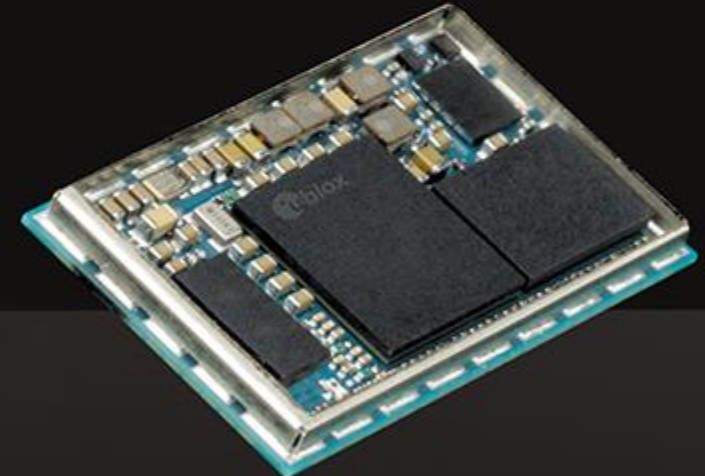


Capital Markets' Day 2020

November 25, 2020

u-blox Holding AG



Agenda



16:00-16:05	Welcome	Thomas Seiler
16:05-16:25	Why u-blox is core	Thomas Seiler
16:25-16:40	Business update	Thomas Seiler
16:40-16:45	ESG	Thomas Seiler
16:45-17:05	Financial update	Roland Jud
17:05-17:20	Break	
17:20-17:30	R&D strategy	Andreas Thiel
17:30-18:10	Technology insights	Andreas Thiel
18:10-18:15	Round-up	Thomas Seiler
18:15-18:45	Q&A	

This presentation contains certain forward-looking statements. Such forward-looking statements reflect the current views of management and are subject to known and unknown risks, uncertainties, assumptions, and other factors that may cause actual results, performance, or achievements of the Group to differ materially from those expressed or implied herein.

Should such risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this presentation.

u-blox is providing the information in this presentation as of this date and does not undertake any obligation to update any forward-looking statements contained in it as a result of new information, future events, or otherwise.

Why u-blox is core

u-blox at a glance

A market leader in positioning and wireless communication technology



Our business

- Global provider of leading positioning and wireless communication technologies
- Number one GNSS module supplier worldwide, with in-house positioning chip
- Enables OEMs to reliably locate and connect people and devices
- A fabless company owning the full IP focusing on R&D and customer relationships
- All manufacturing outsourced



Services

Connectivity, Location, Security



Positioning

To locate the source of information



Cellular connectivity

To connect over a wide area



Short range connectivity

To connect over short distances

Products comprised of chipsets, modules and data services



u-blox at a glance in numbers



3

Core markets



Automotive



Industrial



Consumer

385m

Revenue in 2019

in CHF

1997

Founded as a
spin-off from

ETH Zurich

20.5 %

of revenue
invested into

R&D

7600

Customers

served world-
wide

1/3

of revenue

**AMER, EMEA,
APAC**

1000+

Employees
68% in R&D

2007

IPO and listed
SIX:UBXN

u-blox today and tomorrow

Our value proposition endures



u-blox is in the **right** markets

IoT, autonomous driving and electric vehicles, Smart City and Industry 4.0 are megatrends shaping the world today.

u-blox will emerge even **stronger** after **COVID-19**

Solidly positioned to withstand the COVID-19 crisis and emerge even stronger.

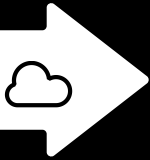


u-blox's markets are **growing and accelerating**

In an increasingly connected world, the number of applications across our markets will only continue to grow.

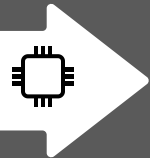
Why u-blox is core

Wireless connectivity is fundamental for IoT devices



Demand for wireless

Only wireless connectivity can deliver the capillarity for connecting billions of devices to the cloud



Technology develops rapidly

Wireless technology continues to become increasingly complex and most of our customers have little knowledge



Customers seek to minimize implementation risk

Wireless requires expertise for successful implementation, and outsourcing is the solution for an efficient go-to-market plan



u-blox delivers

Providing superior wireless connectivity solutions is our core function in the industry

Wireless is the superior method of connectivity

Ideal across applications: automotive, industrial, and consumer



- Only wireless can offer **interconnectivity** among devices
- Wireless is more reliable than cables – it is **self- healing and serviceable**
- Wireless is **cost effective** – only wireless technology makes cloud services feasible
- Wireless continues to **evolve** - strong technology progress in radio signals, signal processing and encryption



The importance of robust connectivity

Machine type communication requires powerful technology



Industrial use cases must be reflected in the basic solution concept

- Requires a solid design to meet the end application

Extremely low risk tolerance for errors in industrial use cases

- Typically used to manage important operational activity, such as fleet management

More complex operating schemes than with personal devices

- Desired functionalities include low power schemes, battery issues, remote upgrades

Qualification and certification is essential for reliable operation

- Standard to conduct thousands of individual tests for a new platform product to ensure robustness and high reliability

We provide a comprehensive “one-stop-shop” solution



Positioning and wireless communication technology bring things to the cloud

From the customer's perspective:

- A seamlessly integrated bundle of technologies leads to faster time to market
- Execution risk greatly reduced when working closely with one competent supplier
- Customer may be unable to create the desired solution on their own when dealing with several suppliers
- u-blox can deliver the desired combination of hardware components and services, and ensure that it will cooperate seamlessly
- **No other provider has this capability**



Services

Connectivity, Location, Security



Positioning

To locate the source of information



Cellular connectivity

To connect over a wide area



Short range connectivity

To connect over short distances

Products comprised of chipsets, modules and data services



Technology leadership built over decades

Constant innovation and platform generation upgrades



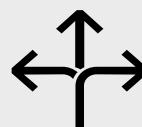
**Our innovation leadership
stems from a unique set of attributes
that would be difficult to replicate**



Deep IP pockets
from long
company history



Focus on the most
promising value
proposals



Deep-rooted spirit
for stepping
outside the box



Culture that
appreciates
innovation



R&D teams with
broad know-how

Supported and driven by more than **20 years** of in-house experience

Competitive environment

No other company offers the same solution space



Large semis

- ST Microelectronics
- NXP
- Mediatek
- Qualcomm
- Broadcom

- Focus on smart phones and other high-volume products
- Very broad product portfolio – driven by consolidation
- Only chip offering

Small semis

- Nordic
- Silicon Labs
- Sequans

- Specialized in few technologies
- Mostly chip offering

Module makers

- Sierra Wireless
- Telit
- Thales
- Fibocom
- Quectel

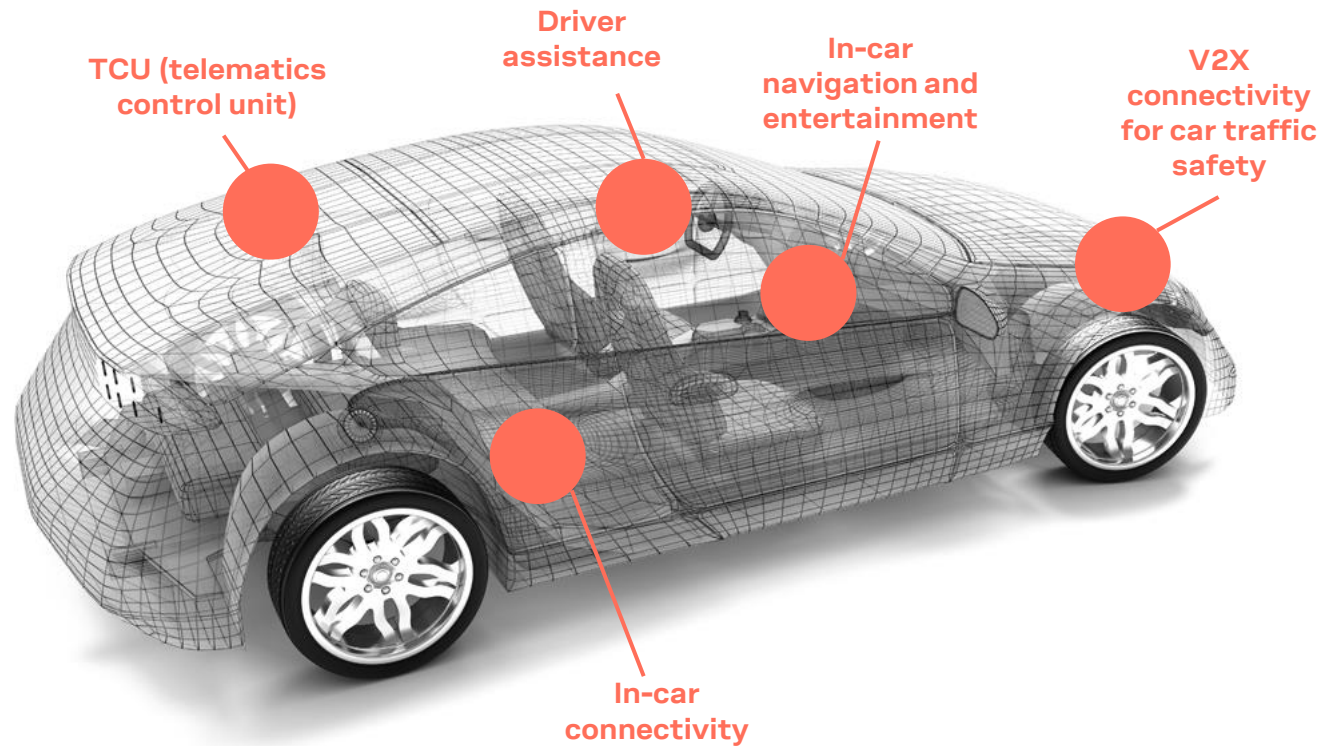
- Produce modules based on reference designs provided by a semi supplier
- No knowledge with respect to core IP and functionality
- Only module capability

u-blox

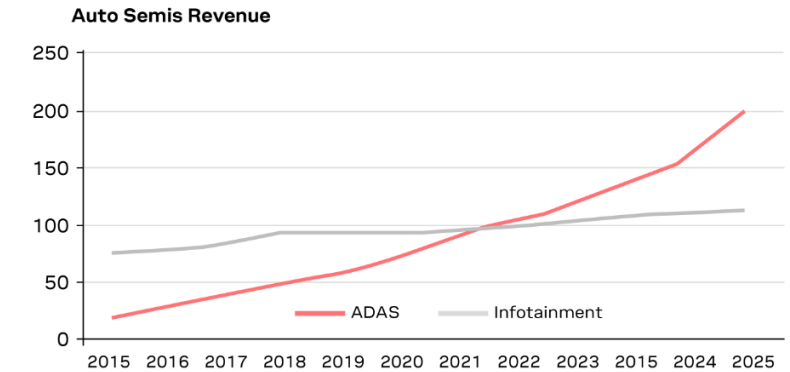
- Focus on industrial and automotive applications
- Specialized in the IoT connectivity technology
- Chip and module offering
- Deep IP in wireless technologies

