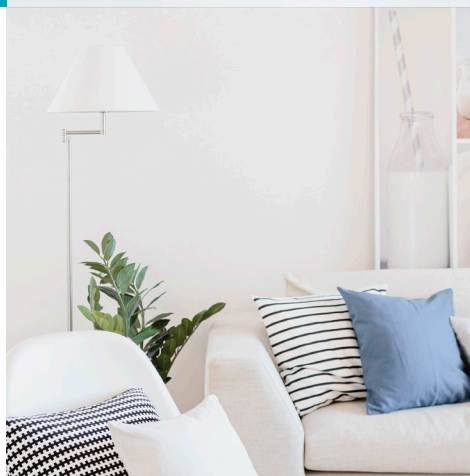


VVO Group plc  
**Annual Report**  
**2016**

16



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Year 2016

## Year 2016

VVO Group's gross investments totalled EUR 696.0 million. The year-on-year increase in gross investments was 196.2 per cent, or EUR 461.1 million. The fair value of investment properties at the end of the financial year was EUR 4.3 billion, including EUR 70.6 million classified into non-current assets held for sale. Turnover during the period 1 January–31 December 2016 amounted to EUR 351.5 million.

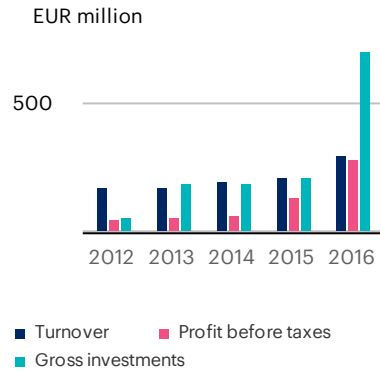
The financial occupancy rate remained high, standing at 97.4 per cent during the review period. There were 1,536 rental apartments under construction at the end of the review period. Of the apartments under construction, 1,220 are located in the Helsinki region and 316 in other Finnish growth centres. At the end of the financial year, VVO Group owned 34,974 rental apartments. The Lumo segment accounted for approximately 90 per cent of these apartments.

VVO Group underwent a major transformation during 2016. The strategic decision to focus, as a housing investment company, on

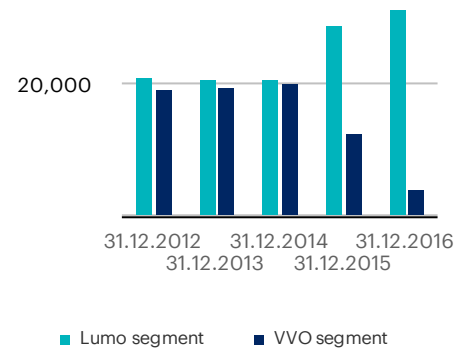
market-based operations and rental housing service design was turned into concrete action in 2016: the Group made the largest investments in its history, totalling approximately EUR 700 million, and divested non-profit properties subject to long-term restrictions. Among other transactions, the Group acquired ICECAPITAL Housing Fund II, which owns 2,274 rental apartments. In order to restructure its operations, the Group sold 8,571 cost principle apartments to Kiinteistö Oy M2-Kodit, owned by Y-Foundation. After the review period, VVO Group sold 1,344 non-restricted rental apartments to a company managed by Avant Capital Partners. The apartments are located around Finland.

VVO Group diversified its financing sources in order to finance growth. VVO Group plc issued a EUR 200 million secured bond on 17 October 2016 and had it listed on the official list of Nasdaq Helsinki Ltd. In addition, the Group and the European Investment Bank agreed on EUR 170 million of long-term financing, which will be used to fund new net or nearly zero-energy buildings (nZEBs) over the next few years.

### Lumo business development 2012-2016



### Lumo segment's share of housing stock 2012-2016



Year 2016 › CEO's review

## The company's significant transformation and the largest investments in its history

The result for the 2016 review period was excellent, based on the increase in the value of our apartment assets, the success of our operating activities and a good financial occupancy rate. We underwent a major transformation, building future competitiveness in an environment where Finland is becoming increasingly urbanised, digitalisation is proceeding and people's housing preferences are developing rapidly. The strategic decision to focus, as a housing investment company, on market-based operations and rental housing service design was turned into concrete action in the review period: the Group made the largest investments in its history and divested non-profit properties subject to long-term restrictions.

As stated in our mission, we create better urban housing. We have boldly developed our operations and innovated housing solutions and services, with the aim of generating even better customer experience. In five years, we have invested nearly EUR 1.5 billion in boosting the Lumo business operations. In addition to acquisitions, we have launched the construction of nearly 4,000 privately financed rental apartments. The Lumo brand has achieved a strong market position, and it already constitutes 90 per cent of our Group's business. The Lumo online store has revolutionised the customer's role in renting an apartment, and more than a thousand tenancy agreements have

already been signed through the service. [Lumo Kompakti](#) will offer a new housing solution, and the car-share scheme has expanded to several locations.

During the review period, we developed the Lumo business with record-breaking EUR 700 million investments. We acquired ICECAPITAL Housing Fund II with its 2,274 market-based rental apartments. The apartments are mainly located in the Helsinki Metropolitan Area and Tampere. Our Group's binding acquisition agreements, amounting to more than EUR 300 million at the end of the year, are key to the completion of 2,635 new Lumo homes.

We have actively divested properties that do not support our strategy due to their characteristics or location. We sold 8,571 non-profit cost principle apartments to Y-Foundation and, towards the end of the year, we signed an SPA whereby a total of 1,344 non-restricted apartments, located around Finland, were sold after the review period to a company managed by Avant Capital Partners.

Our extensive investments also require diverse financing solutions. We issued a EUR 200 million secured bond on 17 October 2016 and had it listed on the official list of Nasdaq Helsinki Ltd. The Group and the European Investment Bank agreed on EUR 170 million of long-term financing, which will be used to fund new net or nearly zero-energy buildings (nZEBs) in the Helsinki Metropolitan Area and other major growth centres over the next few years. The financing from the EIB is part of an investment programme in which we will implement a total of 1,800 apartments.

During the review period, we specified our strategy and updated our values so that they are aligned with our restructured operations as well as with future success factors identified on the basis of the operating environment and megatrends. Our strategic focal points are Delivering the best customer experience, Dynamic and professional place to work, Generating long-term shareholder value and Leading on sustainable development. These focal points are turned into concrete, practical actions together with our competent personnel. Our new values are Happy to serve, Strive for success and Courage to change. Our personnel showed utmost commitment and forward-looking thinking in their contribution to defining the values, which provides a solid foundation for our operations.

The volume of construction and the level of activity in the housing market have been delightfully high. Nevertheless, even the current pace is not sufficient to fully meet the needs of the fastest growing urban centres. During the review period, our Group was the leading operator in property investments and the largest real estate investor in Finland with its EUR 4.3 billion apartment assets.

Our market share of the entire rental housing supply is 4.2 per cent and, in line with our 2021 strategy, we will continue making significant investments both through the development of new properties and through the acquisition of existing properties in the largest growth centres. We want to respond to the demand for rental housing, particularly in the Helsinki region, making it easier for people to move around in pursuit of employment in urbanising Finland. By investing in profitable growth, we are building the future and we believe that the Lumo brand and service design will lead the way in the housing sector.

