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Leveraging FELA

Sharing examples from the Netherlands

Paula Dijkstra, 19 May 2022

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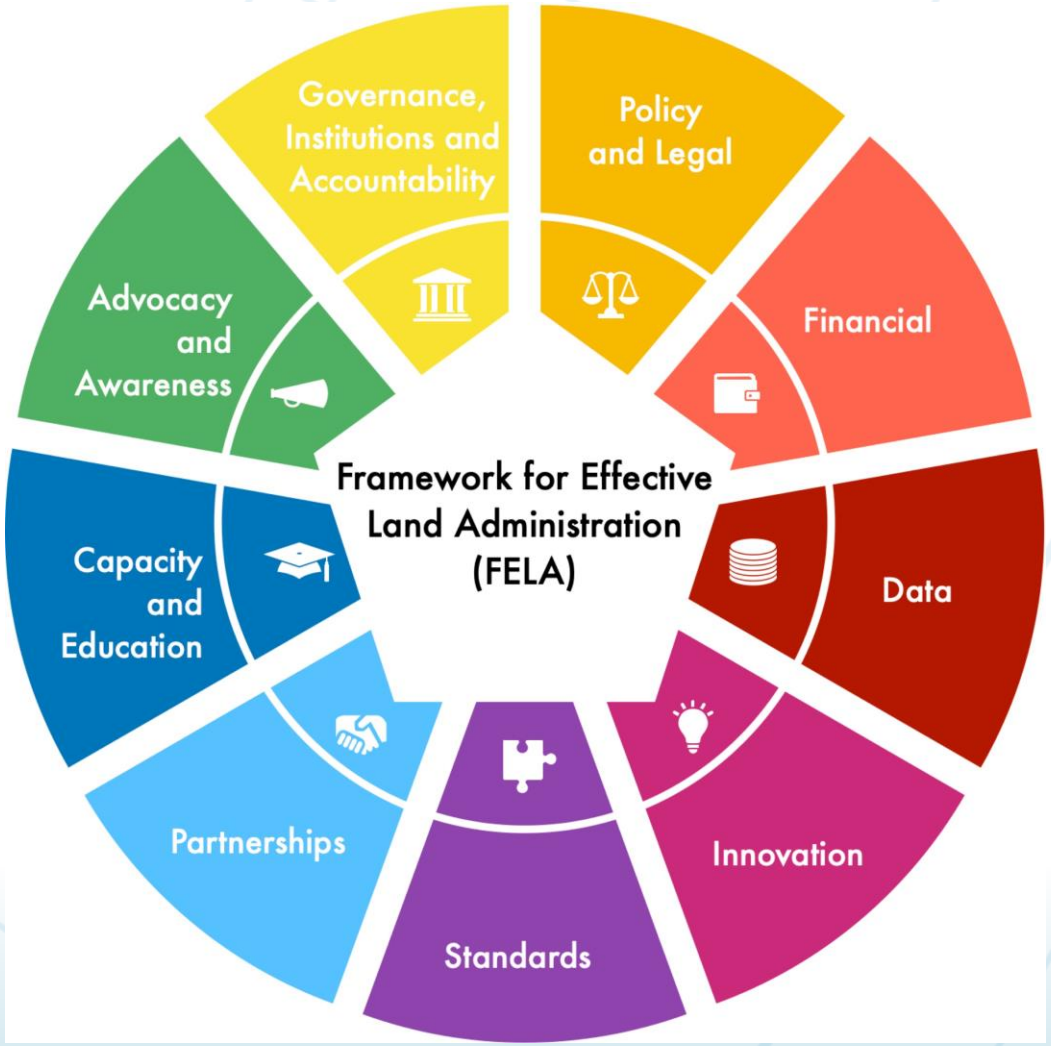
Every human on earth is part of the solution

https://www.un.org/sustainabledevelopment/wp-content/uploads/2018/10/LazyPersonGuide.pdf

