NLS
NATIONAL
LAND SURVEY
OF FINLAND

Location Innovation Hub LIH

Creating Location Intelligence for Europe

Dr. Antti Jakobsson

13
business partners

3
regions

7
reference spaces

200
spatial data services

600
data sets

5
novel sensor data sets

100
SMEs in our network

50 000
potential location data services available through European Data Portal

15
university, public sector, NGO partners

20
associated and other partners

55
countries involved

Built Environment

Bioeconomy

Health & wellbeing

Transportation

€93.4 billion
Estimated value for the European geospatial industry market (by 2020)

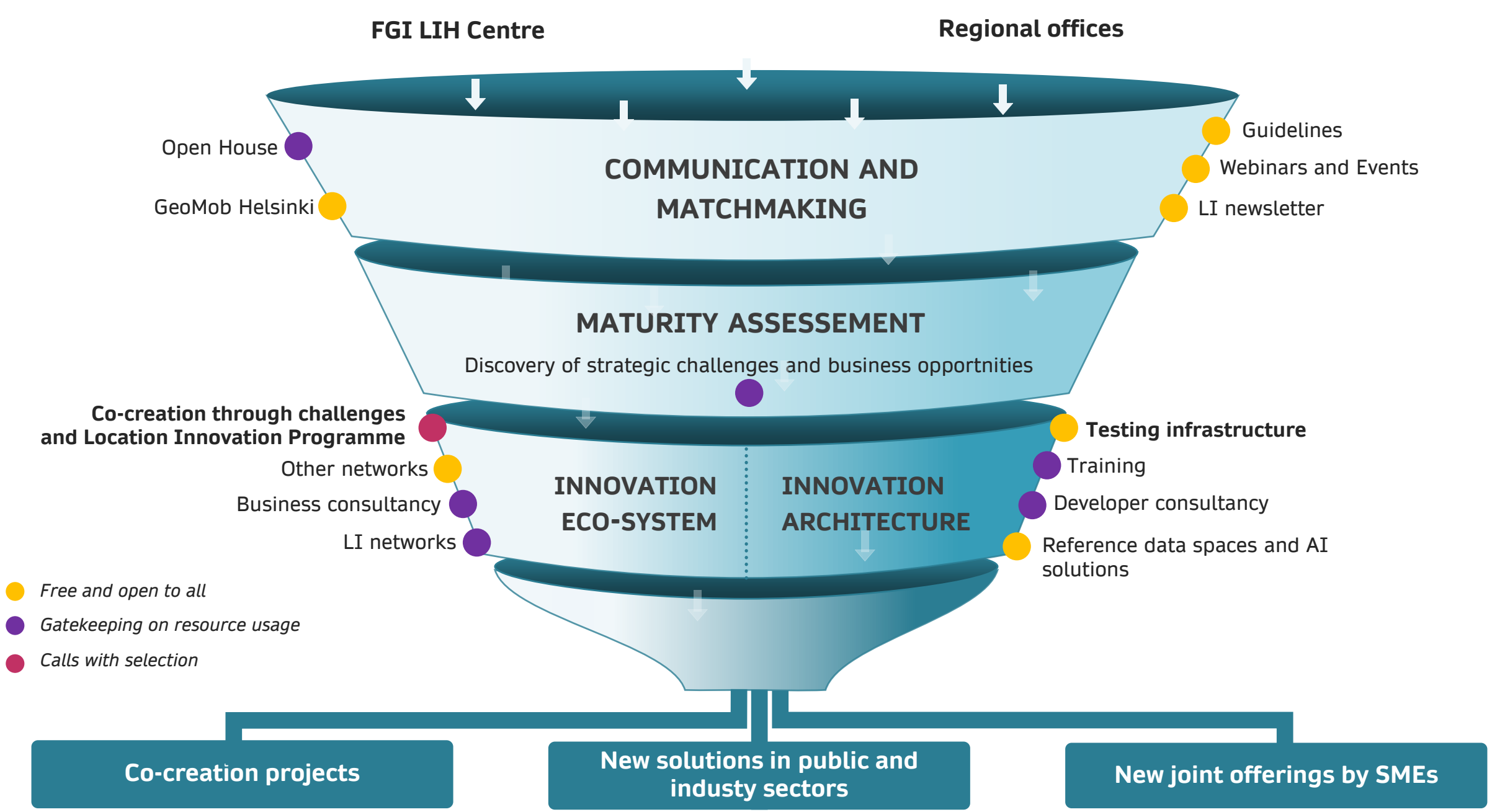
59%
of the companies receive their revenue from the public sector