I would like to thank our customers for their active contribution to our versatile cooperation and our personnel, Board of Directors and other stakeholders for numerous success stories during the past year!

Jani Nieminen  
CEO

Year 2016 › Key indicators and financing sources

## Key indicators and financing sources

VVO Group's turnover during the period 1 January–31 December 2016 amounted to EUR 351.5 (370.9) million. The Lumo segment recorded a turnover of EUR 291.1 (208.8) million, and the VVO segment EUR 61.5 (165.8) million. Turnover is entirely generated by rental income.

The Group's net rental income totalled EUR 222.0 (227.4) million, representing 63.2 (61.3) per cent of turnover. The Lumo segment recorded a net rental income of EUR 190.3 (134.6) million, and the VVO segment EUR 32.8 (94.9) million.

The fair value of investment properties at the end of the financial year was EUR 4.3 (4.0) billion, including EUR 70.6 (534.2) million classified into non-current assets held for sale. At the end of the financial year, VVO Group owned 34,974 (41,153) rental apartments.

On 31 December 2016, the equity ratio stood at 40.7 (41.1) per cent. Equity per share was EUR 251.20 (234.85). The equity ratio of the Lumo segment stood at 40.0 (45.7) per cent.

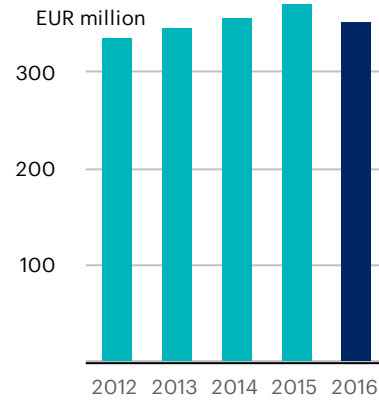
The Group's liquidity remained good throughout the financial year. At the end of the financial year, the Group's liquid assets totalled EUR 132.0 (116.0) million. EUR 141.3 (108.8) million of the EUR 200 million commercial paper programme was in use at the end of the financial year. In addition, the Group has committed credit facilities of EUR 100 million and an uncommitted credit facility of EUR 5 million that remained unused at the end of the financial year. At year end, interest-bearing liabilities stood at EUR 2,122.8 (1,494.6) million, of which EUR 1,726.1 (1,114.9) million was accounted for by market-based loans. During the financial year, EUR 482.6 (195.9) million of new long-term financing was raised. At the end of the financial year, the Group's loan to value was 46.7 (39.4) per cent.

**Key indicators**

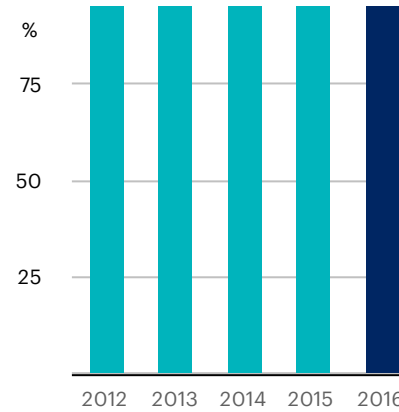
<b>VVO Group</b>	<b>10-12/2016</b>	<b>10-12/2015</b>	<b>1-12/2016</b>	<b>1-12/2015</b>
Turnover, M €	84.6	94.7	351.5	370.9
Net rental income, M €	49.6	56.9	222.0	227.4
% turnover	58.6	60.1	63.2	61.3
Profit before taxes, M €	135.4	57.4	289.7	224.7
Operative result, M €	21.8	29.4	116.9	121.4
Investment properties, M € <sup>1)</sup>			4,298.9	3,999.2
Financial occupancy rate, %	97.8	97.9	97.4	97.6
Interest-bearing liabilities, M € <sup>2)</sup>			2,122.8	1,494.6
Return on equity, % (ROE)			12.9	10.8
Return on investments, % (ROI)			8.8	7.6
Equity ratio, %			40.7	41.1
Loan to Value, % <sup>2)</sup>			46.7	39.4
Earnings per share, €	14.58	6.14	31.38	24.23
Equity per share, €			251.20	234.85
Gross investments, M €	87.0	82.4	696.0	235.0
Number of personnel at period end			286	356
1) Including items held for sale				
2) Does not include items held for sale				



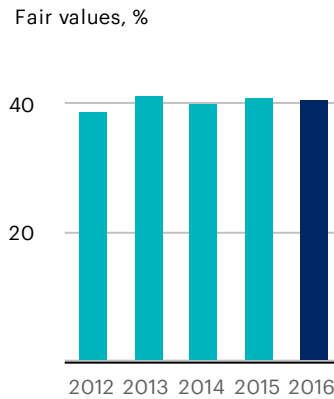
### Turnover



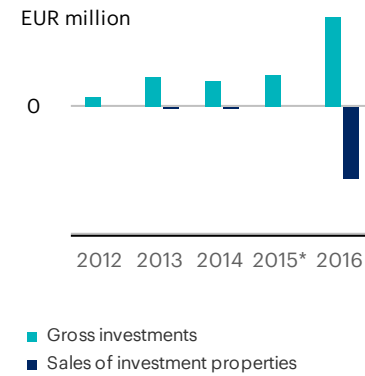
### Financial occupancy rate



### Equity ratio

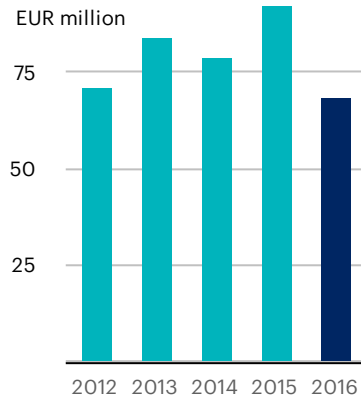


### Gross investments and sales of investment properties

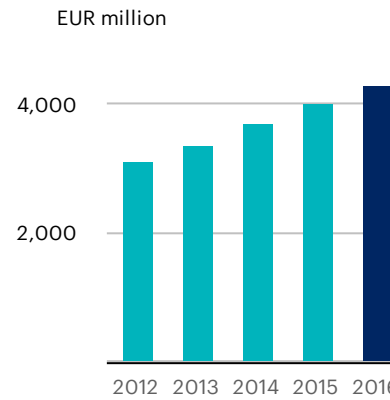


\*The calculation method of gross investments has been changed. Previously, gross investments in the cash flow were presented; starting from 31 Dec. 2015, investments on an accrual basis are presented.

