



**NLS**  
NATIONAL  
LAND SURVEY  
OF FINLAND

# Role of Land Administration Services in Different Ecosystems

Experiences of National Land Surveys of Finland

WPLA webinar 2024-04-18

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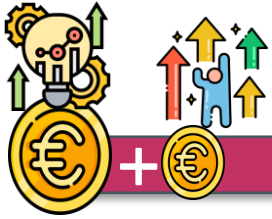
# NLS's interest in Ecosystems and Partners' Networks



Our learning experience...



# Property Transaction Service since 11/2013



Year	Property Transaction Service	All property transactions	% of all transaction
2014	747	97 009	0,8 %
2015	971	101 415	1,0 %
2016	1 502	98 496	1,5 %
2017	1 794	100 198	1,8 %
2018	2 051	102 819	2,0 %
2019	2 523	105 699	2,4 %
2020	5 507	120 541	4,6 %
2021	8 295	120 155	6,9 %
2022	9 009	106 469	8,5 %
2023	9 299	97 145	9,6 %

Change mindset of co-operation and development...



**NLS NATIONAL LAND SURVEY OF FINLAND** Property Transaction

Welcome to the Property Transaction Service

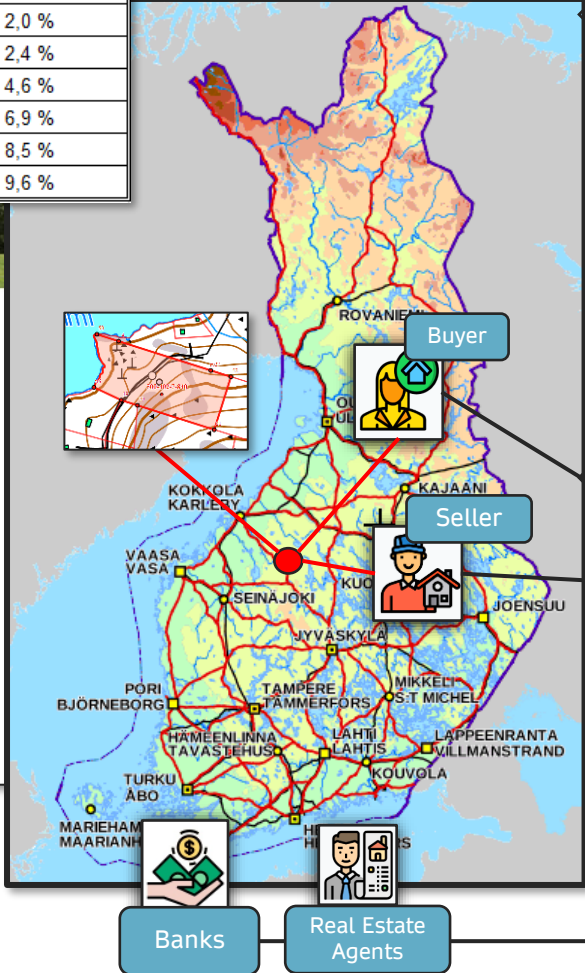
Support for producing different terms of the deed

Digital Service Charge Payment

Digital signatures with banks' authentication or mobile id service

Automatic pending for titles and mortgages registration

**LIS Land Register**



- Independent of time and location
- No need for notary
- Service is precisely described in Land Code Act
- Rather unique service in the world
- "Once in lifetime"-event
- A challenging conceptual world
- High purchase price in property transaction
  - Loans/mortgages
  - Risks
- Inappropriate for their business processes
- Keeping business in their own services
- Fear of reduced business opportunities