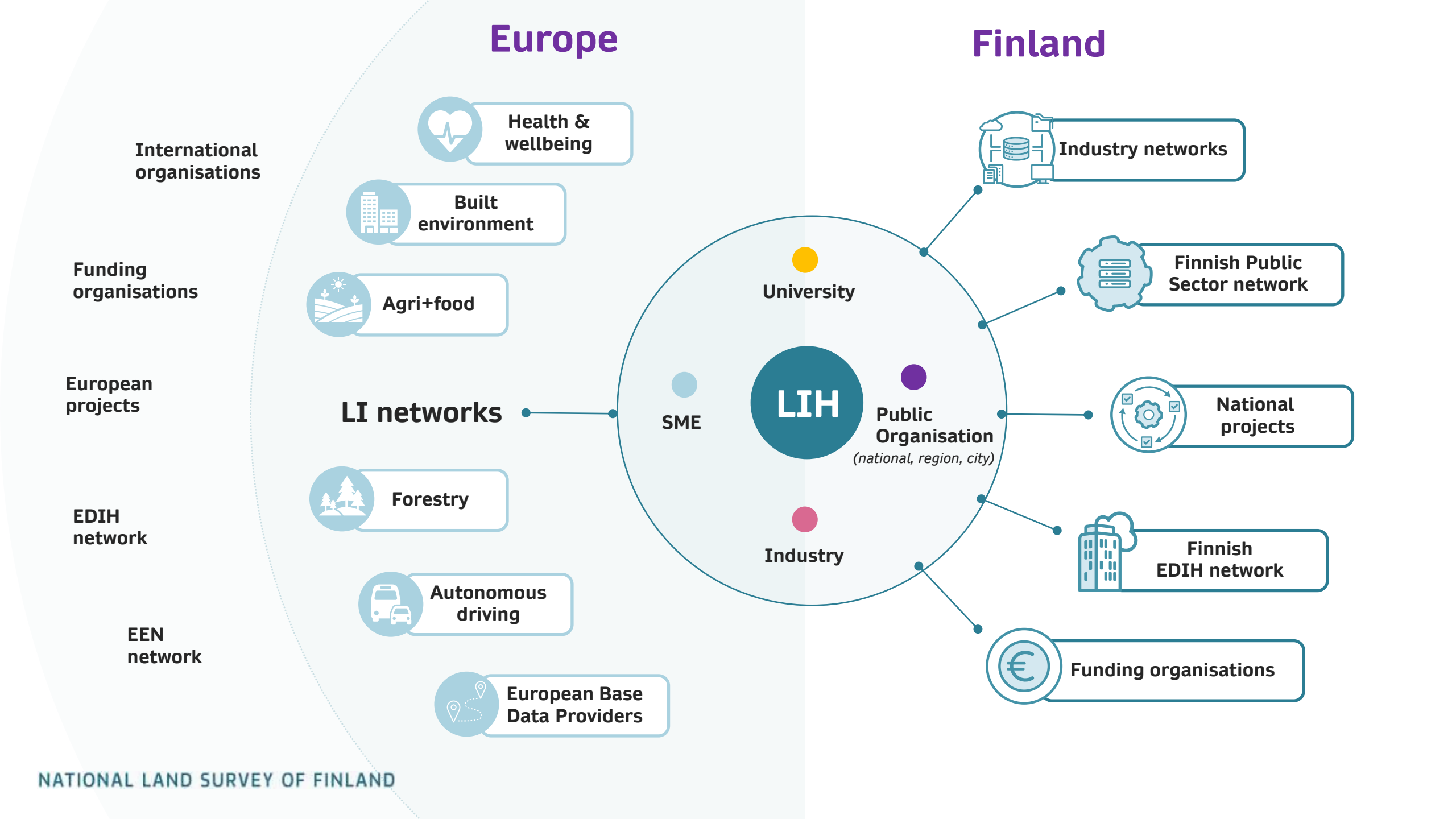
€13 billion
Estimated potential value of economic benefits in increasing use of location intelligence anually in Finland (Study 2019)

