

Conference and Plenary Meeting of the Permanent Committee on Cadastre in the European Union (PCC)

# “Role of National Mapping, Cadastre and Land Registry Authorities in Resilience and Recovery program “

Fredrik Zetterquist

## UNECE Working Party on Land Administration – recent and planned activities



REPUBLIC OF SLOVENIA  
MINISTRY OF THE ENVIRONMENT  
AND SPATIAL PLANNING  
THE SURVEYING AND MAPPING AUTHORITY  
OF THE REPUBLIC OF SLOVENIA



PCC  
Permanent Committee  
on Cadastre in the  
European Union

EuroGeographics

Cadastre and Land Registry  
Knowledge Exchange Network

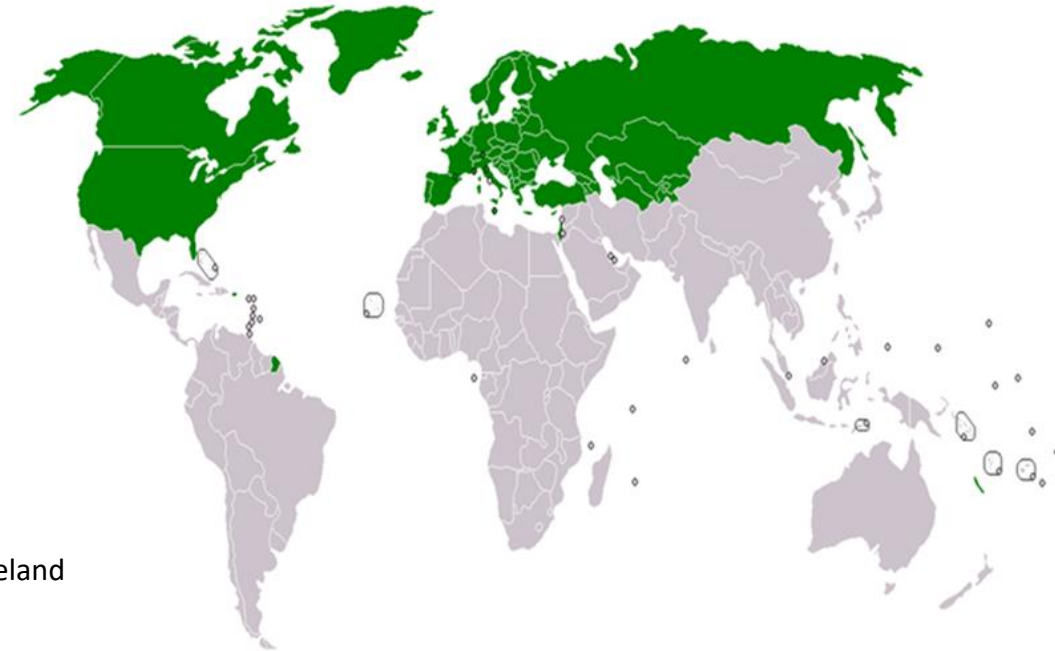
Joint PCC and EuroGeographics CLRKEN Webinar  
Slovenia, 10 and 11 November 2021

# The UNECE Working Party on Land Administration (WPLA)

Albania	Liechtenstein
Andorra	Lithuania
Armenia	Luxembourg
Austria	Malta
Azerbaijan	Monaco
Belarus	Montenegro
Belgium	Netherlands
Bosnia and Herzegovina	North Macedonia
Bulgaria	Norway
Canada	Poland
Croatia	Portugal
Cyprus	Republic of Moldova
Czech Republic	Romania
Denmark	Russian Federation
Estonia	San Marino
Finland	Serbia
France	Slovakia
Georgia	Slovenia
Germany	Spain
Greece	Sweden
Hungary	Switzerland
Iceland	Tajikistan
Ireland	Turkey
Israel	Turkmenistan
Italy	Ukraine
Kazakhstan	United Kingdom of Great Britain and Northern Ireland
Kyrgyzstan	United States of America
Latvia	Uzbekistan

56 member States in Europe, Central Asia and North America

- Continuous dialogue and benchmarking for promotion and improvement of land administration and management in the ECE region – a holistic perspective



# Land administration 2030 – dialogue with member states



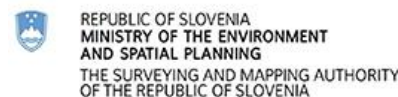
“Role of National Mapping, Cadastre and Land Registry Authorities in Resilience and Recovery program “