Assessment Multi-annual Year Plan & FELA



Framework for Effective Land Administration (2020)
https://www.kadaster.nl/over-ons/beleid/meerjarenbeleidsplan

The Netherlands

- Area: 41,543 km2
- Population : 17,3 million (density 417/ km2)
- Bikes: 22 million (~1000 km / year)
- 60% population lives 5m below sealevel

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Mission

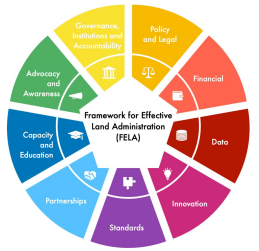
Kadaster

As an independent body, Kadaster provides certainty with transparency regarding ownership and the use of property and space. This provides an important basis for economy and contributes to prosperity. On a daily basis.
We provide overview and support in decision making.
In the Netherlands and abroad.

vision Kadaster

Making reliable data accessible to everyone. Through a single digital gateway. That is our job, by connecting and providing certainty.
When data from different sources is combined, valuable insight is generated offering solutions for challenges in society. Our contribution to a sustainable and livable society. In the Netherlands and abroad.

I: Governance, Institutions and Accountability



- Clear governance models
- Leadership
- Institutional structures
- Clear value proposition

Institutional mandates for land administration

Political endorsement

Enforce accountability and transparancy for procedures, metrics and indicators

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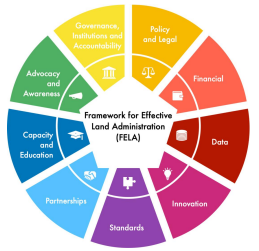
Governance model of Kadaster



Ministry of IKR

Program direction TBO

Works Council

Executive Board

Supervisory Board

BES

User Counsil

Human Resources

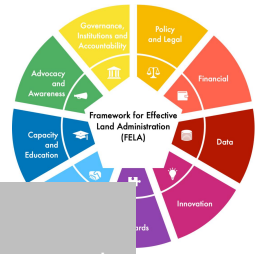
Finance and Control

Management and Development Information Technology

Data, Governance and Innovation

Operation, Service and Registration

Building blocks to determine course of Kadaster



Core values

Mission

As an independent body, Kadaster provides certainty with transparency regarding ownership and the use of property and space. This provides an important basis for economy and conributes to prosperity. On a daily basis. We provide overview and support in decision making. In the Netherlands and abroad.

Legal Framework

Vision

Making reliable data accessible to everyone. Through single digital gateway. That is our job, by connecting and providing certainty.

When data from different sources is combined, valuable insight is generated offering solutions for challenges in society. Our contribution to a sustainable and livable society. In the Netherlands and abroad.

- to offer certainty in land ownership, the use of everything on and under the ground;
- to provide the platform that allows anyone to work with geo-information always and everywhere; and
- to be a partner for the use of geo-information as an indispensable link on social issues, both in the Netherlands and abroad.