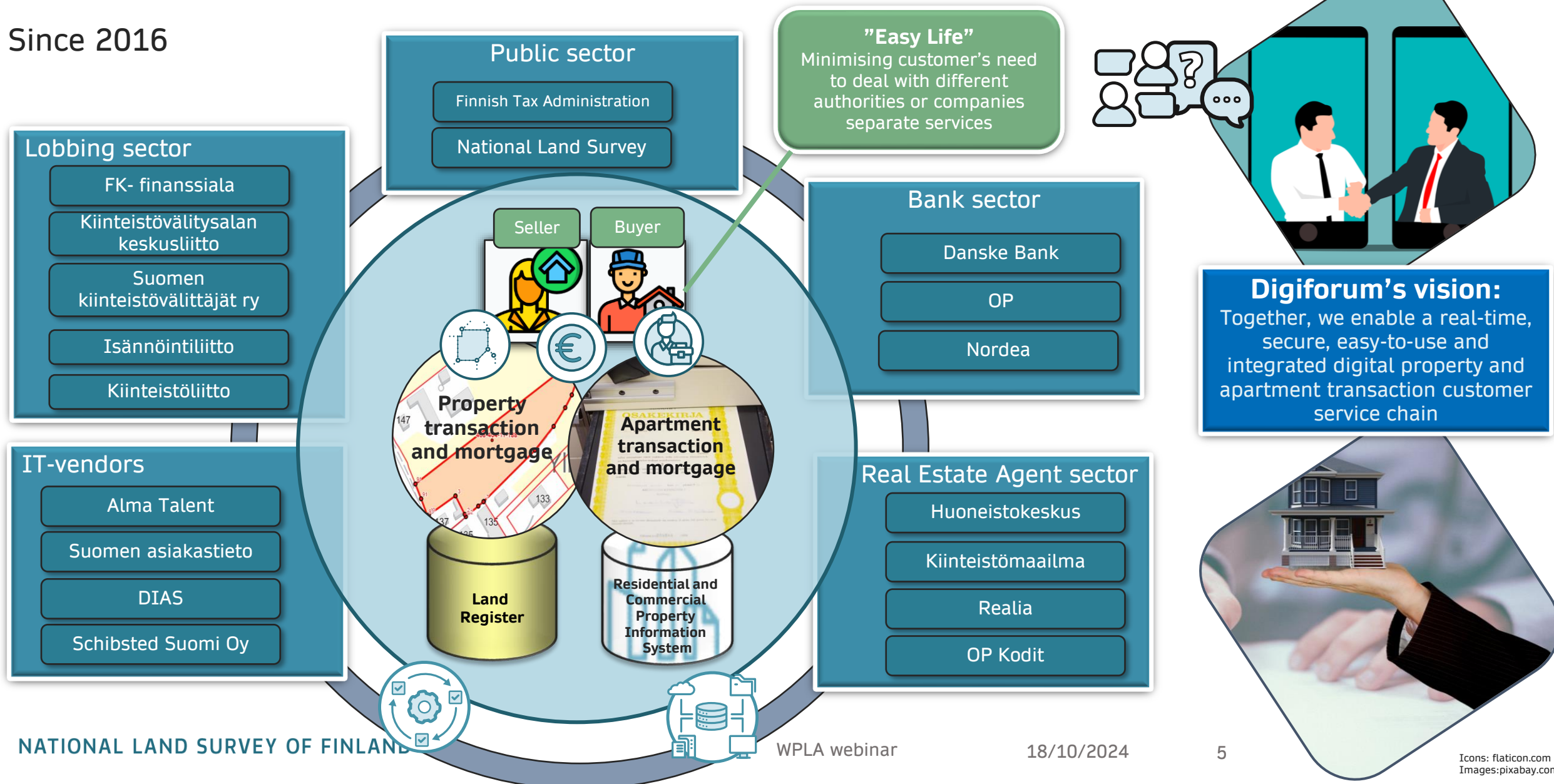
# NLS Mindset Change 2016

Establish Partner Network:  
*Digiforum*

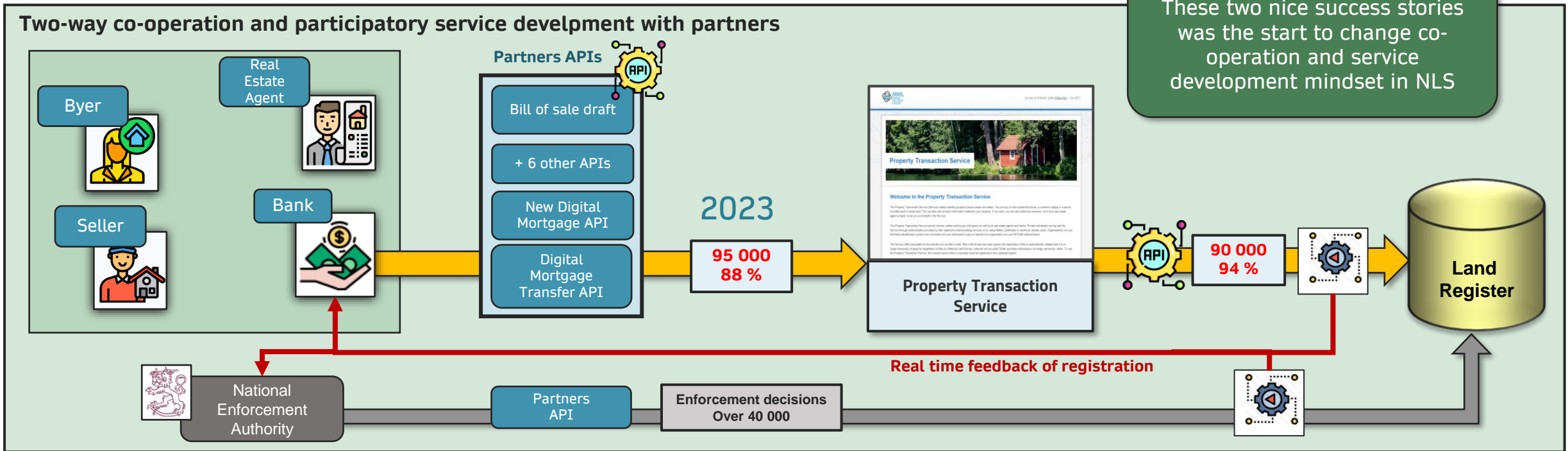
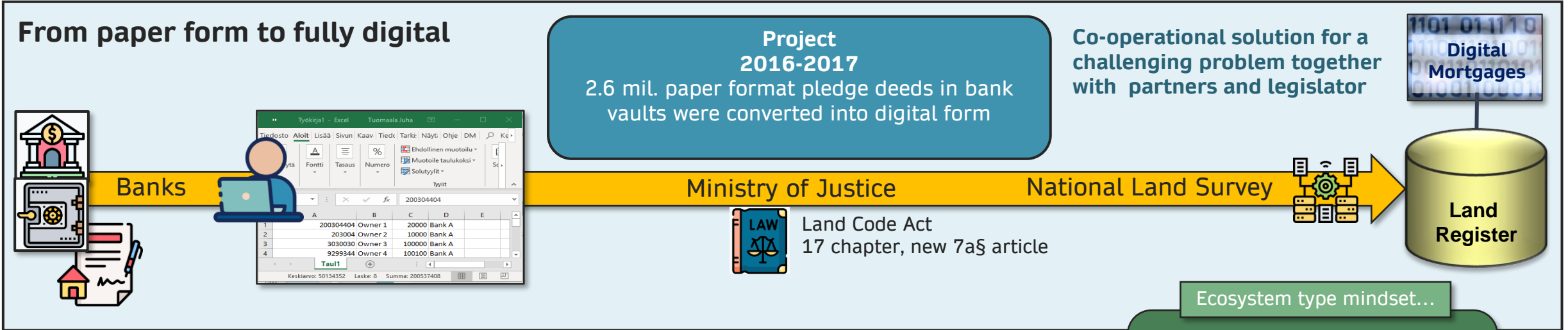


# Digiforum – co-operation and service development network for developing together the property and apartment transaction services