# Scenario study on future land administration - objectives

- Understand emerging developments expected to shape the future
- Provide LA authorities with a framework based on scenario analysis and used to explore their future and to facilitate national LA strategies
- A dialogue tool (in-country/global) to identify common challenges and opportunities, share best practices for solutions and risk mitigation measures and to improve preparedness for future disruptive changes
- Contribute with relevant thought leadership to the long-term strategic work of the authorities for them to stay relevant, liable and provide trustworthy and future-proof services
- Final report in due course

\*) Austria, Finland, Netherlands, Norway, Sweden, Switzerland

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# Global megatrends and specific drivers related to the LA domain



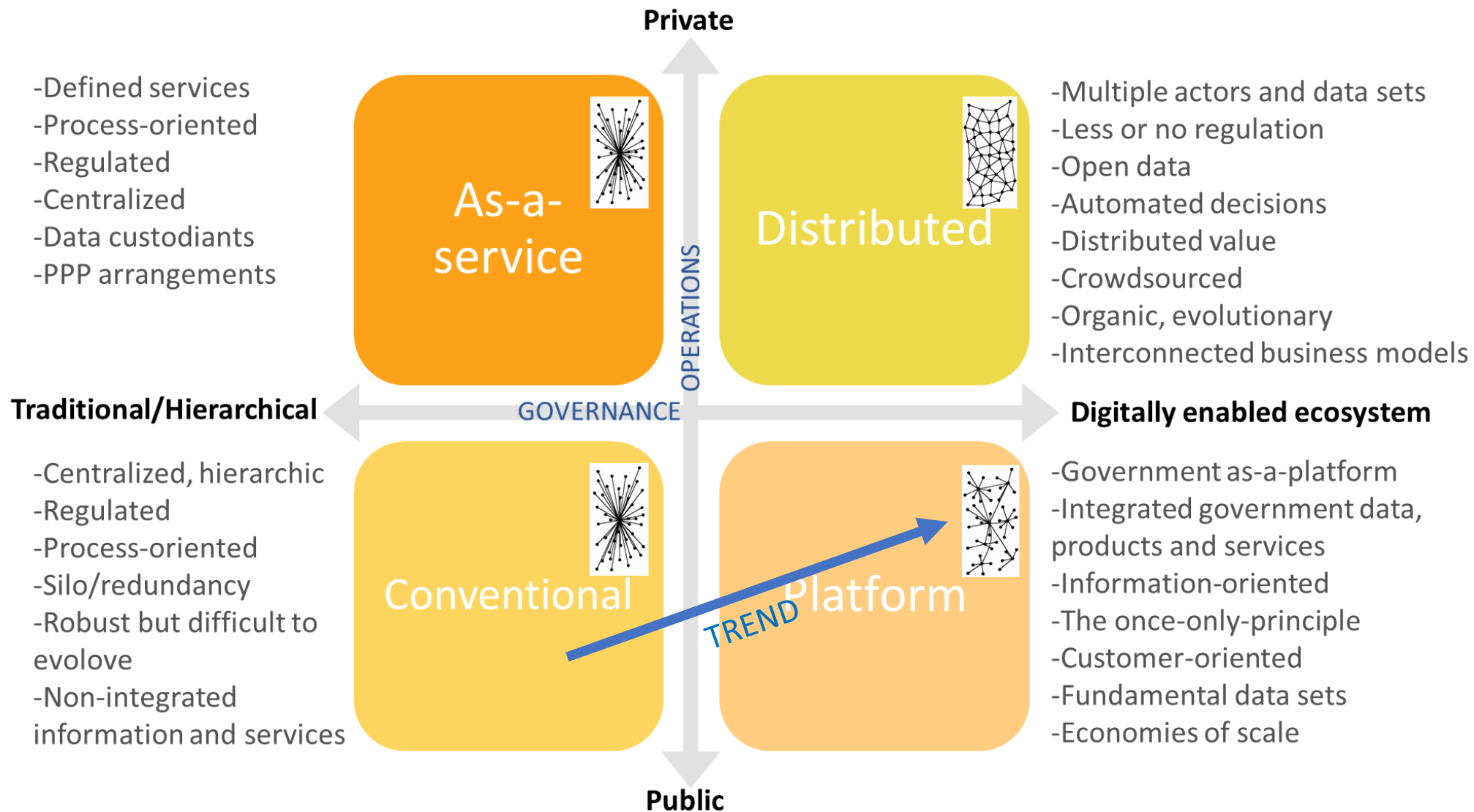
- Collaboration, sharing and interoperable solutions
- Usage of big data, AI, IoT and other new tech
- Information *security* and *integrity* aspects related to new technologies (the cloud, AI, blockchain, digital identity...), legislations (GDPR, PSI...), and policies (open data, government as-a-platform...)
- Respond to next-generation demands requires new digital workflows and new financial, information and business models; scalable, interoperable and evolutionary
- Policies, legal frameworks and governance are sometimes legacies of the passed preventing innovation and development rather than enabling it
- Innovation through crowd-sourcing, open source programming, policy and society hack...
- Geospatial as a facilitator for e.g. integrated land development processes
- VGGT, FELA, IGIF and Agenda 2030
- ...

