CUMBRE DE

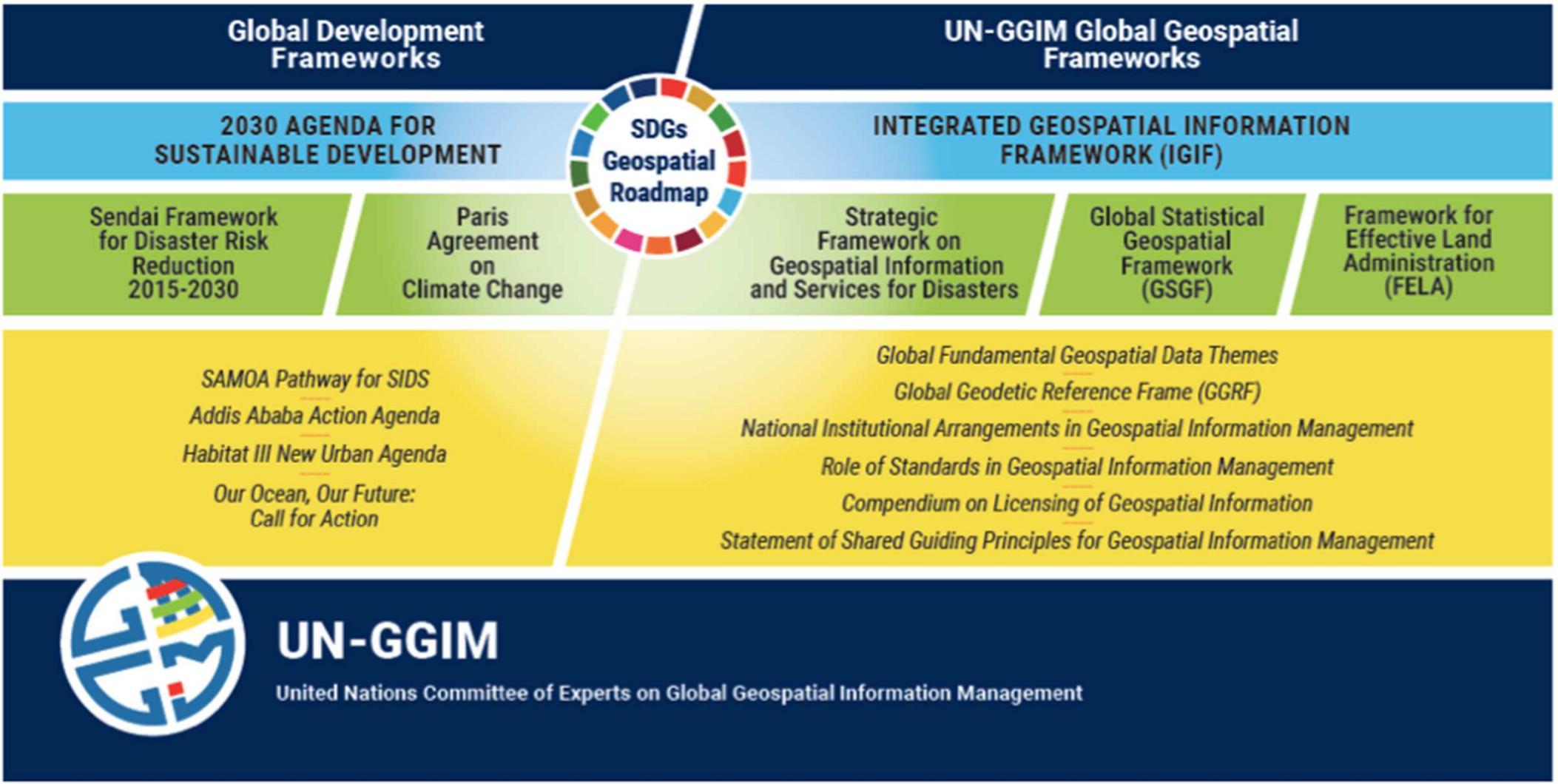
CATASTRO Y REGISTRO DE LA PROPIEDAD

2022

Guías marco de Naciones Unidas para la gestión del territorio y el manejo de la información geoespacial (FELA e IGIF)

Dr. Eva-Maria Unger, Kadaster, The Netherlands

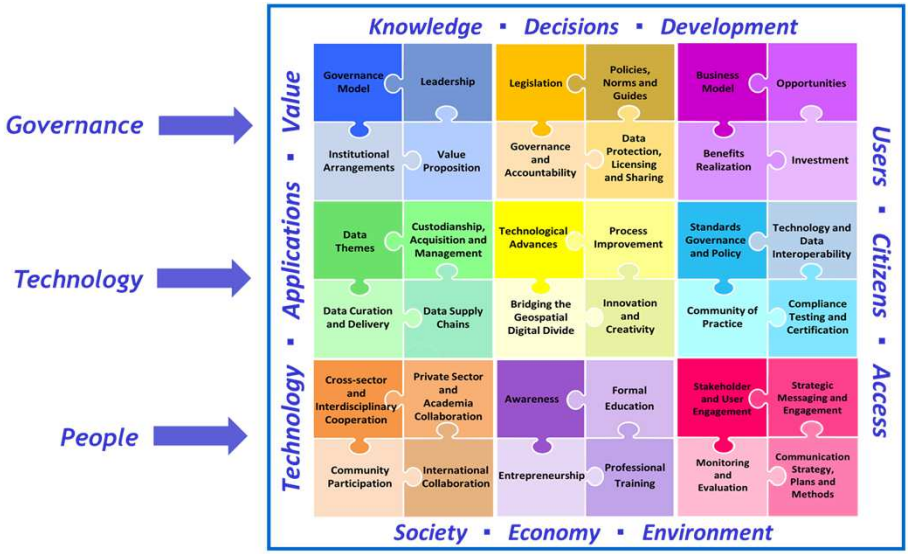
INEGI · Quintana Roo 2016 • 2022 · INMECA · Red Interamericana de Catastro y Registro de la Propiedad · CPC Iberoamérica · OEA Más derechos para más gente


Global Development Frameworks
UN-GGIM Global Geospatial Frameworks
2030 AGENDA FOR SUSTAINABLE DEVELOPMENT
SDGs Geospatial Roadmap
INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK (IGIF)
Sendai Framework for Disaster Risk Reduction 2015-2030
Paris Agreement on Climate Change
Strategic Framework on Geospatial Information and Services for Disasters
Global Statistical Geospatial Framework (GSGF)
Framework for Effective Land Administration (FELA)
SAMOA Pathway for SIDS
Addis Ababa Action Agenda
Habitat III New Urban Agenda
Our Ocean, Our Future: Call for Action
Global Fundamental Geospatial Data Themes
Global Geodetic Reference Frame (GGRF)
National Institutional Arrangements in Geospatial Information Management
Role of Standards in Geospatial Information Management
Compendium on Licensing of Geospatial Information
Statement of Shared Guiding Principles for Geospatial Information Management
UN-GGIM
United Nations Committee of Experts on Global Geospatial Information Management

The Framework for Effective Land Administration

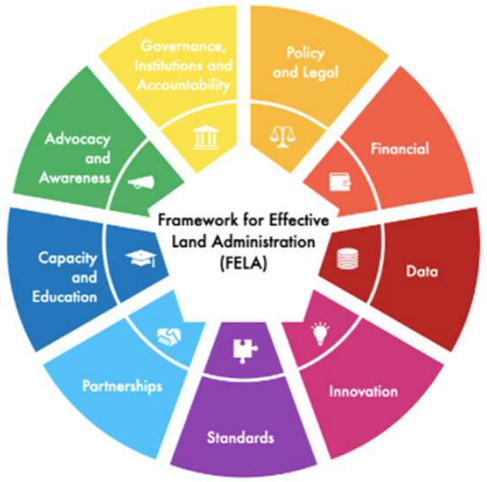
Sustainable development demands effective land administration

Integrated Geospatial Information Framework



- Overarching Framework adopted at 8th Session
- Implementation Guide 2020 adopted at 10th Session
- 9 Strategic Pathways
- 36 Key Elements
- IGIF

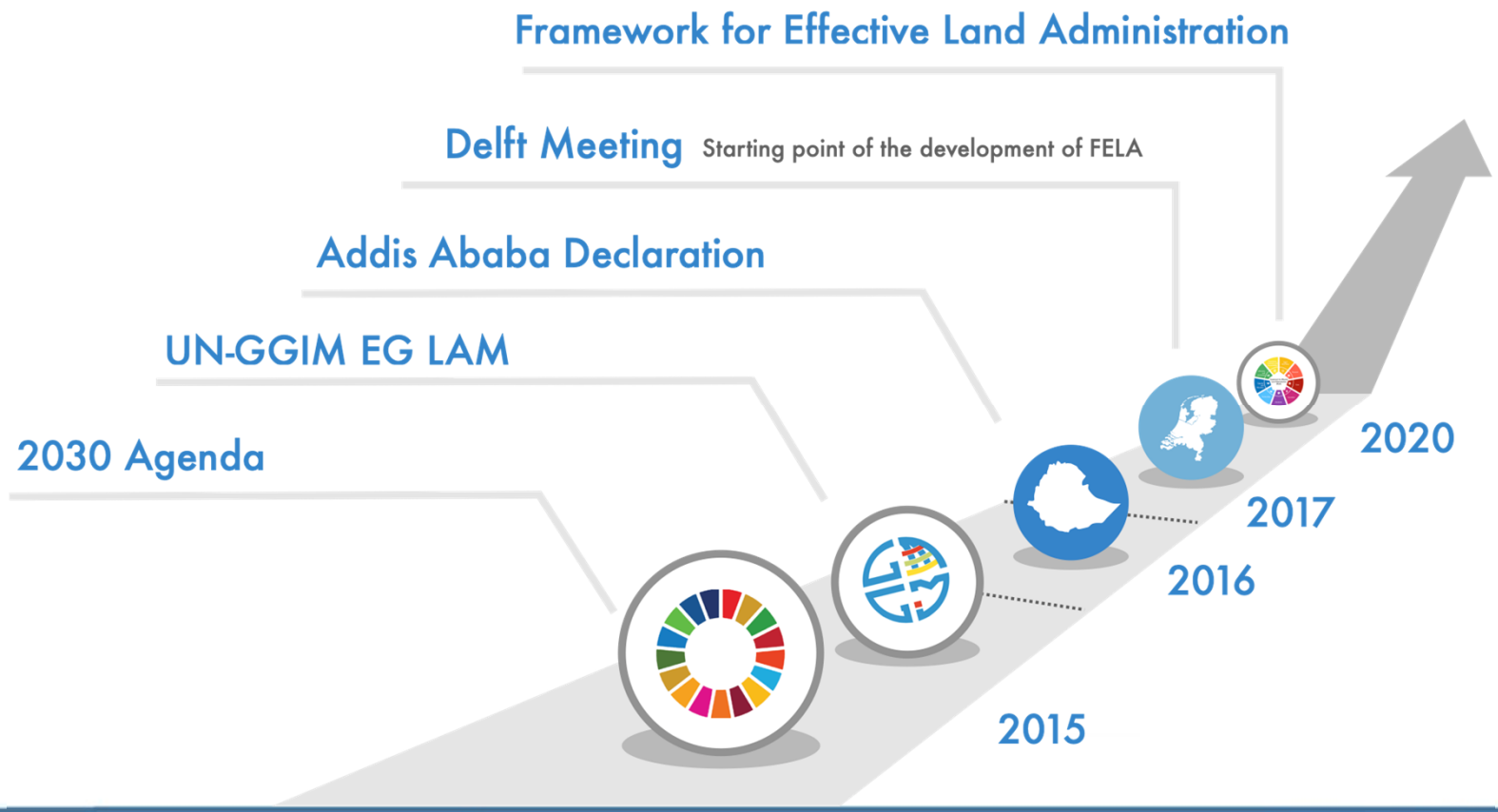
Framework for Effective Land Administration



