KUDELSKI GROUP 2018 ANNUAL REPORT

NAGRA
KUDELSKI GROUP

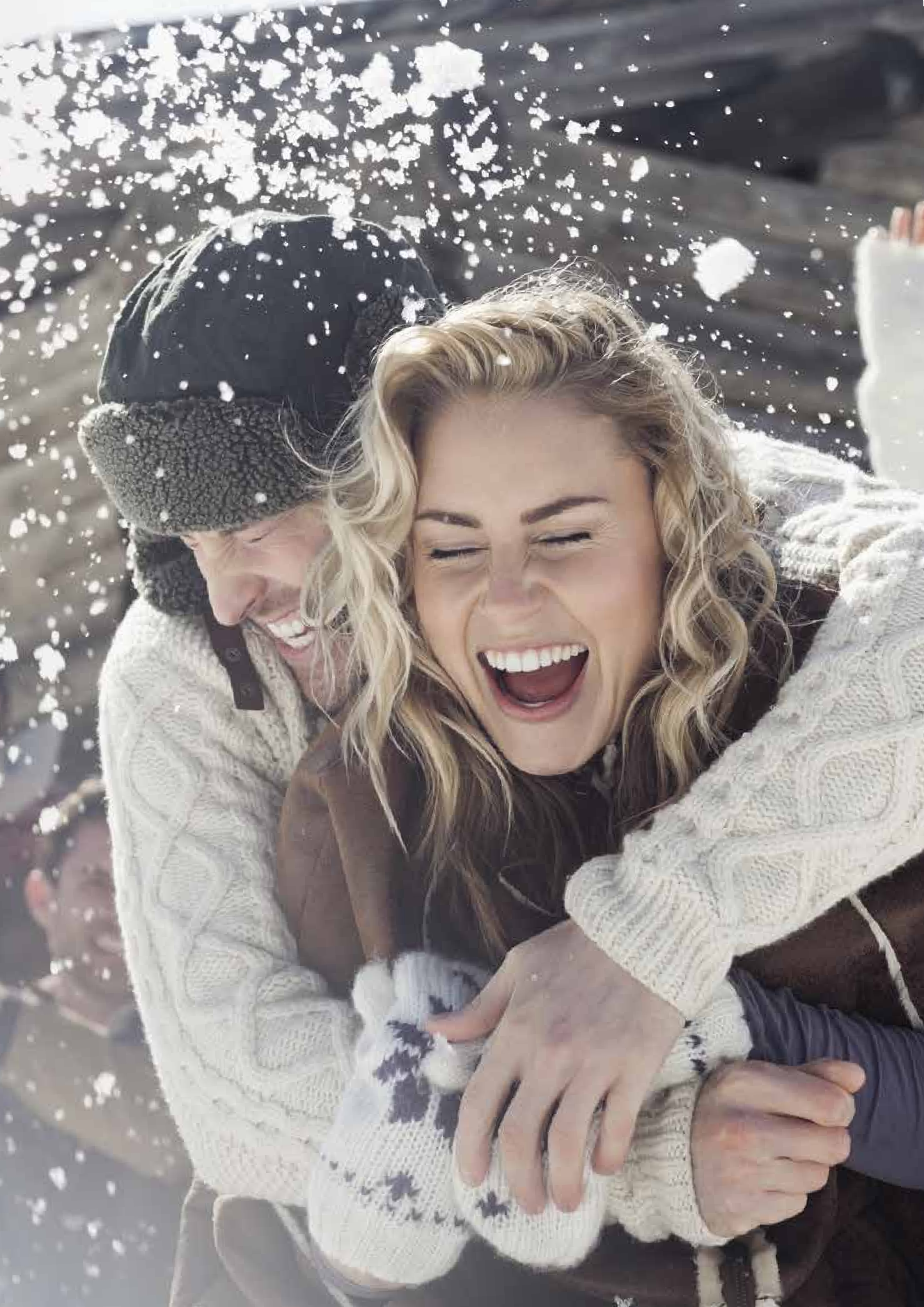
CONTENTS

ENJOYING LEISURE TIME

You want to enjoy recreational activities relaxed and with as little constraint as possible.

Watching an iconic movie at home or while travelling, hitting the slopes in total freedom, without queuing, passing the stadium gates smoothly to watch a game of football, leaving your car at the airport before your trip, whatever the occupation, the Kudelski Group's technologies are here to make simplicity happen.

Discreet though efficient, they ensure comfort and peace of mind, providing smooth and secure access to a wide variety of entertaining moments.

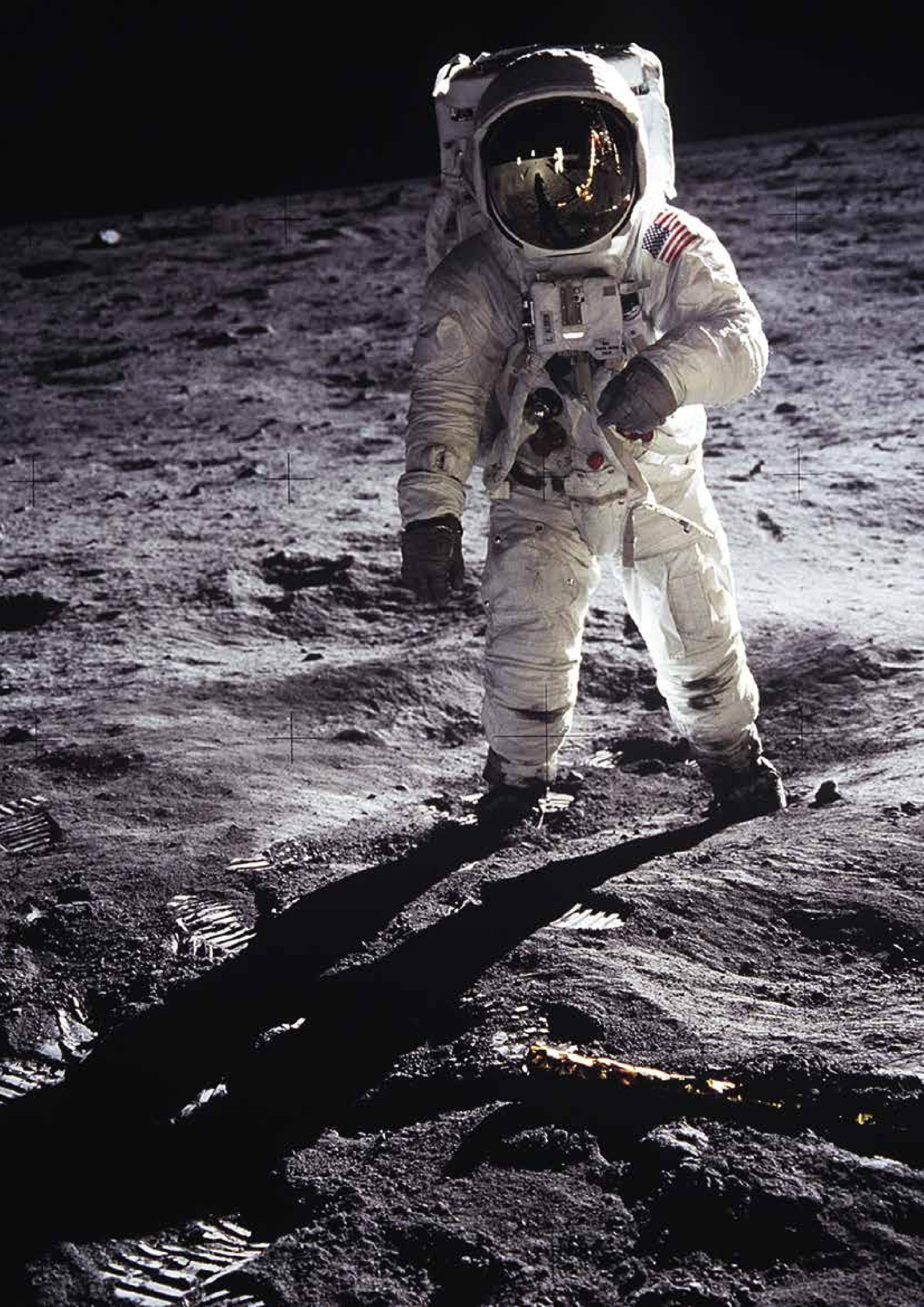


TO THE HIGHEST HEIGHTS… AND BEYOND

First Everest expeditions, Mariana Trench exploration, Apollo missions… NAGRA recorders have been the adventurers' companions for decades.

Used by Hollywood sound engineers, intelligence agencies, reporters, music lovers and more, they testify to the pioneering spirit that the Kudelski Group has demonstrated throughout its 67-year history.

From the revolutionary NAGRA recorders to the first hands-free ski access cards and the more recent intuitive and immersive ultra HD content discovery platforms, the Group's innovations accompany people in some of their boldest and most entertaining experiences.



“Our goal has always been to manage the Group with a long-term perspective, pioneering new technologies and delivering solutions of excellent quality that are impressive technically, from an end-user standpoint and for our customers.”

INTERVIEW WITH ANDRÉ KUDELSKI

Chairman and Chief Executive Officer of the Kudelski Group

How would you characterize 2018 for the Kudelski Group?

As expected, 2018 was a challenging year, underscoring the importance of the transformation efforts previously initiated by the Group in 2017. The Group realized the first tangible results from these efforts last year.

The Group continued to shift its investment efforts from its traditional Digital TV activities to new growth initiatives, including Internet TV, Cybersecurity and Internet of Things (IoT), as well as to its Public Access business.

For Digital TV, important milestones were achieved during the year, including the integration of CONAX with NAGRA, implementation of a cost reduction program and the simplification of the product portfolio, most notably through the divestment of SmarDTV. The combination of these measures has allowed the Digital TV segment to improve its structural profitability in spite of the forecasted revenue decline, while at the same time maintaining strong investment in the Group's innovation efforts.

In order to allow shareholders to better understand our market dynamics, the Board of Directors has decided to improve the transparency of the Group's financial reporting. For the year ended December 31, 2018, we are now reporting four separate segments: Digital TV, Cybersecurity, IoT and Public Access.

Kudelski Security (Cybersecurity) has continued to shift its revenue mix from technology resale to higher value-added activities, such as executive level advisory services, managed security services and sales of proprietary solutions. As a result, Kudelski Security's gross margin and operational profitability improved in 2018, even if revenues declined for the year other than in Switzerland, where revenues increased by 57% compared to 2017.

Still in an early development phase, the Group's IoT business continued to invest in further developing its comprehensive secure IoT platform and also added a growing number of partners in order to market this platform effectively in new industry verticals.

In Public Access, SKIDATA continued its impressive track record of development, evolving from an electro-mechanical equipment provider focusing on the European market when the Group acquired the company in 2001 to now being the worldwide leader in revenue and access management for parking, ski and events infrastructure operators. After more than a decade of 10% CAGR, SKIDATA's growth rate in 2018 was disappointing at 3%, and its operating profit for the year decreased as compared to 2017 due to lower than expected revenues in November and December.

With that in mind, how do you foresee 2019?

Our goal has always been to manage the Group with a long-term perspective, pioneering new technologies and delivering solutions of excellent quality that are impressive technically, from an end-user standpoint. We have always been keenly focused on areas in which we are critical to the business of our customers.

While we will continue to transform the Group to better position it for the future, we do not expect a material improvement in our financial outlook for 2019. As part of the transformation, we will continue to improve our Digital TV segment's performance by focusing our innovation efforts on new promising initiatives and by further optimizing our structural profitability.

For Kudelski Security, we will further develop our high value-added activities, including managed security services, our innovative product portfolio and our Blockchain Center of Excellence.

Kudelski IoT will continue to develop its multi-industry secure IoT platform and will expand its collaboration with existing and future partners to address effectively high potential IoT market segments.

The Group has recently launched an initiative to improve the efficiency of SKIDATA and to restore both profitability and growth, setting a strong foundation for positive developments for Public Access in the future.

In 2017, the Group initiated an important transformation effort that spanned across all its businesses. What is the status today?

Our transformation efforts have been focused on four key goals: (1) reduce our cost to serve, (2) get closer to our key customers, (3) maintain our pace of innovation and (4) improve our delivery excellence.

Our significant efforts have already helped the Group to better focus on new promising initiatives, while improving the structural profitability of its existing core business. The real challenge with transformation is to be able to maintain momentum in innovation while simultaneously downsizing declining activities.

This task is very challenging, but with the help and the support of our teams around the world, we have been able to make it happen while continuing to serve our clients with the highest standards of service and quality. I would like to take this opportunity to thank our employees for their high level of commitment and professionalism in the face of an increasingly challenging market environment.

Will your transformation efforts continue in 2019?

Our transformation is not over, but our focus has evolved. In 2017 and 2018, our priorities largely involved reducing our cost base. For 2019, we will increasingly focus on positioning our offering to serve new market opportunities more effectively.

We will also focus on better leveraging the synergies between entities of the Group. Technology developments, location mix, talent and capabilities management are aspects that share common needs and attributes across our Group companies. We intend to go further in reinforcing the entrepreneurial spirit within the Kudelski Group.

What are the main trends in Digital TV? And how does the Group plan to address them?

Classical pay-TV remains under pressure from new OTT players, including the digital Internet giants. However, most pay-TV network operators have been able to find solutions to stay competitive in this market. We must not forget that this market includes the largest catalogue of premium content in the world and the largest subscriber footprint.

In such an environment, we see a growing number of collaborations between traditional pay-TV operators and new Internet platforms, offering the Kudelski Group opportunities to link the two worlds. The experience of the Group and its reputation of sustainability in the premium content creation and distribution industry for more than 65 years are core assets.

In such a competitive landscape, we see continued investments being made by pay-TV network operators to better compete and adopt new technologies developed by the Group, such as our end-to-end security solution or our Insight business performance platform.

The pure OTT market is also an opportunity for the Kudelski Group, since several of our new solutions have been specially optimized to serve this market, including our end-to-end security solution, watermarking solutions, advanced user experience platform and Insight.

What are the priorities for Public Access?

Over the last decade, SKIDATA has proven its capability to deliver continued revenue growth with sustainable profitability. From that perspective, 2018 was an exception, which has triggered the need to transform SKIDATA to better address future opportunities. The main priority for 2019 and beyond is to restore SKIDATA’s profitability, cash flow generation and growth in a sustainable way.

Innovation is also key for building the future of SKIDATA. We will continue to release high-value solutions that will allow our customers to increase their revenues in a significant way.

How is the Cybersecurity business developing, especially with regards to new product launches?

We see, from an industry standpoint, that major breaches still happened in 2018 and that large enterprises and governments are not well-equipped to detect, diagnose and respond.

When the Group decided to enter the US cybersecurity market with the acquisition of two companies that were active primarily in the business of technology consulting and resale, the goal was to get access to the largest security market in the world. This strategy allowed us to quickly gain a significant distribution channel to sell our high value-added proprietary solutions and services. Our focus for Kudelski Security is to develop new proprietary solutions that will deliver significant margins for the future. New products launched in 2018 include the Secure Blueprint and Managed Secure Enclaves, in addition to the advanced cyber fusion centers in Cheseaux (Switzerland) and Phoenix (USA), which gained significant traction in the market.

In IoT, could you elaborate on the strategy and the success to date?

IoT security is a natural move for the Kudelski Group, since IoT security can fully benefit from the experience of the Group in Digital TV and cybersecurity. We combine the embedded IoT client's security and real time secure backend management with our cybersecurity expertise for a smooth integration of IoT devices within a securely managed IT environment.

In 2018, the priority for Kudelski IoT was to develop its secure proprietary IoT platform and to build partnerships with leaders in high potential IoT industry verticals. In 2019, we will continue in the same direction and add new strategic partners in industries where security is critical.

Our key differentiation in this sector is to provide a secure IoT management platform, combined with the diagnosis, certification and response capabilities made possible by our advanced labs, with the ability to manage the entire security life cycle of a given device.

What will be the distribution to shareholders for fiscal year 2018?

After having carefully reviewed the 2018 performance and the future outlook, the Board of Directors has decided to propose a distribution, as a return of capital, of CHF 0.10 per bearer share (CHF 0.01 per registered share).

What is the outlook for 2019?

For 2019, the Group expects a stable to slightly higher revenue base and an EBITDA ex restructuring costs in the range of USD 80 to 95 million.

The traditional pay-TV business is expected to stabilize in 2019. Cybersecurity is expected to continue adding new clients, expanding geographical coverage and, as a result, increasing profitability by leveraging strategic offerings and high value-added services. The Group will also continue to invest in the IoT domain. For Public Access, our focus will be on improving cash flows and restoring a higher level of profitability.

On behalf of the Board of Directors, I would like to take the opportunity to thank our shareholders, employees, clients and partners for contributing to the long-term success of the Group and for supporting us especially during these challenging times.

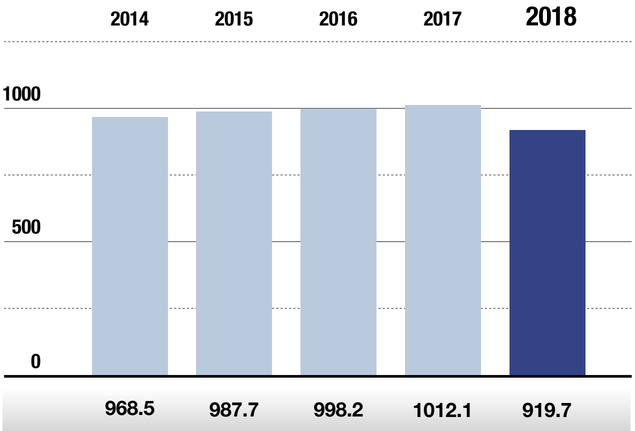
"For 2019, we will increasingly focus on positioning our offering to serve new market opportunities more effectively. We will also focus on better leveraging the synergies between entities of the Group."

KEY FINANCIAL DATA 2018

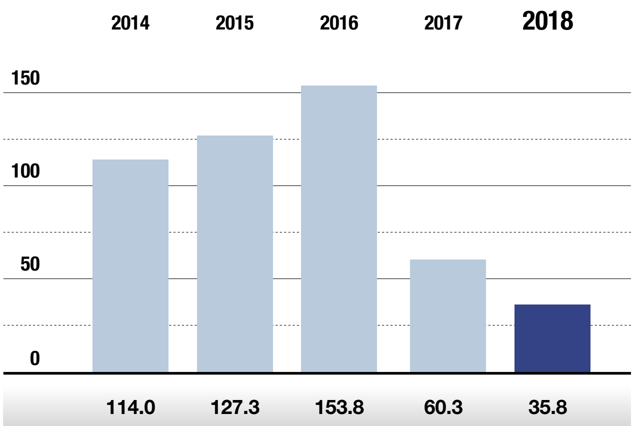
		31.12.2018	31.12.2017	Change
Total revenues and other operating income	USD million	**919.7**	**1012.1**	**-9.1%**
Operating income before depreciation, amortization and impairment (OIBDA)	USD million	**35.8**	**60.3**	-40.7%
in % of total revenues	%	4%	6%	
Operating income (EBIT)	USD million	**-7.3**	**21.8**	-133.5%
in % of total revenues	%	-1%	2%	
Net income from continuing operations	USD million	**-24.3**	**-1.4**	1665.9%
Earnings per share	USD	**-0.5218**	**-0.2716**	
Money returned to shareholders (proposed per bearer share)	CHF	**0.1**	**0.1**	
Share price at December 31 (bearer shares)	CHF	**5.64**	**12.05**	
Market capitalization at December 31 (bearer shares)	CHF million	**281.5**	**599.6**	
Equity attributable to equity holders	USD million	**406.6**	**469.2**	
Cash flow from operating activities	USD million	**-4.7**	**-54.2**	
Cash and cash equivalents	USD million	**86**	**71.9**	
Financial debt	USD million	**-462.3**	**-424.4**	
Number of employees at December 31 (headcount)		**3742**	**3940**	

Total revenues and other operating income

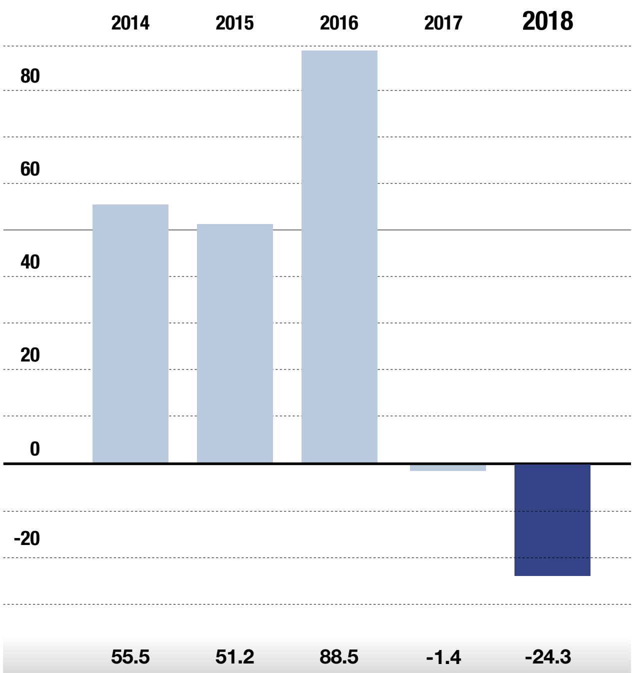
In million USD



OIBDA *



Net income from continuing operations



Revenues per segment

Digital Television

48.8 %

Public Access

40.6 %

Cybersecurity

10.4 %

Internet of Things

0.2 %

OIBDA *

2018

35.8 **

2017

60.3 **

Earnings per bearer share

2018

-0.5218 ***

2017

-0.2716 ***

*Operating Income Before Depreciation, Amortization and Impairment **

*In million USD ***

*In USD ****

Following an adoption of a new accounting standard, figures include latest restated comparative information published in annual reports.
2014-2016 figures have been restated in USD for comparison purposes.


KUDELSKI

THE KUDELSKI GROUP

A world leader in the creation and delivery of state-of-the-art technology solutions

A TRENDSETTER FOR DECADES

More than
500 million users enjoy
Kudelski Group solutions
every day

END-USER FOCUS

Thanks to highly advanced technologies that enable intuitive interactions, the Kudelski Group's solutions simplify the life of more than 500 million consumers in the world every day.

TECHNOLOGY PIONEER

The Kudelski Group has been a pacesetter for decades. Every day, passionate and talented people develop innovative solutions that fuel the Group's intellectual property patent portfolio.

ENGINEERING EXCELLENCE

The Kudelski Group is an undisputed expert in securing data, content and assets around the globe. Kudelski's solutions enable customers to grow in their markets with the necessary confidence.

A GLOBAL TECHNOLOGY LEADER

› THE KUDELSKI GROUP

The Kudelski Group is the world leader in the creation and delivery of state-of-the-art technologies to secure the revenues of content owners and service providers for digital television and interactive applications across all network types. The Group's solutions enable consumers to access content seamlessly over any device through a compelling viewing experience.

The Group capitalizes on its patent portfolio through cross access to state-of-the-art technology patents and license agreements.

The Group is also a global leader in Public Access solutions. The world's leading parking facilities, stadiums and mountain resorts use its SKIDATA people and vehicle management solutions.

Leveraging its long-standing expertise in securing digital content and fighting piracy, the Group is a provider of cybersecurity solutions and services focused on protecting companies' and organizations' data, processes and systems.

The company also designs and delivers technology and services to support companies across all industries in securing their Internet of Things innovations.

THE GROUP'S HISTORY
AND HERITAGE ARE BUILT ON THE FLAGSHIP BRAND
"NAGRA", ORIGINALLY REFERRING
TO THE WORLD-FAMOUS RECORDER
DEVELOPED IN 1951.

THE COMPANY HAS EVER SINCE BEEN
A TECHNOLOGY PIONEER
DRIVEN BY A SHARP SENSE OF INNOVATION.

10 KEY DATES IN THE GROUP'S HISTORY

1951

Stefan Kudelski founded the company.
Launch of the first professional portable recorder, NAGRA I, the start of a series of world-famous recorders that revolutionized sound recording.

1989

First encryption systems for television developed by André Kudelski's team and entry into the pay-TV sector.

1991

André Kudelski becomes Chairman and Chief Executive Officer.

1995

First digital TV access solutions.

2001

Diversification into the Public Access sector with the acquisition of SKIDATA.

2009

Acquisition of 100% of OpenTV: the Group's solutions manage the entire pay-TV ecosystem.

2012

Diversification into the cybersecurity sector with the creation of Kudelski Security.

2016

Opening of a second headquarters in Phoenix, Arizona.
Launch of Insight, the Group's artificial intelligence and big data platform.

2017

Launch of the Group's Internet of Things (IoT) Security Center of Excellence to address demand for increased protection of connected devices.

2018

Further consolidation of the Group's Digital TV business with the merging of all product lines under the NAGRA brand.
Further extension of the cybersecurity offering and increased footprint.
Promising take-off of the Group's IoT offering.

COMPANY PORTFOLIO

Digital Television

NAGRA

Integrated content protection and multi-device user experience solutions, including watermarking and media asset management technologies.

Development, protection and licensing of the Group's intellectual property.

Public Access

SKIDATA

Integrated access and management solutions for car parks, ski resorts as well as sports, cultural, entertainment and exhibition facilities.

Cybersecurity

KUDELSKI SECURITY

Cybersecurity solutions and services for enterprises, governement and public sector organizations.

Internet of Things (IoT)

IOT SECURITY CENTER OF EXCELLENCE

Internet of Things technology and services to help companies across all industries to protect their devices, their data and their business models.


67
years of innovation
500 million
users
10 000
customers
3 742
employees
Presence in
32 countries

FOUR RESILIENT BUSINESS PILLARS WITH STRONG SYNERGIES

	NAGRA KUDELSKI Digital Television	SKIDATA KUDELSKI GROUP Public Access
DESCRIPTION	Long-standing expertise in content value chain protection and distribution technologies. Strong product range and customer footprint.	World leader in public access and revenue management solutions for ski resorts, off-street parking and events.
MAIN FOCUS	Secure, open, integrated platforms for broadcast, broadband and mobile networks with personalized viewing experiences. Key technologies for monetizing premium video content.	Integrated solutions to provide seamless, user-friendly access for people and vehicles to sites and installations such as car parks, ski-lifts, stadiums, arenas and amusement parks. SKIDATA solutions allow infrastructure operators to maximize their revenues.
GEOGRAPHY	Worldwide	Worldwide
DATE OF START	1951 (audio) 1995 (digital)	1977 (since 2001 in the Group)
MATURITY	High, with further development expected	High, with further development expected

KUDELSKI SECURITY	NAGRA KUDELSKI GROUP
Cybersecurity	**Internet of Things**
Unique positioning in securing large corporations' IT networks and infrastructures, from boardroom to field.	Strong skillset and solutions to secure connected device and device-related data collection and exploitation, and decision-making process.
End-to-end cybersecurity solutions to a wide variety of customers across multiple sectors.	Resilient and easy-to-integrate and operate IoT security solution.
Protect enterprises & government against cyberattacks.	Keep the hackers away from IoT operations & protect strategic assets.
USA/Europe	USA/Europe
2012	2017
In development	In development

GROUP STRATEGY

1

Carving out leadership positions in growing markets

— Leverage our trusted partner role
— Improve synergies within the Group and simplify structure
— Address growth areas
— Leverage unique assets in adjacent domains

2

Solving key business issues through solutions innovations

— Grow our four businesses organically and through focused complementary investments
— Ensure future profitable business pipeline
— Increase our portfolio of high-value innovations
— Continue to pioneer the business relevance of new technologies

3

Long-term portfolio management

— Focus on long-term performance and sustainable value creation rather than just short term profit
— Reduce the cost of serving our customers
— Efficient use of capital
— Deleverage balance sheet
— Carefully select investment opportunities

SEGMENT STRATEGY

Digital Television

1. Selectively invest in our Digital TV security business
2. Better convert investments from the past into actual businesses
3. Explore profitable value segments in and adjacent to the video value chain
4. Further focus on user centric culture with innovation at its core
5. Continuously improve and manage operational excellence agendas

Public Access

1. Transform the SKIDATA distribution network to improve profitability & cashflow generation through synergies
2. Proactively increase service activity & further optimize client service
3. Embrace new technologies for new offerings – constantly develop breakthrough solutions to serve customers and increase revenue base
4. Champion digital transformation of industry – use data analytics and process optimization know-how to bring digitalization to customers
5. Upselling of value-adding solutions

Cybersecurity

1. Further expand position as trusted advisor designing cybersecurity strategies
2. Narrow focus to strategic and emerging technologies to deliver enhanced value
3. Continue to grow and expand managed security services, protecting client data wherever it resides
4. Expand focus on generating IP through Research, Development and Innovation

Internet of Things

1. Reach critical mass & mass deployments
2. Further expand customer base by partnering with Industry-specific device players, in industries in which security is business-critical
3. Complete development of comprehensive secure IoT platform

CROSS-FERTILIZATION PROVIDES A COMPETITIVE ADVANTAGE

A SHARED PLATFORM SERVING ALL SEGMENTS

INNOVATION PROCESS AND INFRASTRUCTURE

— Gauge innovative technologies, market trends and opportunities
— Attract the best talents in respective fields
— Opportunistically develop value-added components, "one core, diverse industry applications"
— Create the right business model
— Scale globally and embed in division's activities

MARKETS & CUSTOMERS

— Digital-TV customers are natural prospects for Cybersecurity and IoT
— Sales force of DTV and KS are at the forefront of IoT development
— Shared Infrastructure and back offices
— Resources transfers in talent pool structure to ensure first class knowledge management

ADVANCED SECURITY EXPERTISE & TECHNOLOGIES

— Cutting-edge security technologies
— Embarked in devices on/off-line
— As seamless as possible to business operations
— Using vanguard technologies: AI, face recognition, watermarking, cloud, etc.
— Focused on business applications where critical to revenues

TOP 4 STRENGTHS

1

Megatrends

— Cybersecurity and IoT are two globally recognized megatrends

2

Differentiation

— Cutting-edge Swiss innovation leadership
— Swissness ensures independent technology at Kudelski

3

Platform for growth

— Strong brands in each business, recognized for outstanding client advice and execution
— Strong, satisfied customer base
— Exploit strong core skills in diverse industry applications

4

Governance

— A reference shareholder that takes care of the sustainability of the Group
— Successful track record in building disruptive business segments opportunistically from scratch

DIGITAL TELEVISION

Providing innovative solutions
for the entire premium content distribution
ecosystem

LEVERAGING 30 YEARS OF EXPERIENCE

Leveraging 30 years of experience in the digital television industry, the Kudelski Group develops and delivers a wide range of advanced secure content protection solutions addressing the needs of the digital television ecosystem across Internet, satellite, cable, terrestrial and hybrid end-to-end transmission systems.

NAGRA's digital television solutions enable the deployment and monetization of advanced services with the appropriate level of protection, providing consumers with a thrilling viewing experience.

Further improving efficiencies

Following the integration of Conax's solutions into NAGRA in 2017, the Group continued to streamline its Digital TV brand portfolio to further improve efficiencies, focus on core activities and deliver a broader end-to-end integrated solution offering. In 2018, it sold SmarDTV's Conditional Access Module and Set-Top Box businesses.

Unparalleled know-how and experience

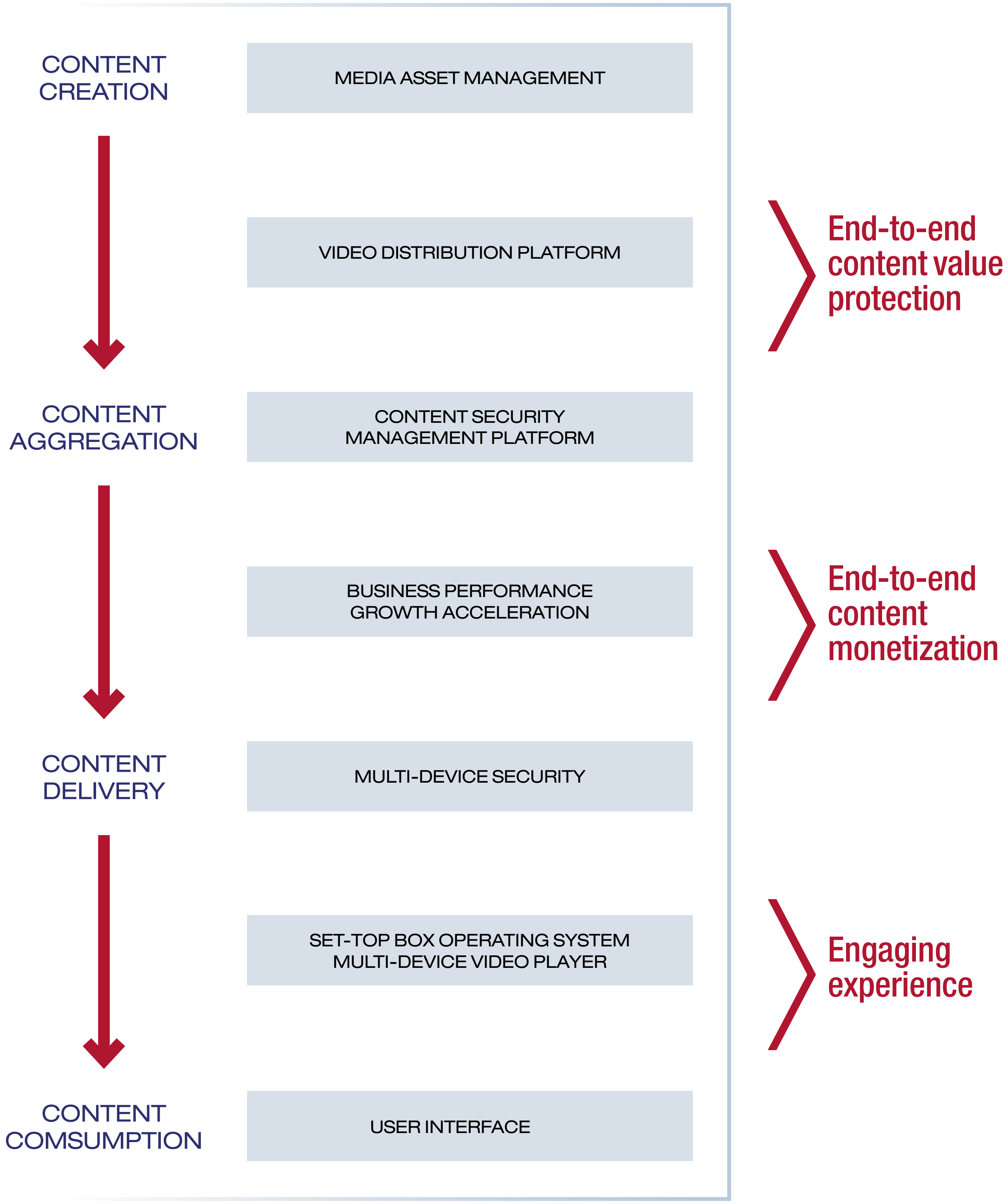
NAGRA has unparalleled know-how and experience in the design of complete end-to-end secure digital pay-TV solutions. It is the leading provider of content protection solutions worldwide and the strategic content security partner to more than 550 of the world's largest and most innovative digital television service providers.

Innovative solutions addressing the entire content value chain

In a world where different business models arise and the lines between them are increasingly blurring, pay-TV service providers are uniquely positioned to become the central gateway to all the content that consumers love. Leveraging the latest cloud, Internet and data technologies, NAGRA solutions ensure content value protection, monetization and personalization, enabling new business models across the entire content value chain from origin to consumption.

Advanced and off-the-shelf offerings

NAGRA's extensive products portfolio provides the best of both worlds when it comes to advanced and off-the-shelf offerings. Service providers can choose from tailor-made solutions that leverage modular products and naturally blend into the environment of larger operators, or lean, off-the-shelf standard Conax solutions optimized for fast time-to-market.



CONTENT CREATION
MEDIA ASSET MANAGEMENT
VIDEO DISTRIBUTION PLATFORM
End-to-end content value protection
CONTENT AGGREGATION
CONTENT SECURITY MANAGEMENT PLATFORM
BUSINESS PERFORMANCE GROWTH ACCELERATION
End-to-end content monetization
CONTENT DELIVERY
MULTI-DEVICE SECURITY
SET-TOP BOX OPERATING SYSTEM MULTI-DEVICE VIDEO PLAYER
Engaging experience
CONTENT COMSUMPTION
USER INTERFACE

CONTENT VALUE PROTECTION

NAGRA's unique content value protection concept features security head-ends tailored to the business needs of pay-TV service providers.

Its solution offering includes a wide range of device security options including third party platforms, forensic watermarking and anti-piracy services.

A holistic approach to addressing the piracy threat

NAGRA leverages three main components to protect content owners against different forms of piracy throughout the entire content distribution ecosystem: CAS/multi-DRM platforms and solutions, forensic watermarking and anti-piracy services.

Advanced security to scale to any operation

As strategic security partner to leading pay-tv operators, NAGRA products are the natural choice for modular content value protection solutions that enable premium content delivery services across broadcast and OTT networks and to any screen.

Off-the-shelf security

NAGRA Conax off-the-shelf content security solutions address the needs of operators whose primary focus is cost-efficiency and fast time-to-market. The Conax unified content security platform delivers a highly efficient, feature-rich and cost-efficient CAS/DRM solution for any use case.

Growing piracy threat

Piracy against the media industry is a growing threat. Solutions to address this issue are limited. NAGRA's solutions combine deep intelligence about global pirate networks with real-time monitoring, take-down and litigation services, and forensic watermarking technologies that enable active defense against piracy – including online content sharing – and protect the operator's reputation and bottom line.

Protecting assets throughout their lifecycle

NexGuard provides studios, sports content providers, rights holders and distributors with an extensive portfolio of cutting-edge forensic watermarking applications to protect high value media assets throughout their entire lifecycle.

NAGRA SECURITY SERVICES PLATFORM (SSP) / CLOUD.SSP

A security platform that manages NAGRA CAS and DRM clients to enable secure premium content delivery to any device.

NAGRA CONNECT

A single converged CAS/DRM client that fully supports the multi-network, multi-device, multi-use case reality of telco and cable providers to reduce complexity and improve performance.

CONAX CONTEGO

An all-in-one, off-the-shelf head-end for one-way and two-way CAS use cases including multi-DRM support. It can be delivered on-premise, via a private or public cloud, or as a fully managed service.

DIRECT-TO-TV SOLUTIONS

NAGRA offers several ways to bring linear and on-demand pay-TV services directly and securely to TV sets without the need for a set-top box, enabling consumers to enjoy premium content up to 4K / HDR without connecting any cables and utilizing only the remote control of the TV set:

- NAGRA Connect for TV
- TVKey (NAGRA and Samsung)
- Conditional Access Modules

NEXGUARD

NAGRA supports the entire premium content lifecycle, with forensic watermarking solutions for pre-release, network ID, digital cinema, OTT streaming and pay-TV workflows.

ANTI-PIRACY SERVICES

These services apply all necessary procedural, technical and legal means to help both service providers and content owners secure, mark, monitor, detect, identify and act against piracy.

AN ENGAGING USER EXPERIENCE

Today, the media consumption industry requires new technologies to facilitate direct access to digital media content on multiple devices.

NAGRA has been at the forefront of entertainment technology and continues to focus on digital content innovation; ensuring the industry has the solutions to allow consumers to always connect to the content they love.

From basic user to content connoisseur

NAGRA's product range offers a diverse set of user experiences that can address simple and/or sophisticated requirements. It provides consumers with the best content discovery possible and satisfies a variety of users, from basic to the content connoisseur and enables operators to offer best-in-class services for each customer profile.

Fully integrated multi-service pay-TV solution

NAGRA's OpenTV Suite is built to address the need for unification and simplicity; allowing operators to focus on operational efficiency, business profitability and customer satisfaction. NAGRA's fully integrated OpenTV modules are the building blocks to a complete operational pay-TV solution that delivers exceptional pay-TV services to consumers, whether via broadcast, hybrid or Internet networks, and with different standards such as Ultra HD, HbbTV and ATSC 3.0 ready.

A consistent experience across all devices

OpenTV's lineup of user interface and user experience products helps pay-TV service providers respond to the challenges created by the rapid evolution of television technology and television consumption habits. These products are designed to deliver an engaging, entertaining and fully immersive, connected entertainment experience to consumers, seamlessly blending the broadcast and Internet worlds.

OPENTV EXPERIENCE

The unique ION user interface was created by NAGRA's award-winning design experts after extensive research with users of all ages and backgrounds. It provides a multi-journey and enhanced viewing experience that suits the viewer's individual needs.

OPENTV PLATFORM

A flexible, multiscreen management platform. Its modular components provide the tools to secure, manage and operate a wide range of media services, whatever the delivery network, device, or content type.

OPENTV PLAYER

Provides secure playout on a wide range of open devices. Advanced features, including personalized recommendations, multi-language audio tracks and subtitles, help subscribers get the most from their content.

OPENTV OS

An open architecture for development teams. It brings together the Linux OS, NAGRA's core digital TV components, and the latest Internet technologies, such as HTML5. Advanced PVR and home networking modules are provided as standard, as well as OTT broadband services.

CONAX GO LIVE

A turnkey, end-to-end OTT solution for streaming live TV to Android and iOS devices with a guaranteed deployment time of less than 30 days.

FORWARD-LOOKING OFFERINGS

Whether for in-home, on-the-go or cinema content distribution, from the sports fields and stadiums to the screens, NAGRA leverages its content protection, content management and Artificial Intelligence technologies to deliver new and smart viewing experiences to consumers.

Empowering operators to make better strategic decisions

Evolving viewer behaviors and a very dynamic competitive landscape are posing significant challenges to the premium content industry, leading to growing risks of increased churn and reduced ARPU (Average Revenue Per User) in several markets. With its Software-as-a-Services (SaaS) INSIGHT platform, NAGRA helps pay-TV providers drive their business using data. INSIGHT uses Artificial Intelligence (AI) to generate smart actions that improve the business performance and profitability. The platform leverages a cross-functional team that has strong pay-TV experience and that includes premium consultants, marketers, content distribution strategists, data scientists, architects, developers and data technologists.

Leveraging online streaming to deliver sports events

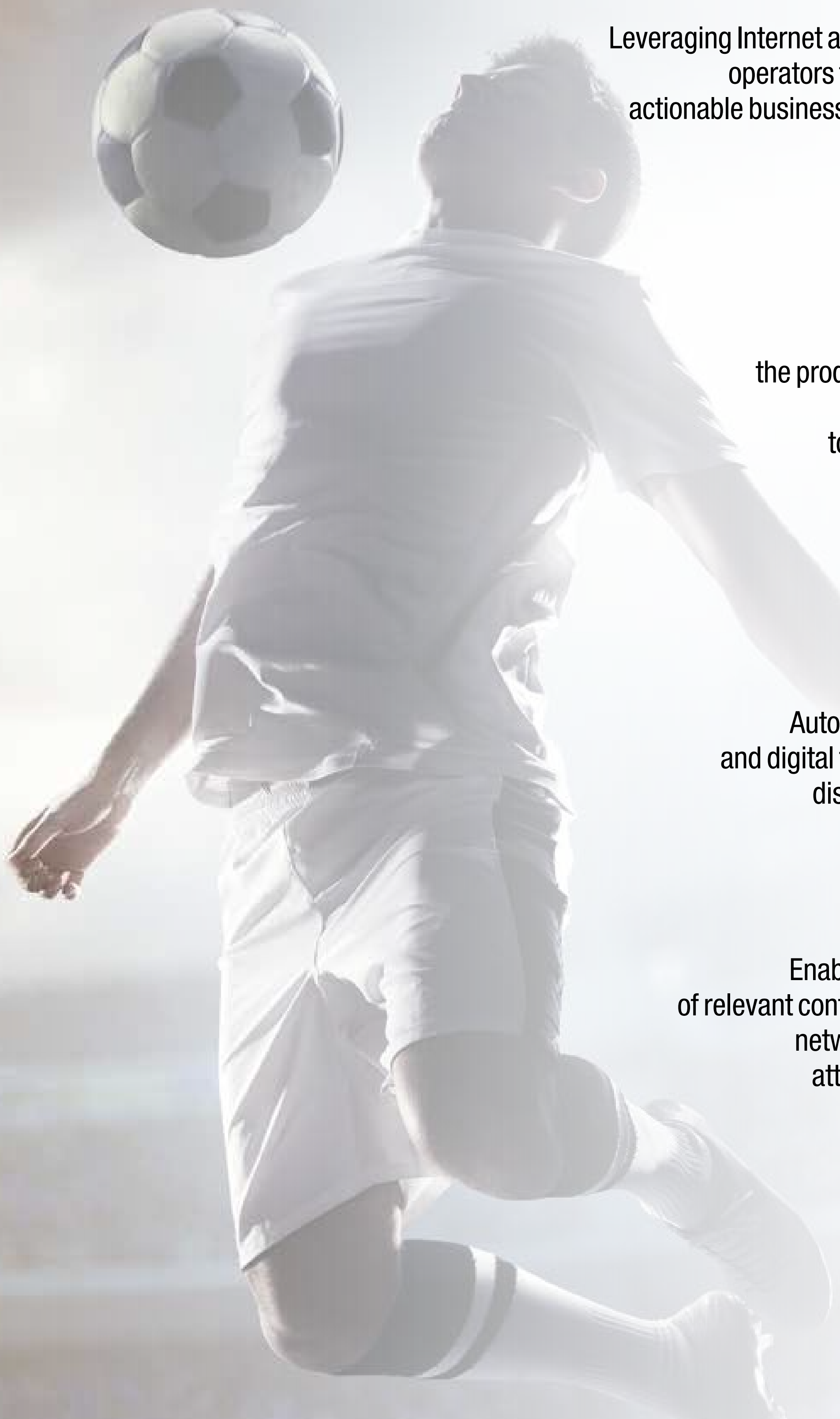
With scalable low-latency streaming technology, sports leagues and teams can now leverage online streaming to deliver sports events, highlights and stats to any viewer worldwide. NAGRA and its leading content, cloud and fiber network partners offer an integrated platform, from the field to the screen, that delivers extremely low-latency live OTT streaming while providing fans with an exciting application and channel-based user experience, from live events, to highlights, stats, fantasy sports and more.

