



VTT
75
years



VTT COMPANY PROFILE



VTT TECHNICAL RESEARCH CENTRE OF FINLAND LTD



ABOUT US

VTT Technical Research Centre of Finland Ltd is one of the leading research and technology organisations in Europe.

We use our scientific and technological excellence to provide innovation services for our domestic and international customers and partners.

OUR MISSION

We make an impact through scientific and technological excellence.

VISION

A brighter future is created through science-based innovations.

MISSION

We help customers and society to grow and renew through applied research



CHALLENGES OF GLOBAL SIGNIFICANCE



**CLIMATE
ACTION**



**RESOURCE
SUFFICIENCY**



GOOD LIFE



**SAFETY AND
SECURITY**



**INDUSTRIAL
RENEWAL**



ANTTI VASARA PRESIDENT & CEO:

“

The impact of VTT activities is based on our scientific excellence. We search for and create tomorrow's opportunities today. Wellbeing for people, new competitiveness for companies, sustainability for the world – these are our goals.

”





Suomi
Finland
100



We have 75 years' experience in supporting our clients' growth with top-level research and science-based results.

Learn more: www.vttresearch.com,
#vttpeople, @VTTFinland

FINLAND
team

* Loikkanen, T. et al. Roles, effectiveness, and impact of VTT. Towards broad-based impact monitoring of a research and technology organisation. 2013. VTT, Espoo. VTT Technology 113. 106 p. + app. 5 p.

SERVICES WE OFFER

We offer our customers access to our cross-disciplinary technological and business expertise, unique research infrastructure and comprehensive partnership networks.

WE FOCUS ON TECHNOLOGIES OF THE FUTURE!



