

TAMPERE REGION

# FACTS & FIGURES

Essential information on the City of Tampere and the Tampere Region

# 2011

NEW  
FACTORY

Lasers

Energy  
Technology

Digital

Hydraulics

TISSUE  
ENGINEERING

Intelligent

UBIQUITOUS  
COMPUTING

Nanotechnology

Machines

BIOTECHNOLOGY

## One of Finland's fastest developing regions

■ ■ ■ The City of Tampere is the third largest city in Finland, and the Tampere Central Region – comprising Tampere and the neighbouring municipalities Kangasala, Lempäälä, Nokia, Orivesi, Pirkkala, Vesilahti and Ylöjärvi – is the second largest growth centre in Finland with 350,000 inhabitants. 490,000 people live in the Tampere Region as a whole.

Some 10,000 non-nationals live in the Tampere Region. The foreign languages most spoken are Russian, Arabic, English, Estonian, Persian and Chinese.

■ Two thirds of Finns live within a two hundred kilometre radius of Tampere.

### Jobs in the Tampere Region by industry



■ The region has about 30,500 places of business. The total revenue of business is about 25 billion euros. Industry accounts for 40% of this revenue. The main branches of industry are technology and forest industry.

The largest private employers include Nokia, Metso, UPM, Metsäliitto,

Sandvik, Itella, Saarioinen, Pirkanmaan Osuuskauppa and Nokian Tyres.

The Gross Domestic Product at market prices per capita is approximately EUR 33,500. The GDP index (EU 27=100) is 112.9.

## pioneering spirit

■ ■ ■ The heart of the region, the City of Tampere, was founded by King of Sweden **Gustav III** in 1779. Tampere has been an industrial pioneer, and by the beginning of the 20<sup>th</sup> century was the largest industrial city in Finland.

■ Finland's first paper mill started operations in 1783

■ Finland's first large-scale industrial enterprise, the cotton factory by **James Finlayson**, was established in 1820

■ The first electric light in the Nordic countries was lit in Finlayson's contemporarily high-tech production facilities in 1882

■ The manufacturer of grinding machines and water turbines Tampereen Pellava- ja Rauta-Teollisuus Oy (Tampella) was established in 1861

## WORLD'S FIRST

### High-tech innovations from Tampere include

- NMT phone call 1974
- biodegradable implant 1984
- electromechanical film 1985
- GSM phone call 1991
- walking forest machine 1995
- internet phone call 1995
- Personal Digital Assistant 1996
- game and image phones 2001
- fog screen 2003
- automated container terminal 2004
- preservative-free prostaglandine eye-drop for glaucoma treatment 2008
- new jaw bone from a patient's fat cells was grown using stem cell technology 2008
- antibiotic-releasing biodegradable implant 2009

### Innovative thinking:

Ski jump performance measured by the smart boot ■ A biodegradable ecological tee for golfers ■ A pocket-size video projector with new laser technology

# ed

■ ■ ■ In the Tampere Region, close to 70% of over 15-year-olds have completed secondary, tertiary or researcher-level education.

■ Some 10 million items are borrowed from libraries each year.

### Higher education institutions are

- The University of Tampere
- Tampere University of Technology
- TAMK University of Applied Sciences
- HAMK University of Applied Sciences
- The Police College of Finland.

■ **Some 40,000 students study at these institutions.**

■■■ Tampere remains a strong industrial city. Versatile research and education and cooperation between companies and universities have maintained and further developed the competitiveness of the region's industry. The region is home to many internationally renowned companies, including

- Nokia
- Cargotec
- Sandvik Mining and Construction
- Metso
- Glaston
- John Deere Forestry
- Bronto Skylift
- Avant Tecno
- Agco Sisu Power
- Nokian Tyres
- UPM
- Santen

The Tampere Region has systematically developed its competence in strategic clusters, using means such as centre of expertise programmes and programme-

based economic development policy. In Finland, strong areas of competence have been developed through the national centre of expertise programme since 1994. For the programme period 2007–2013, the Tampere Region Centre of Expertise covers seven fields:

- Intelligent Machines (National coordination)
- Ubiquitous Computing (National coordination)
- Digital Content
- Energy Technology
- Nanotechnology
- Health Technology
- Biotechnology

In programme-based economic development policy, Tampere has **Creative Tampere** (2006–2011) accelerating the emergence of creative economy.