Supporting VOD content expansion and complexity

As the volume of Video On Demand content increases and viewer expectations rise, service providers face cost, complexity and video quality challenges. NAGRA's DVnor Media Asset Management solution provides a simplified and automated workflow for VOD content, delivering optimal video quality, advanced audio and subtitling features, secure storage and distribution, as well as quick-start VOD services, leveraging NAGRA's leading security technologies.

Cloud-delivered cinema experience

The media industry has been revolutionized by the Internet and digitization. NAGRA has identified an opportunity to offer the cinema industry Internet-age solutions in order to support its modernization. The NAGRA myCinema content-as-a-service solution helps content owners and cinema operators connect audiences to new content formats and connects people to a new entertainment experience.



INSIGHT

Leveraging Internet agility and big data, this solution enables operators to boost business performance through actionable business intelligence and an iterative approach.

NAGRA SPORTS OTT STREAMING

NAGRA's integrated solutions facilitate the production, management and monetization of direct-to-consumer sports services to any device, including iOS and Android.

DVNOR MEDIA ASSET MANAGEMENT

Automated all-in-one platform for metadata and digital file management, transcoding, storage, distribution and post-production services.

MYCINEMA

Enables simple, fast and agile programming of relevant content, securely streamed overbroadband networks to theatres, driving up occupancy, attendance revenue and customer loyalty.

2018 MARKET HIGHLIGHTS

Americas

In the USA, NAGRA continued to strengthen its long-term relationship with Altice USA, the fourth largest cable operator in the US with 4.9 million subscribers, who is expecting to launch a mobile service through a full MVNO (Mobile Virtual Network Operator) Agreement with Sprint in 2019. Altice USA has selected OpenTV Player, NAGRA SSP and NAGRA Connect to power and secure its new multiscreen experience by providing a secure playout on a wide range of open devices. In addition, Altice USA has selected NAGRA Insight, the advanced digital TV data platform that leverages artificial intelligence to address a number of business opportunities and challenges in order to increase both customer satisfaction and Altice USA's business growth.

In North America, NAGRA increased its multi-DRM adoption with its partner, Evolution Digital, which rolled out their platform to additional cable operators in the US.

NAGRA's renewed and expanded long-term content protection partnership with Liberty Global will benefit Liberty Global's Latin America's affiliates in Chile, Caribbean and Costa Rica, alongside its European operations.

In Brazil, NET Brazil launched a 4K set-top box with NAGRA OpenTV allowing its subscriber base to watch the World Cup in full UHD quality.

Telefónica, a global leader in telecommunications, has deployed the NAGRA Security Services Platform (SSP) managing the NAGRA Connect client to secure its Movistar IPTV service and 4K Ultra HD content in multiple countries with advanced set-top boxes. The announcement marks the first deployment of NAGRA SSP and NAGRA Connect with a telco provider in a native IPTV environment.

Deployment is on-going in Brazil, Spain and Argentina, with other countries to come in Q1 2019.

Through its Connect and SSP solution, NAGRA powers Telefónica's deployment of Netflix in the new-generation set-top boxes deployed in Perù, Telefónica being the first telco to offer this service in Perù.

In Mexico, Ultravision's new multiscreen service UltraTV, which is expected to launch in January 2019, will allow its subscribers to watch the best linear pay-TV channels in Puebla, Mexico, using their iOS and Android mobile devices. NAGRA enables the new service with pre-integrated, best-of-breed partner technology to create an end-to-end IPTV multiscreen solution that was ready to deploy in less than 30 days.

Asia – Pacific

Digital penetration of the Taiwan cable digitalization market has reached 100% in 2018 and operators shifted their momentum to OTT growth. NAGRA successfully partnered with both kbro & Taiwan Broadband Communications cable multi-system operators to launch their OTT services and move to a next-generation 4K platform.

In South Korea, with NAGRA's Conditional Access system, Korean satellite broadcaster KT Skylife reached more than 1 million 4K Ultra HD subscribers. Since 2017, NAGRA's NexGuard forensic watermarking is continuously applied to KT Skylife's new set-top box models to secure 4K premium video-on-demand contents.

In China, GDC launched NAGRA-enabled gateway set-top boxes and successfully deployed more than 500'000 units in 2018.

In India, operator consolidation in the satellite and cable space continues to offer new opportunities to NAGRA and add new cable subscribers. NAGRA launched a cloud-based multi-DRM solution with a large telco in India and also commenced the soft launch of the IPTV solution with a leading cable multi-system operator.

In Australia, NAGRA's OpenTV platform continues to provide back-end services to Foxtel's iQ3 HD set-top boxes and iQ4 Ultra HD set-top boxes.

In Vietnam, where digitalization plans were slowed down as the conversion deadline was postponed, NAGRA has won a multi-DRM cloud-based solution at VNPT.

In Indonesia, PT Linknet has selected NAGRA Protect for the hybrid cable deployment of their new Android-based 4Kset-top box.

CANAL+ adopted NAGRA GO Live in Myanmar to deploy Live OTT channels over mobile phones and tablets.

Africa

Digital migration in Africa is behind schedule in most countries but this did not prevent NAGRA's clients from continuing their growth.

In South Africa, the OpenView platform saw a 100% growth year-on-year and is now well on target to reach one million NAGRA encrypted devices deployed in 3 years.

Azam TV in Eastern Africa has also reached high numbers of devices deployed and is continuing to grow significantly.

In Nigeria, Inview has launched its push VoD service using the NAGRA PRM solution and will accelerate the DTT migration next year.

Startimes continued their DTT/DTH market growth in Africa with over 20 million subscribers powered by NAGRA Conax content protection technology.

The Conax Contego conditional access solution has been chosen by two additional clients. Msat, through its local subsidiary, has a DTH offering in Botswana using the cloud-based Conditional Access System, while another client opted for the on-premise solution for its DTT platform in Ghana. Msat will also be deploying a Push VoD service in 2019 using Conax Contego to secure its content.

Europe

CANAL+ and NAGRA jointly deployed anti-piracy services targeting major illegal streaming providers that impact Canal+. STUDIO Canal adopted NexGuard Pre Release in order to securely track movie distribution.

In France, NAGRA has expanded its digital security and convergent media solution partnership with SFR, a subsidiary of the Altice Group and one of France's largest telecom operators. NAGRA is now providing SFR with anti-piracy services to fight illegal live streaming of the UEFA Champions league and English Premiere League. This new agreement will leverage NAGRA's expertise in worldwide global intelligence, IPTV monitoring, takedown and litigation services against illegal content distribution including streaming. This evolution further confirms NAGRA's position as a key partner in the protection of live premium sports events.

As part of the global agreement in place with the Altice Group, NAGRA SSP, OpenTV suite and OpenTV Player have been successfully commercially rolled-out at HOT Telecom in Israel in order to power and secure all the operator's streaming and on-demand services on set-top boxes as well as on a wide range of open devices (including phone, tablets, smart TV, etc.).

NAGRA has renewed and expanded its content protection partnership with Liberty Global, the world's largest international TV and broadband company. As part of this new long-term agreement benefiting Liberty Global's affiliates in Europe (United Kingdom, Germany, Netherlands, Belgium, Switzerland and Eastern Europe) and also Liberty Latin America (Chile, Caribbean, Costa Rica), NAGRA will continue to provide its security solutions as used in Liberty Global's recently launched next generation TV entertainment platform 'Horizon 4' providing 4K Ultra HD services.

As the Italian media landscape is evolving quickly, NAGRA has expanded its footprint by securing Sky Italia's new retail DVB-T pay-TV service.

In Portugal, NAGRA is stepping up the fight against broadcast and streaming piracy of Benfica soccer league matches. NAGRA's Anti-Piracy Services will help combat pirate broadcasting and streaming of soccer games, in Portugal and abroad, for the 2018/2019 season. Also in Portugal, NAGRA is working on a project with NOS to secure, with the NAGRA Connect technology and SSP platform in the cloud, the recently introduced NOS IP set-top box technology.

Vodafone, one of the world's leading telecommunications companies, has selected and deployed the NAGRA Security Services Platform (SSP) to secure its multi-network TV service, Vodafone TV (VTV), across several countries including Italy, Greece, Spain and New Zealand, with other countries adopting it during 2019. Vodafone Group is the first operator to leverage the full operational flexibility and agility of the new NAGRA cloud SSP.

Telekom Srbija is launching a new DTH platform secured by NAGRA's Conax Contego solution targeting viewers in Serbia, Bosnia and Herzegovina and Montenegro. The new DTH platform will enable Telekom Srbija to broadcast more than 150 channels, including up to 30 in HD.

Romania's leading cable and DTH operator RCS & RDS deploys the NAGRA cardless solution, based on a new-generation NAGRA back-end – accommodating the seamless co-existence of smartcard and cardless security clients – to secure its services with a new cardless CAM. This new launch marks the first NAGRA cardless CAM module deployment for NAGRA.

In Poland, multiple cable operators have been migrated their existing security platforms to the unified Conax Contego latest generation content protection and Contego Multi-DRM solution, enabling flexibility to provide advanced OTT consumer offerings in the future.

In Serbia, Bosnia and Slovenia, NAGRA's Conax Contego content protection solutions secure United Group's EON, the first 4K Android TV hybrid deployment in the Balkans.

Middle East

MyHD, pay-TV operator in the Middle East, selected Contego CAS two years ago and will now start its OTT activity with the Conax Go Live solution in 2019. MyHD has been using NAGRA Anti-Piracy Services to fight against the illegal redistribution of their channels.

MANAGING THE PATENT PORTFOLIO

With over 65 years of innovation in developing award-winning products and investing close to $200 million annually in research and development, the Kudelski Group and its subsidiaries have carefully developed and strengthened their global intellectual property position over decades.

The Group has benefited broadly from its long-standing commitment to protecting its intellectual property rights and believes they are essential to ensuring collaborative development, future competitiveness and economic growth that would not be possible otherwise.

Thousands of patent assets

The Kudelski Group and its subsidiaries hold a substantial worldwide portfolio comprised of thousands of patent assets in a variety of technology areas, including digital and cybersecurity, access control, watermarking, digital television and rights management, among other areas. Many of these patents relate to fundamental and valuable technologies with broad impact across many businesses.

The Group's IP strategy, like the strategies of its core businesses, continues to adapt to changing market conditions and emergence of new opportunities. As such, the Group continues to review and optimize its approach to intellectual property protection, including its patent portfolio holdings to emphasize strategic value and return on investment.

Developing valuable intellectual property

The Group's Intellectual Property organization is responsible for setting the Group's overall intellectual property strategy with a focus on protecting, developing, managing and licensing the Group's worldwide patent portfolio and supporting the overall innovation programs within the Group.

In 2018, the Group continued its successful execution on its strategic intellectual property and innovation plan by entering into patent licenses with a number of leading sports streaming video platforms including the National Football League (NFL), NASCAR and Endeavor (the parent of NeuLion and the Ultimate Fighting Championship) and others.

There is no "one-size-fits-all" approach to product partnerships and intellectual property licensing. Different businesses have different needs and different technology requirements. To that end, the Kudelski Group seeks business relationships that extend beyond patent licensing. When appropriate, the Group's IP-based agreements incorporate product relationships, patent or technology transfers and cross-licenses into the engagement.

Building reciprocal IP product partnerships with key players

The strength of the Group's patent portfolio, and its intellectual property strategies and licensing capabilities were evidenced further by the licensing agreements concluded in 2018 with the NFL, NASCAR and Endeavor. This is in addition to many of the agreements concluded in prior years such as Apple, Cisco, Google, Netflix, Disney, AT&T, Bloomberg, Arris, Roku, Twitter, Hulu, Yahoo and Verizon.

Supporting the Group's cybersecurity business

2018 also continued to bring an increased focus in supporting the Group's growing cybersecurity business, Kudelski Security. The Intellectual Property organization is enhancing the Group's patent portfolio in this area with new patent filings and curating patentable technology based on Kudelski Security's integration of the Group's best-in-class security architectures developed for Pay-TV with Research & Development in the cybersecurity marketplace. Likewise, 2018 saw an increased focus on research and development in the Internet of Things (IoT). The Intellectual Property organization also oversaw new patent filings in this area as the Group continued to bring its security architecture expertise to bear on the IoT marketplace.

In 2018, the Group ramped-up its efforts to engage with a number of other technology leaders to expand IP partnerships in terms of IP licensing and cross-licensing as well as technology collaboration. The Group will keep executing its plans to invest in innovation and protect and license its intellectual property portfolio as well as its plans to expand into more strategic industry IP partnerships.

PUBLIC ACCESS

Comprehensive solutions to optimize revenues for infrastructure operators

COMPREHENSIVE SOLUTIONS

SKIDATA carries out the Group's Public Access activities.

The company designs and markets comprehensive solutions which help infrastructure operators optimize their revenues and drive their business forward, and enable them to manage access to ski resorts, stadiums, fairs, amusement parks and parking facilities.

With a global footprint, SKIDATA manages large-scale, complex projects that involve technological challenges as well as innovative marketing and business models.

SKIDATA stands for 40 years of innovation. Since its foundation in 1977, SKIDATA has set standards in access and revenue management with global expert know-how and innovative solutions.

The division's broad spectrum of proven standard to customized solutions guarantees every customer the optimal solution to maximize sales and to offer the best comfort.

10 000
INSTALLATIONS
WORLDWIDE
IN OVER 100 COUNTRIES

750
NEW INSTALLATIONS IN 2018
WITH A FOCUS
ON LARGE PROJECTS

OVER 40 YEARS
OF SUCCESS
AND INNOVATION

GLOBAL LEADER IN ACCESS SOLUTIONS

SKIDATA is the global leader in access and revenue management solutions, providing fast and safe access for people and vehicles. With innovative concepts, SKIDATA has developed to an internationally successful digital solution provider and the world market leader in access and visitor management with over 10 000 installations in over 100 countries.

SKIDATA continues to increase its global footprint and steadily expands its cloud-based solution offering to provide the full advantage of digitalization to its customers.

Technological pioneer and innovation driver

SKIDATA is a pioneer and the world leader in the field of access and ticketing solutions for alpine regions. In 1977, SKIDATA introduced a cash register as well as printed ski tickets to the market – a milestone in the history of the mountain sports regions. Today's standard guest experience for skiers has been fundamentally shaped by SKIDATA and its subsequent patents and inventions. Over the last four decades, the portfolio was expanded with additional business units and innovative solutions like RFID chips for contactless entrance, vehicle access management, and solutions for stadiums, leisure parks and trade fairs.

A digital solutions provider

SKIDATA continuously strives to offer solutions that provide significant added value to its customers' businesses. With its extensive network of innovative technologies, SKIDATA solutions enable a wide range of functionalities, from fast and convenient access to venues and parking sites towards offering full benefits of the ongoing digitalization in visitor management, data management, dynamic pricing and revenue optimization.

With the new, cloud-based sweb Platform (SKIDATA Web Platform), customers benefit from a growing number of advantages of online ticketing, IoT monitoring & control tools and customizable BI suites, without sacrificing independence. In this ever-changing technological landscape, SKIDATA offers completely integrated solutions as well as open interfaces for rapid integration of third-party systems to tailor the solution to each individual customer.

Investing in strategic growth areas

Capitalizing on its steady growth and technological expertise, SKIDATA is well on track to continue shaping the future of access management by delivering innovative, intelligent and customer-oriented solutions.

SKIDATA continues to invest in the strategic growth areas that have brought success since the beginning: further expanding its global presence, delivering complete solutions with a focus on quality, usability and innovations – and continuously developing the expert know-how of its employees.

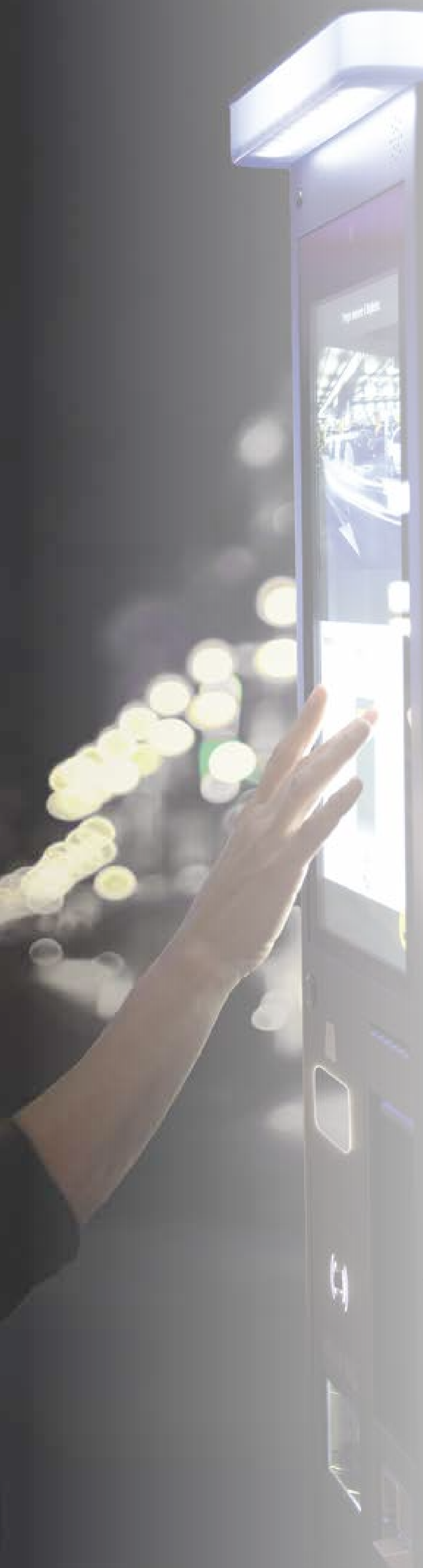


PLATE.GATE ‘CUBE’

For further simplifying the use of SKIDATA’s parking systems, an advanced plate recognition solution has been invented, in the spirit of the hands-free solution invented for ski access more than 30 years ago.

The new solution uses an infrared camera that enables the reliable identification of license plates, day and night. State-of-the-art image processing algorithms and AI-based OCR software ensure that the vehicle is reliably identified via the license plate and enables customer a quick access to car parks.

SWEB.VALIDATE

With this web-based service, car park operators can manage the sale and administration of parking validations digitally and efficiently, for optimized garage utilization. Validation credits collected by the user with business partners (hotels, shops, etc.) are automatically reduced from the applicable parking fees.

SKIOSK

This new range of smart kiosks creates a new experience onsite for customers when buying tickets or annual passes for amusement parks, leisure facilities and ski resorts.

The one-touch use concept and high-resolution touch screen, plus the choice of the preferred payment option, make ticket purchase a smooth experience for end-users.

For operators, central monitoring and control with high ticket capacities ensure low operational intervention and improved service level, around the clock.

proPOS.CASH

This new generation of cash desks is a powerful sales management solution with flexible payment functionality. It combines ticket sales, partner program and invoices in a single, intuitive platform. The cloud-based, intuitive and touch-optimized system can also run on mobile tablets.

2018 MARKET HIGHLIGHTS

〉PUBLIC ACCESS

LOS ANGELES FOOTBALL CLUB
CALIFORNIA – USA

New stadium with 22 000 seats

JBG SMITH CITY PARKING
WASHINGTON D.C – USA

Several car parks managed centrally

BJC-BARNES JEWISH HOSPITAL
SAINT-LOUIS – USA

Largest hospital in the US state of Missouri with 1 200 parking spaces

KUWAIT INTERNATIONAL AIRPORT
KUWAIT

13 735 580 passengers, 2 500 parking spaces

MODLIN AIRPORT
WARSAW – POLAND

1 300 parking spaces

ADNEC CAR PARK
ABU DHABI - UNITED ARAB EMIRATES

National exhibition center of the UAE with 6 000 parking spaces

ORLANDO CITY SOCCER CLUB
FLORIDA – USA

Stadium with 25 500 seats

FRANCE GALOP
FRANCE

First access control for horse racecourses

HIRUZEN BEAR VALLEY
OKAYAMA – JAPAN

First installation in Okayama prefecture, 2 400 passengers per hour

OBERALLGÄU TOURISMUS CARD
ALLGÄU – GERMANY

9 393 036 cards used per year

PARQUE ARAUCO SHOPPING MALL
SANTIAGO – CHILE

New shopping mall with 500 parking spaces

ZAYED SPORTS CITY
ABU DHABI – UNITED ARAB EMIRATES

National stadium of the UAE with 41 000 seats

CYBERSECURITY

Portfolio of integrated cybersecurity solutions for enterprises, government and public sectors

BRINGING NEW FOCUS TO GLOBAL CYBERSECURITY SOLUTIONS

As a result of large and public breaches impacting millions of people, once-fringe subjects of ransomware, malware, denial of service attacks and phishing scams have captured the public's interest and earned the attention of senior leaders in public and private institutions around the globe.

The increasing sophistication of hackers have taken the risks of data and reputational loss to new heights.

A unique positioning

The Kudelski Group's positioning in cybersecurity is unique: as in other businesses within the company, success comes from the Group's ability to be "mission critical" to its customers. Kudelski Security is a trusted partner to the Board and Executive Committees of its customers. It provides a comprehensive offer to large companies to support them in securing their IT networks, infrastructure, data and devices:

– Advisory – Kudelski Security helps build the security strategy and identifies gaps or opportunities

– Technology integration – Kudelski Security installs and integrates the best technologies available to the market

– Managed services – companies outsource the management of their security to Kudelski Security

– Innovation – Kudelski Security develops proprietary solutions to address the most complex security challenges

Historical perspective

Continuing the Group's heritage of innovation and pivoting to meet emerging market needs, Kudelski Security was launched in 2012 as a program that extended digital security and encryption expertise to the cybersecurity sector.

By 2015, this business had grown to USD 5 million in revenue from non-digital TV clients primarily from consulting and managed security services delivered to Swiss clients. The Cyber Fusion Center designed and initially launched in Switzerland, for example, enabled clients to fuse threat intelligence with business and contextual data for a more holistic view of cybersecurity risks.

In 2015, an experienced management team was set up to grow this new business. The leadership team has since been focused on developing a comprehensive business strategy and establishing the capabilities to deliver the solution portfolio in selected geographic regions.

The acquisition of two solution providers in the US, Milestone Systems (in 2016) and M&S Technologies (in 2017), enabled Kudelski Security to get a significant US footprint and further evolve toward a more global focus. The entity became the largest pure-play cybersecurity solution provider in Switzerland and one of the fastest-growing cybersecurity solution companies in the United States, earning recognition from analysts, technology partners and customers.

Since expanding to the US in 2016, Kudelski Security continues to increase its strong foothold in the market, offering its growing Fortune 500 client base unique capabilities and a plan to change how clients work with providers to design, deploy and manage cybersecurity.

ADVISORY SERVICES

Adivsory Services empower organizations to build business-aligned security programs through a strategic cyber program approach across four strategic areas: Strategy and Governance, Risk Vulnerability and Threat Management, Incident Response and Cyber Resilience, and Cybersecurity Staffing.

TECHNOLOGY CONSULTING

Technology Consulting helps clients select and implement technologies that best suit their business and operational requirements through Technology, Architecture Design and Planning, and Solution Implementation services.

MANAGED SECURITY SERVICES

Delivered from Kudelski Security's proprietary Cyber Fusion Centers in Europe and the U.S., the Managed Security Services go beyond the traditional managed security solution providers by combining expert analysts, innovative technologies and detection and hunting approaches to more rapidly identify and block threats.

RESEARCH AND DEVELOPMENT SERVICES

With the R&D services delivered from its Research Centers, Laboratories and Security Centers of Excellence focused on IoT and Blockchain, Kudelski Security engages in cutting-edge research and development to address clients' toughest security challenges.

HIGHLY DIFFERENTIATING SOLUTIONS

Kudelski Security has been focused on leveraging the Group's historical strengths in R&D to fuel its differentiation strategy and challenge the traditional cybersecurity approach. A strong innovation philosophy has driven heavy R&D investment in product and service development across each of the four business pillars. The result is a comprehensive approach that provides clients unique but overlapping capabilities, acting as a force multiplier to significantly improve security business outcomes.

Continually challenging the status quo of cybersecurity

Kudelski Security has set its vision on continually challenging the cybersecurity status quo, uniting world-class and innovative consulting and managed services and technologies to deliver real business outcomes for its clients. The objective is to increase confidence, cyber-resilience, and protection of data across their digital ecosystems, globally.

To deliver on its vision, Kudelski Security's solution portfolio covers the main components of comprehensive cybersecurity, with a focus on service categories that are in high demand and allow scope for enrichment through proprietary innovation and advanced R&D.

Since launching its new business strategy in 2016, Kudelski Security has continued to gain market momentum through client adoption and positive recognition for its multidimensional approach to cybersecurity from partners and industry analysts.

Kudelski Security continues to expand with new organic growth, broader client relationships, new and innovative market offerings and additions to its experienced team of cyber professionals.

Innovation drives industry recognition

Across the company's four business pillars, an important percentage of revenue is invested in R&D focused on new offerings that help clients address expanding risks associated with the increasing sophistication of attackers, the dramatic shortage of skilled cybersecurity professionals and the increased complexity and diversity of enterprise networks.

Kudelski Security continues to earn industry acclaim for its innovation, vision and ability to deliver for clients:

Gartner

- Recognized Kudelski Security for two years in a row for unique and innovative Managed Detection and Response capabilities.

- Recognized Kudelski Security for innovation in managed security services.

Forrester

- Recognized Kudelski Security as a Leader in Emerging Managed Security Service Providers, Q3, 2018, largely for the unique scope of Kudelski Security's next-generation managed security offerings and the effectiveness of its innovative client service portal.

- The Forrester Wave report evaluated 10 top emerging managed services providers and identified Kudelski Security as one of the two leaders in the category.

Frost and Sullivan

- In January 2018, profiled Kudelski Security as an advanced player in threat detection, leveraging cutting-edge technology.

- Confirmed the need for cyber business management methods and tools such as Secure Blueprint to help measure and improve the effectiveness of cybersecurity operations.

MSSP ALERT

– Recognized Kudelski Security as a leading international Managed Security Service Provider for two consecutive years, improving in 2018 to a top 20 position and eclipsing larger and more mature competitors. The annual company list identifies and tracks the world's leading MSSPs that specialize in outsourced cybersecurity services.

CRN

– Rich Fennessy, Kudelski Security's CEO, named as one of the industry's Top 25 Disruptors.

Looking ahead

In 2019, Kudelski Security plans to launch several flagship innovations:

– **Cloud-security focused offerings**
Leveraging its expertise in designing, implementing and operating secure DevOps organizations, Kudelski Security has launched a breadth of cloud-security focused offerings including cloud platform monitoring, SaaS monitoring, cloud configuration monitoring and cloud strategy assessments.

– **Managed Services**
in 2019, Kudelski Security's award-winning MSSP will add the capability to monitor data in all three major cloud providers and with the top SaaS providers. It will also expand monitoring offerings for IoT, IIoT (Industrial IoT) and operational technologies (OT).

– **Blockchain**
Blockchain has the potential to disrupt business models across many different industries. In early 2019, Kudelski Security launched a Blockchain Security Center, focused on assisting companies in designing and protecting their blockchain businesses. Kudelski Security's long-term focus is on leveraging the Group's expertise in end-to-end system design and cryptography to build blockchain-based products.

– **CISO Strategy**
In early 2019, Kudelski Security launched Secure Blueprint in Europe and will bring risk management into the Secure Blueprint platform to supplement strategy management.

2018 MARKET HIGHLIGHTS

Throughout 2018, Kudelski Security continued to launch innovative products and services and expand geographically to drive new business. This includes a strong adoption of managed security services which feature multi-year service agreements for Kudelski Security's Cyber Fusion Centers in Switzerland and the US.

Managed Security Services (MSS)

Next generation Cyber Fusion Center

The first-generation Cyber Fusion Center (CFC) was launched in Switzerland in 2013. In early 2016, the CFC infrastructure was redesigned to enable the delivery of more advanced managed security services as well as to support efficient global expansion.

The next generation of the CFC was launched concurrently in the US and Switzerland in April 2017. This new version was powered by innovation and the introduction of proprietary technologies to analyze business and security events. It integrates powerful best-of-breed commercial products for threat hunting and attacker deception and an intuitive, informative client portal experience to ensure that relevant details on alerts and threat intelligence are accessible to clients at all times.

These new differentiated capabilities were recognized by analysts for their innovative features and in 2018 earned broad distinction from global industry analysts. Since the relaunch, client adoption has continued to accelerate in both Europe and the United States and MSS represents Kudelski Security's fastest growing segment.

Extended offering to operational technology protection

In May 2018, Kudelski Security launched a managed security service focused on the protection of Operational Technology (OT) and Industrial Control Systems (ICS).

To facilitate the new offering, Kudelski Security entered into a strategic partnership with Claroty, whose technology will be integrated with Kudelski Security's Cyber Fusion Centers. Claroty is a leading technology for OT and ICS network protection.

Operational technology represents a growing risk for clients. While a few prominent breaches in critical infrastructures have highlighted the need for better security, many organizations still struggle to monitor their industrial environments effectively. Malicious activity on OT networks is on the rise, as evidenced by the increased in threat activity from ICS attack groups and the emergence of ICS-specific malware. Kudelski Security is addressing this gap with defined services and proven technology that help reduce risks for clients.

Kudelski Security's managed security service offering has continuously driven new innovation across Europe and the United States, and was the first to offer services such as managed attacker deception and managed detection & response (MDR).

R&D

Custom proprietary solutions

Kudelski Security's researchers, engineers and developers work directly with clients on specific projects to analyze new and challenging security problems, and then develop custom proprietary solutions to address them. Examples of specific client projects include a secure, isolated IT enclave and an advanced cloud monitoring technology, both of which are expected to be launched in 2019 as proprietary Kudelski solutions.

Enabling secure tracking solutions

In 2018, Kudelski Security announced a strategic agreement with Vypin, a provider of IoT solutions featuring sensor-based beacons and supporting management software. Through this partnership, Vypin licenses power-efficient, anti-spoofing technology designed by Kudelski Security to extend the life span of Vypin's beacons and IoT tags.

Developing new functional encryption technologies

Kudelski Security has been selected to participate in FENTEC, a 2-year project of the European Commission, Horizon 2020, to develop new functional encryption technologies. The initiative brings together 10 partners from across Europe and several leading universities.

New Blockchain Security Center

Blockchain has the potential to revolutionize business capabilities, creating new avenues of efficiency and supercharge technology applications across all industries and sectors.

In January 2019, Kudelski Security announced the launch of its Blockchain Security Center focused on extending Kudelski's encryption expertise through new products and services that secure blockchain-based solutions increasingly used by organizations across the world.

The Blockchain Security Center will develop a suite of expanded cryptographic solutions, full-stack enterprise blockchain security recommendations, and developer tools to support the entire blockchain ecosystem.

Technology

Reference architectures

In the Technology pillar, Kudelski Security innovates through the development of Reference Architectures that address strategic client concerns such as Endpoint Security, Cloud, and IoT. These documents outline risks and challenges, then serve as the basis for recommendations on how specific technologies can be employed to optimize security and meet business and operational objectives.

In addition, teams of solution architects and engineers provide technology assessments and infrastructure design services to help ensure clients have the robust IT environments required to enable improved security.

Technology partnerships

Kudelski Security works closely with leading technology manufacturers such as F5, Juniper, McAfee, Fortinet, CrowdStrike and Palo Alto Networks, and provide clients the expertise to integrate security technologies across their environments.

Kudelski Security's partnership ecosystem is monitored continually to ensure that the security solutions provided by Kudelski Security match evolving client needs.

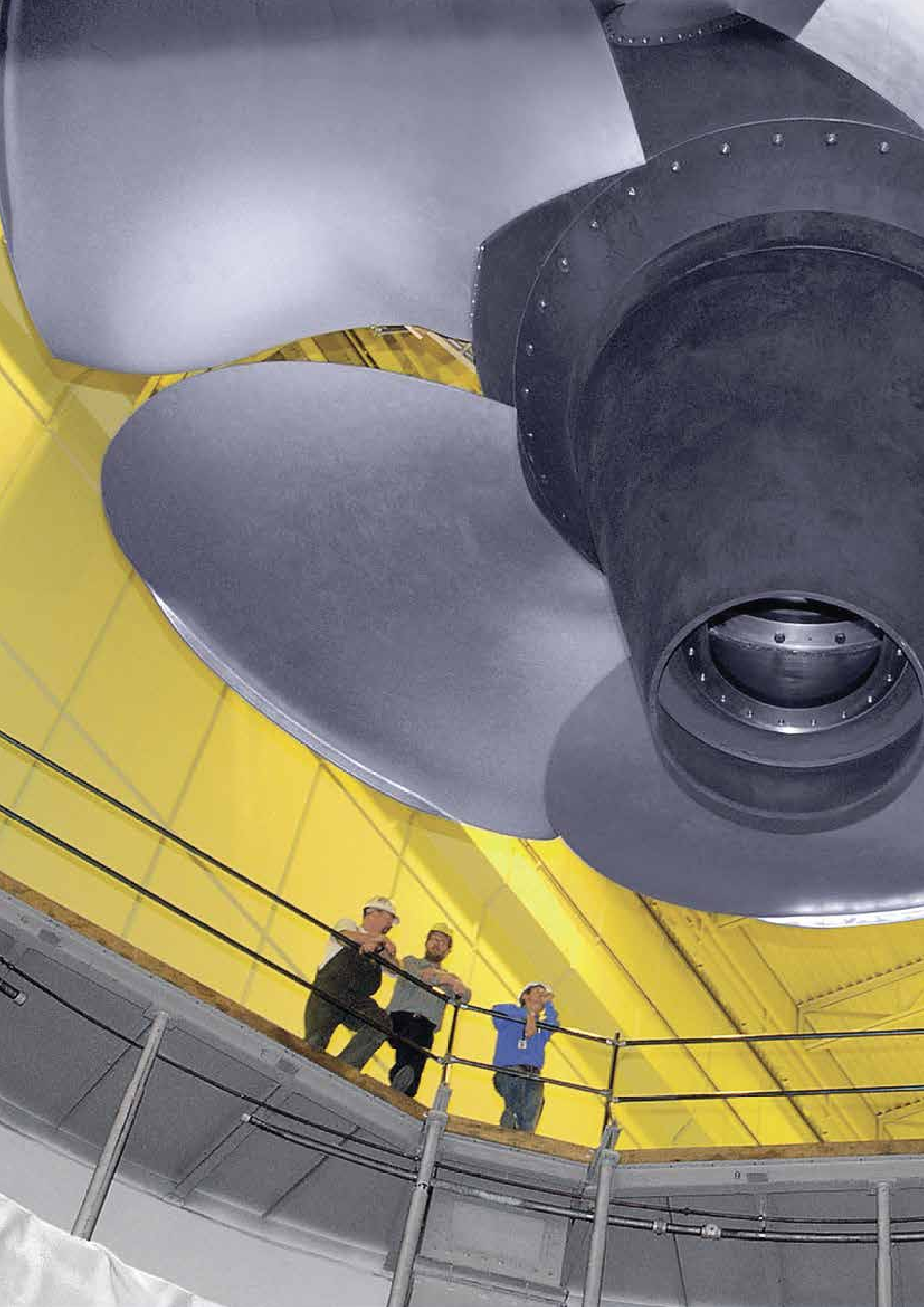
Advisory

Industry's first Cyber Business Management platform

A critical gap for most security leaders is the ability to centrally manage the vast number of components affecting enterprise security, then translate these complex programs into meaningful language that can be reviewed along with other business strategies. To that end, Kudelski Security has introduced the industry's first Cyber Business Management Platform, Secure Blueprint. This unique and proprietary solution launched in the United States in the third quarter of 2018 and in Europe in early 2019.

The Secure Blueprint SaaS platform meets an important emerging need for cybersecurity leaders by providing a real-time tool that sits on the chief information security officer's desktop to track the maturity and effectiveness of their security program, align security initiatives with business priorities, and help communicate the state of cybersecurity programs to business leadership.

Secure Blueprint helps create a true, business-driven cybersecurity strategy that is framed in risk management terms. It includes executive dashboards and dynamic roadmaps that help leaders prioritize investment decisions to ensure that the program can be continuously refocused to evolving contexts.



INTERNET OF THINGS

Pioneering solutions
to make IoT simple and secure

SECURITY CENTER OF EXCELLENCE

Throughout all industries, there is a massive trend to digitalization and device connectivity, enabling operational efficiency gains and new business models. Market analysts expect 25 billion connected devices by 2021.

Leveraging 30 years of innovation in the fields of digital content and device protection, the Kudelski Group has unparalleled ability to provide solutions to address demand for increased protection of connected devices.

30 years of real-life experience

Digitalization is by now widely considered to be the foundation of innovation and growth and therefore is becoming part of every company's core strategy.

With on-going digitization, companies are deploying connected devices and services and need to be able to trust their devices and the data they produce in order to drive new business models, operational efficiency and better decision.

However, the deployment of these devices is outpacing companies' ability to adequately protect them using important "security by design" principles. The result is millions of connected but unsecure devices, ripe for attack by criminals, competitors and hackers.

The Kudelski Group's 30 years of real-life experience in deploying and protecting connected embedded systems is what makes it unique in the IoT industry.

The Group's security technologies and services have been widely deployed in real-life systems. From the beginning, they have been exposed to severe piracy attacks and have proven to be extremely robust, mass-scalable and future-proof to accommodate the rapid business evolution of the Kudelski Group's customers.

By leveraging its unique heritage in both pay TV and cybersecurity, the Kudelski Group is uniquely positioned to provide companies with design, implementation and long-term security lifecycle management of their connected business models across a variety of industries.

End-to-end solution

Kudelski addresses security from a system, end-to-end perspective, protecting all aspects of the connected business' ecosystem, its devices, collected data, intellectual property and associated monetization models. The approach also incorporates Security Lifecycle Management that ensures that security is sustained throughout the lifetime of the device.

DESIGN, ASSESSMENT AND CERTIFICATION SERVICES

Kudelski's IoT experts help develop secure systems to guarantee the integrity of the signal and of the messages, in areas in which the impact of a security breach can be highly damaging of a company, the consumer or even critical infrastructures.

IOT SECURITY PLATFORM

The Kudelski Group's IoT Security Platform provides a rich basis to enable business features using its secure foundations in the device (hardware and/or software-based) and its simple device and application API's.

For instance, the solution protects data from the point of collection (e.g. sensor, camera or other device) to the application that utilizes the data, whether that data is at rest or in motion, and ensures that data is only accessible to authorized parties.

LIFECYCLE MANAGEMENT

Security Lifecycle Management is the active protection of the customer's connected business model over time, using security monitoring, the proactive update of security, and response to security incidents through the application of built-in countermeasures or new security features.

Expanded offering

Kudelski announced its first IoT initiative in 2017, the IoT Security Center of Excellence, providing IoT device and ecosystem security assessment, design and certification services to IoT device manufacturers.

The Center continues to draw new customers who wish to leverage Kudelski's extensive expertise in hardware and software security as well as security architecture and design.

2018 saw a significant expansion of Kudelski's IoT activities with the development of its IoT Security Platform, enabling device manufacturers, communication service providers and their end-customers to establish a trusted relationship between IoT devices and their associated applications.

The Kudelski Group's IoT Security Platform is tailored to deliver value in the specific industry ecosystems. Kudelski partners with specialists to bring a joint offer tuned to the market specificities of each different vertical.

Partnering with key industry players

The Kudelski Group has established a footprint in security solutions for wireless IoT, industrial IoT, smart cameras and consumer products and is exploring other verticals. The company signed a number of agreements with key industry partners and customers in 2018:

- **Cellular IoT**
  In 2018, the Group signed an agreement with Swiss firm u-blox, a global leader in positioning and wireless communication technologies for the automotive, industrial and consumer markets. The companies agreed to integrate the Kudelski IoT Security Platform into multiple u-blox product lines, enabling premium device protection and security lifecycle management (including secure firmware over the air – FOTA – upgrades), as well as secure communications and application data protection.

  In early 2019, the Group and IDEMIA, the global leader in augmented identity, announced a partnership that provides manufacturers and service providers a single, fully-integrated solution to manage the network connectivity and security of cellular IoT devices. The joint solution will allow IoT device manufacturers to simplify the integration process and speed time to market for new devices while providing future-proof connectivity and security.

- **Industrial IoT**
  Kudelski announced its cooperation with Voith, a global technology group that sets standards in energy, oil & gas, paper, raw materials and transport & automotive markets.

  The goal of the partnership is to collaborate to develop focused solutions that support customers with their digital transformation journey and reliably protect their industrial environments from new and emerging cyber and physical security threats. The partnership will leverage the full portfolio of Kudelski IoT Security products and services.

- **Consumer Electronics IoT**
  The company announced a long-term collaboration with American company Pepper to protect IoT service providers and retailers from cybersecurity risks and increase consumer confidence.

  Both companies will work together to influence best practices and criteria for retailers and service providers to minimize the risk of cybersecurity threats. They will also provide the tools and capabilities for device manufacturers to meet those best practices and criteria using the Kudelski IoT Security Platform.

IOT ARCHITECTURE FROM DEVICE TO CLOUD

Sensors, machines	Edge/modem	Connectivity	Cloud
Secured Actuators	**Secured** Data	**Secured** Data	**Secured** Data
Secured Sensors	**Trusted** Local AI		**Trusted** Global AI
Secured Machines	**Trusted** Local Decisions	**Protected** Commands	**Trusted** Decisions

MANAGED SERVICES

Secured IoT Platform

Data. Devices. Control. Connectivity


S·E
140
160
S
180
S·W
W

CORPORATE GOVERNANCE

CORPORATE GOVERNANCE

This report was prepared in compliance with the directive on information relating to corporate governance issued by the SIX Swiss Exchange and in compliance with the Ordinance against Excessive Compensation at Listed Joint-Stock Companies (OaEC). Unless otherwise stated herein, the information provided in this report reflects the situation as of 31 December 2018.

1. Group structure and shareholders

1.1. Group structure

Kudelski SA has its registered offices in Cheseaux-sur-Lausanne. The company has been structured as a holding company since 1999 and its shares have been listed on the SIX Swiss Exchange since 2 August 1999.

The structure of Kudelski SA and its affiliated companies (the "Kudelski Group" or the "Group") is shown below – sections 1.1.1 - 1.1.3.

1.1.1. Description of the issuer's operational Group structure

From an operational point of view, the Group's activities are split into four divisions: Digital TV (formally named iDTV for Integrated Digital Television), Public Access, Cybersecurity and Internet of Things (IoT). The Finance, Legal, Human Resources, Intellectual Property and Corporate IT departments support the entire organization.

Each division is responsible for defining research and development, marketing, sales, services and operation except Internet of Things (IoT) division which is supported directly by Digital TV in these areas.

Until the end of the first semester 2018, the Digital TV division included four Product Units, including Content and Access Security, User Experience (UEX), Internet of Things (IoT) and Cybersecurity.

During the second semester 2018, the Group created two new divisions, Cybersecurity and Internet of Things (IoT), and merged the Content and Access Security and User Experience (UEX) product units.

The Public Access division is comprised of three units: Car Access; People Access (ski); People Access (events).

The Cybersecurity division is organized around four pillars of activity: advisory services, technology resale, managed security services and proprietary research and development.

The Internet of Things (IoT) division is organized around a platform security unit and a security services unit.

Results by sector are presented in note 6 to the Kudelski Group's 2018 financial statements.

<u>Main operating companies held directly or indirectly by Kudelski SA</u>

The list of the Group's main operating companies is provided in note 56 to the 2018 financial statements.

Additional information is also included in the 2018 Annual Report's key figures.