BIOECONOMY



**HEALTH AND
WELLBEING**



**DIGITAL
SOCIETY**



**LOW CARBON
ENERGY**



**SMART
INDUSTRY**



**SUSTAINABLE
AND SMART
CITY**



**BUSINESS
DEVELOPMENT**



WE HAVE UNIQUE R&D INFRASTRUCTURE



**A PILOT-SCALE RESEARCH
ENVIRONMENT FOR FIBRE
PROCESSES**



BIORUUKKI



**BIOTECHNOLOGY AND
FOOD RESEARCH
PILOTING ENVIRONMENT**



**CENTRE FOR
NUCLEAR
SAFETY**



**ENGINE AND
VEHICLE
LABORATORY**



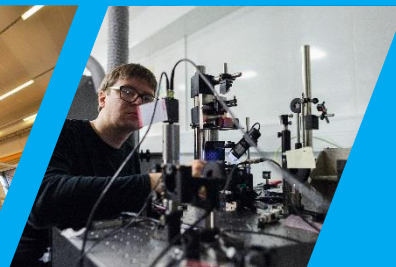
MICRONOVA



PRINTOCENT

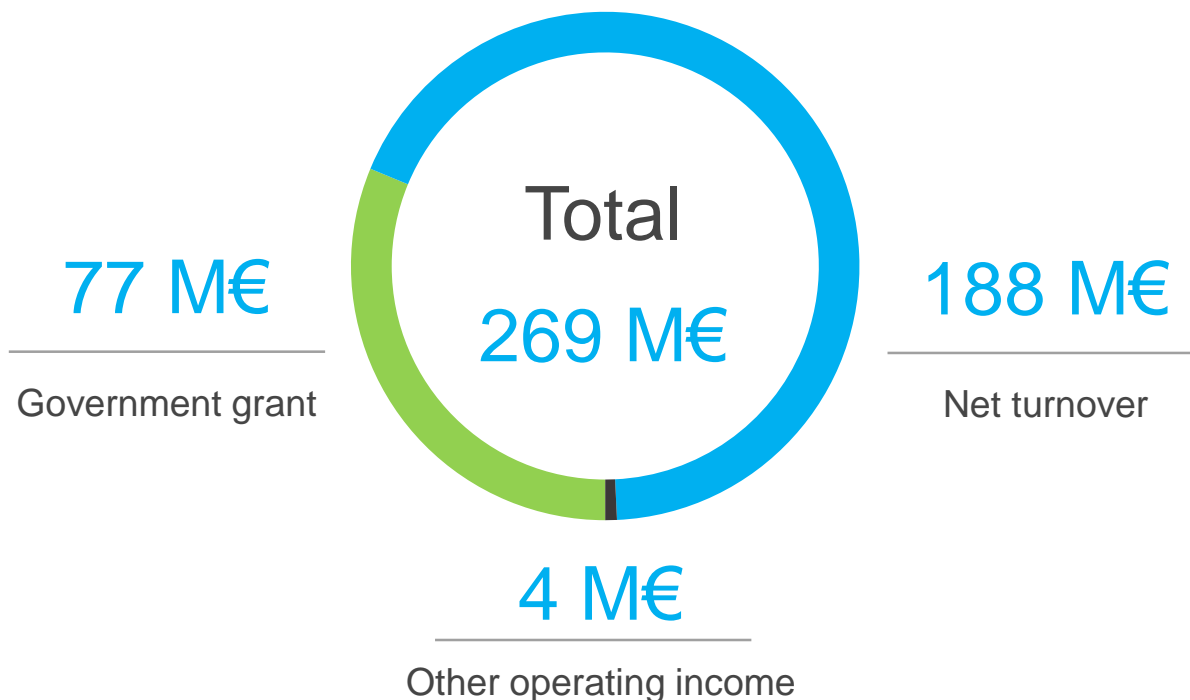


ROViR

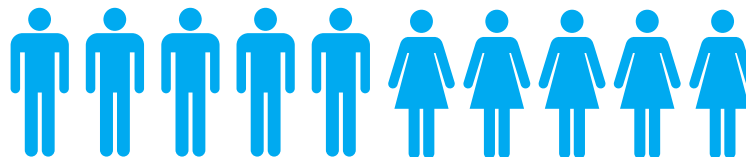


**VTT MIKES
METROLOGY**

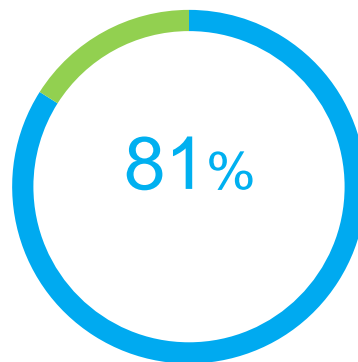
VTT GROUP NET TURNOVER AND OTHER OPERATING INCOME 2016



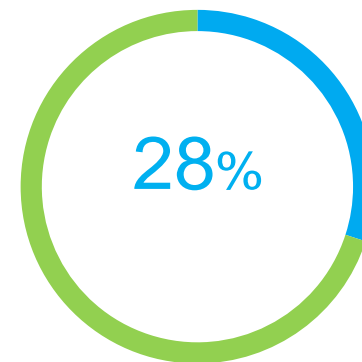
PERSONNEL AT VTT 2016



Total personnel
in 2016 (VTT)