Reference case **Automotive**

Broad expansion of electronics content



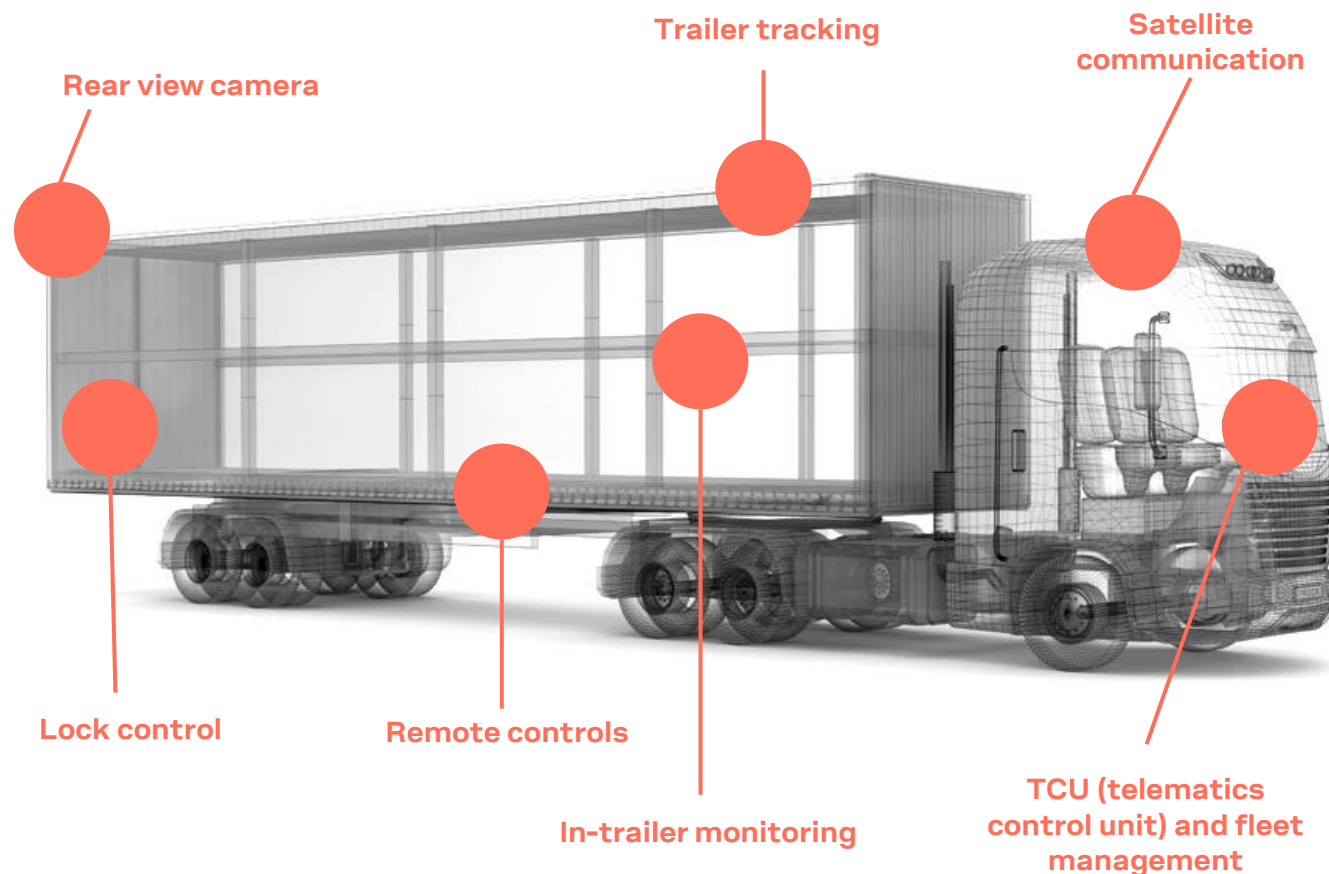
Semis revenue growth mainly driven by automated driving (CAGR = 20%)



Source: Gartner, UBS

Reference case **Industrial**

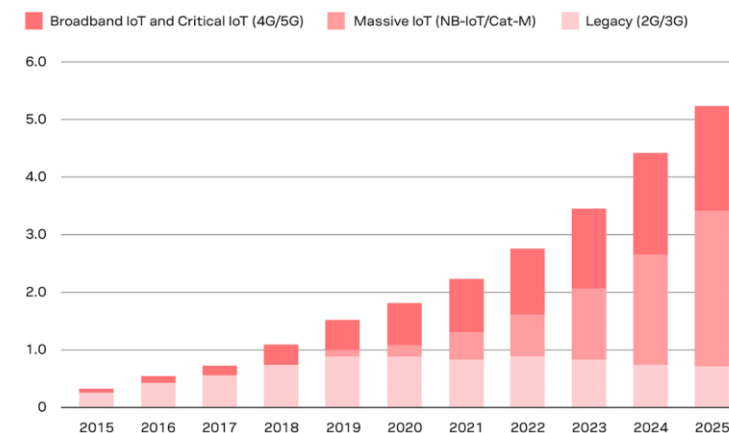
Strong growth of connected devices



IoT connections growth rates 2019-2025 (CAGR)

Wide area/Cellular	23%
Short Range	13%

Figure 22: Cellular IoT connections by segment and technology (billion)



¹ Cat-M includes both Cat-M1 and Cat-M2. Only Cat-M1 is being supported today

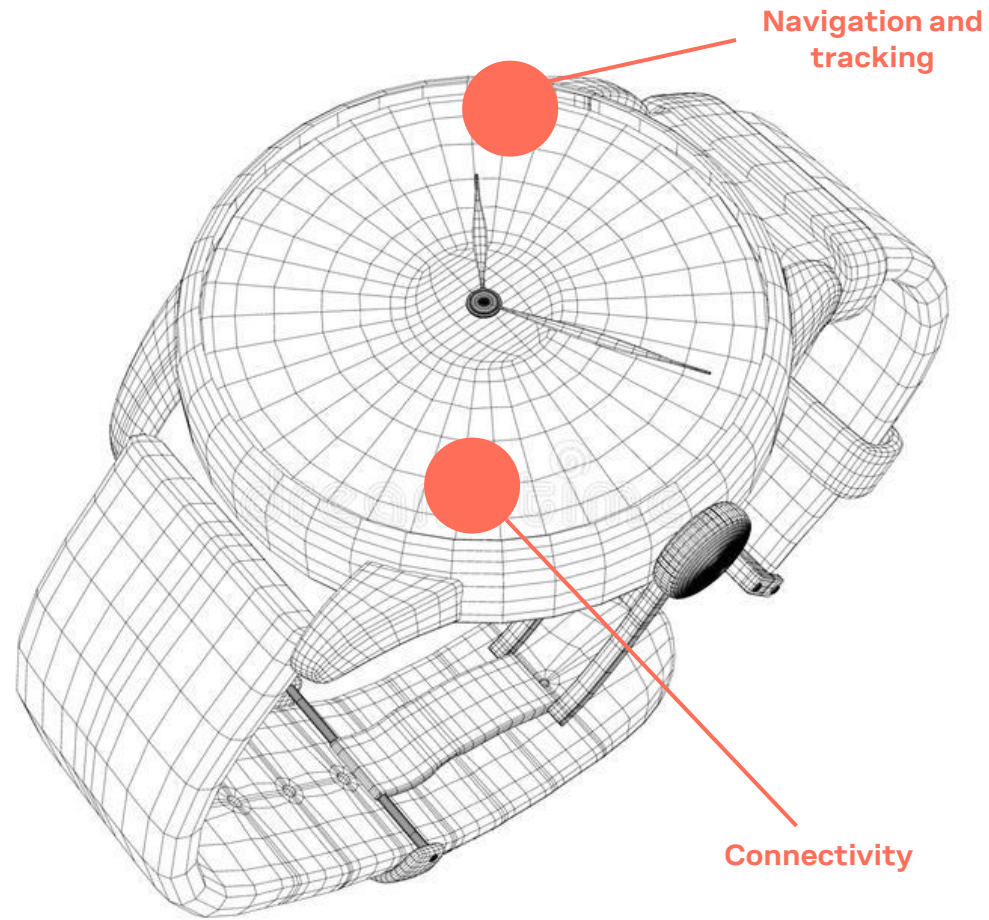
² GSA (April 2020)

³ These figures are also included in the figures for wide-area IoT

Source: Ericsson Mobility Report, June 2020

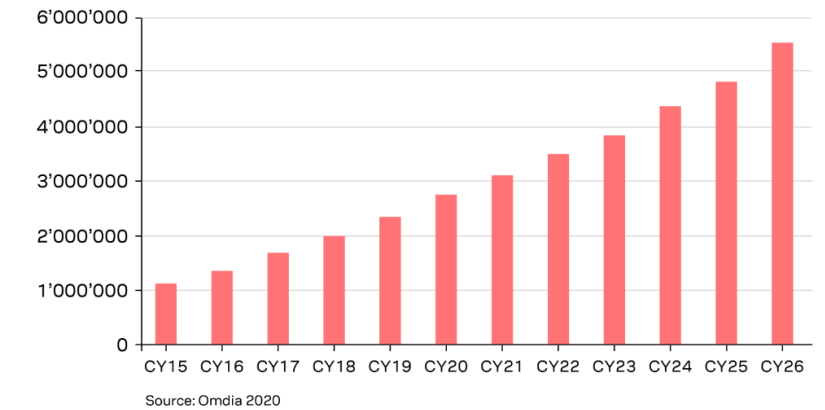
Reference case **Consumer**

A wealth of smart devices



Consumer IoT connections growth rates 2015-2026 (CAGR)

Home, wearables, sports 15%



Business Update

Business update

Priorities continue to be driven by COVID-19 pandemic



Our Priorities

- Protect the health and safety of our employees while ensuring business continuity and efficacy
- Employees working remotely in most regions; in-person meetings possible again in certain APAC countries
- Teamed with manufacturing partners to ensure no production interruptions or impact to available capacity
- Initiated cost improvement measures totaling CHF 15 million in annualized savings
- Continue to follow local government guidelines while ensuring we are ready for a market recovery

Business Impact

- Little to no disruption to business operations worldwide
- Successfully serving customers, manufacturing products and fully managing R&D programs
- Customer relationships migrated to virtual meetings, engaging more often and with greater efficiency
- Strong focus on creation of new business opportunities as COVID-19 has accelerated demand in certain end markets for connected devices
- Adjusted production capacity to work through some inventory overswing through the remainder of 2020

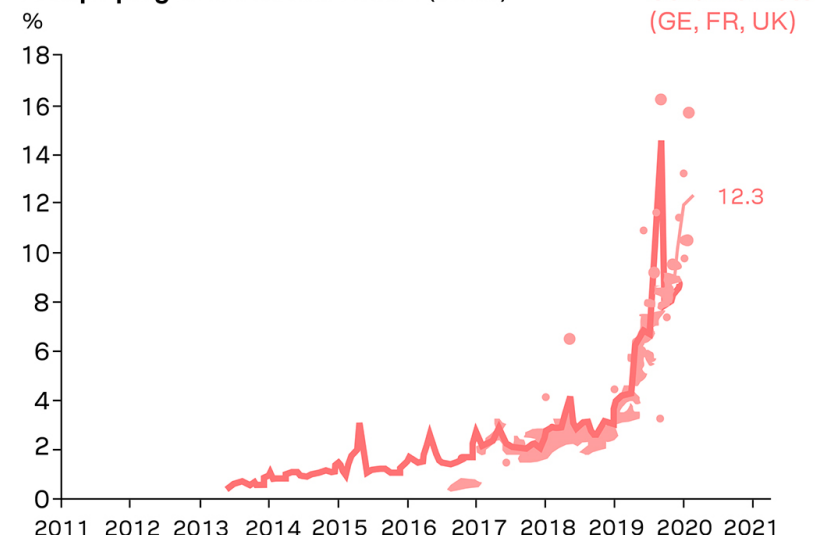
COVID-19: No paradigm shift

IoT, autonomous driving and electric vehicles, Smart City and Industry 4.0 are megatrends driving our business