- Adopted at 10th Session
- FELA is fully aligned with the IGIF*
  *I: Accountability; IX: Advocacy and Awareness
- FELA implements the IGIF for the land sector
- FELA

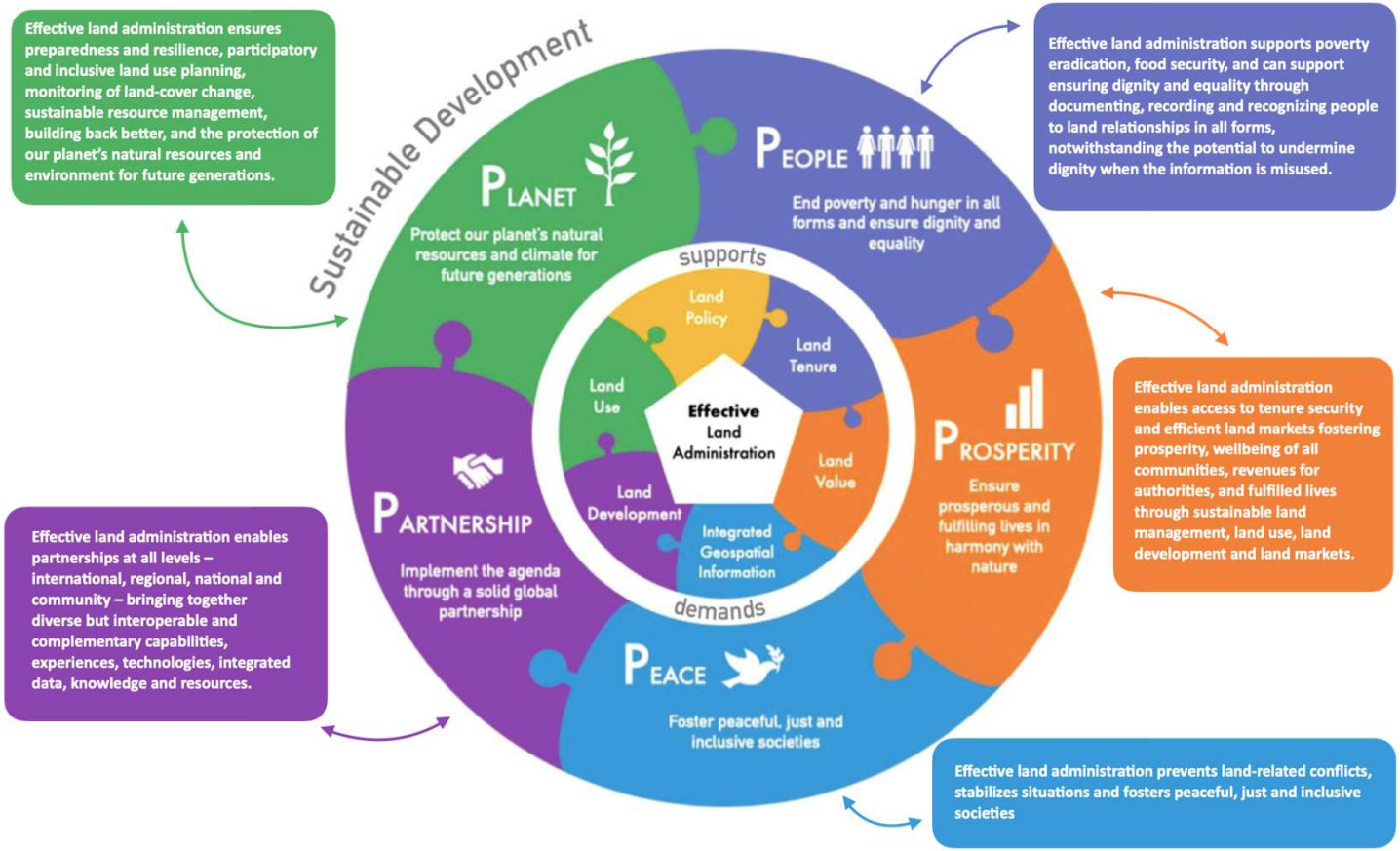
The Framework for Effective Land Administration

Sustainable development demands effective land administration



The Framework for Effective Land Administration

Sustainable development demands effective land administration



The Framework for Effective Land Administration

Sustainable development demands effective land administration

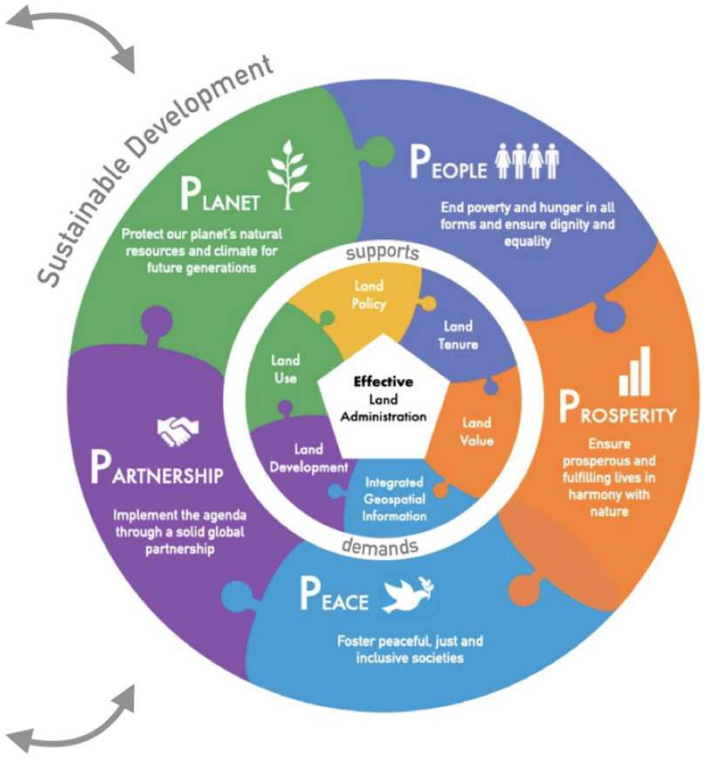
Sustainable development demands effective land administration, realized through integrated geospatial information, for land policies, land tenure, land value, land use, and land development.

The Framework for Effective Land Administration

Sustainable development demands effective land administration

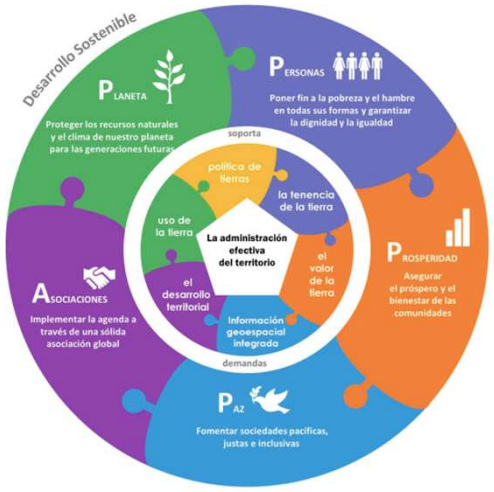
Effective land administration caters to all people, and must:

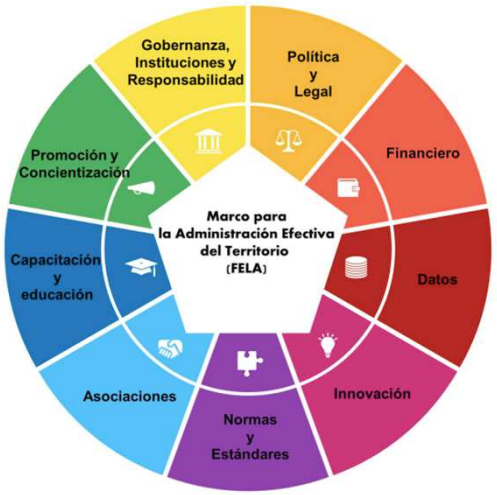
- Develop confidence and trust, promote security, safety, peace and peace building;
- Accelerate the proportion of population with tenure security;
- Allow economic development by supporting land value capture revenue systems that are equitable and transparent;
- Strengthen multi-disciplinary and multi-sectoral participation to achieve integrated geospatial information;
- Contribute to smart and resilient rural and urban societies, with equitable spatial/land use planning, and land development;
- Ensure participatory and inclusive land use, and land use planning;
- Promote the recognition of the inherent rights of indigenous and vulnerable peoples to their lands, territories and resources, and recognise collective traditions, customs and customary tenures, consistent with existing obligations under national and international law;
- Encourage efficient, sustainable and fair land markets, where appropriate, that take into account land tenure, value, use and land development aspects;
- Cater to all circumstances, situations and people – in times of peace and prosperity, in times of stress and hardship (including disaster and conflicts, forced migration and human displacement, poverty, food and water scarcity);
- Enable partnership, bringing and building together knowledge, skills and experiences on land tenure, land value, land use and land development; and
- Promote preparedness and resilience on climate change issues and support biodiversity, conservation and ecosystem sustainability.