1.1.2. All listed companies belonging to the issuer's Group

Kudelski SA, the parent company of the Group, is a Swiss holding company based in Cheseaux-sur-Lausanne in the canton of Vaud. Kudelski bearer shares are listed on the SIX Swiss Exchange (Ticker: KUD; Sec. No 001226836/ ISIN: CH0012268360). As of December 31, 2018, the market capitalization of Kudelski SA bearer shares was CHF 281 497 324.

Kudelski SA and its subsidiaries did not hold any bearer shares of Kudelski SA.

1.1.3. The non-listed companies belonging to the issuer's consolidated entities

Information about the company name, registered office, share capital and holdings owned by non-listed Group companies included in the scope of consolidation is shown on pages 170 and 181 of the Kudelski Group's 2018 financial statements.

INTERNATIONAL PRESENCE*

** Indicates countries in which the Group maintained a representation*

		Digital TV	PUBLIC ACCESS	CYBERSECURITY	IOT
EUROPE	Germany	■	■	□	□
	Austria	■	■	□	□
	Belgium	□	■	□	□
	Spain	■	■	□	□
	France	■	■	□	■
	Ireland	□	■	□	□
	Italy	■	■	□	□
	Norway	■	□	□	□
	The Netherlands	■	■	□	□
	Portugal	■	□	□	□
	United Kingdom	■	■	□	□
	Russia	■	■	□	□
	Slovenia	■	□	□	□
	Sweden	□	■	□	□
	Switzerland	■	■	■	■
	Turkey	□	■	□	□
AMERICAS	Argentina	□	■	□	□
	Brazil	■	■	□	□
	Chile	□	■	□	□
	Mexico	□	■	□	□
	Peru	■	□	□	□
	USA	■	■	■	■
	Uruguay	□	■	□	□
AFRICA	South Africa	■	■	□	□
	Tunisia	□	■	□	□
MIDDLE EAST	United Arab Emirates	■	■	□	□
ASIA / PACIFIC	Australia	■	■	□	□
	China	■	■	□	□
	South Korea	■	□	□	□
	Hong Kong	■	■	□	□
	India	■	■	■	■
	Japan	■	■	□	□
	Malaysia	□	■	□	□
	Singapore	■	□	□	□
	Taiwan	■	□	□	□

1.2. Significant shareholders

As of 31 December 2018, Kudelski SA has two significant shareholders.

The first one consists of a group of shareholders related to the Kudelski family ("Family Pool") with a total of 59.01% of the voting rights of Kudelski SA (see the table below). The Family Pool comprises Mr. André Kudelski, Mrs. Marguerite Kudelski, Mrs. Isabelle Kudelski Haldy, Mrs. Irène Kudelski Mauroux and their respective descendants. Members of the Family Pool own the shares of Kudelski SA directly or through an investment structure of which they are the beneficiaries.

The second significant shareholder ("Kudelski Family outside the Pool*") is composed of two discretionary and irrevocable trusts, whose beneficiaries are members of the family of Mr. André Kudelski. As of December 31, 2018, the Kudelski Family outside the Pool held a total of 4.16% of the voting rights of Kudelski S.A. (see table below). In its capacity as a protector of these trusts, Eigenmann Associés in Lausanne, Switzerland, freely exercises the voting rights of the shares held by these trusts. To the Group's knowledge, no other shareholder or group of shareholders holds more than 3% of the voting rights.

All announcements made by Kudelski SA to the SIX Swiss Exchange can be found on the SIX Swiss Exchange website at the following address: http://www.six-swiss-exchange.com/shares/security_info_fr.html?id=CH0012268360CHF4 and then clicking on the "Principal shareholders" link.

1.3. Cross-shareholdings

The Group has no knowledge of the existence of any cross-shareholdings.

AS OF 31 DECEMBER 2018	REGISTERED SHARES	BEARER SHARES	SHARE CAPITAL HELD	VOTING RIGHTS
Family Pool	46 300 000	10 434 423	27.69%	59.01%
Kudelski Family outside the Pool*		4 000 000	7.33%	4.16%

** On the 27th of June, 2017, the Ad hoc publicity of the SIX Swiss Exchange has advised that the trustee beneficiaries are not required to report positions held by trusts.*

2. Capital structure

2.1. Amount of ordinary, authorized and conditional capital as at 31.12.2018

Ordinary capital

The share capital of Kudelski SA is CHF 436 326 984. It is divided into 49 910 873 bearer shares with a nominal value of CHF 8.00 per share and 46 300 000 registered shares with a nominal value of CHF 0.80 per share. Each share confers the right to one vote. All shares are fully paid up. Articles 6 to 7 of the articles of association of Kudelski SA, which can be found on the company's website at the following address: https://www.nagra.com/investors/publications also contain an authorized capital clause and two conditional capital clauses (see section 2.2 below).

2.2. Specific information concerning authorized and conditional capital

Authorized capital

According to Article 7 of the articles of association of Kudelski SA, the Board of Directors is authorized to increase the share capital in one or more stages until 15 March 2020 by a maximum amount of CHF 32 705 312 (representing 7.52% of the existing share capital) through the issuance of 3 768 164 bearer shares with a nominal value of CHF 8.00 per share and 3 200 000 registered shares with a nominal value of CHF 0.80 per share to be fully paid up. The issuance price, the nature of the contributions, the date from which new shares shall give entitlement to dividends and other modalities of any share issuance shall be determined by the Board of Directors. The preferential subscription rights of shareholders may be excluded and allotted to third parties by the Board of Directors with a view to acquiring companies or parts of companies or in order to finance the whole or partial acquisition of other companies in Switzerland or abroad. The statutory restrictions on the transfer of shares applies to new registered shares issued on the basis of the authorized capital.

Conditional capital
The articles of association of Kudelski SA (Articles 6 and 6bis) provide two clauses related to conditional capital for a total amount of CHF 83 223 064 (19.07% of the existing share capital) structured as follows:

- according to article 6 of the articles of association (conditional capital for option or subscription rights), the share capital of Kudelski SA can be increased by a maximum amount of CHF 3 223 064 (0.74% of the existing capital) through the issuance of a maximum of 402 883 bearer shares with a nominal value of CHF 8.00 per share, to be fully paid up, as and when the option rights or share subscription rights which will be granted to the employees of the company and of affiliated companies are exercised. There are no preferential subscription rights for shareholders. Share option or subscription conditions are determined by the Board of Directors. Issuance at a price below market conditions is authorized; and

- according to article 6bis of the articles of association (conditional capital for conversion rights), the share capital of Kudelski SA can be increased by a maximum amount of CHF 80 000 000 (18.33% of the existing capital) through the issuance of a maximum of 10 000 000 bearer shares with a nominal value of CHF 8.00 per share, to be fully paid up, as and when the conversion rights related to the convertible bonds of the company or its subsidiaries are exercised.

There are no preferential subscription rights for shareholders. The preferential subscription right of shareholders to the issuance of a convertible bond may be limited or excluded by decision of the Board of Directors on valid grounds, namely (a) if the convertible bonds are placed primarily in markets outside Switzerland, or (b) if the issuance proceeds contribute (i) to the financing or refinancing of acquisitions of companies or firms, (ii) to the financing of other strategic investments of the Group, or (iii) to financing the redemption of all or part of convertible bonds previously issued by the company or its subsidiaries.

If the convertible bond is not offered preferentially to shareholders, (a) the convertible bonds must be sold to the public under market conditions, (b) conversion rights must be exercised within a period of seven years from the day of issuance of the respective bond, and (c) the conversion price must be at least equivalent to market conditions at the time of the issuance of the bond.

As of December 31st, 2018, Kudelski SA had issued 26 724 bearer shares on the basis of conditional capital for option or subscription rights. These new bearer shares will be entered in the commercial register in the first three months of 2019, in accordance with Article 653h of the Code of Obligations. As of December 31st, 2018, the available amount of contingent capital for option and subscription rights was therefore CHF 3 223 064, representing a maximum of 402 883 bearer shares with a par value of CHF 8.00 each.

As at December 31st, 2018, Kudelski SA had not issued any option rights within the meaning of article 6 of the articles of association and no conversion rights related to debt obligations within the meaning of article 6bis of the articles of association. The conditional capital for option or subscription rights under article 6 of the articles of association may, however, be used in the context of the employee share purchase plan (see section 2.7 below).

2.3. Changes in the capital of Kudelski SA

IN THOUSAND CHF	31.12.18	31.12.17	31.12.16
Registered share capital	37 040	37 040	37040
Bearer share capital	398 287	398 078	396 965
Legal reserve	110 000	110 000	110 000
Capital contribution reserve	79 689	85010	97 925
Net profit	-57 418	-49 369	44 102
Retained earnings	88 198	145 616	200 423
TOTAL SHAREHOLDERS' EQUITY	**714 214**	**775 744**	**842 353**

For information relating to changes in capital which have taken place in 2018, 2017 and 2016, please refer to the Group's corresponding financial statements. These reports can be found on the Kudelski SA website at www.nagra.com/investors/publications. Information regarding the capital contribution reserve can be found under note 3.4 to the Kudelski SA financial statements in the Kudelski Group's 2018 financial statements.

2.4. Shares and participation certificates
The structure of the share capital of Kudelski SA is described in section 2.1 above.

In compliance with section 18, 3rd paragraph of the articles of association, class A and B shareholders are represented on the Board of Directors.

Kudelski SA does not have participation certificates.

2.5. Dividend-right certificates
Kudelski SA does not have dividend-right certificates.

2.6. Limitations on transferability and nominee registrations
Shares of Kudelski SA which are listed on the stock exchange are issued to the bearer. For these shares, the exercise of shareholder rights does not depend on an entry in the share register. There are therefore no statutory restrictions on their transfer or the exercise of shareholder rights through nominees.

The registered shares of Kudelski SA are not listed on the stock exchange. As of December 31st, 2018, they were all owned by the Kudelski "Family Pool" (see section 1.2 above). Pursuant to the articles of association of Kudelski SA, subject to the provisions of the Swiss Federal Act on Intermediated Securities, registered shares may be transferred upon delivery of the endorsed share certificate, subject to the approval of the Board of Directors and registration in the share register.

Article 9 of Kudelski SA's articles of association allows the Board of Directors to refuse the approval of the transfer of registered shares in one or more of the following cases:

a) If there exists good cause within the meaning of Article 685b, paragraph 2, of the Swiss Code of Obligations, i.e. if admission of the acquirer as a shareholder would be incompatible with the objective of Kudelski SA or could jeopardize the economic independence of the company. This would in particular be the case if the acquirer could prejudice the company directly or indirectly, or if transfer of the shares could jeopardize the existing majorities.

b) If the company offers the seller of the shares to acquire the shares at their fair value at the time of the request for its own account, for the account of other shareholders or for the account of third parties.

c) If the acquirer does not expressly declare that he is acquiring the shares in his own name and for his own account.

Article 9 of the articles of association also provides that if the shares are acquired by inheritance, division of an estate, marital property rights or as a result of debt enforcement proceedings, the company may only refuse its consent if it offers to acquire the shares at their fair value.

In the event of a dispute, the fair value is determined by the court having jurisdiction in the place where the company has its registered office. The company bears the costs of such valuation. The purchase offer is deemed accepted if the acquirer does not reject it within one month of having been informed of the fair value.

2.7. Convertible bonds and options

Convertible bond
The Kudelski Group has no outstanding convertible bond.

Options
The company has no outstanding options.

Share purchase plan
In 2004, the Kudelski Group introduced a share purchase plan for the employees of certain companies of the Group, enabling those employees to buy Kudelski SA bearer shares on favorable terms. Each participant can subscribe annually to this plan up to a maximum amount of 7.7% of his/her gross annual salary.

The share purchase price is the closing price of the Kudelski SA share listed on the SIX Swiss Exchange on the day of subscription with a discount of up to 42%. However, the shares are subject to a three-year blocking period from the date of purchase.

A chart showing employee participation in this plan for the year 2018 can be found in note 40 to the consolidated financial statements.

3. Board of Directors

The Board of Directors is the highest executive body of the company. It has the non-transferable and inalienable responsibilities set forth by the law and the articles of association. As of February 27, 2019, the Board of Directors consisted of seven members elected at the Annual General Meeting of Shareholders.

Three Committees, an Audit Committee, a Strategy Committee and a Nomination and Compensation Committee, have been created by the Board of Directors and are responsible for specific tasks (see sections 3.5.1 - 3.6).

Mr. Mark Beariault, who is not a member of the Board of Directors, was appointed as Corporate Secretary by the Board of Directors.

3.1. Members of the Board of Directors

	YEAR OF BIRTH	NATIONALITY	EDUCATION	FIRST ELECTION	END OF TERM OF OFFICE
ANDRÉ KUDELSKI* Chairman of the Board and Chief Executive Officer Executive Board Member	1960	Swiss	**DEGREE IN PHYSICAL ENGINEERING** Ecole polytechnique fédérale de Lausanne (EPFL)	1987	09.04.2019
CLAUDE SMADJA Deputy Chairman of the Board and Lead Director Non-Executive Board Member	1945	Swiss	**DEGREE IN POLITICAL SCIENCE** University of Lausanne	1999	09.04.2019
PATRICK FŒTISCH Non-Executive Board Member	1933	Swiss	**DOCTORATE IN LAW** University of Lausanne **BAR EXAM**	1992	09.04.2019
LAURENT DASSAULT Non-Executive Board Member	1953	French	**DEGREE IN BUSINESS LAW** **DEGREE FROM ESLSCA** Ecole supérieure libre des sciences commerciales appliquées, Paris	1995	09.04.2019
PIERRE LESCURE Non-Executive Board Member	1945	French	**DEGREE IN LITERATURE AND JOURNALISM** Centre de formation des journalistes, Paris	2004	09.04.2019
MARGUERITE KUDELSKI Non-Executive Board Member	1965	Swiss	**ENGINEERING DEGREE IN MICROTECHNOLOGY** **DOCTORATE IN MICROTECHNOLOGY** Ecole polytechnique fédérale de Lausanne **EXECUTIVE MBA** IMD Lausanne	2006	09.04.2019
ALEXANDRE ZELLER** Non-Executive Board Member	1961	Swiss	**DEGREE IN ECONOMICS AND SOCIAL SCIENCES** University of Lausanne **ADVANCED MANAGEMENT PROGRAM** Harvard Business School, Boston	2007	26.02.2019
ALEC ROSS Non-Executive Board Member	1971	American	**DEGREE IN HISTORY** Northwestern University, USA	2014	09.04.2019

* *André Kudelski is the only member of the Board of Directors to combine his Board duties with an executive function within the Group (Chief Executive Officer). Apart from Mr. Kudelski, no other member of the Board of Directors performed any executive function within the Group during the past three years.*

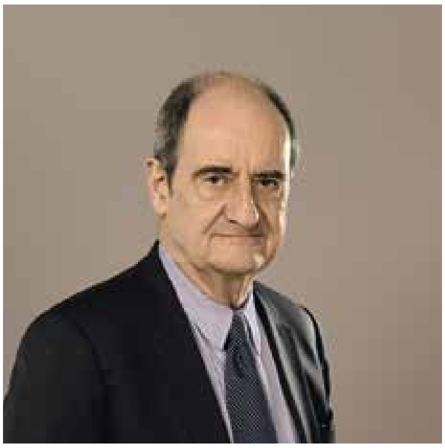
** *On February 26th, 2019, Alexandre Zeller resigned from the Board of Directors, following his decision to join Lombard Odier as a Managing Partner.*


ANDRÉ KUDELSKI


CLAUDE SMADJA


PATRICK FŒTISCH


LAURENT DASSAULT


PIERRE LESCURE


MARGUERITE KUDELSKI


ALEXANDRE ZELLER


ALEC ROSS

ANDRÉ KUDELSKI

André Kudelski began his career in 1984 as a Research & Development (R&D) engineer with Kudelski SA. In 1986, after an assignment for a few months in Silicon Valley, he returned to work in the family business firstly as Pay TV Product Manager, then as Director of Nagravision SA, a company in charge of the Pay TV sector. Mr. Kudelski then took over from his father Stefan Kudelski and from 1991 became Chairman and Chief Executive Officer of the parent company Kudelski SA.

Current mandates Kudelski Group:

- Kudelski Corporate, Inc., in USA, Chairman and Chief Executive Officer
- Kudelski Security, Inc., in USA, Executive Chairman
- Kudelski Security Holdings, Inc., in USA, Chairman and Chief Executive Officer
- Nagravision SA, in Switzerland, Chief Executive Officer
- NAGRA PLUS SA, in Switzerland, Chairman and Chief Executive Officer
- Nagra USA, Inc., in USA, Chairman and Chief Executive Officer
- NagraStar LLC, in USA, Co-Chairman
- OpenTV, Inc., in USA, Chairman and Chief Executive Officer
- SKIDATA AG, in Austria, Member of the Supervisory Board
- SmarDTV SA, in Switzerland, Chairman (until 31st of January 2019)
- Nagravision AS, in Norway, Chairman (Conax AS was renamed Nagravision AS) (until September 2018)

Important mandates outside the Kudelski Group:

- Comité d'economiesuisse, in Switzerland, member
- École polytechnique fédérale de Lausanne (EPFL), (Switzerland), Strategic Advisory Board member
- Greater Phoenix Economic Council (GPEC), in USA, member of the non-profit company
- Innosuisse, in Switzerland, Chairman
- Publicis Groupe, in France, member of the Supervisory Board, Chairman of the Remuneration Committee, member of the Nomination Commitee and of the Audit Committee
- Swiss-American Chamber of Commerce, in Switzerland, Vice-Chairman
- Swiss Board Institute (Swiss foundation), member of the Strategic Advisory Board

- Aéroport International de Genève, in Switzerland, first Vice-Chairman (until 30th of November 2018)

CLAUDE SMADJA

After 15 years with Télévision Suisse Romande (TSR) as Deputy Editor of the Information Department, Claude Smadja joined the management of the World Economic Forum in 1987, a position that he held until 1992. He then returned to TSR as Director of Information until 1996, in which year he was appointed Managing Director of the World Economic Forum. In June 2001, Claude Smadja set up his own strategy consultancy Smadja & Smadja, a strategic advisory firm that collaborates on strategic issues with multinationals and government bodies and organizes international events.

Main mandate outside the Kudelski Group:

- Smadja & Smadja Strategic Advisory SA, in Switzerland, Board member

Mr Smadja has never been part of a management body of the Kudelski Group. Neither he nor any organization he represents has any material business relationship with Kudelski SA or any of its subsidiaries.

PATRICK FŒTISCH

Patrick Foetisch is an independent lawyer specializing in contracts and finance at an international level. He acts as legal counsel to Group companies as and when required, bringing to bear his in-depth knowledge of their activities to provide assistance and legal advice.

Current mandates Kudelski Group:

- Nagravision SA, in Switzerland, Chairman
- Nagra France SAS, Chairman
- NAGRA PLUS SA, in Switzerland, Board member
- SKIDATA AG, in Austria, member of the Supervisory Board

Main mandate outside the Kudelski Group:

- AMRP Handels, in Switzerland, Chairman

LAURENT DASSAULT

After a career spanning thirteen years in the banking sector, Laurent Dassault joined the Dassault Group in 1992 where he holds important positions. Today he assumes around thirty mandates, including those of the Dassault Group, mainly in the financial, industrial and wine-producing sectors.

Current mandates Groupe Industriel Marcel Dassault SAS (France)[1]:

- Arqana SAS, in France, advisor to the Directoire (Managing Board)
- Artcurial Développement Sàrl, in France, Co-manager (Co-gérant)
- DASSAULT BELGIQUE AVIATION S.A, in Belgium, Board member
- DASSAULT INVESTESSEMENTS Sàrl, in France, Managing Director
- Dassault Wine Estates SASU, in France, Chairman
- Immobilière Dassault SA, in France, Chairman of the Supervisory Board
- Groupe Industriel Marcel Dassault SAS, in France, Directeur Général Délégué and Board member
- MARCEL DASSAULT TRADING CORPORATION (USA), Board member
- MIDWAY AIRCRAFT CORPORATION, in USA, Chairman
- Rond-Point Immobilier SAS, in France, member of the Supervisory Board
- SERGE DASSAULT TRADING CORPORATION (USA), Board member
- SOGITEC Industries SA, in France, Board member

Other important mandates outside the Kudelski Group:

- 21Centrale Partners SA, in France, member of the Supervisory Board
- Catalyst Investments II L.P., in Israel, Chairman of the Advisory Board
- LA MAISON SA, in Luxemburg, member of the Supervisory Board
- Laurent Dassault Rond Point (LDRP) SCI, in France, Associé gérant
- Laurent Dassault Rond Point II (LDRP II) SAS, in France, Chairman
- Lepercq, de Neuflize & Co. Inc., in United States, Board member
- L. REAL ESTATE SCA SICAR, in Luxemburg, Chairman of the Investors Committee
- PECHEL INDUSTRIES SAS, in France, member of the Monitoring Committee
- SAGARD PRIVATE EQUITY PARTNERS SAS, in France, member of the Advisory Committee
- WARWYCK Private Bank Ltd, in Mauritius, Board member
- Amis du FRAC (Fonds Régional d'Art Contemporain en Aquitaine), in France, Chairman
- Amis du Musée Centre Pompidou, Association, in France, Board member
- Association pour la Diffusion Internationale de l'Art Français (ADIAF), Board member
- Association pour la Mémoire des Enfants cachés et des Justes (AMECJ), Board member and Treasurer
- Fonds pour Paris, association, in France, Board member
- Organisation pour la prévention de la Cécité (OPC), Association, in France, Board member
- Société des Amis des musées d'Orsay & de l'Orangerie, in France, Board member

Mr. Dassault has never been part of a management body of the Kudelski Group. Neither he nor any organization he represents has any significant business relationship with Kudelski SA or any of its subsidiaries.

PIERRE LESCURE

Save for a two year period (1972-1974) as a television news presenter for Antenne 2, Pierre Lescure spent the first fifteen years of his professional career with the RTL, RMC and Europe1 radio stations where he successively occupied a variety of positions, in particular Deputy Editor and Director of Programs. In 1981 he returned to television as News Director of Antenne 2. From 1984, he worked with André Rousselet on the launch project for the pay TV channel CANAL+ where he was appointed Director and then Chief Executive Officer. From 1993 to 2002, he was Chairman and Chief Executive Officer of the CANAL+ Group. From 2000 to 2002 Pierre Lescure was also co-Chief Executive Officer of Vivendi-Universal. Since 2002, he has been Chairman and Chief Executive Officer of AnnaRose Production SAS, a company active in audio-visual and cinematographic production as well as in communication consultancy services. From 2008 to 2014, he directed the Théâtre Marigny in Paris. Since 1st July 2014, Pierre Lescure has served as President of the Cannes Festival. Since September 2014, Pierre Lescure has been a regular TV columnist for the daily show "C à vous" which is broadcast on France 5, the French TV channel.

Current mandates with the Festival de Cannes[1]:

- Association française du festival international du film (known as "Le Festival de Cannes"), in France, Chairman
- Société de gestion d'opérations commerciales pour le festival international du film SASU, (France), Président

Current Mandates exercised for the Festival de Cannes:

- Fonds de dotation du festival international du film, in France, Chairman

Other important mandates outside the Kudelski Group:

- ANNAROSE PRODUCTIONS Sàrl, in France, Chairman and CEO
- Molotov SAS, in France, Chairman

Mr. Lescure has never been part of a management body of the Kudelski Group. Neither he nor any organization he represents has any significant business relationship with Kudelski SA or any of its subsidiaries.

[1] *As per section 18 of the articles of association and as described below in section 3.3, mandates for legal entities under common control are deemed to constitute a single mandate.*

MARGUERITE KUDELSKI

Marguerite Kudelski's professional career began at the EPFL's Laboratory of Electromechanics and Electrical Machines, where she worked from 1991 to 1999. During this period she also worked as a research and development engineer within the Nagra Audio division of the Kudelski Group. In 1999, she became the Head of R&D with Précel SA in Neuchâtel (then a Kudelski Group company) before being appointed as CEO and Board member of the same company in 2000, positions that she occupied until the end of 2002. After completing a number of marketing and financial analysis projects for NagraID in 2003, she took responsibility for certain key projects for the Group within the Finance Department from 2004 to 2006.

From 2007 to 2011, Marguerite Kudelski worked as a consultant, offering services such as business development and management consulting. In December 2011, she took over the management of Nagra Audio, which was transferred by the Group to Audio Technology Switzerland SA (ATS) for which she serves as Chairman of the Board of Directors. Until the end of 2014, Marguerite Kudelski was in charge of the R&D department of ATS. Since 2017, Marguerite Kudelski is a Board member of Bovay & Partenaires SA and Wire Art Switzerland SA. She is also a member of the Expert Committee of Switzerland Innovation.

Main mandates outside the Kudelski Group:

- AudioTechnology Switzerland SA, in Switzerland, Chairman
- Bovay & Partenaires SA, in Switzerland, Board member
- Swiss Innovation Park, foundation, in Switzerland, member of the Expert Committee
- Wire Art Switzerland SA, in Switzerland, Board member

Apart from the mandates and functions mentioned above, neither Ms. Kudelski nor any organization she represents has any significant business relationship with Kudelski SA or any of its subsidiaries.

ALEXANDRE ZELLER

Alexandre Zeller began his professional career in 1984 with Nestlé as a Management Auditor. Three years later, he joined Credit Suisse, where he carried out various duties in the field of loans and asset management at a Swiss and international level, while at the same time managing various branches. In 1999, he was appointed to the Executive Board and then as CEO of Credit Suisse Private Banking. In November 2002, Alexandre Zeller joined the Banque Cantonale Vaudoise as Chairman of the Executive Board. From July 2008 to February 2012, he was CEO of HSBC Private Bank (Switzerland) and, as from October 2010, Regional CEO Europe and Middle East. Since March 2012, Alexandre Zeller has served as an independent director. From May 2014 to September 2016, Alexandre Zeller was Chairman of the Board of SIX Group SA. From the 1st October 2016 to February 2019, Alexandre Zeller was Chairman of Credit Suisse (Suisse) SA and from 2017 to February 2019 he was also a member of the Board of Directors of Credit Suisse Group SA. Since February 2019, Alexandre Zeller resigned from the Board of Directors of Kudelski SA and all his mandates with the Credit Suisse and has joined Lombard Odier as a Managing Partner.

Current mandates with the Credit Suisse (until February 2019)[1]:

- Credit Suisse (Suisse) SA, Chairman
- Credit Suisse Group SA, in Switzerland, Board member, member of the Governance and Nominations Committee, member of the Compensation Committee and member of the Innovation and Technology Committee

Current mandates exercised for the Credit Suisse:

- Swiss Finance Council, in Switzerland, Chairman

Main mandates outside the Kudelski Group:

- Central Swiss Classic Cars SA (Suisse), Chairman
- Garage Central SA, in Switzerland, Chairman
- Maus Frères SA, in Switzerland, Board member

Mr. Zeller has never been part of a management body of the Kudelski Group. Neither he nor any organization he represents has any significant business relationship with Kudelski SA or any of its subsidiaries.

1 *As per section 18 of the articles of association and as described below in section 3.3, mandates for legal entities under common control are deemed to constitute a single mandate.*

ALEC ROSS

Alec Ross began his professional career in 1994 as a teacher with the Teach for America program in underprivileged neighborhoods of Baltimore. He joined Enterprise Community Partners (formerly Enterprise Foundation) two years later, a non-profit organization based in Columbia, Maryland, which develops affordable housing throughout the United States, where he held the position of Special Assistant to the Chairman. In 2000, Alec Ross co-founded the One Economy Corporation, a non-profit organization which organizes programs to help low-income people worldwide, for which he worked for eight years. In parallel, he joined the presidential campaign of President Barack Obama in 2007 as the Coordinator of the Technology, Media & Telecommunications Policy Committee and then as Project Manager and member of the Technology, Innovation and Government Reform Policy Group. From April 2009 to March 2013, Alec Ross was Senior Advisor for innovation to US Secretary of State Hillary Clinton.

Since then, he has been Senior Fellow at the School of International and Public Affairs of Columbia University and a Distinguished Senior Fellow at John Hopkins University, and he is the author of the New York Times bestseller "The Industries of the Future" (Simon & Schuster) published in February 2016. He also advises investors, enterprises and government officials, helping them to understand the influence of factors located at the crossroads of geopolitics, markets and disruptive technologies.

Main mandates outside the Kudelski Group:

- AmidaTechnology Solutions Inc., in USA, Advisory Board member
- Amplo (USA), Board Partner
- Andela Inc., in USA, Advisory Board member
- Jobbatical Inc., in Estonia, supervisory Board member
- Leeds Equity Partners LLC, in USA, Advisory Board member
- Teach for America, in USA, Advisory Board member
- Telerivet Inc., in USA, Board member

Mr. Ross has never been part of a management body of the Kudelski Group. Neither he nor any organization he represents has any significant business relationship with Kudelski SA or any of its subsidiaries.

3.2. Other activities and vested interests

Please refer to the individual profiles of Board members under section 3.1 above.

3.3. Articles of association provisions on the number of permitted activities

In compliance with section 18 of the articles of association, members of the Board of Directors may exercise no more than five mandates in senior management or administrative bodies of third-party legal entities whose shares are listed on a stock exchange and no more than ten mandates in other third-party legal entities. They may also exercise up to ten mandates in senior management or administrative bodies of non-profit or charitable third-party legal entities.

A company is not considered a third-party legal entity according to this provision, and is therefore not taken into account when calculating the maximum number of mandates mentioned above, if:

1. it controls another company directly, indirectly or jointly with third parties for which a mandate is being carried out, or is controlled by such company; or
2. it does not have to be entered in the Commercial Register or in a corresponding foreign register (e.g., corporations and public entities, non-profit associations, religious foundations or family foundations); or
3. the mandate is carried out at the company's request.

Mandates carried out for legal entities directly or indirectly controlled by a single individual or legal entity, or by a single group of individuals or legal entities acting in concert, or at the request of one of these individuals or legal entities, are deemed to constitute a single mandate for the purposes of this provision.

Members of the Board of Directors must notify the Chairman of positions they hold at third-party legal entities.

3.4. Election and terms of office

The Board of Directors is composed of one to ten members. Board members are individually elected at the Annual General Meeting for a period of one year. The term of office ends on the day of the next Annual General Meeting. All members may be reelected. The year of the first election as well as the end of term of office for each member are mentioned under section 3.1 above.

The articles of association of Kudelski SA do not contain any special provisions regarding the election of the Chairman.

3.5. Internal organization structure

The Board of Directors performs inalienable and nontransferable duties prescribed by the law (see section 3.6 below) with the support of its three committees: Audit, Strategy, and Nomination and Compensation. The internal organization of the Board of Directors is defined in the articles of association and in the bylaws. The bylaws are available on request to the Corporate Secretary of the Kudelski Group by calling +41 21 732 07 31 or by post at the following address: 22-24 route de Genève, 1033 Cheseaux-sur-Lausanne.

3.5.1. Allocation of tasks within the Board of Directors

Except for the Chairman who is elected at the Annual General Meeting, the Board of Directors establishes itself by appointing its Vice Chairman. The Board of Directors may delegate the management of the company to one of its members who shall act as Chief Executive Officer of the company. If the Chairman is elected to exercise the function of Chief Executive Officer, the Board of Directors shall also elect a "Lead Director" from among its members. The management of the company is delegated in full to the Chief Executive Officer or to the Executive Board. A Corporate Secretary may be appointed from outside of the Board of Directors.

The Chairman of the Board of Directors leads the discussions of the Annual General Meeting, ensures that the minutes are taken, is in charge of the protocol and directs meetings of the Board, informs the Board members of the business development and the company's financial results, represents the company with administrative and/or judicial authorities, subject to mandates granted by the Board of Directors to a third party, an officer or one of its members.

The Vice Chairman may call meetings of the Board of Directors. He or she shall chair Board meetings and the Annual General Meeting if the Chairman is absent.

According to Article 25 of Kudelski SA's articles of association, the Board of Directors may delegate the management of the company to the Chief Executive Officer, unless otherwise stipulated by the law. In his or her management, the Chief Executive Officer acts according to the directives issued by the Board of Directors and in the interests of the company. He or she also provides before each meeting of the Board of Directors a report outlining key aspects of the current business situation.

In the Group's current structure, Mr. André Kudelski holds the positions of Chairman of the Board of Directors and Chief Executive Officer. This situation guarantees a rapid and fluid information and decision-making process, enabling the company to respond operationally and strategically at the pace required by developments in the sectors of activity pursued by the Group. As the functions of Chairman and Chief Executive Officer are held by the same person, the Board of Directors has appointed Claude Smadja as Lead Director.

The Lead Director ensures the independence of the Board of Directors vis-à-vis the Chairman and Chief Executive Officer as well as the management of the company; he or she also chairs the Board of Directors' meetings if a conflict arises between the interests of the Chairman and Chief Executive Officer and those of the company. The Lead Director may independently call and lead a meeting of the independent members of the Board of Directors if the interest of the company requires an independent deliberation. He or she ensures a process for evaluating the performance of the Chairman of the Board of Directors and the Chief Executive Officer.

3.5.2. Members list, tasks and area of responsibility for each committee of the Board of Directors

With the exception of the Nomination and Compensation Committee, whose members are elected individually by the Annual General Meeting, the Committees are constituted by the Board of Directors which appoints their members and chairpersons. The Board Committees meet as often as is necessary. The Board of Directors delegates to its committees supervisory and preparatory tasks within their sphere of competence, subject to the provisions of the articles of association. The Committees report on a regular basis to the Board of Directors. Committee reports are used as a decision-making tool by the Board of Directors.

Audit Committee

The Audit Committee is composed of at least three non-executive members of the Board of Directors. At least one of the Committee members must have proven accounting experience. All members have knowledge or practical experience in the field of financial management.

The Audit Committee meets at least three times a year. The Audit Committee may at any time request detailed risk analyses of the Group's various sectors of activity or in any specific area of its choice.

President / Member	AUDIT COMMITTEE	STRATEGY COMMITTEE	NOMINATION AND COMPENSATION COMMITTEE
André Kudelski		Member	
Claude Smadja	President	Member	Member
Laurent Dassault			
Patrick Fœtisch			President
Marguerite Kudelski	Member		
Pierre Lescure		President	Member
Alexandre Zeller*	Member	Member	Member
Alec Ross		Member	

* *On February 26th, 2019, Alexandre Zeller resigned from the Board of Directors, following his decision to join Lombard Odier as a Managing Partner.*

The Committee calls on experts outside the Board of Directors where this is deemed necessary for the successful completion of its tasks.

The Audit Committee supervises the company's internal financial reporting process and ensures its integrity, transparency and quality. It ensures the relevance and consistency of the company's accounting methods. It reviews reports of the company's internal audit department and makes appropriate recommendations to the Board of Directors.

It assesses the quality of work of external auditors. The Audit Committee reviews the auditing fees, ensures execution of the yearly audit plan and assesses the efficiency of the auditors in identifying and solving issues related to the Group or to the financial statements. The Audit Committee provides appropriate recommendations to the Board of Directors concerning renewal of the engagement of external auditors or, where necessary, their replacement. The Committee ensures that the recommendations of external auditors are monitored and ensures their independence.

The Committee provides regular reports offering its recommendations to the Board of Directors with regards to the adequacy, effectiveness and accuracy of accounting procedures.

<u>Strategy Committee</u>
The Strategy Committee is composed of at least four members of the Board of Directors, including the Chairman and Vice Chairman. It meets at least twice a year.

The purpose of the Strategy Committee is to review and define Group strategy. It develops strategic options with a view to ensuring the long-term enhancement of the Group's competitive position and its shareholder value. To this end, the Strategy Committee examines market trends and the Group's competitive position, considers and proposes future growth initiatives, especially through investments, divestments and reorganization.

To define strategic choices, the Strategy Committee relies upon information supplied by the management, the members of the Board of Directors and, if deemed necessary, by external advisors.

The Strategy Committee periodically reviews the appropriateness of the Group's objectives, structure and organization designed to achieve the strategic objectives. The Strategy Committee makes proposals to the Board of Directors, which has ultimate decision-making power on strategy. It reviews also research and development projects and evaluates the competitiveness, value and coherence of such projects in relation to the strategic objectives.

<u>Nomination and Compensation Committee</u>
The Nomination and Compensation Committee is composed of at least three non-executive members of the Board of Directors, who are elected individually at the Annual General Meeting upon recommendation of the Board of Directors. It meets at least twice a year.

The Nomination and Compensation Committee assists the Board of Directors in setting up and periodically reviewing the company's compensation policy and strategy, its guidelines and its performance criteria. The Committee is responsible for setting the compensation for each member of the Board of Directors and the Executive Board. The exception to this principle is the compensation of the members of the Nomination and Compensation Committee, which is fixed by the Board of Directors itself.

The Nomination and Compensation Committee also assists the Board of Directors in making proposals at the Annual General Meeting regarding the compensation of the members of the Board of Directors and of the Executive Board (refer to section 5: Compensation, shareholdings and loans). The Committee presents proposed director nominations to the Board of Directors, which submits them to the Annual General Meeting. At the request of the Chief Executive Officer, the Committee reviews applicants for Executive Board positions or promotions and may interview candidates if desired.

3.5.3. Working methods of the Board of Directors and its Committees

The cooperation and allocation of competencies between the Board of Directors and its Committees are described in section 3.5.2.

The Board of Directors meets at least four times a year, but as often as is required for the proper conduct of business. In 2018, the Board of Directors and its Committees met as follows:

Board of Directors	7 times
Strategy Committee	4 times
Audit Committee	3 times
Nomination and Compensation Committee	2 times

The participation of members of the Executive Board to the discussion and decisions of the Board of Directors are described in section 3.7 below. Average attendance at Board meetings exceeded 92%. Meetings of the Board of Directors lasted on average four hours. Most Committee meetings lasted on average three hours.The auditor in charge of the internal audit attended parts that were relevant for him of two of the Audit Committeee meetings.

3.6. Definition of areas of responsibility

Please see also section 3.5.1 for details of the internal organization of the Board of Directors and the position of Chief Executive Officer.

Board of Directors

The Board of Directors:

- is responsible for the overall management of the company and issues all necessary directives;
- determines the organization of the company;
- determines the organization of the accounting, financial control and financial planning systems as required for management of the company;
- appoints and dismisses persons entrusted with managing and representing the company;
- exercises overall supervision of the persons entrusted with managing the company, in particular with respect to compliance with the law, articles of association, regulations and directions given;
- prepares the Compensation report;
- compiles the annual report, prepares the Annual General Meeting and implements its resolutions;
- takes decisions on further capital calls with respect to shares that are not fully paid up (article 634a of the Code of Obligations);
- takes decisions regarding the assessment of an increase in capital and relevant changes to the articles of association (articles 651 para. 4, 651a, 652a, 652g, 652h, 653g, 653h of the Code of Obligations); and
- notifies the court in the event that the company is over-indebted.

Executive Board

The Board of Directors has delegated full management of the company to the Chief Executive Officer, subject to legal requirements and the above-mentioned internal organizational structure. The Chief Executive Officer therefore coordinates the operations of the Group companies.

3.7. Information and control instruments vis-à-vis the Executive Board

Because of the nature of the industry, mechanisms for controlling Group management and information feedback systems are very important. The Kudelski Group has therefore put in place information and control instruments, at different levels, which it improves on a continuous basis. These instruments concern strategy, operations, finance, legal, intellectual property, human resources and information management.

Supervision

- The Chief Executive Officer submits a report to the Board members prior to each meeting outlining key aspects of the current business situation (key contracts, sales trends, market trends, human resources) for each Group entity and activity.

- Board members receive weekly or quarterly press digests concerning the Group, depending on the amount of relevant newsflow; they may also receive other informative documents concerning the Group and its entities, as well as a message from the Chief Executive Officer whenever the CEO deems it necessary.

- At least twice a year, members of the Executive Board are invited to present their activities to the members of the Board of Directors. Members of the Board of Directors may also ask questions directly to company executives as and when they see fit.

- At each Board meeting, if justified by the business situation and depending on the agenda, members of the Executive Board, top managers of the companies of the Group or in charge of specific areas, as well as outside experts, are invited to present specific subjects to the Board of Directors.

Operations and strategy

- Executive Board members coordinate their action and take decisions related to the management of the Group during "Executive Board Committee" meetings, the frequency and duration of which are tailored to the needs of the Group. This committee generally met once every two weeks for an average of three hours in 2018.

- Management of the three divisions Digital TV, Cybersecurity and IoT is supported by an "Executive Board Group Operations" committee composed of the Chief Executive Officer (CEO), the Chief Financial Officer (CFO), the Chief Marketing Officer (CMO), the Chief Operating Officer (COO), as well as senior members of each division. This committee meets in principle twice a month for 2.5 hours and reviews in particular selected relevant topics for each division. In addition, the members of the Executive Board and the General Counsel, Head of Legal Affairs and Corporate Secretary, the Senior Vice President, Head of Human Resources, the Senior Vice President, Intellectual Property and the Senior Vice President Executive Affairs meet once a month for at least thirty minutes as part of the "Executive Board Group Functions" committee to discuss relevant topics relating to these functions and not directly related to operations. Finally, the synchronization between the Executive Board and the "Executive Board Group Operations" and the "Executive Board Group Functions" committees is achieved within the "Executive Board Group Management" committee which meets every month for at least one hour.

- Management of the Public Access division is supported by the Supervisory Board which includes a Kudelski Group Board member, the Chairman and CEO of the Group, the CFO of the Group and a non-executive member (currently, Mr. Charles Egli, a former Executive Board member) who is Chairman of this Supervisory Board. This Supervisory Board supervises the whole division. The Supervisory Board meets at least four times a year for an average of 3.5 hours and reviews the specific and pertinent topics for the Public Access division. Senior Managers of the Public Access division establish regular reports for the Supervisory Board and, depending on the topics, are invited to take part in Board meetings.

- For certain specialized activities of the Group, ad hoc committees composed of a cross-disciplinary team of internal experts may be created to evaluate market, strategic, operational, legal and financial risks and opportunities. These ad hoc committees manage processes relating to the evaluation of such risks and opportunities, propose actions and monitor implementation of their decisions. There are several committees such as the security committee, privacy committee and innovation committee. Decisions, activities, information and comments arising from these committees are conveyed to the Executive Board members and other top managers of the Group as appropriate.

Finance

- The Controlling group conducts regular financial and operational analyses intended to identify operational and financial risks throughout the value chain of the various activities of Group companies and proposes and coordinates necessary improvements and corrective actions. This entity makes available a platform of analytical services to the Executive Board and operational departments.

- Every month, the Controlling group prepares a number of reports which are made available to the management. Those reports are then adapted and sent to each regional head and business unit with the corresponding analytical metrics. The reports include: a report providing an overview of the Group's profit and loss broken down by activity and showing profit trends and budget over-runs/shortfalls, with adaptations based on quarterly revisions of the annual forecast by entity, as well as their operational indicators; a sales report including region, client and sales type-specific analysis as well as their respective margins; a report on the operational cost trends broken down by cost center, a report on the financial development of key projects and a monthly and quarterly report on the cash-flow situation for the Group and for each segment for the current year and the coming year.

- In addition, the Group has an internal control system based on the COSO (Committee of Sponsoring Organizations of the Treadway Commission) reference system. This system aims at providing "reasonable assurance" as regards the performance and efficiency of operations, the reliability of financial information and reporting, and compliance with laws and regulations in force. A team is in charge of internal controls. The various processes are periodically reviewed and analyzed by the external auditors (PricewaterhouseCoopers SA).

Legal

– The Legal Department provides advice and consultation as part of the Group's decision-making processes and as part of the activities of all Group departments in order to better mitigate and manage legal risks as well as to ensure appropriate levels of compliance with the Group's policies.

– The Legal Department is involved with the negotiation and approval of contracts entered into by Group companies and maintains contract management and electronic archiving tools to ensure efficient tracking of contracts.

– The Legal Department is also responsible for overseeing litigation, government investigations and other regulatory matters for Group companies.

Intellectual Property

– The Intellectual Property Department is responsible for protecting, developing, managing and licensing the Group's technologies and intellectual property portfolio. In connection with this responsibility, the Intellectual Property Department briefs senior management on operational and strategic matters in the field of intellectual property that impact Group activities.

Human Resources

– The HR Department is responsible for recruiting the talent necessary for the Group's needs, developing and promoting high performing employees and ensuring successions. In particular, it maintains a catalog of training tailored to the needs of the Group, managers and employees.

– The Human Resources Department is in charge of the processes and the implementation of performance evaluation tools related to the objectives of the Group, the different departments and each employee.

– In respect of the Group's values, the Human Resources Department advises employees and senior managers from all Group departments on a daily basis in matters relating to human resources.

Information Management

– The Corporate IT department has developed and implemented a series of policies and procedures concerning IT security (for the use of computer systems, data protection, monitoring, systems management back-up, etc.) to set appropriate risk limits and to provide a reliable Information System environment.

– The Corporate IT department regularly reviews the infrastructure of its systems to ensure their evolution in accordance with the new standards and rules that apply to them.

– The information systems infrastructure is monitored 24/7 by the teams of the Cyber Fusion Center of Kudelski Security.