The thematic areas of the programme are creative industries, innovations and entrepreneurship, and attractive city. One of its key tasks is to increase the diversity

and extent of the innovation environment in Tampere and promote open innovation activities.

The programme is progressing well. During the first six years of the 2000s, the number of creative industries business branches in Tampere saw an overall increase of 12 percent. Since the beginning of the Creative Tampere programme, growth has been 25 percent in two years. The number of personnel employed in creative industries has doubled, and turnover has grown four times faster than creative industries elsewhere in Finland.

The programme aims to achieve a project portfolio of 40 million euros and a 100 million euro impact on the development of creative economy by the year 2011.

■ **The Creativity World Forum Reverse Mission will be arranged in Tampere in 2011, and the Creativity World Forum in 2013.**

# education

The TAMK University of Applied Sciences is Finland's third largest university of applied sciences, with 10,000 students. The university's business administration degree programme has been selected as one of the centres of excellence in education in Finnish universities of applied sciences for the years 2010–2012. TAMK also came top in a survey comparing the images of Universities of Applied Sciences in Finland.

## A unique practice area for police

The Finnish police force is trained in Tampere. Crime investigation as well as situations requiring the use of force are practiced in an exercise town and building equipped with state-of-the-art technology. There is no comparable learning environment anywhere else in the world.

## International school starts up in stages

The Finnish International School of Tampere (FISTA), a novel international school founded on the strengths of the Finnish education system, will launch in stages between 2011 and 2014. The school is for grades 1 to 9. The City of Tampere is also to arrange English-language preschool activity in connection with the school. The international school will also offer preparatory training in English language, intended for foreigners living temporarily in the Tampere Region.

# research

■■■ Centres of Excellence in Research appointed by the Academy of Finland:

### At the University of Tampere

The Finnish Centre of Excellence in Research on Mitochondrial Disease and Ageing (FinMIT) 2002–2007, 2008–2013

### At Tampere University of Technology (TUT)

Centre of Excellence in Signal Processing 2006–2011

TUT's Department of Intelligent Hydraulics and Automation and the Helsinki University of Technology Automation Technology Laboratory jointly form the Finnish Centre of Excellence in Generic Intelligent Machines Research (GIM) 2008–2013.

The Inverse Problems research group at the joint Mathematics Centre of the University of Tampere and Tampere University of Technology is part of a National Centre Excellence 2006–2011.

### The VTT Technical Research Centre of

**Finland**, which is the largest technology research organization in Northern Europe, develops and applies technologies and enhances their utilization under commission by customer companies and the public sector. VTT takes part in international research and innovation activity in cooperation with the world's leading technology research organizations.

## Research and development projects,

**Neogames** is a developer of games business, research and training and a national centre in its field which produces business and internationalization services for companies. A local development programme, **Manse Games**, supports the growth of start-ups.

**TAUCHI – the Tampere Unit for Computer-Human Interaction** conducts multidisciplinary research into human-technology interaction and its development, harmonizing the potential of technology with human abilities, needs, and limitations.

**The Finnish Centre for Open Source Software COSS** develops business based on open source technology and operating models. Key international cooperation partners include open source centres in the Nordic countries and the EU as well as South Africa.

**The Regea Institute for Regenerative Medicine** studies and produces treatments based on cell technology and tissue engineering. In addition, Regea serves hospital districts with Finland's first EU directive compliant multi-tissue bank.

The Centre for Vaccine Research and Immunology, **Vactia**, was established in Tampere due to the emergence of Finland's most significant concentration of research into vaccines and infectious diseases. Vactia brings together more than 300 researchers and a project portfolio of some 30 million euros.

