Datan hallintamallin esiselvitys

Datatalousfoorumi
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MINISTRY OF TRANSPORT AND COMMUNICATIONS

futurice

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A holistic team tackling the issue during 3 weeks

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OUR CULTURE:

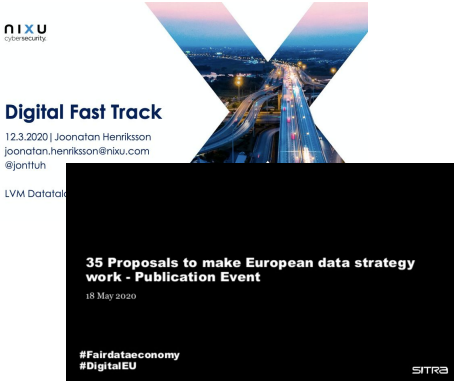
Care. Trust. Transparency. Continuous improvement.

These are our core values, and the cornerstones of our company culture. They define how we work, provide continuity in a changing world, and keep us unique. The worth of our culture is determined by what happens when nobody is watching.

3-week prestudy sprint with LVM on data governance model

What we focused on

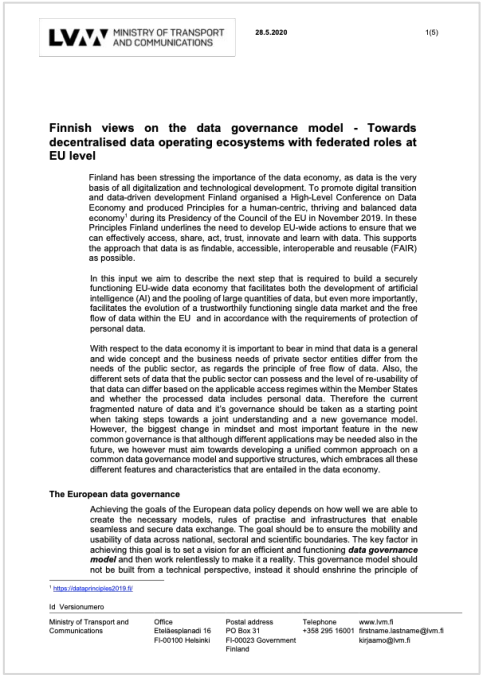
There's already a lot of happening on a deeper level



Goal was to provide a holistic view to data governance model and provide alternative insights

The goals of the prestudy:

- To provide a **holistic view** to a EU-level data governance model and to offer alternative point-of-views regarding data governance
- **Not to define** the vision nor to create the data governance model itself
- To create a **common ground** and **shared vocabulary** for decision-makers to ease the discussion and collaboration on EU-level data governance.
- **Start bridging the gap** between high level documents, such as the Finnish and EU-level principles of data economy and data strategy, and the more detailed proposals such as Project GAIA-X.



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Finnish views on the data governance model - Towards decentralised data operating ecosystems with federated roles at EU level

Finland has been stressing the importance of the data economy, as data is the very basis of all digitalization and technological development. To promote digital transition and data-driven development Finland organised a High-Level Conference on Data Economy and produced Principles for a human-centric, thriving and balanced data economy[1] during its Presidency of the Council of the EU in November 2019. In these Principles Finland underlines the need to develop EU-wide actions to ensure that we can effectively access, share, act, trust, innovate and learn with data. This supports the approach that data is as findable, accessible, interoperable and reusable (FAIR) as possible.

In this input we aim to describe the next step that is required to build a securely functioning EU-wide data economy that facilitates both the development of artificial intelligence (AI) and the pooling of large quantities of data, but even more importantly, facilitates the evolution of a trustworthily functioning single data market and the free flow of data within the EU and in accordance with the requirements of protection of personal data.

With respect to the data economy it is important to bear in mind that data is a general and wide concept and the business needs of private sector entities differ from the needs of the public sector, as regards the principle of free flow of data. Also, the different sets of data that the public sector can possess and the level of re-usability of that data can differ based on the applicable access regimes within the Member States and whether the processed data includes personal data. Therefore the current fragmented nature of data and it's governance should be taken as a starting point when taking steps towards a joint understanding and a new governance model. However, the biggest change in mindset and most important feature in the new common governance is that although different applications may be needed also in the future, we however must aim towards developing a unified common approach on a common data governance model and supportive structures, which embraces all these different features and characteristics that are entailed in the data economy.