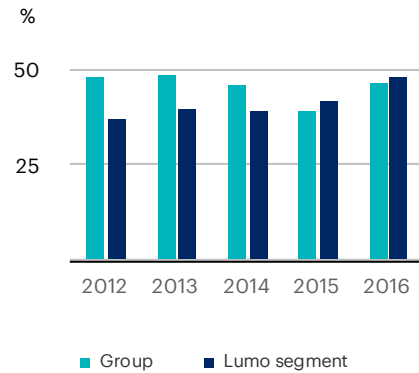
### Renovations



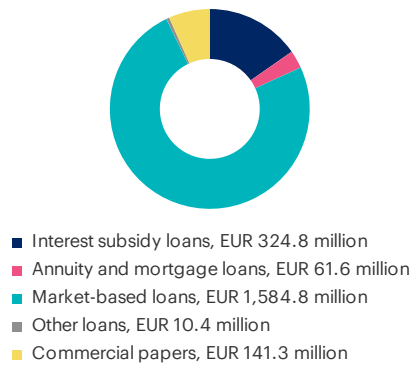
### Value development



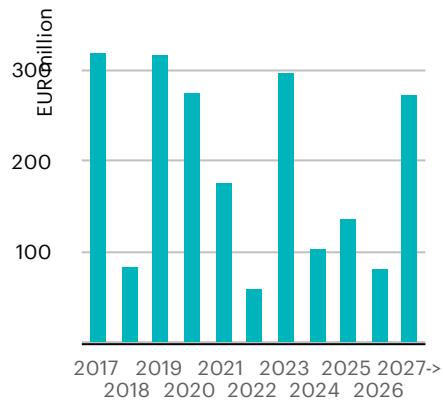
### Loan to Value



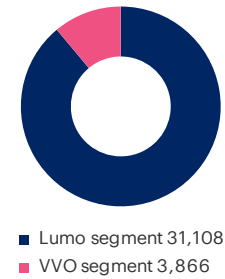
### Loan portfolio structure



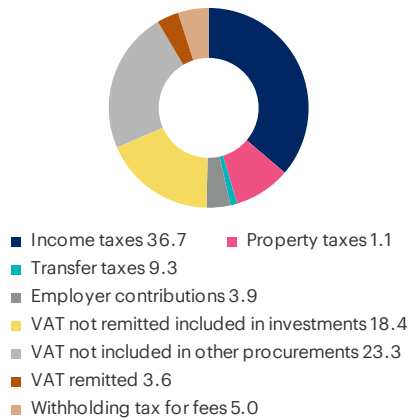
### Distribution of loan maturities



### Rental housing stock



### VVO Group's tax footprint 2016, EUR million



Year 2016 › Strategy implementation

## Strategy implementation

VVO Group underwent a major transformation during 2016. The strategic decision to focus, as a housing investment company, on market-based operations and rental housing service design was turned into concrete action in the past review period: the Group made the largest investments in its history and divested non-profit properties subject to long-term restrictions.

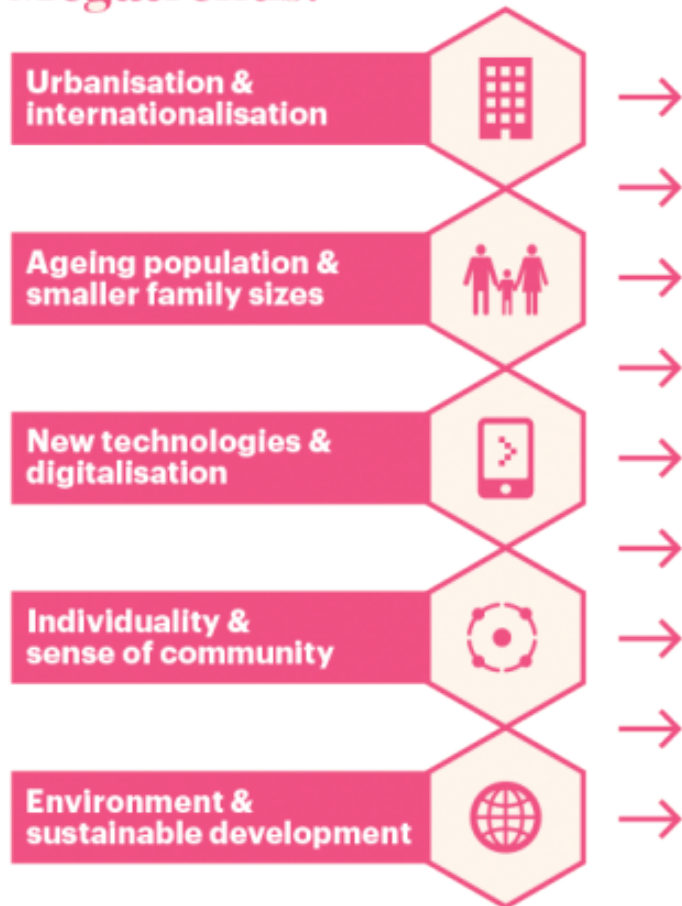
The Group's operational transformation aims to ensure future competitiveness in an environment where Finland is becoming increasingly urbanised, digitalisation is proceeding and people's housing preferences are developing rapidly. As stated in its mission, the company creates better urban housing. The Group has developed its operations and innovated housing solutions and services, with the aim of generating added value for customers. Significant investments in Lumo apartments and service solutions facilitate employment-based migration in urbanising Finland. In five years, VVO Group has invested nearly EUR 1.5 billion in the Lumo business operations, and in addition to acquisitions, the Group has launched the construction of 3,872

privately financed rental apartments. The Lumo brand has achieved a strong market position, and it already constitutes 90 per cent of the Group's business. The Lumo online store has revolutionised the customer's role in renting an apartment.

In line with its strategy, the Group will continue making significant investments both through the development of new properties and through the acquisition of existing properties in the largest growth centres. The company wants to respond to the demand for rental housing, particularly in the Helsinki region, making it easier for people to move around in pursuit of employment in urbanising Finland. By investing in profitable growth, VVO Group is building the future and believes that the Lumo brand and service design will lead the way in the housing sector.

During the strategy period, the company will also divest properties that do not support the Group's strategy due to their characteristics or location.

## Megatrends:



## Mission:

We create better urban housing.

## Vision 2021:

We are a pioneer in housing and the customer's number-one choice.

## Strategic focal points:

- ▶ The best customer experience
- ▶ A long-term development of shareholders' value
- ▶ A leader in sustainable development
- ▶ An energetic and the most competent place to work

## Values:

Happy to serve



Strive for success



Courage to change



**Strategic focal points and strategy programmes**

<b>Delivering the best customer experience</b>	<ul style="list-style-type: none"><li>• Transformation of service culture</li><li>• Added value for customers through customer solution differentiation</li><li>• Competitive price-quality ratio</li></ul>
<b>Generating long-term shareholder value</b>	<ul style="list-style-type: none"><li>• Growth through investments and focus on growth centres</li><li>• Master of real estate development</li><li>• The most cost-efficient operator in the industry</li></ul>
<b>Leading on sustainable development</b>	<ul style="list-style-type: none"><li>• Promoting sustainable development in practice</li><li>• Paragon of responsibility</li></ul>
<b>Dynamic and professional place to work</b>	<ul style="list-style-type: none"><li>• Can-do professionals</li><li>• Inspired by expertise</li></ul>

**Strategic key indicators**

	Actual 2016	Target 2021
Apartment assets	EUR 4.3 billion	EUR 5.8 billion
	34,974 apartments	38,000 apartments
Operative result of the Lumo segment as a percentage of turnover, %	34.7	32.0
Equity ratio of the Lumo segment, %	40.0	40.0
Net promoter score	35	40

Year 2016 › Personnel

## Personnel

The personnel work in positions related to customers, investments and real estate development as well as in support functions. The Group's transparent operating models and methods are at the core of good human resource management. Interesting tasks, good managerial work, clear targets and the opportunity to improve their circumstances and develop themselves create an inspiring working culture.