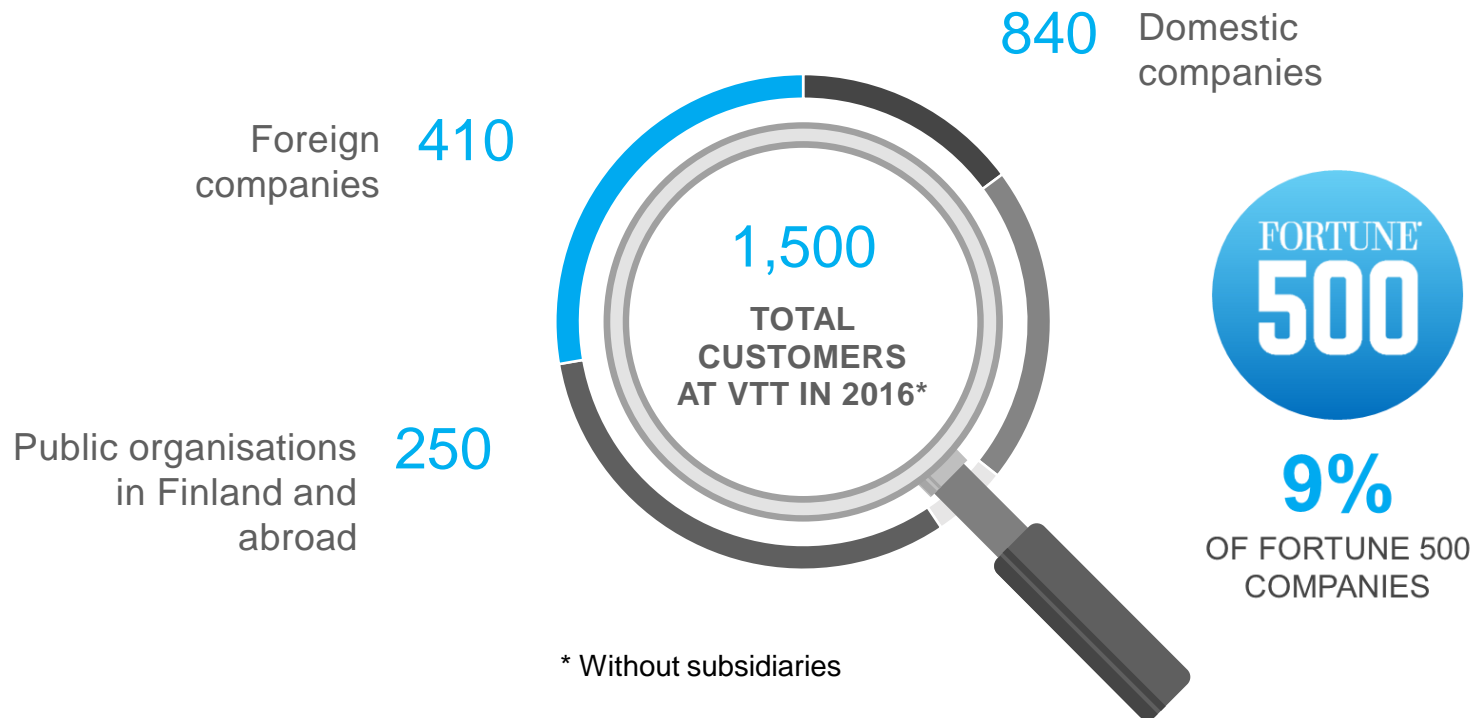


University
degree

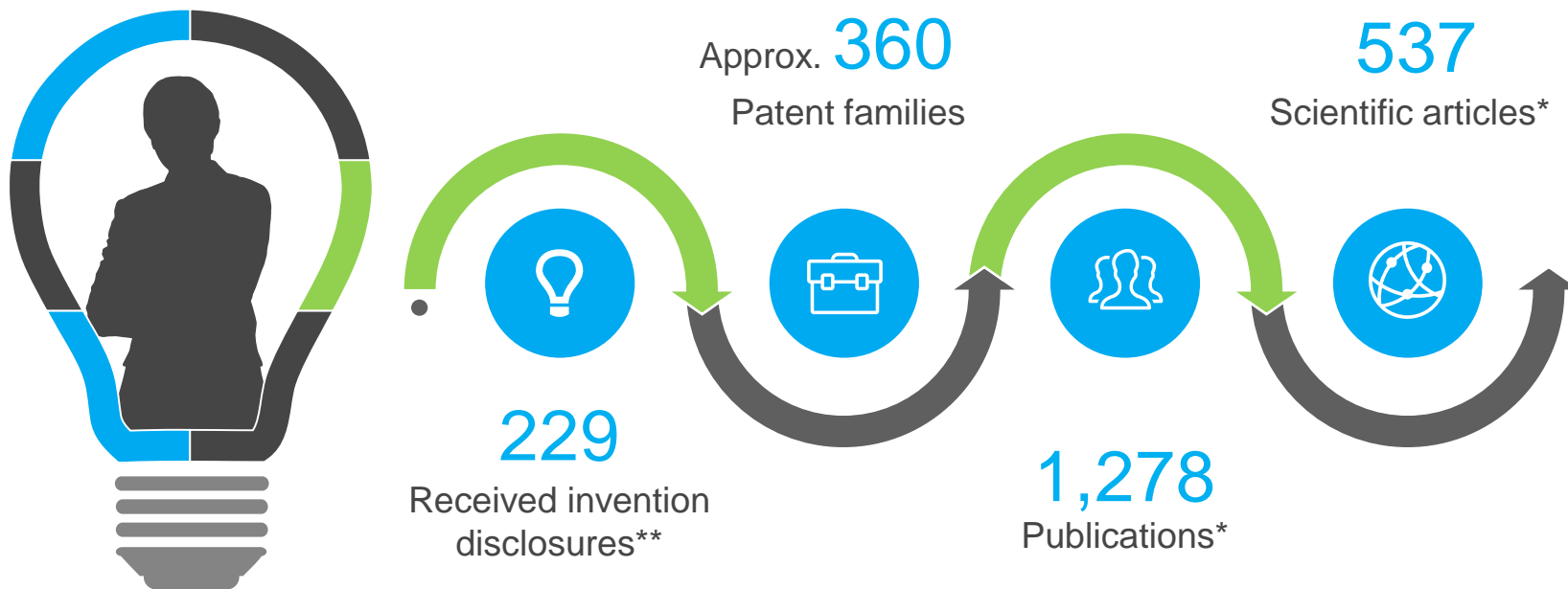


Doctors and
licentiates

OUR CUSTOMERS 2016



IPR AND PUBLICATIONS IN 2016



* VTT Group

** Parent company

Ministry of Economic
Affairs and Employment

VTT Board



Antti Vasara
President &
CEO



Petri Kalliokoski
Executive Vice
President,
Deputy CEO



Erja Turunen
Executive Vice
President



Jussi Manninen
Executive Vice
President

**Business area:
KNOWLEDGE
INTENSIVE PRODUCTS
AND SERVICES**

Research areas

- Sensing and integration
- Connectivity
- Data-driven solutions
- National Metrology
Institute VTT MIKES
- Micronova manufacturing
services

**Business area:
SMART INDUSTRY
AND ENERGY
SYSTEMS**

Research areas

- Lifecycle solutions
- Nuclear safety
- Smart energy and
transport solutions
- Digital engineering