The **SILK** Research, Product Development and Innovation Centre of Ophthalmology is a cross-disciplinary competence centre for diagnostics and new treatment methods for eye diseases.

The Finnish Centre for Alternative Methods, **Ficam**, was established at the University of Tampere Medical School in 2009. Ficam is Finland's first centre for non-animal alternatives in testing. Using human cells gathered under license at a tissue bank, the centre is developing methods to almost entirely replace animal testing in the future.

Tampere University of Technology and the University of Tampere are cooperating in the **MediTech**. In the beginning, the unit focuses on stem cell technology, biomaterials, biosignals and imaging.

## INNOVATION! But how?

■■■ **New Factory** has been established in Tampere to bring innovations to fruition.

It is open to all industries and players: businesses, universities, the public sector and citizens. The factory comprises the **Demola**, **Protomo**, **Suuntaamo** and **Startupstairs** development environments. The factory is operated by Hermia Ltd.

New Factory provides faster, more agile and efficient processes to implement customer-driven and customer-oriented product and service development projects and pilots with a low level of risk and costs. The aim is to generate new business and jobs.

During the year 2010 there were almost 100 projects in the New Factory.

■■■ **Demola**, which brings together the ideas and expertise of students and companies, has received an esteemed the Assembly of European Regions (AER) Innovation Award 2010.  
■ [www.uusitehdas.fi](http://www.uusitehdas.fi)

# expertise

expands, cooperation extends

### Increasingly efficient solar cells

■■■ **A new solar cell development programme** has been launched at the Tampere University of Technology Optoelectronics Research Centre, ORC. In the Solar III-V project, ORC is studying and developing new compound semiconductor materials and testing their applicability to high-efficiency multi-junction solar cells which have an efficiency ratio of about 50 percent.

■■■ **ORC** is the largest university-based research centre in Europe in the molecular beam epitaxy (MBE) crystal growth technique. It is currently running more than 25 national and international research projects with about 50 universities and companies worldwide. ORC has been exceptionally successful in achieving innovative scientific results, developing new technologies, and transferring expertise into industrial use. The centre has played a seminal role in creating a laser manufacturing industry in Finland.

■■■ **Laser Competence Centre LCC Finland** strengthens the position of its members in research and development activities related to photonics applications. It promotes laser cluster and its members in international forums, and is responsible for building a critical mass of equipment and expertise for its members use.

## centres and networks

**FIMA** – The Forum for Intelligent Machines is a research network for manufacturers, suppliers and research institutes. It has 40 enterprise members and a large number of research institute and other members. It promotes and outlines research and product development in the field in accordance with the industry's needs.

The maintenance system for the ITER fusion reactor to be built in France is to be delivered from Tampere. In the beginning of 2009, a research environment was completed at VTT for the development of the remote operation, virtual technologies and simulation needed for ITER's maintenance. VTT and Tampere University of Technology have established a **Remote Operation and Virtual Reality Center, ROViR**, which provides companies with virtual design and remote operation research and development services using the ITER maintenance testing equipment.

A competence centre for wear research, **Tampere Wear Center TWC** at Tampere University of Technology, focuses chiefly on studying and understanding wear mechanisms. In fundamental research, the centre's spearhead fields are heavy abrasive wear and impact wear.

### Wide cooperation between Bosch Rexroth and TUT

■■■ Bosch Rexroth AG and the Tampere University of Technology (TUT) Department of Intelligent Hydraulics and Automation are cooperating in the development of digital hydraulic products and applications, and doctoral education will be arranged for the company's personnel in Tampere.

TUT's Department of Intelligent Hydraulics and Automation is a pioneer in digital hydraulics. Research has focused on digital

### New-era logistics and traffic

■■■ New-era logistics in the Tampere Central Region are being accelerated through a sizeable development project. Green city logistics will revolutionize functions like urban delivery traffic. The project is led by Tredea and logistics integrator Logjera.

■ The Tampere Region is a key testing area for intelligent traffic in the Drive C2X project. The 20-million-euro EU development project starts in 2011, and it is coordinated by the VTT Technical Research Centre of Finland and Daimler AG.

