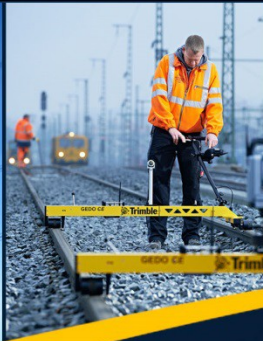
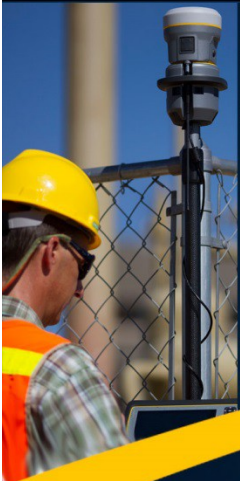




transforming the way the world works



# Authoritative Data Management:

Humanizing Data Collection, Management, and Collaboration  
in Jyväskylä, Finland

Geospatial World Forum | Lisbon, Portugal | May 25-29th  
Trimble Local Government | Rick Gosalvez | [rick\\_gosalvez@trimble.com](mailto:rick_gosalvez@trimble.com)

# Learning Objectives

Share how Jyväskylä, Finland:

- Manages resources, plans and collaborates spatially
- Centrally collects, processes and manages geospatial data
- Improves information flow between citizens, staff and city officials