- Although business impacted in the near term, the **megatrends** driving **growth and demand** for our products will endure
 - Industrial customers continue to seek ways to **drive efficiency and accuracy** in their operations and businesses
 - Electronic content increase in automotive is driven by **Electric Vehicle (EV) expansion** and **increasing environmental requirements** (CO₂ emissions)
- COVID-19 has, in fact, **accelerated** many of our markets
 - Industrial markets have an even greater desire to make products **smart and connected**
 - **High touch** consumer products such as fitness devices have experienced increased demand driven by the crisis

Electric Vehicle expansion

Europe plug-in car market share (sales)



Source: ACEA, EV volumes, national associations

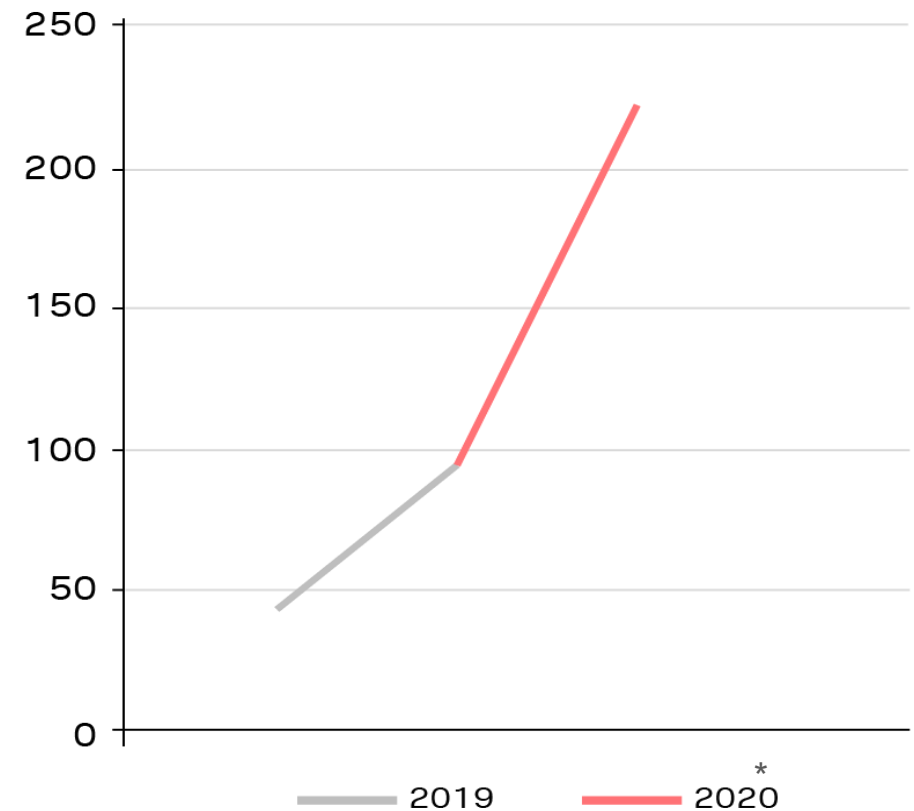
And strong rebound expected

Expanding business pipeline



- Optimistic for a rebound similar to the one following the financial crisis in 2010
- First strong signs are in APAC: Record bookings in Japan and Korea, mainly thanks to Automotive
- Solid project pipeline developing: Intensive customer engagements despite travel restrictions has accelerated the growth of new customer projects in our pipeline

Number of new customer projects, per month



*Through October 2020.

Update: Automotive



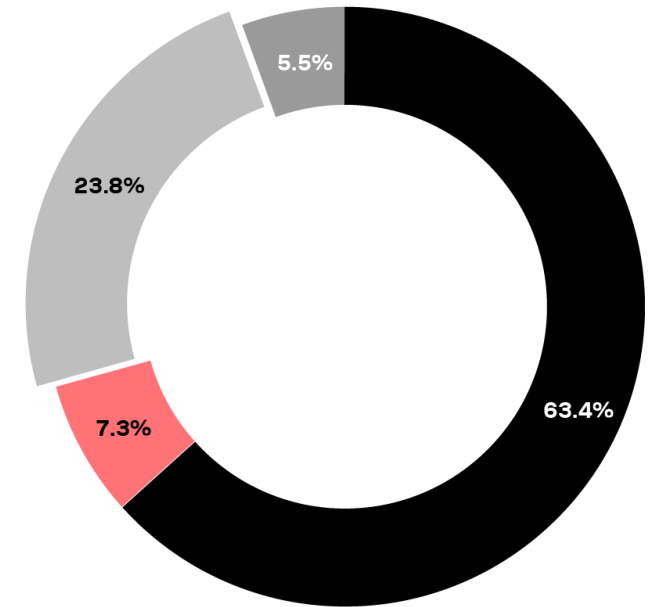
Substantial impact from COVID-19 due to production shutdowns; revenues recovering led by APAC and recent uptick observed in EMEA and Americas

COVID-19 Impact

- In H1 2020, revenue decreased to CHF 41.3m v. CHF 57.3m in H1 2019 (-28%)
- Rebound since September has occurred mainly in APAC (record bookings in Japan and Korea)
- Several ramp-ups help to counter-balance the decline

Expectations

- Volumes (registrations) returning to 2019 levels in Europe
- Autonomous driving remains in focus by OEMs
- Electronics content increasing with more complex system architecture in cars, and EV expansion strongly supported, particularly in APAC



■ Industrial ■ Consumer ■ Automotive ■ Not assigned

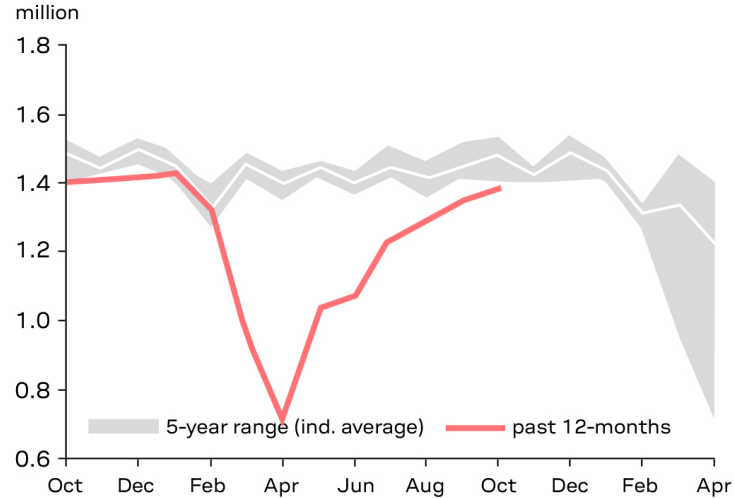
Note: Estimate

Auto sales: Rebounding to historical norms

Volumes (registrations) recovering

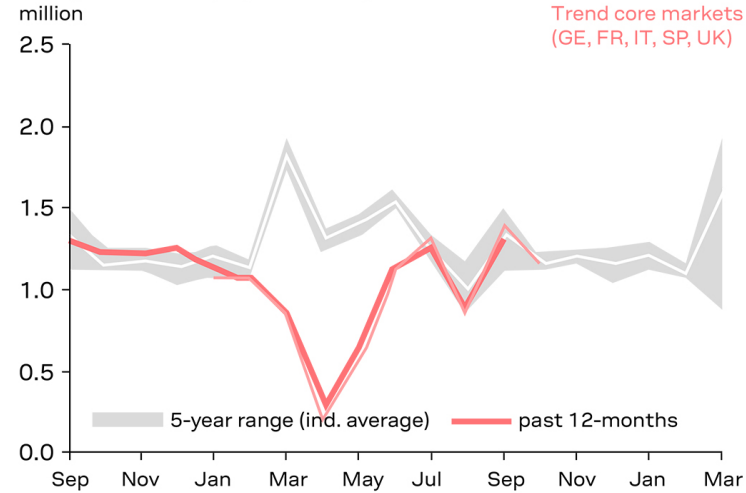


US car sales



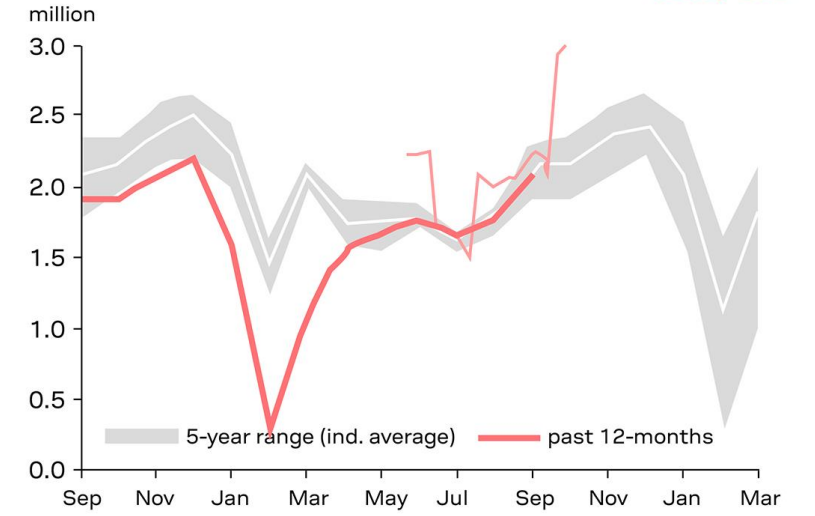
Source: Bureau of Economic Analysis, Ward's

Europe car sales (registrations)



Source: ACEA, Bloomberg Finance L.P.