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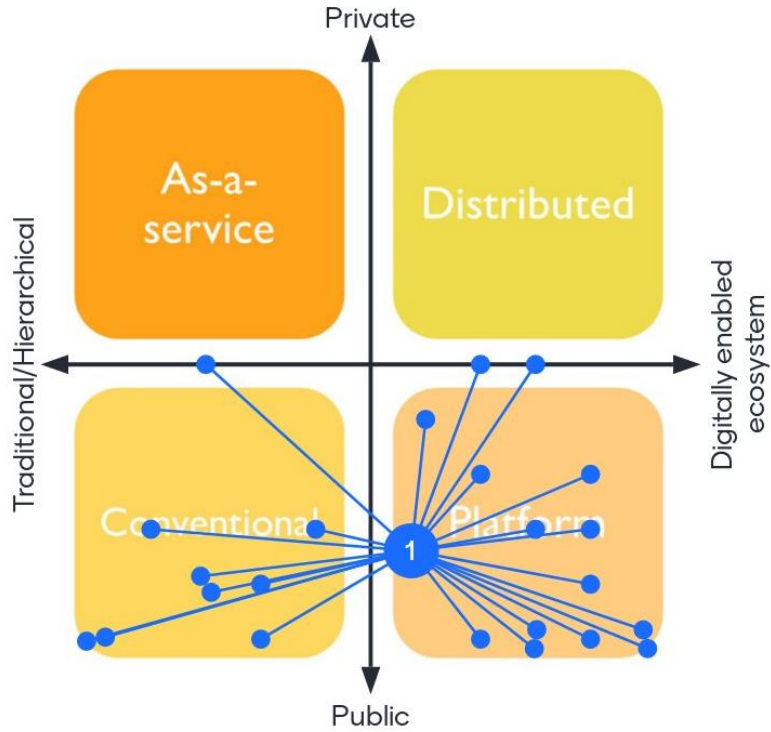