Since 2016



# Partners APIs in Property Transaction Ecosystem

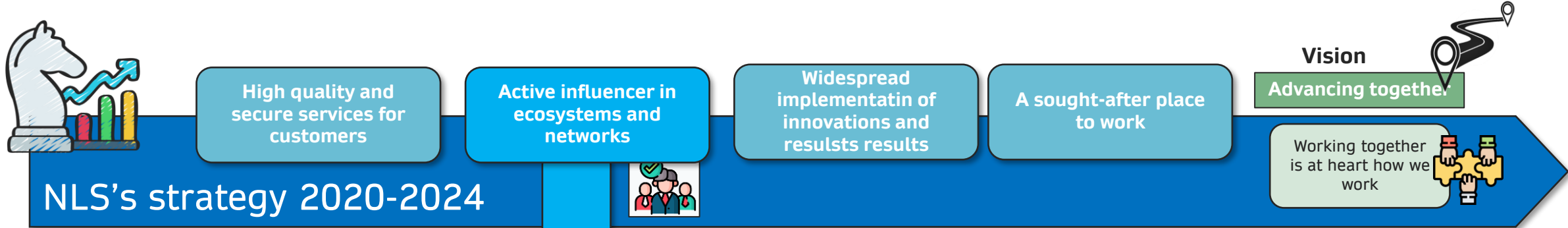




# Mindset Change also to NLS's Strategy



# Linking strategic goals to ecosystem and network actions



By creating value for customers and ecosystem partners

By working in ecosystems and networks, we contribute to the development of society and to the functioning of service chains

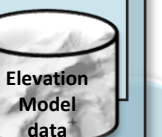
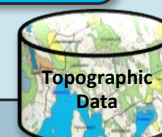
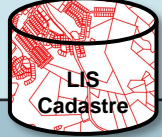
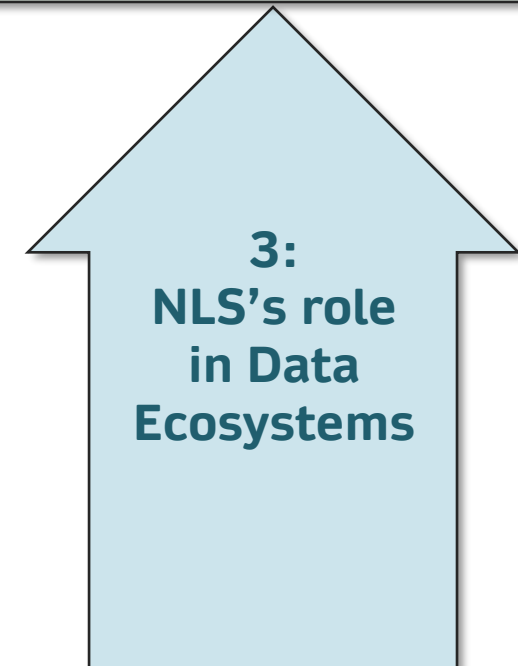
## Linking strategic goals to ecosystem and network actions







## Ecosystems



Land ownership and apartments

Map and geospatial data

## 1: Data Producers' Networks





## Ecosystems

**1:  
Operational  
Partners'  
Networks**

**2:  
NLS's role in  
Business  
Ecosystems**

**3:  
NLS's role  
in Data  
Ecosystems**

New Properties  
and Land  
Surveying

Land  
Consolidation  
Services

Expropriati  
on and  
Valuation

Register  
Services

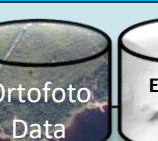
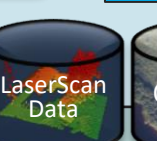
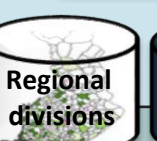
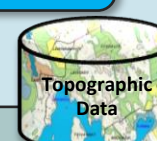
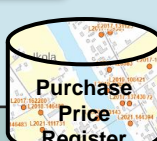
Ownership  
Services  
Regarding  
Properties

Ownership  
Services  
Regarding  
Apartments

Basic Spatial  
Data  
Services

Information  
Services

NLS's Production  
Results Units (8)



Land ownership and apartments

Map and geospatial data



**1: Data Producers' Networks**





### Ecosystems

#### 1: Operational Partners' Networks

- Land Consolidations
- Land Redemptions
- New Traffic Roads
- Energy Production and Distribution

Operational Partners' Networks changes the structure of properties and their ownership in limited areas of land in different ecosystems

#### 2: NLS's role in Business Ecosystems

#### 3: NLS's role in Data Ecosystems

New Properties and Land Surveying

Land Consolidation Services

Expropriation and Valuation

Register Services

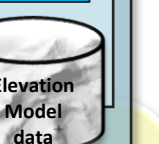
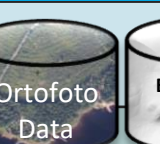
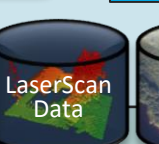
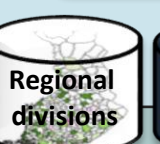
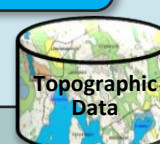
Ownership Services Regarding Properties

Ownership Services Regarding Apartments

Basic Spatial Data Services

Information Services

NLS's Production Results Units (8)