In the autumn, VVO Group launched the Extended Management Group. The model seeks to improve the personnel's opportunities to participate in the development of the company's operations. As a result of a vote, Marko Liikanen was elected as the representative of Heads of Units and Mikko Salkojärvi and Elise Hasselgren as the representatives of other personnel. The first meeting of the Extended Management Group was held on 17 November 2016.

The Group conducted the annual personnel survey in the autumn. As in previous years, the results were clearly better when compared to other similar white-collar-dominated workplaces: the company was rated in the second best category, AA+. The survey was conducted with the People Power method that focuses particularly on dedication and enthusiasm. The unit-level survey results had further improve with regard to indicators measuring team spirit and performance. Experiences of managerial work had also remained extremely positive and at a high level. When compared to the reference benchmarks, satisfaction was significantly higher with regard to how the company invests in well-being at work, strategy communications and efficient decision-making. In addition, other aspects that received positive

feedback in the survey were, for example, personnel benefits and the working atmosphere.

Corporate Spirit Ltd awarded VVO Group the Suomen innostavimmat työpaikat 2017 recognition for being one of Finland's most inspiring places to work, on the basis of the 2016 personnel satisfaction survey. The recognition indicates, among other things, that the Group has succeeded in developing its operations in cooperation with the personnel.

### The new values were created together with the personnel

The annual Group-wide personnel training day concentrated on strategic emphases and the improvement of the customer experience. In addition, the significance of values at work was contemplated and values that best describe the company's targets and operating culture were defined in groups. Value-related contemplation was part of the company's value process that resulted in the new values: Happy to serve, Strive for success and Courage to change.

In strategic competence development, investing in sales management and building management renewal was continued. The A2 coaching project was expanded and linked with the development of resident service models in building management. Professional competence development and supplementary training continued.

In order to improve the occupational safety of the personnel, safety training was organised for everyone involved in customer service and



policies related to workspace safety solutions and operating models were specified in further detail. The updated guidelines and principles were compiled into the Customer Service Safety Plan. Furthermore, orientation material was created in order to make it easier to commit operating methods to memory and provide safety guidance for new employees. The overall target of the project was to improve the general safety culture.

### **Innovativeness is part of the organisation culture**

Innovativeness is part of the Group's organisation culture. In 2016, numerous innovation events related to service culture and operational development were organised. Intranet offers access to the Ideapaja service wherein people can suggest new ideas with regard to any aspect of the company's operations. Residents' comfort was highlighted as a special theme in Ideapaja which culminated in a joint workshop.

In addition, an innovation competition was held for summer workers, and in a joint innovation day, they worked on different innovations related to housing and the development of the company. During the year, nearly 200 new ideas were created, and about 20 of them are currently being, or have already been, realised.

### **VVO Group was among the best employers in the Responsible Summer Job campaign**

The Group hired more than 40 summer workers. In addition to substitute arrangements, the aim was to contribute, as a responsible company, to the development of youth employment and working life.

The Responsible Summer Job campaign rewarded

the most responsible summer job employers in Finland in 2016. A total of 95 employers took part in the competition. Summer workers evaluated their employers on the basis of the application process, orientation training, meaningful tasks and equality, among other things. For the second time in a row, VVO Group plc was among the best companies in the major employer category, coming third this time.

### **Well-being at work focused on prevention**

Investments in well-being at work and recreational activities continued to be significant. The personnel's recreational club Hupari was revamped and it organised activities ranging from sports to arts and crafts as well as various common events.

In the spring, a well-being week was held, encouraging everyone to adopt healthy eating habits and engage in everyday physical activity.

Communication with the Group's occupational healthcare partner, Terveystalo, was expanded and made more efficient and flexible with a chat service, for example. The goal of the operating models was to enhance quick access to help in case of musculoskeletal overload, for example, and prevent the symptoms from getting worse.

During the year, the personnel's sickness absences decreased to the minimum level and occupational healthcare costs reduced by approximately 20 per cent, thanks to, inter alia, preventive operating models.

### **New systems improve the efficiency of HR management**

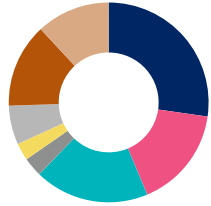
In the autumn, the Group adopted new HR systems for managing employment and personal information, invoices for travel and other expenses as well

as recruitment processes. Automated processes and data transfers and mobile tools made HR management considerably easier and faster. Performance reviews (OMA discussions) and the performance bonus system will also be integrated into the system, which will bring significant advantages in controlling and monitoring performance.

The Järvenpää Home Centre relocated to the Home Centre of the Helsinki Metropolitan Area in September, and the entire customer relationship organisation was restructured, which offered the personnel new career and position opportunities, among other things.

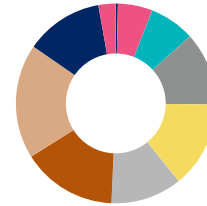
A competitiveness pact related to the company-specific collective agreement was signed with Trade Union Pro. In line with the national pact, the number of working hours was increased and the validity of the collective agreement was extended by one year.

### Distribution of employees among various tasks



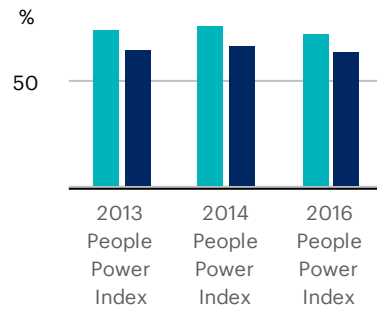
- Rental operations and customer service
- Building management
- Construction
- Investments
- Marketing and communications
- ICT and development
- Financial management and financing
- Other tasks

### Age distribution of employees



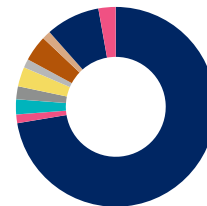
- Less than 20
- 20-25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51-55
- 56-60
- More than 60

### Personnel satisfaction



- VVO group
- Control group

### Geographic distribution of personnel



- Helsinki
- Hämeenlinna
- Jyväskylä
- Kuopio
- Lahti
- Lappeenranta
- Oulu
- Rovaniemi
- Tampere
- Turku

Operating environment

## Operating environment

The eurozone's economy has continued to develop favourably. The positive development of the United States' economy and rising inflation have caused an increase in interest rates. Economic development may be significantly affected by political uncertainty especially in Europe and the United States.

In Finland, the development of the economic outlook

has been cautiously positive. The development of the world economy is a key factor that influences the development of export and industrial production. The confidence of households and companies has strengthened. This was seen in, for example, demand for owner-occupied apartments and construction investments.

According to Statistics Finland, the prices of old apartments in apartment blocks and row houses rose somewhat throughout the country.