# Land administration 2030 – scenario study

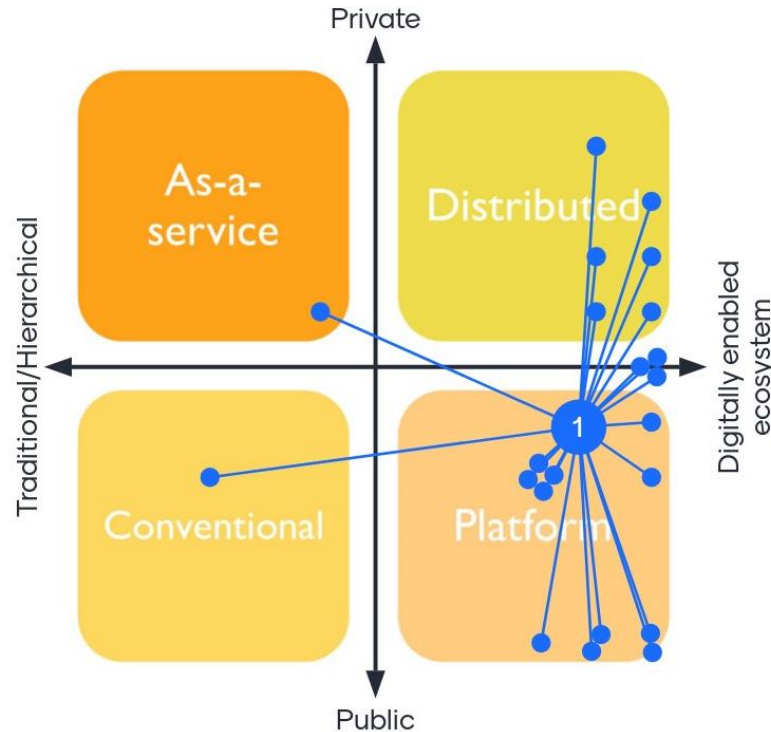


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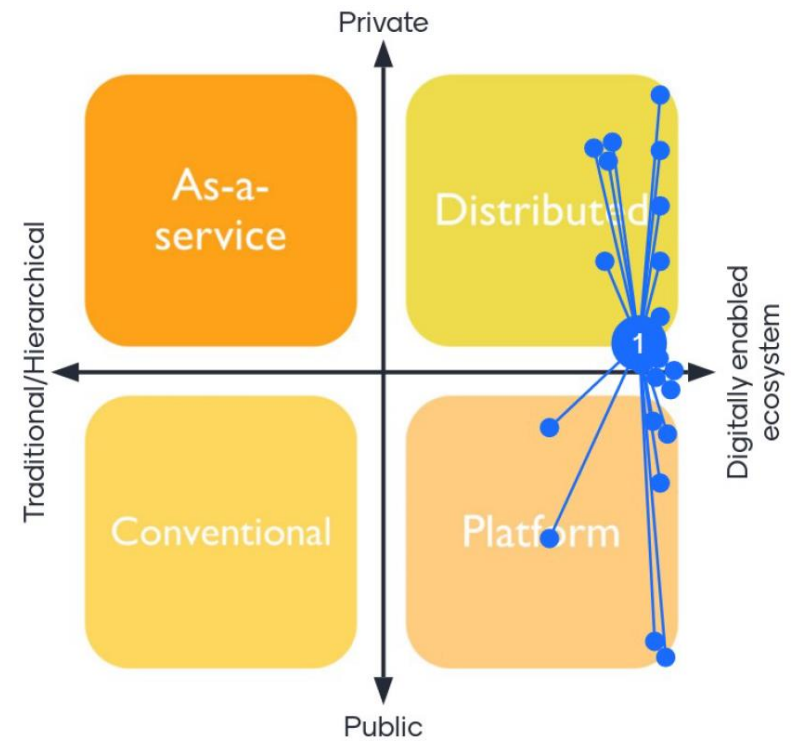
# Trend towards 2030



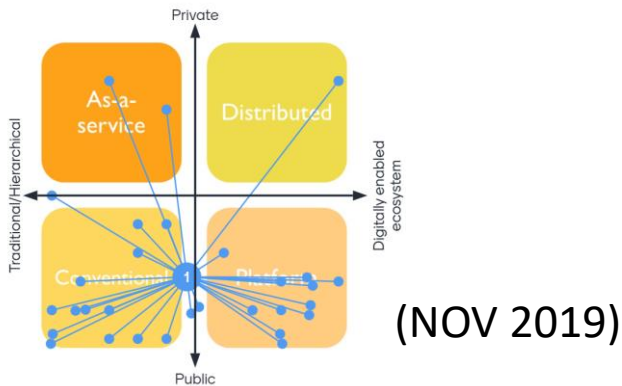
TODAY (JUNE 2021)