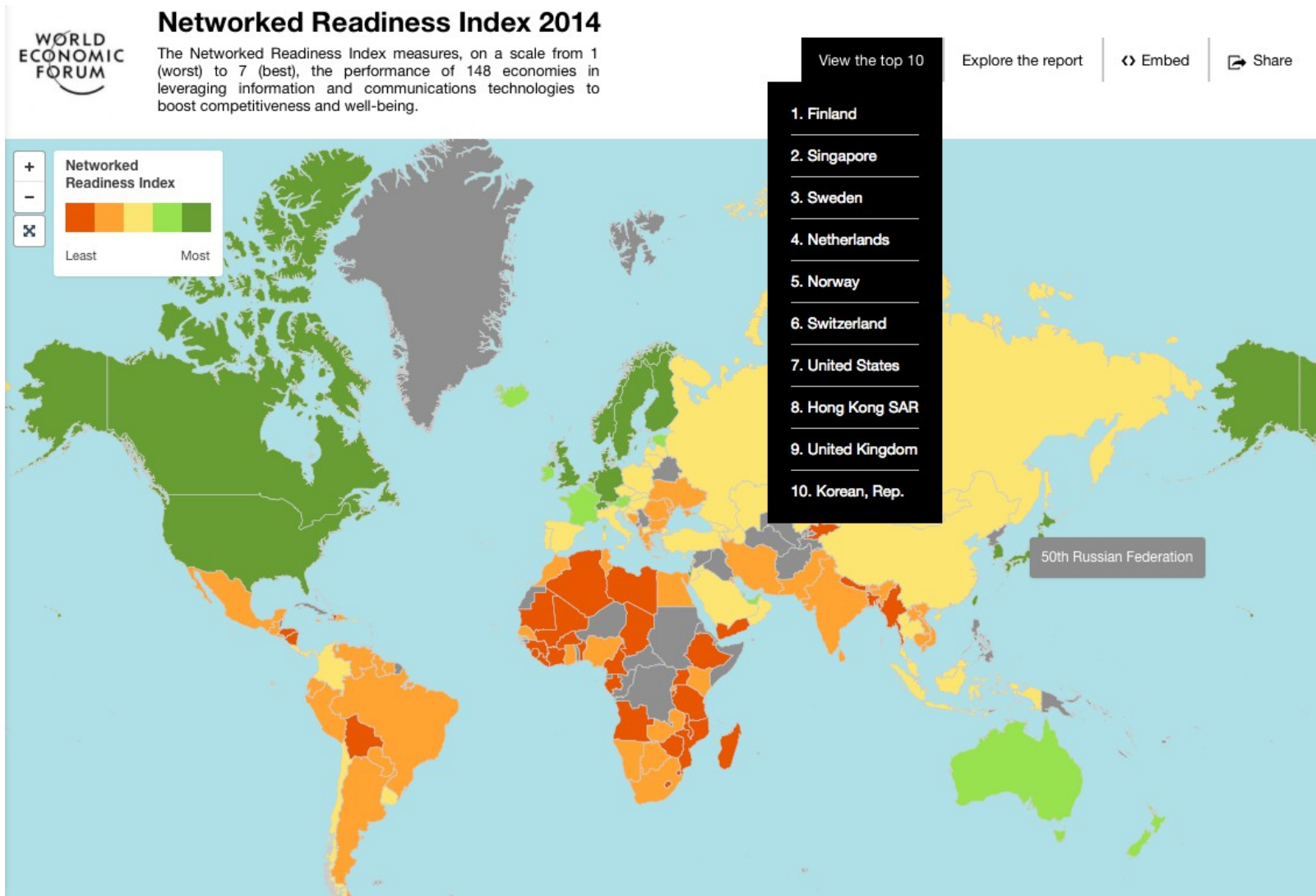
**JYVÄSKYLÄ** *a Smart City*

# City of Jyväskylä finland



# Network Readiness Index 2014

Ranks 148 economies in leveraging information and communication tech to boost competitiveness and well-being.





JYVÄSKYLÄ

- Founded in 1837
- 7<sup>th</sup> largest City in Finland
- 1,171 km<sup>2</sup> (452 mi<sup>2</sup> )
- 136,000 citizens'
- Customer since 1998





JYVÄSKYLÄ

- 34,381 parcels & 59,125 buildings
- 699 new buildings in 2013
- 18,602 sqm | 417 commercial | 282 housing
- 1 in 4 people are academics
- More than 9,959 new jobs since 2000



Growing with People

- Master Plan blends people, place, and environment to service community