Operating environment › Megatrends

# Megatrends

Trend	Observations and conclusions	Effects on VVO Group
 <p><b>Urbanisation and internationalisation</b></p>	<ul style="list-style-type: none"> <li>• Population shift to the Helsinki Metropolitan Area is continuing and strengthening.</li> <li>• Regional separation in Finland is strengthening.</li> <li>• Within cities, the market is becoming divided.</li> <li>• Some customers are gravitating to city centres.</li> </ul>	<ul style="list-style-type: none"> <li>• The demand for rental housing is concentrating on VVO Group’s operating locations.</li> <li>• Increasing emphasis is being placed on micro-market knowledge.</li> <li>• Continuing attention is being paid to the customer potential constituted by the employees of foreign technology companies that gravitate to the Helsinki Metropolitan Area.</li> </ul>
 <p><b>Ageing population and smaller family sizes</b></p>	<ul style="list-style-type: none"> <li>• Family sizes are becoming smaller, especially among those living in rental apartments.</li> <li>• Immigration is continuing and multiculturalism is becoming established.</li> <li>• The ageing of the population is continuing.</li> </ul>	<ul style="list-style-type: none"> <li>• The average area of new apartments is already 45 sq m.</li> <li>• Senior citizens are using housing services.</li> <li>• Immigration is generating potential.</li> </ul>
 <p><b>New technologies and digitalisation</b></p>	<ul style="list-style-type: none"> <li>• Self-service that is not bound to time and place is increasing.</li> <li>• Smart homes and IoT are becoming more common.</li> </ul>	<ul style="list-style-type: none"> <li>• Customer self-service solutions are being expanded.</li> <li>• New solutions (big data, sensors, smartlocks, digital business) are being piloted.</li> <li>• Customer information is being utilised.</li> </ul>



### Individuality and sense of community

- Increasing emphasis is being placed on individuality, aesthetic requirements are becoming more demanding, and freedom of choice and the joy of personalisation are becoming more common.
- Sense of community has expanded virtually from the home building to a wider context (personal networks).
- The sharing economy, crowdsourcing, pop-up culture are becoming more common.
- Ownership plays a smaller role for the younger generation.
- Different experiments are being made in new development.
- Resident activities are being developed and sense of community is being supported.
- Resident activities are being differentiated by service class.



### Environment and sustainable development

- Construction control is becoming stricter, creating cost pressures in production and maintenance.
- Consumers are expecting companies to operate responsibly.
- Climate programme.
- Ecological solutions that provide best overall advantages.

Operating environment › Rental housing market

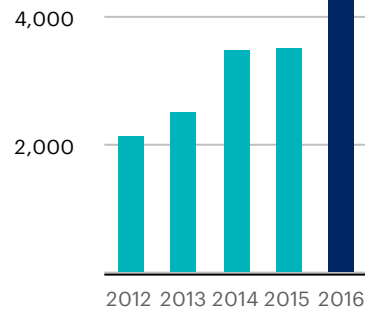
## Rental housing market

According to Statistics Finland, there are approximately 2.9 million apartments in Finland, roughly 2.6 million of them with permanent residents. Approximately 900,000 of the apartments are rental apartments, and 838,000 of these have permanent residents. Around 45 per cent of the apartments are in apartment buildings.

The majority of rental apartments in Finland are owned by private landlords. In addition to them, the operators in the rental housing market include professional housing investors, rental apartment owners, housing funds and municipal rental housing companies.

According to KTI Property Information Ltd's Market Review 2016, the past year will be recorded in history as a peak year for residential construction, mainly due to privately financed rental housing production. The property transaction volume also reached a record level in 2016. Apartment portfolio trade was active: the volume of portfolio transactions exceeded EUR 2 billion. Foreign investors are also interested in Finland.

### Developer-contracted start-ups of privately financed terraced houses and apartment buildings, rental housing



Source: The Confederation of Finnish Construction Industries RT (CFCI)

Demand for rental housing remained high in growth centres. However, differences between regions increased and, in some regions, supply and demand were in balance. The strongest demand focused on smaller apartments, that is, studios and one-bedroom apartments. The increase in rents slowed. According to Statistics Finland, the prices of old apartments in apartment blocks and row houses rose somewhat throughout the country. In the Helsinki Metropolitan Area, the increase in prices was higher than in other parts of the country.

New construction clearly focused on privately financed rental apartments. The market situation for the construction of owner-occupied apartments facilitated contract project negotiations in rental housing development. Continuing urbanisation can be seen in the growing number of apartment buildings being built in growth centres.

Slow zoning and the lack of suitable plots remain bottlenecks in operations.

Operating environment › Actively promoting developments in rental housing

## Actively promoting developments in rental housing

VVO Group's mission is to create better urban housing. The goal is to create more offering and new service solutions in rental housing and to make it easier to acquire rental apartments and to live in them.

The Group strives to contribute to increasing the number of rental apartments especially in the Helsinki region. Rental housing makes it easier for people to move around in pursuit of employment in urbanising Finland.



Business operations

## Business operations

VVO Group plc offers rental apartments and housing services in Finnish growth centres. The fair value of investment properties at the end of the review period was EUR 4.3 billion, including EUR 70.6 million classified into non-current assets held for sale. At the end of the review period, VVO Group owned 34,974 rental apartments.

The rental housing business is characterised by stability and predictability, which provide a good foundation for development.

VVO Group rents out apartments mainly under the market-based Lumo brand. The range of services related to the Lumo apartments is extensive and the services are constantly being developed. During the review period, the average rent for the 30,823 market-based Lumo apartments was EUR 14.44 per sq m per month. The average rent for Lumo apartments is increased by the renewal of the property portfolio due to strong investment activities. During the review period, the average rent for the 4,151 apartments rented at cost price (VVO) was EUR 12.88 per sq m per month.

**34,974**  
rental apartments

# Value creation

## Input and resources (internal + external)

### Financial capital

- Equity EUR 1,860 million
- Liabilities, financial risk management
- Fair value EUR 4.3 billion

### Production capital

- 34,974 apartments
- Property portfolio 2.0 million dwelling m<sup>2</sup>
- Plot reserve 125,000 floor m<sup>2</sup>
- Investments exceeding EUR 696 million

### Human resources and competence capital

- Committed personnel
- Training input
- Input related to well-being in the workplace

### Intangible capital

- Customer relationships, cooperation with residents
- Customer and consumer information, product development, brands
- Ways of working that create market differentiation, such as Lumo Home Centres and Lumo kotinyt.fi

### Relationship capital, structural

- Reliable partner network
- Cooperation with authorities
- Cooperation with the sector and other organisations

### Natural resources

- Consumption of heating energy 310 GWh
- Nearly 100 % of properties uses district heating
- Water consumption 3.1 Mm<sup>3</sup>
- Electricity consumption 42.4 GWh, carbon-neutral energy for property electricity
- Waste treatment efficiency improvements and pilot projects

### Business model



**Output**

- 649 new homes
- 312 renovated homes

**Effects on stakeholders**

- Extending range of rental apartments in good condition
- Safe tenancies
- Taxes
- Anti-grey economy work
- Dividends

**Output**

- 13,484 new tenancy agreements, of which 1,116 internal transfers
- 32 969 tenancies
- New services
- New concepts
- Tenant events and activities

**Effects on stakeholders**

- Smooth customer experience, easy everyday life
- Transparency, support for the sense of community
- Good place to work
- Indirect employment effect, 5,111 person-years
- Reliability when placing orders

**Output**

- CO<sup>2</sup> emissions 49,000 tonnes
- Waste

**Effects on stakeholders**

- Minimisation of energy consumption and emissions
- Reduction of landfill waste

Business operations › Better urban housing

## Better urban housing

VVO Group invests in rental housing in growth centres and develops new housing services. The Group is increasing the number of rental apartments especially in the Helsinki region. The new apartments will make it easier for people to move around in pursuit of employment in urbanising Finland.