Main identified risks and treatment

The main identified risks are listed below. The various information and control instruments of the Board of Directors with respect to the Executive Board described above in section 3.7 are used and allow monitoring of each risk appropriately and according to its criticality for the Group.The communications of the Chairman and Chief Executive Officer to the Board of Directors ensure regular and appropriate information flow and the activities of the committees of the Board of Directors guarantee appropriate supervision by the members of the Board of Directors of the decisions of the Executive Board.

– The business segments in which the Kudelski Group's Digital TV division operate are evolving rapidly and constantly require the Kudelski Group to offer products and services that are flexible enough to respond quickly to the commercial and technological changes of the digital media industry.

– The Public Access business demonstrates significant seasonality, including for example within its mountain segment, with the highest revenues typically generated in the last two months of the year. Many of the factors that impact the timing of the segment's revenue generation are outside the control of the Group, including factors such as weather conditions, changes to project scope and customer budget decisions. To the extent these factors impact the timing of customer orders and projects, particularly in the last quarter of the year, the results of operations of the Public Access business for the year can be materially impacted.

- The two new divisions (Cybersecurity and Internet of Things) are in an early phase of development and as such both fields of activities bring substantial losses. The Group has identified attractive opportunities in these markets. However, while the Group believes it has unique assets to profitably address these fields of activities, it will take an extended period of time for these activities to reach break even. Given the nature and degree of maturity of these activities, there is no assurance that the relevant strategies will be successful.

- The markets in which the Group operates and the customers to whom the Group sells its products and services are subject to significant regulation by governmental agencies around the world, particularly in the areas of data privacy, consumer protection, media content distribution and cybersecurity. Significant changes to or uncertainty regarding government regulations may affect our business, our product development decisions and the willingness of market participants to adopt our products and services.

- The Group provides its products and services in many countries with different currencies, but payments are made mainly in US dollars and Euros. The Group's suppliers are paid in different currencies. Fluctuations in foreign exchange rates may affect the Group's results of operations and financial position.

- Kudelski Group's results could be impacted if the security provided by its products is compromised and if the Group fails to put in place adequate counter-measures.

- The operating results and growth of the Kudelski Group could decrease if the customer base of the Group's customers does not continue to increase.

- The Group's success depends on its ability to attract and retain qualified personnel. Competition for hiring and retaining highly qualified personnel is high.

- A leak of confidential, proprietary or personal information held by the Group could adversely affect the Group's activities.

4. Executive Board

4.1. Executive Board members

MAURO SALADINI, ANDRÉ KUDELSKI, PIERRE ROY AND MORTEN SOLBAKKEN
FROM LEFT TO RIGHT

	DATE OF BIRTH	NATIONALITY	POSITION	EDUCATION
ANDRÉ KUDELSKI	1960	Swiss	**Chairman and Chief Executive Officer (CEO) of the Group**	**Degree in Physical Engineering** Ecole polytechnique fédérale de Lausanne (EPFL)
MAURO SALADINI Executive Vice President of the Group	1966	Swiss	**Chief Financial Officer (CFO)**	**Degree in Electrical Engineering** Ecole polytechnique fédérale de Zurich **MBA,** INSEAD, France
PIERRE ROY Executive Vice President of the Group	1952	Swiss	**Chief Marketing Officer (CMO), Digital TV**	**Degree in Business Management** Hautes études commerciales (HEC) de l'Université de Lausanne
MORTEN SOLBAKKEN Executive Vice President of the Group	1970	Norwegian	**Chief Operating Officer (COO), Digital TV**	**Master of Science** Norwegian University of Science and Technology (NTNU)

ANDRÉ KUDELSKI

Please refer to section 3.1 above

MAURO SALADINI

Mauro Saladini started his professional career in 1990 as a financial services consultant with Accenture. In 1995, he joined Thema Consulting, where he set up the Zurich subsidiary and took responsibility for cash-flow and risk management activities. In 1997, he joined McKinsey & Co, where he became a partner in 2001. He worked in particular on corporate finance and strategy projects relating to various industries, mainly media and telecommunications. In addition, Mauro Saladini was in charge of the Swiss Media Practice and joint-head of the European Media Practice. He has been the Chief Financial Officer and Executive Vice President of the Kudelski Group since 1 February 2003.

Current mandates Kudelski Group:

- Nagravision AS, in Norway, Board member (formerly named Conax AS)
- i Wedia, in Switzerland, Chairman
- Kudelski Corporate, Inc., in USA, Board member
- Kudelski Corporate Holding, Inc., in USA, Board member
- Kudelski Norway AS, Board of Directors, Chairman
- Kudelski Security Inc., in USA, Board member
- Kudelski Security Holdings, Inc., in USA, Board member
- Nagra IP, Inc., in USA, Board member
- Nagra Media Beijing Ltd., in China, Supervisor
- Nagra Media Germany GmbH, in Germany, Executive Board member
- Nagra Media UK Limited, in United Kingdom, Board member
- Nagra USA, LLC., in USA, Board member
- OpenTV, Inc., in USA, Board member
- SKIDATA AG, in Austria, Vice Chairman of the Supervisory Board
- Nagravision SA, in Switzerland, Executive Board member (until 18th of January 2017)

PIERRE ROY

Pierre Roy began his professional career with Procter & Gamble as a Financial Analyst in 1975. Following this early experience, he joined IBM in 1977 as a Sales Engineer. In 1979, he began his international career with Digital Equipment Corporation, where he fulfilled various management positions at the European headquarters in Geneva and also abroad, in the Finance and Administration, Marketing and Business Management departments. He joined Kudelski SA in 1992 as Managing Director of Nagra Audio, Business Development Director of Nagravision and Managing Director of Précel (at the time a Kudelski Group company). In 1999 he started his own corporate consultancy firm working in the telecommunications sector while continuing to collaborate on strategic projects for Nagravision. In 2003, he was appointed Chief Operating Officer for the Digital Television sector of the Kudelski Group and Executive Vice President. On January 1, 2018, Pierre Roy was appointed Chief Marketing Officer (CMO), Digital TV.

Current mandates Kudelski Group:

- Nagravision AS, in Norway, Board member (formerly named Conax AS)
- Kudelski Security, Inc, in USA, Board member
- Kudelski Security Holdings, Inc., in USA, Board member
- Kudelski Corporate, Inc., in USA, Board member
- Nagravision India Private Limited, in India, Board member
- Nagra Media Germany GmbH, in Germany, Board member
- Nagra Media UK Ltd, in the United Kingdom, Board member
- Nagravision Italia s.r.l., in Italy, Board member
- Nagravision Iberica SL, in Spain, Board member
- Nagra USA LLC., in USA, Board member
- Nagravision Asia Pte Ltd., in Singapore, Board member
- Nagra Media Korea LLC, in South Korea, Board member
- Nagra Media Pvt Ltd, in India, Board member
- Nagra Media (Taiwan) Co. Ltd, Board member
- Nagra Media Beijing Ltd, in China, CEO
- Nagra Media Beijing Ltd., Shanghai Branch, in China, Director
- Nagra Media Japan KK, in Japan, Board member
- Nagra Media Australia Pty. Ltd., in Australia, Board member
- Nagravision SA, in Switzerland, Board member and Executive Board member
- NexGuard Labs B.V., in Netherlands, Board member
- NexGuard Labs Netherlands B.V., in Netherlands, Board member
- NexGuard Labs France S.A.S., in France, Board member
- NexGuard Labs USA, Inc., in USA, Board member
- OpenTV Australia Holdings Pty Ltd, in Australia, Board member
- OpenTV, Inc., in USA, Board member
- SmarDTV SA, in Switzerland, Director

MORTEN SOLBAKKEN

Morten Solbakken started his professional career in 1995 as a satellite system engineer in Telenor International. From there on, he held numerous positions in the Telenor structure dealing in particular with strategy and business development around the pay TV assets as well as the management of Telenor's ownership in international satellite organizations. From 2007 to 2011, he was Chief Strategy Officer in Telenor Broadcast Holding AS (owner of Canal Digital, Telenor Satellite, Norkring and Conax). In March 2011, Solbakken was appointed COO at Telenor Broadcast Holding, and Chairman of the Boards of Conax, Telenor Satellite and Norkring. Morten Solbakken joined Conax as acting CEO in September 2011 and was made CEO from December 2011 – driving a transformation of the company including the process which led to the acquisition of Conax by the Kudelski Group in April 2014. He became COO, Digital TV and Executive Vice President of the Kudelski Group on the 1st of January 2018.

Current mandates Kudelski Group:

- Nagravision AS, in Norway, Board member and CEO (formerly named Conax AS)
- Digital Video Holding AS, in Norway, Chairman of the Board
- Digital Video Drift AS, in Norway, Chairman of the Board
- Digital Video Health AS, in Norway, Chairman of the Board
- NexGuard Labs B.V., in Netherlands, Director
- NexGuard Labs Netherlands B.V., in Netherlands, Director
- NexGuard Labs France S.A.S., in France, Director
- Kudelski Corporate, Inc., in USA, member of the Board of Directors
- Kudelski Norway AS, in Norway, executive Board Member and Managing Director
- Nagra USA, LLC., in USA, member of the Board of Directors
- Open TV, Inc., in USA, member of the Board of Directors
- SmarDTV SA, in Switzerland, member of the Board of Directors
- Techno Venture AS, in Norway, Chairman of the Board and Managing Director
- Conax Access Systems Pvt Ltd, in India, Chairman of the Board (until December 31st, 2017)

Other mandates:

- Telenor Satellite AS, in Norway, Member of the Board of Directors

4.2. Other activities and vested interests

Please refer to the individual profiles of members of the Executive Board under section 4.1 above.

4.3. Articles of association on the number of permitted activities

In accordance with section 25 of the articles of association, members of the Executive Board may exercise no more than two mandates in senior management or administrative bodies of third-party legal entities whose five mandates in other third-party legal entities. They may also exercise up to ten mandates in senior management or administrative bodies of non-profit or charitable third-party legal entities.

A company is not considered a third-party legal entity according to this provision, and is therefore not taken into account when calculating the maximum number of mandates mentioned above, if:

1. it controls the company directly, indirectly or jointly with third parties, or is controlled by it; or
2. it does not have to be listed in the Commercial Register or in a corresponding foreign register (e.g., corporations and public entities, non-profit associations, religious foundations or family foundations); or
3. the mandate is carried out at the company's request.

Mandates carried out for legal entities directly or indirectly controlled by a single individual or legal entity, or by a single group of individuals or legal entities acting in concert, or at the request of one of these individuals or legal entities, are deemed to constitute a single mandate for the purposes of this provision.

For members of the Executive Board who are also members of the Board of Directors, the maximum number of mandates in the senior management or administrative bodies of third-party legal entities is governed exclusively by Article 18, paragraphs 7 to 10 and as mentioned above in section 3.3 of this report.

4.4. Management contracts

As of December 31st, 2018, Kudelski SA and its subsidiaries had not entered into any management contract with companies outside the Group.

5. Compensation, shareholdings and loans

For details relating to the compensation, shareholdings and loans to members of the Board of Directors and Executive Board of Kudelski SA, please refer to the 2018 compensation report.

6. Shareholders' participation rights

The provisions of the articles of association governing the participation rights of shareholders are in compliance with the law as set out in the Swiss Code of Obligations. The articles of association of Kudelski SA may be found on the Kudelski Group website via the following link: https://www.nagra.com/investors/publications

6.1.Voting rights restrictions and representation

6.1.1. In accordance with the articles of association of Kudelski SA, there are no restrictions on voting rights and no statutory Group clauses or rules on granting exceptions.

6.1.2. There are currently no statutory provisions on granting instructions to an independent representative or on any form of participation in the General Meeting by electronic means.

6.2. Quorum required by the articles of association

The articles of association of Kudelski SA do not impose any majority higher than contemplated by law for resolutions of the General Meeting of Shareholders.

The General Meeting is validly constituted regardless of the number of shareholders present and/or the number of shares represented.

6.3. Convocation of the General Meeting of Shareholders

The General Meeting of Shareholders must be called at least 20 days before the date of the meeting. The notice of the General Meeting is published in the Swiss Official Gazette of Commerce.

6.4. Inclusion of items on the agenda

Items on the agenda are mentioned in the notice. Regarding rules for adding items to the agenda, the articles of association of Kudelski SA do not contain provisions that differ from the Swiss Code of Obligations, namely Art. 699 CO, which provides that "shareholders who represent shares totaling a nominal value of CHF 1 million* may request that an item be included in the agenda. The calling and the inclusion of an item on the agenda must be requested in writing listing the items and motions".

* This represents 0.23% of the capital of Kudelski SA or 0.13% of the voting rights.

6.5. Entries in the share register

Kudelski SA shares that can be traded on the SIX Swiss Exchange are bearer shares; consequently there is no register of shareholders for this category of shares.

7. Changes of control and defense measures

7.1. Duty to make an offer

Kudelski SA has no provision in its articles of association on "opting-out" within the meaning of Article 125 para. 3 or 4 of the Federal Act on Financial Market Infrastructure (FMIA) or «opting-up» within the meaning of Article 135 para. 1 LIMF. This means that if a shareholder reaches the limit laid down by the Swiss Financial Market Infrastructure Act (art. 135 LIMF: $33^{1/3}$% of the voting rights), he will be required by the same law to submit a takeover bid on all bearer shares of the company that it does not yet hold, at the minimum price defined in article 135 para. 2 LIMF.

7.2. Clauses on changes of control

To the knowledge of the Group, no such agreement exists.

8. Auditors

8.1. Duration of the mandate and term of office of the lead auditor

The auditors of Kudelski SA are PricewaterhouseCoopers SA (Lausanne). Some companies affiliated with the Group are audited by other auditors. The auditors were reappointed by the Annual General Meeting of Shareholders of Kudelski SA of 15 March 2018 for a statutory period of one year. The PricewaterhouseCoopers SA mandate began in 1985. It has been under the responsibility of Mr. Luc Schulthess since 1 January 2017. The auditor in charge is replaced at the latest seven years after the year in which he/she first occupied this position, as specified in Article 730a paragraph 2 of the Swiss Code of Obligations.

8.2. Auditing fees

The Kudelski Group paid PricewaterhouseCoopers for auditing services for the year 2018 the sum of CHF 1 150 000. Auditing services are understood to mean the work required each year to examine the consolidated accounts of the Group and its subsidiaries and to prepare the reports required under the laws of each country.

8.3. Additional fees

The Kudelski Group paid PricewaterhouseCoopers for additional services for the year 2018 the sum of CHF 455 000 representing CHF 413 846 for tax advisory services and CHF 41154 for other additional services. Additional services mean in particular services such as the occasional accounting review of transactions and other services such as review of new or modified accounting methods.

8.4. Information instruments pertaining to the external audit

The aim of the Audit Committee of the Board of Directors is to provide effective and regular supervision of the company's financial reporting processes in order to ensure their integrity, transparency and quality. To this end, it is responsible for monitoring the work, including additional services, of the external auditors.

PricewaterhouseCoopers provides the Audit Committee with a detailed report before each Committee meeting regarding the execution and results of its work for the Kudelski Group, proposals to correct or improve identified problems and the implementation status of decisions made by the Audit Committee.

The auditor's representatives, including the auditor in charge of the Group's audit, are regularly invited to take part in meetings of the Audit Committee as external participants.

Representatives from PricewaterhouseCoopers were invited this year to all three meetings of the Audit Committee. They do not participate in any discussions and decisions of the Audit Committee regarding the auditors. For more information on the Audit Committee, and particularly on the selection, evaluation and independence criteria please refer to sections 3.5.2 and 3.5.3 above.

9. Information policy

The Kudelski Group keeps investors regularly informed of the following developments:

- progress of business and major new contracts;
- changes in the management of the Group;
- acquisitions or sales of companies; and
- half-year and annual financial results.

Press releases are issued in compliance with the rules in force of the SIX Swiss Exchange concerning factual publicity and are available on the Group's website simultaneously with their publication. A link on the home page of the Group's web site allows direct access to press releases. The Group communicates as often as necessary in this manner. Press releases are generally published in French and in English. In certain specific cases, a German version is also provided. They are available in these languages on the website.

Persons wishing to receive Kudelski Group press releases may subscribe to a mailing list using a form available on the Kudelski Group website https://www.nagra.com/media/subscription.

Financial results are presented to investors and financial analysts during a press conference held twice a year. Persons invited can also follow the conference by audio webcast.

The Group's website is a regularly updated source of information. The Investor Relations section contains a list of the principal dates of the corporate calendar (publication of results, Annual General Meeting and presence at major trade shows) as well as the Group's main publications (annual report and half-year report). Mr. Santino Rumasuglia is in charge of the investor relations (+1 480 430 9952, +41 79 373 66 71, santino.rumasuglia@nagra.com).

The Group's main website links and e-mail addresses are on the last page of this report.

Important dates

- 9 April 2019: Annual General Meeting, Cheseaux-sur-Lausanne;

- 21 August 2019: Publication of the Interim Financial Report and Press Conference.

COMPENSATION REPORT

1. Introduction

This report discloses certain information required by the SIX Swiss Exchange Directive on Information relating to Corporate Governance and the Ordinance against Excessive Compensation at Listed Joint-Stock Companies (OaEC). Sections 7 and 8 of this Compensation Report are audited. Unless otherwise mentioned, the information provided in this report reflects the situation as of 31 December 2018.

This Compensation Report refers to the articles of association of the Company, which are available at the following address: https://www.nagra.com/investors/publications

2. Compensation approval by General Meeting

In compliance with section 28 of the articles of association, upon the proposal of the Board of Directors, each year the Annual General Meeting shall separately approve the maximum aggregate amount of compensation awarded to the Board of Directors and the Executive Board. The Board of Directors shall submit a separate proposal to the vote of the Annual General Meeting regarding:

- the maximum aggregate amount granted to the Board of Directors for the compensation of its members for the period up to the following Annual General Meeting; and
- the maximum aggregate amount granted to the Executive Board for the fixed and variable compensation of its members for the following periods, respectively: as regards fixed compensation, the period from the beginning of July of the current fiscal year through the end of June of the following fiscal year; as regards variable compensation, the current fiscal year.

The Board of Directors may submit proposals to the Annual General Meeting regarding compensation for different periods affecting all members of the Board of Directors or the Executive Board or only certain members.

Votes at the Annual General Meeting on compensation-related proposals are binding. If one or more of the aforementioned amounts are rejected at the Annual General Meeting, the Board of Directors shall make an alternative proposal for approval at the same Annual General Meeting or a subsequent General Meeting. Compensation payments for activities by members of the Board of Directors and the Executive Board in other legal entities directly or indirectly controlled by the Company are authorized. Compensation paid by these legal entities is included as part of the compensation submitted for approval at the Annual General Meeting.

The Company, or any other legal entity directly or indirectly controlled by it, may pay compensation prior to its approval at the Annual General Meeting, subject to subsequent approval and an obligation to repay such compensation in the event it is not approved at the General Meeting.

In compliance with section 29 of the articles of association, if the maximum global compensation of the Executive Board already approved at the General Meeting is insufficient to cover compensation of members appointed after this approval, the Company or legal entities controlled by it, may grant an additional amount for the compensation period already approved to remunerate and/or compensate for benefits the new member gave up or lost due to his/her change in employment. The additional amount shall not exceed 150% of the position replaced or the highest fixed compensation of the other members of the Executive Board on a pro rata temporis basis up until the end of the period for which the compensation was already approved.

3. Principles of compensation

The Compensation and Nomination Committee has adopted a compensation policy aligning the interests of Executive Board members with the Group's mid- and long-term strategy and shareholders' interests. Pursuant to this policy, compensation is based on the following principles:

- coherence of compensation levels with the tasks, workload and responsibilities assumed;
- appropriate match between compensation levels and current business, trends and evolution of the market and competitive environment of the Group as well as the mid- and long-term strategy of the Group;

- global assessment (not individually-based) of compensation to encourage a long-term vision of the Group's interests; and

- for Executive Board members, pay for performance to support both short-term and long-term Group objectives.

The Compensation and Nomination Committee (see section 3.5.2 of the Corporate Governance report) strives to maintain a competitive remuneration policy that ensures global compensation of the Executive Board members is comparable with those of their peers at multinational companies operating in the fields of digital television, cyber-security and the Internet in Switzerland, in high technology centers, such as the West Coast of the United States, and in Western Europe. In addition, the Compensation and Nomination Committee aims to limit dilution of the capital of the Company.

The Compensation and Nomination Committee does not use benchmarks or compensation consultancy services. It makes its own assessment of the market practices of the following types of companies:

- high technology companies listed on the Nasdaq or NYSE;

- high technology companies listed on the Euronext;

- high technology companies listed on the SIX Swiss Exchange and belonging to the Swiss Performance. Index (SPI), Technology sector; and

- privately held high technology companies.

Specifically, the Committee assesses those companies with which the Group competes for highly qualified people and which are of a similar size and face comparable operational complexity. Such assessments also take into account the business environment in which the Group operates and the rapid pace of evolution required for success.

Due to the unique characteristics of the Group, including the breadth and variety of its products and services, the rapid evolution of its technologies and markets and the fast-moving competitive environment in which the Group operates, the Compensation and Nomination Committee considers that it is difficult to make direct comparisons with other companies and believes that the aforementioned elements are sufficient for purposes of its compensation policy.

The level of remuneration of the non-executive members of the Board of Directors is determined by their role with the Board of Directors and its Committees. The elements of their compensation are set out in section 4.1.

The total annual compensation of members of the Executive Board includes a fixed and a variable component. The variable component depends on the Group's results (both economic and strategic), the level of responsibility assumed and individual performance, which factors can in the aggregate have a positive or negative impact on the variable compensation of each Executive Board member. Variable compensation helps align the interests of Executive Board members with company strategy and shareholders' interests and ultimately seeks to reward value creation. The variable component is not expressed as a percentage of fixed compensation (see also section 4.2).

Currently, there are no provisions providing for a particular allowance or benefit – including with regard to blocking or vesting periods applicable to shares – in the event of a termination of the employment contract of an Executive Board member, in the event of a departure of a member of the Board of Directors or in the case of a change of control of the company. Executive Board members have employment contracts with an unlimited term and with eleven month's termination notice expiring on the last day of a calendar month, both of which help promote stability within the management of the Group.

4. Elements of compensation

Section 7 sets forth the compensation paid to the members of the Board of Directors and Executive Board in accordance with OaEC requirements.

The elements of compensation for non-executive members of the Board of Directors are different than for executive members of the Board of Directors and the Executive Board members.

4.1. Members of the Board of Directors
In compliance with section 30 of the articles of association, the compensation of non-executive members of the Board of Directors is composed of a fixed annual fee, paid in cash, and an expense allowance.

Specific tasks or services performed for the Group by a non-executive member of the Board of Directors that fall outside of such member's Board responsibilities are generally compensated in cash and based on arm's length terms and conditions.

4.2. Members of the Executive Board
In compliance with section 30 paragraphs 4, 31 and 32 of the articles of associations, the total annual compensation of the executive members of the Board of Directors and of the Executive Board members includes a fixed salary and a variable component.

Compensation is generally paid in a combination of cash, shares and payment in kind (including provision of a company car and reimbursement of all or part of health insurance premiums). The fixed salary is in principle paid in cash. The Compensation and Nomination Committee has discretionary authority to determine how the variable component is paid, taking into account such criteria as the dilutive effect of any share issuances.

A maximum of 50% of the variable compensation may be paid in Kudelski SA bearer shares that are blocked for a period of three or seven years at the election of the Executive Board member. Each Executive Board member may also elect to participate in the Group's share purchase plan adopted in 2004 (see section 2.7 of the Corporate Governance Report: Share purchase plan).

The total compensation of each Executive Board member is linked to his/her individual performance as well as the strategic, economic and operational performance of the Group. Key factors impacting variable compensation levels include the overall performance of the Group and its divisions, performance against the applicable member's department budget, contribution to strategic initiatives, achievement of individual objectives and the quality of management by such Executive Board member. Objectives of the Group are discussed and approved on a yearly basis by the Board of Directors, Strategy Committee, Compensation and Nomination Committee and Chief Executive Officer. Once approved, Group objectives are shared with the Executive Board members who, in addition to their individual performance objectives, shall have responsibility for achieving such objectives as determined by the Chief Executive Officer in agreement with the Compensation and Nomination Committee.

The Compensation and Nomination Committee assesses the achievement of Group objectives and of each Executive Board member's individual performance objectives. The Committee has discretionary authority to determine the relative weighting of the Group objectives and individual performance objectives as part of its assessment for determining the total compensation of each Executive Board member. In addition, the Compensation and Nomination Committee has the discretion to apply a positive or negative performance factor to each individual performance objective, which recognizes achievement or failure of individual performance objectives. This practice is designed to encourage each member of the Executive Board to optimize his/her performance against objectives.

5. Procedure for determining compensation

The Compensation and Nomination Committee determines the compensation policy and sets the compensation of each member of the Executive Board and the Board of Directors, other than the compensation of the Committee members which is decided by the full Board of Directors (see section 3.5.2 of the Corporate Governance Report, Compensation and Nomination Committee section). The Compensation and Nomination Committee reports every year on its activities to the Board of Directors.

The Chairman of the Board of Directors is invited to take part in the Committee's discussions related to compensation, other than discussions relating to the Chairman's own compensation.

Each year, the Compensation and Nomination Committee reassesses its compensation policy and determines the annual compensation of the Board of Directors and Executive Board members. Generally, this occurs during the first quarter of the year. During the same period, the Chief Executive Officer reviews the performance objectives of the Executive Board and presents his recommendations to the Board of Directors. The full Board of Directors will also determine the compensation of the members of the Compensation and Nomination Committee.

6. Special information regarding 2018

6.1. Changes to the compensation policy during the year under review

No major change was made to the Group's compensation policy for the 2018 financial year. Shares granted to Executive Board members as part of their variable compensation were blocked for periods of three or seven years (see section 7).

6.2. Special information regarding 2018

The compensation of each Executive Board member is determined globally, and the variable compensation of the Executive Board members is not based on the fixed salary as specified in section 3. The variable compensation of each Executive Board member represented between 35.0% and 48.0% of his total compensation, except for the Chief Executive Officer (see section 7).

There is no pre-determined ratio between the variable component and the fixed salary; such ratio may be different from year to year. The different ratios of fixed to variable compensation among Executive Board members are based on their function and responsibilities within the Group and market practices.

7. Compensation granted to members of the board of directors and members of the executive board

Total compensation paid directly or indirectly by Kudelski SA or one of its affiliated companies in 2018 and 2017 to former and current members of the Board of Directors and Executive Board is described below. Compensation does not include reimbursement for business expenses incurred by members in the course of performing their responsibilities or representation allowances, which are not considered as compensation by the Swiss fiscal authorities.

The value of shares granted is determined according to the market value at the time of grant, as quoted on the SIX Swiss Exchange and adjusted by a discount factor of 6% for each year that such shares are blocked from sale or transfer. Such discount factor is determined in accordance with the principles applied by Swiss fiscal authorities. 58,138 (2016: 52,112) bearer shares were allocated to members of the Executive Board with a seven-year blocking period and 31,673 (2016: 7,376) with a three-year blocking period. Shares granted as part of variable compensation for fiscal years 2018 and 2017 were granted at the beginning of the respective following year.

YEAR 2018	BASE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN KUDELSKI SHARES (NUMBER)	VARIABLE COMPENSATION IN KUDELSKI SHARES CHF	OTHER * CHF	TOTAL 2018 CHF
BOARD OF DIRECTORS						
KUDELSKI ANDRÉ Chairman	550 000	–	–	–	–	**550 000**
SMADJA CLAUDE Vice-chairman	130 000	–	–	–	6 190	**136 190**
DASSAULT LAURENT Member	40 000	–	–	–	1 805	**41 805**
DEISS JOSEPH*** Member	12 500	–	–	–	–	**12 500**
FOETISCH PATRICK Member	60 000	–	–	–	115 210 **	**175 210**
KUDELSKI MARGUERITE Member	50 000	–	–	–	3 353	**53 353**
LESCURE PIERRE Member	120 000	–	–	–	5 644	**125 644**
ZELLER ALEXANDRE Member	110 000	–	–	–	7 377	**117 377**
ROSS ALEC Member	50 000	–	–	–	3 353	**53 353**
TOTAL BOARD MEMBERS	1 122 500	–	–	–	142 932	**1 265 432**

YEAR 2018	BASE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN KUDELSKI SHARES (NUMBER)	VARIABLE COMPENSATION IN KUDELSKI SHARES CHF	OTHER **** CHF	TOTAL 2018 CHF
MANAGEMENT						
KUDELSKI ANDRÉ CEO	604 680	2 338 248	35 000	147 903	182 633	**3 273 463**
OTHER MEMBERS****	1 742 686	800 079	54 811	266 750	55 218	**2 864 734**
TOTAL MANAGEMENT	2 347 366	3 138 327	89 811	414 653	237 851	**6 138 197**

* *This section includes social security charges.*

** *Compensation paid for his legal services rendered to several Group companies.*

*** *Mr. Joseph Deiss was a member of the Board of Directors until the Annual General Meeting held on the 15th of March 2018.*

**** *This section includes long service benefits and benefits in kind as well as expenditures constituting or increasing pension benefits.*

Two members of the management received their remuneration in USD, one member received part of the 2018 fixed remuneration in USD, which was converted using a 0.9792 exchange rate, and another received part of the 2018 fixed remuneration in NOK, which was converted using a 12.0282 exchange rate.

YEAR 2017	BASE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN KUDELSKI SHARES (NUMBER)	VARIABLE COMPENSATION IN KUDELSKI SHARES CHF	OTHER * CHF	TOTAL 2017 CHF
BOARD OF DIRECTORS						
KUDELSKI ANDRÉ Chairman	551 000	–	–	–	3 353	554 353
SMADJA CLAUDE Vice-chairman	130 000	–	–	–	6 190	136 190
DASSAULT LAURENT Member	40 000	–	–	–	2 683	42 683
DEISS JOSEPH Member	60 000	–	–	–	2 362	62 362
FOETISCH PATRICK Member	60 000	–	–	–	147 087 **	207 087
KUDELSKI MARGUERITE Member	50 000	–	–	–	3 353	53 353
LESCURE PIERRE Member	120 000	–	–	–	5 644	125 644
ZELLER ALEXANDRE Member	110 000	–	–	–	7 377	117 377
ROSS ALEC Member	50 000	–	–	–	3 353	53 353
TOTAL BOARD MEMBERS	1 171 000	–	–	–	181 403	1 352 403

YEAR 2017	BASE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN CASH CHF	VARIABLE COMPENSATION IN KUDELSKI SHARES (NUMBER)	VARIABLE COMPENSATION IN KUDELSKI SHARES CHF	OTHER *** CHF	TOTAL 2017 CHF
MANAGEMENT						
KUDELSKI ANDRÉ CEO	605 500	2 693 500	40 000	335 190	215 488	3 849 678
OTHER MEMBERS****	1 315 547	538 584	19 488	179 528	147 078	2 180 737
TOTAL MANAGEMENT	1 921 047	3 232 084	59 488	514 718	362 566	6 030 415

* *This section includes social security charges.*

** *Compensation paid for his legal services rendered to several Group companies.*

*** *This section includes long service benefits and benefits in kind as well as expenditures constituting or increasing pension benefits.*

**** *Morten Solbakken is a member of the Management since the 1st January 2018. His compensation is not part of this compensation report.*

One member of the management receives his remuneration in USD, and another received part of the 2017 fixed remuneration in USD, which was converted using a 0.9845 exchange rate.

8. Shareholdings and loans granted to members of the Board of Directors and members of the Executive Board

In compliance with section 33 of the articles of association, loans may be granted to a member of the Board of Directors or the Executive Board only under market conditions and, at the time they are granted, may not exceed the most recent total annual compensation of the member in question. Moreover, in compliance with section 28, paragraph 6, the Company, or any other legal entity directly or indirectly controlled by it, may pay compensation prior to its approval at the Annual General Meeting, subject to subsequent approval and an obligation to repay such compensation in the event it is not approved at the Annual General Meeting.

As of December 31, 2018 and 2017, no guarantees, loans, advances or borrowings in favor of members of the Board of Directors, members of the Executive Board or individuals closely related to such persons were outstanding.

9. Retirement benefits in addition to pension benefits schemes granted to members of the Board of Directors and members of the Executive Board

In compliance with section 34 of the articles of association, the Company, or legal entities controlled by the Company, may grant retirement benefits in addition to pension benefits schemes offered by the Company, or legal entities controlled by it, to members of the Board of Directors or the Executive Board. For a given annual compensation period, the value of such retirement benefits may not exceed the most recent total annual compensation of the member in question.

In addition, the Company or entities controlled by the Company may grant an annuity payment to former members of the Board of Directors or the Executive Board as retirement benefits in addition to pension benefits schemes offered by the Company or legal entities controlled by the Company. For each individual affected, the amount paid in this manner may not, for a one year period, exceed 30% of the last annual base salary of the person in question prior to his/her retirement. In lieu of an annuity, the Company may pay the retirement benefit as a lump sum payment, in which case, the amount is calculated according to actuarial calculation methods.

As of December 31, 2018 and 2017, no retirement benefits in addition to pension benefits schemes were in favor of members of the Board of Directors, members of the Executive Board or in favor of individuals closely related to such persons.

REPORT OF THE STATUTORY AUDITOR ON THE REMUNERATION REPORT 2018

TO THE GENERAL MEETING OF KUDELSKI SA, CHESEAUX-SUR-LAUSANNE

We have audited the accompanying remuneration report of Kudelski S.A. (chapters 7 and 8) for the year ended 31 December 2018.

Board of Directors' responsibility

The Board of Directors is responsible for the preparation and overall fair presentation of the remuneration report in accordance with Swiss law and the Ordinance against Excessive Compensation in Stock Exchange Listed Companies (Ordinance). The Board of Directors is also responsible for designing the remuneration system and defining individual remuneration packages.

Auditor's responsibility

Our responsibility is to express an opinion on the accompanying remuneration report. We conducted our audit in accordance with Swiss Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the remuneration report complies with Swiss law and articles 14–16 of the Ordinance.

An audit involves performing procedures to obtain audit evidence on the disclosures made in the remuneration report with regard to compensation, loans and credits in accordance with articles 14–16 of the Ordinance. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements in the remuneration report, whether due to fraud or error. This audit also includes evaluating the reasonableness of the methods applied to value components of remuneration, as well as assessing the overall presentation of the remuneration report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, the remuneration report of Kudelski S.A. for the year ended 31 December 2018 complies with Swiss law and articles 14–16 of the Ordinance.

pwc

PricewaterhouseCoopers SA

Luc Schulthess Audit expert Auditor in charge	Mario Berckmoes Audit expert

Lausanne, 26 February 2019

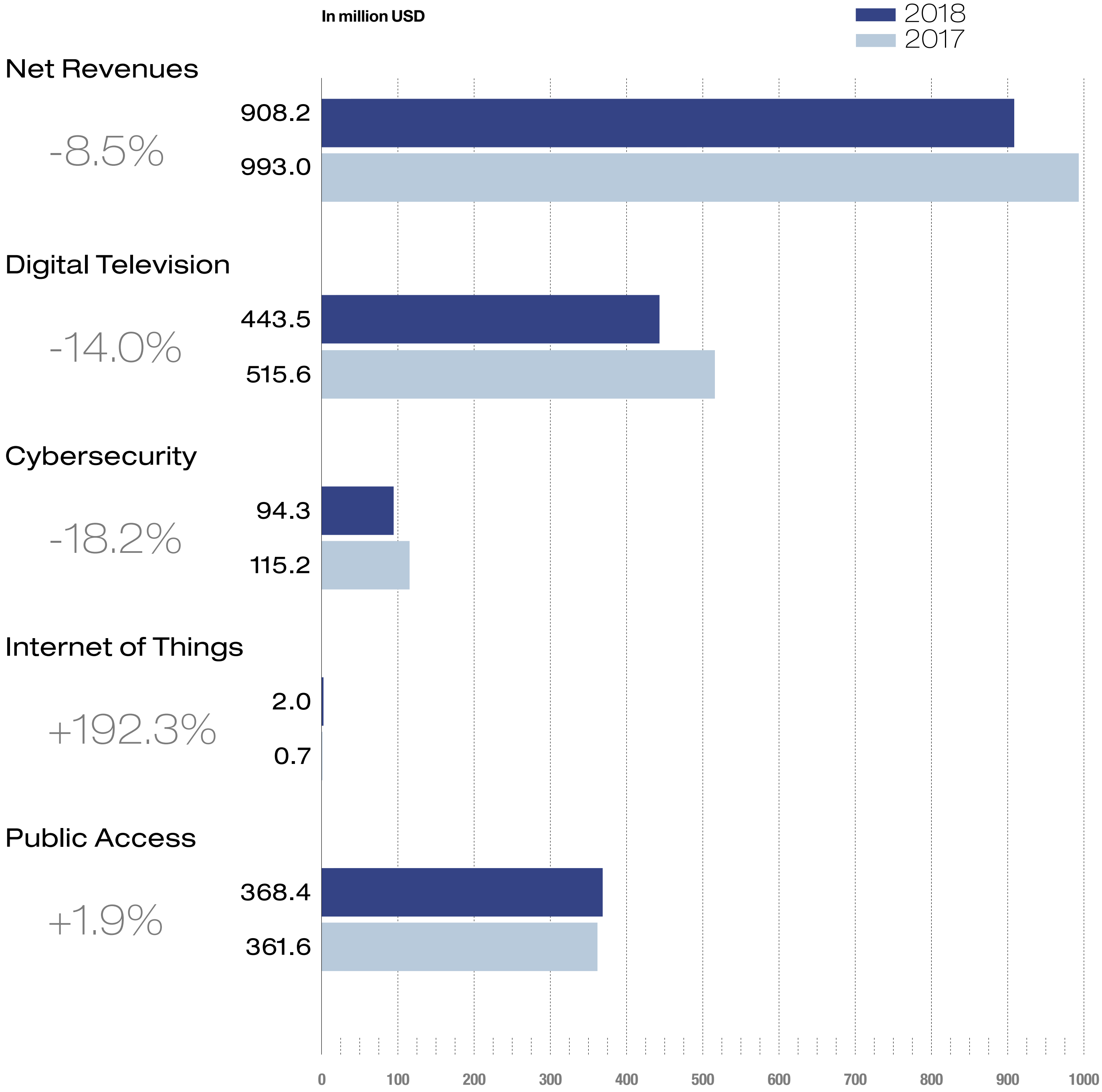
FINANCIAL OVERVIEW AND STATEMENTS

In 2018, total revenues and other operating income decreased from USD 1,012.1 million to USD 919.7 million. Net revenues for the Group decreased by 8.5% to USD 908.2 million, mainly driven by the Digital TV segment, which posted a USD 72.1 million decline, and the Cybersecurity segment, which experienced a USD 20.9 million year-on-year decline.

IoT generated marginal revenues as the segment's current primary focus is on the development of a secure IoT platform.

At USD 6.8 million, Public Access growth was lower than target, reflecting in particular weak performance in the US market, the main growth driver of the previous years.

GROUP REVENUES
BREAKDOWN BY SEGMENT



With the publication of its 2018 financial statements, the Group commences presentation of its results based on four segments: Digital TV, Cybersecurity, Internet of Things (IoT) and Public Access. While Public Access has been disclosed in prior financial statements, the former Integrated Digital TV segment is now divided into three new segments.

Kudelski Group segments

The Digital TV segment provides secure, open, integrated platforms and applications for broadcast, broadband and mobile networks, enabling compelling and personalized viewing experiences. Such platforms allow digital TV operators and content providers to offer a wide range of high value-added pay TV services.

The Cybersecurity segment provides end-to-end cybersecurity solutions to a wide variety of customers across multiple sectors. The portfolio is based on four pillars: advisory services, technology, managed security services and proprietary R&D. The Cybersecurity segment leverages the Group's historical strengths in R&D to fuel a highly differentiated product and service offering across each of the four pillars.

With the IoT segment, Kudelski offers a resilient and easy-to-integrate and operate security solution. The Group's IoT offering includes the Kudelski IoT Security Platform, a pre-integrated, end-to-end solution providing device and data protection, and Kudelski IoT Security Services, such as advanced lab services and managed security services. In the Public Access segment, SKIDATA, the Group's subsidiary, designs and delivers integrated solutions to provide seamless, user-friendly access for people and vehicles to sites and installations such as car parks, ski-lifts, stadiums, arenas and amusement parks.

Discontinued operations, accounting changes, currency effects

On August 20, 2018, the Group sold its SmarDTV Conditional Access Module (CAM) and set-top box activities through an asset sale transaction. Upfront cash consideration from the sale transaction amounted to USD 20.0 million. Group entities will continue to sell SmarDTV's CAMs and will benefit from commissions linked to the sales of CAMs and set-top boxes. In addition, the Group retained certain assets, including in particular SmarDTV's buildings and patents. On December 21, 2018, the Group acquired the 22.5% minority interest in SmarDTV for no consideration and, as a result, it now fully owns the remaining assets held for sale. SmarDTV's income statement items are reported as discontinued operations in the current period and in the comparative previous period. Buildings with a value of USD 14.4 million are classified as "assets held for sale" on the SmarDTV balance sheet. Revenues from SmarDTV's discontinued operations were USD 64.8 million in 2018, while operating income and net result from discontinued operations were USD 0.7 million and USD 4.3 million, respectively.

As of January 1, 2018, the Group adopted IFRS 15, a new revenue recognition standard, and restated 2017 numbers accordingly. The adoption of IFRS 15 results in a USD 56.6 million reduction of 2017 revenues and an operating income reduction of USD 3.9 million. Principal versus agent considerations are the main restatement driver as they result in the recording of cybersecurity-related software subscription and partner provided support revenues on a net basis, while such revenues were previously recognized on a gross basis. The principal versus agent revenue impact for 2017 amounts to USD 51.8 million. Further restatements driven by IFRS 15, including criteria related to transfer of control, modified revenue recognition criteria and measurement of progress to satisfy performance obligations, drive the remaining decrease of restated 2017 revenues.

As of January 1, 2018, the Group adopted IFRS 9 Financial Instruments. The main impact of this newly adopted standard relates to the calculation of loss allowances for trade account receivables. With the new standard, such allowances are based on historical loss rates. The newly adopted standard results in a USD 10.6 million bad debt provision in the 2018 accounts.

The exchange rate impact on 2018 revenues and operating income is less material than in previous years. Exchange rate effects had a positive USD 12.2 million net revenue impact, mainly due to positive variation of the EUR/USD exchange rate. The favorable impact on operating income amounts to USD 1.0 million.

Group results

In 2018, total revenues and other operating income decreased from USD 1,012.1 million to USD 919.7 million. Net revenues for the Group decreased by 8.5% to USD 908.2 million, mainly driven by the Digital TV segment, which posted a USD 72.1 million decline, and the Cybersecurity segment, which experienced a USD 20.9 million year-on-year decline. IoT generated marginal revenues as the segment's current primary focus is on the development of a secure IoT platform. At USD 6.8 million, Public Access growth was lower than target, reflecting in particular weak performance in the US market, the main growth driver of the previous years.

Other operating income decreased by USD 7.6 million to USD 11.5 million, mainly reflecting lower contributions from government grants. The reduction of government grants is due to the downsizing of R&D activities in France following the consolidation of the Group's R&D presence in selected other sites with a critical mass of resources. Margin after cost of material decreased from USD 702.6 million to USD 648.9 million. Relative to total revenues, margin after cost of material increased from 69.4% to 70.6%, despite the shift of revenue mix from higher margin Digital TV to lower margin Public Access business. Relative margins increased in all segments, reflecting a concerted effort to focus on higher value-added services. Cybersecurity was the segment with the steepest improvement due to the growing share of proprietary technologies in the segment revenue mix.

Compared to 2017, the Group reduced personnel expenses by USD 14.5 million. A significant reduction of Digital TV headcount, partly offset by headcount increases at SKIDATA, drove the reduction of personnel expenses. The Group expects personnel costs to further decrease in 2019, benefitting from the full year effect of measures taken in 2018 and from further measures already defined and to be implemented in the course of the current year.

Total group headcount at year end was 3'743 compared to 3'962 at the end of 2017. Group headcount in France decreased by 125 employees. Headcount in other high cost locations such as Switzerland, Norway and the US decreased by 154 units. In India, the Group continues to grow, adding an additional 82 employees to reach a total headcount of 595. Total SKIDATA headcount increased by 63 to 1'502 employees at the end of 2018.

Compared to 2017, the Group reduced other operating expenses by USD 14.6 million, despite a USD 7.8 million increase of provisions. Legal and consultancy costs decreased by USD 19.6 million, reflecting in particular a reduction of legal expenses related to IP licensing activities.