- Goal to Provide Better Service, 24 / 7 service, 365 days per year with:
  - Authoritative Data
  - Centralize Data Management
  - Digital and Integrated Services
  - Citizens as a Resource



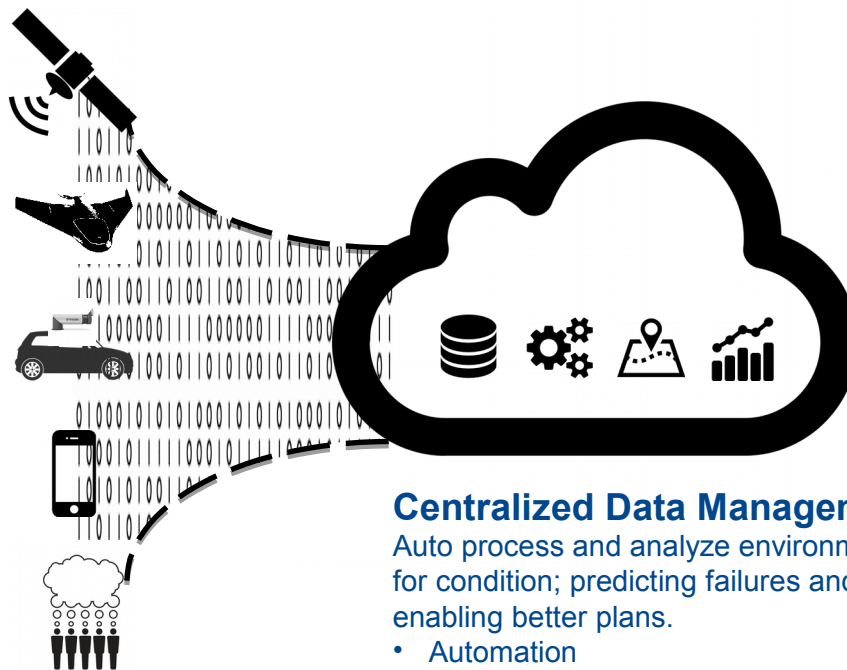
# Smart City Services for People

# Authoritative Data: Building Block for a Smarter City

## Mass Data Collection

Continually capture and monitor the built and natural environment.

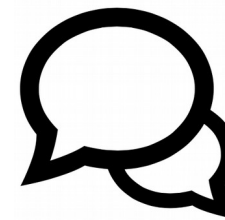
- IoT
- Sensors
- Authoritative Data



## Centralized Data Management

Auto process and analyze environment for condition; predicting failures and enabling better plans.