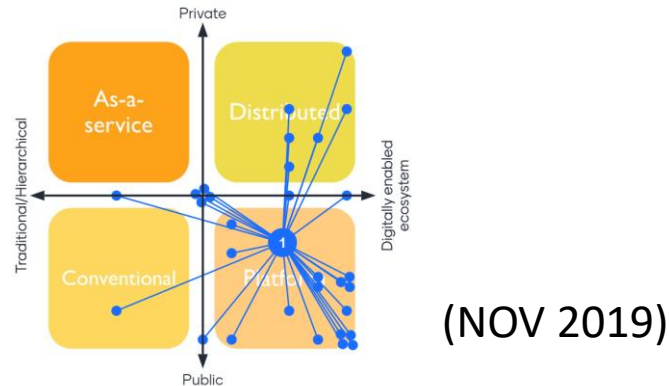
EXPECTED 2030



DESIRED 2030

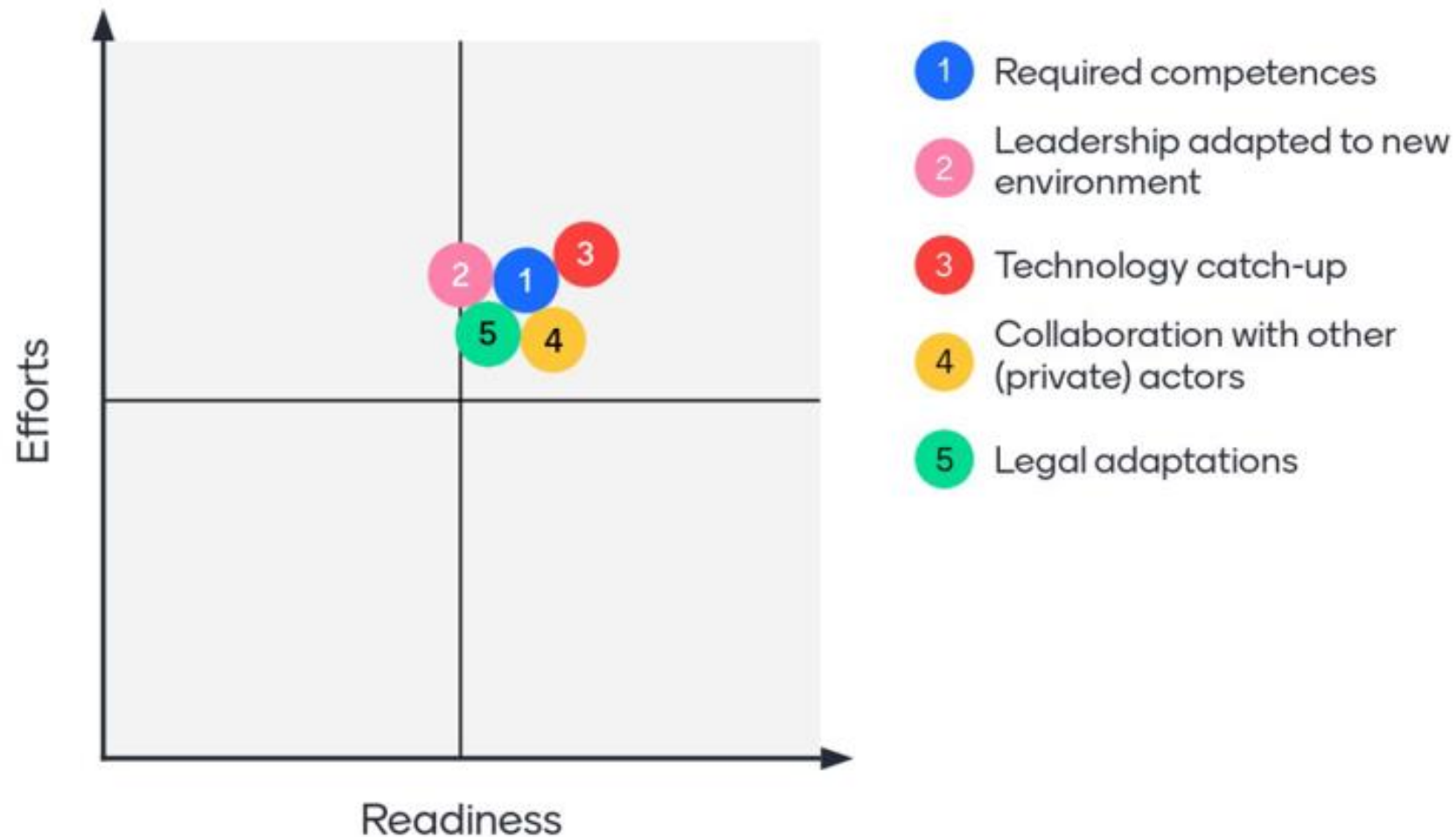


(NOV 2019)



(NOV 2019)