The European data governance

Achieving the goals of the European data policy depends on how well we are able to create the necessary models, rules of practise and infrastructures that enable seamless and secure data exchange. The goal should be to ensure the mobility and usability of data across national, sectoral and scientific boundaries. The key factor in achieving this goal is to set a vision for an efficient and functioning ***data governance model*** and then work relentlessly to make it a reality. This governance model should not be built from a technical perspective, instead it should enshrine the principle of

[1] https://dataprinciples2019.fi/

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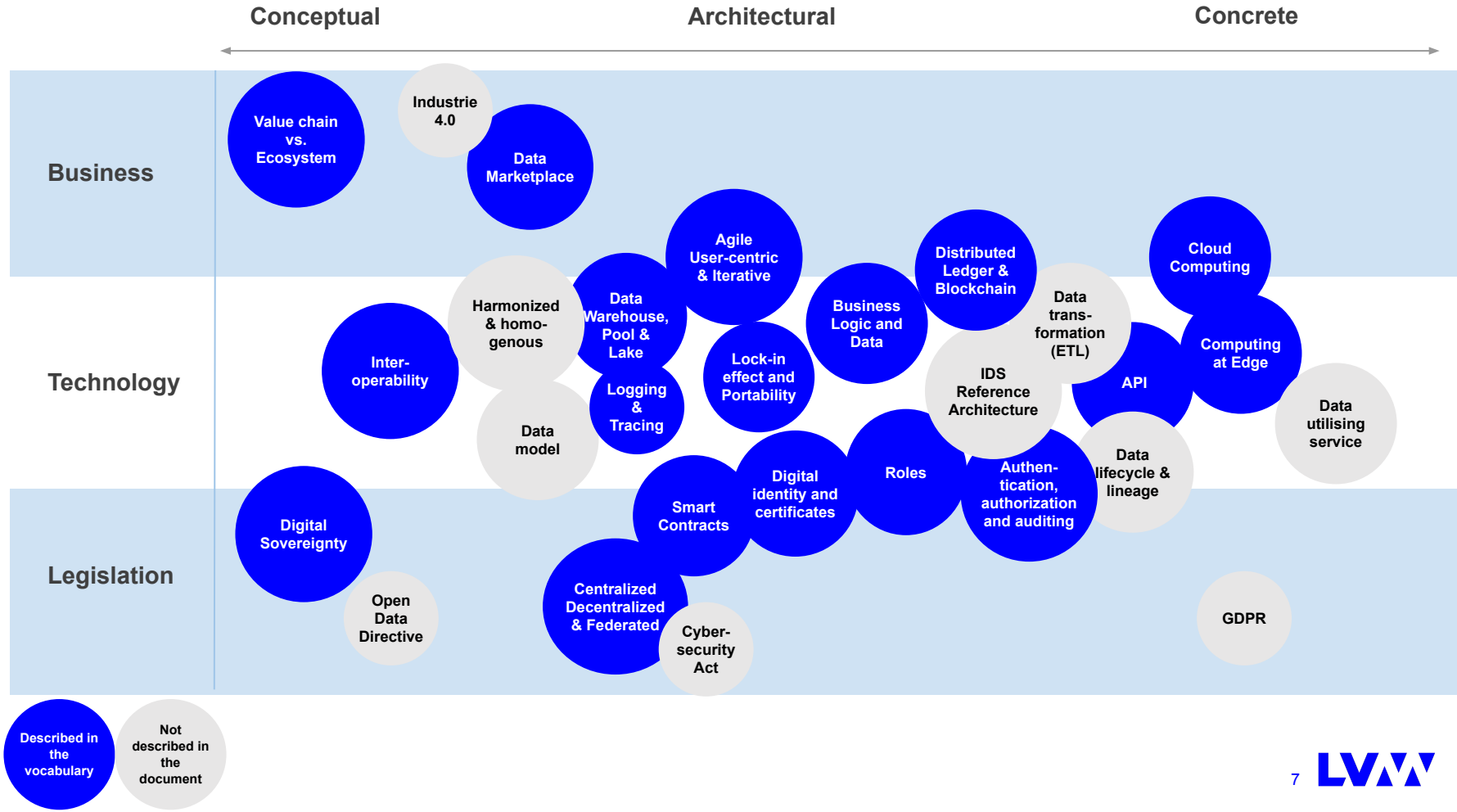
Prestudy content

1. Introduction
2. **Vocabulary and concepts**
3. Critical factors in data governance model
4. Case study: Project GAIA-X
5. Conclusion and other findings