The USD 29.1 million net reduction of Group operating expenses reflects the USD 74.9 million cost savings achieved with the 2018 restructuring program net of restructuring costs, currency effects and the cost of additional investment in the Group's key growth areas.
The 2018 restructuring program enabled a substantial reduction of recurring Digital TV expenses. The Group completed most of the restructuring measures related to its French operations in the second half of 2018, including the divestment of SmarDTV operations and the closure of a French R&D site. A further enabler of the 2018 cost reduction was tighter integration of Nagra and Conax operations. Operational excellence measures across the entire Digital TV organization allowed for material efficiency improvements. Similarly, the Group streamlined corporate functions supporting Digital TV activities through the simplification and digitization of key processes, the consolidation of the organizational structure and the migration of selected functions to lower cost locations. Finally, the Group consolidated its operational footprint, resizing underutilized locations and closing satellite offices.

Total operating expenses in 2018 were USD 613.1 million compared to USD 642.2 million in 2017, representing a net improvement of USD 29.1 million. In 2018, the Group incurred USD 40.2 million of restructuring and run-down costs for the restructuring of its Digital TV activities, compared to USD 22.5 million in 2017. Costs in 2018 related to additional investments in SKIDATA, IoT, Cybersecurity R&D and other growth areas represented USD 22.6 million. Finally, 2017 operating expenses, at average 2018 currency rates, were USD 5.5 million higher compared to 2017 reported expenses. The resulting savings from the 2018 cost reduction program amounts to USD 74.9 million.

Group operating income before depreciation and amortization net of restructuring costs was USD 76.0 million, a USD 6.8 million decrease over the previous year. At USD 43.1 million, depreciation, amortization and impairment were USD 4.5 million higher than in 2017, due to the depreciation of a newly introduced ERP system. Overall, the Group generated an operating loss of USD 7.3 million for the year, compared to an operating income of USD 21.8 million in 2017. Operating income net of restructuring costs was at USD 32.9 million in 2018 compared to USD 44.3 million in 2017.

At USD 10.4 million, interest expense was USD 1.9 million higher in 2018 than in the prior year, as the Group paid interest on a higher debt balance. The Group's primary interest-bearing liabilities include the CHF 200 million bond with a 1.875% interest rate maturing in August 2022, the CHF 150 million bond with a 1.5% interest rate maturing in September 2024 and EUR 78.8 million bank debt at SKIDATA. The Group posted USD 0.3 million of net finance expenses in 2018, representing an improvement of USD 2.3 million from 2017 and reflecting marginal foreign exchange effects. The Group booked USD 7.7 million of income tax expenses in 2018. Income tax expenses include a USD 6.6 million favorable change of deferred income taxes.

Overall, the Group generated a USD 24.3 million net loss from continuing operations in 2018, a decrease of USD 22.9 million from the previous year. The USD 4.3 million of net income from discontinued operations includes the accounting impact of the disposal of the SmarDTV set-top box and CAM assets. The main drivers of this gain are the USD 13.0 million gain on sale of fixed assets and a USD 8.8 million impairment. Including discontinued operations, the Group booked a USD 20.0 million net loss in 2018.

Digital TV

The digital TV market continues to shrink, as a number of established pay TV operators shed subscribers. In particular, Conax operations generated lower revenues compared to the previous year. In 2018, revenues contribution from IP licensing was significantly lower than in the previous year, when the Group completed several licensing transactions.

Reported net digital TV revenues decreased by 14% to USD 443.5 million.

The Group's European Digital TV business grew by 0.2% in 2018 to USD 172.2. million. Most European markets were resilient in 2018, with the Group renewing and further expanding partnerships with large customers. In 2018, the Group extended its content protection partnership with Liberty Global, the world's largest international TV and broadband company. In France, the Group added anti-piracy services to fight illegal live streaming to the portfolio of services supplied to Altice-owned SFR.
At USD 175.5 million, the Americas business posted 20.2% lower revenues in 2018. In 2018, the Group completed IP licensing transactions with the NFL, Endeavor and Nascar Digital Media and recognized revenues related to an agreement closed in a previous period. However, IP licensing revenues in 2018 were substantially lower compared to 2017. The North American satellite TV subscriber base continues to decline. In 2018, Dish Network lost 1.1 million subscribers, 10% of its subscriber base, with a negative impact on Group's revenues. In South America, Brazilian revenues declined from 2017. The Asia Pacific and Africa region posted 22.6% lower revenues in 2018, reaching USD 95.9 million. In 2017, set-top box sales to cable operators in Taiwan sustained Asian revenues, while the Group did not generate any material set-top box sale in 2018. Revenues in the Indian market were materially lower in 2018 than in the prior year, due in particular to the material reduction of sales in this market experienced at Conax.

Digital TV margin after cost of material grew from 86% in 2017 to 87.3% in 2018, due to the favorable development of the revenue mix.

Digital TV generated USD 111.9 million of operating income before depreciation and amortization net of restructuring cost, representing a USD 1.6 million improvement from the previous year. This segment's profitability benefits from the reduction of operating expenses driven by the 2018 restructuring program. In 2018, the Group reduced Digital TV operating costs by USD 74.9 million, incurring USD 40.2 million of restructuring and run-down costs. Reported 2018 Digital TV operating income before depreciation and amortization was at USD 71.7 million, compared to USD 87.7 million in 2017.

Cybersecurity

Cybersecurity has grown to be a meaningful contributor of revenues for the Group. In 2018, Cybersecurity revenues, however, were lower than in the previous year while margin after cost of material increased, as the business mix continues to shift from lower margin technology reselling to higher margin advisory services, managed security services and proprietary technology sales. These strategic pillars, while still representing a relatively small share of total cybersecurity numbers, are growing at solid two-digit rates.

In 2018, Kudelski cybersecurity's business generated USD 151.0 million of gross revenues, a 9.9% decrease from 2017. The application of the new IFRS15 revenue recognition standard results in the recognition of revenues from third party support contracts, software subscription and cloud-based services on a net basis. As a result, Cybersecurity net revenues were at USD 94.3 million in 2018.

The European region posted strong growth in 2018, increasing net revenues to USD 12.7 million, a 57.1% year-on-year improvement. The Americas were most affected by the shift of business mix, with net revenues declining by 23.9% to USD 81.6 million.

Margin after cost of material increased from USD 38.3 million in 2017 to USD 39.1 million. In 2018, 50% of the segment's gross profit dollars were attributed to its strategic business pillars, up from 36% in 2017, contributing to gross margin expansion of over 800 basis points to 41.4%.

The Cybersecurity segment generated a USD 21.3 million operating loss before depreciation and amortization, representing USD 2.0 improvement from the previous year.

Internet of things (IoT)

The Group launched an IoT Security Center of Excellence in 2017, providing secure IoT solutions, hardware and software assessment and evaluations, recommendations and implementations of design and control frameworks and countermeasures to mitigate risks and protect investments.

In 2018, the Group ramped-up investments in the IoT domain with the development of a full IoT security platform, providing a pre-integrated, end-to-end solution on a variety of hardware devices and software-based clients. The Group has secured an initial portfolio of customers that is starting to generate early revenues and has built a funnel of prospects. In addition to extending its collaboration with U-Blox, the Group announced further partnership agreements with IDEMIA in the connectivity domain, Pepper IoT for consumer data protection on connected devices and Voith in the industrial IoT space. Kudelski's secure IoT platform offers customers the ability to manage the identity and authenticity of devices, enable secure access to data, control activation and revocation of devices and support long security lifecycles through countermeasures on a cellular narrowband network.

In 2018, IoT generated revenues of USD 2.0 million and an operating loss before depreciation and amortization of USD 19.5 million, reflecting the early development stage of this business.

Public Access

Public Access revenues increased by 1.9% in 2018. A sales slowdown in the last two months of the year resulted in lower than expected 2018 revenues and a year-on-year profit decline.

At USD 183.3 million, European sales marginally increased by 2.3% from the previous year, with weak development in markets such as Austria and Switzerland. Sales from distribution partners in Europe were also lower compared to the previous year.

In the Americas, SKIDATA generated revenues of USD 110.3 million, representing a decrease of 9.3% compared to the previous year. As local operations were sized to support growing sales volumes, the region generated marginal operating profit in 2018.

Revenues for Asia/Pacific and Africa grew by 23.1%, reaching USD 74.8 million. In this region, SKIDATA continues to benefit from favorable momentum as it broadens its market footprint. Early in the year, SKIDATA completed the acquisition of 51% of Cytel, a market leader for access control systems in China, thereby gaining a stronger foothold in the Chinese parking market. Total consideration for this acquisition was USD 5.8 million.

Public Access operating income before depreciation and amortization was below target, decreasing by USD 10.7 million to USD 21.1 million in 2018. Operating expenses for the segment increased by USD 20.3 million from 2017, while margin after cost of material improved from 56.4% in 2017 to 57.4% in 2018.

As SKIDATA increased its working capital by USD 7.7 million in 2018, the Public Access segment generated negative free cash flow in 2018.

Balance sheet and cash flows

Total non-current assets decreased by USD 10.7 million to USD 696.7 million. 2018 investments in technical equipment and machinery in the Digital TV segment were lower compared to the run rate of previous years. As a result, tangible fixed assets decreased by USD 8.5 million. The USD 19.4 million decrease in intangible fixed assets is mainly due to the depreciation of assets capitalized with the acquisition of Conax. A USD 7.0 million reduction of technology assets and a USD 8.7 million reduction of customer lists, trademarks and brands drive the reduction of intangible fixed assets. Financial fixed assets at amortized cost increased by USD 14.1 million. USD 7.6 million of government grants previously classified as held for sale remain within the Group following the closing of the SmarDTV transaction and, as a result, are reclassified as financial fixed assets. IP licenses accrued during 2018 and to be cashed in at a later stage are a further driver of the increase of financial fixed assets.

Compared to December 31, 2017, total current assets increased by USD 10.6 million. A USD 0.9 million increase of inventories is mainly due to USD 3.7 million higher stock at SKIDATA. The Group decreased trade receivables by USD 30.3 million, as Digital TV entities systematically reduced outstanding receivables, improving by USD 26.8 million compared to the previous year.

Contract assets consist of amounts due from clients for projects recognized on a percentage of completion basis. They were previously presented as trade account receivables. Out of the total USD 59.9 million total contract assets, USD 53.3 million relate to SKIDATA. SKIDATA was also the main driver of the year-on-year increase.

Other financial assets at amortized costs increased by USD 10.8 million to USD 41.0 million. SmarDTV short-term subsidies previously presented as held for sale are now recognized as financial assets as they were not included in the SmarDTV sale transaction. At the end of 2018, cash and cash equivalents amounted to USD 86.0 million, an increase of USD 14.0 million from the end of 2017.

USD 14.4 million of assets classified as held for sale include buildings previously used by SmarDTV, as the Group envisages a sale of these buildings following the closure of the SmarDTV sale transaction. In the prior period, "Assets classified as held for sale" and "Liabilities classified as held for sale" included the fair value of SmarDTV's balance sheet items offered for sale.
Total equity decreased by USD 48.4 million, mainly reflecting the negative net income for the period, currency translation adjustments in other comprehensive income, remeasurements on post-employment benefits and the USD 5.6 million dividend payment.

Total non-current liabilities increased by USD 55.5 million to USD 484.4 million. Long-term financial debt increased by USD 40.7 million to USD 398.2 million, mainly driven by new long-term loans at SKIDATA.

Total current liabilities decreased by USD 23.0 million to USD 310.5 million. Short-term financial debt decreased by USD 2.8 million to USD 64.1 million.

In 2018, the Group used USD 4.7 million of cash flow for operating activities. First half operating cash flow was USD -43.1 million, while operating cash flow in the second half was USD 38.4 million. The main drivers of operating cash flow were USD 40.2 million of restructuring costs, USD 17.1 million of higher deferred costs and other net working capital headings, USD 16.9 million of other non-cash expenses mainly related to new non-cash provisions, and the USD 23.2 million reduction of accrued expenses.

The Group used USD 17.8 million cash for investing activities in 2018. First half investment cash flow was USD -25.5 million, while investment cash flow in the second half was USD 7.7 million. In 2018, the Group invested USD 15.7 million in tangible assets and USD 9.3 million in intangible assets. The net cash consideration for the acquisition of Cytel by SKIDATA amounted to USD 3.9 million. USD 11.9 million of deferred consideration mainly relate to the earn-outs paid by SKIDATA for the acquisition of Sentry. The sale of SmarDTV assets resulted in a USD 20.0 million cash inflow. Cash from financing activities amounted to USD 39.4 million, including in particular a USD 45.2 million increase of loans, of which USD 17.7 million represents a cash advance of government subsidies, and a USD 5.6 million dividend payment.

Outlook

The traditional pay TV business is expected to stabilize in 2019. While Digital TV revenues will continue to decline, the Group expects the pace of the top line regression to start tapering off. In 2018, the Group completed multiyear contract renewals with large pay TV customers, which is expected to secure revenues over a period of several years. The Group is implementing measures to further reduce Digital TV operating expenses. Such measures include the integration of R&D organizations into a consolidated unit, the streamlining of the product portfolio with an increased focus on profitable and promising products addressing new markets, a custom development approach to product areas lacking critical mass, the full integration of Conax and Nagra operations and a further rationalization of Digital TV global presence with the closure of smaller locations and the downsizing of underutilized sites.

With Cybersecurity, the Group will continue to drive the development of higher value product lines and expects continued growth of margin after cost of material. Cybersecurity is expected to continue adding new clients, expanding geographical coverage and, as a result, increasing profitability by leveraging strategic offerings and high-value services.

For 2019, the Group will to continue to invest in the IoT domain, with development costs increasing to reflect the current cost run rate and with revenues still in the single digit million range.

In Public Access, short term measures to restore the segment's performance include stopping non-core, loss making projects optimizing the product portfolio and focusing on profitable, promising solutions, systematically improving working capital management, reviewing scope and structure of central functions, revising incentive systems and effecting changes in the organization. Further measures will release additional synergies within SKIDATA and with other Group entities. In 2019, Public Access will focus on improving cash flows and restoring a higher level of profitability.

CONTENTS

KUDELSKI GROUP CONSOLIDATED FINANCIAL STATEMENTS

KUDELSKI SA FINANCIAL STATEMENTS

CONSOLIDATED INCOME STATEMENTS

(FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017)

In USD'000	Notes	2018	Restated 2017
Revenues	6	908 205	993 040
Other operating income	7	11 482	19 051
Total revenues and other operating income		**919 687**	**1 012 090**
Cost of material, licenses and services		-270 791	-309 537
Employee benefits expense	8	-448 087	-462 648
Other operating expenses	9	-165 053	-179 559
Operating income before depreciation, amortization and impairment		**35 756**	**60 347**
Depreciation, amortization and impairment	10	-43 059	-38 566
Operating income		**-7 303**	**21 781**
Interest expense	11	-10 440	-8 500
Other finance income, net	12	-310	-2 615
Share of result of associates	17	1 495	888
Income before tax		**-16 558**	**11 553**
Income tax expense	13	-7 741	-12 929
Net income for the period from continuing operations		**-24 299**	**-1 376**
Net result from discontinued operations	37	4 278	-9 412
Net income for the period		**-20 020**	**-10 788**
Attributable to:			
- Equity holders of the company		*-28 453*	*-14 770*
- Non-controlling interests		*8 433*	*3 982*
Earnings per share (in USD)			
Attributable to shareholders of Kudelski SA for bearer shares : basic and diluted (in USD)	14	-0.5218	-0.2716
- Continuing operations		*-0.5826*	*-0.1380*
- Discontinued operations		*0.0608*	*-0.1336*
Attributable to shareholders of Kudelski SA for registered shares : basic and diluted (in USD)	14	-0.0522	-0.0272
- Continuing operations		*-0.0583*	*-0.0138*
- Discontinued operations		*0.0061*	*-0.0134*

The accompanying notes form an integral part of the consolidated financial statements. Prior year figures have been restated (refer to note 4 for additional information).

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017)

In USD'000	Notes	2018	Restated 2017
Net income		**-20 020**	**-10 788**
Other comprehensive income to be eventually reclassified into the consolidated income statement in subsequent periods:			
Currency translation differences		-14 371	23 271
Cash flow hedges, net of income tax		-244	-38
		-14 615	**23 232**
Other comprehensive income never to be reclassified into the consolidated income statement in subsequent periods:			
Change in fair value of equity investments at fair value through other comprehensive income		-153	-196
Remeasurements on post employment benefit obligations, net of income tax		-9 095	12 834
		-9 248	**12 638**
Total other comprehensive income, net of tax		**-23 863**	**35 870**
Total comprehensive income		**-43 883**	**25 082**
Attributable to:			
Shareholders of Kudelski SA		-52 018	20 354
- Continuing operations		*-54 883*	*25 862*
- Discontinued operations		*2 865*	*-5 508*
Non-controlling interests		8 135	4 728

The accompanying notes form an integral part of the consolidated financial statements. Prior year figures have been restated (refer to note 4 for additional information).

CONSOLIDATED BALANCE SHEETS
(AT DECEMBER 31, 2018 AND 2017)

In USD'000	Notes	31.12.2018	Restated 31.12.2017	Restated 1.1.2017
ASSETS				
Non-current assets				
Tangible fixed assets	15	128 176	136 668	145 770
Intangible assets	16	431 723	451 136	427 722
Investments in associates	17	6 191	5 858	4 939
Deferred income tax assets	18	61 612	57 746	63 774
Financial assets at fair value through comprehensive income	19	508	1 344	1 498
Financial assets at amortized cost	19	67 251	53 239	28 645
Other non-current assets	19	1 227	1 444	1 694
Total non-current assets		**696 687**	**707 436**	**674 043**
Current assets				
Inventories	20	59 868	58 997	53 221
Trade accounts receivable	21	257 092	287 351	239 206
Contract assets	21	59 987	44 775	37 273
Other financial assets at amortized cost	22	41 021	30 217	40 080
Other current assets	23	22 915	22 622	24 696
Derivative financial instruments	35	64	475	350
Cash and cash equivalents	24	85 979	71 911	174 440
Total current assets		**526 926**	**516 348**	**569 266**
Assets classified as held for sale	**37**	**14 401**	**62 650**	**–**
Total assets		**1 238 014**	**1 286 433**	**1 243 309**
EQUITY AND LIABILITIES				
Equity				
Share capital	25	333 456	332 222	331 091
Reserves		73 164	136 947	135 212
Equity attributable to equity holders of the parent		**406 620**	**469 169**	**466 303**
Non-controlling interests	26	36 541	22 456	23 297
Total equity		**443 162**	**491 625**	**489 600**
Non-current liabilities				
Long-term financial debt	27	398 161	357 528	343 595
Deferred income tax liabilities	18	6 878	9 014	10 847
Employee benefits liabilities	29	66 319	52 311	66 379
Provisions for other liabilities and charges	36	97	10	–
Other long-term liabilities	30	12 946	9 998	23 987
Total non-current liabilities		**484 400**	**428 861**	**444 808**
Current liabilities				
Short-term financial debt	31	64 122	66 902	31 471
Trade accounts payable	32	79 608	88 696	66 797
Contract liabilities	33	50 570	41 279	56 704
Other current liabilities	34	95 746	118 410	129 276
Current income taxes		8 848	7 502	14 608
Derivative financial instruments	35	190	202	97
Provisions for other liabilities and charges	36	11 368	10 420	9 948
Total current liabilities		**310 452**	**333 412**	**308 901**
Liabilities classified as held for sale	**37**	**–**	**32 535**	**–**
Total liabilities		**794 853**	**794 808**	**753 709**
Total equity and liabilities		**1 238 014**	**1 286 433**	**1 243 309**

The accompanying notes form an integral part of the consolidated financial statements. Prior year figures have been restated (refer to note 4 for additional information).

CONSOLIDATED CASH FLOW STATEMENTS
(FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017)

In USD'000	Notes	2018	Restated 2017
Net income for the year		**-20 020**	**-10 788**
Adjustments for net income non-cash items:			
- Current and deferred income tax		8 108	13 322
- Interests, allocation of transaction costs and foreign exchange differences		12 725	9 367
- Depreciation, amortization and impairment		43 059	42 529
- Share of result of associates	17	-1 495	-888
- Non-cash employee benefits (income) / expense		4 954	1 752
- Deferred cost allocated to income statement		289	8 993
- Additional provisions net of unused amounts reversed		8 762	14 186
- Non-cash government grant income		-4 305	-14 921
- Other non cash (income) / expenses		16 914	2 922
Adjustments for items for which cash effects are investing or financing cash flows:			
- Net result on sales of subsidiaries and operations		-12 431	133
- Other non-operating cash items		127	-45
Adjustments for change in working capital:			
- Change in inventories		212	-10 779
- Change in trade accounts receivable		723	-70 412
- Change in trade accounts payable		-16 171	23 403
- Change in accrued expenses		-23 159	-602
- Change in deferred costs and other net current working capital headings		-17 113	-55 769
Government grant from previous periods received		6 664	10 215
Dividends received from associated companies	17	937	175
Interest paid		-8 200	-7 238
Interest received		1 328	888
Income tax paid		-6 628	-10 626
Cash flow from operating activities		**-4 722**	**-54 183**
Purchases of intangible fixed assets		-9 268	-17 343
Purchases of tangible fixed assets		-15 659	-20 112
Proceeds from sales of tangible and intangible fixed assets		641	-1 640
Investment in financial assets and loans granted		-2 729	-3 328
Divestment of financial assets and loan reimbursement		3 046	2 226
Acquisition of subsidiaries, cash outflow (net of cash acquired):			
- Cash consideration arising from current year business combinations	5	-3 893	-13 457
- Cash acquired from business combinations	5	3 332	2 809
- Payment arising from current years business combinations		-1 956	–
- Payment arising from prior years business combinations		-11 880	-8 208
Disposal of subsidiaries and operations		20 556	-266
Cash flow from investing activities		**-17 811**	**-59 318**
Reimbursement of bank overdrafts, long term loans and other non-current liabilities		-23 225	-4 757
Increase in bank overdrafts, long term loans and other non-current liabilities		68 444	31 225
Proceeds from employee share purchase program	40	138	114
Acquisition of non-controlling interests			-281
Dividends paid to non-controlling interests		-382	-5 286
Dividends paid to shareholders	39	-5 568	-19 329
Cash flow from financing activities		**39 407**	**1 685**
Effect of foreign exchange rate changes on cash and cash equivalents		-2 807	9 287
Net movement in cash and cash equivalents		**14 068**	**-102 529**
Cash and cash equivalents at the beginning of the year	24	71 911	174 440
Cash and cash equivalents at the end of the year	24	85 979	71 911
Net movement in cash and cash equivalents		**14 068**	**-102 529**

The accompanying notes form an integral part of the consolidated financial statements. Prior year figures have been restated (refer to note 4 for additional information).

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017)

In USD'000	Notes	Share capital	Share premium	Retained earnings	Fair value and other reserves	Currency translation adjustment	Non-controlling interests	Total equity
January 1, 2017 (published)		**331 091**	**98 464**	**39 591**	**-2 535**	**3 169**	**21 839**	**491 618**
Change in accounting policy	4	–	–	-3 645	169	–	1 458	-2 018
January 1, 2017 (restated)		**331 091**	**98 464**	**35 946**	**-2 367**	**3 169**	**23 297**	**489 600**
Net income		–	–	-14 770	–	–	3 982	-10 788
Other comprehensive income		–	–	12 835	-234	22 523	747	35 870
Total comprehensive income		**–**	**–**	**-1 935**	**-234**	**22 523**	**4 728**	**25 082**
Employee share purchase program	40	110	53	–	–	–	–	163
Shares issued to employees	40	1 020	635	–	–	–	–	1 656
Dividends paid to shareholders		–	-13 807	-5 523	–	–	–	-19 330
Dividends paid to non-controlling interests		–	–	–	–	–	-5 286	-5 286
Transactions with non-controlling interests		–	–	23	–	–	-304	-281
Sale of non-controlling interest							-21	-21
Equity contribution from non-controlling interest		–	–	–	–	–	42	42
December 31, 2017		**332 222**	**85 345**	**28 512**	**-2 601**	**25 691**	**22 456**	**491 625**
January 1, 2018 (published)		**332 222**	**85 345**	**35 549**	**-2 627**	**26 187**	**21 653**	**498 330**
Change in accounting policy	4	–	–	-9 172	26	-496	803	-8 840
January 1, 2018 (restated)		**332 222**	**85 345**	**26 376**	**-2 601**	**25 691**	**22 456**	**489 489**
Net income		–	–	-28 453	–	–	8 433	-20 020
Other comprehensive income		–	–	-9 120	-397	-14 048	-298	-23 863
Total comprehensive income		**–**	**–**	**-37 573**	**-397**	**-14 048**	**8 135**	**-43 883**
Employee share purchase program	40	218	-19	–	–	–	–	199
Shares issued to employees	40	1 016	133	–	–	–	–	1 150
Dividends paid to shareholders		–	-5 568	–	–	–		-5 568
Dividends paid to non-controlling interests		–	–	–	–	–	-382	-382
Transactions with non-controlling interests	5	–	–	-4 176	–	–	4 176	–
Sale of non-controlling interest							-2	-2
Non controlling interests arising on business combinations		–	–	–	–	–	2 158	2 158
December 31, 2018		**333 456**	**79 892**	**-15 373**	**-2 998**	**11 643**	**36 541**	**443 162**

Fair value and other reserves as of December 31, 2018 include kUSD -2 998 (2017: kUSD -2 845) of unrealized loss on financial assets at fair value through other comprehensive income and an unrealized gain of kUSD 0 (2017: kUSD 244) relating to cash flow hedges.

The accompanying notes form an integral part of the consolidated financial statements. Prior year figures have been restated (refer to note 4 for additional information).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

1. SIGNIFICANT ACCOUNTING POLICIES

(A) Basis of preparation

The consolidated financial statements of the Kudelski Group ("Group" or "Company") have been prepared in accordance with International Financial Reporting Standards (IFRS).

The preparation of the financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements, are disclosed in note 2.

These consolidated financial statements were prepared under the historical cost convention, except for items to be measured at fair value as explained in the accounting policies below. The policies set out below are consistently applied to all years presented, except for the changes in accounting policies described in note 4. Prior year figures have been reclassified where necessary to better enable comparison. Due to rounding, numbers presented throughout this report may not add up precisely to the totals provided.

(B) Group accounting

(a) Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect these returns through its power over the entity. Subsidiaries also comprise companies in which the Group does not own, directly or indirectly, more than one half of the voting rights but exercises power to govern their financial and operating policies and bears an over-proportional responsibility for the main risks. Subsidiaries are fully consolidated from the date on which control is transferred to the Group.

Intercompany transactions, balances, income and expenses on transactions between Group companies are eliminated. Profits and losses resulting from intercompany transactions that are recognised in assets are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

(b) Business combinations

The Group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary consists of the fair values of the assets transferred, the liabilities assumed by the former owners of the acquiree and the equity interest issued by the Group. Acquisition-related costs are expensed as incurred. The consideration transferred includes the fair value of any asset or liability resulting from any contingent consideration.
Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair value at the acquisition date, irrespective of the extent of any non-controlling interests. Identified assets acquired include fair value adjustments on tangible and intangible assets. When determining the purchase price allocation, the Group primarily considers development technologies, customer lists, trademarks and brands as intangibles.
Any contingent consideration which depends on the future financial performance of the acquired company ("earn out clause") is recognized at fair value on the acquisition date using management's best estimate of the final consideration payable. The portion of the contingent consideration deferred to a date more than twelve months after the balance sheet date is discounted to its present value and disclosed within other long-term liabilities.

The Group recognizes non-controlling interests as its proportionate share of the recognized amounts of identifiable net assets. Goodwill is initially measured as the excess of the aggregate value of the consideration transferred plus the fair value of non-controlling interests over the net identifiable assets acquired and liabilities assumed. Transactions with non-controlling interests are accounted for as transactions with equity owners of the Group. The difference between the fair value of any consideration paid and the relevant acquired share of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

(c) Disposal of subsidiaries

When the Group ceases to have control over a subsidiary, any retained interest in the entity is re-measured to its fair value at the date when control is lost, with the change in carrying amount recognized in the income statement. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

d) Associates

Associates are entities over which the Group has significant influence but which are not subsidiaries. Significant influence is the power to participate in the financial and operating policy decisions of the associate but not the control of those policies. Significant influence is presumed to exist when the Group holds at least 20% of the associate's voting power. Investments in associates are accounted for using the equity method of accounting and are initially recognized at cost. Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group.

(C) Foreign currencies

The consolidated financial statements of the Group are expressed in U.S. Dollars ("USD"), which is the presentation currency.

The local currency is generally the functional currency throughout the world. In the respective entity financial statements, monetary assets and liabilities denominated in currencies other than the functional currency are translated at the rate prevailing at the balance sheet date. Transactions contracted in a currency other than the functional currency are recorded using the exchange rate at the time of the transaction. All resulting foreign exchange transaction gains and losses are recognized in the subsidiary's income statement.

Income, expense and cash flows of the consolidated companies have been translated into U.S. dollars using average exchange rates. Assets and liabilities are translated at the closing rate at the date of the balance sheet. All resulting translation differences, including those arising from the translation of any net investment in foreign entities, are recognized in other comprehensive income. The loss of control or total disposal of a subsidiary results in the reclassification of any translation difference to the income statement.

(D) Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer, and is shown net of value added tax, returns, rebates, discounts, commissions directly attributed to the sale, and after eliminating sales within the Group. The Group recognizes revenue when it satisfies a performance obligation by transferring control of a product or service to a customer.

The Group sells hardware and software products on both a stand-alone basis without any services and as solutions bundled with services.

Generally, when we provide a combination of hardware and software products with the provision of services, we separately identify our performance obligations under the contract as distinct goods and services that will be provided. The total transaction price for an arrangement with multiple performance obligations is allocated at contract inception to each distinct performance obligation in proportion to its stand-alone selling price. The stand-alone selling price is the price at which we would sell a promised good or service separately to a customer. Observable stand-alone selling prices are used when readily available. If not available, we estimate the price based on observable inputs, including direct labor hours and allocable costs.

(a) Hardware

Revenue from hardware sales is recognized when control of the products has transferred, being when the products are delivered to the customer and there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been shipped to a specified location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the products in accordance with the agreement, the acceptance provisions have lapsed, or the Group has objective evidence that all the criteria for acceptance have been satisfied. In certain instances, we leverage drop-shipment arrangements with our partners and suppliers to deliver products to our clients without having to physically hold the inventory at our warehouses. We recognize revenue for drop-shipment arrangements on a gross basis as the principal in the transaction when the product is received by the customer because we control the product prior to transfer to the customer. We also assume primary responsibility for fulfillment in the arrangement, we assume inventory risk if the product is returned, we set the price charged to the customer and we work closely with our customers to determine their hardware needs.

(b) Software, licenses and royalties

Revenue from software sales is recognized at the point in time when the customer acquires the right to use the software under license and control transfers to the customer. Revenue from licensing arrangements is recognized upon commencement of the term of the license

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

agreement or when the renewal term begins, as applicable. Royalty revenue is recognized upon sale or usage of the product to which the royalty relates.

(c) Services
We design, implement and manage security and access solutions that combine hardware, software and services for our customers. Such services rendered may include system integrations, specific developments and customization, maintenance and training, and may be provided by us or by third-parties as part of bundled arrangements or on a stand-alone basis as consulting or managed service engagements.

If the services are provided as part of a bundled arrangement with hardware and software, the hardware, software and services are generally distinct performance obligations. In general, revenue from service engagements is recognized over time as we perform the underlying services by measuring progress toward complete satisfaction of the performance obligation. In contracts that contain a fixed fee per user, revenue is recognized in the amount in which we have the right to invoice the customer for services performed.

Specific revenue recognition practices for certain of our service offerings are described in further detail below.

(i) **Time and materials service contracts**. Revenue for service engagements that are on a time and materials basis is recognized based upon the hours incurred for the performance completed to date for which we have the right to consideration, even if such amounts have not yet been invoiced as of period end.

(ii) **Fixed fee service contracts**. Revenue from fixed fee service contracts is recognized using a proportional performance method based on the ratio of direct labor hours and other allocated costs incurred to total estimated direct labor hours and other allocated costs.

Certain software maintenance agreements provide our customers the right to obtain software upgrades, help desk and other support services directly from the third-party software provider during the term of the agreement. We act as the selling agent in these arrangements and do not assume any performance obligation to the customer under the arrangement. As a result, we are the agent in these transactions and these sales are recorded on a net sales recognition basis. Under net sales recognition, the cost of the service is recorded as a reduction to sales, resulting in net sales equal to the gross profit on the transaction.

(d) Significant financing components
Certain contracts with our customers may include payment terms that exceed one year. To the extent that a significant financing component exists in these arrangements, we record interest income associated with the financing component of the arrangement over the associated payment terms based on the prevailing market interest rate at the date of the transaction.

(e) Variable consideration
For contracts that contain variable pricing elements, the variable consideration is estimated at contract inception and constrained until the associated uncertainty is subsequently resolved. The application of the constraint on variable consideration generally increases the amount of revenue that will be deferred. Variable consideration is reviewed at each reporting period and is measured using the most likely amount method which includes management appropriate estimates.

(f) Payments to customers
Payments made by the Group to customers to enter into or to renew existing customer relationships are generally treated as a reduction to the transaction price of the contract and are recognized to the income statement at the later of when the Group recognizes the revenue for the transfer of the related goods and services or when the Group pays the consideration.

(g) Interest income
Interest income is recognized according to the effective interest rate method.

(E) Government grants
Grants from governments or similar organizations are recognized at their fair value when there is a reasonable assurance that the Group complies with all conditions associated with their grants receipt and use. Where a government grant is subject to audit before payment, the fair value is determined using management's best estimate of the audit risk. Grants are recognized in the income statement as operating income unless they are linked to a capitalized fixed asset, in which case they are deducted from the cost of the fixed asset.

(F) Cost of material, licenses and services
The cost of material, licenses and services includes direct costs which are attributable to selected revenues. The cost of material includes only the cost of materials paid to external suppliers in connection with recognized sales transactions. It therefore does not include other direct and indirect costs associated with the manufacturing process, such as labor costs, utilities or depreciation of manufacturing assets.

Cost of licenses includes amounts charged by external suppliers for sub-licenses on a per-unit basis for each unit of delivered product (e.g. CODEC licenses charged on each set-top-box sold). It therefore specifically excludes licenses paid independently of the number of units sold, deployed or used in a development process. Cost of services includes outsourced services that are directly connected to a recognized sales transaction, such as subcontracting a portion of a maintenance agreement or outsourcing the implementation of a revenue-generating customer solution.

(G) Derivative financial instruments

Derivative financial instruments are initially recognized at fair value on the date a derivative contract is entered in to and subsequently remeasured to fair value at the end of each reporting period. The method of recognizing the resulting gain or loss is dependent on whether the derivative is designated to hedge a specific risk and therefore qualifies for hedge accounting.

The currency instruments that are generally used include forward foreign exchange contracts, currency swaps and zero cost option strategies with terms generally not exceeding one year. Derivative financial instruments are entered into with high credit quality financial institutions, consistently following specific approval, limit and monitoring procedures.

(a) Derivatives that do not qualify for hedge accounting

Certain derivatives transactions, while providing effective economic hedging under the Group's risk management policy, do not qualify for hedge accounting under the specific rules of IFRS 9. Changes in the fair value of derivative instruments that do not qualify for hedge accounting under IFRS 9 are recognized immediately in the income statement as part of 'other finance income/(expense), net'.

(b) Cash flow hedge

The Group designates the derivatives which qualify as hedges of a forecast transaction (cash flow hedge). The Group documents at the inception of the hedging transaction the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents its assessment, both hedge inception and on an ongoing basis, of whether the economic relationship exists between the hedged item and the hedging instrument. The Group enters into hedging instruments that have similar critical terms as the hedged items, such as reference rates, notional amounts and maturities.

Changes in intrinsic value of derivative financial instruments that meet hedge qualifying criteria are recognized in the "cash flow hedge reserve" within equity. Changes in fair value of derivative instruments attributable to time value are recognized in the "cost of hedging reserve" within equity. The amounts accumulated in hedging reserves of OCI are reclassified to profit or loss in the same period during which the hedged expected future cash flow affects the income statement.

In hedges of highly probable future sales transactions, ineffectiveness may arise if the timing of the forecast transaction changes from what was originally estimated or if there are any changes in the credit risk of the derivative counterparty.

When a cash flow hedge no longer meets the criteria for hedge accounting, the gains and losses that were previously recorded in equity remain deferred in equity until the hedged cash flow is recognized in the income statement. When the forecast transaction is no longer expected to occur, the cumulative gain or loss and deferred cost of hedging are immediately reclassified to the income statement. Gain or loss, as well as cost of hedging, related to the ineffective portion is recognized in the income statement within 'other finance income/(expense), net'.

(H) Taxes

Taxes reported in the consolidated income statements include current and deferred taxes on profit, as well as non-reimbursable withholding taxes and tax adjustments relating to prior years. Income tax is recognized in the income statement, except to the extent that it relates to items directly taken either to equity or to other comprehensive income, in which case it is recognized either in equity or in other comprehensive income. Taxes on income are accrued in the same periods as the revenues and expenses to which they relate.

Deferred taxation is the tax attributable to the temporary differences that appear when taxation authorities recognize and measure assets and liabilities with rules that differ from those of the consolidated accounts. Deferred taxes are determined using the comprehensive liability method and are calculated on the temporary differences at the substatively enacted rates of tax expected to prevail when the temporary differences reverse, except for those temporary differences related to investments in subsidiaries where the timing of their reversal can be controlled and it is probable that the difference will not reverse in the foreseeable future.

Temporary differences and tax losses

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

carried forward are recognized only to the extent that it is probable that future taxable income will be available against which they can be utilized. Temporary differences and tax losses which generate deferred tax assets and liabilities based on their future probable use are combined within each legal entity to provide a net deferred tax asset or liability amount.

Deferred income tax liabilities have not been recognized for withholding tax and other taxes that would be payable on the unremitted earnings of certain subsidiaries. Such amounts are either permanently reinvested or do not generate any taxation due to the application of tax treaties or tax reliefs.

(I) Tangible fixed assets

(a) General

Property, plant and equipment is measured at cost, less subsequent depreciation and impairment, except for land, which is shown at cost less impairment. Cost includes any expenditure that is directly attributable to the acquisition of the items. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group, and the cost of the item can be measured reliably. All other repair and maintenance expenditures are charged to the income statement during the financial period in which they are incurred.

Building acquisitions or construction and building improvements are allocated to components. The costs less residual values are depreciated over their useful lives on a straight-line basis. Such useful lives may be between 4 to 50 years. Depreciation starts when the underlying assets are ready for use.

Depreciation is calculated on a straight-line basis over each asset's useful life, according to the following schedule:

Technical equipment and machinery

	Useful life in years
Machinery and measurement instruments	4 - 7
Digital material and equipment	4 - 5
Computer and information networks	4
Fixed assets made available to clients	4 - 10

Other equipment

	Useful life in years
Office furniture and equipment	5 - 7
Vehicles	4 - 5

Each assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. An asset's carrying amount is impaired immediately if the asset's carrying amount is greater than its estimated recoverable amount. Gains and losses on disposal or retirement of tangible fixed assets are determined by comparing the proceeds received with the carrying amounts, and are included in the consolidated income statements.

(b) Leased tangible fixed assets

Assets acquired under long-term finance leases are capitalized and depreciated over the shorter of the asset's useful life or the lease period in accordance with the Group's policy on property, plant and equipment. The financial commitments associated with long-term finance leases are reported as other current and long-term liabilities. Rentals payable under operating leases are charged to the income statement as incurred.

(c) Fixed assets made available to clients

The Group makes equipment as well as smart cards available to clients within the scope of complete security solutions. The assets given to these clients remain the property of the Group and are initially recognized at cost and disclosed in the balance sheet under technical equipment and machinery. These assets are depreciated over the shorter of the duration of the contract and the economic life of the individual components, and the related expense is disclosed under depreciation.

(d) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production assets which take a substantial period of time to be ready for their intended use of sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

All other borrowing costs are recognised in the income statement in the period in which they are incurred.

(J) Intangible assets

(a) Goodwill

Goodwill arises from the acquisition of subsidiaries and represents the excess of the consideration transferred over the Group's interest in the fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the fair value of the non-controlling interest in the acquiree at the date of acquisition. It is denominated in the functional currency of the related acquisition. Goodwill on acquisition of subsidiaries is included in intangible assets, while goodwill on acquisition of associates is included in investments in associates. All goodwill is considered to have an indefinite life, tested at least annually for impairment, and carried at cost less accumulated impairment losses. Goodwill is allocated to cash generating units for the purpose of impairment testing. Gains and losses on the disposal of an entity include the carrying amount of goodwill associated with the entity sold.

(b) Internal research and development

Internal research and development expenses are fully charged to the income statement when incurred. The Group considers that economic uncertainties inherent in the development of new products preclude it from capitalizing such costs.

(c) External research and development

Expenditures with external parties for research and development, application software and technology contracts are charged to the income statement as incurred if they do not qualify for capitalization. When capitalized, they are amortized over 4 to 10 years once development is achieved and the resulting products are ready for sale .

(d) Computer software

Acquired computer software licenses are capitalized in the amount expended to acquire the software and ready it for its intended use. These costs are amortized on a straight-line basis over their estimated useful lives (three to four years). Costs associated with maintaining computer software programs are recognized as expense as incurred.

(e) Customer lists, Trademarks and Brands

Customer lists, trademarks and brands not acquired through a business combination are initially measured at cost. Following initial recognition, they are carried at cost less any accumulated amortisation and impairment losses, and are amortised over their useful economic life. Internally generated customer lists, trademarks and brands are not capitalised.

(f) Other intangibles in connection with business combinations

Under IFRS 3, in-process research and development, core development technologies, customer lists and trademarks are valued as part of the process of allocating the purchase price in a new business combination. The respective values are recorded separately from goodwill and are allocated to cash-generating units. Acquired intangibles are amortized on a straight-line basis over the following periods, with the expense recorded in the income statement:

	Over the useful life, in years
Core development technologies	4 - 10
Customer lists	10
Trademarks and brands	5

(K) Financial assets

(a) Classification

The Group classifies its financial instruments in the following categories: financial assets or financial liabilities measured at fair value (either through OCI, or through profit or loss), and financial assets or financial liabilities measured at amortized cost. The classification depends on the Group's business model for managing the financial assets and liabilities and the contractual terms of the cash flows.

For assets measured at fair value, gains and losses will either be recorded in profit or loss, or OCI. For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity instrument at fair value through OCI.

(b) Measurement

At initial recognition, the Group measures financial assets and liabilities at fair value plus or minus any transaction costs that are directly attributable to the acquisition of the instrument. For financial assets that are carried at fair value through profit or loss, transaction costs are expensed as incurred.

Subsequent measurement of loans and debt instruments depends on the Group's business model for managing the financial instrument and the cash flow characteristics of the asset or liability. The Group classifies its debt instruments into three measurement categories, amortized cost, fair value through profit or loss, or fair value through OCI.

Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Interest income from these assets is included in 'other finance income/(expense), net' using the effective interest rate method. Any gain or loss arising on derecognition is recognized in profit or loss and presented in 'other operating expenses'. Foreign exchange gains and losses are presented in 'other finance income/(expense), net'.

Assets that are held for collection of contractual cash flows and for selling the financing assets, where the assets' cash flows represent solely payments of principal and interest, are measured at fair value through OCI. Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses, which are recognized in profit or loss. When the financing asset is derecognized, the cumulative gain or loss previously recognized in OCI is reclassified from equity to profit or loss and recognized in 'other finance income/(expense), net'. Interest income from these financial assets

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

is included in 'finance income' using the effective interest rate method. Foreign exchange gains or losses are presented in 'other finance income/(expense), net'.

Assets that do not meet the criteria for amortized cost or fair value through OCI are measured at fair value through profit or loss and presented as 'other finance income/(expense), net' in the period in which it arises.

The Group subsequently measures all equity investments at fair value. Where the Group has elected to present fair value gains and losses on equity investments in OCI, there is no subsequent reclassification of fair value gains and losses to profit or loss following the derecognition of the investment. Dividends from such investments continue to be recognized in profit or loss as 'other finance income/(expense), net' when the right to receive payments is established.

Changes in the fair value of financial assets at fair value through profit or loss are recognized in 'other finance income/(expense), net' in the statement of profit or loss as applicable. Impairment losses (and reversal of impairment losses) on equity investments measured at fair value through OCI are not reported separately from other changes in value.

(c) Impairment
The Group assesses on a forward-looking basis the expected credit losses associated with its financial assets carried at amortized cost and fair value through OCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

Beginning January 1, 2018, the Group applies the simplified approach permitted by IFRS 9 for trade accounts receivables and contract assets, which requires expected lifetime credit losses to be recognized from initial recognition of the receivables.

To measure expected credit losses, trade receivables and contract assets are grouped based on shared credit characteristics and days past due. The Group therefore concludes that the expected loss rates for trade accounts receivables are a reasonable approximation of the loss rates for contract assets.

Expected loss rates are based on the payment profiles of sales over the 36 month period preceding the financial statement reporting date and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information affecting the ability of the customers to settle the receivables.