SDG

Conditions

Strategy

- **Strategic context**
- **Focal Points**
- **Strategic Principles**

Strategic Exploration

Long term policy plan

MBP

- **Continuity**
- **Business Operations**
- **Finances**

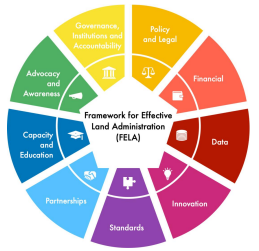
Current Strategic Developments

Year Plan

Year Plan

Employees, users, and partners

II: Policy & Legal



- Policy Framework
- Legal Framework

Available

Accessible

Inclusive

Participative

Gender Responsive

Minority Responsive

Transparant

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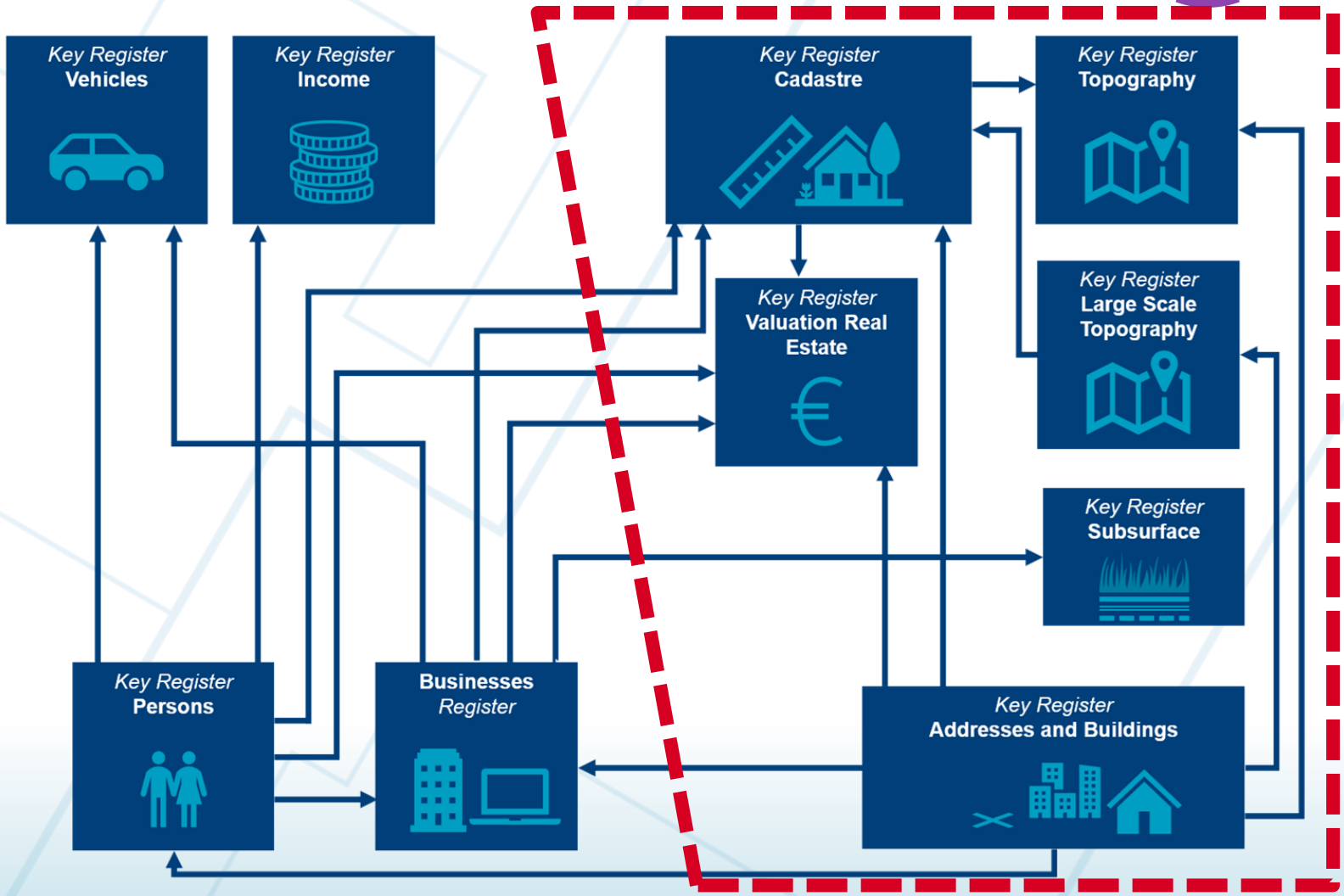
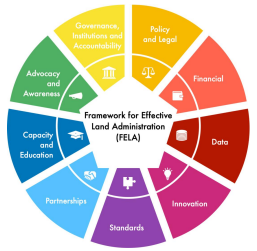
Digital Government Agenda & System of Key Registries
National Spatial Planning Policy (NOVI)



https://www.nldigitalgovernment.nl/digital-government-agenda/
https://www.novistukken.nl/english/default.aspx