- Automation
- Advanced Analytics
- Cloud-connected
- GIS, BIM, EAM



## Collaboration

Benchmark and share actions, plan and results.

- Dash boarding
- eServices
- Citizens as a Resource

Field



Office



Community





- Authoritative data is the foundation for good decisions:
  - Land use planning
  - Mapping
  - Property management
  - Cadastral services
  - Building control
  - Environmental Services
  - Street and Park management
  - Surveying and Engineering

*“Geographic information data and registers remain authoritative because they are always connected to an up-to-date database.”*

- Janne Hartman, GIS Manager



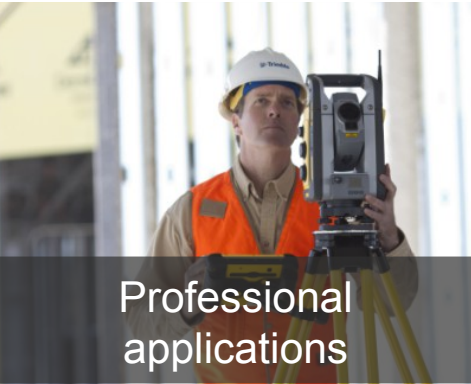
# Authoritative Data



## DEDICATED APPLICATIONS AND SERVICES FOR DIFFERENT NEEDS

*“Work processes are planned to suit the service.”*

- Janne Hartman, GIS Manager



Professional applications



Information utilization & sharing



eServices for citizens & collaboration



## Fluent data flow, process efficiency, real-time decision making



## Geospatial data management

# Centralized Data Management



Rakennusluvut  
ja hakemukset



Yleisten  
alueiden luvat



Ympäristöluvut



Varauspalvelu



Palaute



Tonttihaku



Karttapalvelu

*“My Jyväskylä provides citizens access to various municipal eServices with a single log-on.”*  
- Janne Hartman, GIS Manager

## Integrated eServices



# Citizens as a Resource



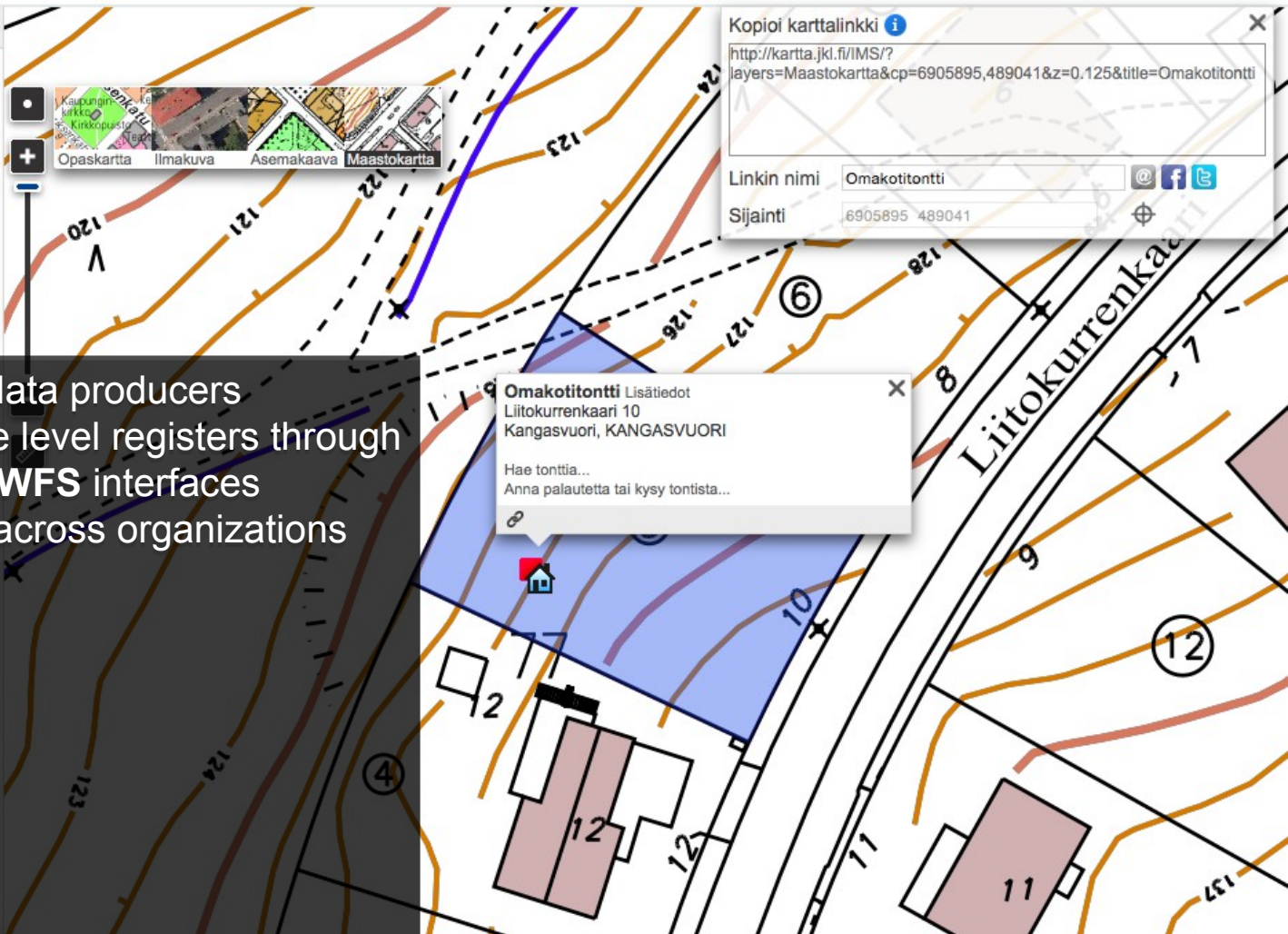
Vapaat tontit > Vapaat omakotitontit > KANGASVUORI > Liitokurrenkaari 10