Marco para la Administración Efectiva del Territorio

Sustainable development demands effective land administration





FELA Objetivos	FELA Requisitos	FELA Vía Estratégica
Mayor responsabilidad y nivel de transparencia	Gobernanza transparente y responsable	Gobernanza, Instituciones y Responsabilidad*
Perspectiva de género e incluye a los grupos vulnerables	Reconocimiento de todas las formas de posesión	Política y Legal
Garantizar inversiones asequibles y rendimientos económicos	Modelos de negocio sostenibles y asequibles	Financiero
Lograr datos y calidad de servicio confiables	Datos protegidos y no dobles	Datos
Guiar la responsabilidad y lograr innovaciones	Sistemas y métodos mejorables	Innovación
Soporte de interoperabilidad e integración	Normas convenidas internacionalmente	Normas y Estándares
Beneficiarse de las asociaciones, la cooperación y la participación	Fortalecimiento de las asociaciones y apoyo a la participación	Asociaciones
Lograr la transferencia y el intercambio de conocimientos y capacidades	Facilitar el desarrollo de la capacidad, la transferencia y el intercambio de conocimientos	Capacitación y educación
Mejora de la participación y la comunicación nacional	Llamamiento a una gestión eficaz de la tierra	Promoción y Concientización

FELA in Spanish:
https://ggim.un.org/documents/Marco_para_la_Administracion_Efectiva_del_Territorio.pdf

¡GRACIAS! Cristian Araneda Hernandez and Amalia Velasco

Implementing the Framework for Effective Land Administration

a. Raise awareness and promote the usefulness of the FELA;

b. Develop guidance to implement the FELA utilising the IGIF Implementation Guide;

c. Develop an assessment mechanism to support the implementation of the FELA;

d. Share and exchange knowledge, information, use cases, practices, experiences and examples; and

e. Engage and collaborate with regional committees, in particular, UN-GGIM: Africa

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration

THE GENERAL LAW OF CADASTRE AND PUBLIC REGISTRY OF PROPERTY

THE GLCPRP AND FELA

INEGI and SEDATU did a review in order to guarantee that the FELA precepts are considered in the Law

THE GLCPRP AND FELA

FELA

- (Page 9) - Proclaim specific recognition related to housing, food, and property ownership by returning indigenous, migrant, and refugee groups.
- [Page 12] Given that a large proportion of humanity does not enjoy registered rights to land and property, it is necessary to accelerate efforts to document, record and recognize the relationships between people and the land in all its forms.

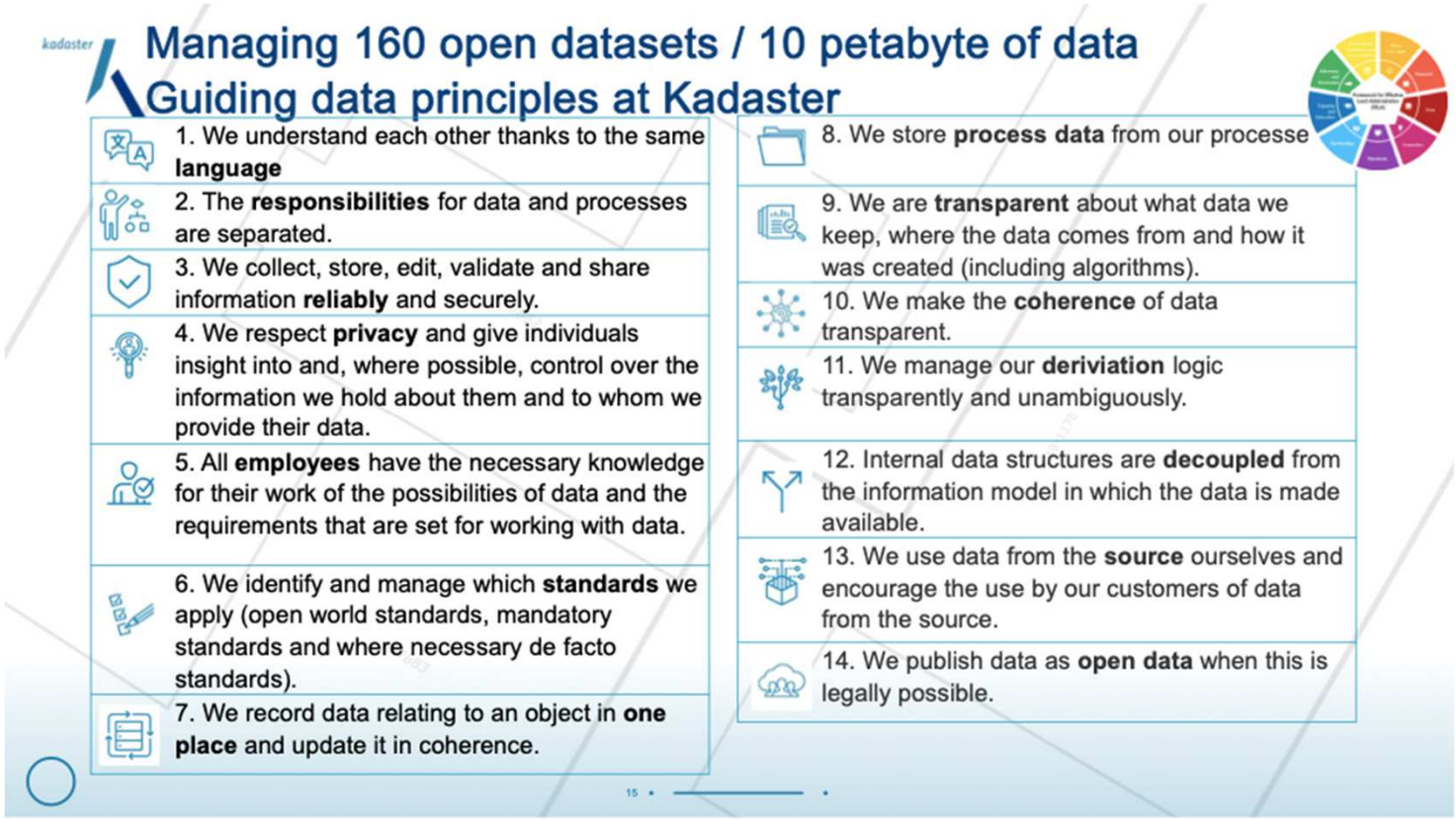
General Law

- (Art 2) - Promote conditions of substantive equality in the territory through the application of collection measures that discourage discrimination, segregation or marginalization of individuals or groups in property rights.
- (Art 2). The objectives of this Law are:
- (...)
- III. Strengthen the legal and administrative certainty of the real rights over the Premises, through the publicity and transparency of the legal acts celebrated in adherence to the applicable regulations in each Federal Entity;
- (...)

¡GRACIAS! Claudio Martinez and his team!

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration



Source: https://ggim.un.org/meetings/2022/4th-EG-LAM/documents/6.3_Paula_Dijkstra.pdf

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration

Digital Transformation of Land Administration: Stages, Status, and Solutions

Rohan BENNETT, Australia, Suren TOVMASYAN, Armenia, Indra HUTABARAT, Clava PATRAMA PUTRA GINTING, Aulia LATIF, Indonesia, Eva-Maria UNGER, Austria, Vincent VERHEIJ and Haico van der VEGT, The Netherlands

Key words: Armenia, Indonesia, UN-GGIM, FELA

Table 1. Digital Transformation opportunities and challenges

Pathway	Opportunities and Challenges
Governance, Institutions and Accountability	**Vision** for ATR/BPN digital transformation that is holistic Digital transformation **champions** at multiple levels **Alignment** of digital strategies withi ATR/BPN and with external stakeholders
Law and Policy	Legislative and regulatory **harmonisation** Assessment of a **positive system** of land registration Ensuring workable, enforceable, and are adequately **resourced** law
Finance	**Sustainable business model** post-2025 **Government business enterprise** model exploration Audit and assessment of **PPP** service models **Performance metrics** redesign around benefits realisation and SDGs
Data	**Vision** for data governance across ATR/BPN, post-2025 **R&D** audit and review on cadastral and land registration data **Fast-tracking** mapping 126M parcels by 2025 (keep going!) Developing and implementing better **quality assurance** standards Ensuring a robust federated **database infrastructure** is developed
Innovation	Formalised innovation **bench making** program across ATR/BPN **Incentive schemes** at all levels Formalise **R&D** collaborations across sector **Digital divide** audit
Standards	Audit **governance** of standards in ATR/BPN Assess range of **technology** and data initiatives in terms good practices Development of both internal and industry-wide **certification** protocols Fostering of a **community of practice** to support awareness raising
Partnerships	Reviewing partnership and establishment new partnership **ecosystem** (NGOs) Assess PR 38/2015 with regards to land sector **PPPs** **PaLaR** (i.e., FFPLA) review on embeddedness into PTSL **Donor-working group** creation for optimisation
Capacity and Education	Plan for **keeping capacity** in ATR/BPN **Fast-tracking skill areas** for maintaining the data Support professional bodies and encourage **self-accreditation**
Communications and Awareness	Revisit key **stakeholder** lists and related communications plans Ensure **World Bank project** comms are institutionalised Examining the current **monitoring and evaluation** mechanisms

Source: https://fig.net/resources/proceedings/fig_proceedings/fig2022/papers/ts04b/TS04B_bennett_unger_et_al_11482.pdf

