

# Engineering with a difference





Etteplan's Annual Report 2016 consists of two parts. This Annual Review 2016 covers our strategy and operations.

## Engineering with a difference

Etteplan offers engineering with a difference, combining diverse design engineering competence, unique service solutions, extensive partnerships and digitalization expertise. We believe that solving tomorrow's engineering challenges will require a different, more structured, focused approach, people who have a passion for technology, efficient networks, fresh thinking and the willingness to question the traditional ways of doing things.

Etteplan is a reliable and natural part of its customers' day-to-day operations, from design engineering of a product to maintenance. The engineering solutions created by our experts and our digitalization competencies lead the way and play a connecting role in the development that is changing the world.



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# Fast. Dynamic. International.

Etteplan Oyj is a rapidly growing and developing expert company that specializes in engineering services, documentation and digitalization. We serve the world's leading manufacturers and innovative start-ups. We operate in highly advanced technical fields in close cooperation with our customers, improving the competitiveness of their products and engineering processes throughout their life cycles. Our key competence areas are machinery and equipment engineering, technical documentation and embedded systems and IoT solutions. Etteplan was founded in Finland in 1983. The company's shares have been listed on Nasdaq Helsinki Ltd since 2000.

## Etteplan around the world

- Market leader in **Finland**
- Among the biggest in **Sweden**
- Growing in **Central Europe**
- Nearshoring hub and growing local markets in **Poland**
- Offshoring hub and growing local markets in **China**
- The **US** unit for technical documentation



▪ The results of our innovative engineering can be seen in numerous industrial solutions and everyday products. ▪

# 183.9

REVENUE, EUR MILLION  
(growth 30.3%)

# 10.1

OPERATING PROFIT, EUR MILLION  
(growth 17.9%)

# ~50

OFFICES IN SEVEN  
COUNTRIES

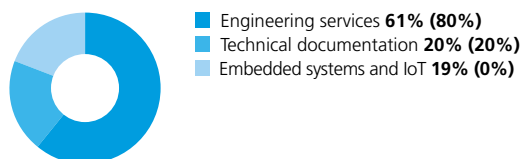
# 2,545

NUMBER OF PERSONNEL AT  
THE END OF THE YEAR  
(year 2015: 2,074)

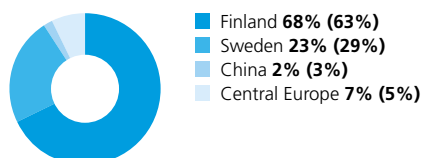
## Our strengths

- 1. SERVICE OFFERING SUPPORTS THE RENEWAL OF OUR CUSTOMERS' BUSINESS**  
Ability to combine engineering and digital solutions throughout the life cycle of the machine or equipment
- 2. ADVANCED AND UNIQUE BUSINESS MODEL**  
Managed Services create a competitive advantage for both the customer and Etteplan
- 3. CUSTOMER-ORIENTED OPERATING CULTURE**  
Long-term global customer relationships based on expertise
- 4. STRONG MARKET POSITION CLOSE TO THE CUSTOMER**  
Among the leading engineering services providers in all operating countries

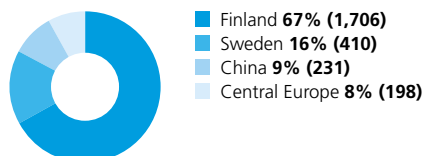
### Revenue by service area 2016 (2015)



### Revenue by geographical area (2015)



### Employees by geographical area 2016



# Expertise and services

Etteplan is a leading player in its field. We provide engineering services, technical documentation services, embedded systems and IoT applications to global machinery and equipment manufacturers. Our most important task is to anticipate the needs of our customers and improve their competitiveness. We differentiate ourselves from our competition through the high-level competence and service orientation of our experts.

## Managed Services as a competitive advantage

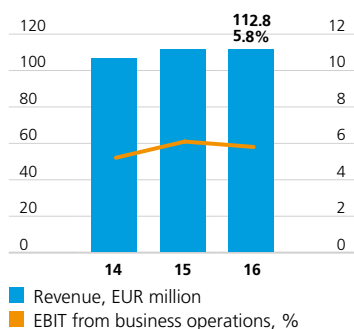
In accordance with our strategy, Etteplan focuses on Managed Services, in which the customer purchases the service solution and pays for the results. Etteplan assumes overall responsibility for the solution produced for the customer. We ensure that the service is produced cost-efficiently and that results are quantifiable and satisfy all quality and safety requirements set for machinery and equipment.

## Three service areas

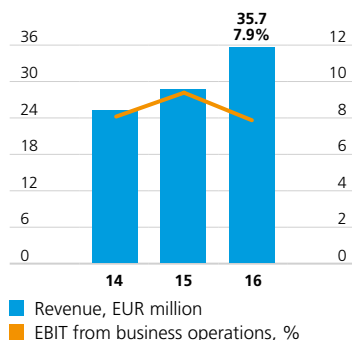
Etteplan has three service areas: Engineering services, Technical documentation and Embedded systems and IoT. In the spring 2016 following the acquisitions of Espotel Oy and Soikea Solutions Oy we established a third service area Embedded systems and IoT. We began reporting on it in the second quarter of 2016.

Digitalization refers to the networking of machinery and equipment and collecting and utilizing the data they produce by means of various technology and cloud solutions.

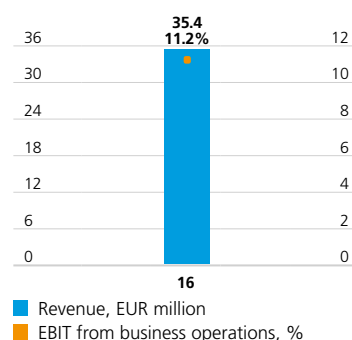
### Engineering services



### Technical documentation



### Embedded systems and IoT



Internet of Things, IoT, means networked devices that sense their environment and generate information for business development purposes.

	ENGINEERING SERVICES	TECHNICAL DOCUMENTATION	EMBEDDED SYSTEMS AND IOT
The content of our services	Engineering Services refer to the innovation, engineering and calculations of the technical attributes of machinery or equipment for the purpose of product development and manufacturing.	Technical Documentation refers to the documentation of a product's technical attributes, such as manuals and service instructions for the users of a product, as well as related content management and distribution in print or digital form.	Embedded Systems and IoT refer to product development services and technology solutions which allow controlling of machines and equipment and enable their digital connectivity as part of the Internet of Things.
The needs of our customers	Assignments are typically product development projects for a new product, plant engineering projects or Engineering-to-Order projects, involving the customization of the product in accordance with end-customer requirements and market area's legislation.	For an industrial customer, technical documentation is typically a non-core operation that has a significant impact on the efficiency of the end-customer's maintenance service operations.	A common challenge faced by our customer is the need to develop a service based on a new business model that takes advantage of the opportunities presented by digitalization.
Examples of our services	<ul style="list-style-type: none"> <li>• Product development projects</li> <li>• Engineer-to-Order projects</li> <li>• Plant engineering</li> <li>• Engineering analysis</li> <li>• Project management</li> <li>• Product safety</li> <li>• Product cost analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Technical writing and illustrations</li> <li>• Animations and simulations</li> <li>• Digital systems for managing technical documentation and distributing it to service and maintenance personnel</li> <li>• Software and methods for producing high-quality technical content</li> </ul>	<ul style="list-style-type: none"> <li>• Product and software engineering</li> <li>• Technology solutions and consulting</li> <li>• Testing services and production testing systems</li> <li>• Services for comprehensive IoT solutions, such as business systems, mobile applications and various integrations</li> </ul>
Share of Etteplan's revenue	<b>61%</b>	<b>20%</b>	<b>19%</b>
Share of revenue represented by Managed Services	<b>49%</b>	<b>70%</b>	<b>54%</b>

# Case

## Outsourcing at Outokumpu's Tornio Plants

**Outokumpu's plants in Tornio outsourced their technical engineering and documentation services to Etteplan in autumn 2016. Taken together, the outsourcing and the acquisition of the business operations of Suomen Unit Oy in early 2016 give Etteplan strong prospects for developing its operations in Northern Finland.**

