



ANNUAL REVIEW 2016

BORN IN 1997

WE MADE OUR  
VISION REALITY



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# Financial highlights

## Revenue in m CHF

**360.2**

Revenue 2015: 338.3 – Growth rate: 6.5%

## Operating cashflow in m CHF

**93.6**

Operating cashflow 2015: 74.7 – Growth rate: 25.3%

## Equity ratio in %

**67.0**

Equity ratio in % 2015: 64.2

## Operating profit (EBIT) in m CHF

**59.0**

Operating profit 2015: 51.3 – Growth rate: 15.0%

## Net profit in m CHF

**46.2**

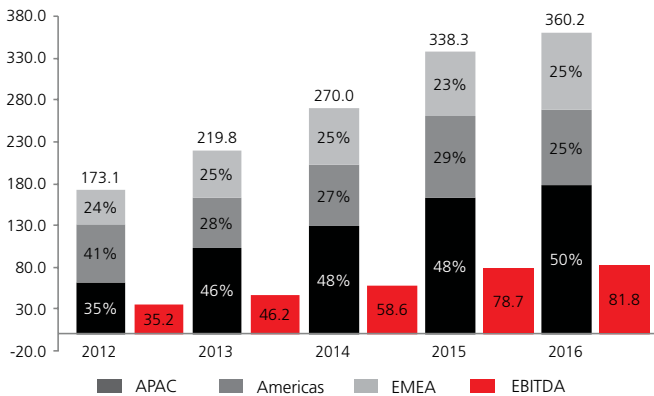
Net profit 2015: 37.1 – Growth rate: 24.5%

## Gross profit in %

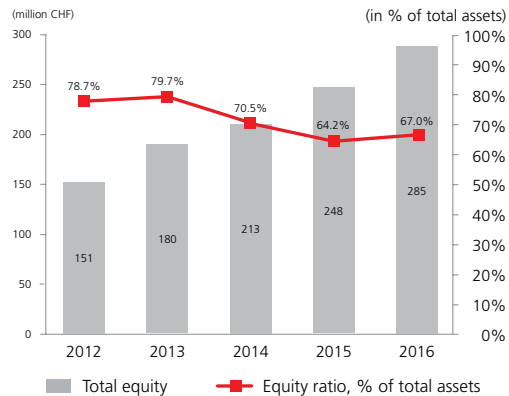
**46.4**

Gross profit in % 2015: 45.8

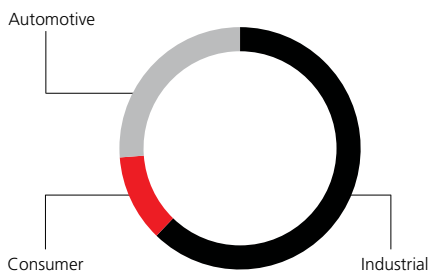
## Revenue by geography / EBITDA in m CHF



## Total equity and equity ratio in m CHF



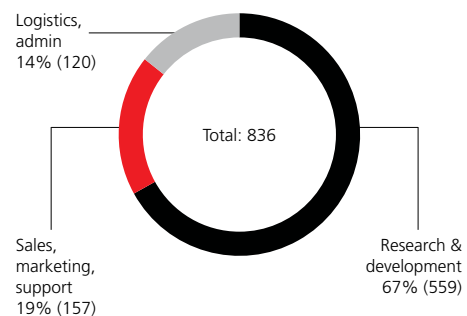
## u-blox revenue split per market



(Estimate)

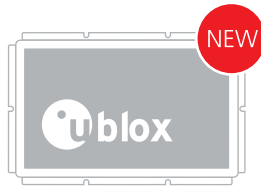
## Employee breakdown spread over 17 countries

75% of employees based outside Switzerland



(end of 2016, FTE based)

# Operational highlights



## Strategic new products

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As a direct result of u-blox's ability to offer components geared to meet the needs of specific markets, in 2016 we unveiled the highest number of new products in our 20-year history. Among them was the pioneering LARA-R3121 module, designed at u-blox from the ground up for the IoT based on the new u-blox R3 LTE chipset for cellular connectivity.



## Automotive focus

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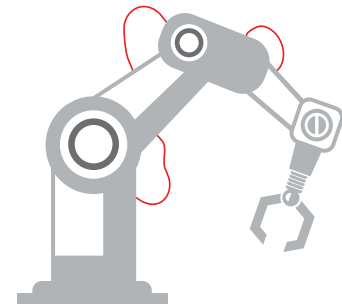
In line with the growing importance of the automotive market, u-blox released the industry's first untethered dead reckoning (UDR) module, which addresses both the first mount and after-market sectors, for a device that combines simple installation with leading positioning capability.



## Global expansion

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As part of our global expansion strategy, we expanded our R&D offices in Tampere, Finland. We also opened a new, significantly larger national office in Taiwan in May 2016. That came in response to Taiwan's booming telematics and IoT markets and now enables us to meet local and Asian customers' needs faster and more efficiently.



## Industry participation

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u-blox joined ESMIG, the European voice of smart energy solution providers. u-blox also became a member of the GSMA which provides a forum for us to engage with the wider cellular and IoT ecosystem.



## Sales of wearables in Asia skyrocket

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As the market for wearables and trackers continues to expand in Asia, u-blox collaborated with one of Korea's leading software development companies to launch a new children's smart watch. Sales of children trackers likewise rose exponentially in China.



## Third analysts day

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Our third analysts' day was held in September and attracted 60 participants. Presentations gave attendees a closer insight into u-blox's vision and strategy. One of the main attractions was a demonstration of the first u-blox cellular chipset in action.

This is u-blox

# OUR TECHNOLOGIES



## Cellular modules

### Technologies

- GSM/GPRS
- CDMA
- UMTS/HSPA
- LTE



## Short range modules

### Technologies

- Bluetooth
- Bluetooth low energy
- Wi-Fi
- Multiradio



## Positioning chips & modules

### Technologies

- GPS
- GLONASS
- BeiDou
- Galileo
- QZSS

# OUR MARKETS



## Industrial

### Positioning & Wireless

- Fleet management
- Remote monitoring and control
- Automatic meter reading
- Point-of-sales
- Remote displays
- Remote security and surveillance
- Unmanned Aerial Vehicles



## Automotive

### Positioning & Wireless

- In-car navigation
- Stolen vehicle recovery
- Emergency call
- Car connectivity telematics
- Vehicle black-box



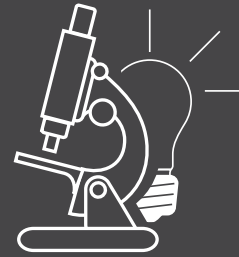
## Consumer

### Positioning & Wireless

- Wearables
- Personal navigation devices
- Notebooks and mobile internet devices
- Cameras
- Person locators

# HOW WE CREATE VALUE

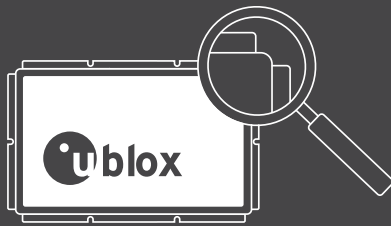
## INNOVATION



### **Comprehensive product lines and IP**

Our success depends on our ability to deliver continuous innovation to our customers. We therefore direct our research and development efforts to the development of ever smaller, higher performance products. We have also amassed an extensive intellectual property portfolio.

## QUALITY



### **Focus on quality**

From product concept to final shipment, our quality systems ensure that every component we deliver is of the highest quality and reliability while supporting environmental sustainability.

## GLOBAL



### **Global presence**

With physical presence in all the world's main markets, we stay close to our customers to make sure our innovation cycles are in synch and to ensure our customers get their products to market fast.

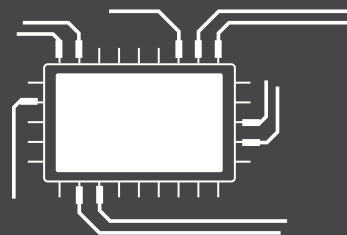
## RELATIONS



### **Close customer relationships**

We are a close and reliable partner to our customers, fully supporting them from prototype to final production. Providing the highest levels of local technical and customer support is essential for our customers to achieve fast time-to-market.

## FABLESS



### **Fabless business model**

Working with leading semiconductor fabrication and module assembly companies allows us to focus our resources on research and development in order to deliver the breakthrough technologies that our customers need to stay ahead of their competitors.

# Letter to the shareholders

## Dear Shareholders,

After the strong results posted in 2015, and despite more challenging circumstances, u-blox can look back on another good year. Robust growth in Asia and Europe and with the ramping up of new products brought a 25% increase over 2015. However, unexpectedly slow demand in the USA in 2016 obliged us to correct our guidance figures, as events on the far side of the Atlantic could not be compensated. The profit outlook was finally little impacted and we post a record result. Our share value remained stable at CHF 191.20.

The Board of Directors proposes a dividend payout of CHF 2.10 per share and will put the motion to shareholders for approval at the Annual General Meeting on April 25, 2017.

## Overall growth continues

Consolidated Group revenues in 2016 showed continued growth, rising by CHF 21.90 million to CHF 360.2 million, or the equivalent of a 6.5% increase over the previous year. Operating profit (EBIT) was up strongly by 15.0% compared with 2015 and stood at CHF 59.0 million. Nevertheless, revenue progress differed markedly from one geographical region to another.

## Worldwide revenue growth of



over 2015 was achieved

Markets in Europe, the Middle East and Africa (EMEA) reported strong growth of 18.5%, with expansion across all areas and product ranges, especially for asset tracking and infrastructure applications. Europe, in particular, benefited from a notable upturn in demand for mobility solutions and smart metering, as well as telematics units for cars and trucks. The latter is driven by lively demand for in-vehicle connectivity and, on the automotive front, will undoubtedly profit from the upcoming mandatory eCall function in the car.

The Asian markets continued to benefit from a positive economic climate and reported a growth of 9.1%, especially in the consumer

## Net cash generated from operating activities in m CHF



2015: 74.7 – Growth rate: 25.3%

markets for wearables and personal trackers, where we continued to develop new business. u-blox has also established a leading position in the region for UAVs (unmanned aerial vehicles, or drones) and continued to play a pioneering role in automotive applications for telematics and navigation. The industrial side of our operations profited from expansion in the telecoms industry.

Business in the Americas was negatively affected by events that included political uncertainty and slow business progress in the USA. Customers there delayed further investments into mobility solutions, and generally took a more prudent approach in launching new products. Despite this temporary setback, we are confident that the design of several promising new products and ongoing demand for IoT solutions will see the region revert to robust growth in the months ahead.

## Firmly on course towards intermediate goal

u-blox remains on course to achieve its medium-term goal of half-billion-dollar annual revenues. We continuously expanded our workforce, particularly in R&D, to boost the innovation rate. The resulting capacity provided the impetus needed to create and announce a number of market leading new products.

## Product highlights

One of the central reasons for u-blox's ongoing success is the company's ability to develop and market products that are geared precisely to the needs of specific markets. In this respect, 2016 was a milestone year: never before had the company announced so many new products. Last year's highlights included:

- LARA-R3121: the first module and chipset from a single supplier. This product expressly underlines our strategy to become a leading semiconductor supplier in the wireless communication market.
- UBX-R3: a low-cost, low-energy consumption chip for a vast range of narrowband IoT applications – and the chipset at the heart of LARA-R3121.





Thomas Seiler, CEO; Fritz Fahrni, Chairman of the Board; Roland Jud, CFO.

- NEO-M8U: the industry's first untethered dead reckoning module, which addresses the automotive sector and combines easy installation with optimum positioning capability.
- NEO-M8P: centimeter-level positioning accuracy for the mass market.
- NINA-B1: a Bluetooth-capable module that tracks mobile devices and equipment moving in confined spaces, such as at healthcare facilities and industrial plants.

### Challenges and risks

The risks that confront a high-technology company like u-blox in a global environment are many, and we take prudent measures to safeguard our own operations and those of our customers. First and foremost of these is the continued development and marketing of the leading products our customers can rely on to meet their precise needs, which means keeping a close eye on and predicting technological development. Secondly, we are keenly aware of the repercussions of currency exchange movements and ensure as far as possible that our production and operational expense in specific currencies is commensurate with our revenues. And thirdly, we have an extensive and expanding base of over 5'700 customers, with no single one of them accounting for more than 6% of sales.

### Strategy

We are pleased to report that we remain firmly on course with our well-established strategy, which is founded on four discrete pillars: consolidation of our market position; ongoing technological development and innovation; operational excellence; and strategic partnerships. We continue to grow our business with regular launches of new and more sophisticated products. These include the launch of first LTE chipset for Category 1 and the LARA-R3 module based on this chipset. We also announced the NANO-S100

module for wireless applications, the new u-blox 8 platform together with high-precision products for positioning, and the expansion of our short range product line for IoT applications. We work untiringly to strengthen our global presence, in the quest for operational excellence and the increased efficiency that comes with economies of scale.