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration

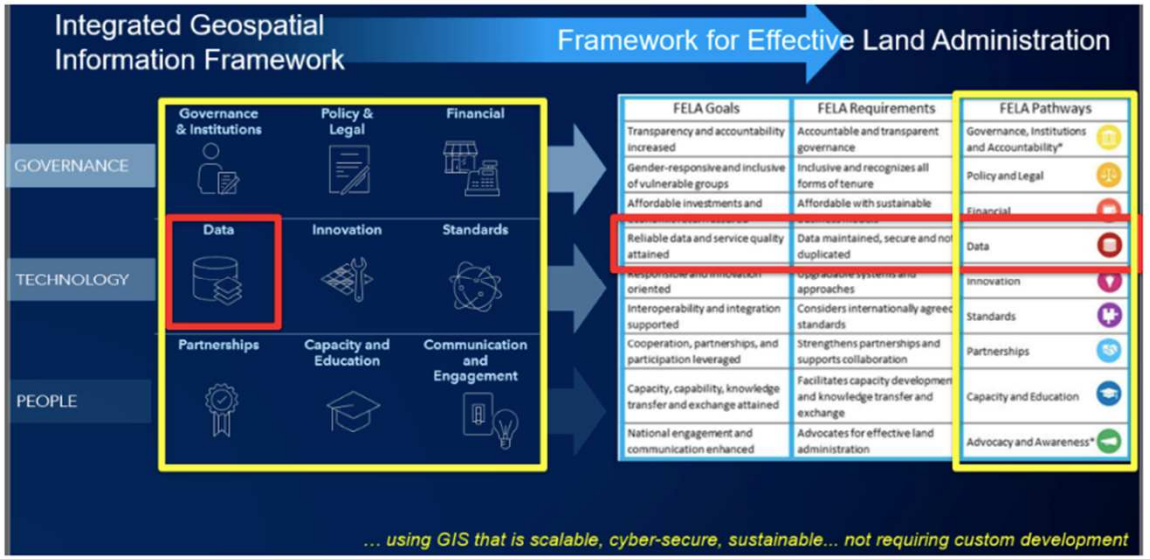
GIS in Land Administration

Can Help You Implement the FELA

and Support the SDG's

BRANDON TOURTELOTTE, USA

Key words: Land Administration, Framework for Effective Land Administration, FELA, Operationalize, Standards



Source: https://fig.net/resources/proceedings/fig_proceedings/fig2022/papers/ts02a/TS02A_tourtelotte_11559.pdf

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration

The selection of participants was restricted to European countries, with an existing relationship with EuroSDR and/or UN-GGIM Europe.

Participating countries:

- Austria,
- Belgium,
- Bosnia & Herzegovina,
- Bulgaria,
- Cyprus,
- Czech Republic,
- Denmark,
- England and Wales,
- Estonia,
- Finland,
- Germany,
- Italy,
- Latvia,
- Luxembourg,
- the Netherlands,
- Portugal,
- Scotland,
- Slovenia,
- Spain,
- Sweden
- Switzerland,

The participating countries represent all regions of Europe: Central and Eastern, Northern, Southern and Western Europe.

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration

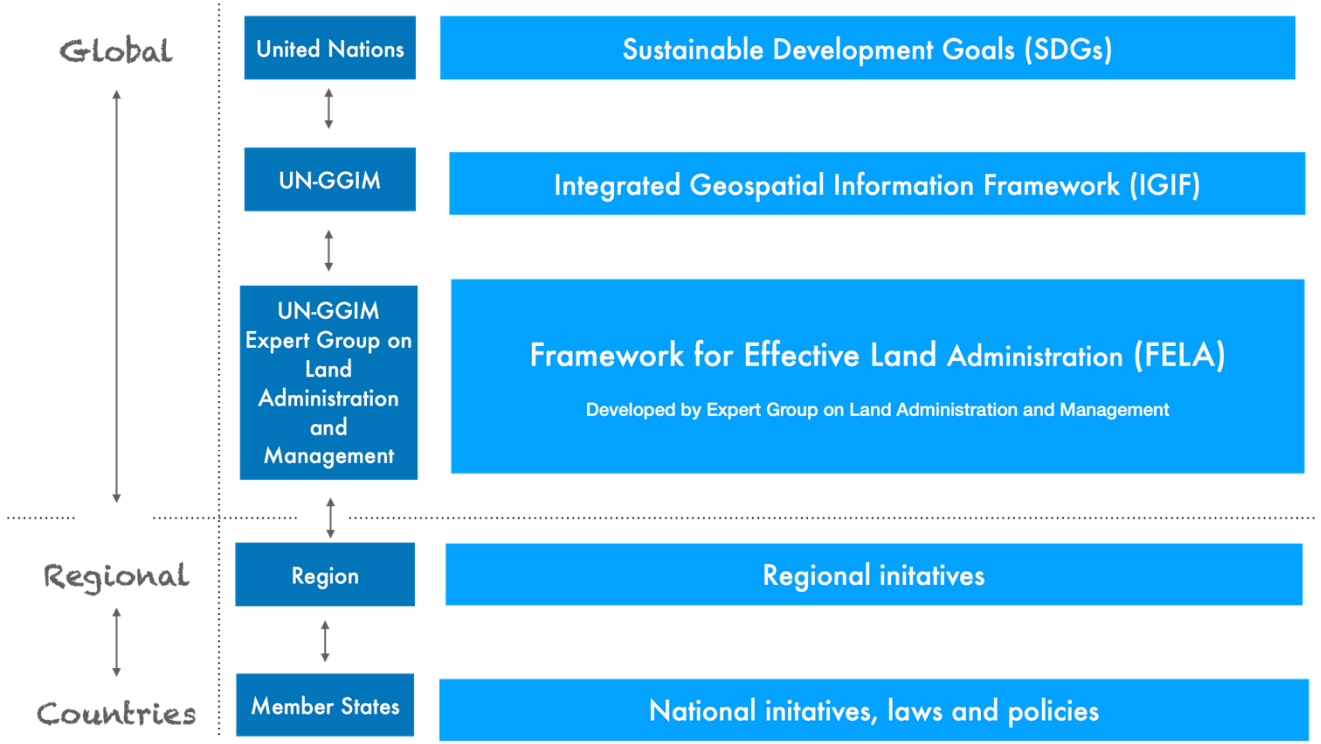
This question relates to the FELA Pathway III 'Finance' – FELA stresses the necessity for sound, accountable and transparent financial governance and management to focus on the importance of understanding the implementation costs and the required ongoing financial commitment necessary for maintenance,

How does the land administration sector sustain itself financially in your jurisdiction?

From the variety of responses it is clear that there are different methods to sustain services and maintain data. Majority presents a combination of taxes and/or levies, user payment and market-based approaches separate state budgets or allocated budgets are also still dominantly presented.

Implementing the Framework for Effective Land Administration

Sustainable development demands effective land administration



Graphic adapted from: Unger, E.M.; Bennett, R.; Lemmen, C.; de Zeeuw, K.; Zevenbergen, J.; Teo, C.; Crompvoets, J. (2020) Global policy transfer for land administration and disaster risk management. In: Land Use Policy, December 2020

Vertical Policy Transfer

(a) UN/UN-GGIM/EG-LAM (FELA)/Regional/National - between governance layers

'Policy Transfer' means the process by which actors borrow policies developed in one setting to develop programs and policies within another (Dolowitz & Marsh, 1996)

Two concepts: institutional and/or networked approach

The Framework for Effective Land Administration

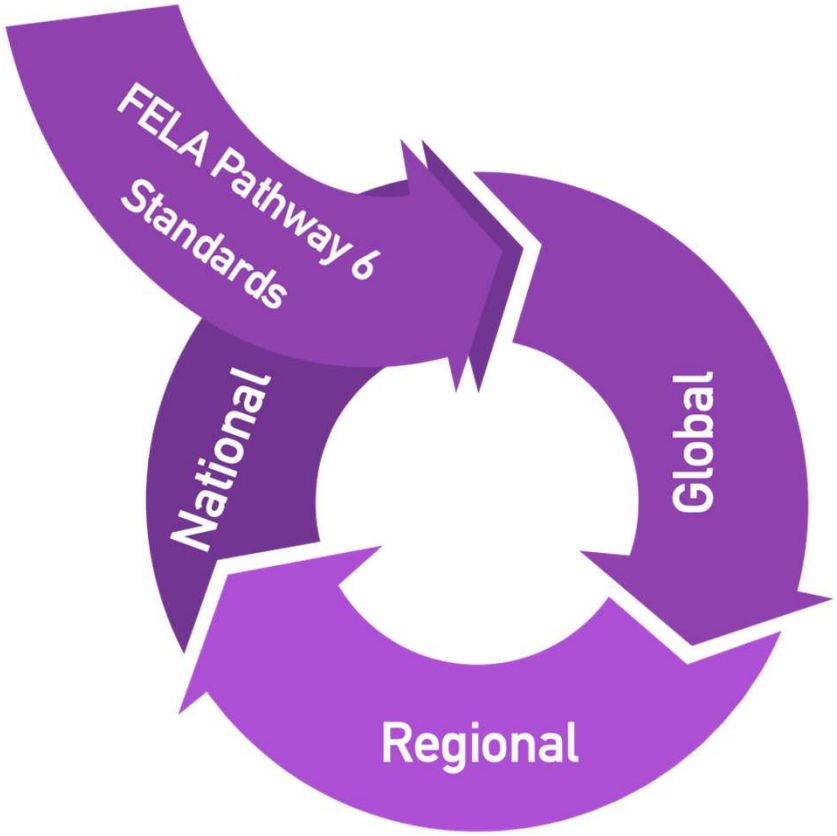
Sustainable development demands effective land administration

'We need the political will (with financial support) to do our job - Information/Data that we are collecting, maintaining and sharing is a tool to make location based decisions.'

Ricardo López Rivera during CONFCAT22

The Framework for Effective Land Administration

Sustainable development demands effective land administration

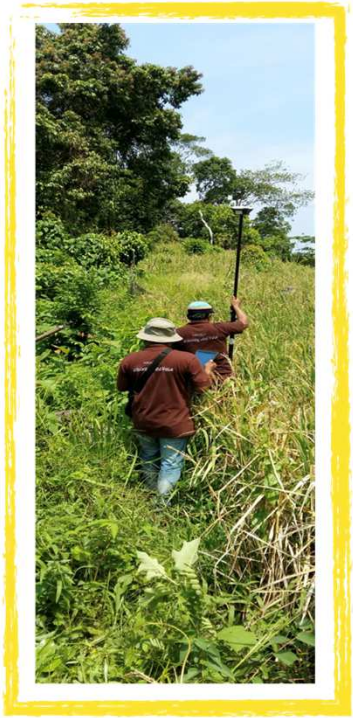


- At global level the resolution on a global geodetic reference frame for sustainable development (A/RES/69/266) represents a foundational global reference.
- At regional level, initiatives such as INSPIRE demonstrate the potential for agreement amongst differing nation states.
- At national level, significant efforts at standardization and sharing are observed in NSDI initiatives and national land and property information strategies, taking advantage of developments with ICT and web technologies.
- Other standards mentioned in FELA:
    - Cadastre 2014 (Cadastral Template)
    - HILUCS – INSPIRE Land Use categorisation
    - ISO S-121 – maritime limits and boundaries
    - ISO 19144 – GI classification system land cover
    - LGAF – Land Governance Assessment Framework
    - Many more...