China car sales (wholesale)



Source: China Automotive Information Network

Source: Bank Bär

Update: Industrial

Stable in H1 2020 with most application sectors continuing to grow

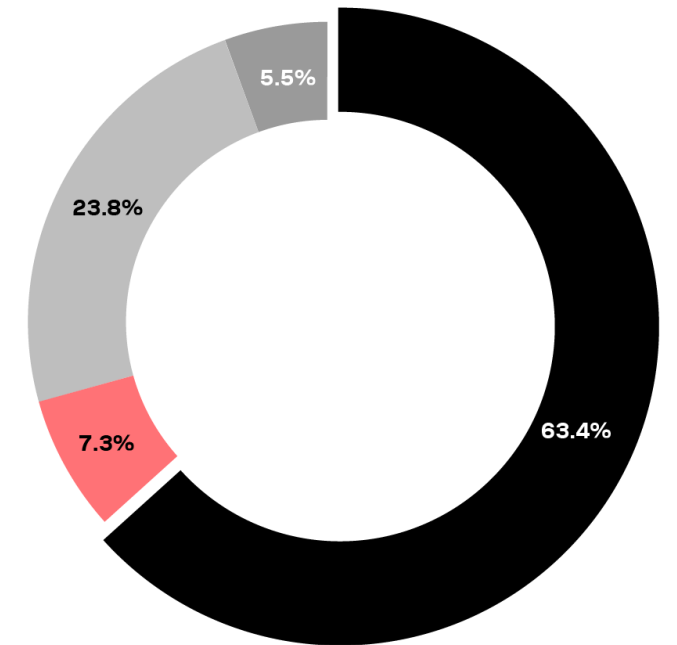


COVID-19 impact

- Revenue in H1 2020 was essentially flat at CHF 110.2m v. CHF 109.5m in H1 2019 (+1%)
- Stable with most application sectors growing, except for telematics

• UAV	✓ ✓
• Infrastructure, surveillance, security	✓ ✓
• Automation, monitoring, sensor	✓ ✓
• Medical, healthcare	✓
• Macro, small & femto cell	✓
• Metering	✓ / -
• Tracking, telematics	--

- Trends driving growth in connected solutions continue, and in some cases, have accelerated due to COVID-19



■ Industrial ■ Consumer ■ Automotive ■ Not assigned

Note: Estimate

Update: Consumer

Downturn from COVID-19 due to restrictions impacting outdoor and communal activities

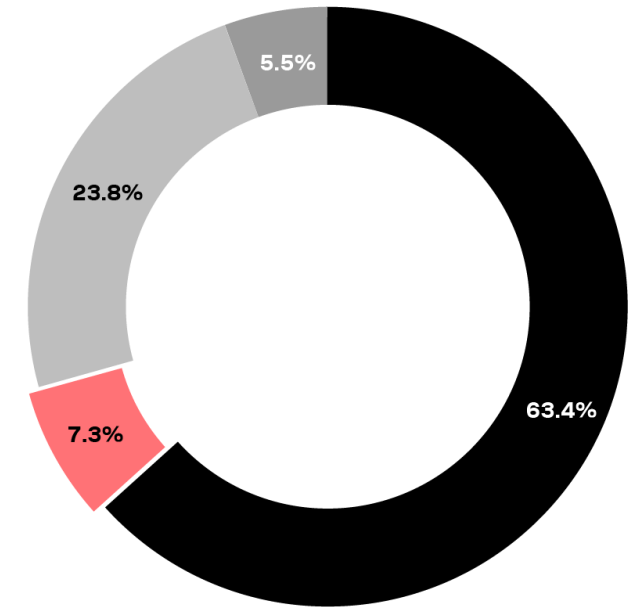


COVID-19 impact

- H1 2020 revenue was CHF 12.8m v. CHF 14.6m (-13%)
- Downturn in several applications (e.g. cameras, watches) but fitness was positive in H1 2020

Expectations

- Recovery visible as lockdown restrictions have eased worldwide
- Several new applications for COVID-19 tracking are driving some growth
- Consumer applications represent relatively small part of our total revenue (7%)



■ Industrial ■ Consumer ■ Automotive ■ Not assigned

Note: Estimate

ESG

(Environmental, Social and Corporate Governance)

How our products support sustainability

Connectivity and positioning are essential in achieving a greener infrastructure



Driving greener travel

Our JODY-W2 Wi-Fi and Bluetooth products are being used in an inductive electric vehicle (EV) charging initiative which promises to simplify this key aspect of EV ownership, and thereby drive adoption of zero-emission vehicles.



Safer and energy efficient communities

Our UBX-M8 GNSS chipset and SARA-R4 series cellular modems are being used in smart street lighting. This enables real-time fault-detection that leads to faster repairs, keeping communities energy efficient.



Reducing greenhouse gas emissions from central heating

Heating large buildings is a significant contributor to global greenhouse gas emissions. The SARA-R4 cellular range is at the heart of a globally available system that cuts energy waste from buildings.

ESG – why sustainability matters

Prioritizing sustainability results in value creation for all stakeholders in the long run



- Since 2012, u-blox has been a member of the **United Nations Global Compact**, the largest corporate sustainability initiative in the world
- The Internet of Things will make an exponential contribution to a more sustainable world and u-blox plays a key role in the **innovation driving sustainability**
- Sustainability is about **maximizing the positive effect that we as a business can have**, including our responsibility to be a good corporate citizen to our employees, business partners, communities and the environment

WE SUPPORT



Our first sustainability report

In 2020, we published our first sustainability report detailing our commitment to these important initiatives

- Identified and prioritized the **topics most important to us and stakeholders**, and aligned them with the 17 United Nations Global Compact Sustainable Development Goals (SDG)
- The **5 u-blox sustainability pillars** are:
 - Business Ethics, Privacy and Security
 - Employees
 - Environmental Responsibility
 - Supply Chain Responsibility
 - Communities

Our 5 engagements		Supported SDG
	Business Ethics	3, 5, 8, 16
	Employees	4, 5, 8, 9, 11
	Environmental responsibility	3, 12, 16
	Supply chain responsibility	3, 12, 16
	Community	3, 4, 5, 10, 11

Financial Update



Half year 2020: Summary financial results

Results reflect the impact of COVID-19 across our business



- Total revenues of CHF 174.0m, a decline of -8.7% (-5.6% at constant exchange rates)
 - APAC revenues declined by -2% to CHF 70.1m
 - EMEA revenues declined by -16% to CHF 51.7m due to the automotive markets
 - AMEC revenues decreased by -14% to CHF 48.9m as consumer and fleet management applications softened
- Despite decline in revenues, gross profit and EBITDA margins remain healthy
 - Gross profit margins increased slightly y-o-y driven by favorable product mix
- Impairment charge of CHF 74.1m due to refocusing of R&D programs and market delays in automotive

(CHF millions, except EPS and margins)	H1 2020		H1 2019 adjusted ¹	Change 2020 to 2019
	IFRS reported	adjusted ¹		
Revenue (at constant exchange rates)	174.0m	174.0m	190.6m	-8.7% (-5.6%)
Gross profit	79.0m	79.4m	86.1m	-7.8%
Gross margin (%)	45.4%	45.6%	45.2%	
EBITDA	19.9m	24.1m	32.7m	-26.3%
EBITDA margin (%)	11.4%	13.9%	17.2%	

¹⁾ Excl. Share-based payments, impacts based on IAS-19, amortization of intangible assets acquired, impairments and non-recurring expenses

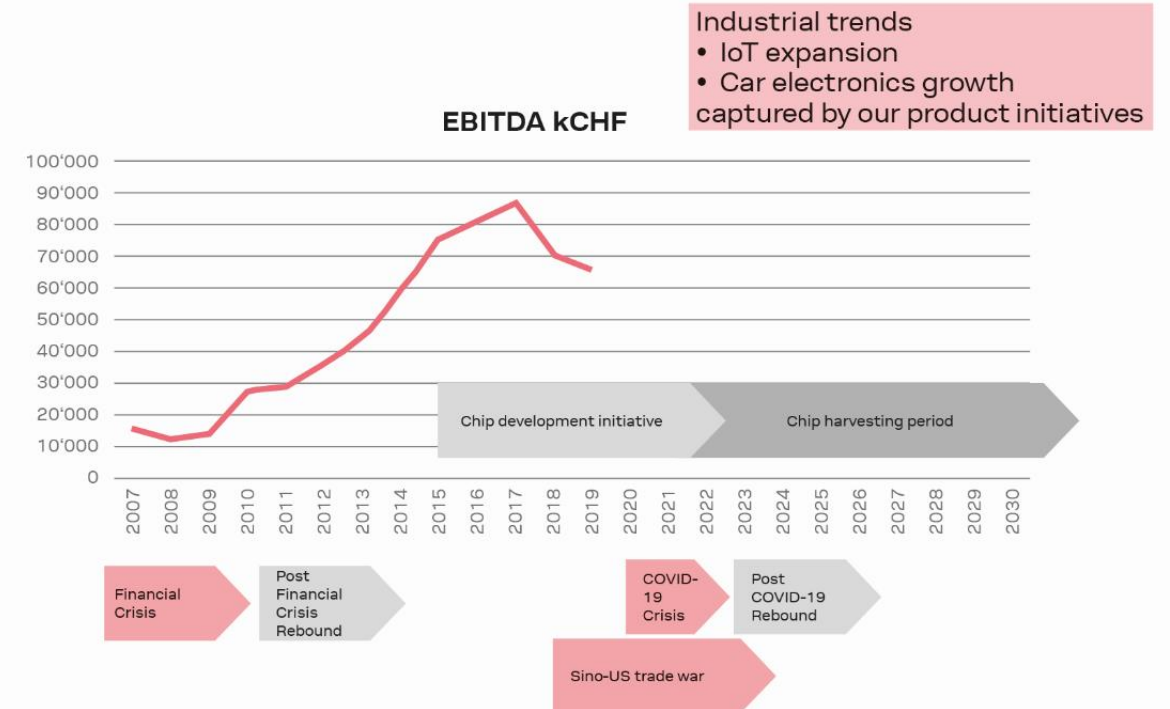
(CHF millions)	Revenue by region				Revenue by end market		
	H1 2020	H1 2019			H1 2020	H1 2019	
APAC	70.1m	71.5m	-2.0%	Automotive	24%	30%	-27%
EMEA	51.7m	61.6m	-16.1%	Consumer	7%	8%	-13%
AMEC	48.9m	56.6m	-13.6%	Industrial	63%	58%	1%
Others	3.3m	0.9m		Others	6%	4%	13%
Total	174.0m	190.6m	-8.7%	Total	174.0m	190.6m	-8.4%

Big picture



Historical investment in R&D will enable us to move past current headwinds with competitive strength

- To Date
 - Focused on expansion of chip development across technologies over past 5 years
 - Building services business to further support base of products
 - Navigated through strong macro headwinds since 2018
- Looking ahead
 - Three new platforms released in 2020
 - Recurring service business taking traction, acquired Thingstream in 2020
 - Robust customer project pipeline



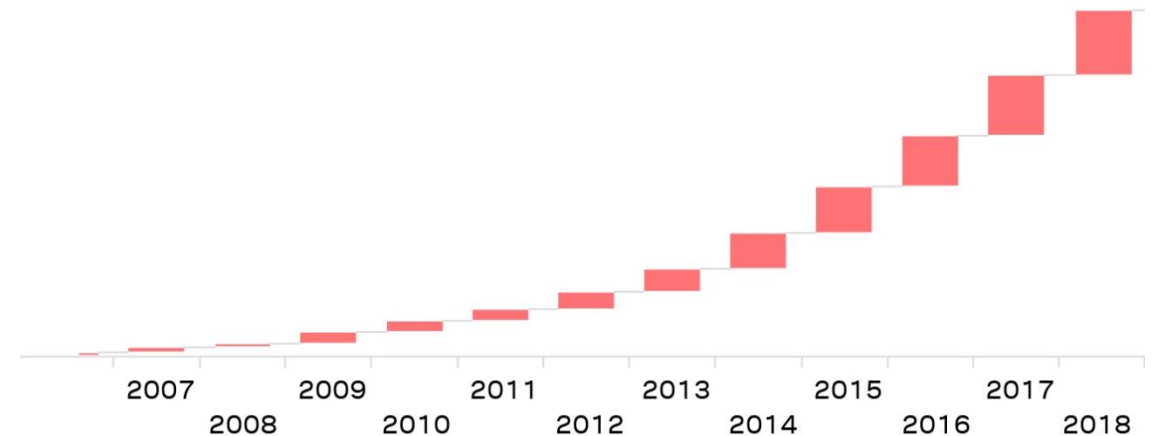
We create intellectual property

R&D priorities are balanced against positive free cash flow objectives



- **Free cash flow is our core KPI**
- **R&D intensity** managed to achieve positive free cash flow and balanced for continual building of innovative core Intellectual Property (IP)
- Our balance sheet represents our core IP in the form of **capitalized R&D** and represents the **intrinsic value of u-blox**
- **Our IP is based on CHF 900m investment over the last 15 years**