#### Land ownership and apartments

#### Map and geospatial data



#### 1: Data Producers' Networks





# NLS's Partners' Networks Maps

A: Operational Partners' Networks

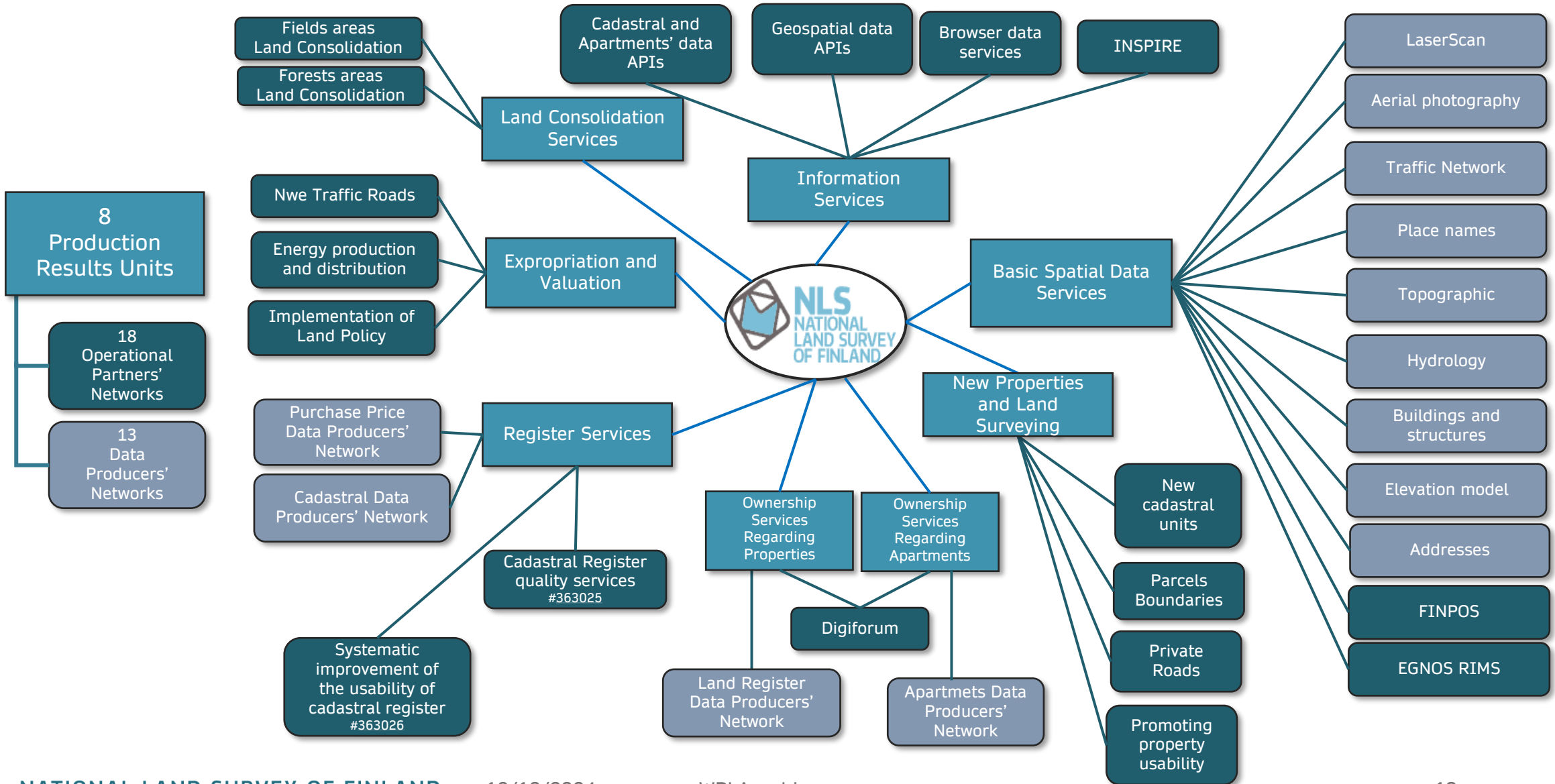
A: Data Producers' Networks



# NLS's Production Results Units Networks

A: Operational Partners' Networks

A: Data Producers' Networks



# Example of Operational Partners' Network Map

Land Consolidation on Field Areas

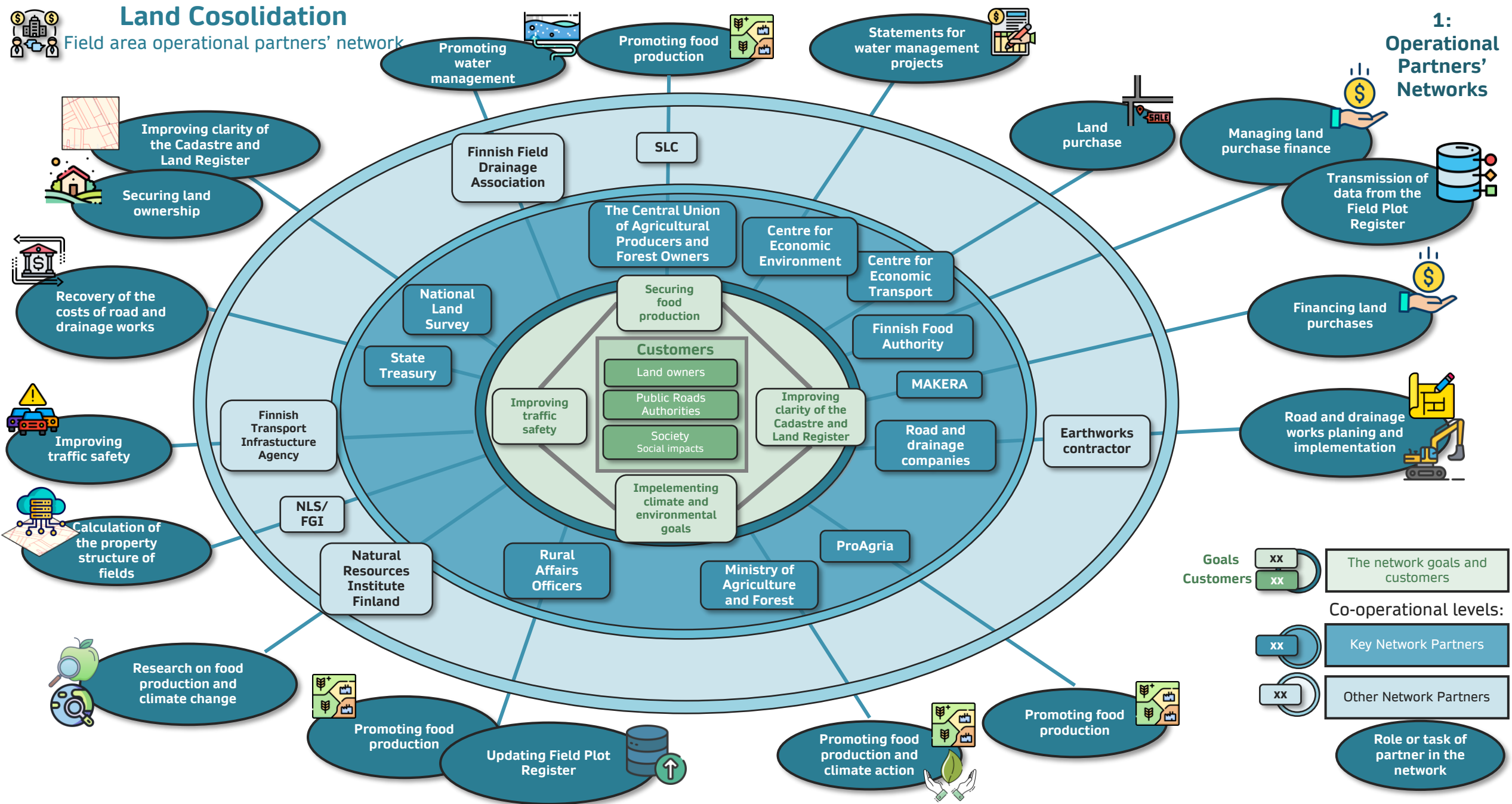




# Land Consolidation

Field area operational partners' network

## 1: Operational Partners' Networks



**Goals** XX

**Customers** XX

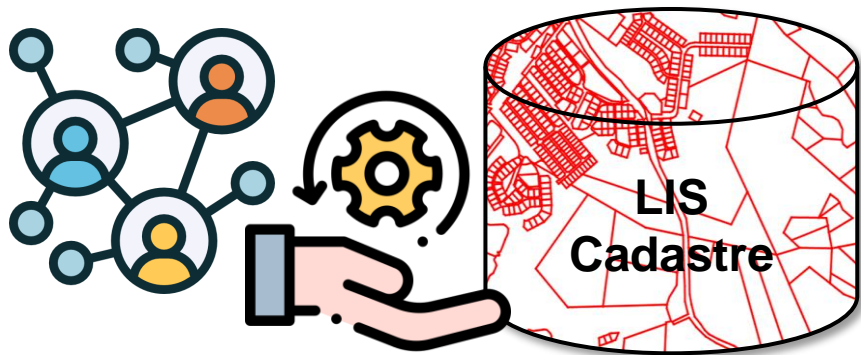