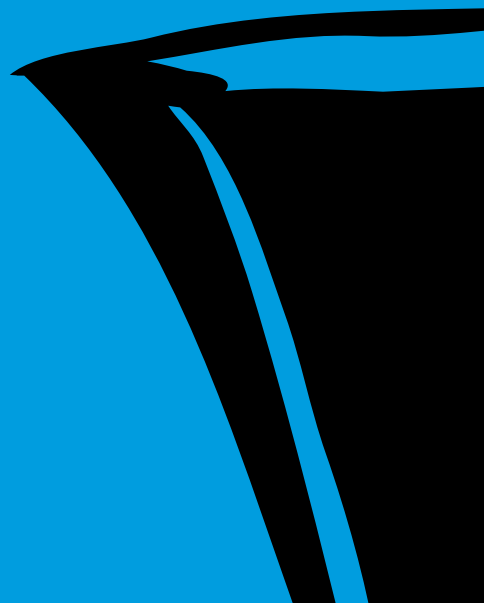
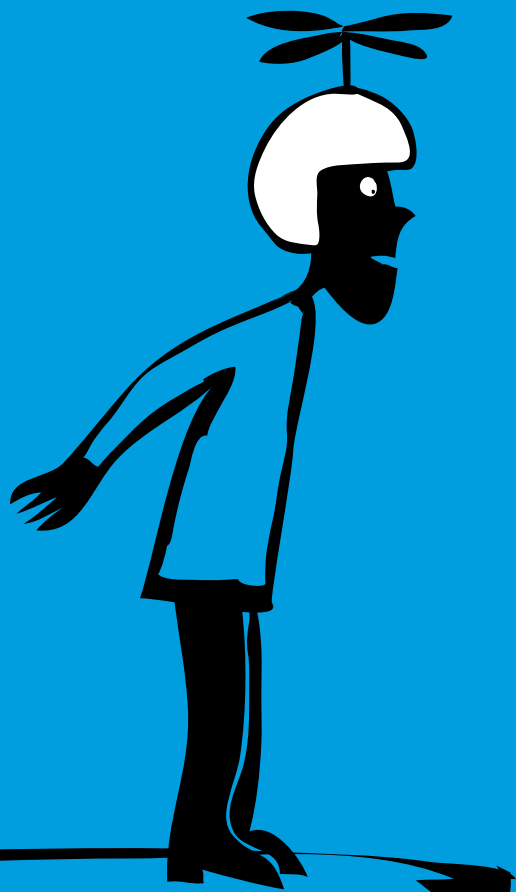
Through the outsourcing, the 22 engineering and documentation services experts of Outokumpu's Tornio plants transferred to Etteplan. In addition to the outsourcing, Outokumpu's Tornio plants and the Kemi mine will focus their technical engineering services, technical documentation, and information management service purchases to Etteplan. Etteplan has opened a new office in Outokumpu's plant area, and new employees have also been recruited there.

Outsourcing is a service model in which a client company transfers to us a function that is important and essential to the client, but not part of its core expertise. The view at Outokumpu's plants in Tornio is that a ready service model will bring them significant added value and the opportunity to concentrate on their own core business operations, and at the same time to get from Etteplan the best expertise on the market. In accordance with Etteplan's outsourcing model, cooperation has been started by creating processes and operating models. Also the indicators to be used in the future at Outokumpu's plants in Tornio for measuring the success of Etteplan's work will be created. Through this development, Etteplan is strengthening its local subcontracting network and increasing its subcontracting in Northern Finland.









# Year 2016

Year 2016 changed Etteplan as a company. We strengthened our presence in technical documentation, embedded systems and into Internet of Things (IoT) through acquisitions. Our operations expanded into new countries especially in Central Europe.

# The highlights of the year

2016 was a successful year of growth and change for Etteplan. The implementation of our strategy progressed well in all areas, and in addition to achieving strong growth Etteplan succeeded in improving profitability towards the end of the year. Through company acquisitions our service offering improved significantly. Our offering covers all the necessary engineering and digitalization services to meet the needs of product and service businesses of industrial customers.

## Q1

Etteplan acquired the business operations of the Kemi-based company Suomen Unit Oy, which specializes in plant and equipment engineering. The transaction further strengthens Etteplan's market position in plant engineering, where it became one of the largest companies providing plant engineering services in Finland after the acquisition of SAV Oy in August 2015.

## Q2

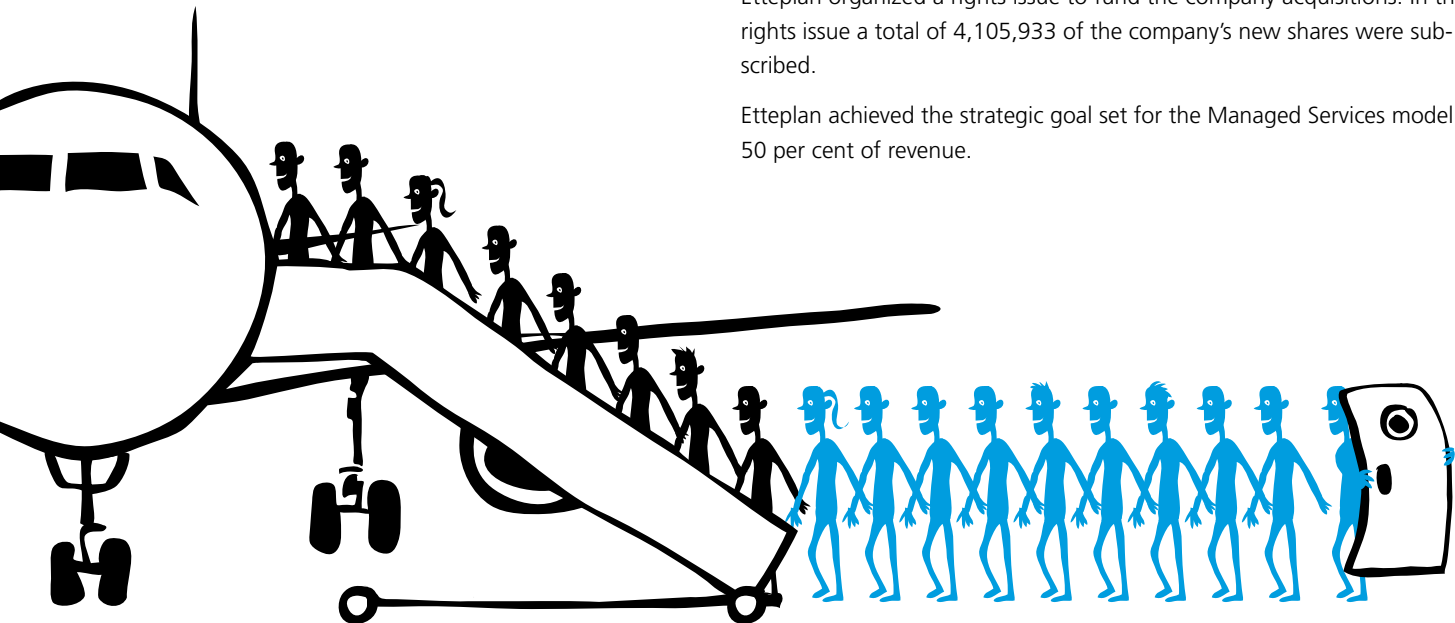
Etteplan acquired Espotel Oy and Soikea Solutions Oy, and thus expanded its business operations in embedded systems and into the Internet of Things (IoT).

The head of the Embedded systems and IoT service area, Kari Liuska, was appointed to the Etteplan Management Group.

Etteplan appointed Outi Torniainen as SVP, Communications and Marketing, and to the Etteplan Management Group.

Etteplan organized a rights issue to fund the company acquisitions. In the rights issue a total of 4,105,933 of the company's new shares were subscribed.

Etteplan achieved the strategic goal set for the Managed Services model: 50 per cent of revenue.



## Q3

Metso Minerals and Etteplan expanded their cooperation to cover the outsourcing services related to spare parts documentation.

Etteplan received a significant order for new measurement technology from the German Federal Office of Civil Protection and Disaster Assistance. Read more about the project on page 29.

## Q4

Outokumpu's plants in Tornio outsourced its technical engineering and documentation services to Etteplan. More information about the outsourcing on page 6.

Glaston outsourced to Etteplan the technical documentation for its machines manufactured in Tampere, Finland, and Tianjin, China.

Etteplan updated its strategic and financial targets. Read more about the targets on page 23.

## The Board's dividend proposal: EUR 0.16/share

## Acquisitions of Espotel Oy and Soikea Solutions Oy

**The most significant event for Etteplan in 2016 was the acquisitions in April of two companies that reinforce our expertise in embedded systems and into the Internet of Things (IoT).**

By integrating expertise in digital data management and embedded systems with our existing strong expertise in equipment engineering, Etteplan continues to be a forerunner in offering innovative service solutions. We are able to meet the growing demand among our customers in the various fields of digitalization, and to utilize the strong growth in the sector. Through the acquisitions, we established a third service area, Embedded Systems and IoT, and in the second quarter began reporting its key figures.

Espotel Oy was one the leading engineering services companies in the Nordic countries, specializing in embedded systems, production testing solutions and IoT solutions for industrial purposes. Espotel's operations were integrated into Etteplan throughout the year.

Soikea Solutions Oy is a specialist in digital data transfer and management. Its multichannel solutions produce the right information to the right place at the right time.

Through the integration, the digital services and services related to embedded systems previously sold under the Espotel brand, and also the services related to the Internet of Things are now offered under the Etteplan and Soikea brands.

# A year of growth and change

**2016 was a successful year of growth and change for Etteplan. We strengthened our service offering and grew significantly as a company during the year, and we strengthened our position in our key markets. Acquisitions increased our digitalization-related expertise.**

For Etteplan, the year 2016 was simultaneously very good and very challenging. The implementation of our strategy progressed well in all areas and, in addition to achieving strong growth, we were able to improve our profitability towards the end of the year. At the same time, the year was characterized by an uncertain market situation and unpredictable changes in Etteplan's main markets and various customer industries. We achieved a good result in spite of the uncertainty. Our revenue grew by more than 30 per cent and, in the last quarter, our EBIT from business operations reached a record level and approached our target of 10 per cent.