III: Financial



- Establishment & Management of costs
- Financial Benefits
- Revenue generation tool
- Business Model

Sustainable economy

Economic Justice

Tools:

- CoFLAS
- LBF
- PPP
- IFC
- Valuation of Unregistered Land

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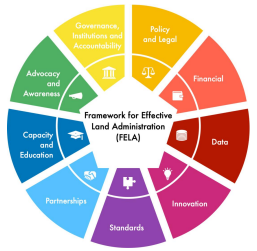
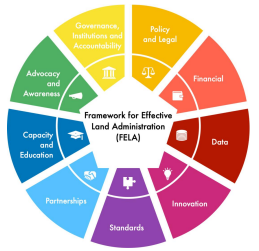
Total revenue

34.1%	Deeds & mortgage documents
14.4%	Surveying projects
20.9%	Information services via Kadaster-on-line
7.0%	Legal products
9.2%	National services
4.1%	Cable and pipeline information
4.3%	Topography
1.5%	Reallotment and area planning
0.3%	Additional activities
1.7%	Defense related products
2.5%	Tactical management Omgevingswet



key figures

IV: Data



- Fundamental data themes
- Guidelines for data collection, curation, management, delivery
- Integrated geospatial information
- Availability, accessibility, interoperability

land tenure

land use

land value

land development

VGGTs, NUA, INSPIRE & FFPLA guidelines

LADM ISO 19152 / IHO S-121

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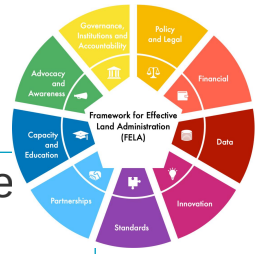
Managing 160 open datasets / 10 petabyte of data
Guiding data principles at Kadaster



1. We understand each other thanks to the same **language**
2. The **responsibilities** for data and processes are separated.
3. We collect, store, edit, validate and share information **reliably** and securely.
4. We respect **privacy** and give individuals insight into and, where possible, control over the information we hold about them and to whom we provide their data.
5. All **employees** have the necessary knowledge for their work of the possibilities of data and the requirements that are set for working with data.
6. We identify and manage which **standards** we apply (open world standards, mandatory standards and where necessary de facto standards).
7. We record data relating to an object in **one place** and update it in coherence.
8. We store **process data** from our processe
9. We are **transparent** about what data we keep, where the data comes from and how it was created (including algorithms).
10. We make the **coherence** of data transparent.
11. We manage our **deriviation** logic transparently and unambiguously.
12. Internal data structures are **decoupled** from the information model in which the data is made available.
13. We use data from the **source** ourselves and encourage the use by our customers of data from the source.
14. We publish data as **open data** when this is legally possible.

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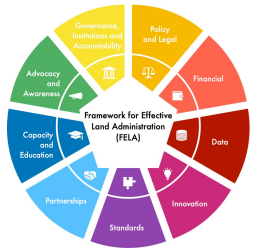
V: Innovation



- Evolving technologies
- Process improvement
- Bridge digital divide
- Societal pull
- Data protection & ethics