# Relative readiness and efforts needed for land administration arrangements to stay relevant in 2030



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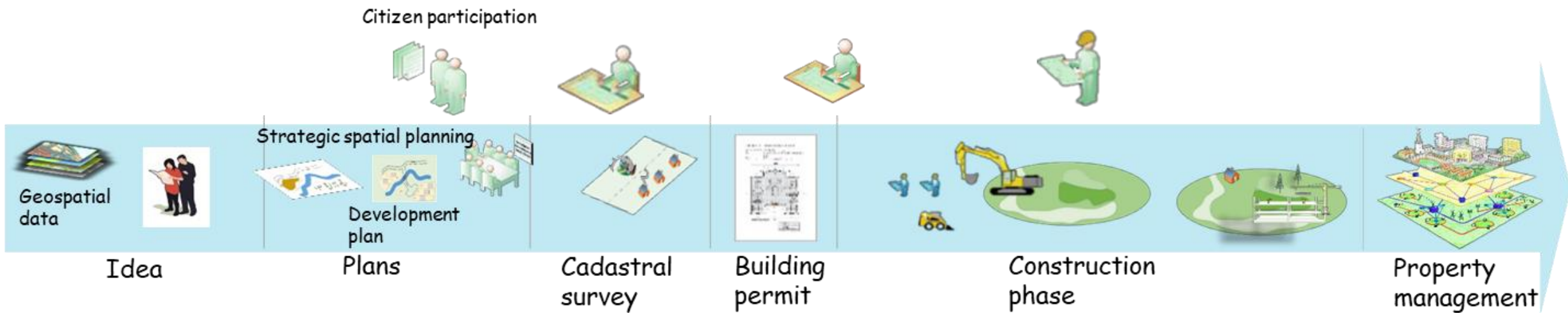


# Possible themes of future webinars



“Role of National Mapping, Cadastre and Land Registry Authorities in Resilience and Recovery program “

# Geospatial information for land use planning and land development



“Role of National Mapping, Cadastre and Land Registry Authorities in Resilience and Recovery program “

# Interoperability and government as-a-platform



**Legal  
Interoperability**



**Organisational  
Interoperability**



**Semantic  
Interoperability**



**Technical  
Interoperability**



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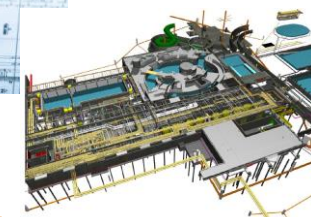
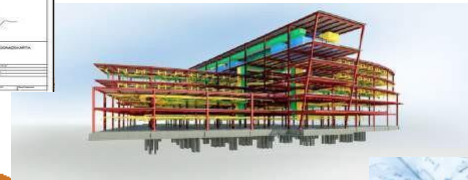
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European Union



Cadastre and Land Registry  
Knowledge Exchange Network



# Data interoperability, access and reuse



Comprehensive plan 2D

Idea 3D

Development plan 2D

Cadastral plan 2D/3D

Project design 3D

Building permit 2D

Construction 3D

Property management 2D/3D

Digital twin

Digitally enabled ecosystems:

- New collaboration and business models
- Data standards and shared information models
- Accessible national data platforms

# 3D geometric representation

Closing the GIS/BIM gap

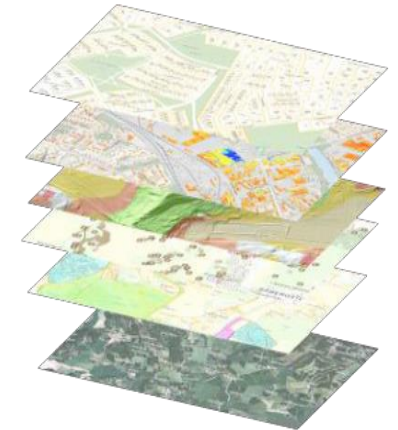
Development plan



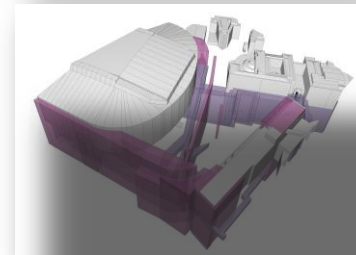
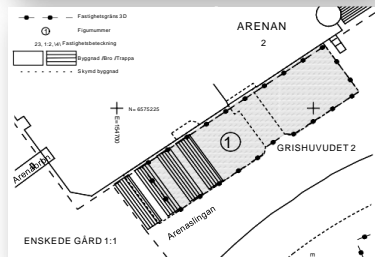
Challenge