### Tontti Liitokurrenkaari 10

Tontin haku aika: Alkaa: 4.5.2015 klo 10:00  
Päättyy: 29.5.2015 klo 16:00  
Hae tonttia

Tontti: 179-15-77-5  
Kaupunginosa: Kangasvuori

- Munis are geospatial data producers
- Data is passed to state level registers through Trimble Locus **WMS / WFS** interfaces
- Open data within and across organizations
- Maps
- Buildings
- Streets
- Assets
- Plans
- Cadastral
- Real Estate
- Environment



Kopioi karttalinkki

<http://kartta.jkl.fi/IMS/?layers=Maastokartta&cp=6905895,489041&z=0.125&title=Omakotitontti>

Linkin nimi: Omakotitontti

Sijainti: 6905895 489041

Omakotitontti Lisätiedot

Liitokurrenkaari 10  
Kangasvuori, KANGASVUORI

Hae tonttia...  
Anna palautetta tai kysy tontista...

# Simple; Accessible; Open Data

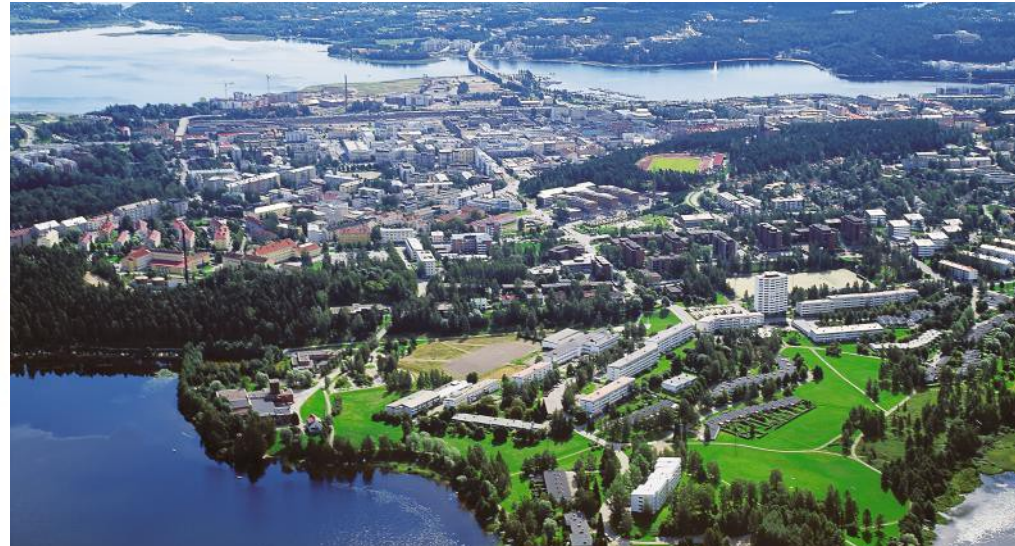
# JYVÄSKYLÄ MASTER PLAN 2010-14

\* RESOURCE WISE URBAN DEVELOPMENT \* LESS CAR-DEPENDENT URBAN SETTLEMENTS \* NICE NEW NEIGHBOURS \*  
\* HOUSING BY THE LAKES \* CITIZENS ARE A RESOURCE \* OUR LANDSCAPE AND CULTURAL HERITAGE \* RURAL PEARLS \*

Yleiskaava - Raamikartta  
luonnos 24.2.2011

MASTER PLAN

- Continuous feedback used to align the **Master Plan** with community priorities
- Ave. citizen participation growing 53%



## Affect Policy



- **BEFORE** a comprehensive engagement program; up to 30% of projects litigated
- **AFTER** deployment 0% of approved projects litigated; streamlining time from approval to construction

Kangas Mixed Use Development

# Streamline Projects



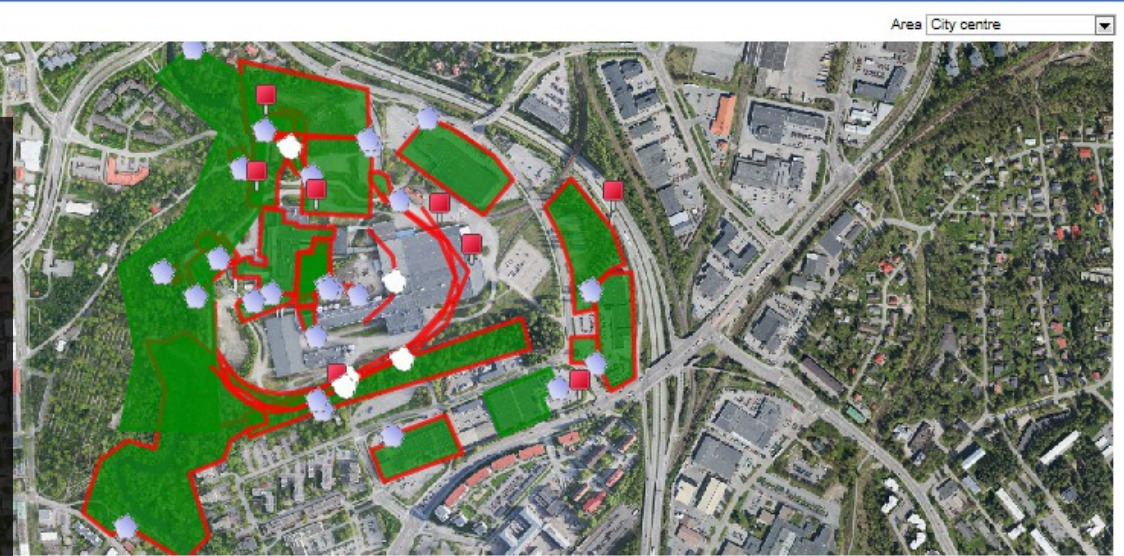
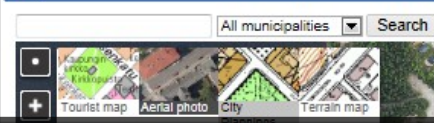
JYVÄSKYLÄ

Browse feedback New feedback Analyze feedback

Search conditions Show the most common

Type: All  
 Subject: All

Map All municipalities Search



- 3 days 7 hours average process time
- 70% of feedback include location

“130 years ago a river was filled to open a mill; the citizens wanted it restored and our council listened.”  
 - Leena Rossi, Planning Director

Responsible party: All  
 Also previous responsible parties:   
 Reply by: All  
 Feedback channel: All  
 Limit search on map:   
 Draw search area on map:   
 Feedback without location:   
 Presentation: -Select-