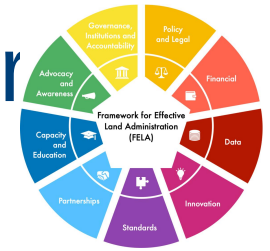
Continuum of Land Rights

Fit for Purpose Land Administration

Responsible Land Administration

3D data, AI, crowdsourced data, blockchain, change detection, big data analytics

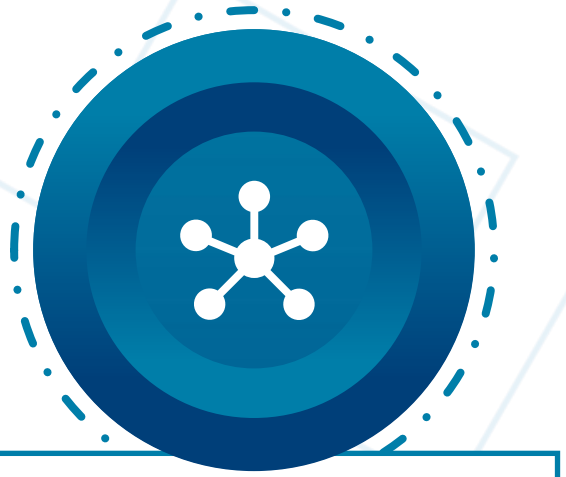
Innovation Board & Emerging Technology Center



Sensors

There are a lot of sensors in the public space and in the future there will be more.

Kadaster conducted a pilot to register sensors and provide access to sensor data.



Multi-dimensional object registration

3D map information supports governments with:

- Noise calculations near motorways
- Sun, shade and wind analyses
- Air quality simulations.

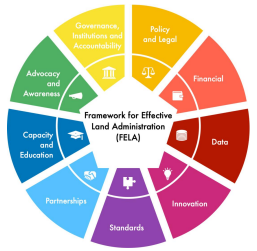
Rebuilding the Cadastral Map (KKN)

We are rebuilding the Cadastral Map based on our existing survey data.

This enables a (more) accurate boundary and surface capture.

Innovation

VI: Standards



- Global Development Agenda through SDG's & indicators
- Interoperability (legal, semantic, technical)

Continuum of Land Rights

Global Geodetic Reference Frame

INSPIRE, Cadastre 2014, LGAF

LADM / STDM

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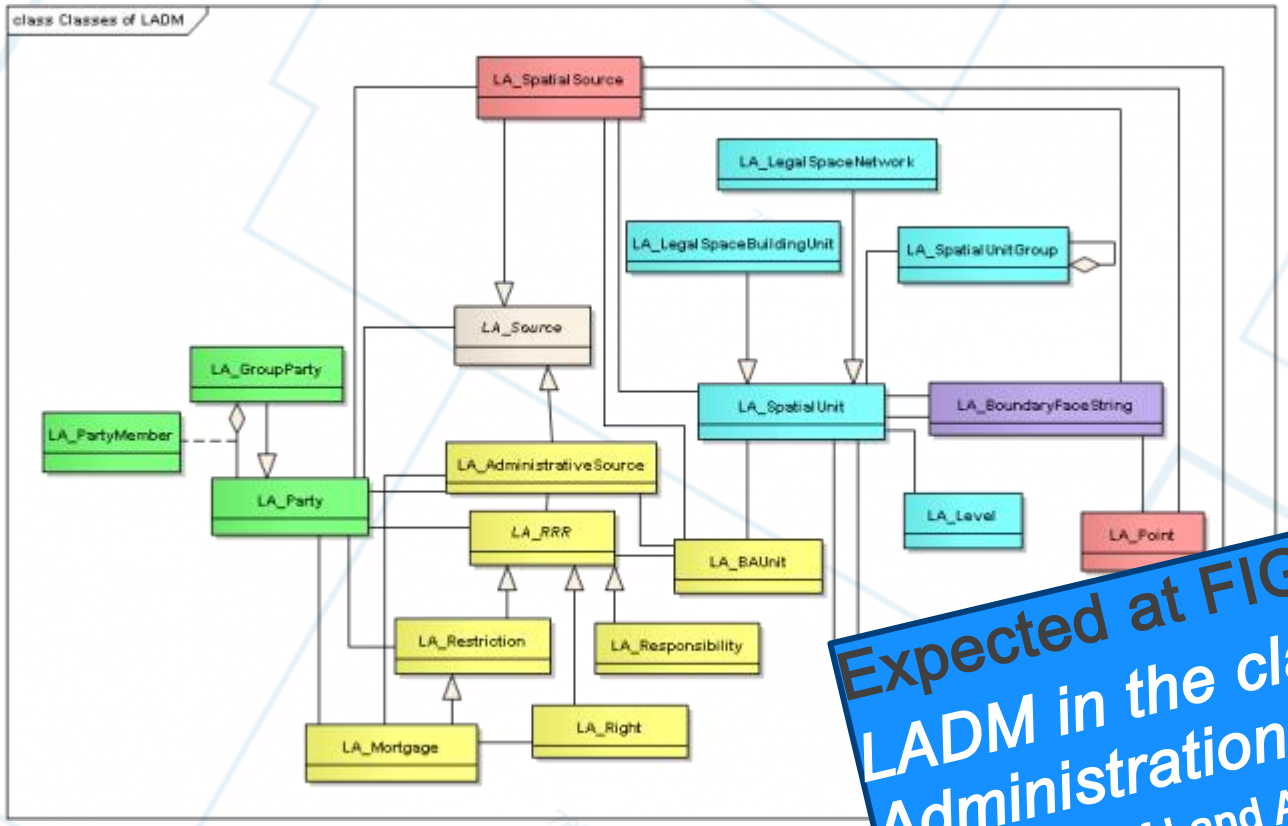
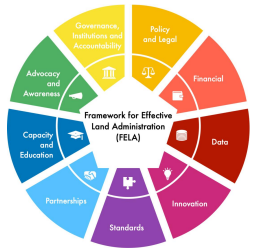
Land Administration Domain Model