**Co-operational levels:**

- XX Key Network Partners
- XX Other Network Partners

Role or task of partner in the network

# Example of Data Producers' Network Map

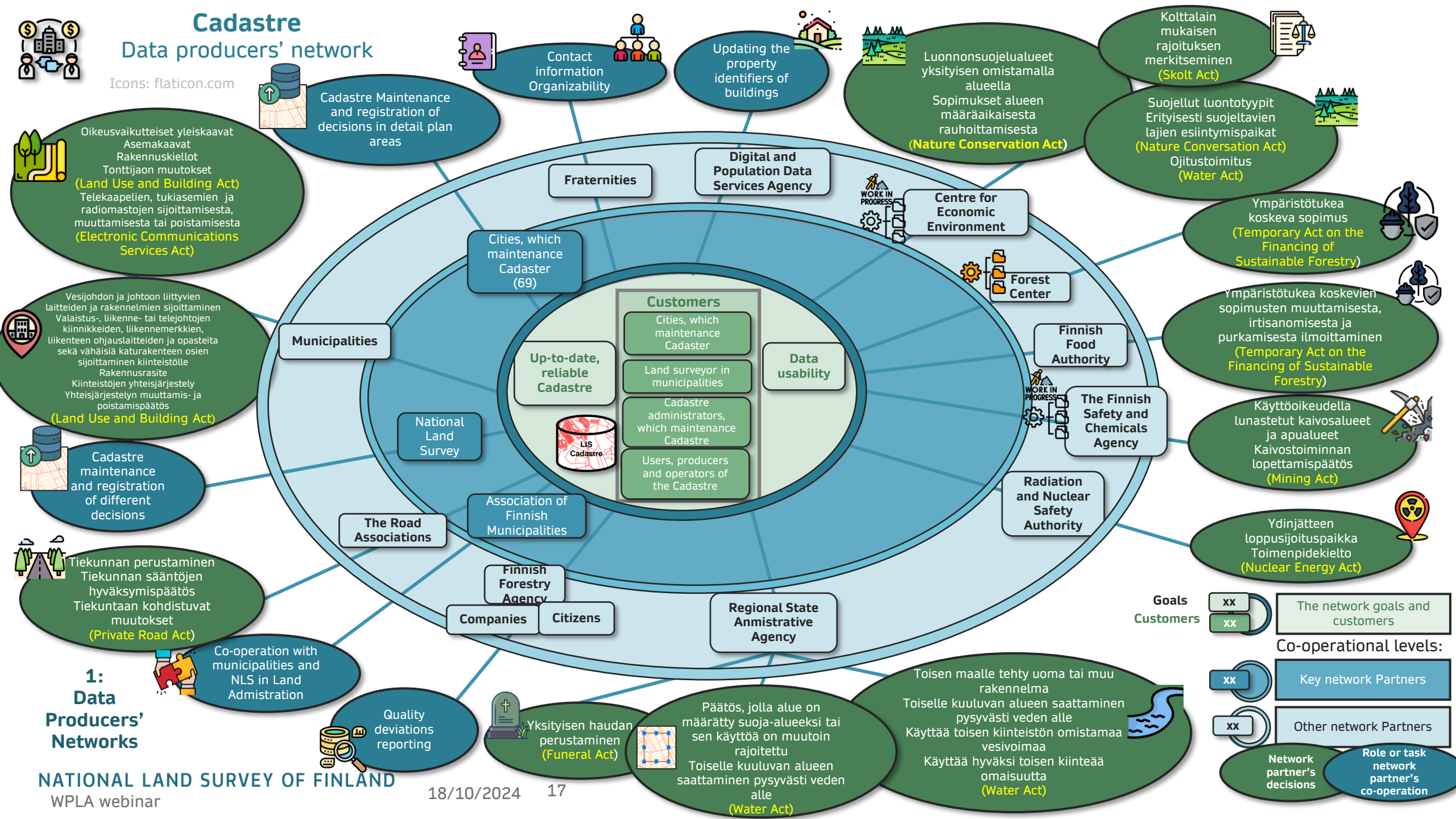
## Cadastral maintenance



# Cadastre

## Data producers' network

Icons: flaticon.com



**1: Data Producers' Networks**

Oikeusvaikutteiset yleiskaavat  
Asemakaavat  
Rakennuskiellot  
Tonttijao muutokset  
**(Land Use and Building Act)**  
Telekaapelin, tukiasemien ja radiomastojen sijoittamisesta, muuttamisesta tai poistamisesta  
**(Electronic Communications Services Act)**