Cumulated R&D investment
(m CHF, expensed and capitalized)



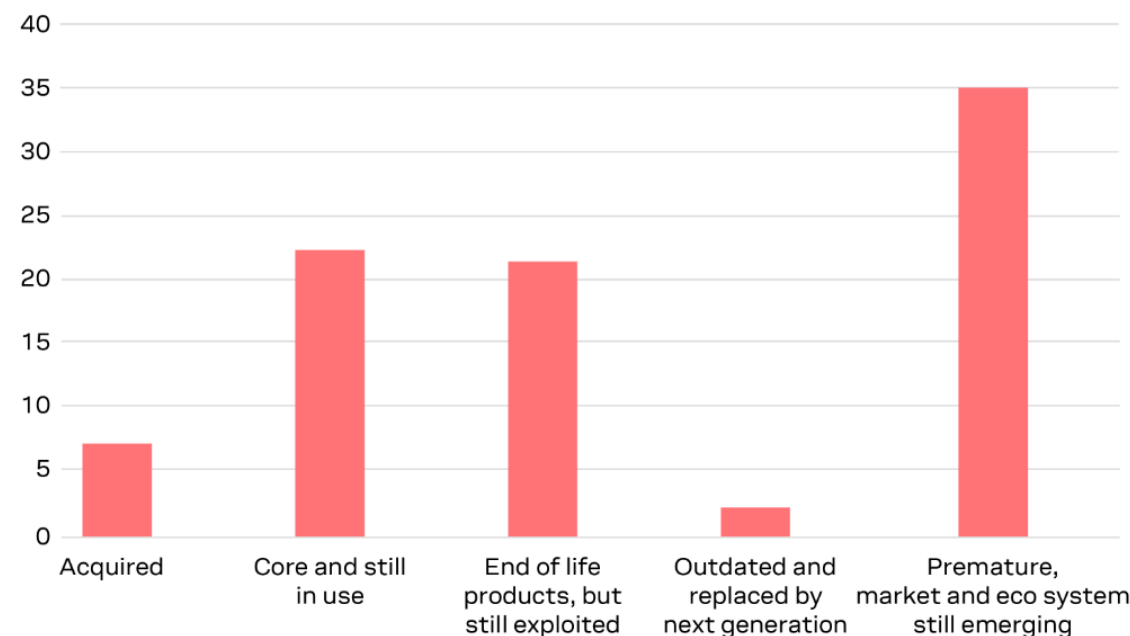
Intellectual property is our core asset

Balance sheet represents our core IP in the form of capitalized R&D



- Impairments of capitalized IP does not mean it has been completely written-off
 - Most of our IP continues to generate cash flow
- Impairments are triggered by various reasons, including delays to market or an end-of-life product that is still being harvested
 - Mostly, these reasons indicate that the IP is still in use and generating cash flow
- Capitalization and the rules for impairments are IFRS based accounting rules and do not necessarily reflect all realities

Impairments by trigger reason
(since 2006, m CHF)



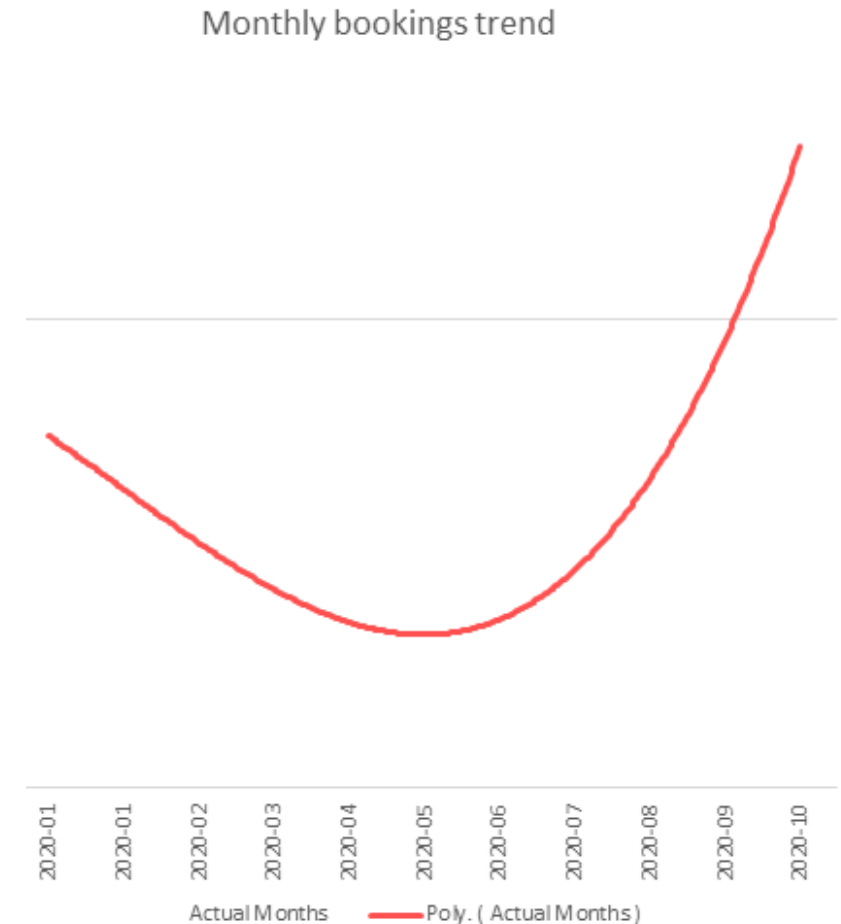
Input to modeling R&D cost:

- 45% capitalization rate
- Amortization lags capitalization by 2-3 years
- 9 years harvesting time

Revenue development

Recent revenue trends indicate COVID-19 low point may be in the past

- After strong start to 2020, revenue began declining in April, reaching a low point in August
- Since August, revenue has increased each sequential month through October
- Bookings (see right) are increasing meaningfully, although remaining relatively short-term as customers are holding little inventory



Financial profile is solid



We are strongly positioned to withstand the impact of COVID-19

Resilient business model

- Strong gross margin performance reflects specialty products, which tend to demonstrate more traction even during market downturns
- Global business is diversified across geographic regions, products and end markets
- CHF is a natural hedge against USD (100% for COGS; 60% for OPEX)
- OPEX saving program in the amount of CHF 15m initiated with the aim to increase efficiency

Balance sheet strength

- Ample cash and liquidity: CHF 100.6m cash at H1 2020
- Bond refinancing to be determined in due time; net debt/EBITDA ratio is currently 0.3x
- Strong IP portfolio - no further impairments expected

- Due to UK Takeover Code rules and the recent announcement of a possible offer for Telit Communications plc we are currently unable to provide an update on our earnings for FY2020
- We expect to be able to provide earnings guidance in the near future and will provide an update in due course

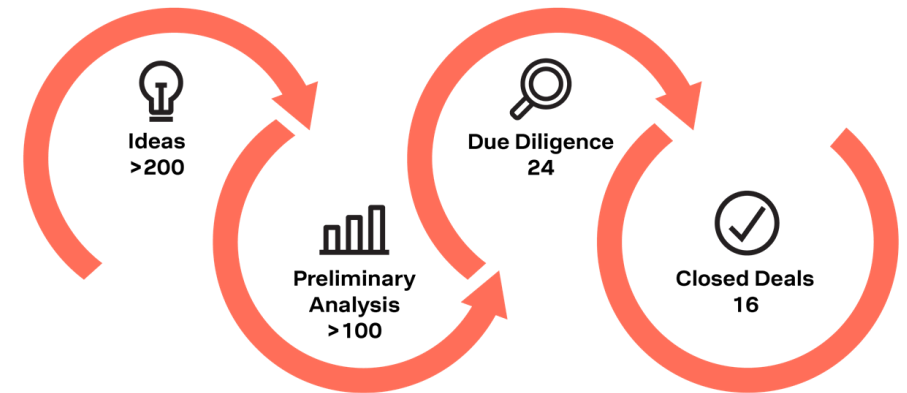
Acquisition criteria

Our M&A strategy



- M&A has always been a part of our long-term strategy; successfully closed 16 transactions to date
- Target must complement product portfolio and add service component with a strong industrial logic
- Purchase price to enable shareholder value creation based on conservative synergy calculation
- Only willing to do acquisitions at reasonable valuation
- Business model, management and culture an ideal fit for u-blox
- Specific areas where we would find a complementary fit:
 - Technology acquisition
 - Gain economies of scale
 - Expanding customer footprint and cross selling
 - Recurring revenue models

We maintain a continual stream of acquisition opportunities



Break

R&D Strategy

u-blox proprietary wireless technology is unique



- **Long-term attitude:** Wireless chips and modules in the industrial and automotive markets have a 5-10 year life-cycle
- **Core intellectual property (IP) re-used:** Between generations of products and across the product portfolio. Low risk of obsolescence
- **Value-added services** based on our core IP in the end device
- **Thorough verification and validation methods** assure robust products
- **Advanced packaging and silicon technology** create energy saving products in small form factors