Business operations › Better urban housing › Development of housing services and solutions

## Development of housing services and solutions

### Online store for rental housing

The Lumo online store enables customers to choose and rent an apartment immediately. The online service has been well received and more than a thousand apartments have already been rented through it.

The service has been further developed by complementing search criteria with new features that make it easier to find a suitable apartment. It is possible to search for an apartment based on the number of available parking places and limit the search entirely to new or renovated apartments. The customer can also sign up for a search alert that will send an e-mail message as soon as a suitable apartment becomes available.

**More than  
1,000  
apartments have  
been rented through  
the Lumo online  
store**

### A multi-use housing concept with more affordable overall rent

VVO Group constantly develops new housing solutions and services. A new housing concept, Lumo Kompakti, was designed for the needs

of urbanising Finland, especially the Helsinki Metropolitan Area. In terms of overall rent, it is a more affordable option as well as a good housing option for those who appreciate efficient multi-use space. Lumo Kompakti was also developed through crowdsourcing among young people. The first Lumo Kompakti property is planned for Tikkurila in Vantaa.

Compared to usual apartments, the space of Lumo Kompakti apartments has multiple uses: for example, in a 30-square metre apartment, not a single square metre is wasted. The apartments have a multi-use space covering more than three square metres. The bathroom-toilet and the multi-use space are separated from the foyer with sliding doors, making the entrance spacious and easy to modify. With the sliding doors open, the entire space is accessible.

### Car-share vehicles available for rent in several locations

In 2016, Lumo customers' opportunity for car sharing was expanded to most of the cities where VVO Group operates. Car-share vehicles are now available in Espoo, Helsinki, Jyväskylä, Lahti, Oulu, Tampere, Turku and Vantaa. As a Lumo benefit, the customers receive a substantial discount on renting a car-share vehicle after the first free use.

### IoT ensures optimal living conditions

VVO Group and the network operator Digita tested the collection and utilisation of apartment temperature and humidity data in a joint pilot project during the spring 2016. In the pilot project, approximately 200 apartments were equipped with wireless sensors measuring temperature

conditions. The goal was to adjust the systems in the property on the basis of the data collected so that living conditions stay optimal. Thanks to Digita's solution, data collection was extremely cost-efficient. After the pilot project, VVO Group and Digita signed an agreement on the commercial utilisation of the technique.

Business operations › Better urban housing › Cooperation with residents

## Cooperation with residents

The Board of Residents represents all VVO Group residents at the national level. The Board of Residents guides resident cooperation and takes part in the development of Lumo services. In addition, the Board of Residents, meeting 4–5 times a year, provides development proposals and statements as the representative of residential management.

Regional tenant events were held in Lahti, Lappeenranta, Jyväskylä, Kuopio, Oulu, Rovaniemi and Turku, where the event also welcomed guests from Pori and Rauma. The joint event of Helsinki, Espoo, Vantaa, Järvenpää, Hämeenlinna and Tampere was held in Vantaa.

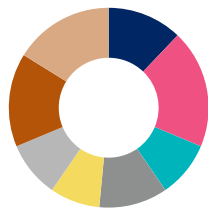
The interactive and discussion-focused events addressed the guests’

current living arrangements and their aspirations for the future. The topics discussed included the housing of the future and environmental and energy issues. The events, organised every other year, attracted some 550 guests.

In the summer, the major resident events again filled the Linnanmäki and Särkänniemi amusement parks. The national resident events culminated in the traditional Christmas concert tour in November–December.

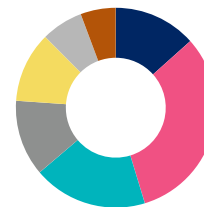
Lumo and FC Honka ry organised a football school on Tapiola Sports Park’s football fields in Espoo in the summer of 2016. The event was targeted at 7–12-year-old children. A skating school was organised for small children at Hartwall Arena, in cooperation with Virkeä-sponsored athletes. All in all, the resident events of 2016 attracted approximately 15,000 participants.

### Resident structure



- Young people (16-24 years)
- Singles (25-44 years)
- Singles (45-54 years)
- Couples without children
- Child families
- Single parents
- Seniors (55-64 years)
- Seniors over 65 years

### Rental housing applications by type of apartment



- 1 room 1,646 units
- 1 room and 2 rooms 3,919 units
- 2 rooms 2,271 units
- 2 rooms and 3 rooms 1,513 units
- 3 rooms 1,402 units
- 3 rooms and 4 rooms 830 units
- 4 rooms+ 701 units



Business operations › Better urban housing › A reliable landlord

## A reliable landlord

A good customer experience, encompassing easy and effortless service, is the guiding principle behind VVO Group's operations. Dialogue with residents and close cooperation with residents' associations increase safety and comfort.

Every year, the Group executes an extensive client satisfaction survey. In the 2016 survey, the clients considered the Group's key strength to be the good location and quality of apartments. The majority of the respondents, 71 per cent, considered the quality of the apartments competitive.

Customer service, building management and maintenance are evaluated in continuously executed surveys for new customers. The results received from the survey are very good. For example, customer service during the renting of an apartment scored 4.27/5. The survey's Net Promoter Score (NPS) was 35.

Business operations › Housing investments in growth centres

## Housing investments in growth centres

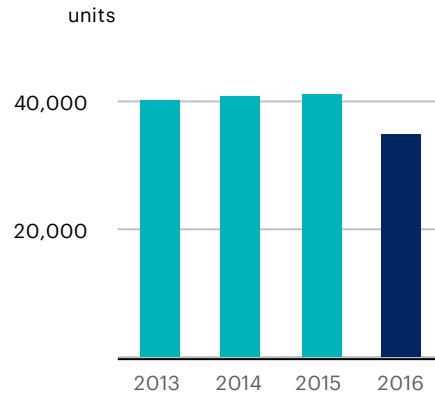
In five years, the company has invested nearly EUR 1.5 billion in market-based rental housing. In 2016, the Group's investments in Finnish rental housing were EUR 696 million, and at the end of the review period, there were 1,536 new rental apartments under construction, of which 1,220 were in the Helsinki region.

The construction of new properties, the acquisition of existing ones and renovation develop and increase the supply of rental housing in the areas with strongest demand. The Group manages and develops its properties through long-term investments, cost-efficient maintenance and repairs. Our focus is on ensuring that the value of our property portfolio increases and that our properties are available for rent.