Interoperability of location and other data

Precise positioning

Next generation navigation space


FGI LIH Centre
Regional offices
Open House
GeoMob Helsinki
COMMUNICATION AND MATCHMAKING
Guidelines
Webinars and Events
LI newsletter
MATURITY ASSESSEMENT
Discovery of strategic challenges and business opportnities
Co-creation through challenges and Location Innovation Programme
Other networks
Business consultancy
LI networks
INNOVATION ECO-SYSTEM
INNOVATION ARCHITECTURE
Testing infrastructure
Training
Developer consultancy
Reference data spaces and AI solutions
Free and open to all
Gatekeeping on resource usage
Calls with selection
Co-creation projects
New solutions in public and industy sectors
New joint offerings by SMEs


Europe
Finland
International organisations
Funding organisations
European projects
EDIH network
EEN network
Health & wellbeing
Built environment
Agri+food
LI networks
Forestry
Autonomous driving
European Base Data Providers
University
SME
LIH
Public Organisation
(national, region, city)
Industry
Industry networks
Finnish Public Sector network
National projects
Finnish EDIH network
Funding organisations

Partner meeting + Associated partner meeting

Exe-cutive Board **(EB)**

Project Manage-ment Group **(PMG)**

LIH office
Project manager (FGI)
Project adminstrator (FGI)
Communication manager (FG)
Network manager (FGI)
Technical support (FGI)

Regions
Turku (VSL,UTU)
Tampere (TCR, Here)
Oulu (OAMK,OIA)
Other (FGI, FFI)

NATIONAL LAND SURVEY OF FINLAND

WP1 Management and coordination — FGI

WP2 Location Business Innovation — Halaus

WP3 Testing infrastructure — FGI

WP4 LI support — CGI

WP5 Reference Location Data Spaces — FGI

WP6 Communica-tion and training — VSL

Location Business Knowledge Pool (FGI)

Halaus, Sand, SPAT, FFI

Location Innovation Networks (FGI)

Aurora **Transportation RS lead**, Metsäteho **Forest RS lead**, LUKE **Agri+Food lead**. Khub **Built environment**, **lead** FGI **Health & Wellbeing lead,** FGI **European Base data providers lead**

Location Business Technology Pool (GISPO)

SPAT, Ubigu, Arbo, Meteho, CGI SW,ESRI, Mtech,Adv

Public sector network Finland (GeoForum)

GTK, SYKE **Built environment RS lead**, FMI LUKE **AGRI+Food RS lead**+ others

Location Business Skills and training pool (UH)