15
R&D centers
worldwide



800+
engineers



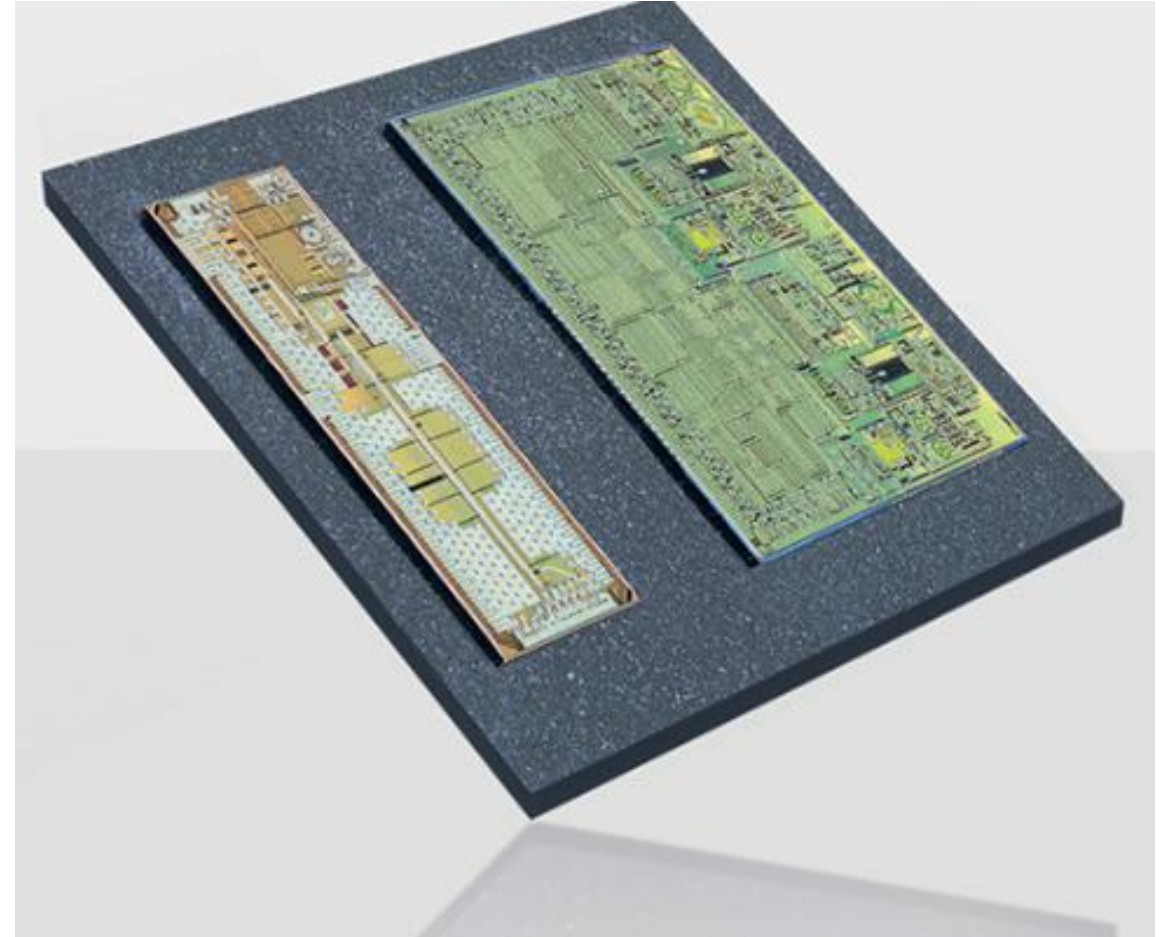
CHF 100m+
annual investment
(2019)

R&D strategy

Creating value bottom-up



- Mixed signal competence: Analog radio and digital signal processing on **one piece of silicon** is our core technology and difficult to replicate
- **High software content:** The specific software can only be developed by experts. It makes up 70% of our R&D cost and is key to differentiation



Why do we do this?

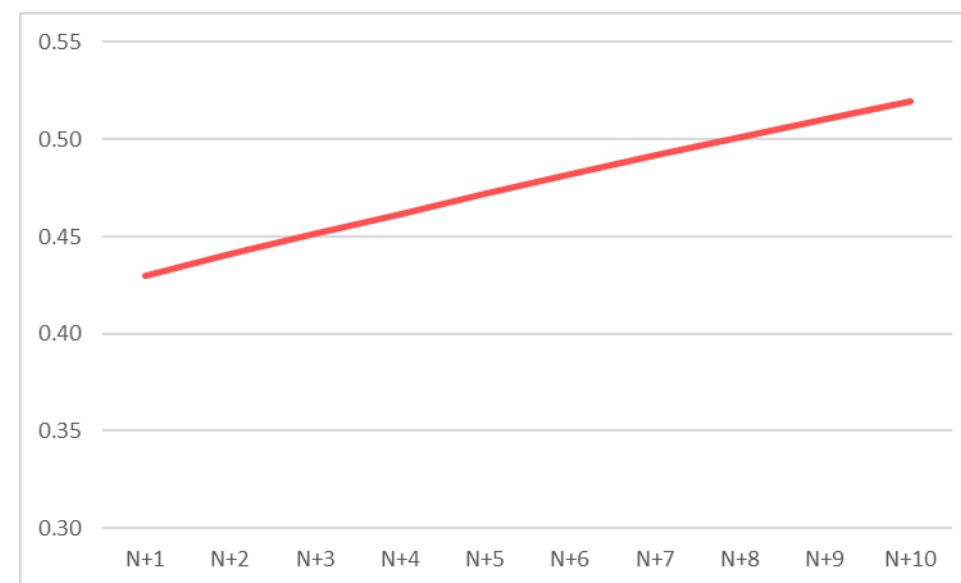
Achieving sustainable competitive advantage and value creation



- We **derive a larger part of the value chain** because we deliver more:
 - Enhanced functionality
 - Lower cost of ownership
 - Added services
- We **increase margins** over the lifetime of the product
- **Independency** from 3rd party chipset roadmaps: Better fit to customer demand
- Customers take a **long-term commitment** with u-blox because of our control of core intellectual property (IP)
- **Better customer support** thanks to full insight and control

Gross margin continually expanding since market launch

Platform results (Chip and module)



Note: Sample based case

Product launches 2020



Broad expansion of solution capabilities will drive business growth



Cellular communication

UBX-R5

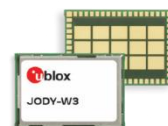
UBX-R5 LTE-M/NB-IoT chipset offers unprecedented wireless technology integration with built-in end-to-end security, making it ideal for mission-critical or long life-cycle IoT applications.



Short range radio communication

JODY-W3

Designed for the increasing number of wireless high speed connections that will be required in vehicles.



Positioning

M9

The ultra-robust M9 technology platform will serve demanding automotive and high-end telematics applications.



M10

Leading edge GNSS platform for wearables and asset trackers, with small size and very low power consumption.



Services

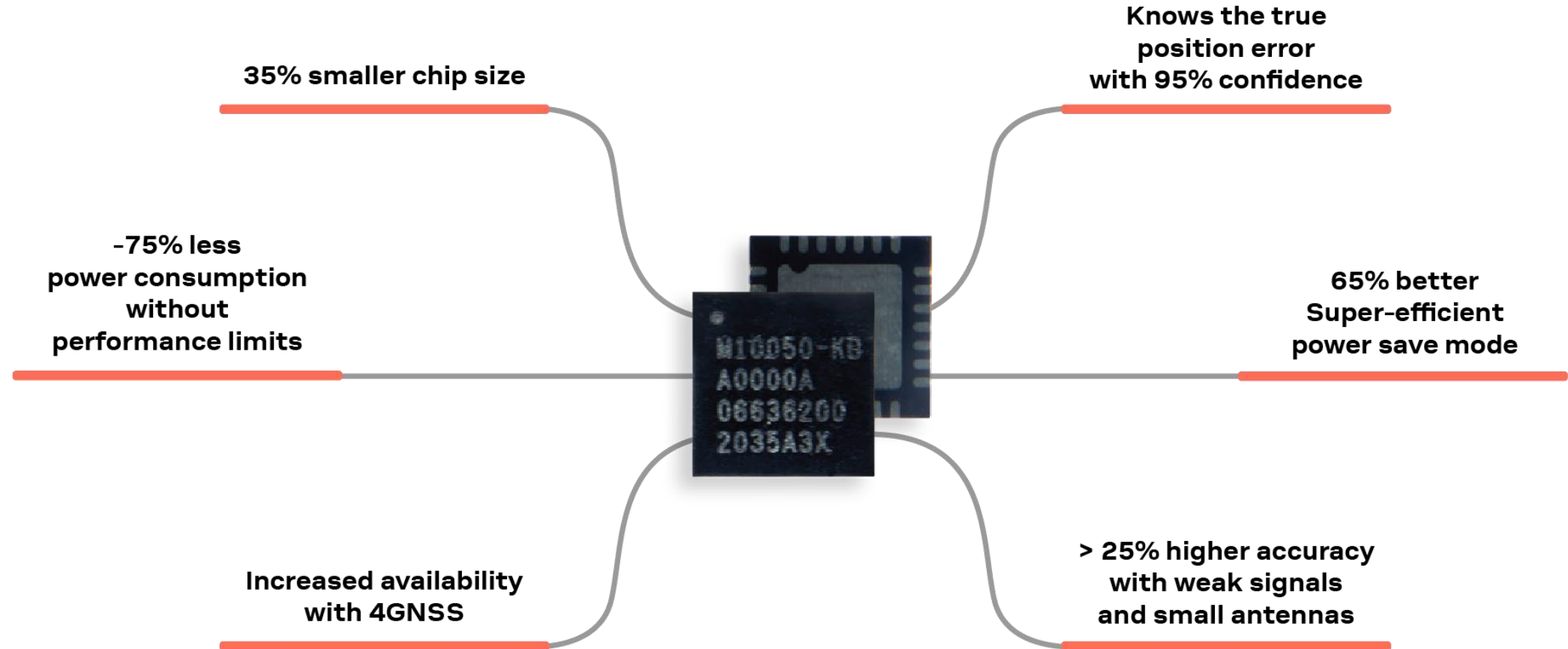
Thingstream acquisition

Enables u-blox to expand its services portfolio toward achieving unique silicon-to-cloud differentiation.



u-blox M10 just launched

All our very best creativity went to this new platform



Big leap in Positioning

We are adding our 10th generation of GNSS receivers



**Our brand new
M10 GNSS
platform**



Services

Connectivity, Location, Security



Positioning

To locate the source of
information



Cellular connectivity

To connect over a wide
area



Short range connectivity

To connect
over short distances

M10 chip and module variants



Cellular product center

Market trends

IoT continues growth, COVID-related shift in applications



COVID impact

COVID is accelerating IoT growth in some areas:

- Touchless / contactless experiences, remote monitoring and automation
- This means more need for edge computing and AI, further driving growth in sensor networks and connected devices
- IoT security becoming more critical to protect sensitive and confidential data
- Efficiency gains will eventually drive business continuity in post-COVID recovery

CAPEX-intensive investments may be postponed in the near term:

- 5G deployments may be slower than expected in a number of regions



Micromobility

Shared and owned single user transport to avoid crowded public transportation.



Connected Health

Demand for remote monitoring, telehealth and connected clinical devices.