On the acquisition front, in January 2017 u-blox announced an asset deal with Shanghai-based SIMCom that expands u-blox's existing cellular product range and makes it a major supplier of cellular modules worldwide. The asset deal is due for completion in spring 2017.

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### Operating profit (EBIT) in m CHF

59.0

Operating profit 2015: 51.3 – Growth rate: 15%

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### Board and management

During the period under review, Soo Boon Koh retired from the board. Her seat was taken by Gina Domanig, who holds triple (Swiss, US and French) nationalities. Gina Domanig is Managing Partner of Emerald Technology Ventures AG, a Member of the Board with Die Mobiliar Genossenschaft, Switzerland, and Chairman of the Board at the Energy Venture Forum, Switzerland.

## Outlook

We plan to maintain our aim of continued profitable growth. To achieve this, we need to invest in new products and offer a wide range of chips and modules that meet the many needs of our customers. These will consolidate our leading position and help us

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## Gross profit in %

46.4%

Gross profit in % 2015: 45.8

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accelerate growth. As the Internet of Things continues to transform the course of the industry, we are forging ahead with the development of the low-power, low-price modules required in countless applications with strong, continuously growing demand, while focusing on the three areas that cover the entire spectrum of communication needs: positioning, cellular and short range technology.

For positioning, we have four primary lines designed for: standard precision (meter-level accuracy), high precision (centimeter to decimeter accuracy), dead reckoning (coverage in tunnels and urban canyons), and timing and frequency requirements.

For the cellular sector, we offer an extensive range of modules covering all major standards, GSM, UMTS and CDMA, high-performance, multi-mode LTE modules and low data-rate, single-mode LTE, NB-IoT and RPMA modules. The integration of SIMCom's products will further enhance our market position. The third element in our product strategy is short range technology, covering low-energy Bluetooth for low data rates, Wi-Fi for high data rates and V2X modules for automotive safety applications.

For the current year, we are targeting revenues of between CHF 485 million and CHF 515 million including the acquisition of SIMCom, with an operating profit (EBIT) of between CHF 60 million and CHF 65 million. These expectations exclude unforeseen economic adversity and budgeted exchange rates (USD/CHF: 1.00; EUR/CHF: 1.10).

u-blox plans to launch its second bond issue in 2017. The net proceeds of the issue will increase u-blox's financial flexibility, ensuring the Group's financing for the coming years.

On behalf of the Board of Directors and the Executive Committee, we wish to thank our growing team of highly skilled employees for their commitment and untiring efforts in 2016. We would also like to extend our gratitude to our shareholders for their trust and confidence in u-blox, and to our valued customers, suppliers and manufacturing partners.

We look forward to another exciting and successful year.



Fritz Fahrni  
Chairman of the Board of Directors



Thomas Seiler  
CEO



Roland Jud  
CFO

# Brief an unsere Aktionäre

## Sehr geehrte Aktionärinnen und Aktionäre,

u-blox kann, nach dem starken Ergebnis 2015 und trotz schwierigerer Rahmenbedingungen, auf ein weiteres erfolgreiches Jahr zurückblicken. Ein solides Wachstum in Asien und Europa und die Einführung neuer Produkte trugen zu einem Anstieg von 25% gegenüber 2015 bei. Jedoch mussten wir aufgrund der unerwartet schwachen Nachfrage in den USA in 2016 unsere Prognosen revidieren, da die Entwicklung jenseits des Atlantik nicht gänzlich kompensiert werden konnten. Der prognostizierte Unternehmensgewinn blieb davon aber wenig berührt und wir weisen diesen Jahr einen Rekordgewinn aus. Unser Aktienkurs blieb stabil bei CHF 191.20.

## Umsatzwachstum weltweit von

**6.5%**

wurde gegenüber 2015 erreicht

## Gesamtwachstum hält an

Der Konzernumsatz konnte 2016 erneut gesteigert werden und erhöhte sich im Vorjahresvergleich um 6.5% von CHF 338.3 auf CHF 360.2 Millionen. Der Betriebsgewinn (EBIT) verbesserte sich deutlich um 15.0% gegenüber dem Vorjahr auf CHF 59.0 Millionen. Allerdings gab es regional deutliche Unterschiede im Geschäftsverlauf.

Die Märkte in Europa, Nahost und Afrika (EMEA) verzeichneten ein starkes Wachstum von 18.5%, das von allen Bereichen und Produktlinien, insbesondere in den Segmenten Asset Tracking und Infrastruktur, unterstützt wurde. Vor allem in Europa profitierten wir von einem deutlichen Anstieg der Nachfrage nach Mobilitätslösungen und Smart Metering sowie Telematik-Einheiten für PKW und Nutzfahrzeuge. Letztere wird von der hohen Nachfrage nach Systemen für die Vernetzung im Fahrzeug angetrieben und sicherlich im Automotive-Bereich vom bevorstehenden verpflichtenden Einbau eines automatischen Notrufsystems (eCall) in alle neuen PKW-Modelle profitieren.

Die asiatischen Märkte spiegelten mit einem Wachstum von 9.1% die gute Konjunkturlage wider. Dies zeigte sich besonders deutlich

in den Märkten für Konsumgüter wie Wearables und Personenortungsgeräte, in denen wir weitere Neukunden gewannen. Ausserdem konnte u-blox in der Region eine führende Position bei unbemannten Luftfahrtsystemen, sogenannten Drohnen, aufbauen und übernahm weiterhin eine Vorreiterrolle bei Telematik- und Navigationslösungen für Fahrzeuganwendungen. Im Industrie-segment wirkte sich die Expansion der Telekommunikationsindustrie positiv auf unsere Geschäftstätigkeit aus.

Die Geschäftstätigkeit auf dem amerikanischen Markt wurde durch verschiedene Ereignisse negativ beeinflusst. Neben politischer Unsicherheit und langsamerer geschäftlicher Expansion schoben Kunden in den USA weitere Investitionen in Mobilitätslösungen auf und verhielten sich insgesamt zurückhaltender bei der Markteinführung neuer Produkte. Wir sind sehr zuversichtlich, dass trotz dieses vorübergehenden Dämpfers die Region in den nächsten Monaten wieder zu einem soliden Wachstum zurückkehrt. Bereits heute sehen wir die Entwicklung mehrerer viel versprechender neuer Produkte und die anhaltende Nachfrage nach Lösungen für das Internet der Dinge (Internet of Things, IoT) voraus.

## Das Zwischenziel fest im Blick

u-blox ist weiterhin auf gutem Weg, das mittelfristige Ziel eines jährlichen Umsatzes von einer halben Milliarde US-Dollar zu erreichen. Wir haben unser Personal, insbesondere im F&E-Bereich, kontinuierlich aufgestockt, um die Innovationsrate zu erhöhen. Die nun verfügbaren Kapazitäten gaben uns den nötigen Impuls, um verschiedene marktführende neue Produkte zu entwickeln und auf den Markt zu bringen.

## Cashflow aus operativer Geschäftstätigkeit in M CHF

**93.6**

2015: 74.7 – Wachstumsrate: 25.3%

## Produkt Highlights

Einer der zentralen Gründe für den anhaltenden Erfolg von u-blox ist die Fähigkeit des Unternehmens, Produkte zu entwickeln und zu vermarkten, die genau auf den Bedarf spezifischer Märkte zugeschnitten sind. Diesbezüglich war 2016 ein Meilenstein-Jahr: Nie zuvor wurden so viele neue Produkte angekündigt. Hier die Highlights des letzten Jahres:

- LARA-R3121: das erste auf dem eigenen Chipsatz basierende Modul – wir sind damit der einzige Hersteller einer solchen Kombination. Dieses Produkt unterstreicht unsere Strategie, ein führender Anbieter von Halbleiterbausteinen im Markt für drahtlose Kommunikation zu werden.

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### Betriebsgewinn (EBIT) in M CHF

59.0

Betriebsgewinn 2015: 51.3 – Wachstumsrate: 15.0%

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- UBX-R3: ein kostenoptimierter Chip mit niedrigem Energieverbrauch für ein breites Spektrum von Anwendungen im Bereich Narrowband IoT, der schmalbandigen Kommunikation mit „Dingen“. Dieser Chip bildet das Herzstück des LARA-R3121 Moduls.
- NEO-M8U: das branchenweit erste Modul mit freistehender Koppelnavigation speziell für die Automobilindustrie, das einfachen Einbau mit optimaler Positionierungsleistung verbindet.
- NEO-M8P: Positionierung bis auf Zentimeter-Level für den Massenmarkt.
- NINA-B1: ein Bluetooth-fähiges Modul, das die drahtlose Kommunikation von mobilen Geräten und Maschinen in Gesundheitseinrichtungen und Industrieanlagen unterstützt.

### Herausforderungen und Risiken

Ein in einem globalen Umfeld agierendes High-Tech-Unternehmen wie u-blox ist mit zahlreichen Risiken konfrontiert. Wir ergreifen angemessene Massnahmen, um unsere Geschäftstätigkeit und die unserer Kunden zu schützen. Die erste und wichtigste Absicherung besteht in der fortlaufenden Entwicklung und Vermarktung führender Produkte, bei denen unsere Kunden darauf vertrauen können, dass diese ihre genauen Anforderungen erfüllen. Das bedeutet, die technologischen Entwicklungen intensiv zu verfolgen und vorherzusagen. Zweitens sind wir uns der Auswirkungen von

Fremdwährungsschwankungen bewusst und stellen nach Möglichkeit sicher, dass unsere Produktions- und Betriebskosten in denselben Währungen anfallen, in denen wir unsere Erlöse erzielen. Drittens haben wir eine breite, weiter wachsende Kundenbasis, wobei keiner dieser über 5'700 Kunden mehr als 6% zu unserem Umsatz beiträgt.

### Strategie

Wir freuen uns, dass wir mit unserer bewährten Vier-Säulen-Strategie auf einem stabilen Kurs sind und setzen weiterhin auf die Konsolidierung unserer Marktposition, fortlaufende technologische Entwicklung und Innovation, operative Höchstleistung und strategische Partnerschaften. Mit der regelmässigen Markteinführung von neuen und immer komplexeren Produkten bauen wir unser Geschäft kontinuierlich aus. Beispiele hierfür sind der erste LTE-Chipsatz der Kategorie 1 und das auf diesem Chipsatz basierende Modul LARA-R3. Ausserdem präsentierten wir die erste Produktlinie mit LPWA-Modulen für drahtlose Anwendungen, die neue Plattform u-blox 8 sowie Hochpräzisionsprodukte für die Positionierung und erweiterten unsere Produktlinie im Kurzstreckenbereich für IoT-Anwendungen. Wir arbeiten unermüdlich daran, unsere weltweite Präsenz zu verstärken, unsere operative Leistungsfähigkeit weiter zu verbessern und unsere Effizienz durch Ausnutzung von Skaleneffekten zu erhöhen.

Im Januar 2017 gab u-blox einen Asset-Deal mit der in Shanghai ansässigen SIMCom Wireless bekannt. Durch den Erwerb wird das bestehende u-blox Produktangebot im Bereich Mobilfunk deutlich erweitert, und das Unternehmen etabliert sich dadurch als einer der weltweit grössten Anbieter für Module der drahtlosen zellulären Kommunikation. Der Asset-Deal soll im Frühjahr 2017 vollzogen werden.

### Verwaltungsrat und Geschäftsleitung

Im Berichtszeitraum schied Soo Boon Koh aus dem Verwaltungsrat aus. Ihre Position wurde durch Gina Domanig übernommen, die Bürgerin der Schweiz, USA und Frankreich ist. Gina Domanig ist Managing Partner der „Emerald Technology Ventures AG“, Mitglied des Verwaltungsrats von „Die Mobiliar Genossenschaft“, Schweiz, und Vorsitzende des Vorstands des „Energy Venture Forums“, Schweiz.

### Ausblick

Wir wollen an unserem Ziel eines anhaltenden, profitablen Wachstums festhalten. Hierzu müssen wir in neue Produkte investieren und eine breite Palette von Chips und Modulen anbieten, die die vielfältigen Anforderungen unserer Kunden erfüllen. Dadurch können wir unsere führende Position festigen und unser Wachstum beschleunigen. Da das Internet der Dinge die Industrie weiter transformiert, treiben wir die Entwicklung kostenoptimierter

### Bruttogewinn in %

46.4

Bruttogewinn in % 2015: 45.8

Modelle mit niedrigem Stromverbrauch, die in unzähligen Anwendungen benötigt werden und sich einer starken, kontinuierlich ansteigenden Nachfrage erfreuen, weiter voran. Gleichzeitig konzentrieren wir uns auf die drei Bereiche, die das gesamte Spektrum des Kommunikationsbedarfs abdecken: Positionierung, Mobilfunk und Kurzstreckentechnologie.