The demand situation varied during the year by market area and customer, as uncertainty characterized the markets. Our service solutions and particularly our outsourcing solutions were nevertheless successful as customers sought cost savings and efficiency in their business operations. The trend of concentrating service purchases also continued. Demand showed signs of recovery in the final quarter despite continued market uncertainty. In Finland, demand was

at a weaker level than in the rest of Europe throughout the year. In Sweden, the market situation in the industry developed favorably during the year and we were able to improve our position. Business in the Netherlands and Germany remained stable. The demand situation in Poland was good and our business developed favorably during the year. In China, the opening up of the engineering services market accelerated towards the end of the year after uncertainty in the market earlier in the year.

We made acquisitions that significantly strengthened our strategic position as a provider of digitalization-related services. Through the acquisitions of Espotel Oy and Soikea Solutions Oy we established a third service area that provided us with new competitiveness in responding to our customers' growing demand and investments in various areas of digitalization. The Embedded systems and IoT service area achieved excellent development throughout the year, the integration into Etteplan of the acquired business operations progressed well and we achieved a strong result.

Combining Etteplan's strong customer industry expertise and product knowledge with digitalization expertise gives us a competitive advantage in the market and creates good future growth opportunities.

The development of the Engineering services service area was stable despite the low level of market activity in making decisions on new plant investment projects, especially in Finland. Our outsourcing models proved to be successful in the area of engineering services with Outokumpu, for example, outsourcing the engineering design and technical documentation services at its Tornio plants to Etteplan.

The Technical documentation business saw excellent development towards the end of the year. Growth was strong throughout the year. Profitability was below our targets early in the year but improved as the year went on. Our unique service portfolio strengthened our market position and we acquired significant new accounts in China, for example.

One of our key strategic indicators is the share of revenue represented by Managed

## In 2016, we achieved significant growth and strengthened our service offering.

Services. Our target was to increase this figure, known as the Managed Services Index, to more than 50 per cent of our revenue. I am pleased to say that we achieved this target already in the second quarter of 2016. In December 2016, we set a new target of increasing our Managed Services Index to 65 per cent by 2019. Managed Services are a concrete expression of our brand promise, "Engineering with a difference", by being an operating model based on comprehensive solutions that provide customers with a cost-efficiently produced service and quantifiable results. For Etteplan, Managed Services represent an opportunity to provide comprehensive services to customers and increase business profitability.

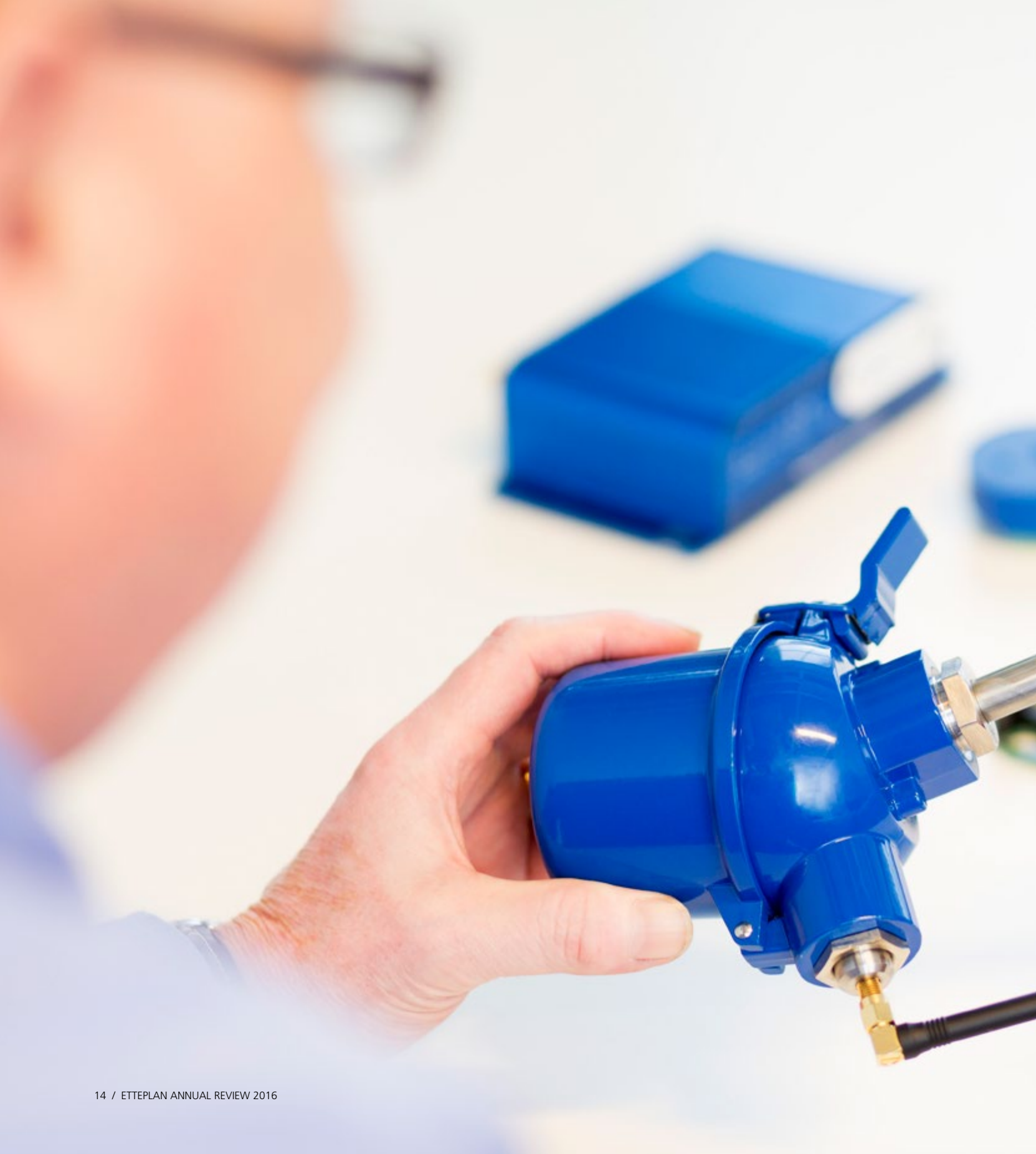
I would like to extend my warmest thanks to our customers for their trust and successful cooperation. I also want to thank our shareholders for their commitment to Etteplan, the opportunity to continue the determined implementation of our growth strategy, and for their support for the rights issue. A great deal of credit for our success belongs to our personnel, who are committed to our strategy and put it into practice in their day-to-day work. Etteplan is entering 2017 as an even stronger and more diverse company.