The Framework for Effective Land Administration

FELA Pathway 6 - Standards

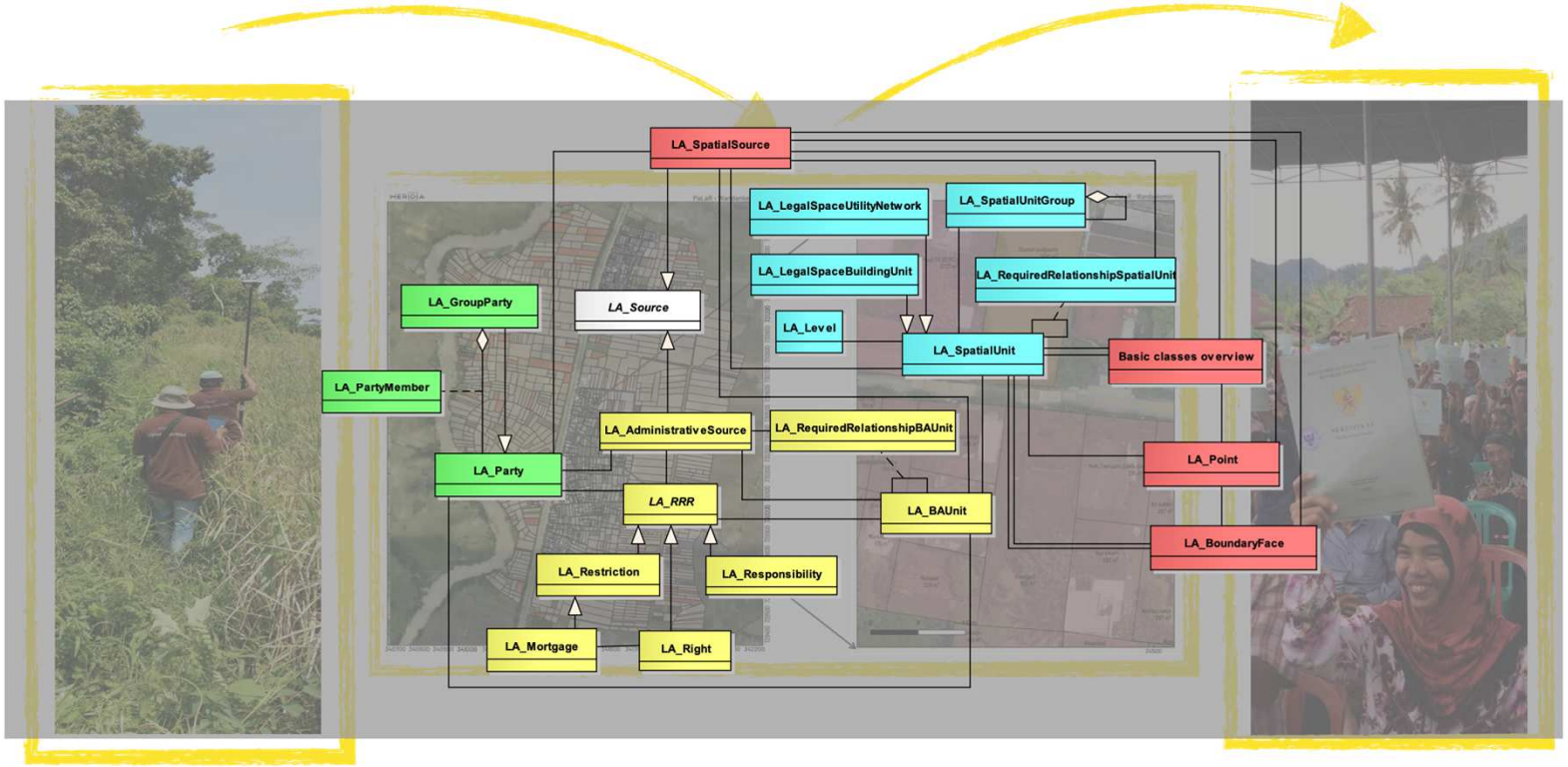
How do we get from the data collection in the field - to a map - to a system - to a title which is registered?



The Framework for Effective Land Administration

FELA Pathway 6 - Standards

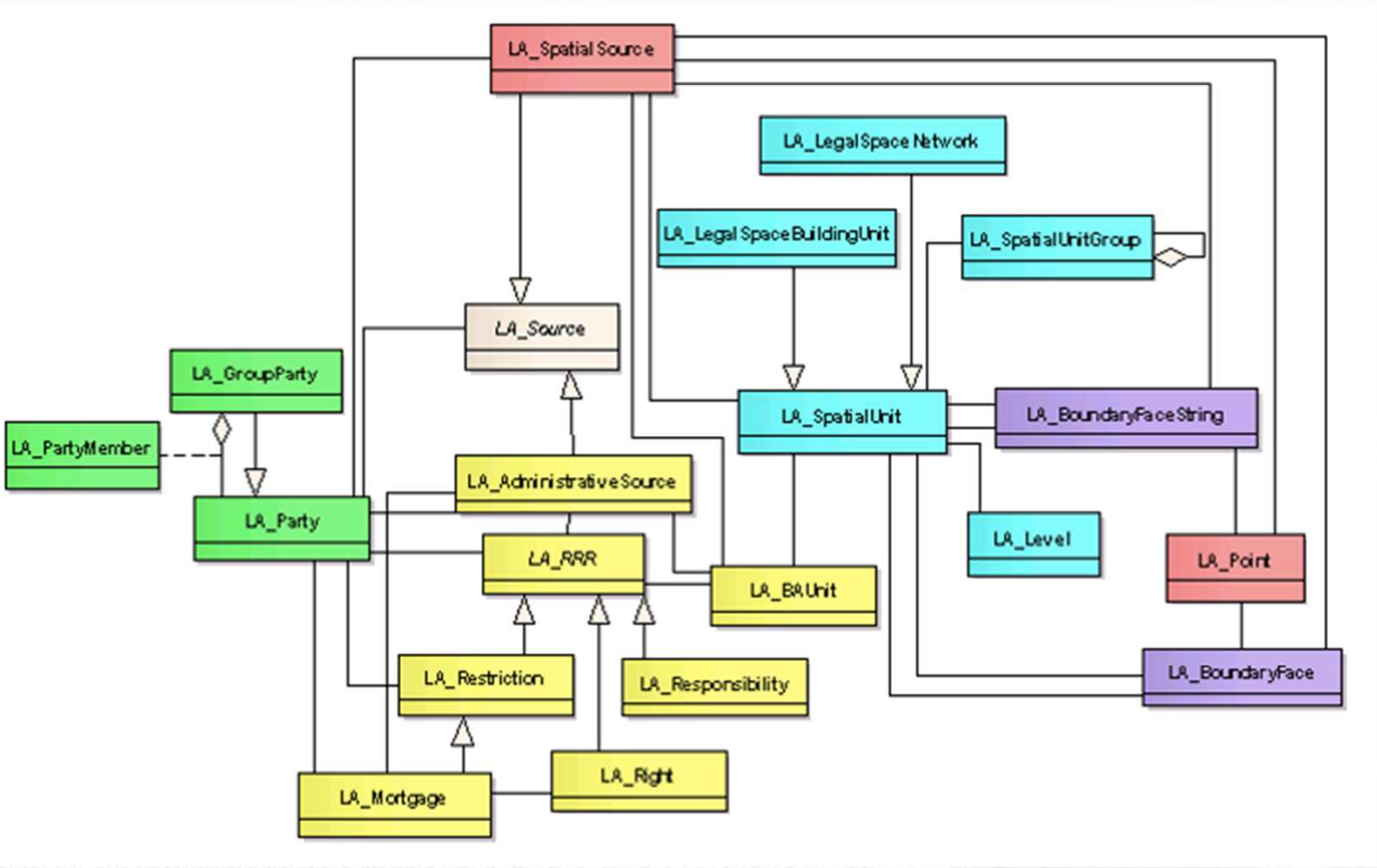
How do we get from the data collection in the field - to a map - to a system - to a title which is registered?



