Some house rules for today

- Please '**name**' yourself. You can do so by clicking on the three dots icon at the bottom right of the screen
- Please use the **chat** at the bottom left to ask any questions during the webinar
- Please **mute** yourself to avoid background noise unless you are speaking
- Please **turn off your video** to avoid any network issues
- '**Raise your hand**' if you want to speak to avoid several contributions at once

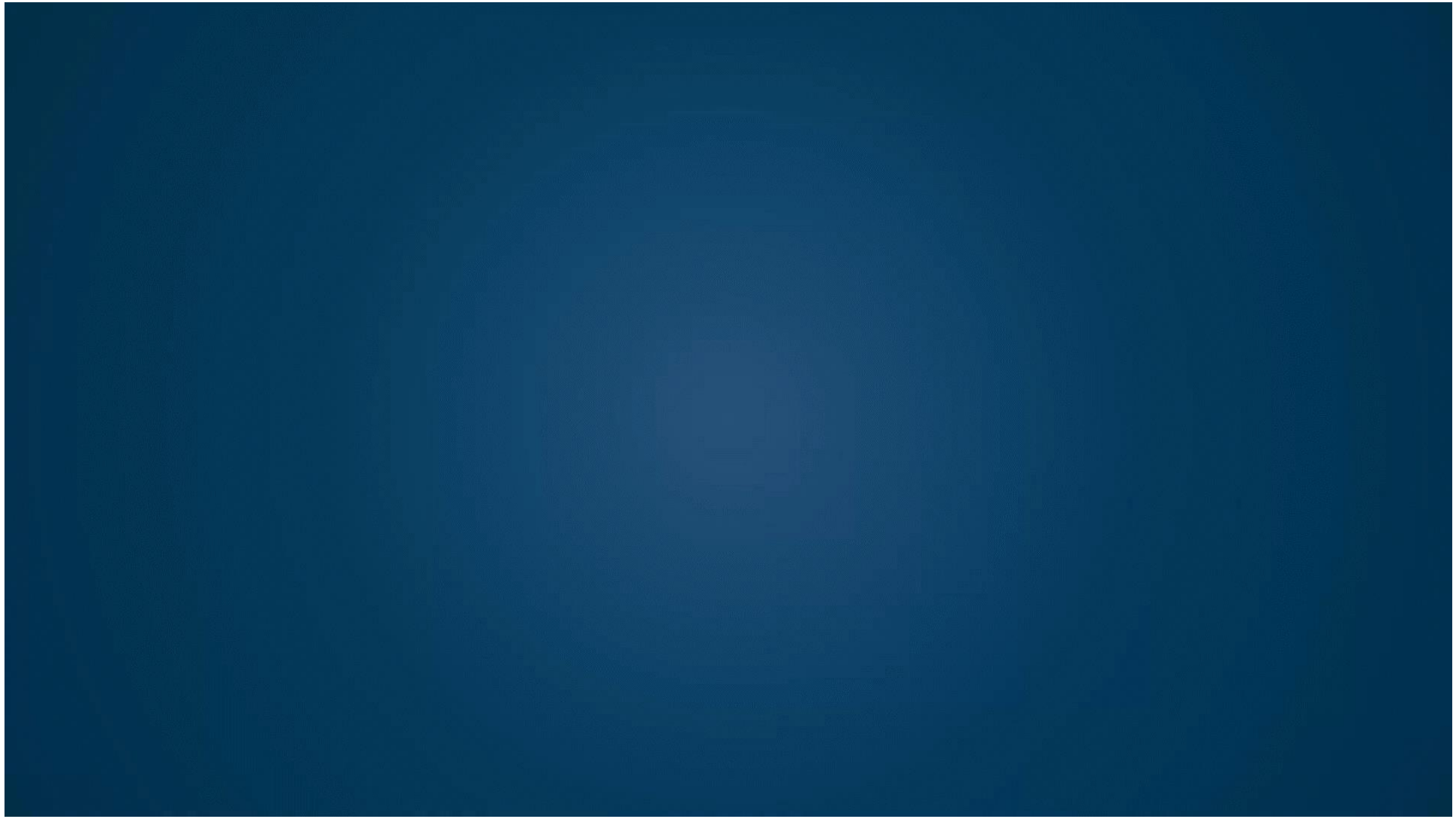
European Commission

23 May 2022

OSOR webinar

Public Procurement of Open Source Software

Discover OSOR