### **Juha Näkki**

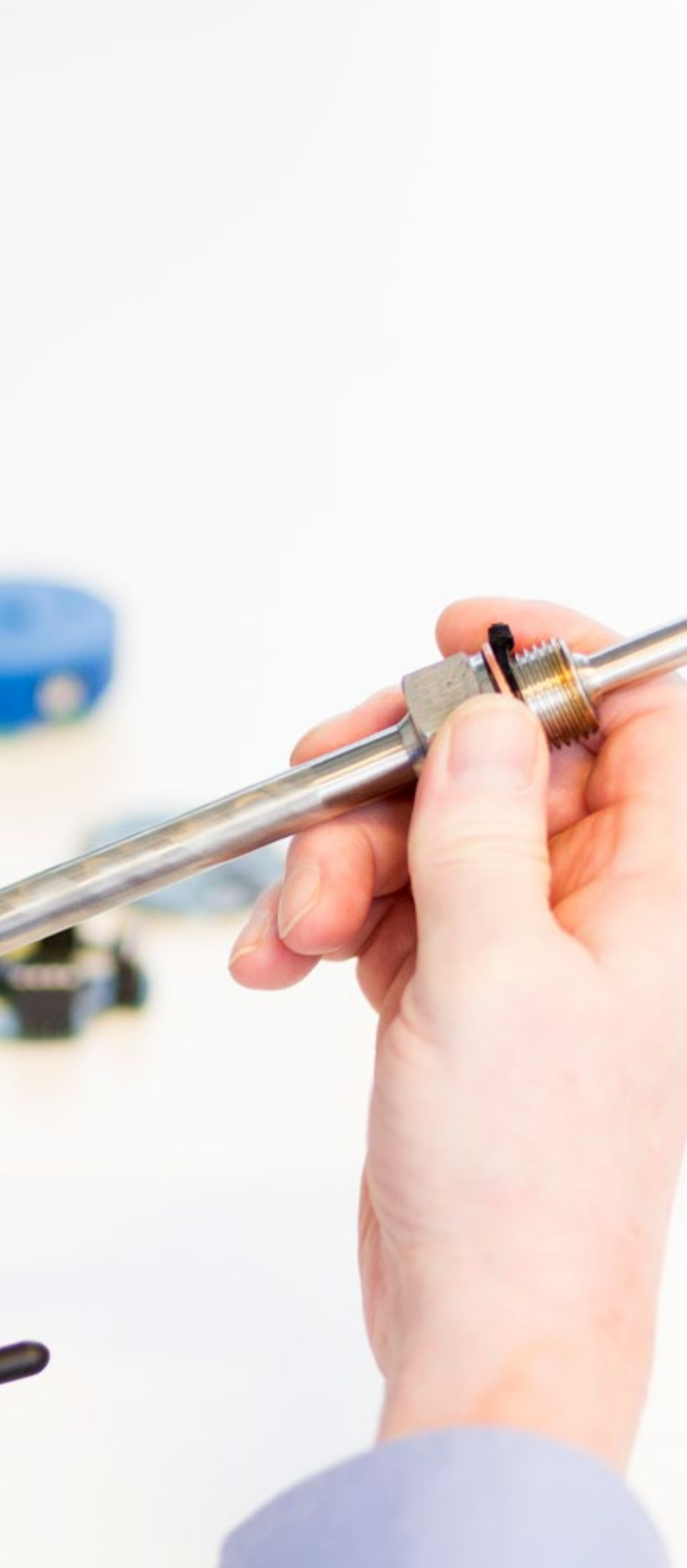
President and CEO











# Case

## LoRa network connects things to the Internet

**The Internet of Things facilitates digital connections to devices such as industrial water and electricity meters, which used to be read by maintenance personnel from the electricity provider or water utility. The wireless LoRa network connects various Smart City applications to the Internet of Things.**

Electricity companies use invoicing based on wireless remote reading. Data is transmitted through mobile networks. Based on wireless long range radio technology, the LoRa network is an inexpensive option. The network can be built by the user, or public network services can be used.

*The Helsinki Region Environmental Services Authority, which is responsible for water and waste management in the Helsinki region in Finland, launched a pilot project in partnership with Etteplan to evaluate the reading of water meters using LoRa technology. Base stations were installed at water towers for the pilot. Data is now transmitted from water meters installed at test properties to a cloud service and onwards to support the real-time monitoring of water consumption.*

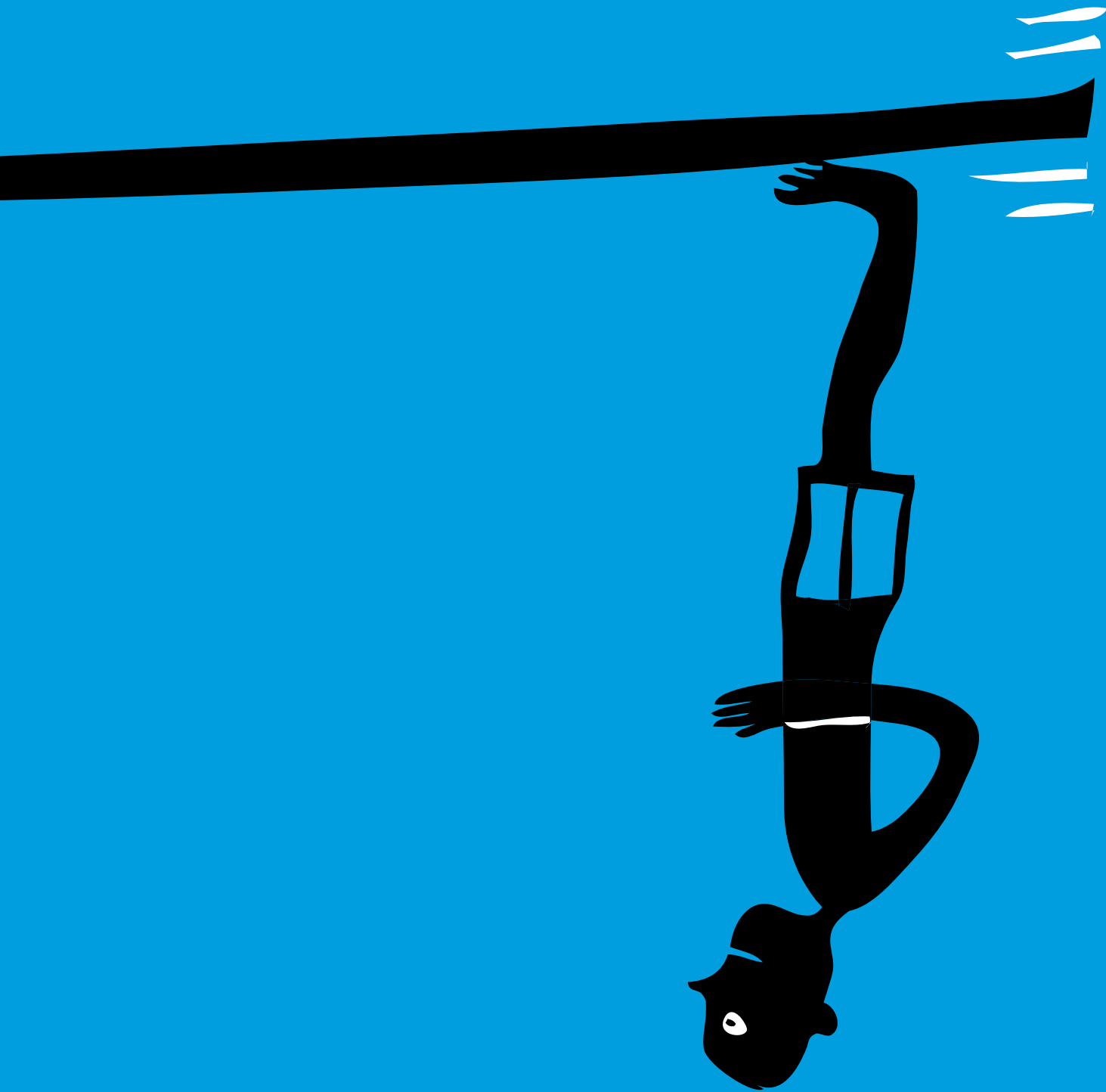
Built by Etteplan for *SKS Automaatio*, the service uses sensors to collect data on temperature, moisture, pressure, flow and levels from industrial systems and transmits it wirelessly to a cloud service or the customer's system for monitoring and analysis.

Waste collection containers with devices installed in their lids can indicate when they need to be emptied. In future, various Smart City applications will also monitor water and air quality, power grids, water distribution systems and waste water, for example.



# Operating environment and strategy

Digitalization changes our operating environment and the entire engineering industry. Improving competitiveness often means the renewal of our customers' existing operating models. Our service offering and the know-how of our personnel support the renewal of the customer's business.



# Digitalization is transforming manufacturing processes

**Global megatrends and industry-specific developments have a favorable impact on Etteplan's business in all of our customer industries. The changes created by digitalization and the need to improve cost competitiveness are examples of the most common challenges faced by industries today.**


**Digitalization** is the most significant factor that is transforming our business environment and the engineering industry while providing opportunities for growth and development for players like Etteplan. Digitalization is expected to revolutionize production processes and products in the manufacturing industries. Intelligent and connected production processes increase efficiency and enable new business and revenue models for traditional industrial companies. In practice, this is a new area of engineering that combines in-depth equipment know-how and technology expertise. The courage to invest and take advantage of the opportunities of IoT varies by industry. Machinery and equipment manufacturers may find new paths to growth in service-based business based on analyzing and leveraging data accumulated from machinery and equipment. Digitalization can, for example, lead to a better understanding of how machines are used, increase their capacity and change their technical attributes.

**Improving competitiveness** often means the renewal of the company's existing operating models or creating entirely new ones. Our customers develop their operations by focusing on their core business, customer cooperation and harmonizing their operating practices. They seek ways to outsource non-core business functions while reducing the number of partners they work with and engaging in closer cooperation with their selected partners. Etteplan has been successful thanks to its service solutions, as customers have reduced the number of engineering partners and sought even closer cooperation with key partners.

[Read more about Etteplan's service solutions on page 24.](#)

## **The availability of top experts is affecting industry development**

According to various sources, Germany will have a shortage of 250,000 engineers



**Several machinery and equipment manufacturers have outsourced their operations to Etteplan in recent years.**

in 2020. There is also extremely intense competition for highly competent experts in engineering and digitalization in Sweden, and the same trend is growing stronger in other countries as well, including Finland. The availability of competent professionals is an important factor for ensuring profitability and business continuity. Companies in the engineering services industry are competing for the same experts as machinery and equipment manufacturers. Key success factors in attracting highly competent professionals include, for example, the employee's development opportunities and well-being at work.

## Trends and strengths

The table below presents the five most significant global trends influencing the operations of Etteplan and its customers, as well as examples of Etteplan's strengths that support our success in a changing world.