Appendix


Conceptual
Architectural
Concrete
Business
Technology
Legislation
Value chain vs. Ecosystem
Industrie 4.0
Data Marketplace
Agile User-centric & Iterative
Distributed Ledger & Blockchain
Cloud Computing
Harmonized & homo-genous
Data Warehouse, Pool & Lake
Business Logic and Data
Data trans-formation (ETL)
Computing at Edge
Inter-operability
Lock-in effect and Portability
IDS Reference Architecture
API
Logging & Tracing
Data utilising service
Data model
Digital identity and certificates
Roles
Authen-tication, authorization and auditing
Data lifecycle & lineage
Digital Sovereignty
Smart Contracts
Centralized Decentralized & Federated
Open Data Directive
Cyber-security Act
GDPR
Described in the vocabulary
Not described in the document

Data Marketplace

Description

Similarly to how the exchange of goods is arranged in the real world marketplace, efficient exchange of data will need mechanisms for discovery of data providers, building of trust among them, payments, tracing and so on. Data Marketplace is an umbrella term encapsulating all these functions, with no direct link to a specific technical “service” or platform. In a federated governance model discovery is most likely arranged in the form of publicly hosted data directories, whereas payments could be arranged directly via parties or through various data transaction services.

Why is this important

Data Marketplace can be arranged as a public or semi-public service, and there is a great variety in the ways certain elements may be included in the service or not. It’s likely people have very different sort of simplified ideas of how it could work.

Our insights

Instead of building more hype around the subject matter, it’s important to start to clarify practical questions, such as “how do we discover all the data directories, how could the search work, how could we make a deal and pay for the data?”.

This relates to:

Business models

Governance

Insights are initial and should be analysed further, as they’re based on interviews, workshop with LVM and Futurice’s analysis during a 3 week sprint.