Growth drivers

Ideally positioned across IoT applications and regions



- **Migration 4G and 5G:** Broad 5G-ready IoT portfolio covering both LTE-M and NB-IoT
- **High integration:** Introduction of combo modules with integrated GNSS support new compact applications
- **Secure data:** Cloud devices with root of trust and support of IoT-Security-as-a-Service
- **Recurring revenue:** Services that provide support over the lifetime of the product
- **New networks:** First LTE-M module certified to FirstNet, US network for first responders and public safety applications



SARA-R5 series

- LTE-M / NB-IoT
- Secure Cloud
- GNSS



SARA-R42 series

- LTE-M / NB-IoT / EGPRS
- Secure Cloud
- GNSS

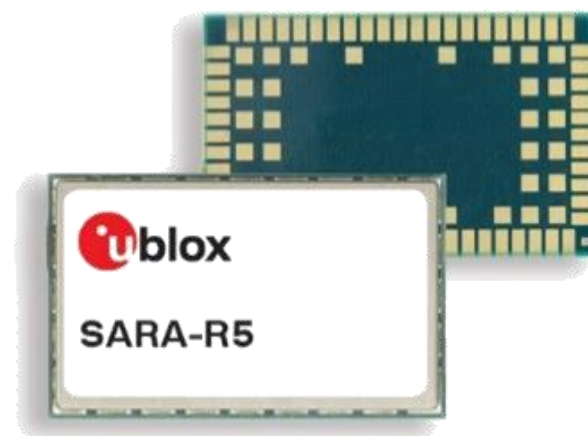


SARA-N3 series

- NB-IoT

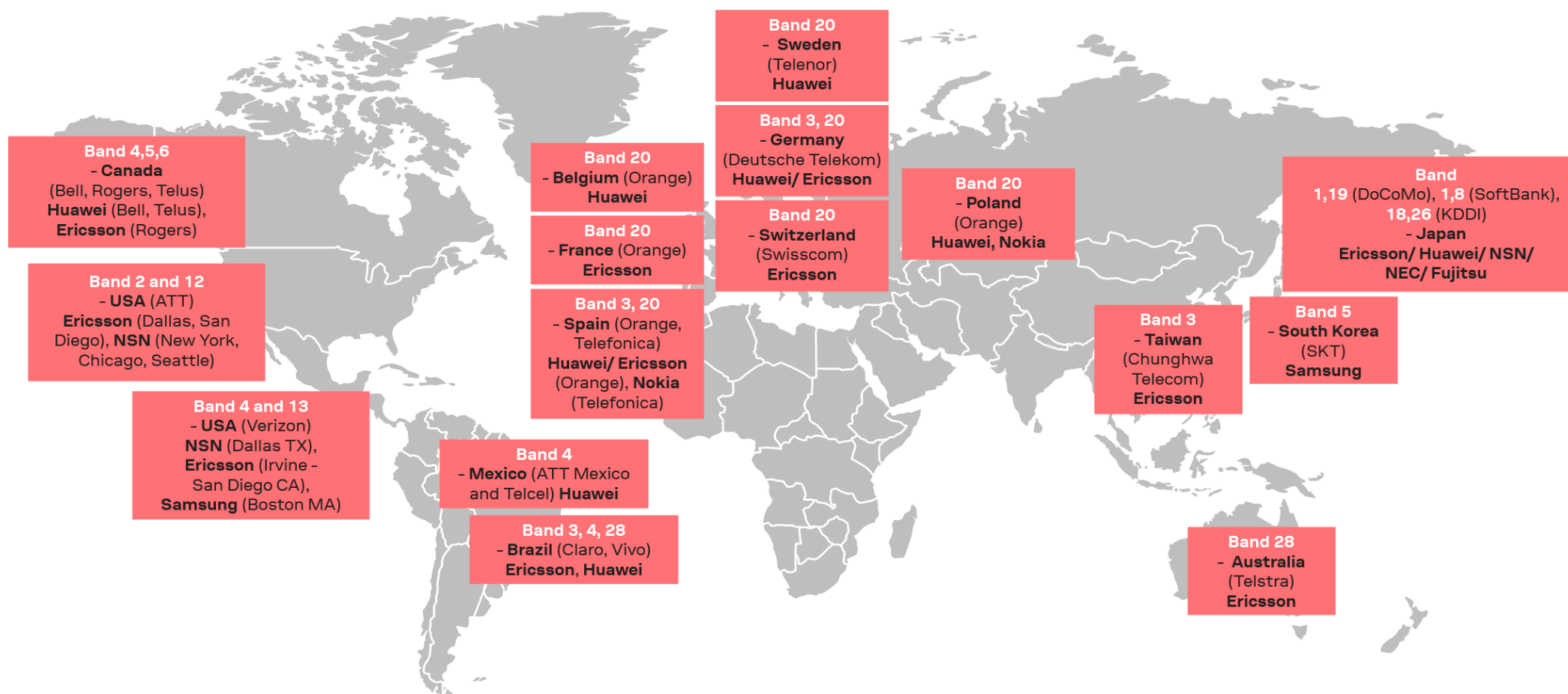
R5 cellular chipset and module deployed to market

All major certifications achieved, for chip and module



R5: Worldwide testing and certification

Covering leading base station makers and carriers



Application 1: NetModule

- NetModule is a leading manufacturer of communication products for M2M, Telematics and IoT
- For their automotive gateway platform they chose u-blox's:
 - TOBY-L2 cellular module,
 - NEO-M8L GNSS receiver with dead reckoning, and
 - JODY-W1 Wi-Fi module (in some products)

NET MODULE



The gateway platform enables e-mobility monitoring, fleet management, and remote vehicle diagnostics.

“The geographic proximity and the exceptional quality and reliability that one could expect from a Swiss enterprise certainly influenced us in selecting u-blox as our technology partner for this product platform.”
Jürgen Kern, CEO of NetModule

Application 2: Leikr

Wearable hub for eHealth



- Smart medical watch that acts as a wireless gateway, channeling data from other medical devices to the cloud
- The Leikr smart medical watch helps track all kinds of biometric data, including blood pressure, blood glucose, heartrate, stress levels, and EKGs
- Leikr chose u-blox's:
 - NINA-B3 short range module
 - ZOE-M8 GNSS receiver module
 - SARA-R5 cellular module

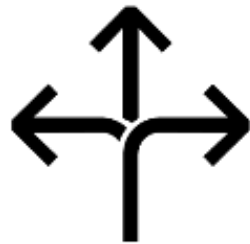


Collects and transmits patient data

Cellular priorities



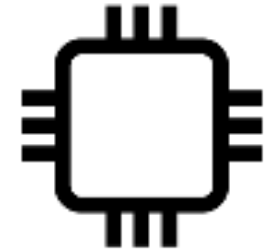
- Expand leadership in LTE-M with UBX-R5 chipset



- Transition of IoT applications to 5G



- Create more value with combo solutions and Services



- Build next generation silicon

Positioning product center

Market trends

Highly reliable and precise tracking and navigation



COVID impact



New solutions to limit virus spread with **drone delivery**



Continued trend for accurate and long battery life fitness **tracking**



Ramp up in **e-bikes** and **e-scooters** as healthy commute to work alternative



Growing interest in reliable **people tracking** solutions for **contact tracing**



Growing interest for stable network connections as more people **work from home**



Acceleration in IoT increasing demands for more **remote monitoring** and **automation**

Growth Drivers

Positioning and timing key to reliable infrastructure



- **High precision for automated operations**
 - Facilitating autonomous vehicles
 - Paving the path to a smart city
- **Highly precise timing for telecoms**
 - Enables 5G infrastructures to meet future demands
 - Expansion to new network types
- **Super low power**
 - Continued strong expansion of wearables
 - Very long operation time, also with small batteries



Application 1: Robotics

Husqvarna – GNSS technology for autonomous robots



- “Husqvarna is the undisputed global market leader in robotic lawn mowers”
- Husqvarna robotic lawnmower with GNSS solution, and connectivity
- Our broad GNSS portfolio offer great customer value
- Our products enable a high precision satellite-based lawnmower with
 - **higher productivity** and
 - **lower installation costs**



Robotic lawnmower

«u-blox is recognized for their experience with the GNSS module and competence in that area.»
Anders Johansson, CTO of Husqvarna

Application 2: Autonomous cars

Functional safe technology at the core



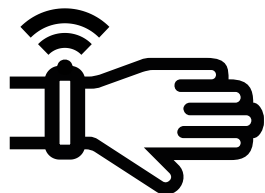
- Connectivity to the cloud combined with edge computing allows for solutions in **autonomous control**
- **High precision and functional safety** are key to such solutions
- **u-blox has invested into this space** for many years and will continue to expand its leadership



Source: www.carmagazine.co.uk, Sep 2020

Advanced Driver Assistance Systems
(ADAS) assisted driving

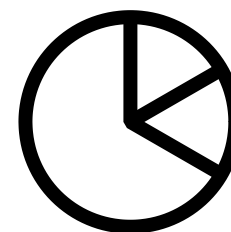
Positioning priorities



- Expand market share with new M10 for consumer and tracking applications



- Build up economies of scale with new M10 platform



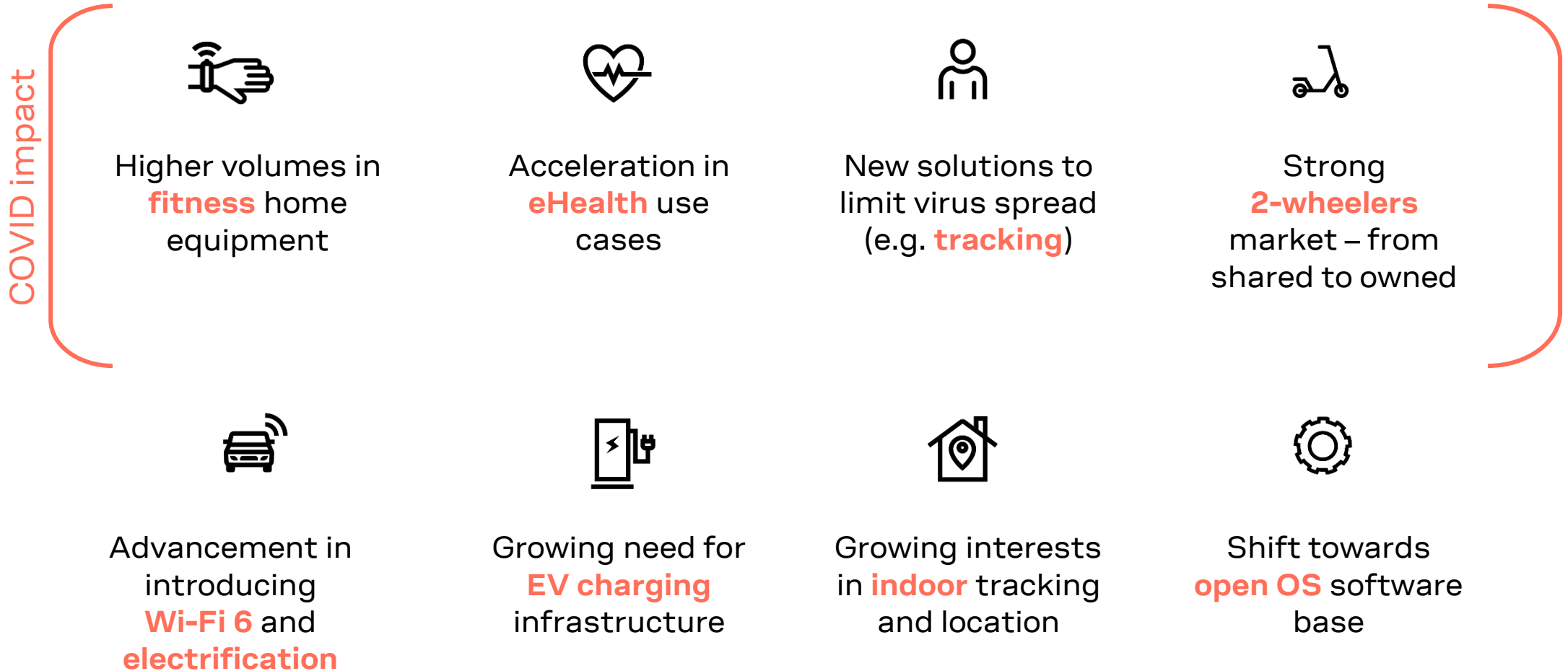
- Strengthen leadership in high precision market