TRENDS INFLUENCING ETTEPLAN'S AND ITS CUSTOMERS' BUSINESSES	ETTEPLAN'S STRENGTHS
<p><b>DIGITALIZATION</b></p>	<ul style="list-style-type: none"> <li>• Broad expertise spanning different industries</li> <li>• Service offering supports the renewal of the customer's business</li> <li>• Ability to combine engineering and digital solutions</li> </ul>
<p><b>INDUSTRY CONSOLIDATION</b></p>	<ul style="list-style-type: none"> <li>• Development and expansion of own service offering</li> <li>• Long-term global customer relationships based on expertise</li> <li>• Service solutions</li> </ul>
<p><b>GLOBAL MARKET GROWTH AND DEVELOPMENT</b></p>	<ul style="list-style-type: none"> <li>• Availability of top experts</li> <li>• Technology transfer, reverse innovation</li> <li>• Adaptation to local legislation</li> <li>• Population growth</li> <li>• Medical technology solutions to satisfy the needs of an aging population</li> </ul>
<p><b>OUTSOURCING</b></p>	<ul style="list-style-type: none"> <li>• Superior outsourcing process</li> <li>• Strong market position close to the customer</li> <li>• Service solutions</li> <li>• Customer references</li> </ul>
<p><b>SUSTAINABLE DEVELOPMENT</b></p>	<ul style="list-style-type: none"> <li>• Life cycle services</li> <li>• Technology expertise in the development of new energy sources and materials</li> </ul>

# Etteplan's growth strategy

**Etteplan wants to be a forerunner in engineering expertise and digitalization. With our innovative service solutions and digitalization expertise, we solve the challenges our customers face. With our services offering, we support the renewal of the customer's business.**

Etteplan is a growth company with a revenue growth target of approximately 15 per cent per year. Our rate of growth in 2016 was 30.3 per cent. Our organic growth is based on the focus areas of our business (see page 21). In acquisitions, which play a key role in our strategy, our focus is on increasing our competence capital and geographical expansion.

In spring 2016, we acquired Espotel and Soikea Solutions and expanded our business in Embedded Systems and into the Internet of Things (IoT). We also further strengthened our position in plant engineering by acquiring Suomen Unit Oy. Following these acquisitions, the customer can obtain all equipment and plant engineering, technical documentation and related digitalization services from the same provider. Thanks to its extensive expertise Etteplan can receive increasingly large engineering assignments from its customers and ensure that the technological solutions for the customer's product satisfy future needs. Realizing the benefits of digitalization requires a comprehensive

understanding of equipment as well as the optimal technology solutions for them. This is the area of Etteplan's in-depth expertise.

We continued to implement our strategy and develop our operations in 2016 in accordance with our objectives based on the cornerstones of our strategy (see page 21).

## **Advanced business model**

Our business model is based on Managed Services. Managed Services are packaged and productized solutions, which means that the customer buys the results rather than temporary staff or working hours, as they would under the traditional operating model used in the engineering services industry. Managed Services are an excellent match with the needs of customer companies as they engage in the renewal of their operating models and decide where to focus their resources. They also free up the customer's time and other resources for strategically important functions, such as product development, while improving their cost competitiveness and the quality of operations. For Etteplan, Managed

Services enhance capacity management and increase the profitability of our operations. Our key strategic goal is to leverage the competitive advantage derived from Managed Services and further increase their share of total revenue.

## **Growth and competitive advantage from growing markets**

Etteplan is the largest Nordic engineering company in China, where we have more than 200 customer companies. We expanded our operations to Poland with the Espotel acquisition. Etteplan's operating models make it easy to relocate engineering and technical documentation work to China and Poland, which creates a significant competitive advantage. We also take advantage of the rapidly growing local markets in both countries.

[Read more about Etteplan's strategic and financial targets on page 23.](#)

**Our values:**  
 Customer-oriented  
 Proactive  
 Attractive

**Our vision:**  
 Our customers get the best  
 service solutions  
 anywhere at any time

## From strategy to action



Cornerstones of strategy

Engineering with a difference

Focus areas in business operations



2016

**+10.7%**

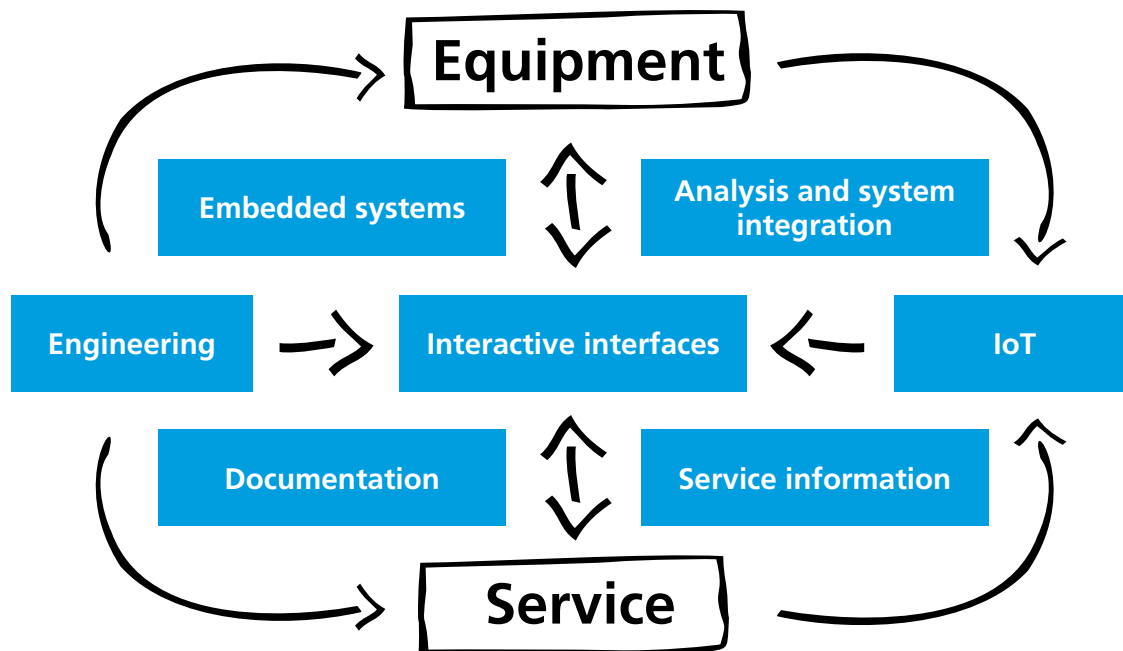
**53%**  
 The share of Managed Services of revenue

**+23.8%**

**+24%**  
 The amount of hours sold to the Chinese markets

**Excellent development throughout the year**

# Unique business concept



Etteplan's expertise brings together intelligent devices, documentation and IoT applications to create a unique service concept in the engineering industry. It enables our customers to develop their business to be more information-intensive, supporting the digitalization of their products and

services. We provide engineering methods and service solutions ranging from product development to service and maintenance. Combining technical documentation with IoT applications offers our customers new added value, particularly in the development of their service and maintenance

business. Our strength is based on a comprehensive understanding of the right business model and technology solution for the customer's situation. Our solutions use analytics and help the customer make data-driven business decisions.



# Strategic and financial targets

Etteplan updated its strategic and financial targets in December 2016. The targets for growth and profitability remained unchanged. The previous target for Managed Services was 50 per cent of revenue. We achieved this target in the second quarter of 2016. The equity ratio target is new.

	TARGET	ACTIONS	DEVELOPMENT 2014–2016												
<b>Growth</b>	<p><b>15%</b></p> <p>Average annual revenue growth, includes both organic growth and potential acquisitions</p>	<ul style="list-style-type: none"> <li>• Growth in key accounts</li> <li>• Organic growth through service solutions</li> <li>• Acquisitions that support growth</li> </ul>	<p><b>Revenue and revenue growth, %</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>Revenue, EUR million</th> <th>Revenue growth, %</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>131.9</td> <td>9.0%</td> </tr> <tr> <td>15</td> <td>141.1</td> <td>7.0%</td> </tr> <tr> <td>16</td> <td>183.9</td> <td>30.3%</td> </tr> </tbody> </table>	Year	Revenue, EUR million	Revenue growth, %	14	131.9	9.0%	15	141.1	7.0%	16	183.9	30.3%
Year	Revenue, EUR million	Revenue growth, %													
14	131.9	9.0%													
15	141.1	7.0%													
16	183.9	30.3%													
<b>Profitability</b>	<p><b>10%</b></p> <p>EBIT from business operations, % of revenue</p>	<ul style="list-style-type: none"> <li>• Shifting the business model towards Managed Services</li> <li>• Market leadership</li> </ul>	<p><b>Revenue and EBIT from business operations, %</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>Revenue, EUR million</th> <th>EBIT from business operations, %</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>131.9</td> <td>5.6%</td> </tr> <tr> <td>15</td> <td>141.1</td> <td>6.8%</td> </tr> <tr> <td>16</td> <td>183.9</td> <td>6.6%</td> </tr> </tbody> </table>	Year	Revenue, EUR million	EBIT from business operations, %	14	131.9	5.6%	15	141.1	6.8%	16	183.9	6.6%
Year	Revenue, EUR million	EBIT from business operations, %													
14	131.9	5.6%													
15	141.1	6.8%													
16	183.9	6.6%													
<b>Managed Services</b>	<p><b>65%</b></p> <p>The share of revenue represented by Managed Services (Managed Services Index, MSI) by 2019</p>	<ul style="list-style-type: none"> <li>• Service solutions</li> <li>• Technology solutions</li> <li>• Project business</li> </ul>	<p><b>Revenue and Managed Services, %</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>Revenue, EUR million</th> <th>Managed Services, %</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>131.9</td> <td>44%</td> </tr> <tr> <td>15</td> <td>141.1</td> <td>47%</td> </tr> <tr> <td>16</td> <td>183.9</td> <td>53%</td> </tr> </tbody> </table>	Year	Revenue, EUR million	Managed Services, %	14	131.9	44%	15	141.1	47%	16	183.9	53%
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14	131.9	44%													
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<b>Balance sheet</b>	<p><b>&gt; 30%</b></p> <p>Equity ratio</p>	<ul style="list-style-type: none"> <li>• Financial arrangements supporting the achievement of the target</li> <li>• Improving cash flow</li> </ul>	<p><b>Equity ratio, %</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>Equity ratio, %</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>39.5%</td> </tr> <tr> <td>15</td> <td>37.8%</td> </tr> <tr> <td>16</td> <td>40.0%</td> </tr> </tbody> </table>	Year	Equity ratio, %	14	39.5%	15	37.8%	16	40.0%				
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# Making expert services easy to buy