■ Tampere has been pioneering intelligent traffic with its own traffic solutions. Among others, the city has the first electronic public transport information system implemented in Finland, and a comprehensive system for gathering traffic data. The city was also the first to take RFID cards into use in public transport.

valves and their control methods. At present, the hottest field of research is mobile hydraulics. The digitalization of hydraulics, their intelligent computerized control and digital pump engines maximize a machine's efficiency and reduce its energy loss by up to 90 percent. Work machines' fuel consumption and emissions are significantly reduced.

# international

■ **The Tampere Business Region** service, TBR, offers information and practical assistance for operators seeking new business opportunities or considering an investment in the Tampere Region. Users of TBR achieve cost benefits and receive free services. In cooperation with its partners, TBR has put together a Fast Track Finland package to help newcomers jump-start their business.

■ The Tampere Region has an **EU Office in Brussels** as a station for promotion, networking and lobbying. The office's main tasks are to follow EU programmes and funding opportunities and to identify partners for regional actors in the Tampere Region. The Region's EU Liaison Manager is Hannele Rääkkönen.

■ Operating in the form of a national network organization, the **Baltic Institute of Finland** is located in Tampere. The institute ideates, plans, launches and coordinates international cooperation projects in a variety of fields within the Baltic Region.

■ The new BSR InnoShip project related to shipping in the Baltic, is led by the Baltic Institute of Finland. The institute's involvement in the project follows many years of cooperation related to the improvement of air quality with the City of St Petersburg and the Finnish Meteorological Institute.

#### Tampere is a member of

- Eurocities
- Union of the Baltic Cities
- Cities for Children
- Energie-Cités
- ICLEI - Local Governments for Sustainability
- International Association of Educating Cities
- Association of European Cities and Regions for Culture
- European Cities Marketing

Creative Tampere is involved in the Creative Industries working group of the Eurocities organization and in the Flanders District of Creativity network.

# A BUILDER

## Daniel Libeskind to envision the Tampere Deck and Central Arena

World-famous architect Daniel Libeskind has been hired as a consultant to refine the concept, architecture and cityscape on the Tampere Deck and Central Arena. The plan is to build a new city district in the heart of the city, over the railway.

Completion of the multifunction arena is expected for 2013 and the Ice Hockey World Championships. The second stage with retail and office space, a hotel and flats is to be completed in 2018. Environmental friendliness is an important overall aspect in the project.

Finland's first patient hotel will start operation in the Finn-Medi campus near Tampere University Hospital in late 2011. The hotel will have 130 rooms, and the same building will house specialist companies' offices and the Eye Centre, a hub for the treatment of ophthalmic diseases will be concentrated.

Industry has left a strong mark on the buildings in Tampere. Though engineering workshops rumbled no more at the **Finlayson** and **Tampella** factories, these areas are full of new life. In its time, the six-storey Finlayson factory was a breakthrough in modern industrial building in the Nordic countries. Now the historic milieu of Finlayson is home to ICT and media companies, museums, restaurants and cinemas. Tampella's workshops have been replaced by IT companies, museums and apartments.

The oldest building in Tampere is the **Messukylä Old Church**, completed in 1434.

The grey-granite **Tampere Cathedral** is a valued treasure among Finnish architecture of the national romantic period. Designed by architect **Lars Sonck**, the church was completed in 1907. The interior is decorated with art by **Hugo Simberg** and **Magnus Enckell**.

**Tampere City Library Metso** also acts as the Regional Library for the Tampere Region. Seen from above, the building resembles a courting wood grouse. Completed in 1985, Metso was designed by **Reima and Raili Pietilä**, who also designed Mäntyniemi, the official residence of the Finnish President.

Tampere's landmark **Näsinneula** is the Nordic countries' highest observation tower and stretches to a height of 168 metres. It was opened in 1971. At the foot of Näsinneula is the **Särkänniemi Adventure Park**.

### Celebrations in 2011

Tampere's **indoor market**, which is the largest of its kind in the Nordic countries, celebrates its 110th anniversary.