Vesijohdon ja johtoon liittyvien laitteiden ja rakennelmien sijoittaminen  
Valaistus-, liikenne- tai telejohtojen kiinnikkeiden, liikennemerkkien, liikenteen ohjauslaitteiden ja opasteita sekä vähäisiä katurakenteen osien sijoittaminen kiinteistöille  
Rakennusrasite  
Kiinteistöjen yhteisjärjestely  
Yhteisjärjestelyn muuttamis- ja poistamispäätös  
**(Land Use and Building Act)**

Cadastre maintenance and registration of different decisions

Tiekunnan perustaminen  
Tiekunnan sääntöjen hyväksymispäätös  
Tiekuntaan kohdistuvat muutokset  
**(Private Road Act)**

Co-operation with municipalities and NLS in Land Administration

Quality deviations reporting

Yksityisen haudan perustaminen  
**(Funeral Act)**

Päätös, jolla alue on määrätty suoja-alueeksi tai sen käyttöä on muutoin rajoitettu  
Toiselle kuuluvan alueen saattaminen pysyvästi veden alle  
**(Water Act)**

Toisen maalle tehty uoma tai muu rakennelma  
Toiselle kuuluvan alueen saattaminen pysyvästi veden alle  
Käyttää toisen kiinteistön omistamaa vesivoimaa  
Käyttää hyväksi toisen kiinteää omaisuutta  
**(Water Act)**

Contact information Organizability

Updating the property identifiers of buildings

Luonnonsuojelualueet yksityisen omistamalla alueella  
Sopimukset alueen määräaikaista rauhoittamisesta  
**(Nature Conservation Act)**

Kolttalain mukaisen rajoituksen merkitseminen  
**(Skolt Act)**

Suojellut luontotyytit Erityisesti suojeltavien lajien esiintymiskaikat  
**(Nature Conservation Act)**  
Ojitusoimitus  
**(Water Act)**

Ympäristötukea koskeva sopimus  
**(Temporary Act on the Financing of Sustainable Forestry)**

Ympäristötukea koskevien sopimusten muuttamisesta, irtisanomisesta ja purkamisesta ilmoittaminen  
**(Temporary Act on the Financing of Sustainable Forestry)**

Käyttöoikeudella lunastetut kaivosalueet ja apualueet Kaivostoiminnan lopettamispäätös  
**(Mining Act)**

Ydinjätteen loppusijoituspaikka Toimenpidekielto  
**(Nuclear Energy Act)**

**Goals Customers**  
XX The network goals and customers  
XX

**Co-operational levels:**

XX Key network Partners

XX Other network Partners

Network partner's decisions  
Role or task network partner's co-operation





## Ecosystems

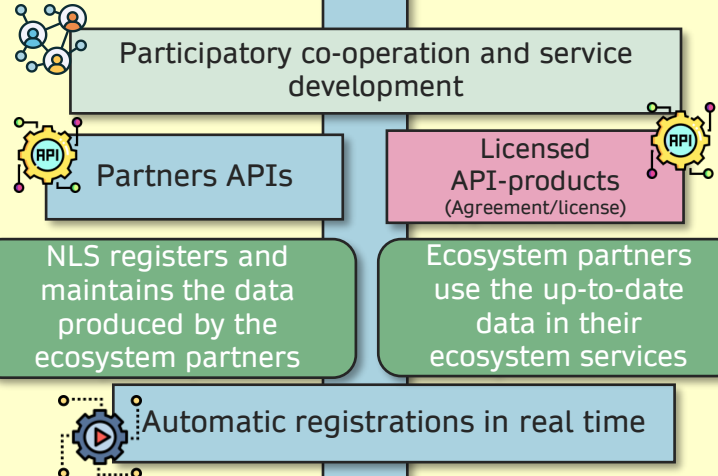
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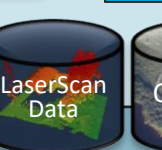
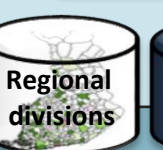
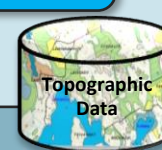
### 2: Business ecosystems

### Property and apartments transactions



### 3: NLS's role in Data Ecosystems

- New Properties and Land Surveying
- Land Consolidation Services
- Expropriation and Valuation
- Register Services
- Ownership Services Regarding Properties
- Ownership Services Regarding Apartments
- Basic Spatial Data Services
- Information Services
- NLS's Production Results Units (8)