Bei den Positionierungsmodulen unterscheiden wir vier Hauptproduktlinien: Standardpräzision (Genauigkeit im Meterbereich), Hochpräzision (Genauigkeit im Zentimeter- bis Dezimeterbereich) und Koppelnavigation (Verfügbarkeit der Positionsinformation in Tunneln und dicht besiedelten Städten) sowie Timing- und Frequenzprodukte.

Für die Mobilfunkbranche bieten wir ein umfassendes Sortiment an Modulen für alle wichtigen Standards (GSM, UMTS und CDMA), leistungsfähige LTE-Multi-Mode-Module, Single-Mode-LTE-Module für Anwendungen mit niedrigen Datenraten sowie NB-IoT- und RPMA-Module an. Durch die Integration der Produkte von SIMCom werden wir unsere Marktposition weiter ausbauen können. Das dritte Element unserer Produktstrategie ist die Kurzstreckentechnologie, die stromsparende Bluetooth-Module für niedrige Datenraten, Wi-Fi-Module für hohe Datenraten und V2X-Module für Fahrzeugsicherheitssysteme umfasst.

Für das laufende Jahr erwarten wir unter Einschluss der Akquisition von SIMCom einen Umsatz zwischen CHF 485 Millionen und CHF 515 Millionen bei einem Betriebsgewinn (EBIT) zwischen CHF 60 Millionen und CHF 65 Millionen. Diese Prognose basiert auf der Annahme, dass keine unvorhergesehenen negativen wirtschaftlichen Entwicklungen eintreten und die Wechselkurse im Planbereich liegen (USD/CHF: 1.00; EUR/CHF: 1.10).

u-blox wird die zweite Obligationenanleihe in 2017 platzieren. Die Mittel aus der Anleihe werden die finanzielle Flexibilität der u-blox Gruppe für die kommenden Jahre erhöhen.

Im Namen des Verwaltungsrats und der Geschäftsleitung möchten wir unserer wachsenden Belegschaft hoch qualifizierter Mitarbeiter für ihren unermüdlichen Einsatz und ihre erbrachten Leistungen in 2016 bestens danken. Ein Dank geht auch an unsere Aktionäre für ihre Unterstützung und ihr Vertrauen in u-blox und unsere geschätzten Kunden, Lieferanten und Fertigungspartner.

Wir freuen uns auf eine Fortsetzung unseres Erfolgs in einem weiteren spannenden Geschäftsjahr.



Fritz Fahrni  
Chairman of the Board of Directors



Thomas Seiler  
CEO



Roland Jud  
CFO



## THE BRAINS BEHIND U-BLOX

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It is 1997. Dani Ammann, Andreas Thiel and Jean-Pierre Wyss are postgraduate students involved in an electrical engineering project at the Swiss Federal Institute of Technology in Zurich. In response to interest from the industry, they join forces with their professor, Gerhard Tröster, and entrepreneur and private investor, Hans-Ulrich Müller, to form a company.

Focus story: 20<sup>th</sup> Anniversary

# REACHING FOR THE STARS

This year, u-blox celebrates its 20<sup>th</sup> anniversary. Three post-graduate students invented the world's smallest GPS module as part of their research at the Swiss Federal Institute of Technology (ETH) and within a matter of months they teamed up with their professor and a well-wishing mentor and investor to found u-blox. Over the last 20 years u-blox has grown from a handful of employees to an international public company with over 1000 employees.

**You have been working together for over 20 years. Can you tell us how you first met?**

**JEAN-PIERRE WYSS (JW)** – Dani and I met over 30 years ago and both studied Electrical Engineering at the Federal Institute of Technology (ETH).

**ANDREAS THIEL (AT)** – I'd just come down from Aachen University in Germany and joined Dani and Jean-Pierre just after they'd finished their degrees. We were part of a new research team under a new professor at the ETH.

**DANI AMMANN (DA)** – Back then we were focusing on research into electronics packaging – a long way from product development – and had no intention of founding a company.

back then was to turn a PhD thesis into a real product and ramp up production to about 100,000 units annually – which we now do in about eight hours!

**DA** – On a more romantic note, back in those early days we were more like a family. We'd all meet up on Friday nights for drinks and pizza. We still do it now in Thalwil and elsewhere, and it's a great way to improve team spirit.

**AT** – Yes, it was cool. We rented a small flat in Zurich that gave us everything we needed to run the business, but after a year, it was clear we needed something bigger, and that's when we moved to Thalwil. Since then we have expanded continuously, here and abroad.

**AT** – One of the key turning points was the decision to change our strategy by giving up the idea of making lots of little blocks and by focusing on our own chipsets. It gave our customers added value and made us really successful.

**JW** – Yes, the GPS technology was vital. And by 2004, we started to show profit, which made it easier to find other investors.

**DA** – I think if we're honest with ourselves, one of the most influential factors in our success was luck. We didn't consciously choose to go down the GPS route. There was simply a demand for it: we had the technology and we were able to package it attractively. And the financial constraints likewise forced us to focus on GPS. Luck was also a major factor in the IPO: we timed it – unwittingly – just a few months

## AT U-BLOX INNOVATION IS "A SYNONYM FOR CREATIVITY" ... AND OFFERING CUSTOMERS AND PARTNERS "A SPECIAL LEVEL OF SERVICE".

**So how did u-blox happen?**

**JW** – We'd developed the world's smallest GPS receiver as part of a study. One day, Andy was talking to our supervisor, Gerhard Tröster, about the interest in the product from the industry. Then Professor Tröster made the suggestion that changed our lives: "Why don't you start up your own company?" he asked. So we gave up our doctoral studies and founded u-blox in 1997.

**Could you tell us a little more about the early days at u-blox?**

**JW** – At the beginning, we were five or six working on the project, and we still had an office at the ETH. The main challenge

**What kind of challenges did you face when you started up?**

**AT** – Initially, it seemed pretty easy because we had clients who were interested in our products. The real challenge came when we were forced to recognize that technology wasn't enough and that we needed more than one big customer if we were going to survive. It meant building up a worldwide sales organization to market our products and providing the support needed to keep our customers happy. That all involved extra financing.

**Were there any specific milestones in the u-blox story that made the company such a success?**

before the world financial crisis in 2008. No one had foreseen that, so the timing was brilliant. We managed to get a good price before share prices dropped drastically. We've done a lot of things well, but the determining factor was being in the right place at the right time.

**AT** – It was certainly lucky for us to get good sales people together from the start. We found people who were able to conjure up a sales organization out of nothing. Overall, I think we've done a good job of handling growth and getting the right people together. We've gone from 70 to 80 employees at the time of the IPO to around 1000 today. We appreciate talented people and I think it's fair to say that people like working with us.



### How would you say u-blox has helped you with your personal development?

**JW** – When we started out, we were all engineers. Since then, we've become entrepreneurs and businessmen and learned how to make big decisions. Speaking personally, I learned an incredible amount from my time as CFO, working with the banks and potential investors, and as Head of Production and Logistics as a fab-less company. The latter involved setting up reliable supply chains from beginning to end.

**DA** – Another major issue was learning how to delegate. As an engineer, you think you know best and want to be involved in the development process. For me personally, learning to let go of that and entrusting the work to other people who are better than me at what they do was a huge step. I think it was a major realization for all three of us that you can't always rely on mathematics or physics to make people and markets work the way you want them to.

**AT** – For me, it was learning how to liaise with so many people working in so many different countries. My own personal ecosystem ranges from Lahore in Pakistan to San Diego, California. These are all people with different mentalities, and it's interesting working with them all. Even here at our head office in Thalwil, we have around 27 different nationalities and cultures. So apart from all the technological aspects, I think it's the people aspect of the business that's so exciting.

### Where do you see yourself and u-blox in the next 20 years?

**DA** – Speaking for myself, I'll be around as long as the job and the fun of running a business continues to stimulate me, and as long as our customers continue to make attractive products with our technology.

**JW** – The same goes for me. As long as there are new challenges – as in the past 20 years – I'll be happy to carry on. Growth brings all kinds of new questions with it, and it can be quite tough retaining the flexibility we've always enjoyed.

**AT** – It's all about new challenges. So while we're working with a great team, making products our customers want, and growing personally in the process, I see no reason for stopping.

### What does innovation mean to you?

**DA** – Survival. The only viable strategy for a company like ours is to take the innovation route. It's all we want to do, and it's borne out by the fact that we invest so much in research and development. But we're also involved in a process of constant reinvention internally.

**AT** – For me, innovation is a synonym for creativity. We want to make things better, and it's what drives us forward as a company. Being successful in this business isn't only about prices. Our customers need to know they're getting something better and more creative.

**JW** – Yes, I think it's important to recognize that we aren't just innovative on the product side, but also offer a special level of service, how we deal with customers and other partners. It's important for us to be innovative across the board.



**1** Early days in the office in a small flat in Zurich.

**2** In 1997 u-blox went public.



## PROF. DR. GERHARD TRÖSTER

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After earning a doctorate in electrical engineering at Darmstadt Technical University, Germany, and being involved with industry research projects centered on components for ISDN and digital mobile phones, Gerhard Tröster joined the Swiss Federal Institute of Technology (ETH) in Zurich as head of the Electronics Laboratory in 1993. At that time, mobile phones were bulky, heavy and looked more like bricks. Tröster's aim was to miniaturize the electronic components that went into them. To assist him, he brought in three outstanding engineers: Dani Ammann, Jean-Pierre Wyss and Andreas Thiel.

**After pursuing your personal vision of miniaturizing electronic components for several years, you became a co-founder of u-blox in 1997. Can you tell us how and why it all happened?**

**GERHARD TRÖSTER (GT)** – As you say, our initial aim was to reduce the size of the electronics for our systems. At some point, someone on the team had the inspired idea of building a GPS system as a way of demonstrating miniaturization in practice. That, it turned out, was the starting point for everything that followed. When we first embarked on our journey, it felt like we were entering uncharted territory. We had no role models to base our-

parts: as senior mentor, supervisor and CEO, and even Chairman of the Board for two years until the end of 2000. After my two-year term was up, I had to set about finding a successor. Fortunately, I found an eminently qualified individual and former Mercedes-Benz CEO, Edzard Reuter, who was delighted at the prospect of coming on board with a start-up company.

**Who were u-blox's first customers?**

**GT** – We had a few small customers back at the beginning, and some of them were quite unusual. For instance, I had a colleague at the University of Zurich, a professor of anatomy, who took a special

all played key roles in orchestrating the company's success to date.

**Speaking of success, can you perhaps tell us what is u-blox's recipe for success?**

**GT** – Apart from the people factor, one of our prime advantages was being able to supply our customers with the right technology at the right time, cutting their time to market and giving them a competitive edge over their rivals. We weren't afraid to make crucial, often difficult, decisions, such as giving ourselves another leg to stand on by extending our products from GPS to wireless communication. And even

“ ... THE FACT THAT SO MANY VEHICLES ARE STILL DRIVING AROUND USING OUR GPS SYSTEM 20 YEARS LATER IS VERY PLEASING ”

selves on, and spin-offs in the technology field were virtually unknown. So, we built our GPS system, and at the time it was the smallest of its kind worldwide. It generated an enormous amount of interest in the press and the media, and we were soon asking ourselves: Where do we go from here? Anyway, my three assistants came into my office one day in 1997, sat down and asked me how I felt about founding a company to commercialize the GPS systems we were developing. I thought about it for a second and said, “OK, let's do it.” And that's how it all started.

**Could you tell us a little about your role at u-blox back in those early days?**

**GT** – In the beginning, I was playing multiple roles. I was the supervisor of my three students and also their partner. I was also de facto the company's official contact person with the ETH and handled all the negotiations with the ETH. My background in the industry had also given me the know-how needed to talk to potential investors. So, there I was, playing several

interest in homing pigeons. He asked us to come up with a GPS system that would help him understand how pigeons could find their way back home from take-off points thousands of kilometers away. But our first big client was FELA (see page 40), the company responsible for putting the Swiss national road pricing system into action. We won the order against a remarkable amount of competition, which was gratifying. And the fact that so many vehicles are still driving around using our GPS system 20 years later is also very pleasing.

**What has it been like guiding a company over a period of 20 years, through both good and difficult times?**

**GT** – One thing we've all learned to appreciate is the value of finding the right people. The fact that we're all still involved, 20 years on, says a lot about our ability to jell. Of course, over time we've managed to get other outstanding personalities on board, people like Hans-Ulrich Müller, Edzard Reuter and Thomas Seiler. They've

when things went off course, we believed that the best course of action was to remain solid, keep on doing what we were best at, and stick by our guns.