LADM Diagram

- Parties → green
- RRRs → yellow
- Spatial Units → blue
- Surveying → pink
- Mapping → violet

RRR supports all land rights



Slide provided by: Chris Body, Douglas O'Brien, Christiaan Lemmen, Peter van Oosterom, Abdullah Kara

LADM country profiles

LADM Edition I, Annex D [2012]

- Hungary
- Indonesia
- Japan
- Portugal
- Queensland, Australia
- Russian Federation
- Republic of Korea
- The Netherlands

LADM-based country profiles [2021]

Bénin	Japan	Saudi Arabia
Brazil	Kenya	Scotland
Cape Verde	Malaysia	Serbia
China	Mongolia	Singapore
Colombia	Montenegro	Slovenia
Croatia	Morocco	South Africa
Cyprus	Mozambique	South Korea
Czech Republic	Nigeria	Taiwan
Greece	Poland	The Netherlands
Honduras	Portugal	Trinidad and Tobago
Hungary	Queensland, Australia	Turkey
Indonesia	Republic of Srpska	Victoria, Australia
India	Russian Federation	Vietnam

The Framework for Effective Land Administration

FELA Pathway 6 - Standards

LADM country implementation

Scotland

Indonesia

Colombia

Mozambique

Malaysia

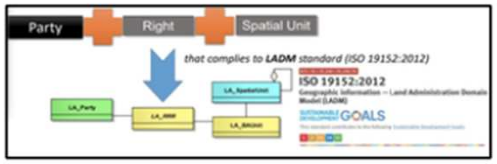
Montenegro

Honduras

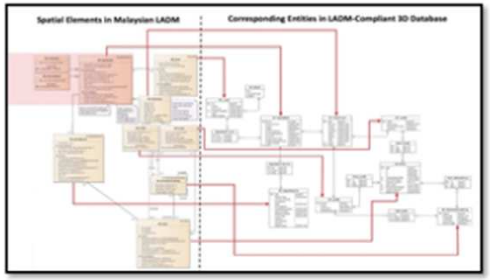
Serbia

Albania

Uganda



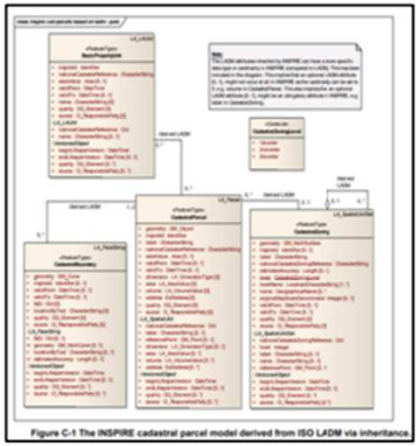
Aditya et al., 2019



Rajabifard et al., 2019

Aditya et al., 2019

INSPIRE Cadastral Parcels



LADM adopted & published as national standard

- ✓ Czech technical standard by the Czech Office for Standards, Metrology & Testing

LADM translation

- ✓ ISO languages (English and French)
- ✓ Spanish,
- ✓ Czech,
- ✓ Chinese,
- ✓ Korean,
- ✓ Russian

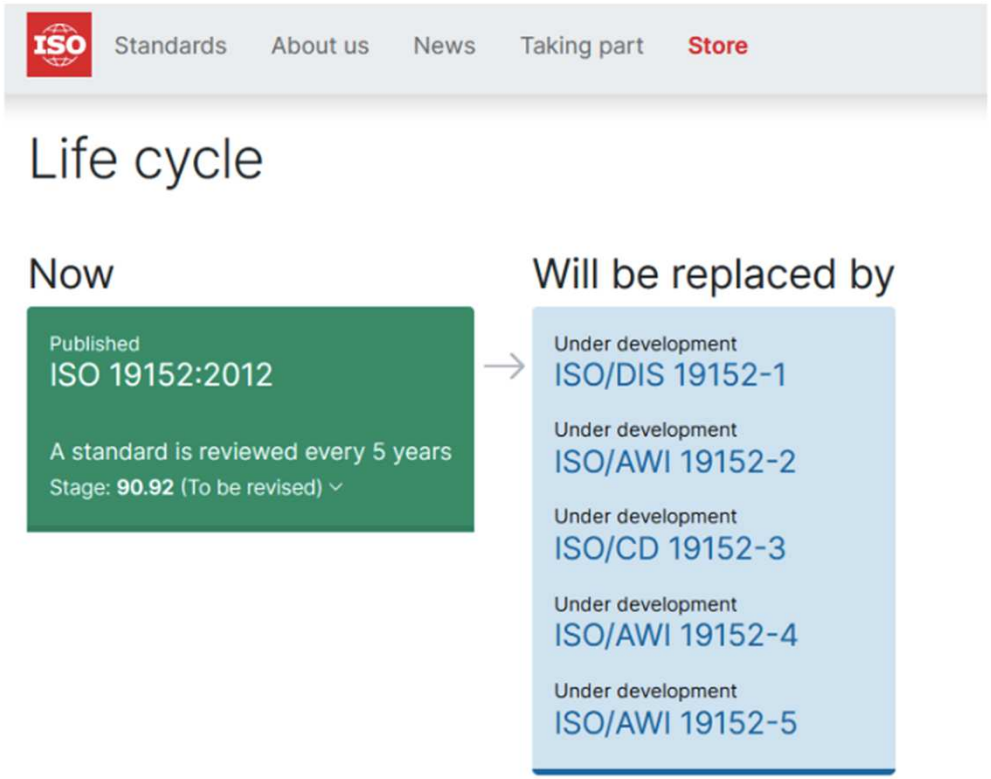
Slide provided by: Christiaan Lemmen, Peter van Oosterom, Abdullah Kara, Eftychia Kalogianni

LADM is being revised and will become a multi-part standard

- Part 1 – Generic Conceptual Model
- Part 2 – Land Registration
- Part 3 – Marine Georegulation
- Part 4 – Valuation Information
- Part 5 – Spatial Plan Information
- Part 6 – Implementation Aspects

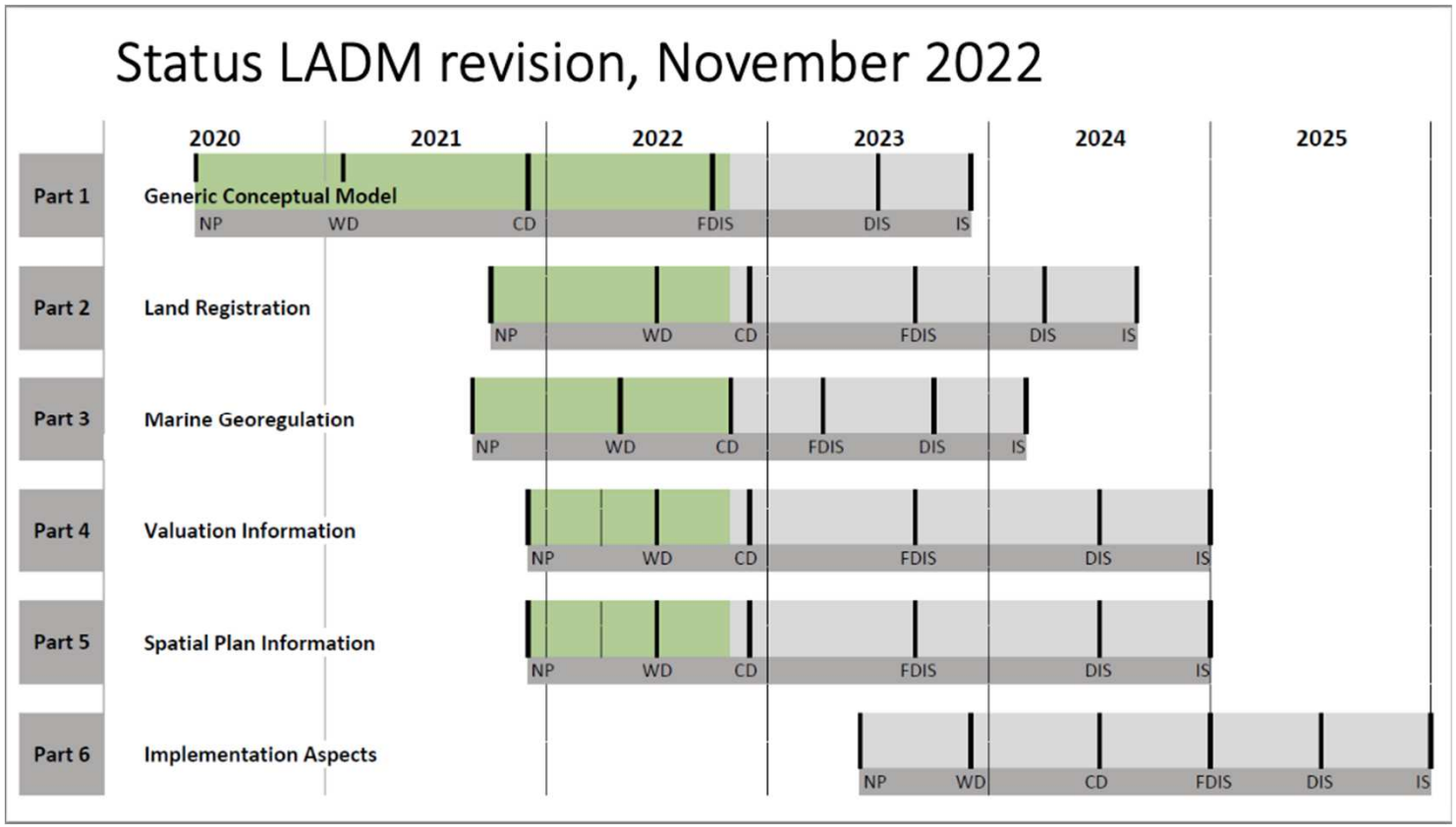
} Scope current version LADM 2012

Status LADM revision



The Framework for Effective Land Administration

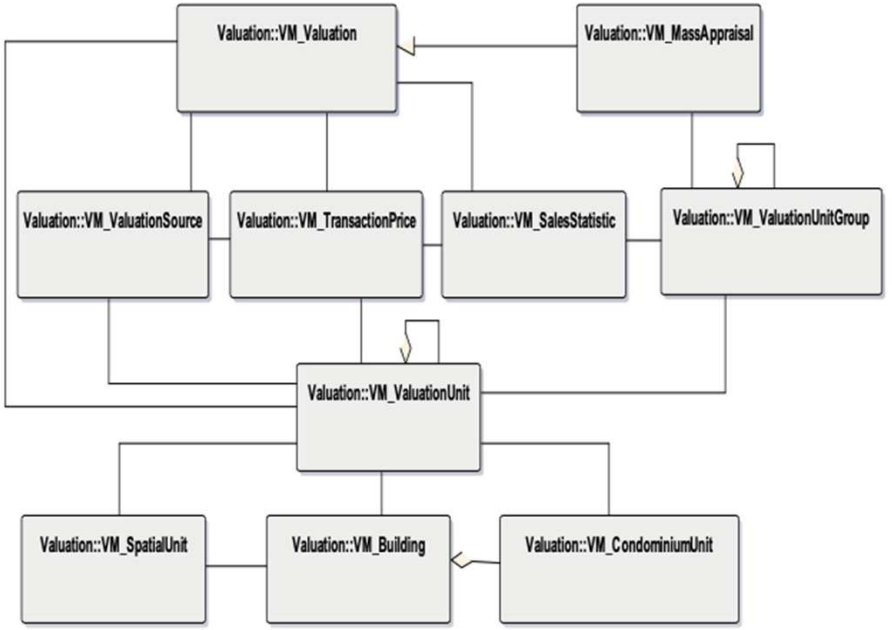
FELA Pathway 6 - Standards



Slide provided by: Christiaan Lemmen, Peter van Oosterom, Abdullah Kara, Eftychia Kalogianni

LADM Edition II Part 4 – Valuation Information

- Part 4 is designed to represent all stages of administrative property valuation.
- It is designed as an extension of core LADM.
- It is expected that the Part 4 will provide a common basis for governments to direct the development of local and national databases and for the private sector to develop information technology products.