**Buying expert services can be challenging. Customers often do not recognize their needs, let alone know how to determine the right solution for them. Making the purchase decision is easier if the customer knows the benefit of the service.**

Industrial and service companies are frantically developing solutions to ensure the customer orientation of products and services in the face of changing customer needs and requirements. The engineering industry is no exception. Quality and cost-efficiency remain important purchasing criteria for machinery and equipment manufacturers in choosing their engineering partner. Customers also value ease of buying, transparency of services and a broad service offering.

Modern industrial machinery and equipment are highly automated and operate as

part of the IoT environment. Determining the solution that offers overall economy requires special expertise that the customer company may find difficult to acquire or maintain.

Increasing service transparency and making the customer benefit quantifiable have been the starting point for the development of Etteplan's productized service solutions.

## **Quantifiable customer benefits**

Etteplan's service model is unique in the engineering industry. Engineering companies typically sell man-hours to make up the customer's resource deficit. While it is possible to buy an expert from Etteplan, it is often not the best alternative for the customer. When the service is instead delivered as a Managed Service, Etteplan assumes overall responsibility for service production. The customer benefits from Etteplan's efficient operating models and tools, which reduce lead time and save costs.

In the traditional staffing-based service model, the customer instead buys an expert for a fixed period of time and pays time-based compensation. The benefit received by the customer is limited to the use of the expert's professional competence, as the service provider does not have the opportunity to influence the engineering process.

## **Bringing transparency to the results of services**

At Etteplan, we believe that the customer should pay for results rather than hours. Results are achieved by using efficient processes for engineering and technical documentation and taking advantage of decades of experience in the best practices of different industries. In the contract stage, we define in detail what activities are transferred to Etteplan by the customer and how the results are measured by jointly agreed key performance indicators (KPIs).



**Despite the world around us becoming increasingly complex, buying expert services must be easy for the customer.**



## A virtual showroom for KONE

**Etteplan has developed for KONE's Marine unit a virtual showroom that helps KONE present its People Flow passenger ship designs to its clients using a digital environment produced with virtual technology.**

In the Virtual Reality (VR) environment designed by Etteplan, clients wear head-mounted display (HMD) glasses to experience the elevators and call button panels located in a ship's lobby, just as they will be in the completed ship. Through the virtual environment, the client can get a better sense than is possible with traditional methods of the functionality of the spaces and elevator solutions, and of the choices of materials and components used in the products.

The virtual showroom offers KONE a cost-effective and practical way of presenting its product solutions in the client's own environment, regardless of location.

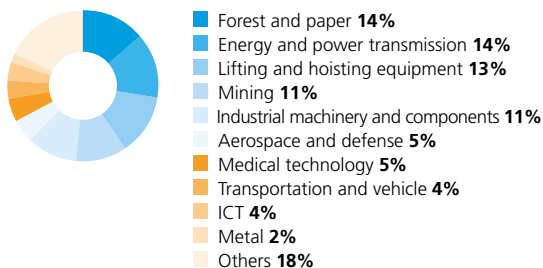
The application is designed for presenting the entire service experience. KONE uses the application in marketing its elevator solutions worldwide.

For optimal user experience, the application requires that the virtual-reality technology used contains high-quality graphics, and that the devices are easy to use. Solutions that use virtual technology create new possibilities, for example in product design and equipment engineering, installation, and training. Its benefits are also seen in reduced expenses for product development.

### Etteplan's customers

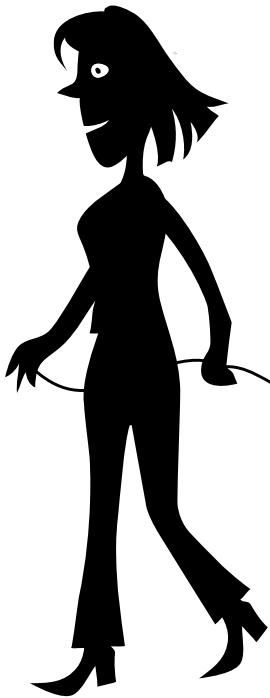
The majority of our customers are leading global manufacturing companies and innovative start-ups in the following industries:

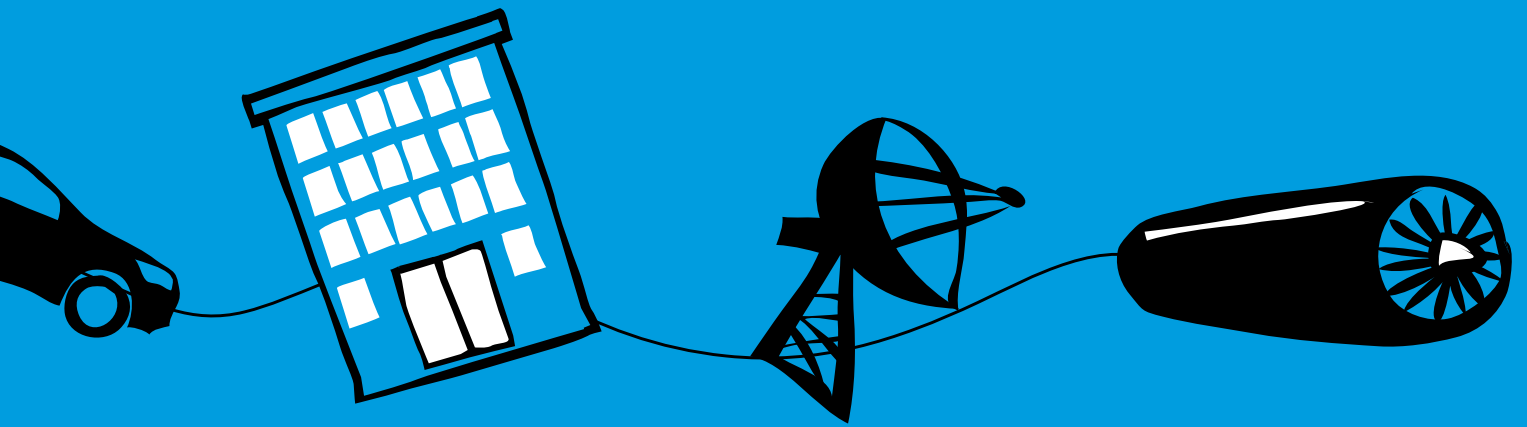
#### Revenue by customer segment 2016



# Corporate responsibility and personnel

Corporate responsibility and personnel are at the core of our day-to-day business. Having skilled and developing personnel with a high level of well-being is a prerequisite for a successful expert organization.





# Corporate responsibility and personnel are at the core of our business

At Etteplan, corporate responsibility is at the core of our day-to-day business as we design hundreds of sustainable solutions for the world's leading machinery and equipment manufacturers every year. Our highly skilled personnel play a crucial role in fulfilling our customer promise. As a large company, we can offer diverse career and development opportunities and lifelong employment relationships to our employees.

## Our corporate responsibility is based on financial profitability

The most relevant aspect of our corporate responsibility, from the perspective of our stakeholders as well as our business, is sustainable financial growth. We continued to produce a strong financial result in 2016. Our revenue was EUR 183.9 million, up 30.3 per cent from 2015, and our operating profit was EUR 10.1 (8.6) million. We pay taxes on our profits in all of the countries we operate in.

## Our highly skilled personnel is our strength

Having skilled and developing personnel with a high level of well-being is a basic requirement for a successful expert organization. Personnel development, providing career opportunities and treating employees equally are at the core of Etteplan's human resource management. We monitor our employees' well-being at work by methods including an annual personnel survey. Our development work in the area of group-wide human resource management will continue.

## The number of personnel continued to increase

The number of personnel increased again in 2016 as a result of acquisitions and organic growth. At the end of 2016, we employed 2,545 people (2,074). The number of personnel increased in Finland due to significant acquisitions. At the end of the year, we employed 1,706 (1,368) people in some 20 locations in Finland, and we also had 410 employees in Sweden, 87 in the Netherlands, 30 in Germany, 81 in Poland and 231 in China. In Finland, over 80 per cent of our employees work outside the Helsinki metropolitan area. We paid salaries and fees totaling EUR 129.1 million (101.4) in 2016. Personnel costs are the company's largest expenditure item.