Project	Type	Subject	Status	Explanation
Kangas osayleiskaava LUONNC			Processed	Kaavojen tulkitsemista on edelleen liian heikosti opet...
Kangas osayleiskaava LUONNC			Processed	Vanha ja uudempi voimalaitos kaikkinen rakenteine...
Kangas osayleiskaava LUONNC			Processed	Viherkehä on hyvä idea, erityisesti jos sen linjausta ei...
Kangas osayleiskaava LUONNC			Processed	Kyseinellä kaistaleella pitää säilyttää ainakin suurimm...
Kangas osayleiskaava LUONNC			Processed	Siltaa ei kannata purkaa. Sille olisi käyttöä rinnakkais...
Kangas osayleiskaava LUONNC			Processed	Kivettyjä, autoita ja ankeita aukioita on jo vähintään t...
Kangas osayleiskaava LUONNC			Processed	Tällä alueella, kuten koko Kankaan alueella, tulisi säil...
Kangas osayleiskaava LUONNC			Processed	Kanavaa kannattaa harkita tarkoin. Korkeuserot ja rak...
Kangas osayleiskaava LUONNC			Processed	Jokilaakso koivuineen tulee säilyttää. Juuri tällaiset ai...
Kangas osayleiskaava LUONNC			Processed	Kaareva katu on jalankulkijan kannalta miellyttävä, ko...
Kangas osayleiskaava LUONNC			Processed	Tourujen tulevassa uomassa kannattaa ehdottomas...
Kangas osayleiskaava LUONNC			Processed	*Uusi koti suojelukohteiden viereen Harjulanseljäntee...
Kangas osayleiskaava LUONNC			Processed	Myllynbiat. Aiemmin AD luulla Piihtehi 25:ssä T...

# Analyze Priorities



Varauspalvelu  
VENEPAIKKOJEN VARAUS



Tervetuloa varaamaan sähköisesti kaupungin venepaikkoja!

Valitse venetyyppi ja anna muut tarvittavat tiedot veneestäsi. Valitse Vapaat paikat -listasta sopiva satama ja venepaikka. Siirry tekemään varaus napsauttamalla listan linkistä.

VAPAIEN VENEPAIKKOJEN SELAILU

Veneen leveys  m

Vapaat paikat

Jyväsjärvi, Lutakko (50)

Laituri 3, paikka 149	alk. 294,00 €	Valitse >>
Laituri 3, paikka 150	alk. 412,00 €	Valitse >>
Laituri 3, paikka 151	alk. 294,00 €	
Laituri 3, paikka 152	alk. 412,00 €	
Laituri 3, paikka 153	alk. 294,00 €	
Laituri 3, paikka 154	alk. 412,00 €	
Laituri 3, paikka 158	alk. 315,00 €	
Laituri 3, paikka 159	alk. 236,00 €	
Laituri 3, paikka 162	alk. 412,00 €	

VENEPAIKAN TIEDOT

Jyväsjärvi, Lutakko  
Laituri 3, paikka 151  
Laituripaikka, 3.0m  
Paikan leveys: 3.000  
Paikan pituus: 10.500  
Käveltävä aisa, 2 venettä / väli.  
Käytössäolevan paikan leveys riippuu toisen veneen leveydestä.

HINNAT

Kuntalaiset  
294,00 €  
Ulkokuntalaiset (=asuinkunta muu kuin Jyväskylä)  
411,60 €