Expected at FIG Congress 2022:
LADM in the class room – Making the Land Administration Domain Model broader accessible
By: School of Land Administration Studies (ITC UTwente & Kadaster) Andre da Silva Mano; Malumbo Chipofya; Christiaan Lemmen.

VII: Partnerships

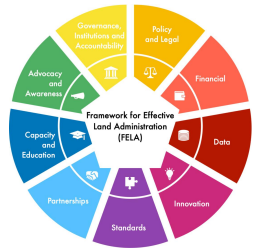


- Cross sector cooperation
- Interdisciplinary cooperation
- Trust
- Strategic alliance
- Shared value

Participatory land administration processes

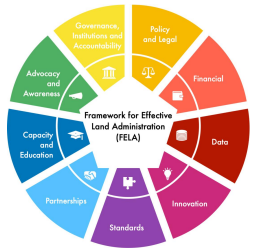
Role of non governmental actors in creation, collection, storage and dissemination of land administration

Our customers, represented in our user council



- Government
- Notaries
- Real estate agencies
- Citizens
- Insurers
- Housing associations
- Commercial parties
- Financial institutions
- Energy companies
- Waterboards
- Provinces / Municipalities
- Open data users

VII: Capacity and Education



- Empower individuals, leaders, organisations, societies
- Improving competencies and skills
- Life long learning