**How do you see things developing in the future?**

**GT** – Before I comment on that, I should point out that we were naïve, or at least overly optimistic, when we started out. Our business plans were out of touch with the realities of growing a business in a hotly contested market. We misguidedly believed we'd get to the IPO stage in three or four years. That's all changed now. On the basis of experience in the first couple of years, we have a much clearer idea as to how to develop the business and we've made some very sensible decisions: to go down the “fables” path, to make modules the heart of our business and to invest in wireless and short range technology. I'm confident that the course we've taken over the years will enable us to meet the challenges that lie ahead and to go from strength to strength.



## HANS-ULRICH MÜLLER

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An electronics engineer by profession, Hans-Ulrich Müller had a successful career in the Swiss semiconductor industry and as venture partner at Partners Group before joining u-blox.

One day in 1998, Professor Gerhard Tröster called him up to tell him about a small group of engineers who wanted to form their own company and to ask whether he would be interested in taking a seat on the board. He didn't hesitate for a second.

**You came on board at an early stage in u-blox's development. What motivated you to invest in the company?**

**Hans-Ulrich Müller (H-UM)** – In 1997, after 20 years in the electronics industry, I decided to set up my own consulting firm. I received a call from professor Gerhard Tröster in 1998 and met him and the founders who were then interested in setting up a company. They made a very professional and positive impression. The idea of miniaturizing high-tech GPS components appealed to me and fitted in perfectly with my field of interest. As a sign

potential, the fact I'd been on the board for over a year was a crucial factor for our initial investment of 5 million francs.

**What has it been like working so closely with a group of entrepreneurs?**

Things have always gone smoothly. The only problem appeared if they got too technical. Then I had to ask the founders to explain things in terms potential investors and I could understand (*laughs*).

**Can you tell us more about your role with u-blox?**

which is also one of the reasons why u-blox is successful today.

Finally, other investments from Partners Group enabled us to survive, and we sold the 140,000 GPS units we had in stock. We developed our next-generation GPS components, branched out into Asia and, by 2004, showed our first profit.

**u-blox went public in 2007. What was your involvement in the IPO?**

**H-UM** – After 2004 we had much higher margins and started considering an IPO. In mid-2007, we figured the time was right.

## U-BLOX STANDS FOR “...STATE-OF-THE-ART TECHNOLOGY IN THE GPS AND WIRELESS COMMUNICATION FIELDS”

of my commitment, I put up 50,000 Swiss francs of my own.

**What was your role during the start-up phase?**

**H-UM** – During the first year, I acted as a coach and mentor. We considered the pros and cons of the venture, drew up a new business plan and worked out how much money u-blox needed. I also provided contacts with the industry and potential investors.

**Could you tell us a little about Partners Group?**

**H-UM** – In 1998, Partners Group also was a small start-up company investing third-party funds into private equity but also wanting to run its own fund. We set up a 150-million Swiss franc private equity fund, intending to invest it into several companies. After looking at about 300 firms in Switzerland and Germany, we eventually went ahead with three of them, including u-blox. Apart from its

**H-UM** – The first two years were amazing. We won a 12 million franc contract to supply 60,000 GPS units for the Swiss road pricing system. After that, Benefon – a Finnish company that needed a GPS unit for its mobile phones – contracted us to produce 50,000 units a month. We found an additional investor, set up production and started delivering in the second quarter of 2001. By mid-2001, Benefon was bankrupt and left us sitting on 140,000 units with a 9-million-euro debt to our suppliers. As a result, the new investor pulled out, and the banks insisted on repayment. Then came 9/11, which paralyzed business until the end of 2001. At that point, Partners Group insisted that I acted as ad-interim CEO until we could find a permanent one. My first job was to get an extension with our creditors and the suppliers.

In this difficult period, we could win Thomas Seiler as an experienced CEO, willing to jump in and also to invest his own money. He was thinking way ahead and making decisions aligned with goals,

Partners Group had about 45% ownership of the company, so we began talking to banks, establishing contacts and setting pricing. The IPO went ahead successfully in 2007. I then found a new Chairman in Dr. Fritz Fahrni, who defined a new strategy with a much broader product portfolio, and we went into the wireless business because most of our customers needed these products.

**Where do you see u-blox in the next 20 years?**

**H-UM** – We're extremely well positioned for the Internet of Things, which is a booming market. It requires lots of high-end products, but also simple, reliable, low-cost components suitable for many fields, such as positioning, Bluetooth and Wi-Fi. I think u-blox will also play a central role in the automotive sector, an area where we have a lot of expertise. And I see u-blox playing a role model: I think it's excellent how we find talented employees all over the world and integrate them into our constellation.

# Financial summary

## Financial highlights

(CHF in million)	2016	2015	2014
<b>Revenue</b>	<b>360.2</b>	<b>338.3</b>	<b>270.0</b>
Growth rate over previous year	6.5%	25.3%	22.9%
<b>Gross Profit</b>	<b>167.1</b>	<b>155.0</b>	<b>122.7</b>
Growth rate over previous year	7.8%	26.3%	21.3%
Gross Profit in % of revenue	46.4%	45.8%	45.4%
<b>EBITDA</b>	<b>81.8</b>	<b>78.7</b>	<b>58.6</b>
Growth rate over previous year	3.9%	34.3%	26.9%
EBITDA in % of revenue	22.7%	23.3%	21.7%
<b>Operating profit (EBIT)</b>	<b>59.0</b>	<b>51.3</b>	<b>39.1</b>
Growth rate over previous year	15.0%	31.3%	30.0%
Operating profit (EBIT) in % of revenue	16.4%	15.2%	14.5%
<b>Net Profit</b>	<b>46.2</b>	<b>37.1</b>	<b>34.4</b>
Growth rate over previous year	24.5%	7.9%	39.6%
Net Profit in % of revenue	12.8%	11.0%	12.7%
<b>Cash generated from operating activities</b>	<b>93.6</b>	<b>74.7</b>	<b>53.7</b>
Growth rate over previous year	25.3%	39.1%	39.5%
in % of revenue	26.0%	22.1%	19.9%
<b>Equity</b>	<b>284.7</b>	<b>248.3</b>	<b>212.9</b>
in % of total assets	67.0%	64.2%	70.5%
Dividend per share	2.10*)	1.90	1.60

\*) proposal of the Board of Directors to the AGM.

## Revenue breakdown

u-blox operates in two segments:

- **Positioning and Wireless products**  
u-blox develops and sells chips and modules for positioning and wireless connectivity that are used in automotive, industrial and consumer applications. Revenue was CHF 360.1 million for 2016 as compared to CHF 338.0 million in 2015.
- **Wireless services**  
u-blox also offers Wireless communication technology services in terms of reference designs and software. In 2016, revenue for Wireless services was CHF 26.0 million compared to CHF 26.1 million in 2015 (including intra-group revenue).

In 2016 based on billing location, Asia-Pacific generated 49.5%, EMEA 25.5% and Americas 25.0% of total revenue. u-blox was able to grow revenues in Asia Pacific by 9.1% to CHF 178.4 million and EMEA by 18.5% to CHF 91.7 million. In the Americas revenue decreased by 7.4% to CHF 90.2 million due to delayed investments of customers into mobility solutions and a more prudent approach by our customers in launching new products.

In 2016, the company made about 80% of its total revenue from 71 customers. u-blox's largest customer accounted for less than 6% of revenue. u-blox served over 5'700 customers and achieved global expansion into new regions and markets.

## Consolidated income statement

(in CHF 000s)	For the year ended December 31, 2016		For the year ended December 31, 2015	
		% revenue		% revenue
<b>Revenue</b>	<b>360'230</b>	100.0%	<b>338'341</b>	100.0%
Cost of sales	-193'123	-53.6%	-183'323	-54.2%
<b>Gross profit</b>	<b>167'107</b>	46.4%	<b>155'018</b>	45.8%
Distribution and marketing expenses	-32'032	-8.9%	-27'659	-8.2%
Research and development expenses	-63'490	-17.6%	-65'033	-19.2%
General and administrative expenses	-14'614	-4.1%	-13'509	-4.0%
Other income	2'033	0.6%	2'474	0.7%
<b>Operating profit (EBIT)</b>	<b>59'004</b>	16.4%	<b>51'291</b>	15.2%
Finance income	4'337	1.2%	996	0.3%
Finance costs	-1'653	-0.5%	-4'674	-1.4%
<b>Profit before income tax (EBT)</b>	<b>61'688</b>	17.1%	<b>47'613</b>	14.1%
Income tax expense	-15'488	-4.3%	-10'515	-3.1%
<b>Net profit, attributable to owners of the parent</b>	<b>46'200</b>	12.8%	<b>37'098</b>	11.0%
Operating profit (EBIT)	59'004	16.4%	51'291	15.2%
Depreciation and amortization	22'762	6.3%	27'421	8.1%
<b>EBITDA<sup>1)</sup></b>	<b>81'766</b>	22.7%	<b>78'712</b>	23.3%

<sup>1)</sup> Management calculates EBITDA (earnings before interest, taxes, depreciation and amortization) by adding back depreciation and amortization to operating profit (EBIT), in each case determined in accordance with IFRS.

### Increased gross profit

Gross profit increased by 7.8% to CHF 167.1 million in 2016 from CHF 155.0 million in 2015. Gross profit margin was 46.4% for 2016, increasing from 45.8% in 2015 because of a more favorable product mix.

### Distribution and marketing activities

Distribution and marketing expenses increased in 2016 due to the expansion of the business. In 2016, distribution and marketing activities were CHF 32.0 million as compared to CHF 27.7 million in the previous year. As a percentage of revenue, distribution and marketing expenses were 8.9% in 2016 compared to 8.2% in 2015.

### Research and product development

R&D expenses in 2016 were CHF 63.5 million as compared to CHF 65.0 million in 2015. As a percentage of revenue, R&D expenses in 2016 were 17.6% as compared to 19.2% in 2015. The percentage decreased because contrary to the previous year, there was no impairment of capitalized R&D expenses in 2016.

### Share based payment

The sharebased payment expenses recognized in 2016 were CHF 7.0 million as compared to CHF 4.4 million in 2015.

### **Growth of operating profit (EBIT)**

Operating profit (EBIT) was CHF 59.0 million in 2016 as compared to CHF 51.3 million in the previous year. The growth rate from 2015 to 2016 was 15.0%. Operating profit (EBIT) margin was 16.4% and EBITDA margin was 22.7% in 2016.

### **Finance income and costs**

Finance income was CHF 4.3 million. Finance costs were CHF 1.7 million, mainly due to foreign exchange effects and interests for the bond.

### **Strong net cash generated from operating activities**

In 2016, u-blox generated cash from operating activities in the amount of CHF 93.6 million as compared to CHF 74.7 million in 2015. A strong growth of 25.3% compared to previous year. Due to strict management inventory level and trade receivables decreased despite of the expansion of the business and higher revenues.

### **Main investing activities**

Investments in property, plant and equipment and intangible assets increased to CHF 49.5 million in 2016 (2015: CHF 43.0 million). As a percentage of sales, the investment ratio remained stable at 13.7% in 2016 (2015: 12.7%).

With the continued expansion of the R&D pipeline and the increased number of development projects for all product categories, the investments into capitalized development costs increased to CHF 37.2 million (2015: CHF 27.0 million). Additionally CHF 1.2 million (2015: CHF 5.9 million) was invested into intellectual property rights and CHF 1.4 million (2015: CHF 1.6 million) into software. In 2016, CHF 9.7 million of investments were used for property, plant and equipment (2015: CHF 8.4 million).

u-blox invested 77.5% of total investments (2015: 76.7%) into the development of new products and 2.9% of total investments were invested into capacity expansion (2015: 0.9%).

### **Financing activities**

In 2016 u-blox paid dividends of CHF 12.9 million and received proceeds from the issuance of ordinary shares connected with the employee share option plan of CHF 3.4 million.

### **Strong financial position**

u-blox has a very strong balance sheet with an equity ratio of 67.0%. Cash and cash equivalents and marketable securities amounted to CHF 157.1 million at December 31, 2016, compared to CHF 124.0 million at December 31, 2015.

Goodwill decreased due to changes in EUR/CHF exchange rate from CHF 56.7 million in 2015 to CHF 54.1 million or 12.7% of total assets in 2016.

On the basis of this strong financial position and the positive outlook, the Board of Directors proposes at the Annual General Meeting to pay out dividends. For this year an increased dividend of CHF 2.10 per share is suggested, which represents a payout ratio of 31.1% of consolidated net profit, attributable to owners of the parent.