The **TTT Theatre**, the only professional workers' theatre in Finland, celebrates its 110th anniversary.

Workers' residential areas were formed back in the day on the **Pispala** ridge and in the **Amuri** district. A small area of the old Amuri has been preserved as a museum.

New openings and plans include the development of the **Ratina** area for residential and office use in the city centre, and the building of a new suburb, **Vuores**, on the border between Lempäälä and Tampere.

**The Finnish Housing Fair will be held in Vuores in 2012.**

**Sorin Sirkus**, the pioneer of Finnish youth circus activities, received the 2010 State Award for Children's Culture.

### Let's tweet a book!

In Autumn 2010 the world's first novel compiled using Twitter was published in Tampere. The book consists of more than a thousand consecutive tweets.

## Tampere is a city of trade fairs,

# environment

The land area of the Tampere Region is 12,500 square kilometres, and the population density approximately 40 inhabitants per square kilometre. In the city of Tampere, the population density is some 390 per square kilometre. There are 2,600 lakes in the Tampere Region.

Tampere's city centre is surrounded by lake and ridge scenery, situated on an isthmus between lakes **Pyhäjärvi**

and **Näsijärvi**. The **Tammerkoski** rapids run through the city. The Ministry of the Environment has appointed the Tammerkoski industrial scenery as one of Finland's national landscapes.

There are numerous nature reserves in the Tampere Region. **Pyynikki** and **Viikinsaari** near Tampere's city centre, **Helvetinjärvi** in Ruovesi and **Seitseminen** spanning over Ylöjärvi and Ikaalinen are the best known.

Pyynikki, formed by the action of ice and

# active & creative

## congresses

52 international congresses were arranged in Tampere in 2010. Approximately 7,800 delegates attended.

■ **Tampere Hall**, the Nordic countries' largest congress and concert centre, was opened in 1990.

## trade fairs

In 2010, **Tampere Trade Fairs Ltd** arranged 14 fairs drawing more than 130,000 visitors to Tampere Exhibition and Sports Centre. Some 300 meetings and events were arranged at the centre, with 760,000 attending in total.

## museums

Museum Centre Vapriikki inside the old Tampella engineering workshop ■ Tampere Art Museum ■ the Sara Hildén Art Museum ■ Moomin Valley ■ the Finnish Labour Museum Werstas ■ the Lenin Museum ■ the Textile Industry Museum ■ the Rupriikki Media Museum ■ the Shoe Museum ■ the Finnish Ice Hockey Museum ■ the Finnish Boxing Museum.

■ **Tampere is the theatre capital of Finland.** There are 13 professional theatres and several independent theatre groups. One third of Finnish actors receive professional training at the University of Tampere's Department of Acting. The Centre for Practice as Research in Theatre is one of six European theatrical organizations participating in Prospero, a 5.4 million euro project funded by the EU's Culture programme.

## events

Tampere Film Festival ■ Tampere Theatre Festival ■ Pispala Scottische ■ Tampere Biennale ■ Tampere Vocal Music Festival ■ Tampere Jazz Happening ■ The MindTrek conference for digital media and business

In 2011 Tampere is hosting the ■ European Universities Futsal Championship. ■ ETU Long Distance Triathlon European Championship.

Annually arranged international competitions include the Tammer Tournament in boxing, the International Rowing Regatta on Kaukajärvi lake, and the Delfin Basket Tournament for junior basketball players.

■ **Ice hockey** is Tampere's favourite sport, and it is steeped in tradition: Finland's first artificial ice rink was built in the city in 1956 and the first ice hall, the Hakametsä hall, in 1965. Tampere has two teams in the national championships league, Tappara and Ilves.

Tampere also has a team in the national championships league in football, basketball, volleyball, floorball, American football and rugby.

### ■ National championships in 2010:

Tampereen Pyrintö in the men's basketball league, and Tampereen Ilves in the women's icehockey league.

The **Ratina stadium**, right in the city centre, is an arena for athletics and football as well as concerts. The stadium has capacity for 16,500 spectators.