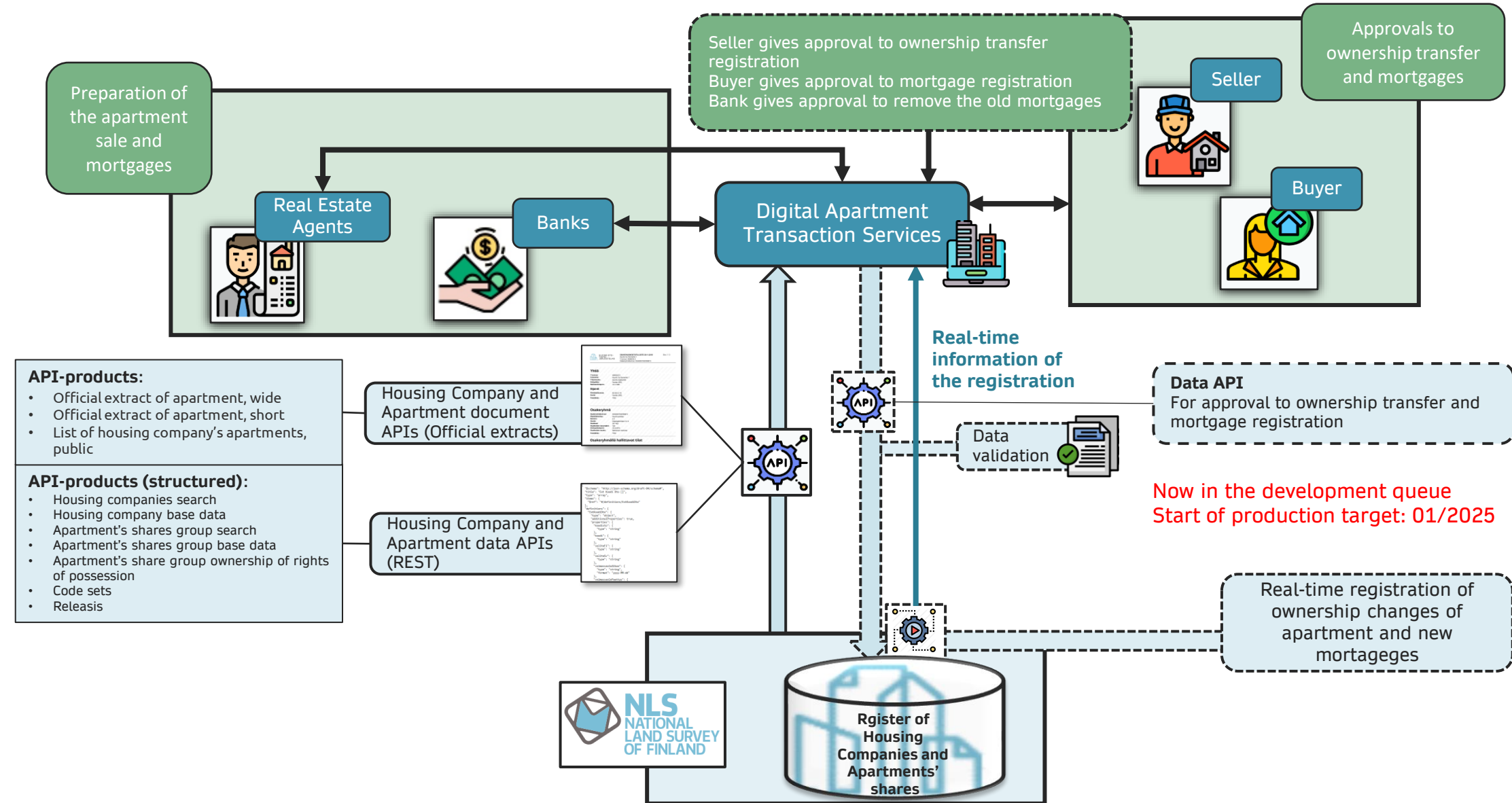
### Land ownership and apartments

### Map and spatial data

### 1: Data Producers' Networks

# Apartment's shares transactions

Goal: Real-time registration of ownership ja mortgages





## Ecosystems

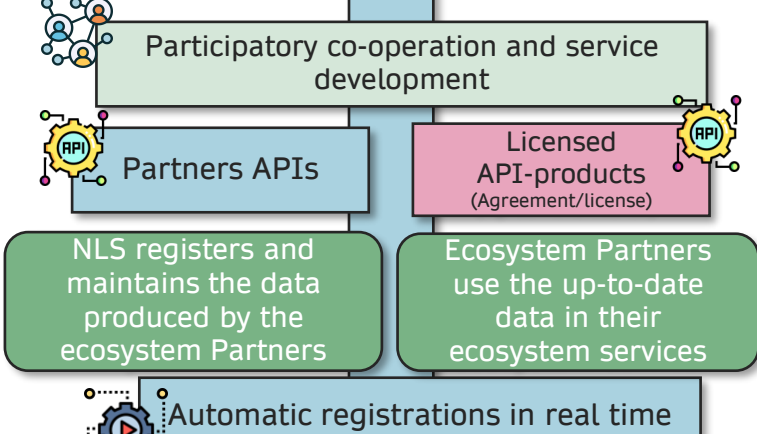
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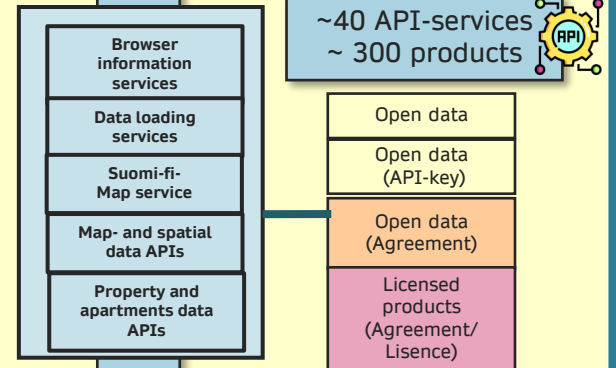
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Property and apartments transactions

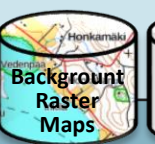
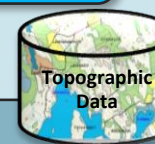
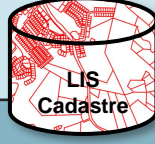


### 3: Data ecosystems

Ecosystems services need up-to-date data maintained by NLS and other data providers

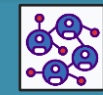


- New Properties and Land Surveying
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Land ownership and apartments