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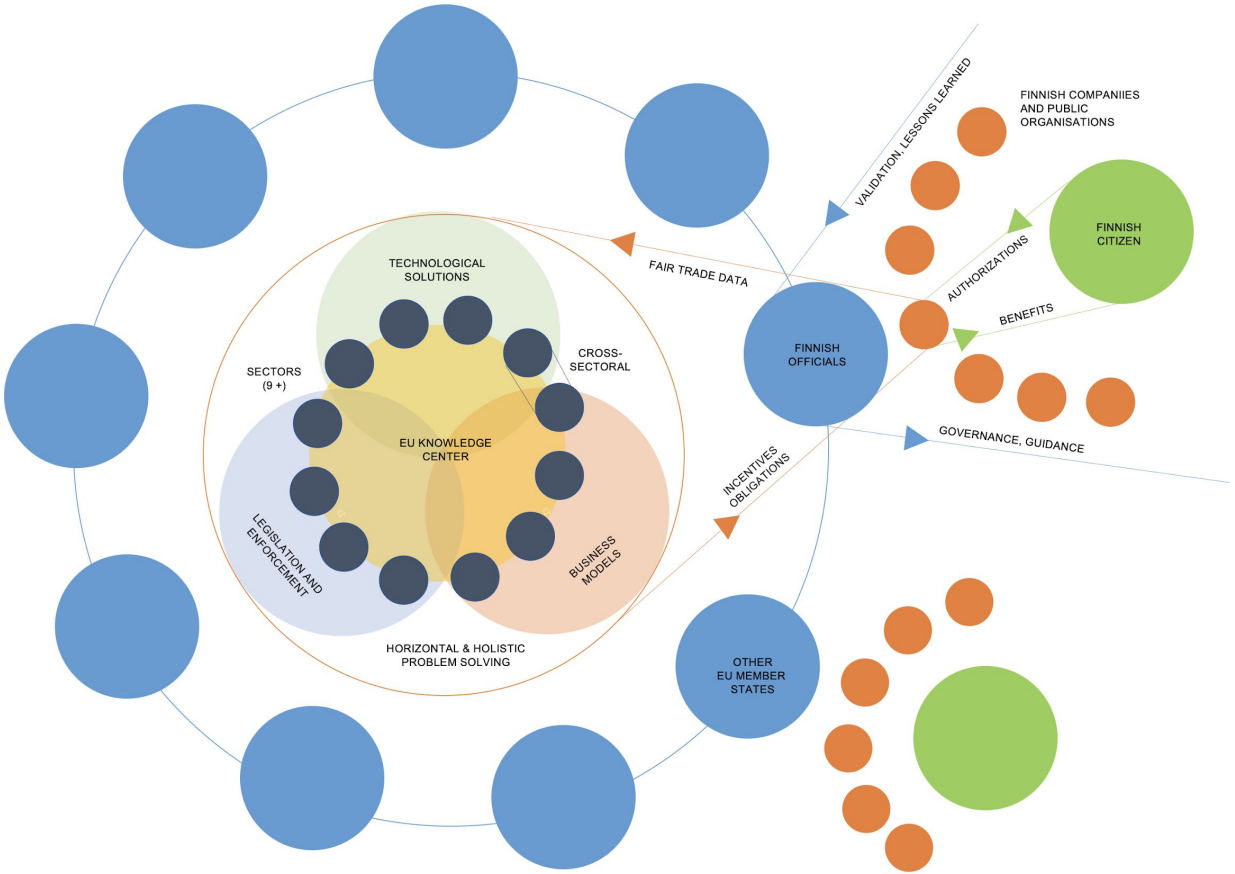
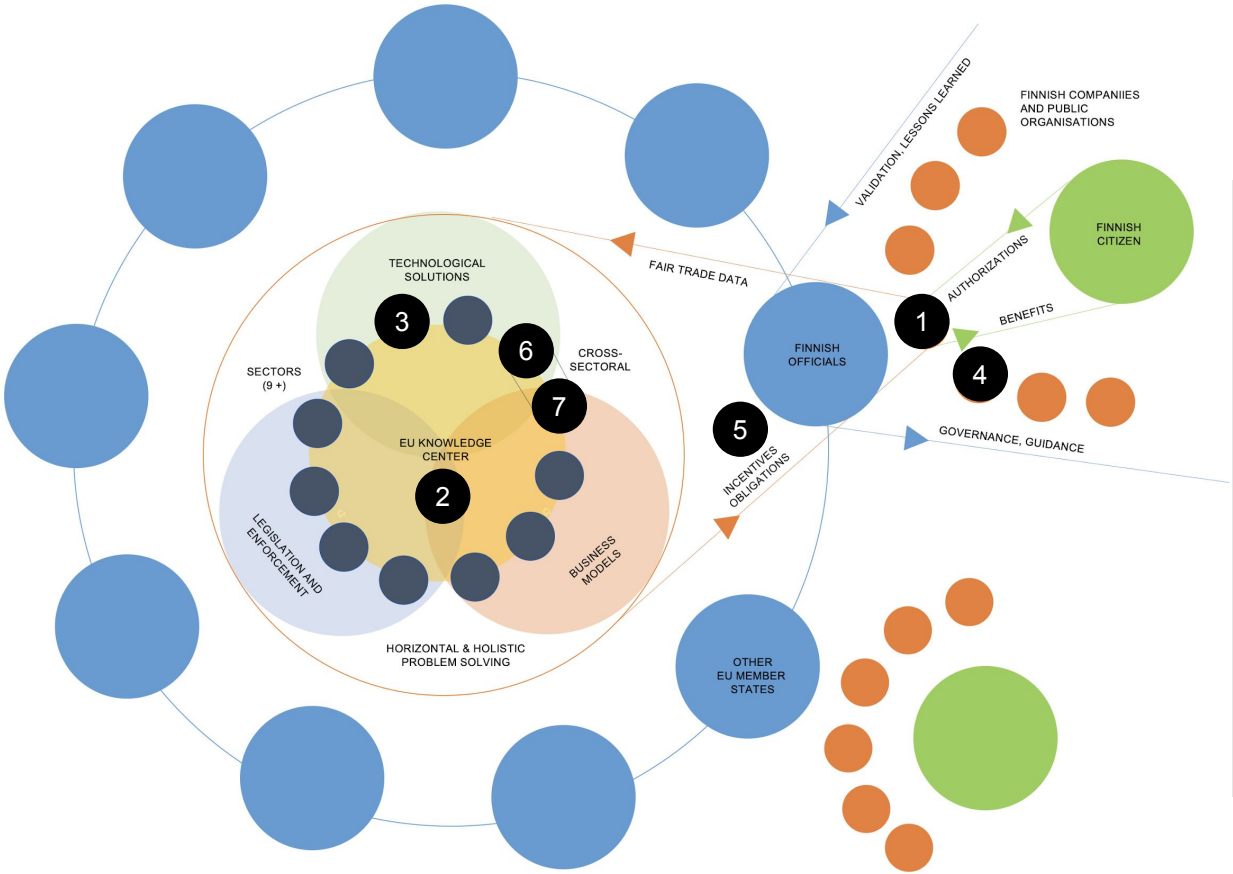
Data governance in EU is a complex environment