Prior to January 1, 2018, the impairment of trade accounts receivables was assessed on the incurred loss model. Individual receivables which were known to be uncollectible were written off by reducing the carrying amount directly. The other receivables were assessed collectively to determine whether there was evidence that an impairment had been incurred but not yet identified. For these receivables the estimated impairment losses were recognized in a separate provision for impairment. Receivables for which an impairment provision was recognized were written off against the provision when there was no expectation of recovering additional cash.

(L) Inventories
Inventories are stated at the lower of cost and net realizable value. Cost is determined using the weighted average cost method.
The cost of work in progress and manufactured finished goods is comprised of direct production costs and an appropriate proportion of production overhead and factory depreciation. Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses. Inventories which are no longer part of production and sales plans are charged to profit and loss.

(M) Deferred costs
Deferred costs are measured at cost and are allocated to the income statement over the shorter of their useful life and the contract period. The portion of deferred cost to be expensed in the income statement during a period that exceeds 12 months from the balance sheet date is disclosed under other non-current assets.

(N) Trade accounts receivable
Trade accounts receivable are initially measured at fair value and subsequently valued using the amortized cost method.

(O) Contract assets
A contract asset is the entity's right to consideration in exchange for goods or services that the entity has transferred to the customer. A contract asset becomes a receivable when the entity's right to consideration is unconditional, which is the case when only the passage of time is required before payment of the consideration is due. Contract assets relate to unbilled work in progress and have substantially the same risk characteristics as trade receivables.

(P) Cash and cash equivalents
Cash and cash equivalents include cash in hand and highly liquid investments with original maturities of three months or less which are readily con-

vertible to known amounts of cash. Bank overdrafts are included in short-term financial debt in current liabilities on the balance sheet.

(Q) Share capital
Ordinary and preferred shares of Kudelski SA are classified as equity and are presented at their nominal value. The difference between proceeds of share capital less directly attributable incremental costs and the nominal value of the share capital increase are considered as share premium and included in equity.

(R) Borrowings
Borrowings are initially recognized at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortized cost. Any difference between the net proceeds and the redemption value is recognized in the income statement over the period of the borrowings using the effective interest method.

Fees paid for the establishment of loan facilities are recognized as transaction costs of the loan if all of the facility will be drawn down. If there is no evidence that all of the facility will be drawn down, the fee is capitalized as a pre-payment for liquidity services and amortized over the period of the loan facility.

(S) Provisions
Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation, and the amount can be reliably estimated. Provisions are not recognized for future operating losses.
Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognized even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

A restructuring provision is recognized when the Group has developed a formal plan for the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement the plan or announcing its main features to those affected. Restructuring provisions comprise employee termination payments, lease termination penalties and dilapidation costs.

(T) Employee benefits
(a) Pension obligations
The Group operates a number of defined benefit and defined contribution plans, the assets of which are generally held in separate trustee-administered funds. The pension plans are generally funded by payments from employees and by their employer, taking into consideration the recommendations of independent qualified actuaries. For defined benefit plans, the Group companies provide for benefits payable to their employees on retirement by charging current service costs to income.

The liability for defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date minus the fair value of plan assets, together with adjustments for actuarial gains/losses and past service costs. Defined benefit obligations are in all material cases calculated annually by independent actuaries using the projected unit credit method, which reflects services rendered by employees to the date of valuation, incorporates assumptions concerning employees' projected salaries and uses interest rates of highly liquid corporate bonds which have terms to maturity approximating the terms of the related liability. Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

The Group's contributions to the defined contribution plans are charged to the income statement in the year during which they are made.

(b) Other long-term employee benefits
Other long-term employee benefits represent amounts due to employees under deferred compensation arrangements mandated by certain jurisdictions in which the Group conducts its operations. The cost of such deferred compensation arrangements is recognized on an accrual basis and included within employee benefits expense.

(c) Employee Share Purchase Program (ESPP)
The Group's employee share purchase program allows certain employees to buy a specific number of shares on a preferential basis, subject to certain restrictions on the sales of the shares for a period of 3 years.The difference between the fair value of these shares and the employee' payments for the shares is expensed in the income statement on the subscription date. The fair value of the shares transferred is determined based on the market price of the shares adjusted for the estimated value of the restrictions on sales.

(d) Profit sharing and bonus plan
The Group recognizes a liability and an expense for bonuses and profit sharing where contractually obliged or where there is a past practice that has created a constructive obligation. In addition,

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the Board of Directors may grant shares to certain employees. These shares may be subject to a blocking period of up to 7 years and are expensed in the income statement at their fair value at grant date taking into account the estimated value reduction due to the blocking period.

(e) Other employee benefits
Salaries, wages, social contributions and other benefits are recognized on an accrual basis in employee benefits expense in the year in which the employees render the associated services.

(U) Trade accounts payable
Trade payables are recognized initially at fair value and subsequently measured at amortised cost using the effective interest method.

(V) Contract liabilities
Contract liabilities represent the Group's current obligation to transfer goods or services to a customer for which the Group has received consideration from the customer. Contract liabilities primarily relate to billed work in progress and service contracts, whereby the customer has been invoiced in advance of the services being performed and are generally recognized within twelve months.

(W) Dividends
Dividends are recorded in the Group's financial statements in the period in which they are approved by the Group's shareholders.

(X) Non-current assets held for sale
Non-current assets and disposal groups are classified as held for sale if their carrying value will be recovered principally through a sale transaction rather than through continuing use. The Group considers this condition to be met when management is committed to a sale and a sale is highly probable of being completed within one year from the date of classification.

When the Group is committed to a sale plan involving loss of control of a subsidiary, all of the assets and liabilities of that subsidiary are classified as held for sale when the criteria described above are met, regardless of whether the Group will retain a non-controlling interest in its former subsidiary after sale.

When the Group is committed to a sale plan involving disposal of an investment, or a portion of an investment, in an associate, the investment or portion of the investment that will be disposed of is classified as held for sale when the criteria described above are met, and the Group discontinues the use of the equity method in relation to the portion that is classified as held for sale. Any retained portion of an investment in an associate that has not been classified as held for sale continues to be accounted for using the equity method. The Group discontinues the use of the equity method at the time of disposal when the disposal results in the Group losing significant influence over the associate.

Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their carrying value or fair value less costs to sell.

(Y) New and amended accounting standards and IFRIC interpretations
Standards and Interpretations effective in the current period and change in accounting policies
The accounting policies adopted are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2017, except for the adoption of new standards and interpretations as of January 1, 2018 described below.

The Group applies, for the first time, IFRS 15 Revenue from Contracts with Customers and IFRS 9 Financial Instruments. The impact of the adoption of these new standards are disclosed in note 4.

The Group has also applied the following amendments and interpretations effective from January 1, 2018:
• Classification and Measurement of Share-Based Payment Transactions - Amendments to IFRS 2
• Annual Improvement 2014-2016 cycle
• Transfers to Investment Property - Amendments to IAS 40
• Interpretation 22 Foreign Currency Transactions and Advance Consideration

The adoption of the amendments listed above had only limited impact on the Group's accounting policies, financial position and performance. The Group has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

Standard and Interpretations in issue not yet adopted
Certain new standards, amendments and interpretations to existing standards have been published that are mandatory for the Group's accounting periods beginning after 1 January 2019 or later periods, and which the Group has not early adopted:

• IFRS 16 – 'Leases' – IFRS 16 will substantially change the financial statements as it requires the majority of leases to be recognized on the balance sheet. Under the new standard, an asset (the right to use the leased item) and a financial liability to pay rentals are recognized, with the exception of short-term and low-value leases.

The Group will adopt IFRS 16 with an effective date of January 1, 2019 using the simplified transition approach. Upon adoption, the Group expects to recognize right-of-use assets and lease liabilities in a range consistent with its current operating lease commitments disclosed in note 43, noting that some lease commitments may be covered by the exception for short-term and low-value leases and some commitments may relate to arrangements that will not qualify as leases under IFRS 16. As of the date of these financial statements, the Group has not yet determined to what extent the new standard will affect the Group's profit and classification of cash flows.

There are no other standards that are not yet effective and that would be expected to have a material impact on the Group financial statements in the current or future reporting periods and on foreseeable future transactions.

2. CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The Group's principal accounting policies are set out in note 1 of the Group's consolidated financial statements and conform to International Financial Reporting Standards (IFRS).

Significant judgments and estimates are used in the preparation of the consolidated financial statements which, to the extent that actual outcomes and results may differ from these assumptions and estimates, could significantly affect the accounting in the areas described in this section.

Complete security solutions generating recurring service revenues

As defined in note 1 D, the Group provides complete security solutions which generate recurring service revenues. Depending on the contract terms with each client, the Group may replace the assets made available or transferred to the client for security or economic reasons. Early replacement due to technical obsolescence would result in an impairment of the assets made available to the client or of the deferred costs, which would impact the profitability of the Group.

Litigation and product liability provisions

A number of Group subsidiaries can be subject to litigation and product liability claims arising out of the normal conduct of their businesses. As a result, claims could be made against them that might not be covered by existing provisions or by external insurance coverage. Management believes that the outcomes of such actions, if any, would not be material to the Group's financial condition but could be material to future results of operations in a given period.

Income tax, deferred tax assets and government grants

The Group is subject to income tax in numerous jurisdictions. Significant judgment is required in determining the portion of tax losses carried forward which can be offset against future taxable profit (note 18). In order to assess whether there is any future benefit, forecasts are made of the future taxable profits by legal entity. Actual outcomes could vary significantly from forecasts of future profits and could therefore significantly modify the deferred tax asset and the income taxes. Furthermore, subsequent changes in tax laws, such as non-exhaustive changes in tax rates, the proportion of tax losses that could be offset with future profits or changes in forfeiting periods which occur after the accounts have been approved might affect the tax asset capitalized.
A tax audit may also lead to significant adjustments, due to a rejection of key components of a tax return or a government grant (e.g. related to transfer pricing or the assessment of the eligibility of a project qualifying for a grant).

Retirement benefit plans

The Group sponsors pension and other retirement plans in various forms covering employees who meet eligibility requirements. Several statistical and other factors that attempt to anticipate future events are used in calculating the expense and liability related to these plans. The factors include assumptions about the discount rate and rate of future compensation increases, as determined by Group management within certain guidelines. In addition, the Group's actuarial consultants use statistical information such as withdrawal and mortality rates for their estimates.
Assumptions used (note 29) may differ materially from actual results due to changing market and economic conditions, higher or lower withdrawal rates

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or longer or shorter life spans of participants, among other factors. Depending on events, such differences could have a material effect on our total equity.

Impairment of goodwill
Determining whether goodwill is impaired requires an estimation of the value in use of the cash-generating units to which goodwill has been allocated.
The value in use calculation requires management's estimate of the future cash flows expected to arise from the cash-generating unit and a suitable discount rate in order to calculate present value. Actual cash flows and values could vary significantly from the forecasted cash flows and related values derived using discounting techniques.

3. FINANCIAL RISK MANAGEMENT

The Group's Corporate Treasury function provides services to the business, coordinates access to domestic and international financial markets, and monitors and manages the financial risks relating to the operations of the Group through exposure analyses. These risks include market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk.
The Group seeks to minimize the effects of these risks by using derivative financial instruments to hedge risk exposures. The use of financial derivatives is governed by the Group's treasury policies, which provide written principles on foreign exchange risk, interest rate risk, credit risk, the use of financial derivatives and non-derivative financial instruments, and the investment of excess liquidity. Internal control procedures ensure compliance with these policies. The Group does not enter into or trade financial instruments, including derivative financial instruments, for speculative purposes. The Corporate Treasury function reports periodically to the Group's finance executive committee which monitors risks and policies implemented to mitigate risk exposures.

Market risk
The Group's activities expose it primarily to the financial risks of changes in foreign currency exchange rates and interest rates. The Group applies a natural economic hedging strategy and can enter into a variety of derivative financial instruments to manage its exposure to foreign currencies and interest rate risks, including forward foreign exchange contracts or option strategies to hedge the exchange rate risks and interest rate swaps to mitigate the risk of rising interest rates.
The Group does not enter into any financial transactions containing a risk that cannot be quantified at the time the transaction is concluded (it does not sell assets short). The Group only sells existing assets or hedges transactions and future transactions that are likely to happen. Future transaction hedges are contracted according to treasury policy based on a foreign exchange cash flow forecast. In the case of liquid funds, it writes options on assets it has, or on positions it wants to acquire, and for which it has the required liquidity. The Group therefore expects that any loss in value for these instruments would be generally offset by increases in the value of the hedged transactions.

(a) Foreign exchange risk
The Group conducts business in a variety of countries using a variety of foreign currencies. However, the Group prepares its consolidated financial statements in U.S. Dollars. It is therefore exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the Swiss franc and the Euro. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities and net investments in foreign operations. In order to manage foreign exchange risks arising from future commercial transactions and certain assets and liabilities, the Group uses forward foreign exchange contracts and foreign currency zero cost option contracts.

The Group enters into zero cost foreign currency option contracts to manage the risk associated with highly probable sales transactions for the next 12 months within a determined portion of the exposure generated, as defined in the treasury policy. These derivatives are generally qualified as cash flow hedges.

The Group also enters into foreign exchange forward and swap contracts in order to hedge the risk attributed to changes in value of recognized assets and liabilities. The Group qualifies these derivatives as held-for-trading with gains and losses recognized through profit and loss.

Net investments in Group affiliates with a functional currency other than the U.S. Dollar are of a long-term nature: the Group does not hedge such foreign currency translation exposures.

(b) Interest rates

The Group is exposed to interest rate risk as entities in the Group borrow funds at both fixed and floating interest rates. The Group manages this risk by maintaining an appropriate mix between fixed and floating rate borrowings. Interest risk exposure is evaluated regularly to align with interest rate views and the Group's defined risk appetite, which ensure that optimal hedging strategies are applied by either neutralizing the balance sheet exposures or protecting interest expense through different interest rate cycles.

Other price risks

The Group is exposed to equity price risks arising from equity investments. Equity investments are held for strategic rather than trading purposes. The Group does not actively trade these investments.

Credit risk management

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group uses credit rating information supplied by independent rating agencies where available and, if not available, the Group uses other publicly available financial information and its own trading records to rate its major customers. The Group's exposure and the credit ratings of its counterparties are continuously monitored, and the aggregate value of transactions concluded is spread amongst approved counterparties. Credit exposure is controlled by counterparty limits that are reviewed and approved annually by the department in charge.

The Group does not have any significant credit risk exposure to any single counterparty or any group of counterparties having similar characteristics. The Group defines counterparties as having simlar characteristics if they are related entities. Concentration of credit risk did not exceed 10% of gross monetary assets at the end of the year, with the exception of cash balances deposited with a highly rated bank. The credit risk on liquid funds and derivative financial instruments is limited because the counterparties are banks with high credit-ratings assigned by international credit-rating agencies. The maximum amount of credit risk is the carrying amount of the financial assets.

Liquidity risk management

The Group has built an appropriate liquidity risk management framework for the management of the Group's short, medium and long-term funding and liquidity management requirements.
The Group manages liquidity risk by maintaining adequate reserves, banking facilities and reserve borrowing facilities, by continuously monitoring forecasts and actual cash flows and by matching the maturity profiles of financial assets and liabilities.

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4. CHANGE IN ACCOUNTING POLICIES

This note explains the impact of the adoption of IFRS 9 Financial Instruments and IFRS 15 Revenue from Contracts with Customers on the Group's financial statements. As a result of changes in the Group's accounting policies, prior year financial statements had to be restated. The Group has adopted IFRS 15 Revenue from Contracts with Customers from January 1, 2018 which resulted in adjustments to the amounts recognized in the financial statements. In accordance with the transition provisions in IFRS 15, the Group has adopted the new rules restrospectively and has restated comparatives for the 2017 financial year. With the exception of certain aspects of hedge accounting, the Group applied IFRS 9 prospectively and has adapted the classification and terminology of certain balance sheet headings to better align with IFRS 9 terminology. To improve comparability of the financial statements, December 31, 2017 comparative figures have been reclassified. The adjustments arising from the new impairment rules are not reflected in the restated balance sheet as of December 31, 2017, but are recognized in the opening balance sheet on January 1, 2018.

The following tables show the adjustments recognized for each individual line item. Line items that were not affected by the changes have not been included. As a result, the subtotals and totals disclosed cannot be recalculated from the numbers provided. The adjustments are explained in more detail by standard below.

In USD'000	December 31, 2017 As originally presented	Reclassification	IFRS 9 Hedging	IFRS 15	December 31, 2017 Restated	IFRS 9	January 1, 2018
Non-current assets							
Deferred income tax assets	55 212	–	5	2 529	57 746	288	58 034
Financial assets and other non-current assets	56 405	-56 405	–	–	–	–	–
Financial asset at fair value through other comprehensive income	–	1 344	–	–	1 344	–	1 344
Financial asset at amortized cost	–	53 239	–	–	53 239	–	53 239
Other non-current assets	–	1 821	–	-377	1 444	–	1 444
Current assets							
Trade receivables	340 357	-54 611	–	1 605	287 351	-2 345	285 006
Contract assets	–	54 611	–	-9 836	44 775	-79	44 696
Other current assets	53 469	-30 217	–	-630	22 622	–	22 622
Other financial assets at amortized cost	–	30 217	–	–	30 217	–	30 217
Total Assets	**505 443**	**–**	**5**	**-6 710**	**498 738**	**-2 136**	**496 602**
Equity							
Reserves	144 455	–	5	-7 512	136 947	-2 136	134 811
Non-controlling interests	21 653	–	–	803	22 456	–	22 456
Current liabilities							
Contract liabilities	–	41 279	–	–	41 279	–	41 279
Other current liabilities	137 794	-19 384	–	–	118 410	–	118 410
Advances received from clients	21 895	-21 895	–	–	–	–	–
Total equity and liabilities	**325 797**	**–**	**5**	**-6 710**	**319 092**	**-2 136**	**316 956**

In USD'000	2017 As originally presented	IFRS 15	IFRS 9 Hedging	2017 Restated
Revenues	1 068 707	-56 616	–	1 012 090
Expenses	-1 043 069	52 760	–	-990 310
Operating income	**25 637**	**-3 857**	**–**	**21 781**
Finance costs	-10 371	–	143	-10 228
Income before tax	**15 266**	**-3 857**	**143**	**11 553**
Income tax	-12 595	-302	-31	-12 929
Net income for the period before discontinued operations	**2 672**	**-4 159**	**112**	**-1 376**
Net result from discontinued operations	-9 412	–	–	-9 412
Net income from continuing operations	**-6 741**	**-4 159**	**112**	**-10 788**
Attributable to:				
- Equity holders of the company	-11 378	-3 504	112	-14 770
- Non-controlling interests	4 637	-655	–	3 982
Earnings per share, basic and diluted in USD:				
- bearer shares	-0.2092	-0.0644	0.0021	-0.2716
- registered shares	-0.0209	-0.0064	0.0002	-0.0272
Other comprehensive income				
Other comprehensive income to be eventually reclassified into the consolidated income statement in subsequent periods:				
Currency translation differences	23 766	-496	1	23 272
Cash flow hedges, net of income tax	105	–	-143	-38
Total other comprehensive income, net of income tax	**36 509**	**-496**	**-142**	**35 870**
Total comprehensive income for the period	**29 768**	**-4 654**	**-30**	**25 082**
Attributable to:				
- Equity holders of the company	24 385	-4 000	-30	20 354
- Non-controlling interests	5 383	-655	–	4 728
	29 768	**-4 655**	**-30**	**25 082**

IFRS 9 Financial Instruments - Impact of Adoption

IFRS 9 replaces the provisions of IAS 39 that relate to the recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets and hedge accounting.

The adoption of IFRS 9 Financial Instruments from January 1, 2018 resulted in changes in accounting policies and adjustments to the amounts recognized in the financial statements.

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Derivatives and hedging

The Group enters into foreign currency option contracts to reduce the exposure of its highly probable forecast transactions to foreign currency fluctuations. The foreign currency options in place as of January 1, 2018 qualified as cash flow hedges under IFRS 9. The Group's risk management strategies and hedge documentation are aligned with the requirements of IFRS 9 and these relationships are therefore treated as continuing hedges. For foreign currency options, the Group only designates the intrinsic value as hedging instruments in the cash flow hedge relationships.

Prior to January 1, 2018, changes in instrinsic value were recognized in comprehensive income, while changes in the time value were recognized in the statement of profit or loss. Since the adoption of IFRS 9, the Group recognized changes in fair value of foreign currency options attributable to time value in the costs of hedging reserve within equity. This change has been applied restrospectively for foreign currency options in cash flow hedge relationships resulting in a reclassification of kUSD 169 from retained earnings to the costs of hedging reserves as of January 1, 2017 and kUSD 31 as of January 1, 2018 and a decrease in other comprehensive income ("OCI") of kUSD 143 for the year ended December 31, 2017.

Impairment of financial assets

The Group has the following types of financial assets that are subject to IFRS 9's new expected credit loss model:

- Trade accounts receivable
- Contract assets
- Financial assets carried at amortized costs, and
- Financial assets carried at fair value through OCI

The Group was required to revise its impairment methodology under IFRS 9 for each of these categories. The impact of the change in impairment methodology on the Group's retained earnings and equity is disclosed in the table above.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets. To measure expected credit losses, trade accounts receivable and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in process and have substantially the same risk characteristics as the trade accounts receivable for the same types of contracts.

The loss allowances for trade accounts receivable and contract assets at December 31, 2017 reconcile to the opening loss allowance on January 1, 2018 as follows:

In USD'000	Contract assets	Trade accounts receivable
Loss allowance at December 31, 2017	30	26 453
Amounts restated through opening retained earnings	79	2 345
Opening loss allowance at January 1, 2018	**109**	**28 798**

Other financial assets carried at amortized costs and fair value through OCI are considered to have low credit risk, and any loss allowance recognized is therefore limited to 12 months expected credit losses. These assets include, among others, advance payments to suppliers, income and other tax receivables, the long-term portions of trade accounts receivable, including the discounted revenues related to the Group's intellectual property portfolio, equity investments and marketable securities. Instruments are considered to be low credit risk when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

IFRS 15 Revenue from Contracts with Customers - Impact of Adoption

Presentation of assets and liabilities related to contracts with customers

The Group has voluntarily changed the presentation of certain amounts in the comparative balance sheet to reflect the terminology of IFRS 15 and IFRS 9 as follows:

- Contract assets were previously presented as part of trade accounts receivable
- Contract liabilities were previously included in advances received from clients and other current liabilities

Principal versus agent considerations

In sales transactions for certain security products that are sold with third-party delivered maintenance or software subscriptions, we changed our accounting to record revenue for these transactions on a net basis, as the agent in the arrangement. Under previous guidance, based on the Group's credit risk exposure in connection with the contractual obligations, the Group was deemed a principal and reported these revenues on a gross basis. This change has no effect on the reported gross profit associated with these transactions and resulted in a decrease of revenue and cost of material, licenses and services of kUSD 51 769 for the year ended December 31, 2017.

Transfer of control versus risks and rewards of ownership

In connection with a contract for a complete security solution, the Group bundled certain hardware, software and service elements whereby the consideration received for the hardware elements (smartcards) was based on the performance of the solution. Under previous guidance, revenue for these elements was recognized when earned. Under IFRS 15, we consider that control of the goods has passed to the customer and recognize revenue for the sale of smartcards upon delivery. The change related to this contract resulted in an increase in trade accounts receivable of kUSD 2 916, a decrease in other current assets of kUSD 1 796 and other minor adjustments to opening retained earnings and deferred tax assets.

Arrangements where revenue recogntion critieria are not met

IFRS 15 requires certain criteria be met for a contract to be accounted for using the five-step model in the revenue standard. Under previous guidance, the Group considered the criteria for recognizing revenue for a particular transaction had been met although a definitive contract had not been signed with the customer. Under IFRS 15, we consider that each party's rights and obligations were not sufficiently identified to allow for recognition under the revised standard. This change resulted in a decrease in revenue and contract assets of kUSD 3 798 for the year ended December 31, 2017.

Measuring progress towards complete satisfaction of a performance obligations

Under previous guidance, the Group used a variety of ways to measure progress towards satisfaction of its performance obligations. IFRS 15 requires an entity to apply a single method of measuring progress for each performance obligation satisfied over time and apply that method consistently to similar performance obligations. Upon adopting IFRS 15, the Group revised its accounting policies to conform to the new standard and reviewed its calculations for measuring progress. As a result, the timing of revenue recognition for certain contracts changed to a later point in time. This change resulted in an opening retained earnings adjustment of kUSD 3 567, decreases of contract assets and deferred taxes of kUSD 5 726 and 2 159, respectively, at January 1, 2017 and a decrease in contract assets of kUSD 6 210 at December 31, 2017.

Other adjustments

In addition to the adjustments described above, upon the adoption of IFRS 15, other items of the primary financial statements such as deferred taxes, income tax expense, and retained earnings were adjusted as necessary. Furthermore, exchange differences on translation of foreign operations were also adjusted.

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5. BUSINESS COMBINATIONS

On January 30, 2018, the Group, through its subsidiary SKIDATA, signed a share purchase agreement whereby it acquired 51% of Cytel (Shanghai) Ltd. for total consideration of kUSD 5 830. Founded in 1972, Cytel (Shanghai) Ltd. is a pioneer and the market leader in the sales, installation and maintenance of high-quality access systems in China. The company has a long history of developing parking solutions to meet the specific needs of the Chinese market and its network of 18 sales and service locations in China's urban centers is expected to broaden the customer and partnership base of SKIDATA.

The goodwill arising from the acquisition amounts to kUSD 3 463 and is allocated to the Public Access operating segment. The goodwill arises from a number of factors, including expected synergies resulting from acquiring an experienced workforce and valuable sales knowledge and expertise in the relevant market. The gross contractual amount of trade accounts receivable acquired is kUSD 4 888, of which kUSD 792 is expected to be uncollectible. Acquisition related costs of kUSD 62 are included in other operating expenses.

The fair values of the identifiable assets and liabilities as at the date of acquisition for the above business combination was as follows:

In USD'000	Fair value of net assets acquired 31.12.2018
Tangible fixed assets	77
Intangible fixed assets (Goodwill excl.)	2 389
Inventory	839
Trade accounts receivable	4 096
Other current assets	369
Cash and cash equivalents	3 332
Trade accounts payable	-521
Other current liabilities	-5 796
Deferred income tax liabilities	-145
Total identified net assets	**4 641**
Non-controlling interest resulting from a business combination	-2 274
Goodwill	3 463
Total consideration	**5 830**
Total consideration, of which:	
- cash	3 893
- deferred	1 937
Total consideration	**5 830**

Proforma information

From the date of acqjuisition, Cytel (Shanghai) Ltd. has contributed kUSD 2 797 to revenues and kUSD -176 to the net income from continuing operations of the Group. If the acquisitions had taken place on January 1, revenues from continuing operations would have been approximately kUSD 908 753 and the net income from continuing operations for the year would have been approximately kUSD -24 381.

Transaction with non-controlling interests

On December 21, 2018, the Group acquired the remaining 22.5% of SmarDTV SA, for no consideration. This transaction is treated as a transaction with non-controlling interest and is allocated to retained earnings for kUSD -4 176 and non-controlling interests for kUSD 4 176.

6. OPERATING SEGMENTS

IFRS 8 requires operating segments to be identified based on internal reporting that is regularly reviewed by the chief operating decision maker. Group operating segments represent strategic business units that offer products and services for which such internal reporting is maintained. The chief operating decision maker reviews the internal segment reporting in order to allocate resources to the segments and assess their performance.

Starting 2018, the Group manages the Digital TV, Cybersecurity and Internet of Things (IoT) as three distinct businesses that were previously included into one single operating segment. The chief operating decision maker now receives distinct profitability reports for each of these businesses and allocates resources accordingly. A clear cost allocation to each business has been defined and implemented. As a result, the Group reports four operating segments which are reflected in internal management reporting as follows:
- Digital TV
- Cybersecurity
- Internet of Things (IoT)
- Public Access

The Digital TV division provides end-to-end integrated solutions, including open conditional access solutions, which allow TV operators and content providers to operate a wide range of high value-added pay TV services on a secure platform, and middleware software solutions for set-top-boxes and other consumer devices, enabling an advanced end-user experience. The Digital TV operating segment also includes the Group's Intellectual Property activities. Prior to 2018, the Integrated Digital Television division included the activities of the Group's Cybersecurity and IoT divisions, which have now been separated based on reporting criteria of IFRS 8.

The Cybersecurity division provides end-to-end cybersecurity solutions to a wide range of customers across multiple sectors, including advisory services, technology and resale services, managed security and custom developed proprietary solutions in domains not covered by existing commercial products. The Cybersecurity division is a combination of organic developments and the former acquisitions of Milestone Systems, Inc. and M&S Technologies.

The IoT division extends the existing Digital Television secure platform into new domains, enabling device security through identity authentication and firmware protection, data security to ensure the confidentiality, integrity and authenticity of sensitive data, and access management and active security protections to enable secure processing, local decision making and threat detection and response.

The Public Access division provides access control systems and ticketing services for ski lifts, car parks, stadiums, concert halls and other major events.

The measure of income presented to manage segment performance is the segment operating income. Segment operating income is based on the same accounting policies as consolidated operating income except that intersegment sales are eliminated at the consolidation level. Income and expenses relating to Corporate include the costs of Group headquarters and the items of income and expense which are not directly attributable to specific divisions. These elements are reported under the "Corporate common functions". Reportable segment assets include total assets allocated by segment with the exclusion of intersegment balances, which are eliminated. Unallocated assets include assets managed on a centralized basis, included in the reconciliation to balance sheet assets.

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In USD'000	Digital TV 2018	Public Access 2018	Cyber-security 2018	Internet of Things 2018	Total 2018
Revenues from external customers	443 520	368 395	94 290	1 999	908 205
Other operating income	9 156	2 115	91	120	11 482
Total segment revenues and other operating income	**452 676**	**370 511**	**94 381**	**2 119**	**919 687**
Cost of materials, licenses and services	-57 633	-157 863	-55 292	-4	-270 791
Operating expenses	-323 366	-191 562	-60 431	-21 589	-596 947
Operating income before depreciation, amortization and impairment	**71 678**	**21 086**	**-21 342**	**-19 474**	**51 949**
Depreciation, amortization and impairment	-27 497	-10 407	-4 355	-800	-43 059
Operating income - excluding corporate common functions	**44 181**	**10 679**	**-25 697**	**-20 273**	**8 890**
Corporate common functions					-16 193
Interest expense and other Finance income/(expense), net					-10 750
Share of result of associates	355	1 140	–	–	1 495
Income before tax from continuing operations					**-16 558**
	31.12.2018	31.12.2018	31.12.2018	31.12.2018	31.12.2018
Total segment Assets	**671 105**	**351 272**	**148 105**	**36 290**	**1 206 772**

In USD'000	Digital TV Restated 2017	Public Access Restated 2017	Cyber-security Restated 2017	Internet of Things Restated 2017	Total Restated 2017
Revenues from external customers	515 578	361 552	115 226	684	993 040
Other operating income	19 947	-1 547	589	62	19 051
Total segment revenue and other operating income	**535 525**	**360 005**	**115 815**	**746**	**1 012 090**
Cost of materials, licenses and services	-75 083	-156 954	-77 483	-16	-309 537
Operating expenses	-372 697	-171 301	-61 642	-19 136	-624 776
Operating income before depreciation, amortization and impairment	**87 745**	**31 750**	**-23 311**	**-18 406**	**77 778**
Depreciation, amortization and impairment	-23 073	-10 397	-4 636	-461	-38 566
Operating income - excluding corporate common functions	**64 672**	**21 353**	**-27 946**	**-18 867**	**39 211**
Corporate common functions					-17 431
Interest expense and other Finance income/(expense), net					-11 116
Share of result of associates	6	882	–	–	888
Income before tax from continuing operations					**11 553**
	Restated 31.12.2017	Restated 31.12.2017	Restated 31.12.2017	Restated 31.12.2017	Restated 31.12.2017
Total segment Assets	**783 901**	**344 314**	**89 061**	**1 125**	**1 218 401**

In USD'000	31.12.2018	Restated 31.12.2017
Total Segment Assets	1 206 772	1 218 401
Cash & Cash equivalents	13 021	2 580
Other current assets	1 193	85
Financial assets and other non-current assets	2 627	2 717
Asset of disposal group classified as held for sale	14 401	62 650
Total Assets as per Balance Sheet	**1 238 014**	**1 286 433**

GEOGRAPHICAL INFORMATION

The company's country of domicile is Switzerland. The Group's revenue from external customers and information about its non-current assets by country are presented below:

	Revenues from external customers		Non-current assets	
In USD'000	2018	Restated 2017	31.12.2018	Restated 31.12.2017
Switzerland	35 672	41 827	76 126	82 181
United States of America	269 544	345 420	249 459	252 760
France	53 836	49 053	10 687	12 176
Norway	11 228	9 993	139 638	156 686
Rest of the world	537 925	546 748	91 021	91 302
	908 205	**993 040**	**566 931**	**595 106**

Non-current assets exclude financial instruments, deferred tax assets and employment benefit assets. Revenues are allocated to countries on the basis of the end-customer's location.

INFORMATION ABOUT MAJOR CUSTOMERS

No aggregate revenues resulting from transactions with a single external customer amount to 10% of the Group's total revenues.

REVENUE CATEGORIES

	Digital TV		Public Access		Cybersecurity		Internet of Things	
In USD'000	31.12.2018	Restated 31.12.2017	31.12.2018	Restated 31.12.2017	31.12.2018	Restated 31.12.2017	31.12.2018	Restated 31.12.2017
Europe	172 166	171 755	183 309	179 202	12 713	8 094	1 999	684
Americas	175 476	219 869	110 251	121 507	81 577	107 132	–	–
Asia & Africa	95 878	123 954	74 835	60 843	–	–	–	–
	443 520	**515 578**	**368 395**	**361 552**	**94 290**	**115 226**	**1 999**	**684**
Sale of goods	116 650	128 446	230 344	239 415	30 532	51 302	–	–
Services rendered	223 156	230 655	103 806	89 001	37 965	39 063	1 999	684
Royalties and licenses	103 715	156 477	34 245	33 136	25 793	24 861	–	–
	443 520	**515 578**	**368 395**	**361 552**	**94 290**	**115 226**	**1 999**	**684**

2018 total revenues and other operating income including revenues from discontinued operations amount to kUSD 981 029 (2017: kUSD 1 138 128).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

7. OTHER OPERATING INCOME

In USD'000	2018	Restated 2017
Government grants (research, development and training)	5 878	13 498
Gain on sale of subsidiary	790	–
Income from rental of property	3 634	2 770
Gains/(losses) on disposal of assets	-127	45
Others	1 307	2 738
	11 482	**19 051**

8. EMPLOYEE BENEFITS EXPENSE

In USD'000	Note	2018	Restated 2017
Wages and salaries		358 125	374 684
Social security costs		51 074	52 816
Defined benefit plans expenses	29	10 659	7 781
Defined contribution plans expenses		10 091	10 169
Other personnel expenses		18 139	17 197
		448 087	**462 648**

9. OTHER OPERATING EXPENSES

In USD'000	2018	2017
Development and engineering expenses	17 755	12 267
Travel, entertainment and lodging expenses	34 833	37 496
Legal, experts and consultancy expenses	25 565	45 176
Administration expenses	26 223	28 870
Building and infrastructure expenses	30 533	28 880
Marketing and sales expenses	6 405	10 572
Taxes other than income tax	3 908	3 767
Change in provisions	8 850	1 060
Insurance, vehicles and others	10 980	11 472
	165 053	**179 559**

10. DEPRECIATION, AMORTIZATION AND IMPAIRMENT

In USD'000	Note	2018	2017
Land and buildings	15	5 050	4 288
Equipment and machines	15	11 751	13 606
Total depreciation and impairment of tangible fixed assets		**16 801**	**17 894**
Intangible assets	16	26 258	20 672
Total amortization and impairment on intangible fixed assets		**26 258**	**20 672**
Depreciation, amortization and impairment		**43 059**	**38 566**

11. INTEREST EXPENSE

In USD'000	Note	2018	2017
Interest expense:			
- Bond 2015-2022	28	3 976	3 952
- Bond 2016-2024	28	2 397	2 383
- Net interest expense recognized on defined benefit plans	29	609	689
- Other and bank charges		3 458	1 476
		10 440	**8 500**

12. OTHER FINANCE INCOME, NET

In USD'000	Note	2018	Restated 2017
Interest income		3 007	1 549
Net gains/(losses) on foreign exchange related derivative financial instruments		246	-594
Net foreign exchange transaction gains/(losses)		-2 299	-3 180
Others		-1 264	-390
		-310	**-2 615**

Changes in the fair value of financial assets at fair value through OCI were kUSD -153 (2017: kUSD -196) and recognized directly in other comprehensive income.

13. INCOME TAX EXPENSE

In USD'000	Note	2018	Restated 2017
Current income tax		-12 365	-12 200
Deferred income tax	18	6 643	486
Non refundable withholding tax		-2 019	-1 215
		-7 741	**-12 929**

The tax on the Group’s income before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated companies as follows:

In USD'000	2018	Restated 2017
Income before taxes	**-16 558**	**11 553**
Expected tax calculated at domestic tax rates in the respective countries	4 835	-2 842
Effect of income not subject to income tax or taxed at reduced rates	2 280	4 809
Effect of utilization of previously unrecognized tax asset on tax losses carried forward and temporary differences	4 435	8 966
Effect of temporary differences and tax losses not recognized and deferred tax assets written-off	-14 207	-400
Effect of changes in tax rates	1 299	-20 859
Efffect of associates' result reported net of tax	285	66
Effect of disallowed expenditures	-6 163	-3 564
Effect of prior year income taxes	-329	-368
Effect of non-refundable withholding tax	-2 019	-1 215
Other	1 843	2 478
Tax expense	**-7 741**	**-12 929**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

Income before tax for tax-transparent companies includes the full income before tax of non-fully-owned subsidiaries whose taxes are paid by the subsidiaries' shareholders. However, the Group only recognizes its ownership percentage tax portion. The theoretical tax impact if the Group had recognized 100% of the taxes on these subsidiaries amounts to kUSD 1 426 (2017: kUSD 2 574) and is disclosed under 'Other' in the above table.

The weighted average applicable tax rate increased from 24.6% in 2017 to 29.2% in 2018. The increase can be explained by a different revenue split between countries.

14. EARNINGS PER SHARE (EPS)

Basic and diluted earnings per share

Basic and diluted earnings per share is calculated by dividing the profit attributable to equity holders of the company by the weighted average number of shares outstanding during the year.

In USD'000	2018	Restated 2017
Net income attributable to bearer shareholders	-26 037	-13 513
- Continuing operations	*-29 071*	*-6 868*
- Discontinued operations	*3 034*	*-6 645*
Net income attributable to registered shareholders	-2 416	-1 257
- Continuing operations	*-2 698*	*-639*
- Discontinued operations	*282*	*-618*
Total net income attributable to equity holders	**-28 453**	**-14 770**
Weighted average number of bearer shares outstanding	49 897 528	49 751 978
Weighted average number of registered shares outstanding	46 300 000	46 300 000
Basic and diluted earnings per share (in USD)		
Attributable to shareholders of Kudelski SA for bearer shares : basic and diluted (in USD)	-0.5218	-0.2716
- Continuing operations	*-0.5826*	*-0.1380*
- Discontinued operations	*0.0608*	*-0.1336*
Attributable to shareholders of Kudelski SA for registered shares : basic and diluted (in USD)	-0.0522	-0.0272
- Continuing operations	*-0.0583*	*-0.0138*
- Discontinued operations	*0.0061*	*-0.0134*

The company has no share options nor share subscription rights outstanding which could lead to a dilution of earnings per share.

15. TANGIBLE FIXED ASSETS

In USD'000	31.12.2018	31.12.2017
Land and buildings	94 952	97 941
Equipment and machines	33 224	38 728
	128 176	**136 668**

LAND AND BUILDINGS

In USD'000	Land	Buildings	Building improvements	Total
GROSS VALUES AT COST				
As of January 1, 2017	**23 892**	**113 773**	**16 276**	**153 942**
Additions	–	5 536	2 823	8 359
Impact of business combinations	–	–	94	94
Disposals and retirements	–	–	-456	-456
Classified as held for sale	-2 816	-13 392	-4	-16 212
Currency translation effects	567	4 171	676	5 414
Reclassification & others	–	–	-273	-273
As of January 1, 2018	**21 644**	**110 088**	**19 137**	**150 869**
Additions	–	2 362	1 655	4 017
Disposals and retirements	–	-157	-4 877	-5 034
Currency translation effects	-135	-1 428	-382	-1 945
Reclassification & others	–	-1 288	315	-973
As of December 31, 2018	**21 509**	**109 577**	**15 848**	**146 934**
ACCUMULATED DEPRECIATION AND IMPAIRMENT				
As of January 1, 2017	**–**	**-36 351**	**-10 862**	**-47 214**
Systematic depreciation	–	-2 635	-1 653	-4 288
Disposals and retirements	–	-79	424	346
Classified as held for sale	–	786	4	789
Currency translation effects	–	-2 106	-481	-2 587
Reclassification & others	–	–	26	26
As of January 1, 2018	**–**	**-40 385**	**-12 543**	**-52 928**
Systematic depreciation	–	-3 174	-1 876	-5 050
Disposals and retirements	–	437	4 601	5 038
Currency translation effects	–	691	197	888
Reclassification & others	–	79	-8	71
As of December 31, 2018	**–**	**-42 352**	**-9 629**	**-51 981**
Net book values as of December 31, 2017	**21 644**	**69 703**	**6 595**	**97 941**
Net book values as of December 31, 2018	**21 509**	**67 224**	**6 220**	**94 952**
Useful life in years	Indefinite	10 – 50	4 – 8	

In USD'000	31.12.2018	31.12.2017
Corporate buildings on land whose owner has granted a permanent and specific right of use	14 033	12 318

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

EQUIPMENT AND MACHINES

In USD'000	Technical equipment and machinery	Other equipment	Total
GROSS VALUES AT COST			
As of January 1, 2017	**163 893**	**13 529**	**177 423**
Additions	9 390	1 748	11 138
Impact of business combinations	34	107	142
Disposals and retirements	-9 127	-416	-9 543
Classified as held for sale	-5 347	-601	-5 948
Currency translation effects	9 452	567	10 018
Reclassification & others	290	-17	273
As of January 1, 2018	**168 584**	**14 917**	**183 501**
Additions	9 636	1 892	11 528
Impact of business combinations	77	–	77
Disposals and retirements	-75 319	-3 806	-79 125
Currency translation effects	-1 829	-605	-2 434
Reclassification & others	-4 351	4 800	450
As of December 31, 2018	**96 800**	**17 197**	**113 997**
ACCUMULATED DEPRECIATION AND IMPAIRMENT			
As of January 1, 2017	**-129 319**	**-9 061**	**-138 381**
Systematic depreciation	-11 655	-1 775	-13 430
Impairment	-156	-20	-176
Disposals and retirements	10 034	288	10 322
Classified as held for sale	3 685	600	4 285
Currency translation effects	-6 979	-389	-7 368
Reclassification & others	-77	51	-26
As of January 1, 2018	**-134 466**	**-10 307**	**-144 774**
Systematic depreciation	-9 573	-2 036	-11 609
Impairment	-142	–	-142
Disposals and retirements	71 001	3 726	74 727
Currency translation effects	714	388	1 102
Reclassification & others	3 499	-3 576	-76
As of December 31, 2018	**-68 967**	**-11 806**	**-80 773**
Net book values as of December 31, 2017	**34 118**	**4 610**	**38 728**
Net book values as of December 31, 2018	**27 832**	**5 392**	**33 224**
Useful life in years	4 – 10	4 – 7	

Technical equipment and machinery is comprised of assets made available to clients which generates recurring service revenue. 2018 disposals and retirements relate to assets made available to customers where the customer agreements have been renegotiated and the assets are no longer made available to such customers.