We held personnel negotiations in several operating locations in Finland in 2016. The negotiations led to temporary layoffs, but we avoided dismissals. The number of temporarily laid off personnel

## Economic impacts 2016

1,000 EUR	2014	2015	2016
Direct taxes	1,020	1,744	1,838
Wages and salaries	94,367	101,452	129,172
Dividends	2,169	2,981	3,963*
Financial expenses	1,082	1,251	1,245

\* Board's dividend proposal at the most



was approximately 50–80. A total of 47 employees were temporarily laid off at the end of 2016.

Our aim is that our employees are satisfied with their work and have the ability to perform their expert duties for a long time. In Finland, our employees retired on old-age pension at the average age of 64.3 years (63.6). In Sweden, our employees retired on old-age pension at approximately 65 years of age, with the minimum retirement age being 65. Etteplan has several employees who continue to work as hourly paid employees even after retiring on old-age pension.

Etteplan has works councils in all of its operating countries to deal with personnel-related matters locally. As the use of local agreements increases, the works councils play a central and active role, and

they held a large number of meetings in various countries during the year. In China, we deepened our cooperation with the HR specialist FESCO, with a focus on developing working conditions in China.

#### **We survey our employee satisfaction**

Etteplan uses an annual personnel survey to assess the job satisfaction and well-being at work of its employees. In 2016, the survey was completed by 72 per cent of all personnel (76) and the results revealed substantial differences between countries. The results of the 2016 survey were at the previous year's level. In Sweden, human resource management improved. Based on the survey, we produced country-specific development plans for improving the results.

## **An important order from Germany for Etteplan's multinational team**

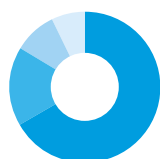
**The expertise of Etteplan's multinational team played a key role when Etteplan received a significant order from the German Federal Office of Civil Protection and Disaster Assistance, which is part of the Federal Ministry of the Interior. The order contributes to our goal of strengthening our business operations in Central Europe.**

The order consists of new measurement equipment and upgrade packages used in exploration vehicles to detect hazardous air particles, such as chemical, biological, radioactive and nuclear particles.

The device and software will be delivered in 2017–2019 by Etteplan's multinational team. The software development is being done by Etteplan's specialists in Sweden. Etteplan's German unit implements integration and installation of new measurement devices, their device and software documentation, the logistics required by their update packages, and installation, support and training services.

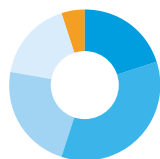
Etteplan began operations in Germany in January 2016 with the acquisition of the technical documentation operations of arvato AG, which is part of the Bertelsmann Group.

### Geographical distribution and average number of personnel 2016



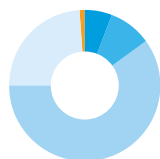
■ Finland	67% (1,599)
■ Sweden	17% (411)
■ China	9% (223)
■ Central Europe	7% (174)

### Age distribution 2016



■ under 30 years	20%
■ 31-40 years	35%
■ 41-50 years	23%
■ 51-60 years	17%
■ over 60 years	5%

### Educational background 2016



■ Upper secondary education	6%
■ College	9%
■ Lower university degree	60%
■ Higher university degree	24%
■ Doctoral degree	1%

### We provide extensive career and development opportunities

Providing career opportunities to our personnel is one of the guiding principles of our operations. The large scale of our operations provides good opportunities for working in various project teams that serve the world's leading machinery and equipment manufacturers. Etteplan's emphasis in personnel development is on learning on the job.

The career path model is at the core of monitoring the professional development of our employees.

[Read more about the career path model on page 34.](#)

Personnel development discussions are held annually and, in 2016, they covered more than 95 per cent of the company's personnel, as in the previous year.

In 2015, Etteplan launched a coaching program intended for managerial development. The program continued in 2016 with personal coaching and the implementation of the coaching program will continue in 2017. We measure the development of employees in managerial roles annually.

In the expert service business, HR risks include the availability of labor and the required expertise, as well as attrition. Personnel risks are discussed in more detail on pages 80-83 in the Financial Review 2016.

## Environmental responsibility

The day-to-day work of Etteplan's environmental management is based on the standards specified in the ISO 14001 environmental system. The goals of our environmental policy include minimizing the environmental impacts of our own operations, training our personnel to recognize the environmental impacts of their work, and helping our partners observe responsibility in environmental matters.

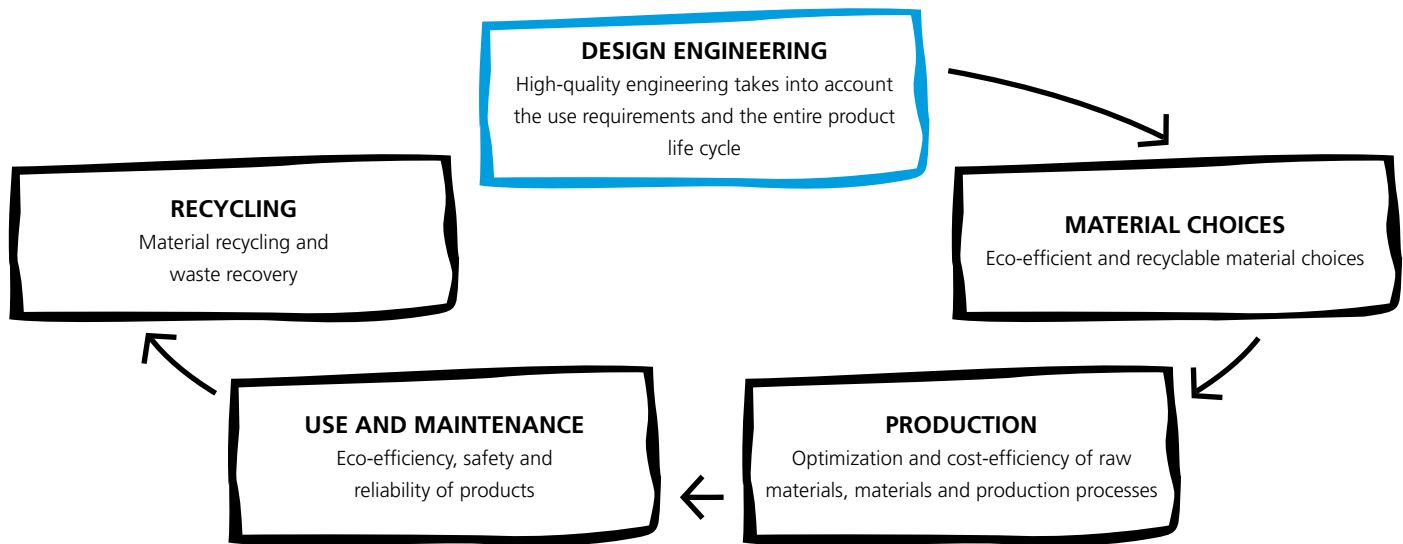
### We developed our energy efficiency

In 2016, Etteplan prepared to fulfil the requirements of the updated ISO 14001 standard. An external audit in accordance with the updated standard will be carried out in Finland and Sweden in spring 2017.

The company's energy review conducted in 2015 surveyed the electricity, heating and water consumption of Etteplan's properties and the fuel consumption of company cars in Finland. In conjunction with these assessments, we also evaluated the energy consumption of our Jyväskylä office. Under the Energy Efficiency Act, Etteplan is required to review the energy consumption of its operating locations over the next four-year period. The next site review will be conducted in Vantaa during 2017. Based on the reviews, suitable energy conservation measures will be determined for each site.



## Engineering affects the whole life cycle of a product



In 2016, we also produced new environmental training materials and held several environmentally themed training events at our offices in Finland and Sweden.

Due to the nature of Etteplan's business, the company's direct environmental impacts are moderate. In addition to the electricity consumption of our offices, our environmental impacts arise primarily from travel, which we have been able to significantly reduce thanks to electronic meeting technology. We monitor the CO<sub>2</sub> emissions of air travel based on information supplied by an external service provider.