FGI, GISPO, Aalto, UH, UTU

Partners and Associated partners

GEOFORUM

KIRAHub

Mtech

FORUM VIRIUM HELSINKI

Telia

advan

SITOWISE

FINNISH METEOROLOGICAL INSTITUTE

Finnish institute for health and welfare

EuroSDR

arbonaut

Spatineo

HUAWEI

SNOWBOX

Regional Council of Southwest Finland

OIA // OULU INNOVATION ALLIANCE

REPUBLIC OF ESTONIA LAND BOARD

ubigu

ublox

CGI

SAND HILL

kadaster

esri Finland

Luke NATURAL RESOURCES INSTITUTE FINLAND

A? Aalto University

here

septentrio

GISPO

CSC

SYKE

KAIRA CLAN

Kartverket

Metsäteho LUOMASSA MAHDOLLISUUKSIA

GTK

TAMPEREEN KAUPUNKISEUTU

OAMK

HALAUS

UNIVERSITY OF TURKU

UNITE

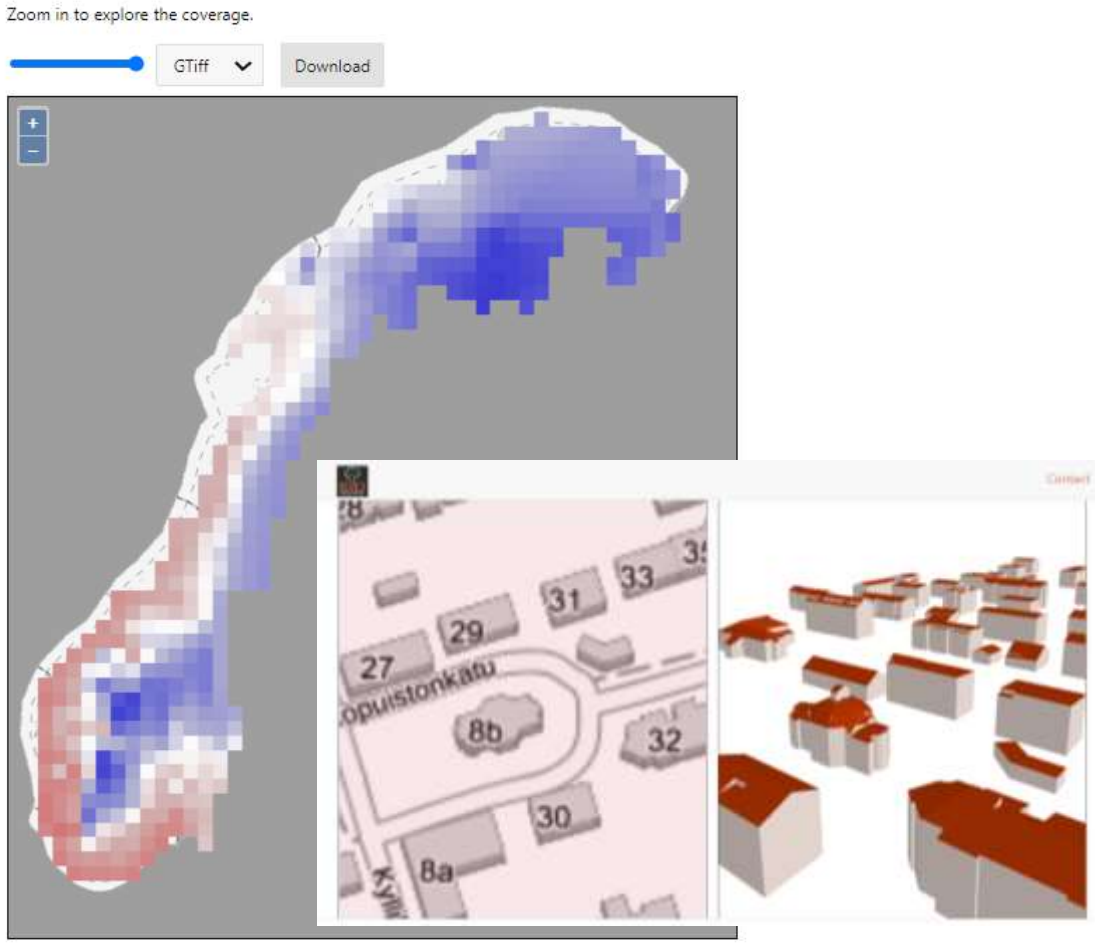
UNIVERSITY OF HELSINKI

keksintösäätiö

European and National projects supporting LIH-GEOE3

Interoperability based on national sources