## Condensed consolidated statement of financial position

(in CHF 000s)	At December 31, 2016	At December 31, 2015
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	149'545	112'387
Marketable securities	7'573	11'659
Trade accounts receivables	39'792	43'790
Other current assets	42'670	51'933
<b>Total current assets</b>	<b>239'580</b>	<b>219'769</b>
<b>Non-current assets</b>		
Property, plant and equipment	15'774	14'708
Goodwill	54'104	56'716
Other intangible assets	111'905	88'042
Financial assets	1'074	678
Deferred tax assets	2'435	6'930
<b>Total non-current assets</b>	<b>185'292</b>	<b>167'074</b>
<b>Total assets</b>	<b>424'872</b>	<b>386'843</b>
<b>Liabilities and equity</b>		
Current liabilities	59'098	55'405
Non-current liabilities	81'047	83'117
<b>Total liabilities</b>	<b>140'145</b>	<b>138'522</b>
<b>Shareholders' equity</b>		
Share capital	6'152	6'053
Share premium	74'387	84'006
Retained earnings	204'188	158'262
<b>Total equity, attributable to owners of the parent</b>	<b>284'727</b>	<b>248'321</b>
<b>Total liabilities and equity</b>	<b>424'872</b>	<b>386'843</b>

## Condensed consolidated statement of cash flows

(in CHF 000s)	For the year ended December 31, 2016	For the year ended December 31, 2015
Net cash generated from operating activities	93'559	74'659
Net cash used in investing activities	-45'711	-33'367
Net cash generated from/(used in) financing activities	-10'515	33'776
<b>Net increase in cash and cash equivalents</b>	<b>37'333</b>	<b>75'068</b>
Cash and cash equivalents at beginning of the year	112'387	37'662
Exchange (losses)/gains on cash and cash equivalents	-175	-343
<b>Cash and cash equivalents at end of year</b>	<b>149'545</b>	<b>112'387</b>

## FIRMLY FOCUSED ON OUR STRATEGIC OBJECTIVES

In 2016, we maintained our focus on providing leading-edge components that enable our customers to build systems for smooth integration into the Internet of Things. For the automotive, industrial and consumer sectors, data transfer, location and precise timing are the key factors for efficient operation. For us, they are the WHAT? WHERE? and WHEN?, the essence of the Internet of Things and u-blox is at the core of this development. These are the questions we help our customers to answer: by delivering precisely the products they need.

### **The meaning of WHAT, WHERE and WHEN?**

These three terms define the core of everything customers need to control in the Internet of Things and in markets increasingly subject to disruptive business models. As the transition from products to services affects more industries, they also constitute the data our customers collect about their products and, in the future, will provide an invaluable source of precise and relevant information. The WHAT defines specific types of information: What temperature is it? What mileage is left in this tire? The WHERE, as the term implies, mainly involves positioning: Where is this tire, container or washing machine? Where can it be serviced? In future, this will provide manufacturers with supplementary information on the use and performance of their products. WHEN? is another of u-blox's prime strengths, because we excel at providing accurate timing information. Combined with the other two elements, it puts the data in perspective, enhancing the value of the information.

### **Making products that simplify development and provide leading-edge security**

With the growing prevalence of the Internet of Things, u-blox has identified two factors that are crucial if the market is to continue expanding and fulfill its potential: applications must be as simple to use as possible, and they must be secure. We are therefore focusing on the development of easy-to-use, fast-to-market components into which customers can build their own wireless systems and environments and significantly reduce their time to market with new products. The presence of all these simple components in billions of devices such as automatic garage doors or coffee machines, however, makes systems more vulnerable to hacking and other breaches

of security. We are therefore investing considerable resources in the development and certification of components that meet market requirements and are resistant to cyber attacks.

### **Carving out more independence**

One of our central aims is to reduce our dependence on component suppliers and define our own future. We continue to invest a significant proportion of our revenues in the development and control of core technologies that give us entry into the value chain at an earlier stage and enable our products to stand out from those of the competition. This is inevitably a long-term commitment but one we believe to be central to sustain long-term success.

### **Helping our customers do what they do best**

We specialize in helping our customers make the most of their own strengths by providing them with products over which we have far-reaching control and helping them to make their systems run more efficiently. One example is our CellLocate service, which we give our customers free of charge and which enables our cellular modems to report their position. Ultimately, we do not develop products or services that earn revenue in markets that are better served by our customers, and their customers. This clear-cut division neatly avoids potential conflicts of interest.

### **Strategic partnerships**

In order to ensure that our products tick all the boxes with their target audiences, u-blox has an ongoing policy of entering into cooperative partnerships that are of benefit to both parties. Some of these are with the best-known names in their respective industries, such as Accenture (data analytics), Ingenu (proprietary RPMA cellular technology) and Cohda Wireless (V2X protocols). Our cooperation with partners is tied to our interest to drive new standards for low power wide area networks and to lead the technology development for the IoT markets we serve.

**70<sub>m</sub>**

drone shipments  
in 2021

**64<sub>m</sub>**

IoT gateways in 2021

**400<sub>m</sub>**

connected home security  
and automation systems  
by 2021

**6<sub>m</sub>**

smart footwear  
shipments in 2021

**14<sub>m</sub>**

connected vending  
machines by 2021

**2.7<sub>m</sub>**

pets being tracked  
by 2021

**130<sub>m</sub>**

health device  
shipments in 2021

**85<sub>m</sub>**

connected street light  
shipments by 2021

**660<sub>m</sub>**

smart meters by 2021

**270<sub>m</sub>**

connected cars by 2021

**73<sub>m</sub>**

connected Point  
of Sale devices by 2021

# Strategy

In 2016, we stuck firmly to the proven four-pillar strategy that has defined our success in previous years, coming closer to our ultimate goal of striking a balance between our three product centers in positioning, cellular and short range. We made strategic additions

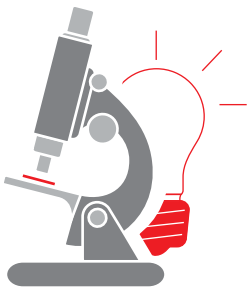
to our existing product lines and introduced major improvements to our operations on several fronts. Overall, we look back on a year of ongoing innovation, trailblazing products, consolidated market leadership and encouraging financial growth.

1



Market position

2



Technology and innovation

3



Operational excellence

4



Strategic partnerships and acquisition opportunities

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### Goals

- Automotive: Ensure we are a key component in future ADAS systems
- Industrial: Broaden the number of market sectors for which we are a major player
- Consumer: Strengthen our position in sports and personal tracking to the wider wearables market

### Achievements 2016

- Increased penetration in key markets including: wearables, UAVs, security devices and point of sale terminals
- Launched the high-precision NEO-M8P module specifically to deliver a new level of performance with centimeter-level accuracy

### Outlook 2017

- Develop range of products aimed at replacing legacy cellular technology in IoT applications calling for a long service life and low data rates
- Introduce high-precision location technology to the mass market

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### Goals

- Supply a homogeneous range of products that are easy to use and guarantee security
- Increase the volume of products built around our own silicon in selected markets while maintaining close relationships with existing semiconductor partners

### Achievements 2016

- Announced our first cellular chipset for Cat 1 modems and the respective LARA-R3 module
- Unveiled solutions in which two u-blox products working side by side add value and performance for the customer

### Outlook 2017

- Develop NB-IoT and RPMA modules for IoT applications
- Offer tools and development environments that enable shorter time to market
- Roll out u-blox's principles for security across the company

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### Goals

- Optimize operation as we move beyond 100 million units
- Broadening our base for our manufacturing and distribution

### Achievements 2016

- Initiated a product release program for positioning that brings MVP<sup>1</sup> to market quickly and gives us an early foothold in this market
- Selective outsourcing to boost further growth and increase the cost-effectiveness of software development

### Outlook 2017

- Use economies of scale to reduce cost-to-revenue ratio as company expands
- Exploit multiple sourcing agreements to make supply chain more robust

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### Goals

- Support our strategic direction through partnerships and acquisitions that help us strengthen our core business and extend our market reach

### Achievements 2016

- Established partnerships with systems integrators such as IBM and Accenture, to give our customers the best options for implementing their products and systems
- Acquired rights to manufacture and supply modules compatible with RPMA standard promoted by Ingenu

### Outlook 2017

- Build on relations with major global cellular operators around low-data-rate products announced in 2016
- Continue to review potential acquisitions that will strengthen our product portfolio and technology base, and extend global reach (Note: In January 2017 we announced the acquisition of assets from SIMCom Wireless Solutions)

<sup>1</sup> MVP – Minimum Viable Product, a key part of the lean development process

# Products

## Drivers

With some 16 billion active IoT devices predicted by 2021, society stands on the threshold of a momentous change in the ways we do business and organize our lives. However, this market will only develop its full potential if the devices flooding the market are perceived, by both manufacturers and consumers, to generate real, tangible benefits at the right functionality, quality and price.

The move towards easily integrated IoT devices not only takes much of the hard work and unpredictability out of manufacturers' operations but can also help them streamline their service offering and find new ways of engaging with their customers. For manufacturers, the communication revolution means they no longer need to waste valuable time or resources trying to locate devices and also gives them access to copious data, which provides invaluable input on their sales and marketing efforts, improving products and after-sales support. For consumers, who are used to having instantaneous data about everything in their lives, from their cars and washing machines to their CCTV security systems, two factors are essential: cost and convenience.

## Achievements 2016

u-blox has established its position as a leading supplier of positioning chips and modules on the strength of its unmatched research, development and technological expertise. But there is another element that has played a central role in our success: the company's ability to match its product offering closely to the needs of specific markets. The NEO-M8U, for example, the industry's first untethered dead reckoning (UDR) module, addresses the needs of the automotive industry, both the first mount and after-market sectors, for a device that combines simple installation with leading positioning capability. Or, SARA-N2, a low-cost, low-power consumption module designed for a vast range of narrowband IoT applications where whole-life cost is a critical factor. At the short range end of the market, the Bluetooth-capable NINA-B1 has the ability to reliably track multiple mobile devices and equipment moving around in relatively confined spaces, such as factories or hospitals. As a result, tools and other equipment do not go missing and can be located instantaneously.

## Future focus

At u-blox, we will be focusing on three prime areas as part of our drive to keep existing customers satisfied, to acquire new ones, and to secure a larger share of the market.

- **Security**  
To help our customers to create secure products we are adopting a set of fundamental design principles across our product range. The security features will allow our components to ensure customers' product and data integrity, and to resist malicious attacks from cyber hackers.
- **Autonomous car**  
Autonomous vehicles require high-precision positioning as a critical component of multi-sensor systems. This calls for high-integrity data and continuously safe operation (ISO 26262). Autonomous vehicles will also communicate with each other and roadside infrastructure (V2X communication). In both these areas, u-blox is developing core technologies to meet market needs well into the future.
- **Open platforms**  
Many u-blox products are designed to enable customers to host their applications within the module, saving cost and space, both which are critical to IoT success. To do this, u-blox provides the tools and software environments that make the process efficient. For "big" applications, customers can incorporate their specific software into a Linux OS. "Small" applications can be developed and directly loaded onto the module, for example through the ARM mbed Device Platform.

FEB



## NEO-M8P

Bringing centimeter-level positioning accuracy to the mass market, the NEO-M8P is the smallest GNSS RTK module available. Unlike previous enhanced positioning technology solutions, the module combines a compact design, reduced weight and high precision with reduced power consumption and low cost, and is suitable for a vast range of applications, from UGVs through to robotic guidance systems.

FEB



## NINA-B1

The NINA-B1 Bluetooth low-energy (Bluetooth Smart) 4.2 stand-alone module brings state-of-the-art performance to IoT designs. Certified to global radio type approvals, it comprises an antenna, radio transceiver and embedded ARM Cortex® M4F microcontroller. It is ideal for a vast range of IoT connected sensors, from building automation and telematics to monitoring and control systems.

FEB



## NEO-M8U

The industry' first untethered 3D dead reckoning (UDR) module combines multi-GNSS with an onboard 3D gyro/accelerometer and provides accurate positioning even in tough environments such as urban canyons, tunnels or parking garages with weak GNSS signals. It needs no connection to the vehicle other than power, leading to one of its key advantages: ease of product development and installation.

FEB



## LILY-W1

The ultra-compact Wi-Fi transceiver module measures just 10 x 14 mm and provides Wi-Fi connectivity for an increasing range of LTE-compatible products. LILY-W1 simplifies the integrator's RF design efforts and features a bulk acoustic wave filter that enables Wi-Fi to coexist with an LTE modem inside the device, ensuring unimpeded Wi-Fi performance and allowing the transceivers to be sited together.

JUN



## SARA-N2

The world's first Narrowband IoT (NB-IoT) module delivers easy, affordable low power cellular connectivity for low-data-rate IoT applications. Designed for smart buildings and cities, utilities metering, white goods, asset tracking, and agricultural and environmental monitoring among others, the module can operate for 10 to 20 years with a single-cell primary battery.

SEP



## LARA-R3

The UBX-R3 chip forms the first u-blox platform which underscores u-blox's commitment to delivering the industry's prime LTE cellular connectivity. It is at the heart of LARA-R3, the first step in a strategy to establish LTE modem technology for both IoT and M2M communication. Complementing u-blox's multimode LTE Cat 1 portfolio, it responds to customer demand by providing positioning information based on an on-board GNSS receiver.