Map and spatial data



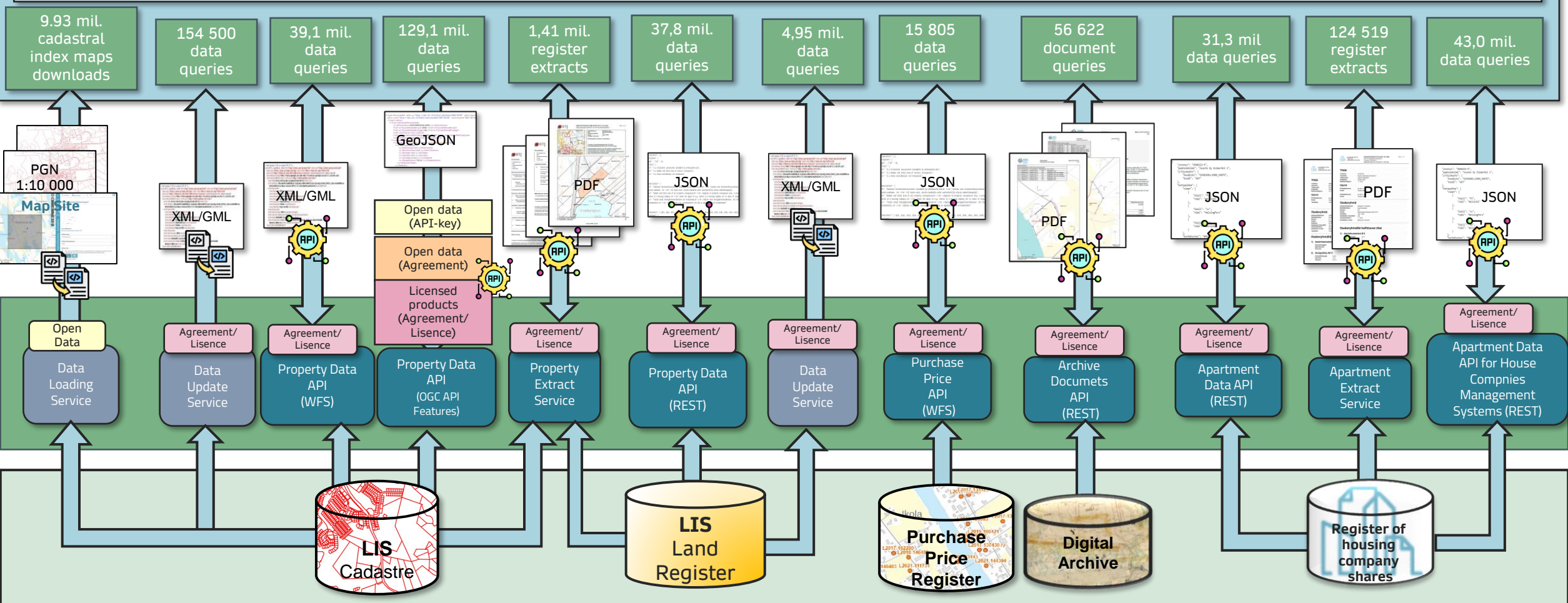
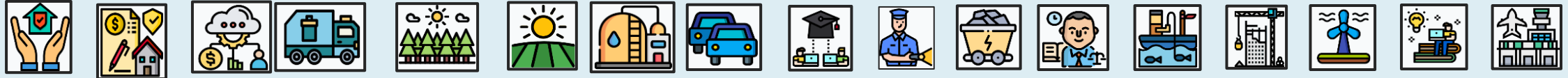


# Data loading and API-interface services 2023

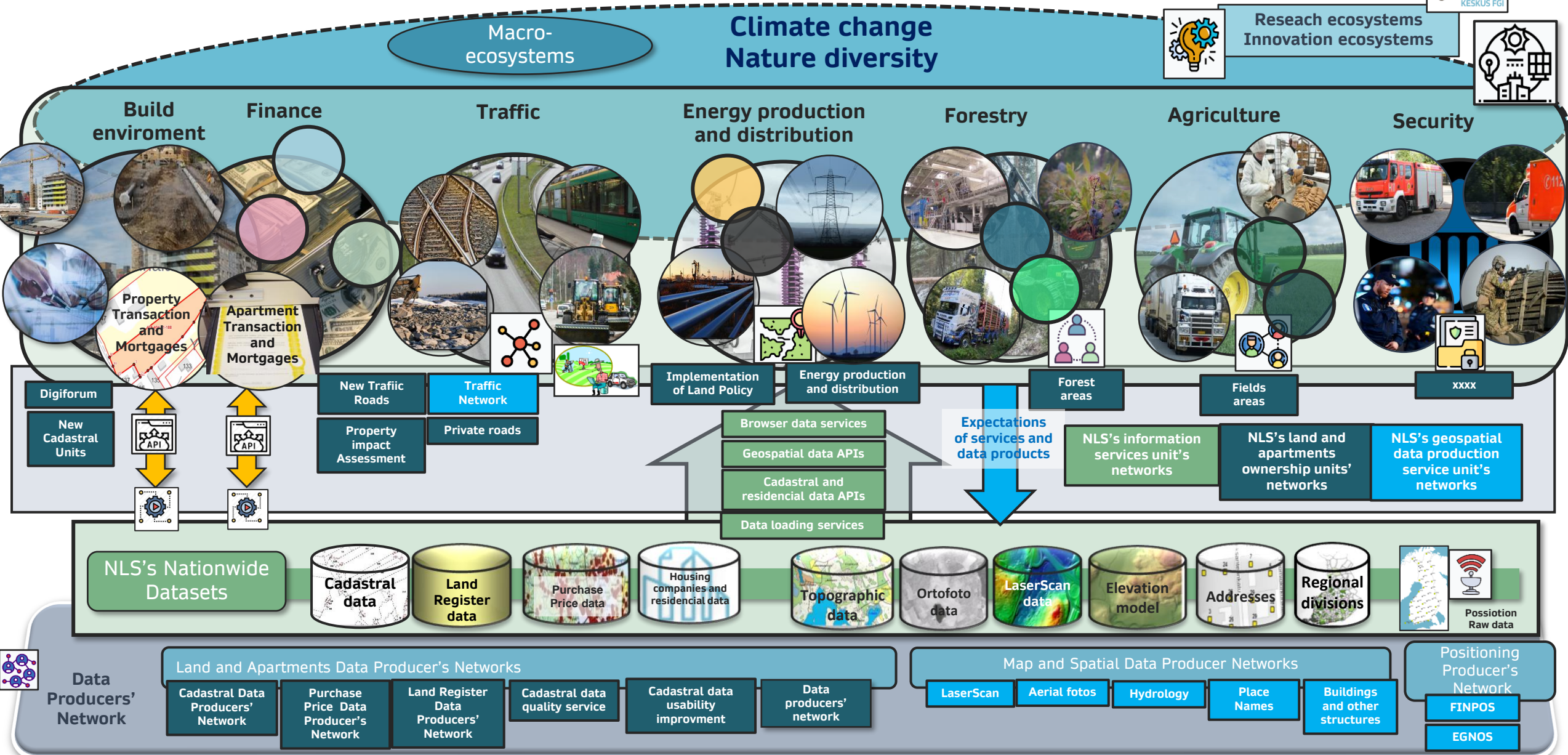
## Land and apartments' data

285,3 mil. data queries  
9,9 mil. cadastral index map downloads  
1,6 mil. register extracts queries (pdf)

### Ecosystems services need also up-to-date land and apartments' data



# Macroecosystems, Ecosystems, Sub-Ecosystems and Networks hierarchy by NLS



# Knowing the Earth – Securing the Future