16. INTANGIBLE ASSETS

In USD'000	Technol-ogy	Customer lists, Trade-marks & Brands	Software	Goodwill	Other intangibles	Total
GROSS VALUES AT COST						
As of January 1, 2017	**137 456**	**63 432**	**78 241**	**337 798**	**683**	**617 610**
Additions	4 322	1	11 554	–	–	15 877
Impact of business combinations	–	6 944	25	12 239	–	19 207
Disposals and retirements	–	–	-3 002	–	-238	-3 239
Classified as held for sale	-17 714	-767	-882	-1 515	–	-20 877
Reclassification & others	-1	–	-0	–	–	-1
Currency translation effects	6 922	2 774	3 581	10 477	58	23 811
As of January 1, 2018	**130 985**	**72 383**	**89 517**	**358 999**	**503**	**652 388**
Additions	1 979	3 322	7 087	–	–	12 388
Impact of business combinations	–	2 389	–	3 464	–	5 853
Disposals and retirements	-0	–	-3 831	–	-0	-3 831
Classified as held for sale	–	–	–	–	–	–
Reclassification & others	57	-3 322	3 844	–	-57	522
Currency translation effects	-3 106	-3 203	-1 230	-9 245	-15	-16 798
As of December 31, 2018	**129 915**	**71 570**	**95 387**	**353 217**	**431**	**650 521**
ACCUMULATED DEPRECIATION AND IMPAIRMENT						
As of January 1, 2017	**-108 074**	**-17 605**	**-63 539**	**–**	**-669**	**-189 888**
Systematic amortization	-8 733	-8 756	-3 051	–	-5	-20 545
Impairment	-128	–	–	–	–	-128
Recovery of amortization on disposal and retirements	1 020	–	3 015	–	238	4 273
Classified as held for sale	11 912	767	837	–	–	13 516
Currency translation effects	-4 923	-826	-2 674	–	-56	-8 479
As of January 1, 2018	**-108 926**	**-26 420**	**-65 412**	**–**	**-492**	**-201 250**
Systematic amortization	-7 951	-9 402	-8 483	–	-5	-25 841
Impairment	-398	–	-19	–	–	-417
Recovery of amortization on disposal and retirements	–	–	3 809	–	–	3 809
Classified as held for sale	–	–	–	–	–	–
Reclassification & others	-52	–	–	–	57	5
Currency translation effects	2 546	1 498	840	–	14	4 898
As of December 31, 2018	**-114 782**	**-34 324**	**-69 264**	**–**	**-426**	**-218 797**
Net book values as of December 31, 2017	**22 059**	**45 963**	**24 105**	**358 999**	**10**	**451 137**
Net book values as of December 31, 2018	**15 133**	**37 245**	**26 123**	**353 217**	**5**	**431 724**
Useful life in years	4 – 10	5 – 10	3 – 4	Indefinite	4	

Intangible assets with indefinite useful lives are subject to a yearly impairment reviews. The impairment of the Technology asset in 2018 is due to a commercial initiative abondoned during such year.

Goodwill is allocated for impairment testing to cash generating units, which are defined within the framework of the Group as its operating segments. In 2018, the Group changed its operating structure and, in accordance with IAS 8, now reports four operating segments as the prior Integrated Digital Television segment is now split into three segments: Digital TV, Cybersecurity and Internet of Things (IoT) (note 6). Goodwill previously allocated to Integrated Digital Television has been reallocated over these three segments while goodwill related to the Public Access segment remains unchanged. The reallocation was performed in accordance with IAS 36 using the relative value approach whereby the relative value of each cash generating unit was derived using a discounted cash flow methodology as of December 31, 2018.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

Goodwill allocated to each operating segment was tested for impairment using a value-in-use calculation based on cash flow projections approved by Group management and covering a five year period. At December 31, 2018, kUSD 215 832 of goodwill has been allocated to Digital TV, kUSD 65 354 to Cybersecurity, kUSD 36 072 to IoT (totalling a combined value of kUSD 325 665 in 2017 before carve out) and kUSD 35 959 has been allocated to Public Access Solutions (2017: 33 334).

Digital TV
Digital TV revenue assumptions for the five year plan are based on adjusted bottom-up revenue projections from existing products and existing regions, and a discount rate of 10.0% (2017: 9.0%). Cost projections are based on the estimated cost to serve customers through a continuous improvement of segment's operations. Cash flows beyond the five year plan have been extrapolated using a steady growth rate of 1.5% per annum (2017: 1.5%). In the Digital TV segment, we assume declining revenues over the first years of the planning period, as the subscriber base of established pay TV operators is expected to continue shrinking. In the later years of the planning period, revenues are expected to stabilize and revert to growth, as the relative weight of growing domains will increase over time. We expect to streamline Digital TV cost base as to maintain the current level of operating profitability excluding restructuring costs. Key assumptions reflect management's best knowledge of the market, business evolution and past experience.

Cybersecurity
Cybersecurity revenue projections are based on segment management's assuptions of the development of the segment's key business lines. Such assumptions were adjusted to include contingencies related to the uncertainty of such developments. Related cost assumptions are based on the estimated cost required to provide the projected product and service portfolio and were approved by Group management. Projections are discounted using a 10.0% discount rate. Cash flows beyond the five year plan have been extrapolated using a steady growth rate of 3.0% per annum. In the Cybersecurity segment, revenue mix has changed in 2018 and is expected to continue to develop towards the higher value added business pillars (advisory, managed security services and proprietary technologies). As a result, Cybersecurity segment gross profits are expected to grow, reflecting material R&D and operating investments of the past years. Key assumptions reflect management's best knowledge of the market, business evolution and past experience.

Internet of Things (IoT)
IoT revenue projections have been developed by the segment managers based on expected sales to existing and prospective customers. Cost assumptions are mainly based on the assumed cost base required for the implementation of the current product roadmap. Cash flows beyond the five year plan have been extrapolated using a steady growth rate of 2.0% per annum. Cash flows have been discounted using a 10.0% discount rate. In the IoT segment, we expect to maintain the current run rate of R&D spending, allowing for an initial launch of the Group secure IoT platform in 2019 and an ongoing extension of this platform. Revenue projections are based on estimated volumes and prices for existing customers and prospects. Given the high operating leverage of the IoT platform, no material cost increase is expected over the planning period. Key assumptions reflect management's best knowledge of the market, business evolution and past experience.

Public Access
Public Access revenue assumptions for the five year plan were generated from existing products and existing customers, and a discount rate of 11.0% (2017: 10.25%). Cash flows beyond the five year plan have been extrapolated using a steady growth rate of 2.0% per annum (2017: 1.5%). Key assumptions reflect management's best knowledge of the market, business evolution and past experience.

In 2018 and 2017, management analyzed independently reasonable possible changes in the plan for changes in discount rate, changes in growth rate in perpetuity and the loss of key customers. Based on such analyses, management concludes that any reasonably possible change in key assumptions on which the recoverable amount is based would not cause the aggregate carrying amount to exceed the aggregate recoverable amount of the cash-generating unit.

17. INVESTMENTS IN ASSOCIATES

In USD'000	2018	2017
At January 1	**5 858**	**4 939**
Share of profit	1 495	888
Dividends received	-936	-175
Currency translation effects	-226	206
At December 31	**6 191**	**5 858**

The Group's interests in its principal associates, all of which are unlisted, were as follows:

		Interest held	
Name of associate	**Principal activity**	**2018**	**2017**
APT-SkiData Ltd, United Kingdom	Sales of Public Access products	26%	26%
SKIDATA Parking Systems, Hong-Kong	Sales of Public Access products	26%	26%
SKIDATA India Private Limited, India	Sales of Public Access products	49%	49%
SJack GmbH, Austria	Sales of Public Access products	26%	26%
Swiss Peak Experience SA, Switzerland	Sales of Public Access products	45%	45%
iWedia SA, Switzerland	Digital Television sales and service	40%	40%
Kryptus Segurança da Informaçao Ltda.	Cyber Security activities	* 16%	* 16%

*Through a shareholder agreement, Kudelski Group is entitled to appoint and has appointed one board member of Kryptus Segurança da Informaçao Ltda. and participates in significant financial and operating decisions. The Group has therefore determined that it has significant influence over this entity, even though it only holds 16% of the voting rights.

SUMMARIZED FINANCIAL INFORMATION OF THE GROUP'S ASSOCIATES

In USD'000	31.12.2018	Restated 31.12.2017
Total assets	34 502	33 867
Total liabilities	18 586	18 843
Net assets	15 904	15 024
Group's share of associates' net assets	4 837	4 471

	2018	Restated 2017
Revenue	50 211	43 496
Result of the period	4 987	3 286
Group's share of associates' result for the period	1 495	888

18. DEFERRED INCOME TAXES

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes relate to the same fiscal authority. The offset amounts are as follows:

In USD'000	31.12.2018	Restated 31.12.2017
Deferred tax assets	61 612	57 746
Deferred tax liabilities	-6 878	-9 014
	54 734	**48 732**

Movement on the deferred income tax account is as follows:

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

In USD'000	Note	2018	Restated 2017
At January 1		**48 732**	**50 339**
Change in accounting policy		–	2 588
Exchange differences		-1 937	1 993
Recognized against other comprehensive income		1 506	-5 177
Change in scope of consolidation		-210	-1 497
Income statement (expense)/income	13	6 643	486
At December 31		**54 734**	**48 732**

The movement in deferred tax assets and liabilities during 2018, without taking into consideration the offsetting of balances within the same tax jurisdiction, is as follows:

In USD'000	At January 1, 2018	Income statement effect	Change in scope of consolida-tion	Other Compre-hensive income	Currency translation effects	At December 31, 2018
Deferred tax assets associated with						
- intangibles	7 442	-2 387	–	–	-53	5 001
- employee benefits	7 607	182	–	1 475	-150	9 115
- tax losses	35 164	4 162	–	–	-901	38 425
- provisions and other elements tax deductible when paid	1 893	5 906	322	31	-969	7 183
- inter-company profit elimination	5 544	-339	–	–	-46	5 160
- others	-150	1 250	-162	–	-120	818
Total deferred tax assets (gross)	**57 501**	**8 774**	**160**	**1 506**	**-2 238**	**65 703**
Deferred tax liabilities associated with						
- affiliates and allowances for Group companies	6	–	-6	–	–	–
- intangibles	-8 187	2 526	-465	–	308	-5 817
- provisions & accelerated tax depreciation	-1 054	-3 270	100	–	-45	-4 268
- others	466	-1 388	–	–	38	-884
Total deferred tax liabilities (gross)	**-8 769**	**-2 131**	**-371**	**–**	**302**	**-10 969**
Net deferred tax asset/(liability)	**48 732**	**6 643**	**-210**	**1 506**	**-1 937**	**54 734**

Included in change in scope are the impacts of business combinations and reclassification of deferred taxes to discontinued operations at December 31, 2018.
And for 2017:

In USD'000	At January 1, 2017 Restated	Income statement effect	Change in scope	Other Compre-hensive income	Currency translation effects	At December 31, 2017 Restated
Deferred tax assets associated with						
- intangibles	28 732	-22 220	–	–	930	7 442
- employee benefits	14 284	-1 916	-245	-5 181	665	7 607
- tax losses	14 627	19 671	–	–	866	35 164
- provisions and other elements tax deductible when paid	2 329	-515	-8	3	84	1 893
- inter-company profit elimination	5 127	427	–	–	-10	5 544
- others	261	-359	-47	–	-5	-150
Total deferred tax assets (gross)	**65 360**	**-4 912**	**-300**	**-5 177**	**2 530**	**57 501**
Deferred tax liabilities associated with						
- affiliates and allowances for Group companies	6	–	–	–	–	6
- intangibles	-9 722	1 900	–	–	-365	-8 187
- provisions & accelerated tax depreciation	-1 939	2 227	-1 197	–	-145	-1 054
- others	-778	1 271	–	–	-27	466
Total deferred tax liabilities (gross)	**-12 433**	**5 398**	**-1 197**	**–**	**-537**	**-8 769**
Net deferred tax asset/(liability)	**52 927**	**486**	**-1 497**	**-5 177**	**1 993**	**48 732**

Included in change in scope are the impacts of business combinations and assets and liabilities reclassified as held for sale at December 31, 2017.

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UNRECOGNIZED TAX LOSSES CARRIED FORWARD

At the balance sheet date, the Group has unused tax losses and temporary differences of mUSD 1 177.9 (2017: mUSD 1 077.6) available for offset against future profits. A deferred tax asset has been recognized in respect of mUSD 404.1 (2017: mUSD 423.2) of such losses and temporary differences. No deferred tax asset has been recognized for the remaining mUSD 773.8 (2017: mUSD 654.3) due to the unpredictability of future profit streams. The amount of unused tax losses carried forward which have not been capitalized as deferred tax assets, with their expiry dates, is as follows:

In USD million	2018	2017
Expiration within:		
One year	4.3	52.9
Two years	46.2	12.4
Three years	34.3	40.5
Four years	40.5	38.7
Five years	69.4	72.8
More than five years	579.1	437.0
Total	**773.8**	**654.3**

19. FINANCIAL ASSETS AND OTHER NON-CURRENT ASSETS

In USD'000	31.12.2018	Restated 31.12.2017
Financial assets at amortized cost:		
Loan – third party	11 506	11 672
State and government institutions	18 273	11 376
Trade accounts receivable (long-term portion)	34 725	26 993
Guarantee deposits	2 249	3 061
Prepaid expenses and accrued income (long-term portion)	497	138
Total financial assets at amortized cost	**67 251**	**53 239**
Financial assets at fair value through comprehensive income:		
Equity instruments (level 3)	508	922
Marketable securities (level 1)	–	422
Total financial assets at fair value through comprehensive income	**508**	**1 344**
Other non-current assets:		
Deferred contract cost	386	512
Deferred rent	841	932
Total other non-current assets	**1 227**	**1 444**
	68 985	**56 027**

The equity instruments are measured using a discounted cash flow method provided by the company on a yearly basis. Marketable securities were sold in 2018 for kUSD 671. The resulting gain was not recycled to the income statement.

The effective interest rate on third party loans is 2.00% (2017: 2.38%). State and government institutions include government grants for R&D projects that will not be received within the next 12 months. The long term portion of trade accounts receivable includes, among others, discounted revenues related to the licensing of the Group intellectual property portfolio.

20. INVENTORIES

In USD'000	31.12.2018	31.12.2017
Raw materials	3 423	1 352
Work in progress	5 917	5 893
Finished goods	50 529	51 752
	59 868	58 997

The cost of inventories recognised as an expense includes kUSD 180 (2017: kUSD 175) in respect of write-downs, and has been reduced by kUSD 399 (2017: kUSD 226) in respect of the reversal of such write-downs.

Changes in inventories of finished goods and work in progress included in cost of material are kUSD -3 070 (2017: kUSD 8 384).

21. TRADE ACCOUNTS RECEIVABLE AND CONTRACT ASSETS

In USD'000	31.12.2018	Restated 31.12.2017
Trade accounts receivable	291 641	311 792
Less: provision for impairment	-36 780	-26 453
Trade accounts receivable related parties	2 231	2 012
Trade accounts receivable - net	**257 092**	**287 351**
Contract assets	60 345	44 805
Less: provision for impairment	-358	-30
Contract assets - net	**59 987**	**44 775**

Before accepting a new customer, the Group performs a credit scoring to assess the potential customer's credit quality and defines specific credit limits. Limits and scoring are regularly reviewed. Furthermore, for low value added business deliveries, the Group usually works on a back to back basis.

The following table summarizes the movement in the provisions for impairment of trade accounts receivable and contract assets:

	Contract assets		Trade accounts receivable	
In USD'000	2018	Restated 2017	2018	Restated 2017
December 31,	**-30**	**-1 025**	**-26 453**	**-24 754**
Amounts restated through opening retained earnings	-79	–	-2 345	–
January 1,	**-109**	**-1 025**	**-28 797**	**-24 754**
Reclassified to (from) held for sale	–	–	-1 668	2 324
Provision for impairment charged to income statement	-285	-30	-10 645	-7 285
Utilization	–	–	122	423
Reversal	30	1 057	3 798	4 061
Change in scope	–	–	-753	-9
Translation effects	6	-32	1 164	-1 213
December 31,	**-358**	**-30**	**-36 780**	**-26 453**

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The creation and release of the provision for impairment are included in other operating expenses in the income statement. Provisions recognized for the impairment of trade receivables amount to kUSD -10645 (2017: kUSD -7 285). Amounts charged to the provision for impairment account are written-off when there is no expectation to recover additional cash.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade accounts receivables and contract assets. On that basis, the provisions for impairment of trade accounts receivable and contract assets as of December 31, 2018 and January 1, 2018 (adoption of IFRS 9) were determined as follows:

In USD'000	Gross carrying amount	Expected loss rate	Provision for impairment 31.12.2018	Gross carrying amount	Expected loss rate	Provision for impairment 1.1.2018
Trade accounts receivable not overdue	144 167	0.1%	114	177 137	0.4%	709
Past due:						
- not more than one month	40 771	0.3%	134	46 628	0.4%	199
- more than one month and not more than three months	28 849	0.6%	184	25 227	1.3%	333
- more than three months and not more than six months	22 169	1.7%	377	20 403	3.1%	628
- more than six months and not more than one year	19 909	28.1%	5 591	18 837	25.4%	4 787
- more than one year	35 776	84.9%	30 380	25 571	86.6%	22 141
Total	**291 641**		**36 780**	**313 804**		**28 798**
Contract assets	60 345	0.6%	358	44 805	0.3%	109
Total	**60 345**		**358**	**44 805**		**109**

The expected loss rates are based on payment profiles of sales from the individual Group companies and corresponding historical credit losses. The average loss rates displayed above may vary due to the mix of outstanding receivables within the Group companies.

22. OTHER FINANCIAL ASSETS AT AMORTIZED COST

In USD'000	31.12.2018	Restated 31.12.2017
Other receivables - third parties	7 488	3 117
Other receivables - related parties	1 279	1 320
Advances to suppliers and employees	2 276	7 578
State and government institutions	28 773	18 084
Loans third parties - short term portion	1 204	117
	41 021	**30 217**

23. OTHER CURRENT ASSETS

In USD'000	31.12.2018	Restated 31.12.2017
Prepaid expenses	11 518	11 873
Accrued income	10 408	9 960
Deferred contract cost (short term portion)	364	403
Other receivables - third parties	625	386
	22 915	**22 622**

24. CASH AND CASH EQUIVALENTS

In USD'000	31.12.2018	31.12.2017
Cash at bank and in hand	83 082	67 954
Short term deposits	2 897	3 957
	85 979	**71 911**

The effective interest rate on short term deposits was 0.98% (2017: 0.62%). These deposits have an average maturity of 30 days. The Group only enters into transactions with highly rated banks.

25. SHARE CAPITAL

ISSUED AND FULLY PAID SHARE CAPITAL

The share capital consists of 49 910 873 (2017: 49 759 755) bearer shares at CHF 8.00 par value each and 46 300 000 (2017: 46 300'000) registered shares at CHF 0.80 par value each. Each share confers the right to vote and is fully paid up. The counter-value for the share capital is kUSD 333 456 (2017: kUSD 332 222).

The registered shares are neither listed nor traded on any stock exchange. The bearer shares have been listed on the main market of the SIX since August 2, 1999 (ticker: KUD, security number: 1 226 836; ISIN CH0012268360).

AUTHORIZED SHARE CAPITAL

The Board of Directors is authorized to increase the share capital in one or more stages until 15 March 2020 by a maximum amount of CHF 32 705 312 through the issuance of 3 768 164 bearer shares with a nominal value of CHF 8.00 per share and 3 200 000 registered shares with a nominal value of CHF 0.80 per share to be fully paid up. The issuance price, the nature of the contributions, the date from which new shares shall give entitlement to dividends and other modalities of any share issuance shall be determined by the Board of Directors. The preferential subscription rights of shareholders may be excluded and allotted to third parties by the Board of Directors with a view to acquiring companies or parts of companies or in order to finance the whole or partial acquisition of other companies in Switzerland or abroad. All statutory restrictions on the transfer of shares are applicable to new registered shares.

CONDITIONAL SHARE CAPITAL

Conditional share capital consists in 10 000 000 (2017: 10 000 000) bearer shares at CHF 8.00 each to satisfy convertible bond exercise right and 402 883 (2017: 554 001) bearer shares at CHF 8.00 each to satisfy option exercise or share subscriptions to employees.

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26. NON-CONTROLLING INTERESTS

The following table summarizes the information relating to each of the Group's subsidiaries in which it has material non-controlling interests, before any intercompany elimination:

As at December 31, 2018 (in USD'000)	Nagrastar	275, Sacramento Street LLC
Non-controlling interests percentage	**50.0%**	**50.1%**
Non-current assets	1 660	36 772
Current Assets	42 769	552
Non-current liabilities	–	6 700
Current liabilities	10 308	201
Total Equity	**34 121**	**30 422**
Non-controlling interests percentage	50%	50.1%
Theoritical amount of non-controlling interests	17 060	15 242
Carrying amount of non-controlling interests	**17 060**	**15 242**
Revenue	22 979	4 292
Net result	8 588	2 383
Other comprehensive income	–	–
Total comprehensive income	8 588	2 383
Total comprehensive income allocated to non-controlling interests	4 294	1 194
Dividend paid to non controlling interests	–	–
Net increase /(decrease) in cash and cash equivalents	10 363	-56

As at December 31, 2017 (in USD'000)	Nagrastar	275, Sacramento Street LLC
Non-controlling interests percentage	**50.0%**	**50.1%**
Non-current assets	1 567	36 928
Current Assets	37 970	410
Non-current liabilities	–	9 100
Current liabilities	14 004	199
Total Equity	**25 533**	**28 039**
Non-controlling interests percentage	50%	50.1%
Theoritical amount of non-controlling interests	12 767	14 048
Carrying amount of non-controlling interests	**12 767**	**14 048**
Revenue	23 451	4 157
Net result	8 930	2 227
Other comprehensive income	–	–
Total comprehensive income	8 930	2 227
Total comprehensive income allocated to non-controlling interests	4 465	1 116
Dividend paid to non controlling interests	-5 000	–
Net increase /(decrease) in cash and cash equivalents	-912	-24

These companies are treated as subsidiaries because the Group controls them either by financing or bearing an over-proportional responsibility for the main risks.

27. LONG TERM FINANCIAL DEBT

In USD'000	Note	31.12.2018	31.12.2017
CHF 200 million 1.875% bond 2015/2022	28	202 591	204 332
CHF 150 million 1.5% bond 2016/2024	28	151 795	153 111
Long term bank loans		43 715	–
Other long term financial liabilities		60	85
		398 161	**357 528**

Long term bank loans effective interest rate is 0.78%.

28. BONDS

On May 12, 2015 Kudelski SA issued a CHF 200 million bond with a subscription price of 100%, bearing an annual interest rate of 1.875% and maturing on August 12, 2022 at par, with denominations of CHF 5 000 nominal and multiples thereof. The proceeds amounted to kCHF 200 000 (kUSD 214 891) less issuance costs of kCHF 870 (kUSD 939) totaling an initial net proceed of kCHF 199 130 (kUSD 213 952) and resulting in an effective interest rate of 1.97%.

On September 27, 2016 Kudelski SA issued an additional CHF 150 million bond with a subscription price of 100%, bearing an annual interest rate of 1.5% and maturing on September 27, 2024 at par, with denominations of CHF 5 000 nominal and multiples thereof. The proceeds amounted to kCHF 150’000 (kUSD 154 384) less issuance costs of kCHF 665 (kUSD 684) totaling an initial net proceed of kCHF 149’335 (kUSD 153 700) and resulting in an effective interest rate of 1.58%.

Bonds are recognized in the consolidated balance sheets as of December 31, as follows:

In USD'000	2018	2017
Initial balance	**357 443**	**343 510**
Amortization of transaction costs less premium	210	205
Exchange differences	-3 267	13 728
Liability component as of December 31	**354 386**	**357 443**
of which:		
- long term portion (bond 2015/2022)	202 591	204 332
- long term portion (bond 2016/2024)	151 795	153 111
	354 386	**357 443**

29. EMPLOYEE BENEFITS LIABILITIES

Defined benefit plan income, expense, plan assets and defined benefit obligations are determined by independent actuaries. Defined benefit obligations are calculated using the “Projected Unit Credit” method, and plan assets have been measured at fair market values. Most of the employee benefit obligation results from the Swiss pension plan.

SWITZERLAND

In addition to the legally required social security schemes, the Group has an independent pension plan. Swiss legislation prescribes that both the employer and the employee contribute a fixed percentage of the employee’s insured salary to an external pension fund. Additional employers or employees’ contribution may be required whenever the plan’s statutory funding ratio falls below a certain level. The pension plan is run by a separate legal entity, governed by a Board of Trustees which consists of representatives nominated by the Group and by the active insured employees. The Board of Trustees is responsible for the plan design and the asset investment strategy. This plan covers all employees in Switzerland and is treated as a defined benefit plan with associated risks exposure being:

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- Mortality risk: the assumptions adopted by the Group make allowance for future improvements in life expectancy. However, if life expectancy improves at a faster rate than assumed, this would result in greater payments from the plans and consequently increases in the plan's liabilities. In order to minimize the risk, mortality assumptions are reviewed on a regular basis.
- Market and liquidity risks: these are the risks that the investments do not meet the expected returns over the medium to long term. This also encompasses the mismatch between assets and liabilities. In order to minimize the risks, the structure of the portfolios is reviewed on a regular-basis.

ABROAD

Outside Switzerland, the Group sponsors twelve other post-employment benefit plans treated as defined benefit plan according to IAS 19 revised. Post-employment benefit plan may include jubilee and termination benefits. Other post-employment benefit plans are not funded.

The following table sets forth the status of the pension plans and the amount that is recognized in the balance sheet:

In USD'000	31.12.2018	31.12.2017
Fair value of plan assets	166 457	174 206
Defined benefit obligation	-232 775	-226 517
Funded status	**-66 319**	**-52 311**
Other comprehensive income	-25 879	-15 428
Prepaid/(accrued) pension cost	-40 440	-36 883
Funded status	**-66 319**	**-52 311**

In accordance with IAS 19, the following amount is recorded as net pension cost in the income statement for the financial years 2018 and 2017:

In USD'000	Note	2018	2017
Service cost		-17 989	-19 095
Employees contributions		5 500	5 855
Amortization of gains/(losses)		167	33
Curtailment gain / (loss)		1 845	5 499
Impact of plan amendment		-181	-73
Total recognized in employee benefits expense	**8**	**-10 659**	**-7 781**
Interest cost		-2 190	-2 215
Interest income		1 582	1 525
Total recognized in interest expense	**11**	**-609**	**-689**
Net pension (cost)/income		**-11 267**	**-8 470**

The main assumptions used for the calculation of the pension cost and the defined benefit obligation for the years 2018 and 2017 are as follows:

	31.12.2018	31.12.2017
Switzerland		
Discount rate	1.00%	0.90%
Rate of future increase in compensations	1.50%	1.50%
Rate of future increase in current pensions	0.75%	0.75%
Interest rate credited on savings accounts	1.00%	0.90%
Turnover *(on average)*	10.0%	10.0%
Abroad		
Discount rate	2.17%	1.86%
Rate of future increase in compensations	3.13%	2.83%
Turnover *(on average)*	8.5%	8.1%

The weighted average duration of the defined benefit obligation is as follows :

	31.12.2018	31.12.2017
Weighted average duration of the defined benefit obligation in years		
Switzerland	23.5	23.7
Abroad	11.8	12.9

The changes in defined benefit obligation and fair value of plan assets during the years 2018 and 2017 are as follows:

A. Change in defined benefit obligation

In USD'000	2018	2017
Defined benefit obligation as of 1.1.	**-226 517**	**-230 817**
Service cost	-17 989	-19 095
Interest cost	-2 190	-2 215
Change in demographic assumptions	-1 148	–
Change in financial assumptions	3 762	1 899
Other actuarial gains / (losses)	-967	4 566
Benefits payments	7 951	10 588
Exchange rate difference	2 659	-10 215
Curtailment	1 845	13 860
Settlement	–	4 555
Acquisition of subsidiaries	–	-262
Plan amendment	-181	-73
Classified as held for sale	–	692
Defined benefit obligation as of December 31,	**-232 775**	**-226 517**

B. Change in fair value of plan assets

In USD'000	2018	2017
Fair value of plan assets as of 1.1.	**174 206**	**164 438**
Interest income	1 582	1 525
Employees' contributions	5 500	5 855
Employer's contribution	6 901	7 810
Plan assets gains/(losses)	-12 226	11 437
Benefit payments	-7 951	-10 588
Curtailment	–	-8 361
Settlement	–	-4 555
Exchange rate difference	-1 555	6 645
Fair value of plan assets as of December 31,	**166 457**	**174 206**

The actual return on plan assets amounts to kUSD -10 644 in 2018 (kUSD 12 962 for the year 2017). The estimated employer's contribution to the pension plans for the year 2019 is kUSD 6 351.

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The categories of plan assets, all of which are easily convertible to cash, are stated at their fair value at December 31, 2018 and 2017 as follows:

In USD'000	31.12.2018	Proportion in % 31.12.2018	31.12.2017	Proportion in % 31.12.2017
Cash	6 706	4.0%	354	0.2%
Swiss bonds	14 063	8.4%	14 477	8.3%
Foreign bonds	41 509	24.9%	46 091	26.5%
Swiss shares	31 994	19.2%	37 422	21.5%
Foreign shares	30 820	18.5%	39 375	22.6%
Real estate	34 405	20.7%	33 533	19.2%
Alternative investments	6 960	4.2%	2 954	1.7%
Total	**166 457**	**100.0%**	**174 206**	**100.0%**

Plan assets are quoted on liquid markets. The investment strategy pursues the goal of achieving the highest possible return on assets within the framework of its risk tolerance and thus of generating income on a long-term basis in order to meet all financial obligations. This is achieved through a broad diversification of risks over various investment categories, markets, currencies and industry segments.

The expected benefit payments for the next ten years are as follows :

In USD'000	Switzerland	Abroad
2 019	7 910	91
2 020	7 364	54
2 021	6 878	101
2 022	6 331	436
2 023	5 862	356
2024-2028	27 221	3 038

The following table shows the sensitivity of the defined benefit pension obligations to the principal actuarial assumptions based on reasonably possible changes to the respective assumptions occurring at the end of the reporting period:

	Change in 2018 year-end defined benefit obligation		Change in 2017 year-end defined benefit obligation	
	Switzerland	Abroad	Switzerland	Abroad
	In USD'000	In USD'000	In USD'000	In USD'000
50 basis point increase in discount rate	-23 473	-740	-22 962	-865
50 basis point decrease in discount rate	27 779	807	27 216	948
50 basis point increase in rate of salary increase	275	n/a	249	n/a
50 basis point decrease in rate of salary increase	-289	n/a	-274	n/a
50 basis point increase in rate of pension increase	15 758	n/a	15 408	n/a
50 basis point decrease in rate of pension increase	-14 197	n/a	-13 880	n/a
50 basis point increase of interest in saving accounts	8 249	n/a	8 001	n/a
50 basis point decrease of interest in saving accounts	-7 763	n/a	-7 533	n/a
50 basis point increase of turnover	-2 112	n/a	-2 192	n/a
50 basis point decrease of turnover	1 972	n/a	2 052	n/a

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions the same method (present value of the defined benefit obligation calculated with the projected unit credit method at the end of the reporting period) has been applied as when calculating the defined benefit liability recognised in the balance sheet.
The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the prior period.

30. OTHER LONG TERM LIABILITIES

In USD'000	31.12.2018	31.12.2017
Long-term loans - third parties	7 383	233
Deferred consideration	1 440	3 995
Contingent consideration	2 142	4 568
Other long-term liabilities	1 649	1 202
Deferred income	332	–
	12 946	**9 998**

Long-term loans – third parties includes a loan previously reclassified as held for sale in 2017, but was not transferred to the Buyer in connection with the SmarDTV transaction (note 37). The effective interest rate is 2.00% (2017: 2.00%.)

Deferred and contingent consideration balances include the long-term portions of deferred fixed and contingent earn-out payments in connection with business acquisitions. Assumptions for contingent consideration include discount rates varying from 4.0% to 10.0% and are dependent on the achievement of certain financial performance targets of the acquired companies and are reviewed by management on a periodic basis.

31. SHORT TERM FINANCIAL DEBT

In USD'000	Note	31.12.2018	31.12.2017
Short term bank borrowings		63 729	66 875
Other short term financial liabilities		394	27
		64 122	**66 902**

The average effective interest rate paid in 2018 for short term bank borrowings was 1.07% (2017: 1.24%).

32. TRADE ACCOUNTS PAYABLE

In USD'000	31.12.2018	31.12.2017
Trade accounts payable – third parties	79 607	88 694
Trade accounts payable – related parties	2	1
	79 608	**88 696**

33. CONTRACT LIABILITIES

In USD'000	31.12.2018	Restated 31.12.2017
Amounts due to customers for contract work	4 731	4 312
Advances from clients	26 228	17 583
Deferred income	19 611	19 384
	50 570	**41 279**

34. OTHER CURRENT LIABILITIES

In USD'000	31.12.2018	Restated 31.12.2017
Accrued expenses	74 738	94 617
Deferred consideration	57	2 783
Contingent consideration (level 3)	352	3 212
Payable to pension fund	1 045	558
Other payables	19 554	17 240
	95 746	**118 410**

Deferred and contingent consideration balances include the short-term portion of deferred fix and earn-out payments in connection with business acquisitions.

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35. DERIVATIVE FINANCIAL INSTRUMENTS

Derivatives are only used for economic hedging purposes and not as speculative instruments. However, where derivatives do not meet the hedge accounting criteria or where the Group chooses not to designate derivatives as hedging instruments, they are classfied as "held-for-trading" for accounting purposes and are accounted for at fair value through profit or loss.

In USD'000	Assets 31.12.2018	Assets Restated 31.12.2017	Liabilities 31.12.2018	Liabilities Restated 31.12.2017
Cash flow hedge:				
- Foreign currency options	64	297	–	–
Held-for-trading:				
- Foreign currency options	–	–	-190	-202
- Forward contracts	–	175	–	–
- FX swaps	–	3	–	–
Total of derivatives financial instruments	**64**	**475**	**-190**	**-202**

There were no long-term derivative instruments at December 31, 2018 and 2017.

In USD'000	Cost of hedging reserve	Intrinsic value of options	Total hedge reserves
Balance at January 1, 2017	169	114	282
Change in fair value of hedging instruments recognized in OCI	–	219	219
Cost of hedging deferred and recognized in OCI	31	–	31
Reclassified from OCI to profit or loss	-169	-114	-282
Balance at December 31, 2017	**31**	**219**	**250**
Change in fair value of hedging instruments recognized in OCI	–	42	42
Cost of hedging deferred and recognized in OCI	-42	–	-42
Reclassified from OCI to profit or loss	-31	-219	-250
Balance at December 31, 2018	**-42**	**42**	**0**

The amounts included in cost of hedging reserve relate to the time value of options. All the amounts in the hedging reserve are in respect of transaction-related items, namely forecast sales transactions. The notional amount of options qualifiying for hedge accounting amounted to mUSD 92 in 2018 (2017: mUSD 57) with maturities between January and December and average strike rate of USD/CHF 0.97 in 2018 (2017: USD/CHF 0.99). The foreign currency options are denominated in the same currency as the highly probable future sales transactions, therefore the hedge ration is 1:1. There was no hedge ineffectiveness during 2018 and 2017 relating to foreign currency options.

36. PROVISIONS FOR OTHER LIABILITIES AND CHARGES

In USD'000	Restructuring provisions	Provision for warranty	Litigations and others	Total 2018	Total 2017
As of January 1	**7 498**	**2 668**	**264**	**10 430**	**9 948**
Reclassified as held for sale	–	–	–	–	-4 311
Additional provisions	9 072	109	181	9 362	14 721
Change in scope of consolidation	–	–	–	–	2
Unused amounts reversed	–	-302	-165	-466	-705
Used during the year	-7 347	–	-61	-7 409	-9 767
Exchange differences	-290	-148	-14	-452	542
As of December 31	**8 933**	**2 327**	**205**	**11 465**	**10 430**
Thereof:					
- Short term	8 933	2 327	109	11 368	10 420
- Long term	–	–	97	97	10
	8 933	**2 327**	**205**	**11 465**	**10 430**

Restructuring provisions
Restructuring provisions in 2018 and 2017 primarily relate to headcount reduction measures impacting the Group's Digital TV operations. In addition, the 2018 provision includes amounts related to the non-achievement of sales commitments on an abandoned initiative.

Litigations and others
A number of Group companies are the subject of litigation arising out of the normal conduct of their business, as a result of which claims could be made against them. Such claims, in whole or in part, might not be covered by insurance. This provision disclosed in short-term covers legal fees and lawsuits and is valued according to management's best estimate.

Long-term provisions include an amount for corporate social responsibility actions mandated by the government.

Provision for warranty
Provisions for warranty-related costs are recognised when the product is sold or service provided. Initial recognition is based on historical experience. The initial estimate of warranty-related costs is revised annually.

37. DISCONTINUED OPERATIONS AND ASSETS HELD FOR SALE

In December 2017, the Group announced its intention to dispose of most assets and resources linked to SmarDTV subsidiary's business and has accordingly treated the whole unit as discontinued operations for the year ended December 31, 2017. On August 13, 2018, the Group reached an agreement whereby SmarDTV's Conditional Access Module (CAM) and Set-Top-Box businesses were transferred to SmarDTV Global, a newly formed entity affiliated with a third-party Buyer. Upfront cash consideration for this transfer amounted to kUSD 20 000, subject to customary closing adjustments relating to the transfer of workforce, selected tangible and intangible assets. Inventories were partially transferred for additional consideration at their net book values. The Group retained certain assets, including buildings, debtors and patents.

In connection with this sale agreement, the Buyer and the Group have entered into a commercial relationship whereby the Group will continue to distribute CAMs to Group customers. Continuing operations for the Group will primarily represent revenues recognized from the sale of licenses to third parties in connection with retained patents, and licenses, sales of CAMs as well as sales commissions. The impact of discontinued operations for the Group reconciles as follows:

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

In USD'000	2 018	2 017
Revenue	64 839	75 464
Expenses	-64 142	-78 936
Operating result	**697**	**-3 472**
Impairment to measure at fair value	-8 847	-4 614
Finance costs	-516	-932
Gain on sale of fixed assets	12 958	–
Result before tax from discontinued operations	**4 293**	**-9 018**
Income tax	-14	-394
Net result from discontinued operations	**4 278**	**-9 412**

In USD'000	2 018	2 017
Cash flow used in operating activities	697	2 454
Cash flow used in investing activities	19 840	-1 908
Cash flow from financing activities	–	-662

At December 31, 2017, the assets and liabilities of SmarDTV considered as part of the disposal group were reclassified as held for sale. At December 31, 2018, the assets classified as held for sale represent buildings retained upon the disposal of the SmarDTV operations.

In USD'000	31.12.2018	31.12.2017
Assets classified as held for sale:		
- Tangible fixed assets	14 401	18 435
- Intangible fixed assets	–	6 481
- Financial assets	–	9 905
- Trade and other receivables	–	15 041
- Inventories	–	6 505
- Other current assets	–	6 283
Total assets held for sale	**14 401**	**62 650**
Liabilities classified as held for sale:		
- Trade and other payables	–	13 981
- Other current liabilities	–	6 984
- Employee benefits liabilities	–	873
- Other long-term liabilities	–	6 982
- Advances received from clients	–	2 749
- Current income taxes	–	580
- Deferred tax liabilities	–	251
- Provision for other liabilities and charges	–	134
Total liabilities held for sale	**–**	**32 535**
Total net assets held for sale	**14 401**	**30 115**

38. RESEARCH AND DEVELOPMENT

The following amounts were recognized as expense and charged to the income statement:

In USD'000	2018	2017
Research and development	162 629	189 562

39. DIVIDEND

On March 22, 2018, the Group paid a distribution of CHF 0.10 per bearer share and CHF 0.01 per registered share. The distribution amounted to kUSD 5 568. Since year end, the Board of Directors have proposed a distribution of kUSD 5 537, representing CHF 0.10 per bearer share and CHF 0.01 per registered share respectively. The final distribution may fluctuate upon the issuance of additional share capital for employees by utilization of conditional share capital or utilization of authorized share capital for acquisitions. The proposal calls for the distribution of CHF 0.10 per bearer share (CHF 0.01 per registered share) from capital contribution reserves at 31 December 2018 and is subject to shareholder approval at the Annual General Meeting. This proposed distribution has not been recorded as a liability in these financial statements.

40. EMPLOYEE SHARE PARTICIPATION PLANS

EMPLOYEE SHARE PURCHASE PROGRAM (ESPP)

The Group has set up a plan to allow employees of certain Group companies preferential conditions to buy Kudelski SA bearer shares. All such shares purchased, and the additional shares obtained through this plan, are subject to a three-year blocking period.

	Shares 2018	Shares 2017
Shares underwritten by employees	22 270	11 315
Bonus shares from ESPP	4 454	2 263
Total employee share program	**26 724**	**13 578**
Amount paid by employee (In USD'000)	138	114
Booked corporate charges (excluding social charges) (In USD'000)	61	50
	199	**164**

SHARES ISSUED TO EMPLOYEES

In 2018, 124 394 (2017: 125 558) bearer shares of Kudelski SA were given to employees for no consideration as part of their compensation, of which 64 767 (2017: 70 017) include a seven-year blocking period, 47 127 (2017: 55 541) include a three-year blocking period and 12 500 with no restriction to sale. The fair value recognized for this equity based compensation is kUSD 1 150 (2017: kUSD 1 656).

41. RELATED PARTIES

Trading transactions

Transactions between the Group and its subsidiaries, which are related parties of the Group, have been eliminated in consolidation and are not disclosed in this note.

During the year, Group entities entered into the following significant trading transactions with related parties, associates or joint ventures that are not members of the Group:

In USD'000	Sale of goods and services 2018	2017	Purchase of goods and services 2018	2017	Amounts owed to related parties 31.12.2018	31.12.2017	Amounts owed by related parties 31.12.2018	31.12.2017
APT-Skidata Ltd	7 053	7 464	–	–	–	–	1 260	1 164
SKIDATA Parking System Ltd	1 493	2 091	–	–	–	–	171	276
SKIDATA India Private Limited	496	818	–	–	–	1	251	177
iWedia SA	155	145	608	667	125	308	29	46
Total associated companies	**9 197**	**10 518**	**608**	**667**	**125**	**309**	**1 710**	**1 662**
Audio Technology Switzerland SA	–	–	–	–	–	–	1 644	1 659
Total other related	**–**	**–**	**–**	**–**	**–**	**–**	**1 644**	**1 659**

APT SKIDATA and SKIDATA Parking System Ltd are sales representative companies for SKIDATA Group. Audio Technology Switzerland SA is considered as a related party as some Kudelski Board members invested in the company.

Services provided to/by associates and other related parties are performed at arm's length. The associates are listed in note 17. Outstanding balances are unsecured and are repayable in cash.

Key management compensation

Key management includes directors (executives and non-executives) and members of the Executive Committee. The compensation paid or payable to key management is shown below:

In USD'000	2018	2017
Salaries and other short-term employees benefits	7 138	6 976
Post-employments benefits	35	68
Share-based payments	423	523
	7 596	**7 567**

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

42. SHAREHOLDINGS AND LOANS

PRINCIPAL SHAREHOLDERS

	Voting rights		Shareholdings	
	31.12.2018	Restated 31.12.2017	31.12.2018	31.12.2017
Kudelski family pool	59%	59%	28%	28%
Kudelski family interests outside Kudelski family pool	4%	4%	7%	7%

The Kudelski family pool includes Mr. André Kudelski, Mrs. Marguerite Kudelski, Mrs. Isabelle Kudelski Haldy, Mrs. Irene Kudelski Mauroux and their respective descendants. The Kudelski family interests outside Kudelski family pool are two discretionary and irrevocable trusts of which the beneficiaries are family members of M. André Kudelski.

BOARD OF DIRECTORS AND MANAGEMENT

As of December 31, 2018 and 2017, the members of the Board of Directors and members of Group management had the following interest in the company (without including shares from 2018 and 2017 variable compensation - issued in 2019 and 2018 respectively):

	31.12.2018	31.12.2017
	Bearer shares	Bearer shares
Board of Directors		
Kudelski André, chairman (as member of the family pool)	10 474 423	10 434 423
Smadja Claude, vice chairman	1 300	1 300
Dassault Laurent, member	705 790	2 340
Deiss Joseph, member	–	1 000
Foetisch Patrick, member	1 000	1 000
Kudelski Marguerite, (as member of the family pool)	see above	see above
Lescure Pierre, member	2 000	2 000
Zeller Alexandre, member	–	–
Ross Alec, member	1 250	1 250
Total board members	**11 185 763**	**10 443 313**
Management		
Kudelski André, CEO	see above	see above
Saladini Mauro, CFO	109 187	97 075
Roy Pierre, CMO	47 213	39 837
Solbakken Morten, COO	10 834	6 228
Total Management (excluding CEO)	**167 234**	**143 140**

The Kudelski family pool also owns 46 300 000 registered shares of Kudelski SA as of December 31, 2018 and 2017.

No loans were granted in 2018 and 2017 to the members of the Board of Directors and Group management.