Understanding of geospatial concepts and tools

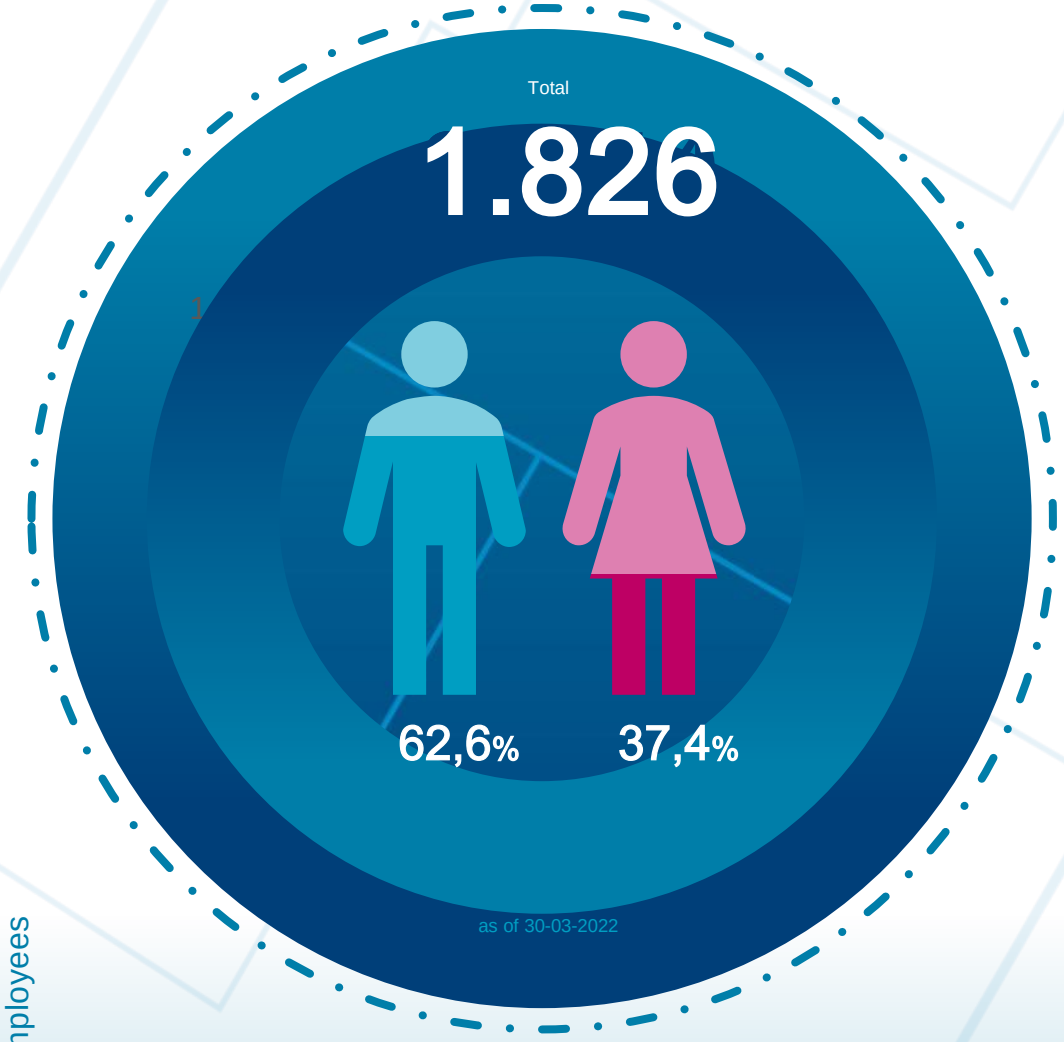
Primary, secondary, tertiary, graduate level

MOOCs

Curriculum development

Grass root surveyors

Ensuring a vital & agile organisation



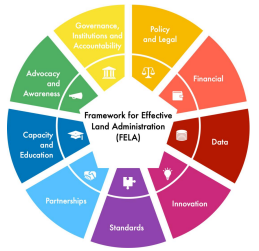
Challenge to ensure a pipeline of Talent:

- Own training programme for surveyors
- Kadaster Academy
- Traineeship
- Attention for well being of the employees

  (flexible hours, promoting healthy choices,

  own training budget)

IX: Advocacy and Awareness



- Stakeholder acceptance
- Societal support
- Integral approach

Involve all land stakeholders (communities, CSO's, NGO's, private, academic, government)