23 May 2022

OSOR webinar

Public Procurement of Open Source Software

OSOR's offer

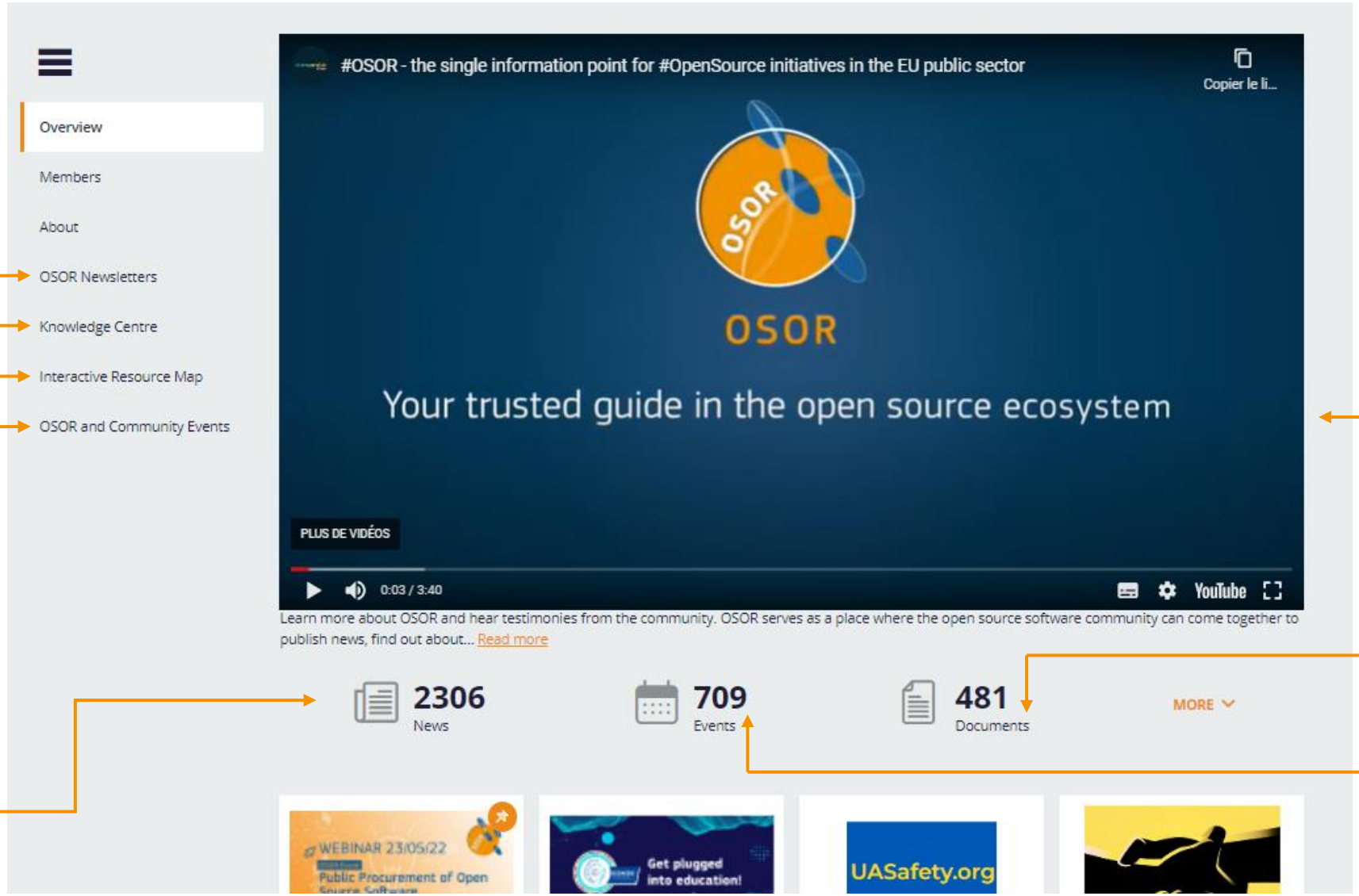
Monthly Newsletter

Knowledge Centre

Interactive map

OSOR and community events

News



Introductory video

Case studies

OSS events

OSOR’s offer

Observatory providing FOSS expertise and information for public administrations across and beyond Europe since 2007

Open source platform promoting OSS and helping European public administrations with its adoption

Actively connects European **public administrations** with other stakeholders and provides them with useful resources