## WIRELESS SERVICES

u-blox continues to supply design support in wireless applications and customized features for a select clientele. Our software team develops protocol-stack and test solutions, control of which is crucial to our LTE-technology development and our ability to set ourselves apart from the competition.

SEP

## GLOBAL ISM BAND IOT MODULES

In September, Ingenu Inc.TM and u-blox announced a strategic partnership to enable the next generation of Ingenu's patented, low-power RPMA® (Random Phase Multiple Access) technology to cater for machine-to-machine applications in the IoT market. The platform uses the global 2.4 GHz ISM (Industrial, Scientific and Medical) band, enabling one radio module to serve applications worldwide, and provides scale and cost benefits that give partners a profitable way of marketing their IoT solutions.

# Innovation

We uphold our leading position in the industry by maintaining a continuous stream of innovations, developed both internally by the company's own talent pools and externally with independent research centers and universities.

## Drawing on potential worldwide

u-blox takes a dual-track approach to innovation and actively encourages it both within the company and at centers of excellence elsewhere. Internally, the process is both simple and efficient. We seek the best R&D talent available, sometimes an offshoot of acquisitions, and link it up to market development and sales specialists with a hands-on understanding of vertical market requirements. Our in-house experts ensure that our products dovetail ideally with markets as diverse as automotive and metering, or consumables and health, and create a fertile environment in which innovation can thrive.

We have a policy of nurturing expertise wherever it may be and maintaining R&D teams with pockets of specialist know-how all over the world. The locations (such as the middle of Finland or Cork, Ireland) may not suggest themselves immediately, but they form the technology hot spots where specialists with vital expertise in relevant areas have their home. Genuine quality talent is essential to what we do. We therefore encourage it wherever it may be, rather than wait for it to come to us, and are always on the lookout for the best people in their fields.

At the same time, we work with universities and other third parties, funding research and development projects in precisely defined areas. Examples include studies on the uses of wireless signals, on radio topologies or new application areas.

## Setting benchmarks

u-blox is increasingly taking a pioneering role in new and exciting technology developments that go on to define the standards by which the rest of the industry measures itself. Narrowband IoT, for instance, is a field in which u-blox has been active from the beginning. In 2012, we joined a consortium comprising Vodafone, AT&T, Motorola, Huawei, Sony and several other companies to establish how cellular systems could better address the emerging Internet of Things. And in 2016, our collaboration with Vodafone and Huawei led to the emergence and adoption of a full-fledged new global standard that defines NB-IoT. As a result, we are the first company in the world supplying modules compatible with that standard, and in 2017 will be running trials with many of the world's biggest mobile network operators. This venture opens up a promising future for u-blox's cellular activities in the years ahead.

## Innovations all down the line

u-blox pushes back the boundaries of innovation in several other areas, too. One of our priorities is to make complex components and modules easy to use, enabling simple integration with our customers' products.

Another issue of ever-greater importance in the Internet of Things is security. As more and more devices are connected, the ways in which systems can be hacked or attacked become impossible to supervise. At u-blox, our philosophy is to help our customers secure their systems against malicious acts without making them impractical or unwieldy: in other words giving them robust security to protect devices without inconveniencing them. Crucially, we aim to ensure that:

- no one can modify our software that runs on our hardware;
- our test systems remain confidential and secure;
- data is encrypted as it is transferred;
- smart techniques identify spoofing and jamming of our products;
- the customer can program our products without impacting the software we provide.

Finally, for one of the world's biggest future markets, autonomous driving, we are developing GNSS-based positioning components that are sufficiently accurate and have the integrity to know their level of precision, and can be swiftly incorporated into automated driving designs.

## Innovative silicon design

We design and produce low-cost, high-volume silicon chips that work well by themselves. The innovative thrust behind these chips is massive, and we venture deeply into each field of technology and application. Whether our innovations are marketable products or the result of research projects, u-blox is justifiably proud of its position in the vanguard of the semiconductor industry. We design and produce low-cost, high-volume communication chips that provide solutions for the Internet of Things That Really Matter.



17.6%

of revenue spent on  
research & development

559

R&D engineers

27

new products launched

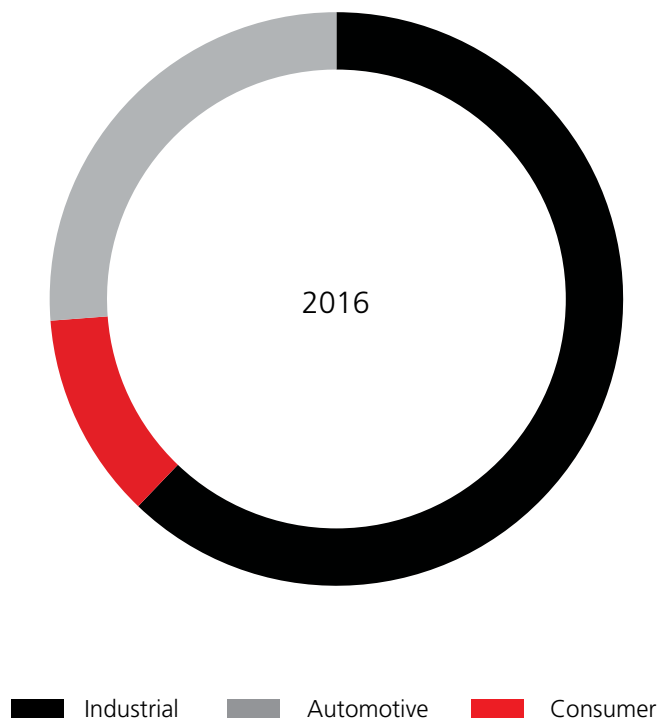
14

research & development centers



# Markets

Our three prime markets remained largely unchanged in 2016, with all sectors progressing encouragingly and marked development in specific areas. The Internet of Things remains the main driver of the design, development and manufacture of products for all three markets where our customers aim to meet market needs.



# INDUSTRIAL MARKETS

Demand for omnipresent connectivity continued to rise across the entire industrial market. Certain established applications remained prominent, with new ones emerging at regular intervals.

- Connected health was an emerging theme in 2016, with cellular and short range products ensuring that patient data can be efficiently and safely transferred.
- Point-of-sale (POS) payment terminals using a variety of short range and cellular communications were a market that continued to grow from 2015 into 2016.
- Security and surveillance applications rose in prominence during 2016, with many cameras delivering video wirelessly and many alarm systems now relying on short range communication to monitor remote sensors.



# AUTOMOTIVE MARKETS

Automotive sales continued to outpace the other markets in 2016.

- The connected car remained a strong theme, with both short range and cellular wireless connectivity playing a key role in accessing and distributing infotainment within vehicles.
- The rise of autonomous vehicles is a strong technological driver for the industry, pushing performance boundaries, demanding higher accuracy, wider temperature ranges and robust positioning in all conditions. Throughout 2016, u-blox remained at the forefront of automotive positioning to meet these increasingly stringent requirements.
- V2V received a boost in 2016, with the US taking a first step to mandating its use. u-blox is currently a principal supplier of GNSS and V2X modules in this market.



## CONSUMER MARKETS

Integrated into a wealth of devices, u-blox's cellular modems and wireless solutions do far more than pinpoint users' positions and guide them to their destinations. The consumer market accounts for a comparatively small but significant proportion of u-blox's revenues.

- Sharp growth was observed in GNSS-equipped action cameras: these compact devices can quantify speed, direction and position as well as capturing spectacular video.
- The UAV market, both industrial and consumer, continued to show rapid growth through 2016, with GNSS modules at the heart of the drone control systems. This is expected to continue as the legal framework and technology continues to evolve.
- Children and sports trackers showed significant growth in 2016. u-blox compact GNSS modules with low-power modes are particularly attractive for these devices, given the need to take up little space and run on a diminutive battery.



# Customers

In 2016, u-blox remained firmly on course for expansion and now offers products and services from 25 branch offices worldwide. Over the years, the company has established a broad and diverse customer base that now extends to 65 countries and includes some 5'700 customers worldwide. Today, 65 customers in 24 countries account for 80% of our total revenues, with not one of them responsible for more than 6% of total sales.

**5700**

CUSTOMERS  
WORLDWIDE

**2**

NEW OFFICES IN  
FINLAND AND  
TAIWAN

**25**

OFFICES  
WORLDWIDE

**14**

RESEARCH AND  
DEVELOPMENT  
CENTERS

One of the reasons for u-blox's success and steady growth is a market approach and a tightly structured product portfolio that allow us to supply modules and chips to companies with widely diverging demands, from start-ups all the way through to major, billion-dollar corporations. Our customers choose us, secure in the knowledge that they can rely on our product performance and service availability to quickly and with little risk achieve their products.

## Start-ups

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Some of which spring from the "maker community"—comprise companies with smart ideas that create instant market demand and typically operate on a small scale with limited R&D teams and resources. They need to work with a supplier who provides modules at prices that give them a good margin, gets them to market quickly and then responds rapidly to increased demand when success kicks in on a bigger scale.

## Major corporations

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At the other end of the spectrum are the large companies, with billion-dollar revenues, who need the reassurance that we are used to dealing with big orders and can supply them with an extensive range of chips and modules. For these customers, we offer advantages, such as our highly sophisticated logistics system that reliably supports their manufacturing processes.

## Our overarching goal: customer satisfaction and loyalty

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Customer satisfaction is the ultimate aim of everything we do. And figures suggest that we are doing those things successfully. In 2016, over 90% of our revenues came from customers who were with us in 2015 or before, and we are still the suppliers of choice for customers who started buying from us over a decade ago.

Customer satisfaction is made up of several elements, first-most quality, delivery reliability, and technological expertise. Ultimately, our customers appreciate the sharp reduction in time to market and guaranteed revenue when they work with us.

A prerequisite for our mutual success is a broad range of products that meet the quality requirements of a diverse customer base. Every aspect of our manufacturing processes, such as automotive oriented AEC-Q100 standards and ISO/TS 16949-certified manufacturing sites, reflects our commitment to those levels of quality. To achieve them, we maintain an extensive manufacturing chain that includes semiconductor fabrication and assembly in Asia, module assembly in Europe and Asia.

No less important is the technological expertise u-blox has amassed over the years, together with its place in the vanguard of R&D within the industry. Three examples of the trailblazing technologies that highlight our technological superiority are: high-precision positioning chips and modules; dead reckoning solutions; as well as our own cellular modem technology. No less significant was the announcement in September 2016 that u-blox had become the first supplier of an LTE module that is entirely based on in-house chipset.

u-blox is at pains not to intrude into its customers' fields of interest and plays a clearly defined role as a supplier. We lay no claim to be systems integrator and refer buyers who need specific types of systems to the selected partner companies who specialize in these fields. Our overriding aim is to add value to our customers' operations by giving them the broad range of chips and modules they need to build the systems and products in which they specialize and thus achieve their objectives.

Together these four elements help to ensure that we can supply the parts and components required by a customer base with disparate needs, easing their progress from small, often boutique-style manufacture to large-scale corporations. They significantly define our customers' success and our own.

# Customer story

u-blox is proud that many of the customers who sourced its products almost 20 years ago when u-blox was founded still buy chips and modules from us today. One of them is FELA Management AG, which specializes in telematics solutions for the mobile sector and is a leading provider of logistics, transport and electronic payment systems. FELA first approached u-blox in 1998 with a request for 60,000 MS1E GPS modules for a new device designed to administer the Swiss road freight toll scheme.

Looking back on that first assignment, Jürg Uhlmann, owner and CEO of FELA Management AG, recalls the tight deadline: all the devices had to be delivered by the second half of 2000, which left very little time for production. This called for very close liaison between the two companies to ensure that everything went according to plan. He explains the reason for choosing u-blox back then in a single word: “miniaturization”. At that time, the MS1E GPS module was the smallest of its kind on the market and ideally suited for integration in a compact device, not much larger than a today’s GPS navigation product, that had to attach to a vehicle’s windshield. u-blox was also developing a range of products that could simply be soldered onto FELA’s own printed circuit boards. But the other major advantage of working with u-blox was that the customer could update the software himself and thus ensure hassle-free operation. Although overall performance was good, there was a concern – which proved unfounded – that u-blox may not be able to follow up with the necessary improvements in performance. Over the years, however, the company has more than demonstrated its ability to match and exceed its customers’ expectations. Following the success of the first order, FELA continued to order components such as TIM-4 and TIM-5, and later NEO and MAX modules for all its GPS products from u-blox.

Today, FELA primarily uses GPS applications and modules for tracking assets such as trucks, containers, railway wagons and trailers, as well as fleet management. The company has also been involved in the EU-backed Galileo global navigation satellite system (GNSS), which has turned out to be more demanding and complex than expected. At the same time, FELA has broadened its horizons beyond GPS to include communication products.

