

EU World Cities 2017 - 2018

Gwangju – Tampere results



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About Gwangju

Stats	Industry	Climate
- Size : 501.20 km ²	- GRDP : appr 30 bil. US\$	- Annual Temp. 15.0 (Cel.)
- Population : 1.49 mil.	- Export : 16.5 buil US\$ (as of 2015)	- Annual Precipitation : 1,482 mm

Democracy, Human Rights, and Peace

Asian Culture Hub

High-tech Industry

Green City

- Designated by national govt. as a leading city for climate change









How Gwangju Responds to Climate Change



Gwangju's Environmental Conditions



Slogan





A Cool Gwangju – 44 initiatives to make Gwangju Cooler



Add Green(+)

• Expand Green
/Waterfront Areas

 Build eco-friendly infrastructure









Improve Water Reclamation

Use Cooling Mists

Shelters from Heat

Citizen Education and

Public Relations

Build Urban

Parks for Citizens

12



Reduce Grey(-)

• Reduce Air Pollution

 Reduce Energy Consumption Build and Improve Systems for Public Transportation and Bicycle Use

Create District Maps with Wind-Paths









Promote Eco-Friendly Vehicles Reduce Vehicle Emissions



Shared Spirit(+)

- Create a Gwangju Community
- Build a Private-Public Cooperation Network







Low-Carbon Green Apartment Projects





Install solar panels on homes



Encourage Energy Management Systems for Buildings Encourage use of LED lights 13

Severe air quality in Gwangju



Baseball games 'Dusted off'

For the second time in Korea (and the first ever in Gwangju) the baseball games are being postponed due to severe air quality. On April 15, a baseball game in Gwangju was dusted off. The dust alert was issued for more than two hours and PM 10 skyrocketed up to 414 and beyond. In Korea, it is considered 'very bad' when MP10 gets $151\mu g/m^2$.



Different roles of the city

Depending on the need and context of the ecosystem or theme ecosystem, the City of Tampere can play different roles.



Strategist & Advocate Sets out a clear direction for the City of Tampere: what is our vision and ambition with the Smart Tampere Ecosystem. Furthermore: be an active advocate of the city as innovative hub for new business.

Director & Regulator

Create or change laws and regulations to allow new business models and disruptive entries, and simultaneously protect the interests of citizens and users of the city. **Connector & Protector** Secure modern transportation infrastructures, energy grids and digital networks. Set standards and take measures to make these vital infrastructures resilient and safe.

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Innovator & Investor Apply the principles of innovation in the internal organization and processes. Stimulate innovative solutions by acting as launching customer.

Solution enabler

Build ecosystems by gathering parties that normally do not work together to deliver creative new solutions. Support the ecosystems by channeling government funding.

Steward

Create an environment in which new businesses and smart solutions can emerge and grow. For example by providing 'open data' and by facilitating start ups.



Value creation in platform ecosystem



- Improved services and urban operations
- Capital efficiencies
- Increased revenues
- Equality in services, education and living standards
- Easier everyday life due to better services
- Sustainable values, clean environment
- Safety and security
- Democracy and openess
- Flexible education and knowledge
- Wider ability for creativity and innovation
- Engagement of talents and students





Smart Mobility System Architecture



KEY ENABLERS (eg HD 3D maps, location data sensor & city data)

Current Flat Bus Route System Between Two Lakes





Murto

ajarv

Maur

Palo



Tram Trunk Line through the City

Tram – the trunk line through the city – will create the top of the hierarchy, buses will feed passengers via multiple hubs to trunk line.













Population density







Tram Construction Site through the <u>whole</u> City

Building Smart City and it's basic infrastructure means a lot of disorder for citizens and retail before it is ready.

- Fast and efficient construction period
- ➤ A lot of information
- Tools and practices to minimize problems



MPERE







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Meeting in Tampere, Nov 2017

- Smart Tampere program overview
- MaaS (Mobility as a Service) seminar, meeting with Finnish Minister of Transport
- University visits
- Industry collaboration tools, example DIMECC (<u>https://www.dimecc.com</u>)
- Visits to city facilities power plant and clean water station







Meetings in Gwangju, March 2017, March 2018

• Overview of Climate Change Response

- Int'l Climate & Environment Center, UEA Secretariat

- Gwangju City Govt. (Climate Change Response dept.)

- Gwangju Environment Corporation
- KEPCO Smart City(Smart Valley)
- GIGA Electric & Hydrogen Vehicle
- Others

- Governance (Green Road : urban park made from abandoned railroad)

- Industry (SWEET : Renewable Energy Fair)







Collaboration Areas

- 1. Energy Efficiency and Environmental Actions
- 2. Air Quality
- 3. Mobility
 - E-mobility platform
 - Industrial collaboration in modern vehicles
- 4. City-to-City Collaboration
 - OASC (Open & Agile Smart Cities) UEA
 - University and NGO collaboration, citizen participation





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