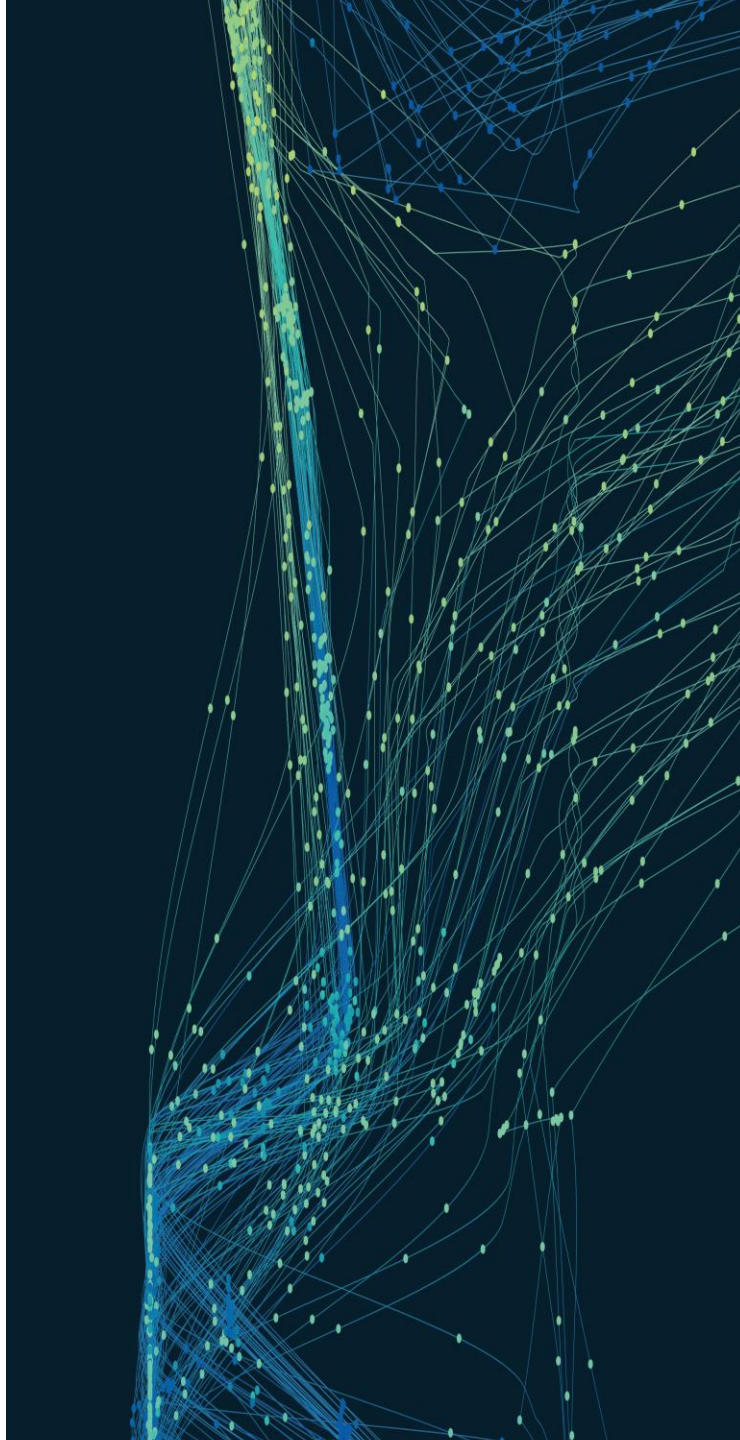
Nurtures an active **community** by bringing OSOR users together through regular webinars and events

OSOR Knowledge Centre

Check out **osor.eu** for more

Agenda

1. About OSOR
2. A look into the updated Guidelines on Public Procurement of Open Source Software
3. Johan Linåker – Development and Acquisition of Open Source Software in the Public Sector
4. Rasmus Frey – Danish Municipalities and Open Source procurement: how we do it the OS2 way
5. Patrice-Emmanuel Schmitz – Legal perspective
6. Q&A Session



European Commission

Our guest speakers

Johan Linåker

Researcher at Lund University

Rasmus Frey

Head of Secretariat at OS2

Patrice-Emmanuel Schmitz

Lawyer, ICT practitioner and legal expert

A look into the updated Guidelines on Public Procurement of Open Source Software

European Commission

The objectives of the Guidelines

- Provide information to public administrations on the processes, principles, and requirements of procurement of OSS
- Address the challenges of the public procurement of OSS
- Showcase good practices of the public procurement of OSS throughout the EU

The updated Guidelines on Public Procurement of Open Source Software

First published in 2010, the Guidelines on Public Procurement of Open Source Software are being updated to provide up-to-date information on the **policy and legislative framework** underlying public procurement processes.