M. Joseph Deiss was no longer a member of the Board of Directors as of December 31, 2018

43. COMMITMENTS AND CONTINGENCIES

OPERATING LEASE COMMITMENTS

The future aggregate minimum lease payments under operating leases are as follows:

In USD'000	2018	2017
Within one year	13 215	14 059
In the second to fifth year inclusive	27 844	36 712
More than five years	3 112	5 929
	44 171	**56 700**

44. CATEGORIES OF FINANCIAL INSTRUMENTS

The financial assets and liabilities are classified as follow as of December 31, 2018:

Assets as per balance sheet date December 31, 2018 (in USD'000)	Note	Derivatives used for hedging	Financial assets at fair value through profit or loss	Financial assets at fair value through OCI	Financial Assets at amortized costs	Total 31.12.2018
Financial assets and non current assets:						
- equity instruments with no quoted market price (level 3)	19	–	–	508	–	508
- long term loans	19	–	–	–	11 506	11 506
- state and government institutions	19	–	–	–	18 273	18 273
- trade accounts receivable - long-term portion	19	–	–	–	34 725	34 725
- guarantee deposits	19	–	–	–	2 249	2 249
- prepaid expenses and accrued income (long term)	19	–	–	–	497	497
Trade accounts receivable	21	–	–	–	257 092	257 092
Other current assets:						
- loans	22	–	–	–	1 204	1 204
- state and government institutions	22				28 773	28 773
- other receivable (third and related parties)	22	–	–	–	8 767	8 767
Cash and cash equivalents	24	–	–	–	85 979	85 979
Derivative financial instruments (level 2)	35	64	–	–	–	64
		64	**–**	**508**	**449 065**	**449 637**

Liabilities as per balance sheet date December 31, 2018 (in USD'000)	Note	Derivatives used for hedging	Financial liabilities at fair value through profit or loss	Financial Liabilities at amortized costs	Total 31.12.2018
Long term financial debt	27	–	–	398 161	398 161
Other long term liabilities:					
- deferred consideration	30	–	–	1 440	1 440
- contingent consideration (level 3)	30	–	2 142	–	2 142
- loans and others	30			9 032	9 032
Short term financial debt	31	–	–	64 122	64 122
Trade accounts payable	32	–	–	79 608	79 608
Other current liabilities:					
- deferred consideration	34	–	–	57	57
- contingent consideration (level 3)	34	–	352	–	352
- payable to pension fund	34	–	–	1 045	1 045
- other payables	34	–	–	19 554	19 554
- current income tax		–	–	8 848	8 848
Derivative financial instruments (level 2)	35	–	190	–	190
		–	**2 684**	**581 867**	**584 551**

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And for 2017:

Assets as per balance sheet date December 31, 2017 (in USD'000) Restated	Note	Derivatives used for hedging	Financial assets at fair value through profit or loss	Financial assets at fair value through OCI	Financial Assets at amortized costs	Total 31.12.2017
Financial assets and non current assets:						
- equity instruments with no quoted market price (level 3)	19	–	–	512	–	512
- equity instruments with no quoted market price (level 3)	19	–	–	410	–	410
- marketable securities (level 1)	19	–	–	422	–	422
- long term loans	19	–	–	–	11 672	11 672
- state and government institutions	19	–	–	–	11 376	11 376
- trade accounts receivable - long-term portion	19	–	–	–	26 993	26 993
- guarantee deposits	19	–	–	–	3 061	3 061
- prepaid expenses and accrued income (long term)	19				138	138
Trade accounts receivable	21	–	–	–	287 351	287 351
Other current assets:						
- loans	22	–	–	–	117	117
- state and government institutions	22				18 084	18 084
- other receivable (third and related parties)	22	–	–	–	4 437	4 437
Cash and cash equivalents	24	–	–	–	71 911	71 911
Derivative financial instruments (level 2)	35	475	–	–	–	475
		475	**–**	**1 344**	**435 140**	**436 959**

Liabilities as per balance sheet date December 31, 2017 (in USD'000) Restated	Note	Derivatives used for hedging	Financial liabilities at fair value through profit or loss	Financial Liabilities at amortized costs	Total 31.12.2017
Long term financial debt	27	–	–	357 528	357 528
Other long term liabilities:					
- deferred consideration	30	–	–	3 995	3 995
- contingent consideration (level 3)	30	–	4 568	–	4 568
- loans and others	30			1 435	1 435
Short term financial debt	31	–	–	66 902	66 902
Trade accounts payable	32	–	–	88 696	88 696
Other current liabilities:					
- deferred consideration	34	–	–	2 783	2 783
- contingent consideration (level 3)	34	–	3 212	–	3 212
- payable to pension fund	34	–	–	558	558
- other payables	34	–	–	17 240	17 240
- current income tax		–	–	7 502	7 502
Derivative financial instruments (level 2)	35	–	202	–	202
		–	**7 982**	**546 639**	**554 621**

45. FAIR VALUE OF FINANCIAL INSTRUMENTS

IFRS requires disclosure of fair value measurement by level according to the following fair value measurement hierarchy:
- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices)
- Level 3: inputs for the assets or liabilities that are not based on observable market data (unobservable inputs)

The table below illustrates the three hierarchical levels for valuing financial instruments carried at fair value as of December 31, 2018 and 2017:

In USD'000		Note	31.12.2018	Restated 31.12.2017
Financial assets at fair value through comprehensive income:				
- marketable securities	Level 1	19	–	422
- derivative financial instruments	Level 2	35	64	475
- equity instuments with no quoted market price	Level 3	19	508	410
Total financial assets			**572**	**1 307**
Financial liabilities:				
- derivative financial instruments	Level 2	35	190	202
- contingent consideration (short-term portion)	Level 3	34	352	3 212
- contingent consideration (long-term portion)	Level 3	30	2 142	4 568
Total financial liabilities			**2 684**	**7 982**

The fair value of Level 3 equity instruments with no quoted market price is determined using a discounted cash flow method provided by the company. Level 3 contingent consideration consists of earn-out payments on companies that have been acquired. The fair value is measured using projections reviewed by management and discount rate comprised between 6.6 and 10.2% (2017: 4.0 and 7.6%).

RECONCILIATION OF LEVEL 3 FAIR VALUES:

The following table shows a reconciliation for the level 3 fair values:

In USD'000	Equity instruments with no quoted market price	Contingent liabilities
Balance at January 1, 2017	394	-9 030
Assumed in a business combination	–	-2 857
Settlements	–	4 566
Remeasurement (recognized in other operating income)	–	-146
Discount effect (recognized in interest expense)	–	-126
Currency translation adjustment	16	-188
Balance at December 31, 2017	**410**	**-7 781**
Assumed in a business combination	–	–
Settlements	–	6 049
Impairment	-406	–
Remeasurement (recognized in other operating income)	–	-116
Reclassification	512	–
Discount effect (recognized in interest expense)	–	-824
Exchange difference	-4	-54
Currency translation adjustment	-4	232
Balance at December 31, 2018	**508**	**-2 494**

Reclassifcation relates to available-for-sale equity instruments with no quoted market price that were previously measured at cost less impairment, which has been reclassifed at fair value through OCI
Except as detailed in the following table, management considers that the carrying amounts of financial assets and financial liabilities recorded at amortized cost in the financial statements approximate their fair values:

In USD'000	Carrying amount 2018	Fair value 2018	Carrying amount 2017	Fair value 2017
Financial liabilities				
- CHF 200 million bond	202 591	143 046	204 332	210 100
- CHF 150 million bond	151 795	86 878	153 111	154 707

The fair values of the bonds are based on their market prices as of December 31. Limited trading liquidity results in material volatility of such prices.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

46. MATURITY ANALYSIS FOR FINANCIAL LIABILITIES

The following table analyses the Group's remaining contractual maturities for its non-derivative financial liabilities. The table is based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay. The table below includes both interest and principal cash flows. The adjustment columns represent the possible future cash flows attributable to the instrument included in the maturity analysis which are not included in the carrying amount of the financial liability on the balance sheet. Balances due within one year equal their carrying amounts as the impact of discounting is not significant.

In USD'000	Due within 1 year	Due within 1 year	Due > 1 year < 5 years	Due > 1 year < 5 years	Due > 5 years	Due > 5 years	Adjustment	Adjustment	Total book value	Total book value
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Bonds	6 127	6 183	223 746	229 672	154 599	158 345	-30 086	-36 757	354 386	357 443
Long term bank loans	–	–	39 106	–	5 373	–	-764	–	43 715	–
Short term financial debt	64 122	66 902	–	–	–	–	–	–	64 122	66 902
Trade accounts payable	79 608	88 696	–	–	–	–	–	–	79 608	88 696
Other payables	19 554	17 240	–	–	–	–	–	–	19 554	17 240
Total	**169 411**	**179 021**	**262 852**	**229 672**	**159 972**	**158 345**	**-30 850**	**-36 757**	**561 386**	**530 281**

47. SENSITIVITY ANALYSIS

Foreign currency

The Group undertakes certain transactions denominated in foreign currencies. Hence, exposure to exchange rate fluctuations arises. Exchange rate exposures are managed within approved policy parameters utilizing derivative instruments.

The Group is mainly exposed to the CHF and the EUR. The following table details the Group's sensitivity to a 10% (2017: 10%) increase and decrease in the CHF and a 10% (2017: 10%) increase or decrease in the EUR compared to the presentation currency. The sensitivity rate used approximates the fluctuation considered by management when performing risk analysis. The sensitivity analysis includes only outstanding foreign currency-denominated monetary items and adjusts their translation at period end for the above mentioned change in foreign currency rates. The sensitivity analysis includes external loans as well as loans to foreign operations within the Group where the denomination of the loan is in a currency other than the currency of the lender or the borrower. A positive number indicates an increase in post-tax profit when the foreign currency strengthens against the relevant currency.

	CHF		EUR	
In USD'000	**2018**	**2017**	**2018**	**2017**
Post-tax net income				
- Increase	-5 592	-7 804	-2 758	-5 359
- Decrease	6 755	2 023	2 758	5 359
Comprehensive income (post-tax effect)				
- Increase	-21 741	-20 791	-1 100	-2 038
- Decrease	23 631	21 436	1 100	2 038

Interest rates

The sensitivity analysis below is based on the exposure to interest rates for financial instruments at the balance sheet date and the stipulated change taking place at the beginning of the financial year and held constant throughout the reporting period in the case of financial instruments that have floating rates. The following rates, corresponding to each currency, represent management's assessment of the reasonable possible change in interest rates for purposes of reporting interest rate sensitivity:

- USD: increase of 200 basis points and decrease of 50 basis points (2017: 200 basis points increase or 50 decrease)
- EUR: increase of 100 basis points and decrease of 100 basis points (2017: 100 basis points increase or 100 decrease)
- CHF: increase of 100 basis points and decrease of 100 basis points (2017: 100 basis points increase or 100 decrease)

If interest rates had been higher/lower on the above mentioned possible change in interest rates and all other variables were held constant, the Group's:

- post-tax profit for the year ended December 31, 2018 would increase by kUSD 578 and increase by kUSD 78, respectively. (2017: increase by kUSD 152 and decrease by kUSD 129). This is mainly due to the interest rate exposure on cash balances.
- other comprehensive income would not be impacted in 2018 and 2017.

Equity prices

The Group is not materially exposed to any equity price fluctuation.

48. COLLATERAL RECEIVED AND GIVEN

In USD'000	31.12.2018	31.12.2017
Guarantees in favor of third parties	34 120	47 010

49. RISK CONCENTRATION

At December 31, 2018 and 2017, no financial asset exposure was more than 10% of the financial assets.

50. FINANCIAL INSTRUMENTS - UNREPRESENTATIVE RISK EXPOSURE AT REPORTING DATE

The quantative data required for IFRS 7 disclosures encompassing market, credit and liquidity risk for the year ended 31 December 2018 was representative of the Group risk profile at that date and is determined by Group management to be representative for future periods.

51. CAPITAL RISK MANAGEMENT

The Group's capital management focus is to maintain a sound capital base to support the continued development of its business. The Group is not subject to externally imposed capital requirements.

The Board of Directors seeks to maintain a prudent balance between different components of the Group's capital. Group management monitors capital on the basis of operating cash flow as a percentage of net financial debt. Net financial debt is defined as current and non-current financial liabilities less liquid assets.

The operating cash flow to net financial debt ratio as at 31 December 2018 was -1.3% (2017: -15.4%).

2017 operating cash flow was negative USD 54.2 million. Such negative operating cash flow is due to a negative USD 110.5 million adjustment for changes in working capital. Such adjustment is a one-off in nature and is mainly due to additional temporary working capital requirements at SKIDATA as well as the structure of 2017 IP licensing transactions resulting in delayed cash inflows. 2017 cash flow from operating activities, net of such adjustments, was positive at USD 56.3 million. 2018 operating cash flow was negative at USD 4.7 million mainly due to further working capital requirements at SKIDATA.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2018

52. NET DEBT RECONCILIATION

In USD'000	31.12.2018	Restated 31.12.2017
Cash and cash equivalents	85 979	71 911
Long-term financial debt	-398 161	-357 528
Short-term financial debt	-64 122	-66 902
Net debt	**-376 304**	**-352 520**

In USD'000	Note:	Cash and cash equivalents	Long-term debt	Short-term debt	Total
Net debt at January 1, 2017		**174 440**	**-343 595**	**-31 471**	**-200 626**
Cash flows		-111 816	–	–	-111 816
Reimbursment of bank overdrafts, long-term loans		–	–	1 619	1 619
Increase in bank overdrafts, long-term loans		–	-2	-34 361	-34 363
Arising from business combinations		–		3 138	3 138
Foreign exchange adjustments		9 287	-13 726	-5 827	-10 266
Amortization of transaction cost less premium	28	–	-205	–	-205
Net debt at December 31, 2017		**71 911**	**-357 528**	**-66 902**	**-352 519**
Cash flows		16 875	–	–	16 875
Reimbursment of bank overdrafts, long-term loans		–	20	23 205	23 225
Increase in bank overdrafts, long-term loans		–	-45 067	-23 377	-68 444
Foreign exchange adjustments		-2 807	4 624	2 952	4 769
Amortization of transaction cost less premium	28	–	-210	–	-210
Net debt at December 31, 2018		**85 979**	**-398 161**	**-64 122**	**-376 304**

53. EVENTS OCCURRING AFTER THE REPORTING PERIOD

The group is not aware of any significant events occuring after the reporting period that could have a material impact on the Group financial statements.

54. PRINCIPAL CURRENCY TRANSLATION RATES

	Year end rates used for the consolidated balance sheets		Average rates used for the consolidated income and cash flow statements	
	2018	2017	2018	2017
1 CHF	1.0152	1.0246	1.0212	1.0157
1 EUR	1.1452	1.1988	1.1792	1.1293
100 CNY	14.5279	15.3688	15.1070	14.7996
100 NOK	11.5086	12.1926	12.2837	12.1009
1 GBP	1.2802	1.3514	1.3333	1.2885
100 BRL	25.7868	30.2254	27.4918	31.3459
100 INR	1.4315	1.5676	1.4608	1.5363
1 SGD	0.7340	0.7479	0.7407	0.7244
100 ZAR	6.9442	8.0943	7.5674	7.5165
100 RUB	1.4315	1.7275	1.5957	1.7153
1 AUD	0.7046	0.7818	0.7461	0.7667

55. APPROVAL OF FINANCIAL STATEMENTS

The consolidated financial statements were approved by the Board of Directors and authorised for issuance on February 26, 2019.

56. PRINCIPAL OPERATING COMPANIES

Company	Place of incorporation	Activity	Digital TV	Cyber-security	Internet of Things	Public Access	Corporate	Percentage held 2018	Percentage held 2017
Nagravision SA	CH – Cheseaux	Solutions for Digital TV	•	•	•			100	100
Nagra France SAS	FR – Paris	Solutions for Digital TV	•					100	100
Nagra USA, Inc.	US – Nashville	Sales and support	•		•			100	100
Nagravision Asia Pte Ltd	SG – Singapore	Services	•					100	100
SmarDTV SA	CH – Cheseaux	Conditional access modules and set-top-boxes	•					100	77.5
NagraStar LLC	US – Englewood	Smartcards and digital TV support	•					50	50
OpenTV Inc	US - Delaware	Middleware for set-top-boxes	•					100	100
Conax Group	NO - Oslo	Conditional access modules and set-top-boxes	•					100	100
Kudelski Security, Inc.	US - Minneapolis	Cyber Security Solutions		•				100	100
SKIDATA Group	AT – Gartenau	People and car access systems				•		100	100
Kudelski SA	CH – Cheseaux	Holding, parent company of the Group					•	100	100

These principal companies are all subsidiaries.

57. RISK ASSESSMENT DISCLOSURES REQUIRED BY SWISS LAW

REQUIRED BY SWISS LAW

Risk assessment and management is an integral part of the Group-wide enterprise risk management. The risk management approach is structured around a global risk assessment and management, and financial risk management. Both are governed by policies initiated by the Board of Directors. The internal control system is based on the COSO framework with a dedicated internal control team in place.

Global risk management

The global risk management process led to the identification and management of security, operational, strategic, asset and market risks. Daily management of the global risks is performed and monitored by the executive management. Risks related to market dynamics include foreign exchange movements, interest rate changes and financing risks. They are described in more detail in section 3 of this report.

Financial Risk Management

The major financial risks consist of accounting complexity and the control environment. Risks related to the control environment include information systems complexity, timely review of results and the robustness of the documentation of processes. Executive management continues to address these risks with process documentation initiatives as well as establishment of process and entity level controls. Financial risk management is described in more details in note 3.

The most critical accounting policies to address accounting complexity include revenue recognition, accounting for acquisitions and strategic alliances, intangible assets and impairments, tax provisions, equity based compensation and contingencies.

Kudelski SA

Cheseaux-sur-Lausanne

Report of the statutory auditor to the General Meeting

on the consolidated financial statements 2018

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Report of the statutory auditor

to the General Meeting of Kudelski SA

Cheseaux-sur-Lausanne

Report on the audit of the consolidated financial statements

Opinion

We have audited the consolidated financial statements of Kudelski SA and its subsidiaries (the "Group"), which comprise the consolidated balance sheet as at 31 December 2018 and the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2018 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with the International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements" section of our report.

We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the IESBA Code of Ethics for Professional Accountants, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our audit approach

Overview

Overall Group materiality: USD 2'250'000

We concluded full scope audit work at 11 reporting components in 7 countries, and in order to increase our coverage, we also performed certain specified procedures. Our audit scope addressed over 76% of the Group's revenue and 77% of the Group's assets.

As key audit matters the following areas of focus have been identified:

- Goodwill impairment assessment
- IFRS 15 Revenue Recognition

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Materiality

The scope of our audit was influenced by our application of materiality. Our audit opinion aims to provide reasonable assurance that the consolidated financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the consolidated financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall Group materiality for the consolidated financial statements as a whole as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, both individually and in aggregate, on the consolidated financial statements as a whole.

Overall Group materiality	USD 2'250'000
How we determined it	5% of average net income before tax from continuing operations of the last 3 years
Rationale for the materiality benchmark applied	We chose net income before tax from continuing operations as the benchmark because, in our view, it is the benchmark against which the performance of the Group is most commonly measured. To account for the volatility of the project-based business, the average value of the last three years was chosen for the materiality calculation.

We agreed with the Audit Committee that we would report to them misstatements above USD 210'000 identified during our audit as well as any misstatements below that amount which, in our view, warranted reporting for qualitative reasons.

Audit scope

We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the consolidated financial statements as a whole, taking into account the structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

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The Group financial statements are a consolidation of 86 reporting components. Following our assessment of the risk of material misstatement to the Group's consolidated financial statements and considering the significance of the reporting components' business operations relative to the Group, we selected 21 reporting components which represent the principal business operations of the Group. Of the 21 reporting components, 11 of these components were subject to an audit of complete financial information and 10 reporting components were subject to specific audit procedures.

For the remaining reporting components, we performed other procedures to test or assess that there were no significant risks of material misstatement in relation to the Group's consolidated financial statements.

The Group audit team, in addition to the audit of the consolidation, was directly responsible for auditing 3 of the 11 reporting components which were subject to a full audit. For the other reporting components, the Group audit team directed and supervised the audit work performed by the PwC component teams at all stages of the audit.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the

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context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Goodwill impairment assessment

Key audit matter	*How our audit addressed the key audit matter*
The Group's goodwill is recognised in 4 Cash Generating Units (CGUs): • Digital TV (DTV) • Public Access (PA) • Cybersecurity (CS) • Internet of Things (IoT) We focused on this area in view of the significance of this amount and in relation to the negative results of the company over the last 2 years. • The assessment of the carrying value of the goodwill balances is dependent on the estimation of future cash flows. Judgement is required to determine the assumptions relating to the future business results and the discount rate applied to the forecasted cash flows. • Starting 2018, the Group manages the Digital TV, Cybersecurity and Internet of Things as 3 distinct businesses that were previously included in one single operating segment. • In particular, those assessments and judgments made to support the carrying value of the goodwill allocated to the Digital TV, Cybersecurity or Internet of Things Divisions were critical, given the 2018 underlying results or the size of the goodwill. Refer to note 2 – Critical accounting estimates and judgements, and note 16 – Intangible assets for details of management's impairment test and assumptions.	In relation to the newly identified segments, we assessed the aggregation of CGUs through review of the relevant documents to management confirming that it is the lowest level at which management monitors goodwill for internal purposes and that no grouping of CGUs for goodwill impairment testing purposes is larger than any of the Group's operating segments. With respect to the reallocation of the goodwill previously allocated to the Integrated Digital TV segment, we tested the respective models determining the relative value of existing goodwill to the newly identified segments. We challenged management to substantiate its key assumptions in the cash flow projections during the forecast period and its intention and ability to execute their strategic initiatives. We discussed the forecasts of the different CGU's with the Group's CEO, CFO, Group controller and the heads of operating segments. We tested, with the support of our valuation specialists, the reasonableness of the cash flows growth rate after the forecast period assumption of 1,5% for Digital TV and 3% for Cybersecurity and Internet of Things divisions. We compared the 2018 actual results with the cash flow forecasts used in the 2017 impairment test to identify in retrospect whether any of the assumptions might have been too optimistic. Together with our specialists, we evaluated the reasonableness of the discount rate of 10% applied to those future cash flows of the Digital TV, Cybersecurity and Internet of Things segment. We assessed management's sensitivity analysis around key estimates to quantify the downside changes in assumptions that could result in an impairment. We assessed the disclosures included in Note 16 Goodwill and intangible assets of the annual report.

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	As a result of our procedures, as discussed with the Audit Committee, we determined that the conclusions reached by management with regard to the carrying value of goodwill were reasonable and supportable.

IFRS 15 - Revenue Recognition

Key audit matter	*How our audit addressed the key audit matter*
In the 2018 financial year, total revenue amounted to USD 908m, comprising the sale of goods (USD 377m), services rendered (USD 367m) and royalties and licences (USD 164m). During the year, the company adopted IFRS 15 'Revenue from contracts with customers'. This resulted in a number of changes. For a summary of those changes, please refer to note 4 in the consolidated financial statements. We considered revenue recognition and the application of IFRS 15 to be a key audit matter because of the risk of material misstatements in the financial statements. Transactions with customers often have bundled components that typically might include a combination of hardware, software, additional services and maintenance. The separation of these elements requires management to use estimates in the determination of the fair value for each component. For more detailed information on the accounting policy regarding revenue recognition, including the assumptions and impact of the new IFRS 15 standard, please refer to notes 1 and 4 to the consolidated financial statements.	Firstly, we evaluated the compliance of Kudelski's accounting policies with IFRS 15. As part of the adoption of IFRS 15, we obtained the schedule of cumulative adjustments as at 1 January 2017 and 2018 and evaluated it for completeness and accuracy by assessing whether it reflected appropriate considerations for the changes in the revenue recognition under IFRS 15. For the majority of sales of good, royalties and licences, the company is recognising revenues at a point in time. We selected a sample of transactions and traced to shipping documents and contracts to validate the accuracy of the revenues recognised. For revenue recognised for services rendered, the company is recognising revenue over time under the principle of percentage of completion. We selected a sample of projects and traced to supporting documentation to demonstrate the level of completion. We performed cut-off testing procedures to ensure that revenue is recognised in the correct reporting period by reference to the contract and evidence of delivery. Based on the work performed, we concluded that the critical judgements and estimates made by management were reasonable and the accounting for revenue appropriate

Other information in the annual report

The Board of Directors is responsible for the other information in the annual report. The other information comprises all information included in the annual report, but does not include the consolidated financial statements, the stand-alone financial statements and the remuneration report of Kudelski SA and our auditor's reports thereon.

Our opinion on the consolidated financial statements does not cover the other information in the annual report and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the annual report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors for the consolidated financial statements

The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Swiss law, ISAs and Swiss Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We

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are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on other legal and regulatory requirements

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

PricewaterhouseCoopers SA

Luc Schulthess	Mario Berckmoes
Audit expert Auditor in charge	Audit expert

Lausanne, 26 February 2019

Enclosure:

- Consolidated financial statements (consolidated income statement, consolidated statement of comprehensive income, consolidated balance sheets, consolidated statement of cash flows, consolidated statement of changes in equity and notes)

BALANCE SHEETS AT DECEMBER 31, 2018 AND 2017

ASSETS

In CHF'000	Notes	31.12.2018	31.12.2017
Current assets			
Cash and cash equivalents		798	3 009
Accounts receivable from Group companies		74 044	55 993
Loan to third party		1 066	–
Other current receivables and prepaid expenses	3.1	1 040	1 204
Total current assets		**76 948**	**60 206**
Fixed assets			
Loans to Group companies		670 500	746 077
Investments	3.2	371 362	377 472
Total fixed assets		**1 041 862**	**1 123 549**
Total assets		**1 118 810**	**1 183 755**

SHAREHOLDERS' EQUITY AND LIABILITIES

In CHF'000	Notes	31.12.2018	31.12.2017
Short-term liabilities			
Short-term interest-bearing liabilities :			
- Bank overdraft		3 644	20 464
Other short-term liabilities :			
- due to third parties		817	480
- due to Group companies		47 880	35 050
Accrued expenses		2 255	2 017
Total short-term liabilities		**54 596**	**58 011**
Long-term liabilities			
Long-term interest-bearing liabilities :			
- Bonds	3.3	350 000	350 000
Total long-term liabilities		**350 000**	**350 000**
Total liabilities		**404 596**	**408 011**
Shareholders' equity			
Share capital		436 327	435 118
Legal reserves:			
- from retained earnings		110 000	110 000
- from capital contribution		79 689	85 010
Retained earnings		145 616	194 985
Net (loss) / income		-57 418	-49 369
Total shareholders' equity	**3.4**	**714 214**	**775 744**
Total liabilities and shareholders' equity		**1 118 810**	**1 183 755**

INCOME STATEMENTS AND PROPOSAL FOR APPROPRIATION OF AVAILABLE EARNINGS FOR THE YEAR 2018

INCOME STATEMENTS FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

In CHF'000	Notes	2018	2017
Other non operating income		4	133
Financial income	4.1	39 953	42 717
Gain on sale of investments		252	–
Administrative and other expenses		-2 759	-3 106
Financial expenses and exchange result	4.2	-10 893	-10 577
Impairment of financial fixed assets	4.3	-82 779	-77 221
Income/(loss) before tax		**-56 222**	**-48 054**
Direct taxes (other than income tax)		-1 196	-1 315
Net income/(loss)		**-57 418**	**-49 369**

PROPOSAL FOR APPROPRIATION OF AVAILABLE EARNINGS FOR THE YEAR 2018

In CHF'000	Legal reserves from capital contribu- tion	Retained earnings
Balance brought forward from previous year	85 010	145 616
Dividend	-5 452	–
Share capital increase	131	–
Net result	–	-57 418
Total available earnings	**79 689**	**88 198**
Proposal of the Board of Directors:		
Ordinary distribution:		
- CHF 0.10 on 49'910'873* bearer shares (out of capital contribution reserve)	-4 991	–
- CHF 0.01 on 46'300'000 registered shares (out of capital contribution reserve)	-463	–
Balance to be carried forward	**74 235**	**88 198**

* This figure represents the number of bearer shares which are dividend bearing as of December 31, 2018 and may fluctuate upon issuance of additional share capital for the employees by utilization of the conditional share capital or utilization of the authorized share capital to acquire companies.

NOTES TO THE FINANCIAL STATEMENTS 2018

1. INTRODUCTION

Kudelski SA, with registered office in Cheseaux, is the ultimate holding company of the Kudelski Group, which comprises subsidiaries and associated companies.

2. ACCOUNTING POLICIES

BASIS OF PREPARATION

The financial statements of Kudelski SA, comply with the requirements of the Swiss accounting legislation of the Swiss Code of Obligations (SCO).

These financial statements were prepared under the historical cost convention and on an accrual basis.

Kudelski SA is presenting consolidated financial statements according to IFRS. As a result, these financial statements and notes do not include additional disclosures, cash flow statement and management report.

FINANCIAL ASSETS

Investments and loans are initially recognized at cost. They are assessed annually and in case of an impairment adjusted to their recoverable amount within their category.

Investments and loans are allocated to four buckets for impairment testing. The four buckets are the cash generating units, which are defined within the framework of the Group as the operating segments, Digital TV, Cybersecurity, Internet of Things (IoT) and Public Access.

The recoverable amount of the cash generating units (CGUs) was determined based on value-in-use calculations. The calculations use cash flow projections approved by management covering a five-year period. Cash flows beyond the five-year period are extrapolated using estimated growth rates in perpetuity.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include cash at bank and short-term deposits. Cash at bank consists of all funds in current accounts available within 48 hours. Short-term deposits generally include bank deposits and fixed term investments whose maturities are of three months or less from the transaction date.

EXCHANGE RATE DIFFERENCES

Transactions in foreign currencies are accounted for in Swiss francs (CHF) at the exchange rate prevailing at the date of the transaction. Assets and liabilities in foreign currencies are accounted for at year-end rates.

Any resulting exchange differences are included in the respective income statement caption depending upon the nature of the underlying transactions; the aggregate unrealized exchange difference is calculated by reference to original transaction date exchange rates and includes hedging transactions. Where this gives rise to a net loss, it is charged to the income statement, while net gains are deferred.

NOTES TO THE FINANCIAL STATEMENTS 2018

3. NOTES TO THE BALANCE SHEETS

3.1 OTHER CURRENT RECEIVABLES AND PREPAID EXPENSES

In CHF'000	31.12.2018	31.12.2017
Prepaid expenses	958	1 169
Withholding tax	51	19
Other accounts receivable	31	16
	1 040	1 204

Prepaid expenses mainly includes the amortized cost of the difference between nominal value and net proceeds less issuance costs of the bonds (note 3.3). These amounts are allocated against income statement over the contractual periods of their underlying borrowings.

3.2 INVESTMENTS

DIRECT INVESTMENTS

Company	Location	Activity	Share capital		Percentage held and voting rights 2018	2017
Nagravision SA	CH – Cheseaux	Solutions for Digital TV	kCHF	20 000	100	100
Nagravision Iberica SL	ES – Madrid	Sales and support Digital TV	kEUR	3	100	100
Nagra France SAS	FR – Paris	Solutions for Digital TV	kEUR	32 833	100	100
Nagra Media Germany GmbH	DE – Ismaning	Services	kEUR	25	100	100
Nagra USA, Inc.	US – Nashville	Sales and support	kUSD	10	100	100
SKIDATA AG	AT - Salzburg	Public access	kEUR	3 634	100	100
Nagra Plus	CH – Cheseaux	Analog Pay-TV solutions	kCHF	100	50	50
SmarDTV SA	CH – Cheseaux	Conditional access modules and set-top-boxes	kCHF	1 000	100	77.5
Kud SA	LU – Luxembourg	Finance	kCHF	100	100	100
Leman Consulting SA in liquidation	CH – Nyon	Intellectual property consulting	kCHF	100	100	100
Nagravision Asia Pte Ltd	SG – Singapore	Services	kSGD	100	100	100
Nagra Media UK Ltd	UK – London	Research & development	KGBP	1 000	100	100
Nagravision Italy Srl	IT – Bolzano	Sales and support	kEUR	10	100	100
Nagra Travel Sàrl	CH – Cheseaux	Travel agency	kCHF	50	100	100
Nagravision India Pvt Ltd	IN – Bangalore	Research & development	kINR	100	100	100
Acetel Co Ltd	SK – Séoul	Digital broadcasting solution provider	kKRW	1 460	17	17
Nagra Media Private Limited	IN - Mumbai	Sales and support	kINR	100	100	100
Nagra Media Beijing Co. Ltd	CN - Beijing	R & D, Sales and services	KCNY	15 890	100	100
Nagra Media Korea LLC	KR - Anyang	Sales and support	kKRW	200 000	100	100
Nagra Media Brasil LTDA	BR - São Paulo	Sales and support	kBRL	553	100	100
Nagra Media Japan K.K.	JP - Tokyo	Sales and support	kJPY	10 000	100	100
Nagra Media (Taiwan) Co., Ltd	TW - Taipei	Sales and support	kNTD	500	100	100
Kudelski Norway AS	NO - Oslo	Holding	kNOK	200	100	100
iWedia SA	CH - Lausanne	Solutions for Digital TV	kCHF	750	40	40
Kryptus Segurança da Informaçao Ltda.	BR - Sao Paulo	Cyber Security Solutions	kBRL	298	16	16
E.D.S.I. SAS	FR - Cesson Sévigné	Research & development	KEUR	163	100	100
Nagra Media Australia Pty Ltd	AU - New South Wales	Sales and support	kAUD	50	100	100
OpenTV Australia Holding Pty Ltd	AU - New South Wales	Holding	kAUD	1	100	100
NexGuard Labs B.V.	NL - Eindhoven	Watermarking Solutions	kEUR	25	100	100
NexGuard Labs France SAS	FR - Cesson Sevigne	Watermarking Solutions	kEUR	420	100	0

SIGNIFICANT INDIRECT INVESTMENTS

Company	Location	Activity	Share capital		Percentage held and voting rights 2018	2017
Conax AS	NO - Oslo	Conditional access modules and set-top-boxes	kNOK	1 111	100	100
OpenTV Inc	US - Delaware	Middleware for set-top-boxes	kUSD	112 887	100	100
NagraStar LLC	US – Englewood	Smartcards and digital TV support	kUSD	2 043	50	50
Kudelski Security Inc.	US - Minneapolis	Cyber Security Solutions	kUSD	0	100	100
Sentry Control Systems LLC	US – Van Nuys	Public access	kUSD	45	60	60
SKIDATA Benelux BV	NL – Barenbrecht	Public access	kEUR	90.6	100	100
SKIDATA (Schweiz) AG	CH - Adliswil	Public access	kCHF	150	100	100
SKIDATA Inc	US – Hillsborough	Public access	kUSD	5 510	100	100
SKIDATA Australasia Pty Ltd	AU – Melbourne	Public access	kAUD	5 472	100	100

3.3 BONDS

On May 12, 2016 the company issued a CHF 200 million bond with a subscription price of 100%, bearing an interest rate of 1.875% and maturing on August 12, 2022 with denominations of CHF 5 000 and multiples thereof.

On September 27, 2016 the company also issued a CHF 150 million bond with a subscription price of 100%, bearing an interest rate of 1.5% and maturing on September 27, 2024 with denominations of CHF 5 000 and multiples thereof.

Each bond is measured at its nominal value. The initial difference between nominal value and net proceeds less issuance costs is considered as a prepaid expense and allocated against the income statement over the period of the bond.

3.4 CHANGE IN SHAREHOLDERS' EQUITY

In CHF'000	Share capital	Legal reserves from retained earnings	Legal reserves from capital contribution	Retained earnings	Total Shareholders' equity
As of December 31, 2016	**434 005**	**110 000**	**97 925**	**200 423**	**842 353**
Dividend			-13 593	-5 437	-19 030
Share capital increase	1 113		678		1 791
Net Income				-49 369	-49 369
As of December 31, 2017	**435 118**	**110 000**	**85 010**	**145 616**	**775 744**
Dividend			-5 452		-5 452
Share capital increase	1 209		131		1 340
Net Income				-57 418	-57 418
As of December 31, 2018	**436 327**	**110 000**	**79 689**	**88 198**	**714 214**

NOTES TO THE FINANCIAL STATEMENTS 2018

SHARE CAPITAL

In CHF'000	31.12.2018	31.12.2017
49'910'873 / 49'759'755 bearer shares, at CHF 8 each	399 287	398 078
46'300'000 registered shares, at CHF 0.80 each	37 040	37 040
	436 327	**435 118**

The registered shares are neither listed nor traded on any stock exchange. The bearer shares have been listed on the main market of the SIX since 2 August 1999 (ticker: KUD, security number: 1 226 836; ISIN CH0012268360).

CONDITIONAL SHARE CAPITAL (ARTICLE 6 OF ARTICLES OF INCORPORATION)

In CHF'000	2018	2017
Conditional share capital as of January 1	84 432	85 545
Employee share purchase plan	-214	-109
Shares allotted to employees	-995	-1 004
Conditional share capital at December 31	**83 223**	**84 432**
Of which may be utilized as of December 31 for:		
- Convertible bonds:		
10'000'000 bearer shares, at CHF 8 each	80 000	80 000
- Options or share subscriptions to employees:		
402'883 / 554'001 bearer shares, at CHF 8 each	3 223	4 432
	83 223	**84 432**

AUTHORIZED SHARE CAPITAL (ARTICLE 7 OF ARTICLES OF INCORPORATION)

In CHF'000	31.12.2018	31.12.2017
3'768'164 bearer shares, at CHF 8 each	30 145	30 145
3'200'000 registered shares, at CHF 0.80 each	2 560	2 560
Authorized share capital as of December 31	**32 705**	**32 705**

The Board of Directors is authorized to increase the share capital in one or more stages until March 15, 2020, for the purpose of acquiring companies or parts of companies.

MAJOR SHAREHOLDERS

	Voting rights		Shareholdings	
	31.12.2018	31.12.2017	31.12.2018	31.12.2017
Kudelski family pool	59%	59%	28%	28%
Kudelski family interests outside Kudelski family pool	4%	4%	7%	7%

The Kudelski family pool includes Mr. André Kudelski, Mrs. Marguerite Kudelski, Mrs. Isabelle Kudelski Haldy, Mrs. Irene Kudelski Mauroux and their respective descendants. The Kudelski family interests outside Kudelski family pool are two discretionary and irrevocable trusts of which the beneficiaries are family members of M. André Kudelski.

4. NOTES TO THE INCOME STATEMENTS

4.1 FINANCIAL INCOME

In CHF'000	2018	2017
Dividends received from Group subsidiaries	15 282	18 038
Interest on loans to Group subsidiaries	24 377	24 397
Interest income third parties	294	282
	39 953	**42 717**

4.2 FINANCIAL EXPENSES AND EXCHANGE RESULTS

In CHF'000	2018	2017
Net currency exchange result	-3 808	-3 697
Interest on loans from Group subsidiaries	-257	-237
Interest expenses and bank charges	-6 828	-6 643
	-10 893	**-10 577**

4.3 IMPAIRMENT OF FINANCIAL FIXED ASSETS

In CHF'000	2018	2017
Change in provision on Group investments and loans	-82 778	-77 012
Value adjustment on investments	-1	-209
	-82 779	**-77 221**

The 2018 change in provision on Group investments primarily relates to capital contributions (stabilization measures) to subsidiaries of kCHF 69 811 and subsidiary substance dividends for kCHF 12 966. The 2017 change in provision was the result of value adjustments following the Group's annual impairment test.

NOTES TO THE FINANCIAL STATEMENTS 2018

5. COMMITMENTS AND CONTINGENCIES

In CHF'000	**31.12.2018**	**31.12.2017**
Guarantee commitments		
Commitment in favor of third parties	828	5 458
Other commitments		
Penalty risk for non-completion of contracts	p.m.	p.m.
Subordinated loans in favor of Group companies	p.m.	p.m.
Support letters and guarantees signed in favor of Group companies	p.m.	p.m.
Jointly responsible for VAT liabilities of Swiss subsidiaries (VAT Group)	p.m.	p.m.

6. FULL-TIME EQUIVALENTS

The annual average number of full-time equivalents for 2018 and 2017 did not exceed ten people.

7. BOARD AND EXECUTIVE INTEREST DISCLOSURES

The disclosures required by article 663c of Swiss Code of Obligations on Board and Executive interest are shown in the Kudelski Group consolidated financial statements.

Kudelski SA

Cheseaux-sur-Lausanne

Report of the statutory auditor to the General Meeting

on the financial statements 2018

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Report of the statutory auditor
to the General Meeting of Kudelski SA
Cheseaux-sur-Lausanne

Report on the audit of the financial statements

Opinion
We have audited the financial statements of Kudelski SA, which comprise the balance sheet as at 31 December 2018, income statement and notes for the year then ended, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements as at 31 December 2018 comply with Swiss law and the company's articles of incorporation.

Basis for opinion
We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the "Auditor's responsibilities for the audit of the financial statements" section of our report.

We are independent of the entity in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our audit approach

Overview

Overall materiality: CHF 11'180'000

We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the financial statements as a whole, taking into account the structure of the entity, the accounting processes and controls, and the industry in which the entity operates.

As key audit matter the following area of focus has been identified:

Valuation of investments in subsidiaries and loans to Group companies

Materiality
The scope of our audit was influenced by our application of materiality. Our audit opinion aims to provide reasonable assurance that the financial statements are free from material misstatement. Misstatements

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may arise due to fraud or error. They are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall materiality for the financial statements as a whole as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, both individually and in aggregate, on the financial statements as a whole.

Overall materiality	CHF 11'180'000
How we determined it	1% of total assets
Rationale for the materiality benchmark applied	We chose total assets as the benchmark because Kudelski SA is a holding company that mainly holds investments in subsidiaries. Total assets is a generally accepted benchmark for determining the materiality according to auditing standards. This calculation results in an overall materiality of CHF 11'180'000.

We agreed with the Audit Committee that we would report to them misstatements above CHF 1'118'000 identified during our audit as well as any misstatements below that amount which, in our view, warranted reporting for qualitative reasons.

Audit scope

We designed our audit by determining materiality and assessing the risks of material misstatement in the financial statements. In particular, we considered where subjective judgements were made; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of investments in subsidiaries and loans to Group companies

Key audit matter	*How our audit addressed the key audit matter*
Kudelski SA's investments in and loans to Group companies are valued at CHF 371m and CHF 670m respectively. The company has allocated the investments in subsidiaries and loans to Group companies to 4 Cash Generating Units (CGU's): Digital TV (DTV): CHF 748m Public Access (PA): CHF 115m Cybersecurity (CS): CHF 115m	We obtained an understanding of management's process and controls over the valuation of investments in and loans to Group companies. We challenged management to substantiate its key assumptions in the cash flow projections during the forecast period and its intention and ability to execute their strategic initiatives. We discussed the forecasts of the different CGU's with the Group's CEO, CFO, group controller and the heads of operating segments.

Internet of Things (IoT): CHF 63 m We consider the value of investments and loans to Group companies to be a key audit matter due to the size of the balances and the judgement involved in the assessment of the recoverability of those assets. In particular, those assessments and judgments made to support the carrying value of the investments and loans to Group companies allocated to the Digital TV, Cybersecurity and Internet of Things Divisions were critical, given the 2018 underlying results or the size of the balances involved. For the year ended 31 December 2018, management has performed an impairment assessment of investments in subsidiaries and loans to Group companies by performing an Enterprise value calculation for the different CGU's. To determine the Enterprise Value management uses a discounted cash flow method. Judgement is required to determine the assumptions relating to the future results and the discount rate applied to the forecasted cash flows. The results of management's impairment testing indicated that the investments in subsidiaries and loans to group companies were not impaired. During the year, the company increased its provision in investments in subsidiaries for CHF 82m. This change in provision is not related to the annual impairment test. The provisions are related to capital contributions (stabilization measures) to subsidiaries for CHF 69m and subsidiary substance dividends for CHF 13m. Refer to note 4.3– Investments for details of the investments and the impairment booked.	We tested, with the support of our valuation specialists, the reasonableness of the cash flows growth rate after the forecast period assumption of 1,5% for Digital TV and 3% for Cybersecurity and Internet of Things divisions. We compared the 2018 actual results with the cash flow forecasts used in the 2017 impairment test to identify in retrospect whether any of the assumptions might have been too optimistic. Together with our specialists, we evaluated the reasonableness of the discount rate of 10% applied to those future cash flows of the Digital TV, Cybersecurity and Internet of Things segment. We assessed management's sensitivity analysis around key estimates to quantify the downside changes in assumptions that could result in an impairment. We assessed the disclosures included in Note 4.3 of the annual report. As a result of our procedures, as discussed with the Audit Committee, we determined that the conclusions reached by management with regard to the valuations of investments in subsidiaries and loans to Group companies were reasonable and supportable.

Responsibilities of the Board of Directors for the financial statements

The Board of Directors is responsible for the preparation of the financial statements in accordance with the provisions of Swiss law and the company's articles of incorporation, and for such internal control as the Board of Directors determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

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Auditor's responsibilities for the audit of the financial statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law and Swiss Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Swiss law and Swiss Auditing Standards, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- Conclude on the appropriateness of the Board of Directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the entity to cease to continue as a going concern.

We communicate with the Board of Directors or its relevant committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on other legal and regulatory requirements

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers SA

Luc Schulthess	Mario Berckmoes
Audit expert Auditor in charge	Audit expert

Lausanne, 26 February 2019

Enclosures:

- Financial statements (balance sheet, income statement and notes)
- Proposed appropriation of the available earnings

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