Apart from the undisputed quality of u-blox products, Jürg Uhlmann points specifically to another reason for working with u-blox: support. FELA is pleased to source its products directly from u-blox and to have ready access to the company’s expertise. An additional factor that swung the decision in u-blox’s favor was the versatile evaluation kits the company supplies to help customers assess the practicality of specific products in use.

For the future, FELA plans to continue working closely with u-blox and is keeping a close eye on LTE and development in the Internet of Things with a view to entering this market of the future at the right time. Here, too, the company will very likely opt for u-blox products because they represent the state of the art, often being copied by the competition, but never being surpassed. They also guarantee a high level of continuity, which makes seamless connection easier, cuts time to market and thus costs. Jürg Uhlmann is aware that u-blox is not necessarily the cheapest supplier, but “other factors, prime among them reliability and outweigh the procurement cost. We look forward to working with u-blox for many years to come.”





1

**1**  
FELA uses GPS applications for tracking assets.

**2**  
The world-wide first road freight electronic toll collection device with integrated GPS.



2

# Our values and brand

u-blox has five core values. They define what we believe and how we behave towards customers, partners and colleagues. They provide a framework for profitable, sustainable growth and act as a reliable guideline. In essence, they constitute who we are.

## Values

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Throughout our 20-year history, five core values have consistently united the aims of all people at u-blox: customer focus, passion, all-round reliability, unmatched quality and ethical standards.

### **Customer focus**

All our activities must bring value to and earn the trust of our customers. By building positive partnerships, cooperating closely and listening carefully we aim to exceed our customers' expectations.

### **Passion**

Passion is the lifeblood of our company. We continuously move forward and seek ways of improving our products and services, either by ourselves or through partners and acquisitions.

### **All-round reliability**

Dependability is at the heart of everything we do. From initial contact through design in to prototypes and production, our customers can depend on us for technical and logistical support and excellence every step of the way.

### **Unmatched quality**

Only by conforming to the industry's most demanding quality standards can we maintain the trust we have built with our customers.

### **Ethical standards**

We have a solid commitment to conducting ourselves ethically and acting as an upstanding corporate citizen in all the environments in which our company operates. We listen to others, work together to achieve shared goals, treat each other with respect and dignity, and maintain high ethical standards.

## Global brand recognition

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u-blox's clearly defined brand strategy consolidates our leading market position, sets us apart from the competition and projects a consistent image that ensures recognition worldwide. Our brand is also a promise: to explore every possibility in the quest for groundbreaking, top-quality solutions tailored precisely to our customers' needs.

In 2016, our presence at international trade shows continued to build awareness of our brand and its unique position in the industry. The newly designed website unveiled in 2015 was further enhanced to include a technical forum and blog, giving our customers a platform on which to air their views and provide feedback to the industry and u-blox on our products.

## Brand protection

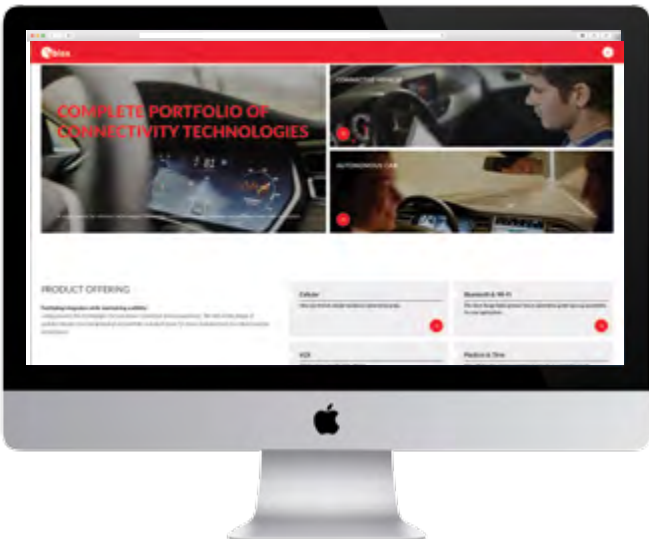
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International copyright protects our brand and trademarks, and we leave no stone unturned to ensure that it is not abused. We continuously enhance our brand presence with richer content and dynamic visuals, and position it in an ever-wider range of media.

New booth design



Automotive microsite



20 years anniversary experience



# Risk management

Assessing and controlling risk is crucial to sustainable business success.

u-blox employs strategies that effectively mitigate risk and prevent losses.



## RISKS

## RISK MITIGATION

### Personnel

Skilled and dedicated employees are essential for the success of our growth-oriented corporate strategy. The loss of these individuals could disrupt the company's operations.

- Globally positioning the company as an attractive employer.
- Develop and increase management talent pipeline.
- Regular employee satisfaction survey.
- Maintain attractive employment conditions and compensation packages plus a stock option plan.
- Offer career path opportunities group wide.

### Suppliers

u-blox outsources its capital-intensive production to leading production suppliers around the world. Rising raw material prices, capacity constraints or business interruption could lead to a shortage of supply with negative consequences for our business.

- Lean supply base with few key suppliers.
- Long-term relationships with suppliers and close interaction to plan and manage capacity.
- Inventory buffers to respond to unplanned demand fluctuations.

### Compliance

Non-compliant or unethical behavior could lead to reputational damage, fines and liability claims.

- Active fostering of high ethical standards and membership in the UN Global Compact
- u-blox Code of Conduct.
- Anti-bribery policy.
- Speak-up culture, formal compliance process and sanctions.
- Sustainable supplier program containing regular risk assessments and inspections of production suppliers' operations.

### Currency fluctuations

The majority of u-blox's revenue, material costs and R&D expenses are in US dollar currency.

- Foster natural hedging by matching revenue currency amounts with expense currency amounts.

### Credit

Credit risks arising from financial institutions and from customers could have a negative impact on u-blox's financial performance.

- Individual risk assessment of customers and definition of appropriate credit lines.
- Insurance for all customer credit lines.
- Frequent and thorough follow-up on late payments.

### Liquidity

Failure in liquidity management may have a negative effect on u-blox's financial performance.

- Monitor our liquidity on a quarterly basis.
- In 2015 successfully raised CH 60.0 million fixed rate bond to increase u-blox's financial flexibility.
- Cash flow program to optimize liquidity and cash flow management.
- Efficient use of available cash through cash pooling.

# Sustainability

A keen awareness of our social responsibility runs through everything we do: it shapes our business policy, our strategy, and every other aspect of our corporation.

## 1 Business ethics

### **Compliance with ethical standards**

We respect universal ethical principles. The UN Global Compact commits companies to overarching principles on human rights, labor, the environment and corruption while advancing socially beneficial goals. As supporters of the UN Global Compact, we submit an annual Communication on Progress (COP) report that describes how we implement its ten principles in each of the four areas listed above. We also inform our internal and external stakeholders openly about our efforts to apply strict moral and ethical standards to everything we do, at every level of our business. More detailed information about the Communication on Progress (COP) can be found at [www.unglobalcompact.com](http://www.unglobalcompact.com)

### **Company-wide Code of Conduct**

Our workforce is highly diverse, comprising individuals from every part of the world. This fact makes it all the more important for us to have a set of shared values we can all identify with. u-blox's Code of Conduct is firmly based on the UN Global Compact and can be accessed in seven languages on the corporate intranet, together with other relevant information. The Code of Conduct stipulates the ethical standards and behavior we require from our employees and external third parties acting on our behalf. In 2015, to help ensure that our people remain aware of our Code of Conduct and anti-bribery guidelines, we set up an e-learning course. u-blox employees

completed the course in 2015 and 2016 and are required to repeat it each year.

### **Anti-corruption**

We have stringent anti-bribery regulations that are central to our ongoing efforts to eliminate corruption in any form and at all levels. As a company operating internationally, we inevitably have business dealings in countries where corruption is widespread. Thus it's essential that our people have clear, objective guidelines that equip them to deal with any form of corruption to which they may be exposed. In 2016, u-blox had a clean record on corruption and human rights and faced no investigations or legal proceedings.

### **Insider trading**

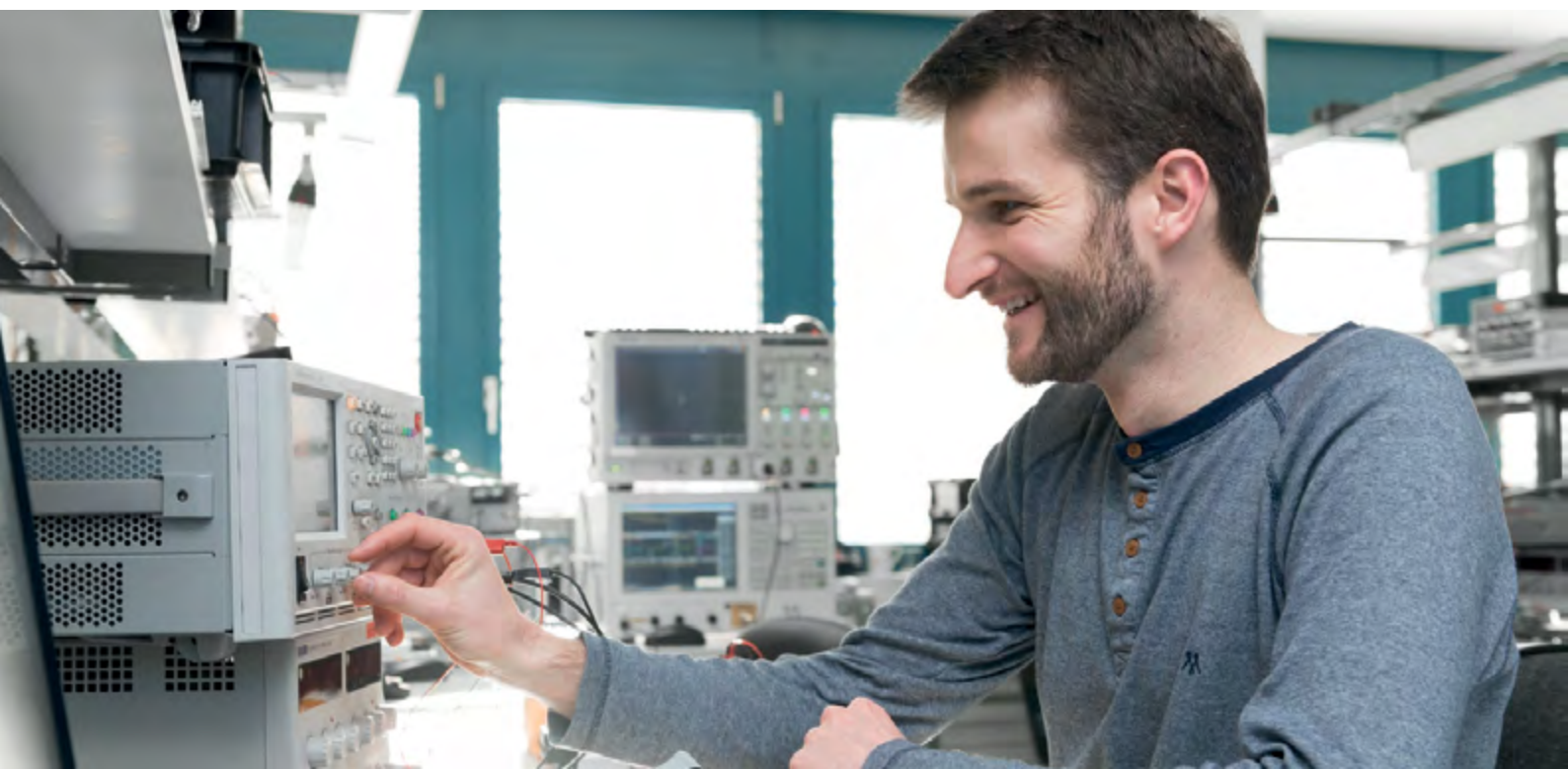
u-blox employees are forbidden to trade company's shares during times when knowledge of specific information could influence the stock price.

### **Political affiliations**

u-blox neither funds nor subsidizes any political party or organizations.

### **Privacy, confidentiality and data protection**

As part of its compliance with all relevant data protection legislation, u-blox makes every effort to ensure that its employees' personal data is treated in the strictest confidence.





## Our employees

On December 31, 2016, u-blox's workforce stood at 836. Of these, 24.3% worked at corporate headquarters in Thalwil, Switzerland, with the remaining 75.7% at 14 R&D centers and 15 sales and marketing offices in countries all over the world. This global structure reflects a recruitment policy based on diversity: only by employing the very best people at locations worldwide can we maintain our leading market position.

### A solid reputation as an attractive employer

In markets as competitive and highly skilled as those in which we operate, we need the very best individuals available. Finding them and ensuring that they stay with us is thus a top priority. We help them to develop their professional skills and attain their full potential: ultimately, their sense of achievement and fulfillment benefits both them and the company. Our annual appraisal process helps employees stay focused on their personal objectives, while a policy of promoting our own people to vacant management positions provides them with additional incentive. In 2016, salaries and social benefits amounted to CHF 65.8 million (compared with CHF 59.2 million in 2015).