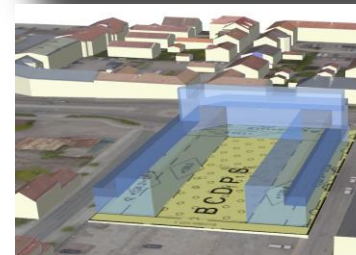
3D



Cadastral plan



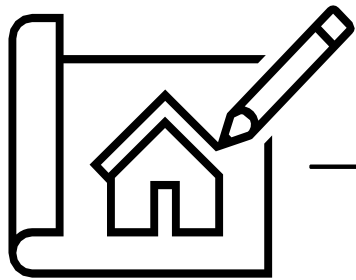
Building permit



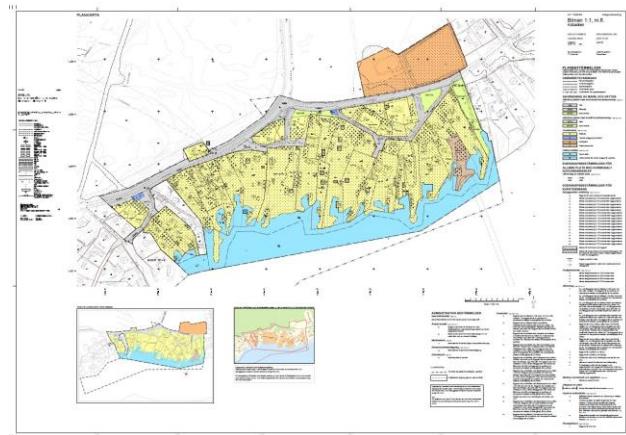
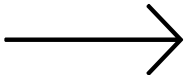
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# Future process for land use planning and development

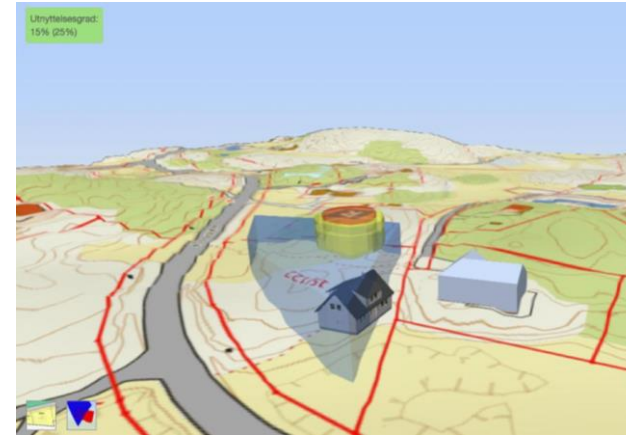
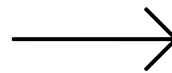


Investor, land developer, property owner

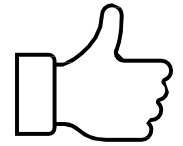
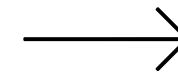


National platform for digital development plans uploaded by municipalities

150 data layers by 2027



Interactive and automated analysis to ensure that the suggested building (BIM model) fulfill the regulations defined in the development plan



Municipalities issue building permit

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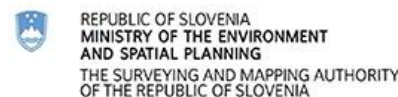
# Recent webinars (spring 2021)

## COVID-19 pandemic and land administration

- “Accelerated Digitalisation: The impact of the COVID-19 Pandemic on the Land Administration sector” (HMLR, UK)
- "COVID-19 and Property Markets: How is the pandemic affecting property markets in the UNECE region?“ (Kartverket, Norway)
- “NSDI, geospatial data and technology: The role of geospatial and cadastre agencies in the COVID-19 pandemic response” (Rosreestr, Russia)

Recordings/presentations available at: <https://unece.org/info/events/unece-meetings-and-events/housing-and-land-management>

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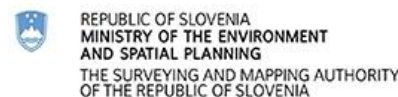
# Recent/upcoming publications

- Fraud in land administration systems
- Future scenarios on land administration
- Public-private partnerships in land administration
- COVID-19 Recovery Action Plan for informal settlements in the UNECE Region
- Perceived security of tenure (Prindex)

The publications are available at:

<https://unece.org/publications/housing-and-land-management>

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# Thank you for your attention!

Fredrik Zetterquist

fredrik.zetterquist@hig.se

+46 70 550 49 56

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