We have identified 7 critical factors



1. We need information about data possessions
2. Our current faculties and vocabularies are restricting
3. Personal identifiable data is gathered in all sectors
4. Companies' hopes of profit and fears of failure need to be addressed
5. We need a solid concept combining incentives and obligations
6. Siloes drive the development but cripple the innovation
7. Cross-sectoral development could benefit from machine learning

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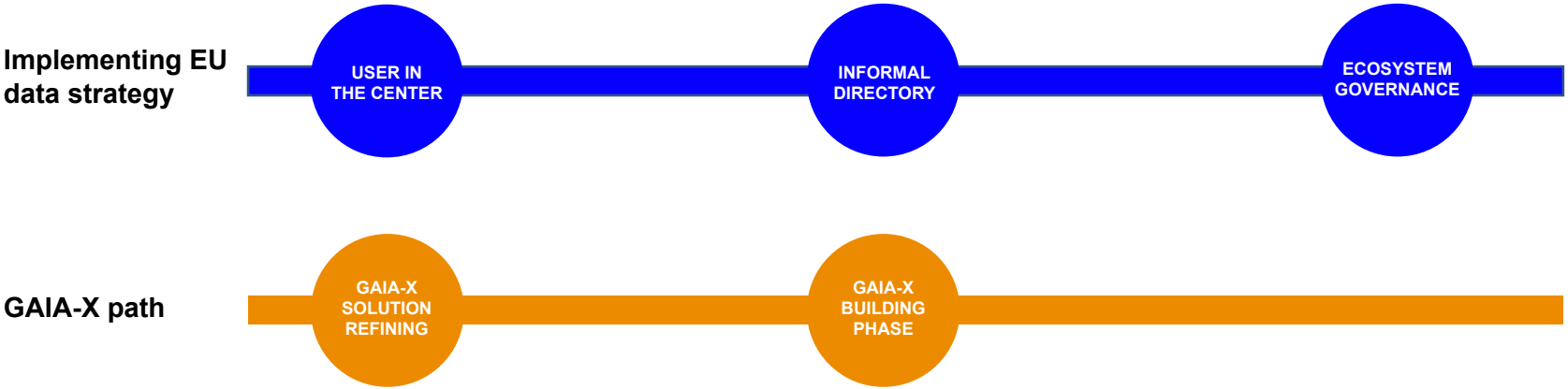
GAIA-X proceeds, but a user-centric track is needed



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User-centricity in directory creation and data governance

Implementing EU data strategy

1 USER IN THE CENTER

1.1 Plan how you can gradually create an informal data source directory
- Describe the concept proposal properly
- Define who should be involved in planning, how it will relate to GAIA-X, which sectors and user groups are most important to start with?

1.2 Understand companies & SMEs better: What barriers and fears do they face?
- Create a series of service design and futures thinking workshops to address key hopes and fears of SMEs
- Communicate your findings well

1.3 Investigate how MyData will be implemented in the directory / whole data governance model
- Benchmark MyData architectures and see which would fit EU data governance needs
- Investigate citizens' needs for the directory

1.4 Plan companies' data sharing path
- Co-create a tool for collecting information on data sources (information structure)
- Co-create a model for gradually broadening the directory & making it more detailed
- Educate companies on APIs (next steps)

2 INFORMAL DIRECTORY

2.1 Proof-of-concept of directory to test and validate with different user groups
- How well does it encourage data sharing? How likely user companies would use it? How well does it serve data providers and users?
- Make iterations on the model based on the learnings and feedback from users

2.2 Plan how to ensure maximum amount of providers, while maintaining systematic directory
- Gather insights and creative ideas on how to incentivise and obligate companies to share
- Gather and communicate success cases and pilot projects on data sharing
- Tackle problems of uneven development in different sectors

2.3 Ensure possibilities to build (AI) solutions on top of the directory
- Benchmark platform ideas for creating AI-powered solutions on top of incommensurable data sources
- Pilot AI use of data source information?