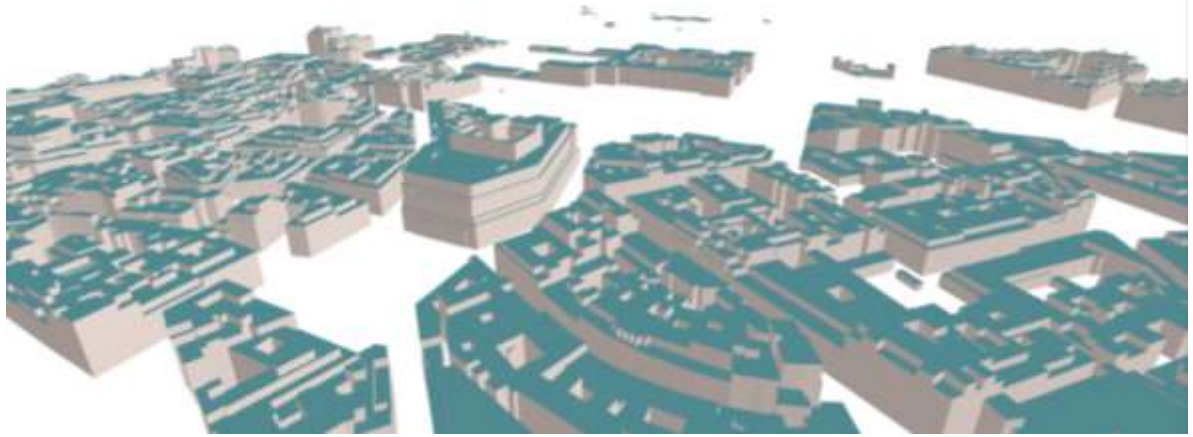
Metadata and semantic search	Quality assurance and dashboard	Open OGC APIs
Semantic harmonisation	Integration of statistical and meteorological data	3D
	Use cases: Solar Energy, Smart Cities and Electric Cars	



Try yourself: geoe3platform.eu APIs are open!

Amsterdam

Tallinn

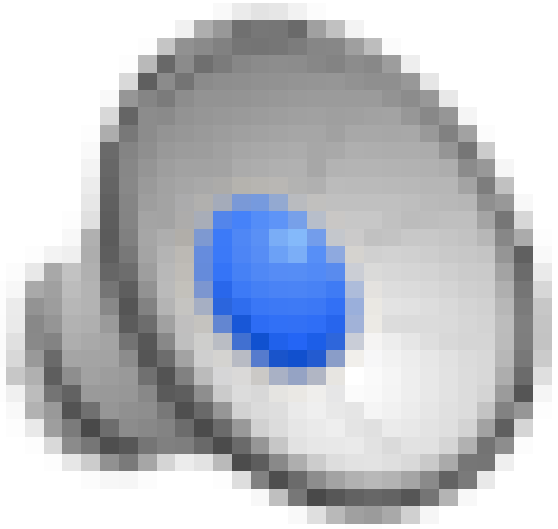


Madrid

Helsinki

Ikaalinen

European and National projects supporting LIH-Unite -Forest digitalization

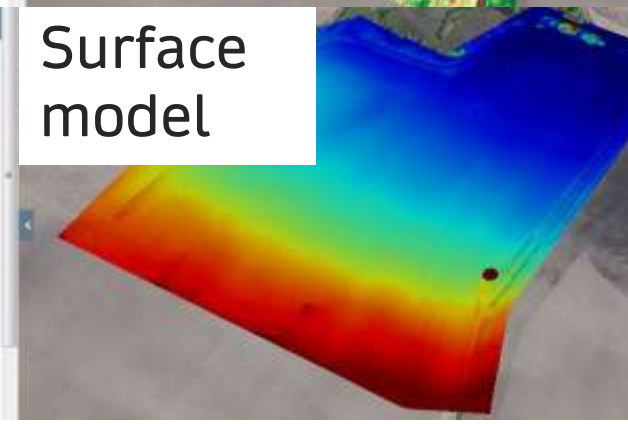


European and National projects supporting LIH-Agriculture Digitalization

Farmer application
- Flight planning
- Data capture flight
- Data transfer to cloud service
- Processed data transfer to farmer

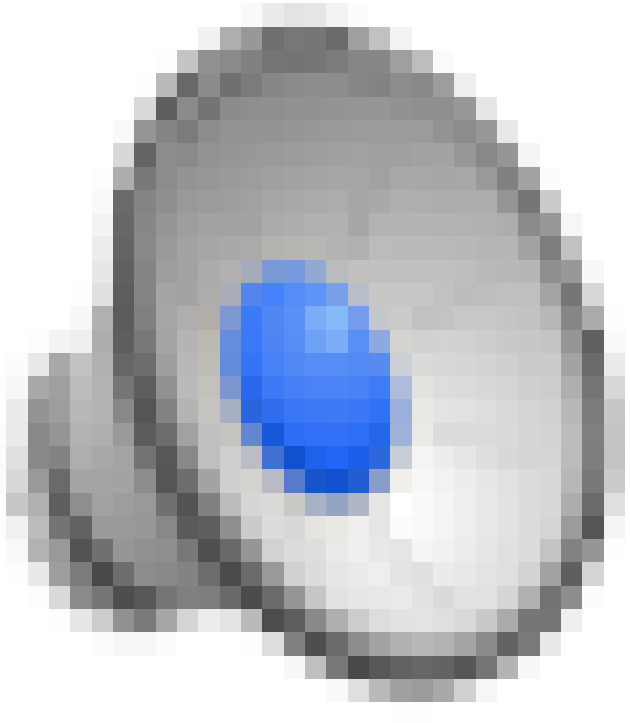
Farmer controls process
- Selection of area of interest
- Scheduling tasks
- Decision making