- Business innovation
foresight

**Business area:
SOLUTIONS FOR
NATURAL RESOURCES
AND ENVIRONMENT**

Research areas

- Industrial biotechnology
and food solutions
- Biomass processing and
products
- Sustainable energy and
chemical technologies

**FINANCE &
BUSINESS
SUPPORT**



Tanja Huoponen
Chief Financial
Officer (CFO)

**HUMAN
RESOURCES**



Kirsi Nuotto
Senior Vice
President

**MARKETING
AND
COMMUNI-
CATIONS**



Jussi Ollila
Senior Vice
President

**STRATEGY
& BUSINESS
INTELLIGENCE**



Katri Kallio
Vice President

VTT SUBSIDIARY COMPANIES

VTT Expert Services Ltd, Laura Apilo, CEO
VTT Ventures Ltd, Antti Sinisalo, CEO
VTT International Ltd, Matias Markkanen, CEO
VTT Memsfab Ltd, Howard Rupprecht, CEO



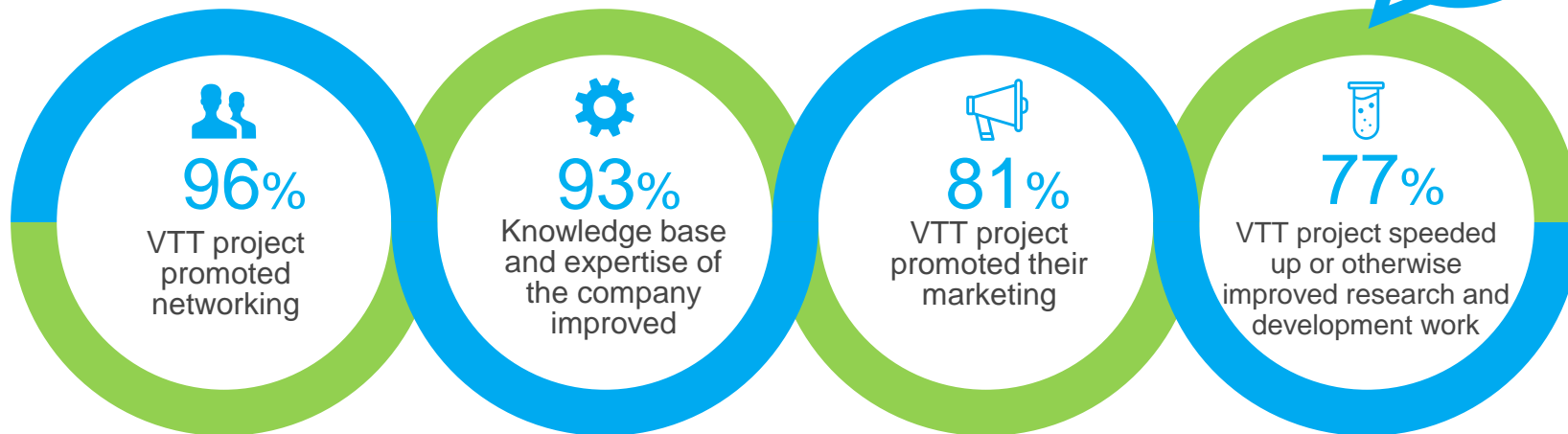
Anu Vaari
Senior Scientist,
personnel
representative