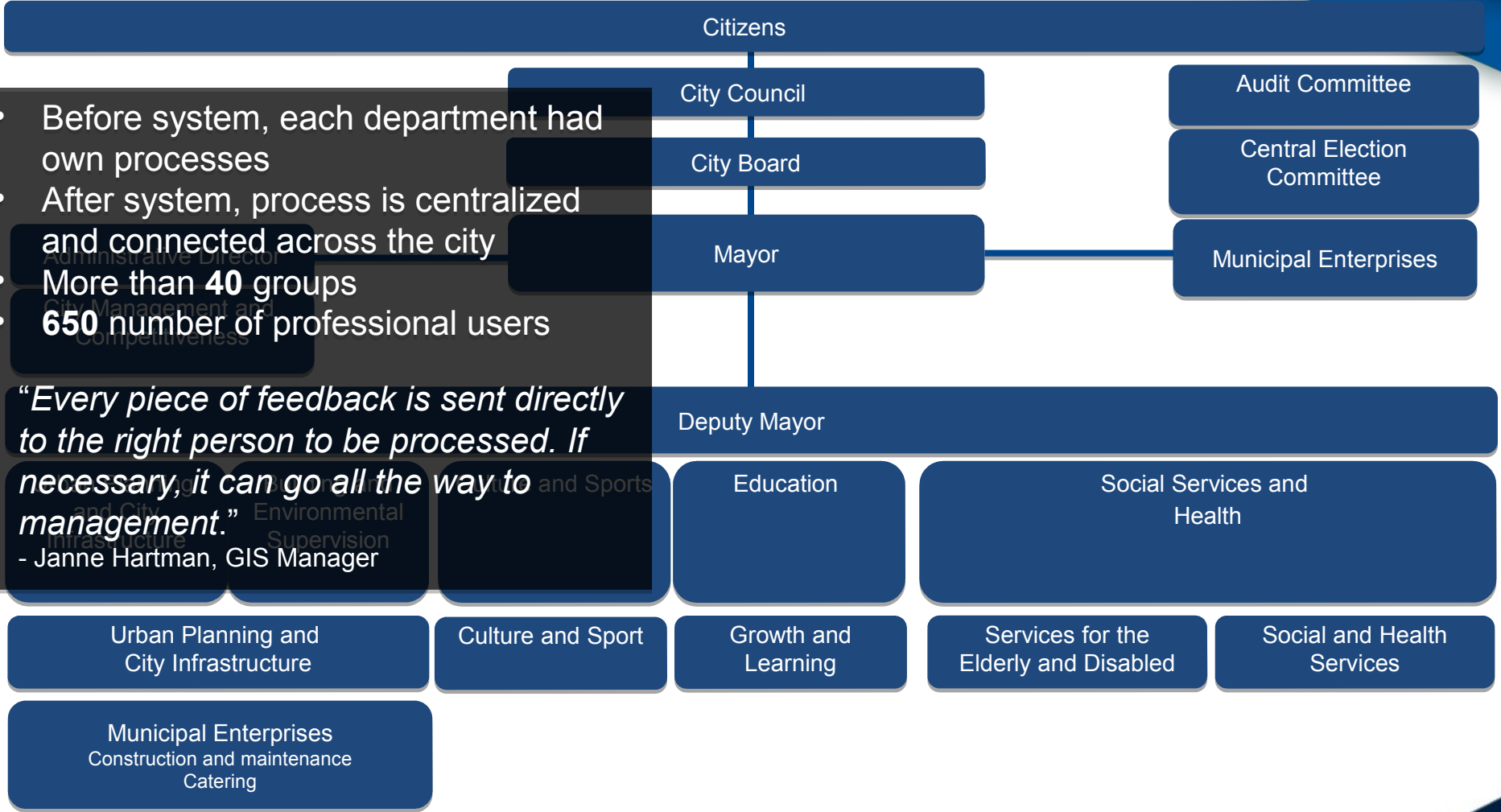
*“Our boat mooring reservation service is an electronic process from start to finish, details are automatically fetched and displayed on a map; allowing employees to do other tasks.”*  
- Janne Hartman, GIS Manager

# Improve Services



- Before system, each department had own processes
- After system, process is centralized and connected across the city
- More than 40 groups
- 650 number of professional users

*“Every piece of feedback is sent directly to the right person to be processed. If necessary, it can go all the way to management.”*  
 - Janne Hartman, GIS Manager



# A Connected Smart City



Authoritative Data Management Has Lead to:

- Better management - measurable actions
- Litigation mitigation - drawing developer interest as a place to do business
- Pleased citizens - Voted best place for children in Finland
- Higher levels of service; a smarter city

Happier Citizens



transforming the way the world works



# Visit Trimble in Booth 11 of Exhibit Area To Learn More

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[www.trimble.com/localgovernment](http://www.trimble.com/localgovernment)