Next FIG workshop

- 3D LA & LADM combined
- Location: Gävle, Sweden
- Submission abstracts:
  1 May 2023
  (when accepted full paper by
  15 August 2023)

Slide provided by: Christiaan Lemmen, Peter van Oosterom, Abdullah Kara, Eftychia Kalogianni

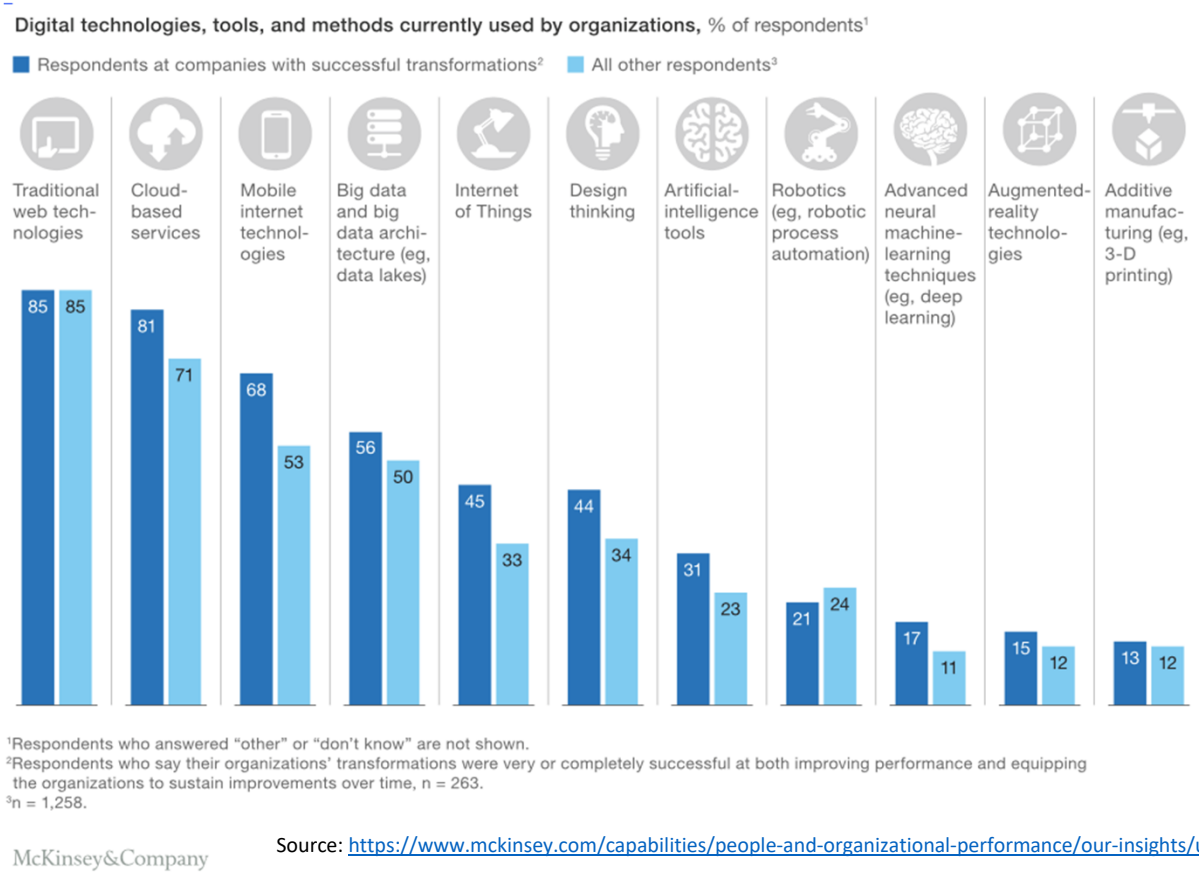
The Framework for Effective Land Administration

Sustainable development demands effective land administration

'Successful digital transformation of organisations leads to inclusion of the citizens, sustainability and trust, creating new value and markets and demands new business models.'

The Framework for Effective Land Administration

FELA Pathway 4 - Data



[1]Respondents who answered "other" or "don't know" are not shown.
[2]Respondents who say their organizations' transformations were very or completely successful at both improving performance and equipping the organizations to sustain improvements over time, n = 263.
[3]n = 1,258.

McKinsey&Company

2018 – Pre Pandemic

Source: https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/unlocking-success-in-digital-transformations

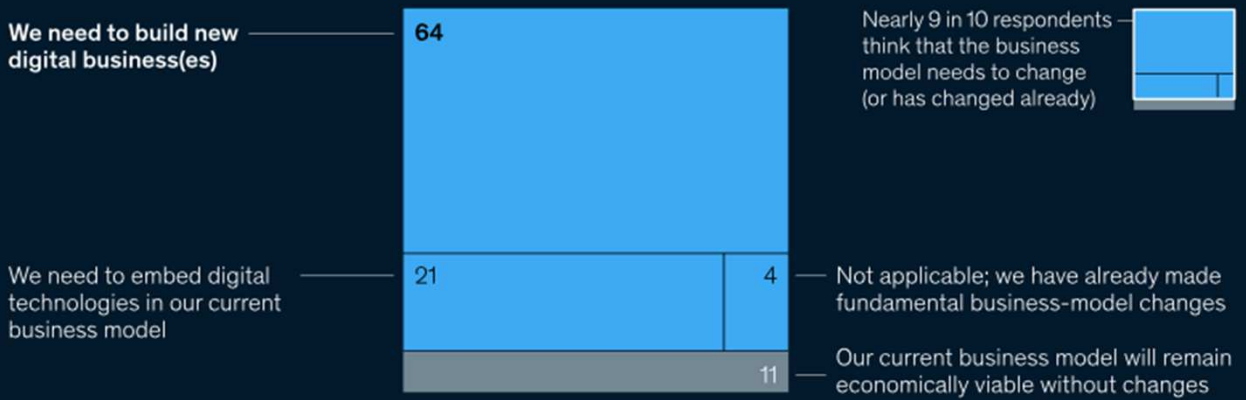
The Framework for Effective Land Administration

FELA Pathway 3 - Finance

But it's not only the pace of business that the COVID-19 crisis has fundamentally changed. According to the survey, many respondents recognize that their companies' business models are becoming obsolete. Only 11 percent believe their current business models will be economically viable through 2023, while another 64 percent say their companies need to build new digital businesses to help them get there.

Looking toward 2023, most companies will need to build new digital businesses to stay economically viable.

Changes needed to make company's business model economically viable by 2023, % of respondents[1]



[1]Respondents who answered "don't know" are not shown; n = 1,140.

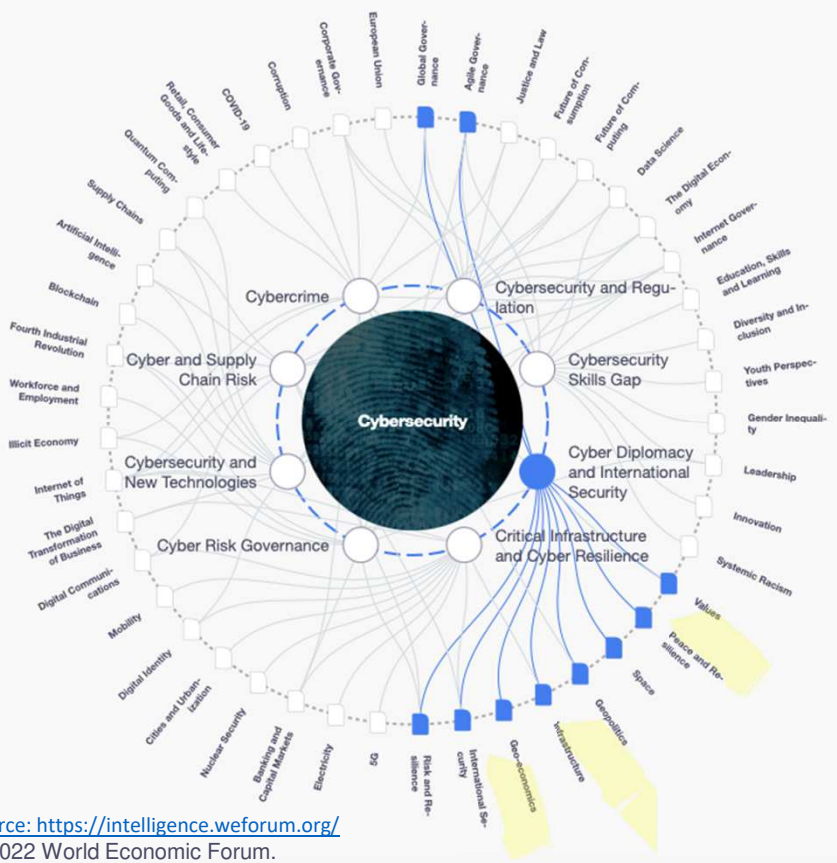
McKinsey & Company

Source: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-new-digital-edge-rethinking-strategy-for-the-postpandemic-era