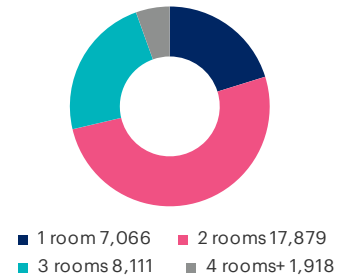
# 696

**EUR million  
investments in  
Finnish rental  
housing**

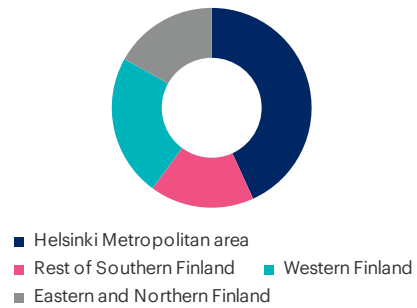
### Number of apartments



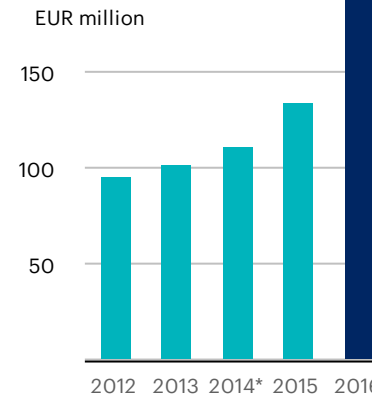
### Apartment distribution



### Nationwide apartment distribution



### Net rental income (Lumo segment)



\*As of 2014, the Group adopted IFRS for its financial reporting.

Business operations › Housing investments in growth centres › Real estate development and renovations

## Real estate development and renovations

In 2016, VVO Group developed the cost efficiency of maintenance and repairs, among other things. Especially the cost efficiency of apartment renovations and repairs improved, and cost control was developed. In addition, the efficiency of waste management at renovation and repair sites was increased.

The Group started using a procurement system. Economies of scale were leveraged in smaller expense items that previously were outside the scope of centralised procurement. The terminating cooperation agreements regarding apartment renovations and repairs, pest control, heating, plumbing and electrical maintenance and annual ventilation machinery maintenance were renewed through competitive tendering.

In 2016, the adjustment of heating on the basis of [the real-time monitoring of apartment temperatures](#) was adopted more extensively in the property portfolio. This adjustment method makes it possible to maintain constant apartment temperatures under different weather conditions.

### Real estate development and renovation projects

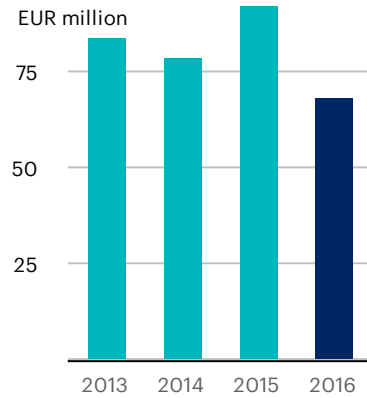
A contract was signed with Lujatalo Oy regarding the building contract of the Saariniemenkatu 6 property, located in the Hakaniemi district of Helsinki. The Group converts the property into high-quality Lumo apartments. The interior

and building technology of the property will be fully renovated. The renovation will be completed in the autumn of 2017.

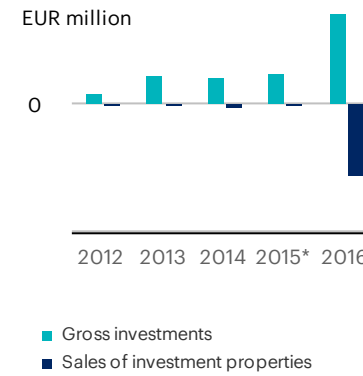
The City of Espoo reserved an area for VVO Group and SRV for the planning of the Kivenlahti Metro Centre. According to plans, the area would feature approximately 76,000 square metres of housing and roughly 56,000 square metres of business, office and service premises as well as a bus terminal and a park-and-ride car park. The total number of apartments to be built in the area is approximately 1,200.

VVO Kodit Oy has signed a contract with MM-Yritysrakentaja Oy regarding the conversion of the office building located at Lönnrotinkatu 30 in Helsinki, known as Eliaksentalo, into rental apartments and business premises. The Eliaksentalo property, centrally located in Helsinki's Kamppi district, will hold 41 privately financed high-quality Lumo rental apartments.

### Repairs and renovations

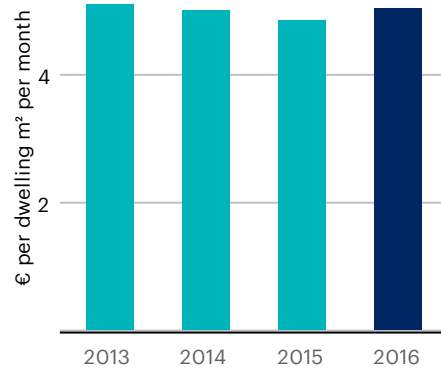


### Gross investments and sales of investment properties



\*The calculation method of gross investments has been changed. Previously, gross investments in the cash flow were presented; starting from 31 Dec. 2015, investments on an accrual basis are presented.

### Property portfolio maintenance expenses



Business operations › Housing investments in growth centres › New development, acquired and divested properties

## New development, acquired and divested properties

### New development

VVO Group signed an agreement with Pohjola Rakennus Oy Uusimaa on the construction of rental apartments in Helsinki, Vantaa and Hyvinkää, with a total value of nearly EUR 50 million. All in all, this agreement involves the construction of 263 Lumo rental apartments, most of which will be completed during the next two years.

Peab and VVO Group signed an agreement on the construction of two privately financed apartment buildings, consisting of 190 rental apartments and a parking facility, in Marinkallio, Espoo.

Skanska and VVO Group agreed on the construction of four apartment buildings at Pyhtääntorventie 25 in the Aerola residential area in Veromies, Vantaa. The 139 new privately financed rental apartments will be completed in February 2018.

VVO Kodit Oy and Lehto Group Plc signed a cooperation agreement on the construction of more than 100 rental apartments in the Helsinki Metropolitan Area.

VVO Kodit Oy and Temotek Oy, based in Oulu, signed a cooperation agreement on building 73 Lumo apartments in the Linnanmaa district

in Oulu. The apartments will be completed in 2017. The site is located in the immediate vicinity of Technopolis Oulu and the campus of the University of Oulu.

Lemminkäinen and VVO Group signed an agreement on the construction of 67 rental apartments at Kahvipavunkuja in Helsinki's Vuosaari district. The apartments will be completed in the autumn 2017.

### Acquired properties

On 4 July 2016, VVO Kodit Oy acquired ICECAPITAL Housing Fund II, which owns 2,274 rental apartments. The apartments covered by the transaction are market-based, and most of them are located in Helsinki, Espoo, Vantaa and Tampere.

VVO Group signed a preliminary agreement on the acquisition of seven properties currently occupied by Metropolia University of Applied Sciences. VVO Group's VVO Kodit Oy signed a preliminary agreement on the purchase of properties at Onnentie 18, Sofianlehdonkatu 5, Tukholmankatu 10, Agricolankatu 1–3, Albertinkatu 40–42, Abrahaminkatu 1–3 and Bulevardi 29–31 with the City of Helsinki and Merasco Real Estate Ltd Oy. Under the terms of the agreement, the fixed sales price is set at EUR 80.9 million, as determined by a valuation based on existing building rights to develop further commercial provision. The sales price may be adjusted in the event that the building rights are amended following a revision of the local plan as applied for by the purchaser.

VVO Kodit Oy signed a preliminary agreement with Rakennus

Omera Oy and e-House Oy with regard to the entire share capital of Helsingin Ristiretkeläisenkatu 19. The site will consist of 30 new Lumo rental apartments.

apartments, located around Finland, to a company managed by Avant Capital Partners. The transaction was completed on 31 January 2017.