OUR HIGH PROFESSIONAL TEAMS

WHAT CLIENTS SAY ABOUT US

IMPACT OF VTT PROJECTS

Share of survey respondents who had this benefit as their goal in their VTT project and felt that the benefit was generated in the project:



SOME OF OUR CUSTOMERS AND PARTNERS



75 YEARS OF INNOVATIONS



16.1.1942: President Risto Ryti signed the **act on the Technical Research Centre of Finland**.

Fire Technical Laboratory involved in **military research**.

Quality inspection and testing of products **supported the home front**.

1940

1950



Research needs of industry grew. VTT had over 6,000 industry testing assignments per year in 1955.

The Laboratory of Construction Technology developed **new building materials**.

VTT redefined its mission and goals to be able to do **scientific research in addition to testing**.



1960

1970

Malting and industrial processes were studied in test brewery.

New sawmill technique saved wood material and improved the finish of sawn **timber**.

Results of corrosion research were applied in cars and ships.



Fermentor shed light on biotechnical processes.

Corrosion conditions at **nuclear power plants** were simulated.

VTT got a **new main building** in Otaniemi. State funding and commercial research were separated.



1980

1990

VTT played an active role in the development of **mobile communications**.

CAD-CAM technology was introduced.



Electronics and information technology research were the engine of development.

Biotechnology became a growth field.

Virtual modelling supported product development.



2000



IT and electronic applications and systems form an essential part of operations in all fields.

VTT's central research subjects include **low-carbon energy technologies, lean production and eco-efficient environment.**

VTT has done pioneering work in the **development of biofuels.**

New wired and wireless communications methods, RFID and mobile phone solutions were developed.

Construction energy solutions became an area of special interest in the 2000s.

Printed Intelligence is an example of the benefits gained by focusing in large research programmes.

New possibilities are opened by **nano-technology.**



PRESENT



VTT continues to bolster the development of the **Finnish forest industry's production, technology and new products.**

IT solutions and safety are in a key position with the goal of creating the **transport system of the future.**

Innovations enabling **early diagnostics of different diseases** are based on research that combines diagnostics competence with information technology, electronics and behavioral science.

We aim to keep Finland on the top of the **progressing digital disruption.**

Through utilisation of **Internet of Things**, new **manufacturing automation solutions** and **intelligent energy systems** we create competitiveness for industry and wellbeing for people.



EXCELLENCE FROM VTT

Built on **our scientific and technology excellence, partnerships, unique research infrastructure and IPR**, we collaboratively develop innovations that are commercially competitive and reach the market at the right time.

◀ TOMORROW ▶



IMPACT FROM VTT

We are focusing our research on the following societal challenges and growth opportunities:

- **Climate action**
- **Resource sufficiency**
- **Good life**
- **Safety and security**
- **Industrial renewal**



VTT
75
years

Read about our RESEARCH RESULTS

www.vttresearch.com





VTT 100

Let's join forces to tackle significant industrial and societal challenges.

2017 will mark 100 years of Finnish independence. VTT will contribute to this special year by taking up some key challenges of industrial and societal importance. To find solutions, we wish to build creative collaboration with our partners and clients. We have identified five **Lighthouse** areas that guide our work in the long term:



Climate Action



Resource Sufficiency



Good Life



Safety and Security



Industrial Renewal

Read more:

www.vtt.fi/vtt100

We are now looking for **forward-thinking companies to host innovation challenges** around these Lighthouse areas. For 75 years, VTT has blazed a trail of incredible innovation. Where will our country stand in another 25 years, when we celebrate the VTT centennial? That is up to all of us, our hard work, our will to prosper.



TECHNOLOGY FOR BUSINESS

“ WE MAKE IT HAPPEN! ”

#VTTpeople
@VTTFinland