Cloud service
- Image data processing, analysis, classification

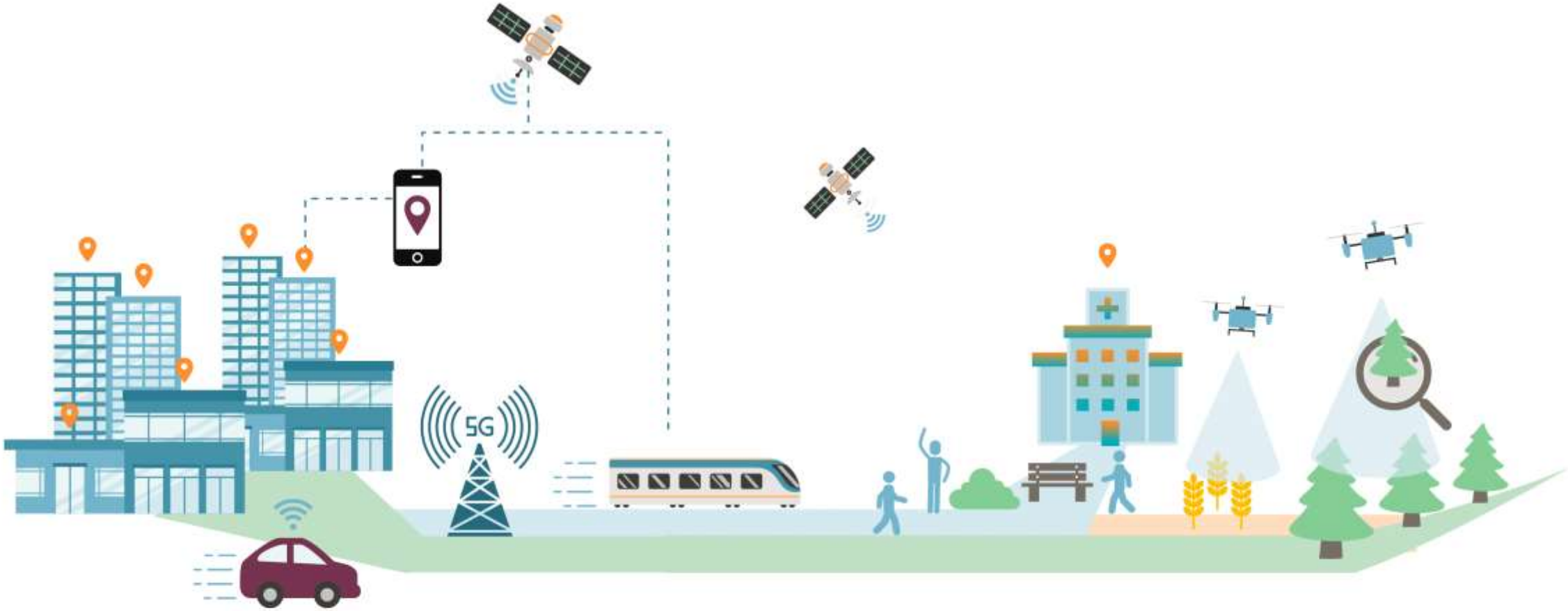


Approximate costs
- Drone: 1000 – 2000 €
- Sensor: RGB/CIR: 500 €;
- Service: 100 €/month
- Speed <1 day

Courtesy to Jere Kaivosoja, Luke



Thank you



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