May 2021

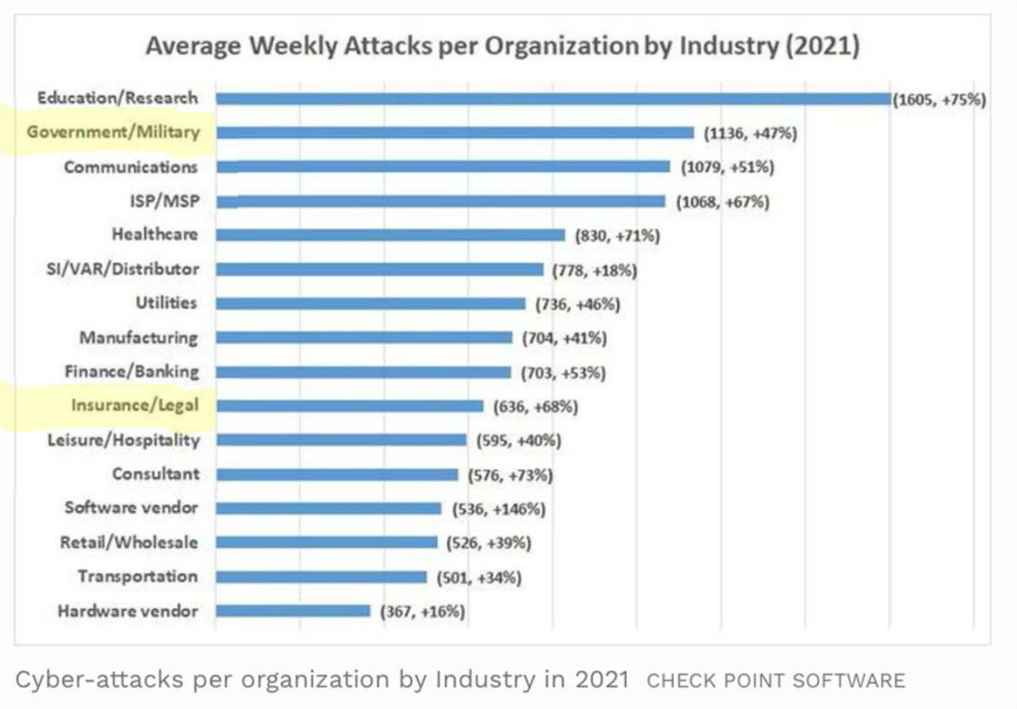
The Framework for Effective Land Administration

FELA Pathway 4 - Data



Source: https://intelligence.weforum.org/

© 2022 World Economic Forum.

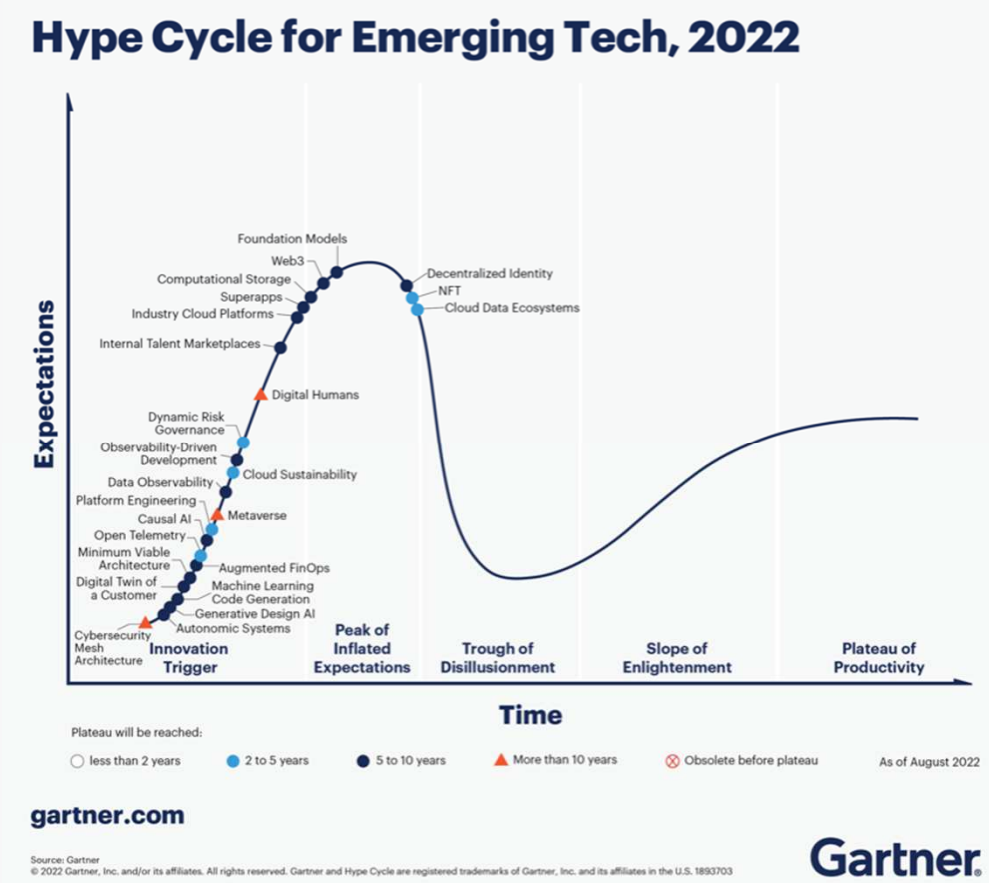


Cyber-attacks per organization by Industry in 2021 CHECK POINT SOFTWARE

Source: https://www.forbes.com/sites/chuckbrooks/2022/06/03/alarming-cyber-statistics-for-mid-year-2022-that-you-need-to-know/?sh=6177f3cf7864

The Framework for Effective Land Administration

FELA Pathway 5 - Innovation



- **Decentralized identity** (DCI) allows an entity to control their digital identity by leveraging technologies such as blockchain or other distributed ledger technologies (DLTs), along with digital wallets.

- **Non-fungible token** (NFT) is a programmable blockchain-based digital item that publicly proves ownership of digital assets, or physical assets that are tokenized, such as e.g. houses.

- **Web3** is a stack of technologies for the development of decentralized web applications that enable users to control their own identity and data

- **Cybersecurity mesh architecture** (CSMA) is an emerging approach for architecting composable, distributed security controls that improve overall security effectiveness.

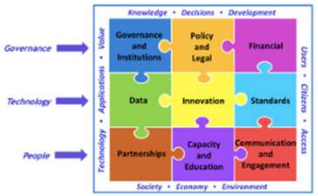
- …Many more

Source: https://www.gartner.com/en/articles/what-s-new-in-the-2022-gartner-hype-cycle-for-emerging-technologies

FIG - Com7

WORKING GROUP:
FELA and FFPLA Implementation

:: Setting The Scene >> UN - GGIM



IGIF - Integrated Geospatial Information Framework,
Overarching Framework adopted at 8th Session, 9 Strategic Pathways, Implementation Guide

...But For The Land Sector...

FELA - Framework for Effective Land Administration,
adopted at 10th Session, developed by EG-LAM, 9 Pathways, fully aligned with the IGIF*, FELA implements the IGIF for the land sector

FFPLA, VGGTs, Continuum of Land Rights, NUA, CoFLAS...,
Global Policies and Tools are referenced in FELA

Interested? Get in contact with! Amalia Velasco

:: Drivers & Proposal

Global Driver

The 2030 Sustainable Development Agenda, adopted by world leaders in 2015

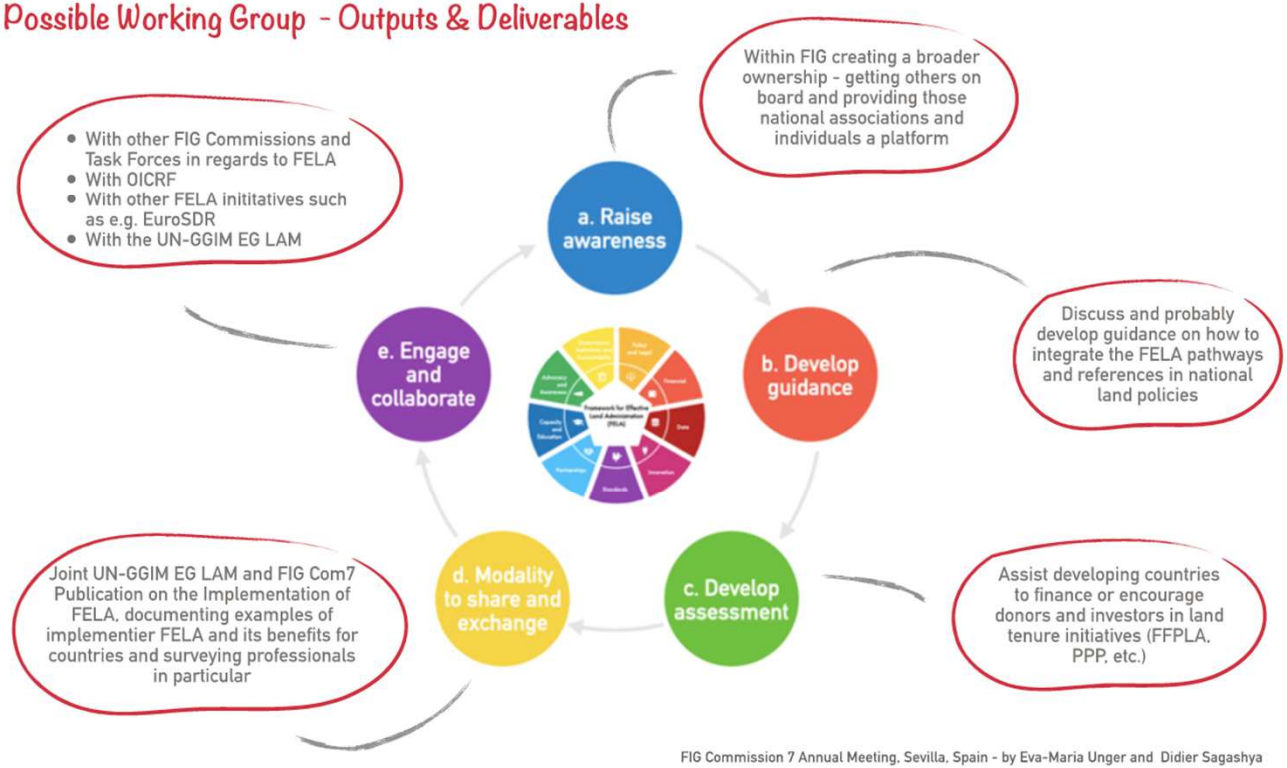
National Association Driver

National Association and here especially Com 7 members are often responsible for delivering Land Administration services and to report on SDGs indicators related to land.

Working Group Proposal

With FELA now being adopted, there is a great opportunity to disseminate amongst Com7 members and to jointly work on its implementation at a country level.

:: Possible Working Group - Outputs & Deliverables



2022

CUMBRE DE

CATASTRO Y REGISTRO DE LA PROPIEDAD

¡GRACIAS!