3 ECOSYSTEM GOVERNANCE

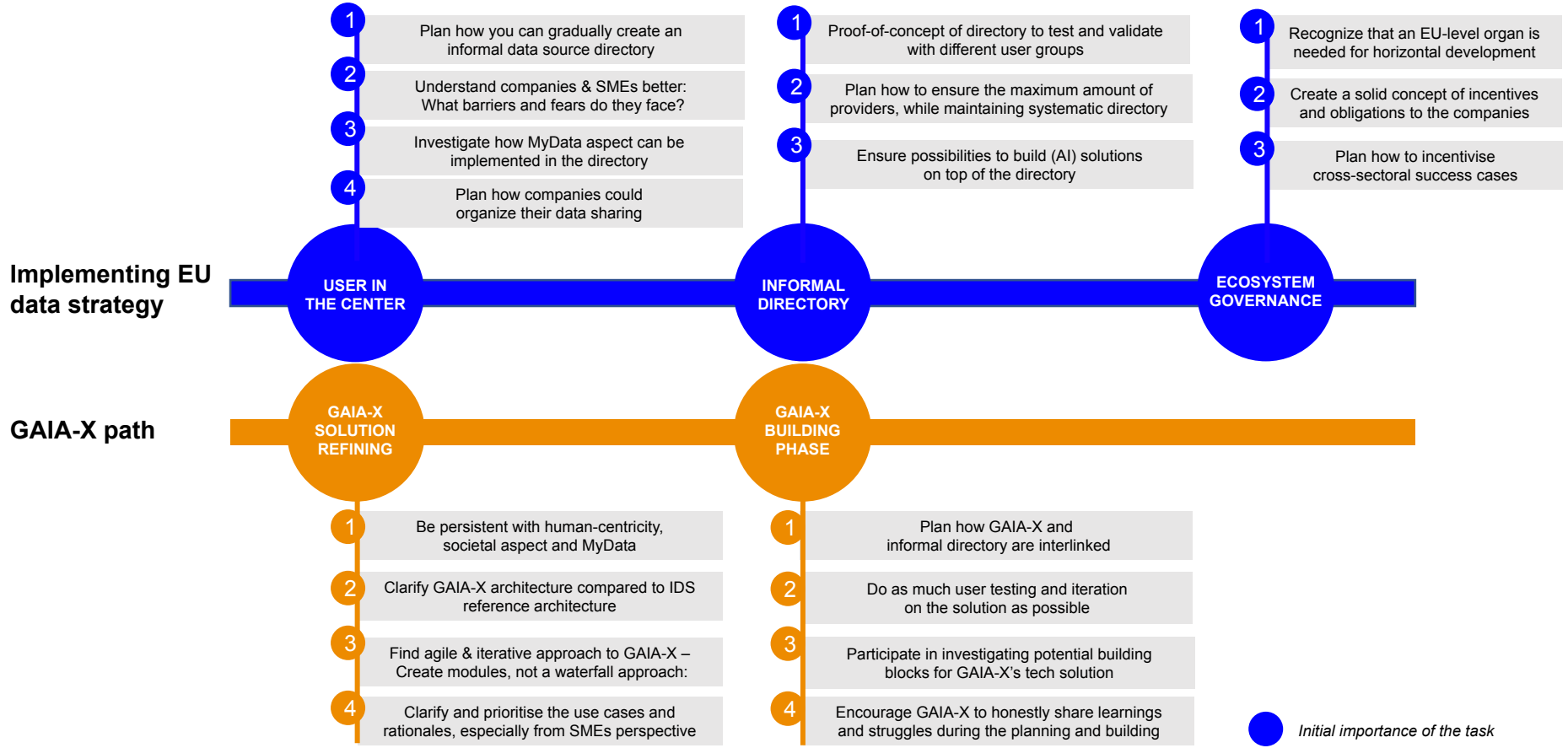
3.1 Recognize that an EU-level organ is needed for horizontal development
- Crystallize the challenge and philosophical foundations for collaboration in the new organ
- Plan the initial roles, responsibilities and focus areas

3.2 Create a solid concept of incentives and obligations to the companies
- Showcase Finnish prestudy on incentives and obligations
- Emphasise SME viewpoints

3.3 Plan how to incentivise cross-sectoral success cases
- Promote findings from Finnish pilots
- Encourage new cross-sectoral use cases with campaigns and gamification

These initial ideas should be studied further to understand co-depencencies, contextual needs and simultaneous development paths better.

GAIA-X proceeds, but a more user-centric track is needed



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Kiitos! Millaisia ajatuksia heräsi?

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