- Build up strong position for ADAS 2+ solutions and ramp up ADAS 3+ platform

Short Range Radio product center

Market trends



Growth drivers

Delivering today and preparing tomorrow



- **Bluetooth as mass market technology:** wide range of Bluetooth low energy modules and strong support for open OS ecosystem
- **Wi-Fi for today and tomorrow:** successful launch of Wi-Fi 6 modules addressing both industrial and automotive
- **Market outreach:** go-to-market partnership for untapped opportunities and stronger global distributors channels
- **Cloud connection:** seamlessly through services
- **Indoor positioning:** gained expertise and investment in technologies



Application 1: Industry 4.0

Sulzer – From pumps to service revenues



- Treon's sensors measure vibration on Sulzer's pumps and send this data to the cloud via Treon's gateway (incl. **NINA-B1** and **SARA-R4**) for predictive maintenance.
- Seeing strong investment into Industry 4.0, e.g. digital transformation:
 - Adding services to pure product sales
 - Shifting of business model to recurring revenues
- Multiple successes with high profile companies in Europe



Monitoring vibration on pumps

Application 2: e-bike

Modmo – When e-bikes replace cars



- Featuring u-blox GPS technology with dedicated 4G data connection for location tracking and security:
 - Real-time location uploaded to a cloud server and retrieved from a mobile phone via cellular connectivity (**LARA-R211**)
 - Locking and unlocking e-bike with mobile phones via Bluetooth low energy (**NINA-B111**)
 - Connectivity handled in **Thingstream** platform



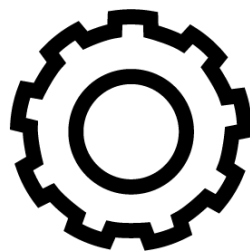
e-bike user management

“The reason we chose u-blox was because of its high quality, which raises the reliability of our product and adds value to the functionality of the smart bike,”
Jack O’Sullivan, Founder at Modmo.

Short Range Radio priorities



Expand into the
high-performance
applications



Add on next releases
in SHO standards



Gain strong traction
with (indoor)
positioning



Expand services
offering with secure
connectivity

An aerial photograph of a large agricultural field with two combine harvesters working. The harvesters are moving from left to right, leaving behind long, straight rows of harvested grain. Dust is being kicked up by the machines. The text "Services product center" is overlaid in white on the left side of the image.

Services product center

Market Trends

Why services shape future business



IoT adoption is part of a broader **cultural change** to **optimize productivity** and **secure the business and operating environment**

COVID impact

- **Reliable and robust connectivity** is critical
- Services are in **high business focus**: They are perishable products
- Businesses are increasingly **converting to service-based models**



eMobility

Demand for electrical vehicles such as eBikes, eScooters and electric wheelchairs.



Connected eHealth

Demand for remote monitoring, telehealth and connected clinical devices.

Growth drivers

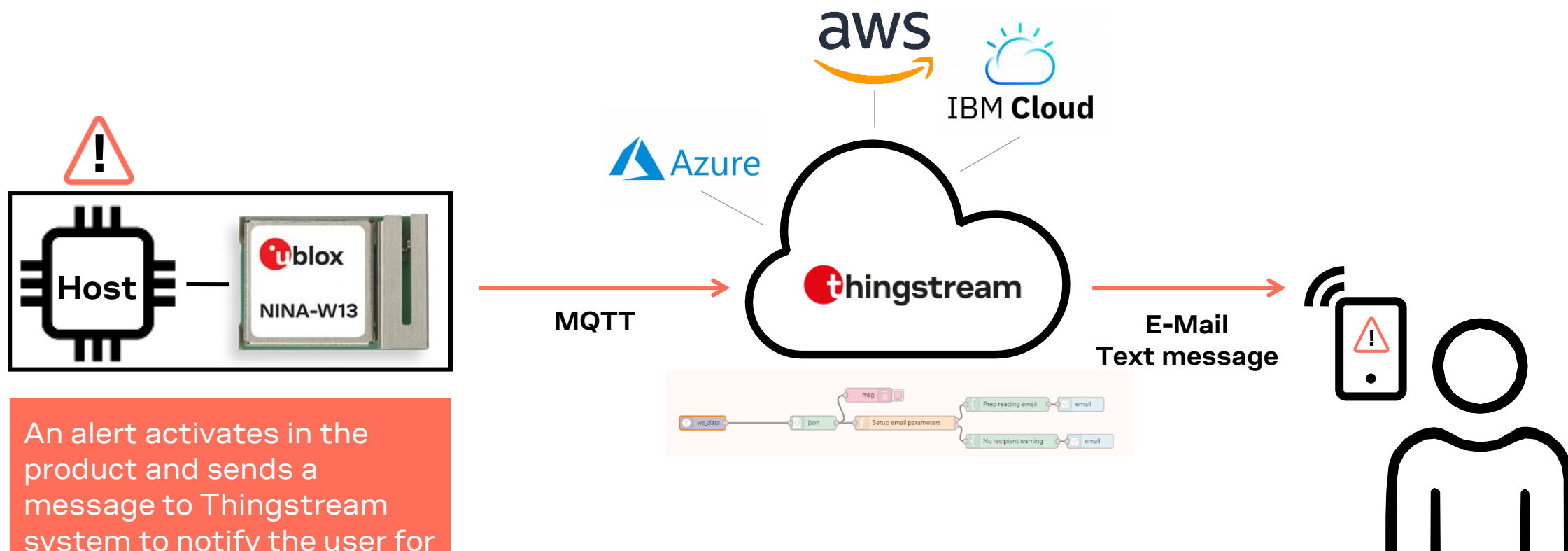
Strong expansion of IoT requires more robust solutions

- **Service content increasing in most application segments** – connectivity a generic pre-condition
- **Many new customers have little experience in cloud connectivity** – need for out of the box connectivity
- **Edge computing** - complementary features at the edge of the cloud
- **High expectations** of availability and life-time maintenance
- **Data security consciousness** - Security services is a recurring need



Connectivity services – what is it about?

MQTT NOW is natively supported in u-blox modules



An alert activates in the product and sends a message to Thingstream system to notify the user for action.

Application 1: Bridgit Home Support Hub

Upstream Health - E-health increasing wellbeing



- Real-time **medical and behavioral home monitor** that measures more than 40 data points
- Patients can live more **safely** and **independently** in their homes
- With the MQTT Anywhere service, u-blox's **Thingstream** platform automatically connects to **remotely and securely collect and transmit data**



Medical and behavioral home monitor

Application 2: Cooler system

Largest brewer AB InBev stay cool in South Africa



- u-blox's IoT connectivity solution supports AB InBev with a Fridgelogic Connected Cooler system
- The solution enables AB InBev to track and monitor the temperature and location of its coolers and fridges

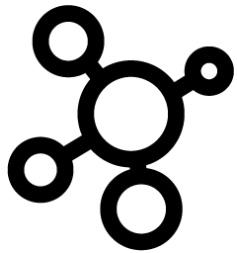
Ajay Lalu, Director, CIRT, said: *“Thingstream provides us with the confidence that a cellular connection will always be maintained, without a guaranteed connection IoT, solutions just fail. Thingstream’s connectivity platform is unique in its ability to not only ensure connectivity but also output IoT messages in a way that can be ingested for real-time interpretation.”*



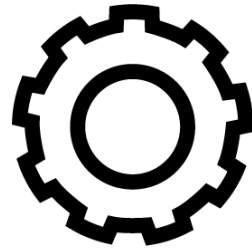
The AB InBev refrigerator

Source: <https://www.itweb.co.za/content/dgp45MaGNRbvX9l8>, 2019

Services priorities



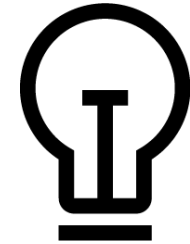
- Timely expansion of Thingstream services delivery platform



- Roll-out new services



- Increase recurring revenue to double digit percentage of revenue



- Make solutions unique and differentiated

Summary – round up

Takeaway: Positioned to thrive



Our long-term strategy and focus remains unchanged

- The **secular trends** propelling the growth of positioning and wireless technology in **automotive and industrial applications** will continue

Leader in positioning and wireless connectivity solutions

- Offering a **unique, comprehensive solution** offering that no other company can provide
- Our IP portfolio reflects our **long history of R&D** know-how built over decades of experience
- **New product platforms** paving the way for expansion: three new Positioning platforms in market, strong traction R5 based LTE connectivity, building recurring revenue segment of the business

Well positioned to capitalize on a market recovery

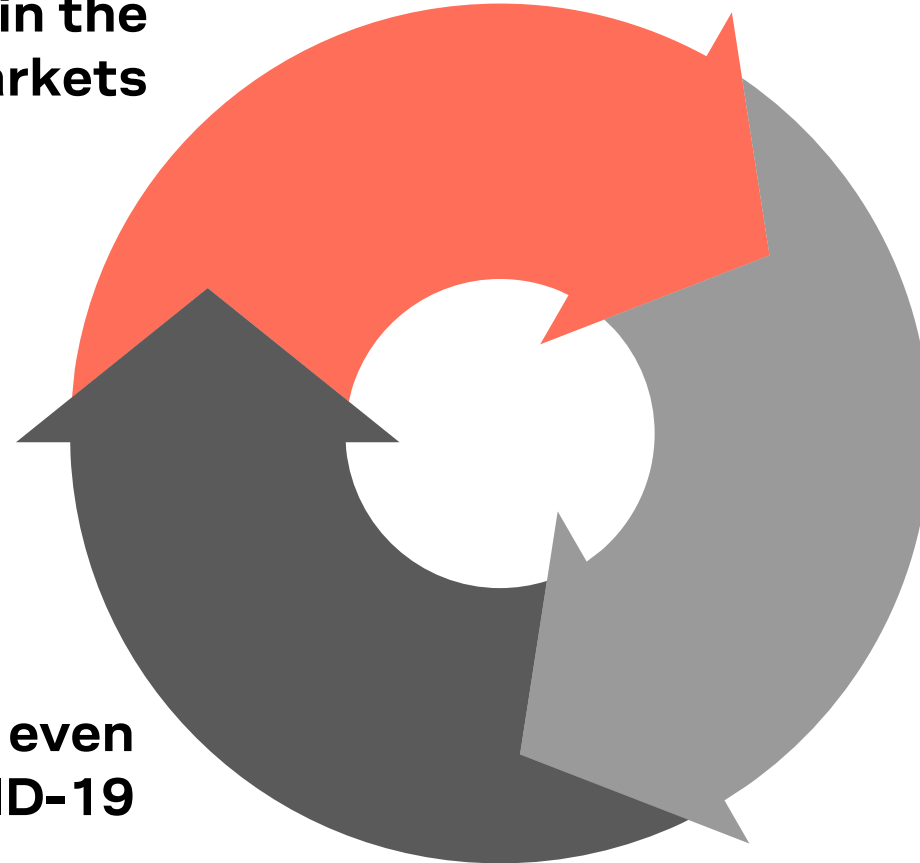
u-blox today and tomorrow

Our value proposition endures



u-blox is in the
right markets

u-blox will emerge even
stronger after COVID-19



u-blox's markets are
growing and **accelerating**

Q&A

Thank you for your attention