### **Divested properties**

Towards the end of the year, VVO Group signed an SPA whereby its various group companies sold a total of 1,344 non-restricted

Business operations › Housing investments in growth centres › Cooperation network

## Cooperation network

The anti-grey economy models used by the company exceed legislative requirements in many respects. We continuously monitor the fulfilment of contractor obligations for all of the companies in our supplier network through the Reliable Partner service at the tilaajavastuu.fi website. Active anti-grey economy work is an essential part of our operations.

To support the implementation of purchasing principles, new purchasing guidelines were prepared and they are applied to all of VVO Group's purchasing. The Group will observe sustainable principles in all purchasing and seek to conserve raw materials, energy and natural resources wherever possible. The Group will observe sound business practices at all times and operates in accordance with the ethical principles in relation to all suppliers and contractors.

### Tax footprint and indirect employment effect

VVO Group's estimated taxes and tax-like charges in 2016 exceed EUR 100 million. As estimated on the basis of the 2016 performance in RT's/VTT's report, the share of taxes and tax-like charges in VVO Group's EUR 696 million investments in 2016 was 41 per cent; in the entire procurement chain, this amounts to approximately EUR 285 million including the tax effect of the properties acquired during the financial year.

In addition to providing employment to its personnel, VVO Group is a significant indirect employer as a purchaser and investor. The indirect employment effect of VVO's property maintenance, cleaning, and renovation and building contracting totalled approximately 5,111 person-years in 2016.

**5,111**  
indirect  
employment in  
person-years

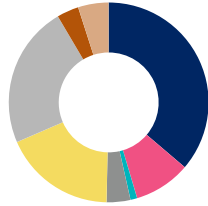
### An occupational safety index for construction sites

TR measurements (working conditions assessment) are a means of observing occupational safety on construction sites. These measurements monitor key factors affecting on-site accidents. From VVO Group's perspective, these measurements are important for maintaining occupational safety at a good level. The Group has collected this information as from 2013.

In the tender stage, the project manager sets the minimum level of TR measurements. At the site start-up meeting, the target levels are specified with the contractor. At monthly construction site meetings, these TR figures are compared with actual figures measured on the site.

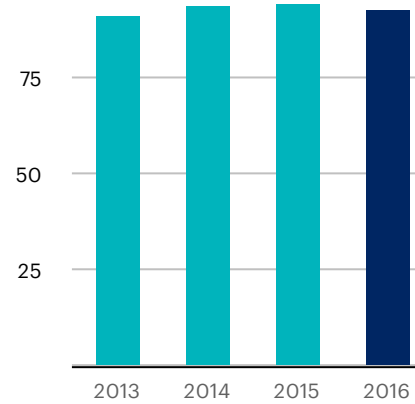


### VVO Group's tax footprint 2016, EUR million



- Income taxes 36.7
- Property taxes 1.1
- Transfer taxes 9.3
- Employer contributions 3.9
- VAT not remitted included in investments 18.4
- VAT not included in other procurements 23.3
- VAT remitted 3.6
- Withholding tax for fees 5.0

### TR measurements



Business operations › Taking the environment into consideration

## Taking the environment into consideration

VVO Group's most significant environmental impacts are associated with construction and property maintenance. The most significant impact comes from the carbon dioxide emissions caused by our housing stock's energy consumption. In Finland, the energy used by buildings accounts for 39 per cent of total energy consumption, which corresponds to 30 per cent of greenhouse gas emissions.

VVO Group has long traditions in energy management. Consumption monitoring has been in use since the 1980s and the first environmental programme was launched in the 1990s. We boost the energy efficiency of our property portfolio with maintenance and operational measures without compromising on residents' comfort. Annual property maintenance costs total approximately EUR 116 million, of which just over a third is spent on energy. Greater energy efficiency curbs rises in property maintenance costs and reduces greenhouse gas emissions. If VVO had not used its energy wisely, our costs would have risen dramatically since the turn of the millennium due to increased energy prices.

In 2016, the temperature-corrected consumption of heating energy in VVO Group's properties decreased by 2.4 per cent (2015: -0.8%) when compared to the previous year. Water consumption increased by 1.6 per cent (-1.1%) and electricity consumption decreased by 0.3 per cent (-2.6%).

CO2 emissions caused by heating energy production

for VVO's properties were approximately 49,000 (54,000) tonnes. VVO Group seeks to alleviate the environmental impacts of energy consumption by using carbon-neutral energy for property electricity. District heating is used in 99 per cent of VVO's properties.

The balance between healthy and comfortable living conditions and smart energy consumption is sought by increasing heat recovery. In the coming years, VVO Group will use heat pumps to increase heat recovery ventilation in its existing housing stock. In addition, the monitoring of living conditions has been increased significantly in recent years. Room temperatures and ventilation are automatically monitored in new properties. In older properties, monitoring is carried out with regular sample measurements; however, different IoT-based measurement systems have also been taken into use. This increased volume of data helps to ensure energy-efficient settings in the properties and optimum indoor air conditions in the apartments.

**99%**  
of properties use  
district heating

### Renovation offers good opportunities to improve energy efficiency

The Finnish Energy Efficiency Act obligates major companies to conduct an energy audit at a four-year interval. The energy audit determines the energy consumption profile of all company or group sites and identifies opportunities for saving energy.

According to VVO Group's energy audit, the most efficient way to improve

renovation-related energy efficiency is to take improvements into account as a part of repair and renovation activities. Improving the energy efficiency of an individual structural component is considerably more cost-efficient in connection with other repairs than as separate energy repair actions. Another cost-efficient method of improving the energy efficiency of a property is to monitor consumption during use and maintenance and to take use-related technical measures.

As part of our renovations and new construction projects, VVO Group contributes to the development of efficient lifecycle solutions for residential buildings. Stricter construction regulations also steer us towards more energy-efficient solutions.

### VVO Group participating in environmental agreements

VVO Group will continue its climate partnership agreement with the City of Helsinki. VVO Group has also committed to following the Rental Property Action Plan (VAETS), which set a 2016 heating energy savings target of seven

per cent compared to 2009. The savings targets for 2016 have already been achieved and, with regard to property electricity consumption, have even been exceeded. VVO Group decided to join the VAETS II agreement on 14 October 2016. The housing investment company pursues energy savings of 7.5 per cent by 2025.

VVO Group is the only Finnish real estate company in the Climate Leadership Council. As a member, VVO Group has an opportunity to influence climate issues and public dialogue. CLC is also a source of innovation and practical solutions. In return, VVO Group provides solution developers with pilot sites and views from the field of everyday housing operations.

In 2016, Lumo-kotikeskus in Tampere received the right to use WWF's Green Office label. The agreements on the joining of the Tampere and Hämeenlinna Lumo-kotikeskus offices in the Green Office environmental system were signed in 2015. The Group head office in Helsinki has been Green Office certified since the inception of the programme in 2002.

### Energy consumption

	2016	2015
Heating energy, total consumption (GWh)	313	346
Heat index, entire housing stock (kWh/rm3)	36.8	39,0
Water, total consumption (l/m3 building volume)	3.1	3,6
Water consumption (l/m3 building volume)	346	347
Property electricity, total consumption (GWh)	43.1	50,1
Property electricity consumption (kWh/m3 building volume)	4.8	4,8
CO <sub>2</sub> (tonnes)	49,000	54,000