■ **There are seven golf courses either in or near Tampere.**

## congresses, museums, events, theatre, sport and Fairtrade.

sea more than 10,000 years ago, is the world's highest gravel ridge. At its highest it rises 160 metres above sea level.

■ **There are approximately**

**100 square metres of parks and green areas per inhabitant in the City of Tampere.**

## Making climate targets a reality

■■■ The City of Tampere, together with the Finnish Innovation Fund, Sitra, has launched a climate and energy programme named Eco-Efficient Tampere 2020 (ECO<sub>20</sub>). The programme is the first eco-initiative to such an extent and level of integration in Finland.

The city is also involved in international environmental

initiatives including the Aalborg Charter and the climate covenant of mayors in the EU. Tampere was Finland's first city to draw up a climate account.

■■■ **Tampere will see the realization of Finland's first passive energy kindergarten, and Finland's largest concentration of solar energy is under planning for the Vuores suburb.**



## By plane

Tampere-Pirkkala Airport is located 13 kilometres southwest of Tampere and enjoys good traffic connections. Tampere can be reached from Helsinki, Stockholm, London, Frankfurt, Riga, Milan, Bremen, Oslo, Edinburgh and Kaunas (as of February 2011). Starting soon Pisa, Malaga, Alicante and Gdansk.

## By train

The Pendolino train makes the 175-kilometre journey from Helsinki to Tampere quickly, in just an hour and 30 minutes.

## By bus

Tampere can be reached by bus from almost anywhere in Finland – four fifths of all north-south traffic in Finland goes through the Tampere Region. Taking a bus is also a handy way to get about in the city itself. Tampere was the first city in Finland to manage its internal traffic with buses.

## GET IN TOUCH!

**Tampere Region  
Economic Development  
Agency Tredea Oy**  
[www.tredea.fi](http://www.tredea.fi)

**Tampere Business Region**  
[www.tamperebusinessregion.com](http://www.tamperebusinessregion.com)

**Tampere Region  
EU Office in Brussels**  
[www.tampere-region.eu](http://www.tampere-region.eu)

**City of Tampere**  
[www.tampere.fi](http://www.tampere.fi)

**Joint Authority  
of Tampere Central Region**  
[www.tampereenseutu.fi](http://www.tampereenseutu.fi)

**Regional Council  
of Tampere Region**  
[www.pirkanmaa.fi](http://www.pirkanmaa.fi)

**Centre for Economic  
Development, Transport and  
the Environment for Pirkanmaa**  
[www.ely-keskus.fi/pirkanmaa](http://www.ely-keskus.fi/pirkanmaa)

**Tampere Chamber of  
Commerce and Industry**  
[www.tampere.chamber.fi](http://www.tampere.chamber.fi)

**Creative Tampere programme**  
[www.creativetampere.fi](http://www.creativetampere.fi)

**Eco-efficient Tampere**  
[www.eco2.fi](http://www.eco2.fi)

**Logistics integrator**  
[www.logiera.com](http://www.logiera.com)

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Congresses and meetings**  
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<http://researchandstudy.fi>

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[www.tut.fi](http://www.tut.fi)  
<http://interface.tut.fi>

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**HAMK University  
of Applied Sciences**  
[www.hamk.fi](http://www.hamk.fi)

**Police College of Finland**  
[www.polamk.fi](http://www.polamk.fi)

**VTT Technical Research  
Centre of Finland**  
[www.vtt.fi](http://www.vtt.fi)

**Finnish Safety and  
Chemicals Agency Tukes**  
[www.tukes.fi](http://www.tukes.fi)

**Tampere Hall**  
[www.tamperehall.fi](http://www.tamperehall.fi)

**Tampere Trade Fairs**  
[www.tamperetradefairs.fi](http://www.tamperetradefairs.fi)

**Tampere-Pirkkala Airport**  
[www.finavia.fi/airports/airport\\_tampere-pirkkala](http://www.finavia.fi/airports/airport_tampere-pirkkala)

## facts&figures

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