Naturally, u-blox has a fair and non-discriminatory employment policy. Nevertheless, the proportion of male employees is significantly higher than female, though the balance is improving. At the end of 2016 women accounted for 15.4% of the workforce, compared to 13.7% in 2015. Executive management is exclusively male, and the seven-strong Board of Directors comprises only one woman to six men. The reason for the discrepancy lies in the predominance of engineering positions in the company's workforce, for which only a small number of women are suitably qualified. In other, non-product-related areas, such as HR, administration and logistics, the proportion of women is over 70%. We have a vested interest in helping to redress the overall situation and actively support various initiatives and programs to attract women to engineering studies at university level.

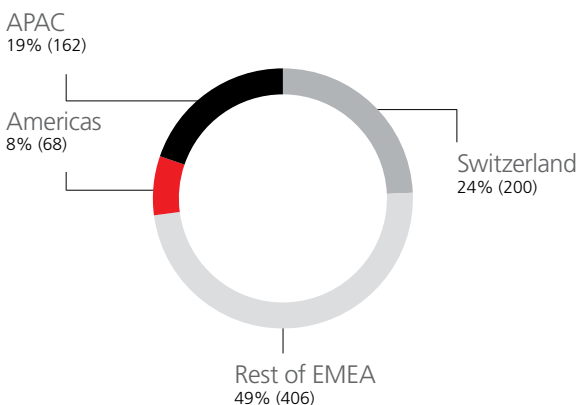
Annual performance review meetings are a valuable means of discussing employees' performance over the preceding twelve months and obtaining direct feedback on their satisfaction. We have a set of compensation and promotion guidelines based firmly on clearly defined individual and corporate goals. The company has a reputation for being an attractive employer and regularly features in the Swiss top-100 employers list. In 2016, we also conducted our biennial Group-wide satisfaction survey: 79% participated. Employee commitment remains very high. 84.5% stated "I would give my best". Staff turnover in 2016 stood at 6.7% (2015: 8.7%).

### Striking a healthy life/work balance

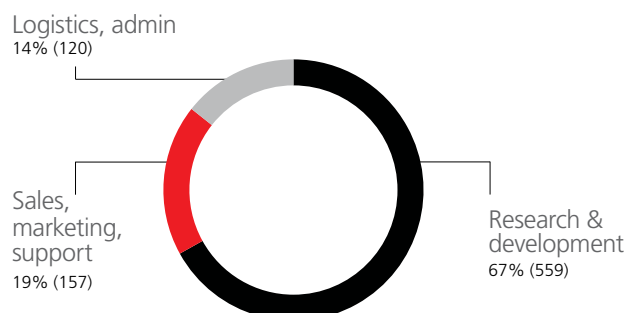
Employees who are content with their lives at home and at work are more engaged and efficient. Life-quality plays a central role here, and we take proactive measures to increase it by offering our people flexible working hours together with work, remuneration and vacation programs tailored precisely to their needs. After five years with u-blox, employees are free to take a sabbatical. Apart from this, we offer interactive, real-time internal communications that keep them fully and regularly informed about the state of the company.

Performance indicators	2015	2016
Total headcount (end of the year)	750	884
Jobs created	126	134
Women in overall workforce	13.7%	15.4%
Part-time employees	7.3%	8.4%
Fluctuation	8.7%	6.7%

### Employees per region (end of 2016, FTE based)



### Employees per function (end of 2016, FTE based)



## Social commitment

Through our past involvement in projects with a social or health-related component, we have established a reputation for taking our corporate social responsibility seriously. We use our human, financial and technological resources to initiate change and make communities stronger.

One area that recurs continuously in our project portfolio is health, and 2016 was no exception.

One of the projects we support is called No Isolation. This connected healthcare start-up in Norway has pioneered an avatar for children with long-term illnesses who are confined to home or hospital for lengthy periods. Essentially a robot, the AV1 avatar takes the child's place in the classroom, on excursions and even at birthday parties, enabling the child to participate in everyday events when the medical condition prevents him from being physically present.

In 2016, u-blox donated 500 4G cellular modules to No Isolation. These enable the AV1 to transmit audio and video signals from any location with 4G coverage and eliminate the need to connect the robot to a local wireless network (LAN). The avatar is completely within the child's control and features a camera, microphone and speaker, which stream live to the child's smartphone or tablet, allowing him to see and hear the avatar's surroundings in real time, to talk with his own voice and to decide in which direction to look.

No Isolation's award-winning avatar helps to overcome the feeling of social isolation experienced by many sick children who are forced to stay away from school. The project demonstrates the power of u-blox's technology to solve a long-term children's health issue and epitomizes the company's vision of an Internet of Things That Really Matter.



No Isolation's avatar AV1.



The avatar enables children to participate in everyday events.



The avatar takes the child's place in the class room.



# 4

## Supply chain sustainability

### **Upholding responsibility in the supply chain**

Introduced in 2012, u-blox's Sustainable Supplier Program was designed to guarantee safe working conditions all the way down the supply chain line, to ensure that workers the world over are treated with due respect and consideration and to limit the environmental impact of operations. The Program is based on the principles of the Electronic Industry Citizenship Coalition (EICC) Code of Conduct, a coalition of the world's leading electronics companies that aims to improve labor and human rights, worker health and safety, social, ethical, and environmental responsibility and management systems in the global supply chain. We carry out sustainable auditing of our supply chain internally and inspect a selected group of suppliers' factories each year.

# 5

## Environmental issues

### **Treating our planet with care and respect**

u-blox already has an exacting set of environment-protection measures in place. Despite this, we never rest in our efforts to ensure more effective control of our sustainability objectives. We require the same demanding standards from our suppliers as we set for ourselves and work with our principal contract manufacturers to make them even more stringent. For years now, we have closely monitored the use of potentially hazardous materials at every stage of the production cycle.

We operate a zero-tolerance policy towards conflict materials from any source and maintain close links with our suppliers to ensure that all the metals used in our products – gold, tin, tungsten and tantalum – are from acceptable sources. We are a fabless semiconductor company and ethically bound to demand that our key manufacturing partners comply with clearly defined environmental standards. Enforcing these requirements is a complicated and time-consuming exercise, and we take steps to ease the burden by gathering and storing essential and otherwise useful data while monitoring compliance.

### **Reducing greenhouse gas emissions**

Curbing our production of carbon dioxide is a process that starts at headquarters in Thalwil and runs all the way down the value chain. We take active steps to dissuade employees from using their own vehicles for the daily commute by reimbursing the cost of the journey to and from work by public transport. We have radically cut back on the need for our employees to travel to meetings abroad by installing new video-conferencing facilities at all major offices worldwide. And by outsourcing the production of our components to external manufacturers with ISO 14001 certification and their own CO<sub>2</sub>-reduction programs, we are able to lower our overall carbon dioxide output.

Finally, the products we develop and produce substantially reduce CO<sub>2</sub> emissions. Our sensors eliminate the need for utility companies to send employees on costly and environmentally damaging journeys merely to read meters. GPS tracking enables cars to take the most efficient route from one place to another. And wireless communication from sensor-activated systems make it possible for local authorities to provide street lighting only when it is needed, massively reducing the burden on their finances and the amount of electricity used. And as new ways of using our products are invented on a daily basis, their environmental contribution grows exponentially.

# Information for investors

## Share price performance

The share price decreased by approximately 12% during this year going from CHF 214.50 to CHF 191.20.

At December 31, 2016, u-blox had 5'380 shareholders. Information on our major shareholders can be found in the Corporate Governance section of the Financial Report.

## Dividend

In light of the positive future business outlook and the good cash situation of the company, the Board of Directors has proposed a dividend for 2016 of CHF 2.10 per share, equivalent to a total dividend payment of approximately CHF 14.4 million. The proposed dividend will be put to shareholders for approval at the Annual General Meeting of the company which will be held at 4 PM, April 25, 2017.

## Share information (at December 31, 2016)

Stock Exchange	SIX Swiss Exchange
Swiss Security Number / ISIN	3336167 / CH0033361673
Ticker	UBXN
Nominal value	CHF 0.90
Shares issued	6'835'094
Reuters	UBXN S
Bloomberg	UBXN SW

## Publications and calendar

u-blox pursues an open and ongoing information policy with the general public and the capital markets. The company also meets investors regularly throughout the year, presents its financial results at analyst meetings and road shows, hosts an analyst day, and keeps its shareholders regularly informed about its business through press releases.

The annual report is published in March and presented at the press conference. It is also available online at: [www.u-blox.com/en/investor-relations-section.html](http://www.u-blox.com/en/investor-relations-section.html). The half-year report is published in September.

April 18, 2017:  
Closing of share register for the Annual General Meeting

April 25, 2017:  
Annual General Meeting

April 27, 2017:  
Proposed ex-dividend trading day

May 3, 2017:  
Proposed dividend payout date

August 25, 2017:  
Publication of half-year results 2017

Share price (in CHF)	2016	2015	2014
Highest	249.00	220.00	143.00
Lowest	162.30	115.40	99.25
Closing at December 31,	191.20	214.50	137.40
<b>Market capitalization at December 31, (Mio CHF)</b>	<b>1'307</b>	<b>1'443</b>	<b>905</b>

Key Figures	2016	2015	2014
Registered shares with a nominal value of CHF 0.90	6'835'094	6'725'736	6'588'681
Nominal share capital (in TCHF)	6'152	6'053	5'930
Basic earnings per share (in CHF)	6.80	5.55	5.27

## Market capitalization end 2016, Mio CHF

1'307

## Basic earnings per share (in CHF)

6.80



**Daniel Ammann**  
Executive Vice President  
(Head of Positioning Products)

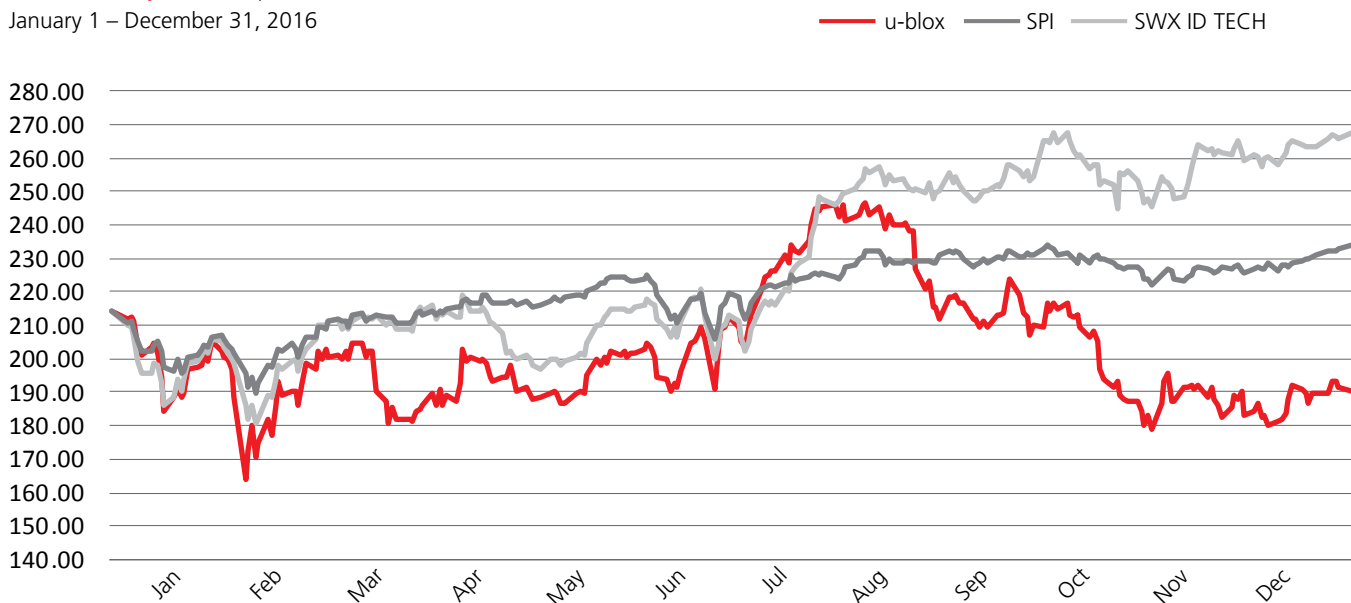
**Andreas Thiel**  
Executive Vice President  
(Head of Wireless Products)

**Thomas Seiler**  
CEO

**Jean-Pierre Wyss**  
Executive Vice President  
(Head of Production and Logistics)

**Roland Jud**  
CFO

**u-blox share price** (CHF per share)  
January 1 – December 31, 2016



## Investor contact

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