### **Environmental responsibility is emphasized in our work with customers**

Etteplan's business has a strong foundation in the principles of sustainable develop-

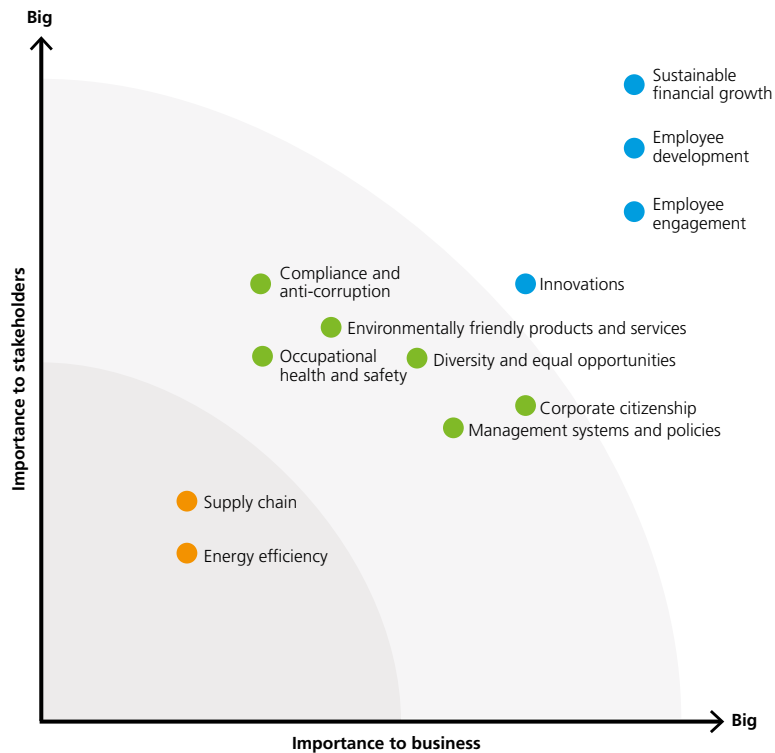
ment. Each year, we design hundreds of solutions for the world's leading machinery and equipment suppliers. They help our customers create solutions that are eco-efficient with respect to their manufacturability, usability and recyclability. We develop environmentally friendly technologies and cleantech products, and contribute to the energy efficiency of our customers' equipment, machinery and production facilities.

Product design takes into consideration the product's full life cycle environmental footprint: from raw materials to production, product use and disposal or recycling.

For instance Etteplan's technical documentation solutions are environmentally friendly and reduce the need for printed materials, as manuals and instructions can be distributed to maintenance and service personnel digitally.

**Etteplan's direct environmental impacts are moderate.**

## Materiality matrix



### We defined our indicators for corporate responsibility reporting

At the end of 2016, we defined GRI indicators for our material responsibility aspects. They will guide the measurement of our corporate responsibility work starting from 2017 and our reporting starting from 2018. GRI (Global Reporting Initiative) is the world's most widely used framework for reporting on corporate responsibility.

A suitable GRI indicator could not be identified for all of the material aspects.

For such aspects, we will begin reporting, where possible, based on our own internal annual surveys and assessments or by describing the management system, among other things.

The materiality analysis for corporate responsibility was conducted in 2015 by interviewing key external stakeholder representatives and our own personnel. Based on the analysis, Etteplan's key aspects of corporate responsibility are financial growth as well as personnel development and commitment.

### Responding to stakeholder expectations

In its operations, Etteplan strives for open dialogue with all of its stakeholders. We take our stakeholders' views and expectations into consideration and aim to respond to them in the best possible manner. Our three most important stakeholders are personnel, customers and shareholders.

The most important topics highlighted by personnel in 2016 were themes related to pleasant working environment in China and themes related to the employer image in Finland. Etteplan will continue to implement personnel development measures related particularly to leadership, competence development and HR processes. Our goal is to strengthen Etteplan as an even more attractive workplace.

Of the themes highlighted by our customers, the significance of corporate responsibility and corporate security were emphasized further.

Etteplan was again able to show profitable growth for shareholders in 2016.

Etteplan is an active participant in the development of its industry through its membership in the Federation of Finnish Technology Industries and the Swedish Federation of Consulting Engineers and Architects.

We also want to support the less fortunate in society, and we donated Christmas presents to two charitable organizations in 2016. As an expert organization, we



want to contribute to supporting education. To this end, we donated a personnel Christmas present to the World Vision child sponsorship organization. The funds allocated to Christmas cards for customers were donated to Plan International.

### **Code of Conduct guides our business operations**

Etteplan's business operations are guided by the company's Code of Conduct. The

Code of Conduct presents the Company's values and business principles to all stakeholders and serve as instructions to our employees in day-to-day business.

The Code of Conduct applies to all Etteplan companies, and all employees are obligated to comply with it. Etteplan also encourages the suppliers and other partners within its sphere of influence to adopt the principles documented in the Code of Conduct.

The Code of Conduct includes instructions related to ethics and law, quality and the environment, the working environment, as well as equality and diversity.

**[Read more about the ethical principles that guide our business operations at www.etteplan.com.](http://www.etteplan.com)**

# Case

## Etteplan's career path model

**Our personnel's professional development is monitored using the career path model we adopted in 2013. There are four career paths. The highest level in the Technology Leadership career path is Technology Director. We appointed the first Technology Directors in line with the career path model at the start of 2017.**

Etteplan's business operations, growth, and success are based on the competence of our personnel. We develop our expertise base to meet the needs of our clients, and recognize that it is equally important to develop our technological know-how and management skills. The goal-oriented development of our competences will ensure our continued success.

The aim of the career path model is to make career possibilities and their requirements visible to our staff. For supervisors, the model offers a tool for career planning, systematic personnel development, planning of personnel structure, and specification of recruitment needs.

Our expertise management system encompasses 700 different expertise areas, with four career paths: Technology Leadership, Business and People Leadership, Project Leadership and Technical communicator. Each career path contains 5–7 different level tasks, which are divided into local-, country-, and Group-level tasks.

The task of each and every Etteplan employee is contained in the career path model. The model shows vertical career opportunities. Each position in the career path model and the related career opportunities are assessed annually as part of the personnel development discussion.







# From the Management Group



Top row from the left: Petri Ikonen, Mikael Vatn, Riku Riikonen, Veikko Lamminen, Kari Liuska. Lower row from the left: Per-Anders Gådin, Outi-Maria Liedes, Juha Näkki and Outi Torniainen.

**Juha Näkki, President and CEO:** "We are a forerunner in the engineering industry. Our goal is to be an even more important partner to our customers."

**Petri Ikonen, Senior Vice President, Technical Documentation:** "Digitalization of technical documentation support the development of our customers' service business."

**Mikael Vatn, Senior Vice President, Operations Central and Western Europe:** "We are aiming to grow the business of all our three service areas in Central Europe and Sweden."

**Riku Riikonen, Senior Vice President, Engineering Services:** "We want to utilize the growing engineering markets in China and will strengthen our presence in the country."

**Veikko Lamminen, Senior Vice President, Operations Finland:** "In Finland we operate in some 20 locations close to our customers' operations, which is a clear strength for our operations."

**Kari Liuska, Senior Vice President, Embedded systems and IoT:** "In the near future, all industrial equipment will be connected to the internet. This challenges companies to join digitalization."

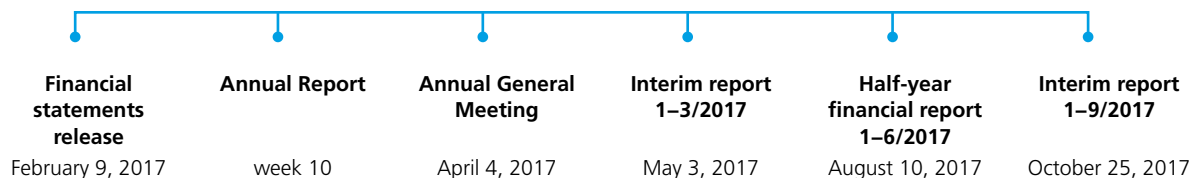
**Per-Anders Gådin, CFO:** "Etteplan's profitability has developed favorable thanks to our Managed Services."

**Outi-Maria Liedes, Senior Vice President, HR and Operational Development:** "The availability of top experts and the continuous professional development of our personnel are among our key success factors."

**Outi Torniainen, Senior Vice President, Communications and Marketing:** "Etteplan's brand promise Engineering with a difference describes how we at Etteplan work according to our strategy and values."

# Investor information

## Important dates



## Investor Relations contacts

**Juha Näkki**, President and CEO, Tel. +358 10 307 2077

**Outi Tornainen**, Senior Vice President, Communications and Marketing, Tel. + 358 10 307 3302

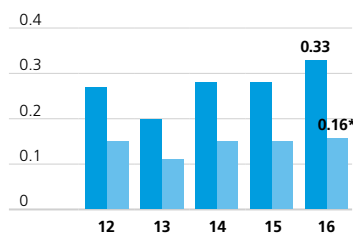
**Per-Anders Gådin**, CFO, Tel. +46 70 399 7929

The up-to-date CV information for Board of Directors and Management Group is available at [www.etteplan.com](http://www.etteplan.com).

Etteplan's Financial Review 2016 is published at [www.etteplan.com](http://www.etteplan.com).

There you can also find other up-to-date financial information including Interim reports, Half-year financial reports, releases and financial result webcasts.

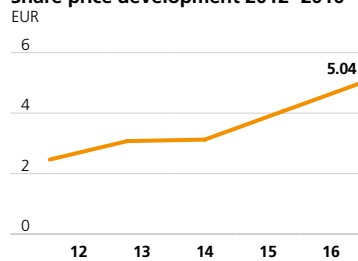
## Earnings per share and dividend



■ Issue adjusted earnings per share  
■ Dividend

\* Board's dividend proposal  
Rights issue factor 1.050

## Share price development 2012–2016



Volume-weighted average price



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