Concepts and tools of UN Habitat, FAO, ABLOS97, FIG

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Our responsibility to

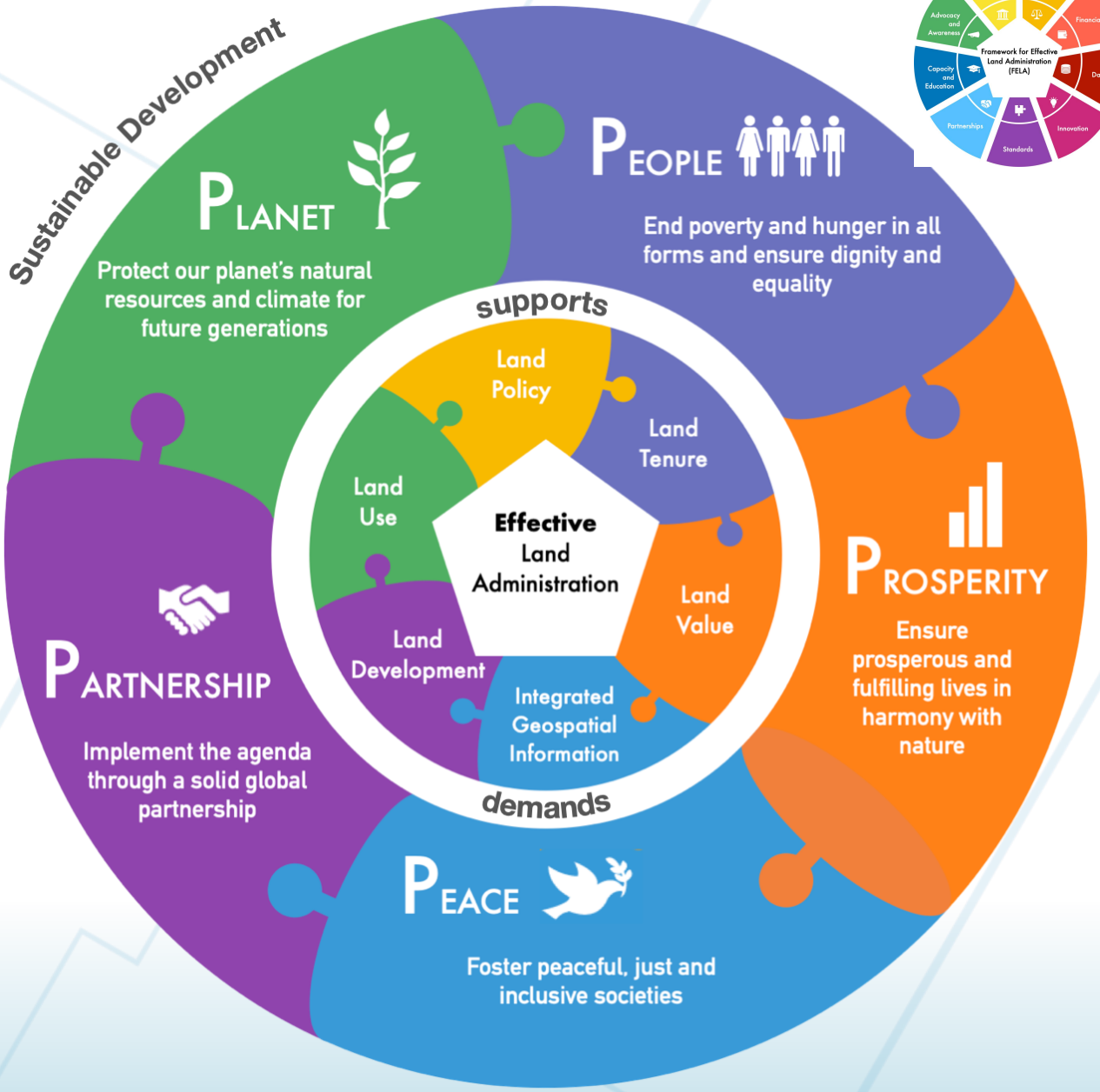
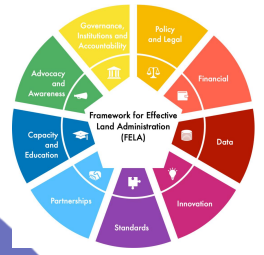
Manage our world

Achieve the SDG's

Strengthen our institutions

Share knowledge

Work together

Create impact

Leave no one behind