Political and legal framework at EU level

- Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement
- Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardization
- European Commission Open Source Software Strategy 2020-2023 – Think Open
- Tallin and Berlin Declarations

Non discrimination

Mutual recognition

Proportionality

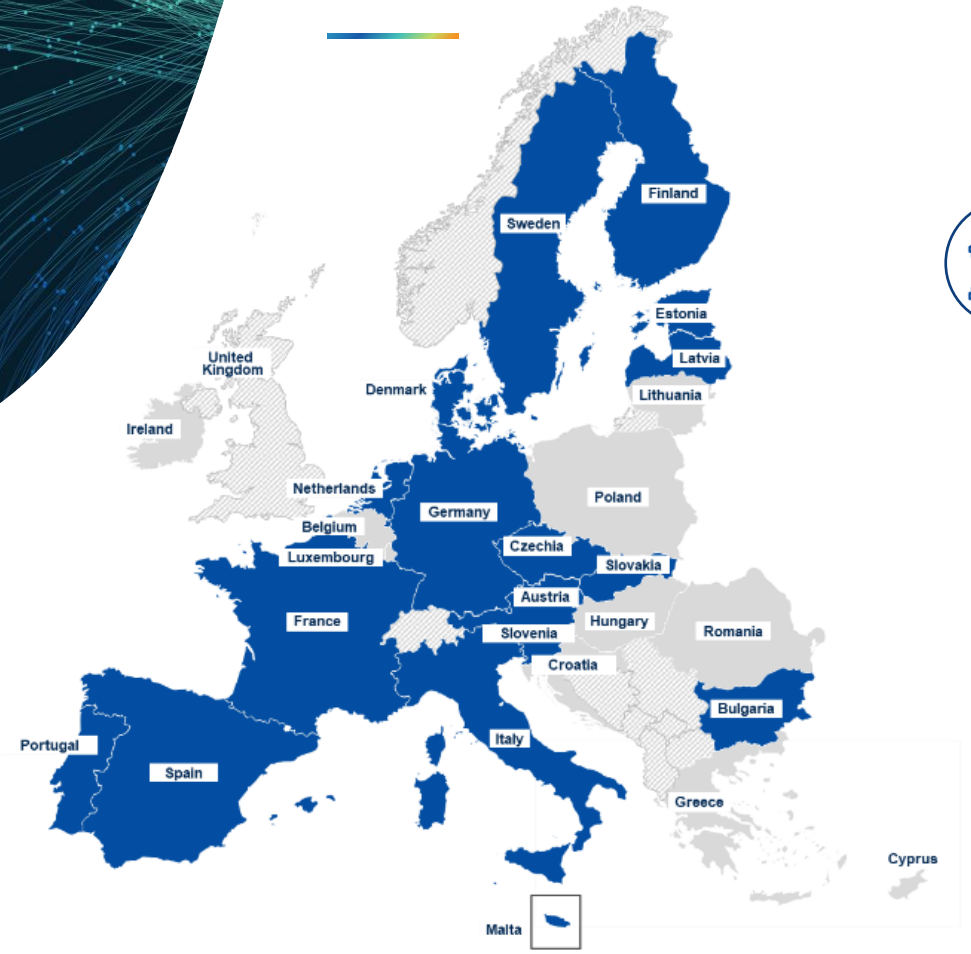
Equal treatment

Transparency

Open competition

European Commission

The updated Guidelines on Public Procurement of Open Source Software



Political and legal framework at national level

- Fostering an OSS culture within the public sector
- Ensuring a level-playing field between proprietary and open source software providers
- Pursuing internal strategies in favour of OSS

European Commission

A typical public procurement process

01 Planning

To decide whether to download or purchase a software, public administrations should identify their needs and perform market research.

02 Preparing tender documentation

To ensure the success of the procurement process, public administration should identify and describe their needs, constraints, and required technical specifications.

03 Evaluating and awarding

Bids responding to the call for tenders must be evaluated and the best offer chosen.

04 Managing the contract

Every contract requires maintenance, discussions, and compromises between the parties.

Johan Linåker

Development and Acquisition of Open Source Software in the Public Sector

European Commission

Acquisition and Development of Open Source Software in the Public Sector

Johan Linåker

RI.SE

Guidelines in Sweden

- Soft and implicit guidelines compared to e.g., Italy, France, and Estonia
- *”The public administrations' e-services should, as far as possible, be based on open standards and use open source software and open source software-based solutions to gradually remove lock-in to individual platforms and solutions.”* - Swedish E-delegation
- *”Open Source Software should always be considered pending that it fulfills all requirements and the total cost of ownership is reasonable.”* - Swedish Insurance Agency
- *”Software that is developed or acquired should (in first hand) be published as open source software.”* - Swedish Agency for Digital Government

Reuse of existing Open Source Software

Are there open alternatives?

- In the preparatory phase of an acquisition...
  - Investigate existing alternatives
    - Software catalogs, networks, RFIs
  - Download, test, and cross check against requirements specification
  - Missing requirements critical? Can they be developed at a reasonable cost? Is it possible to upstream?

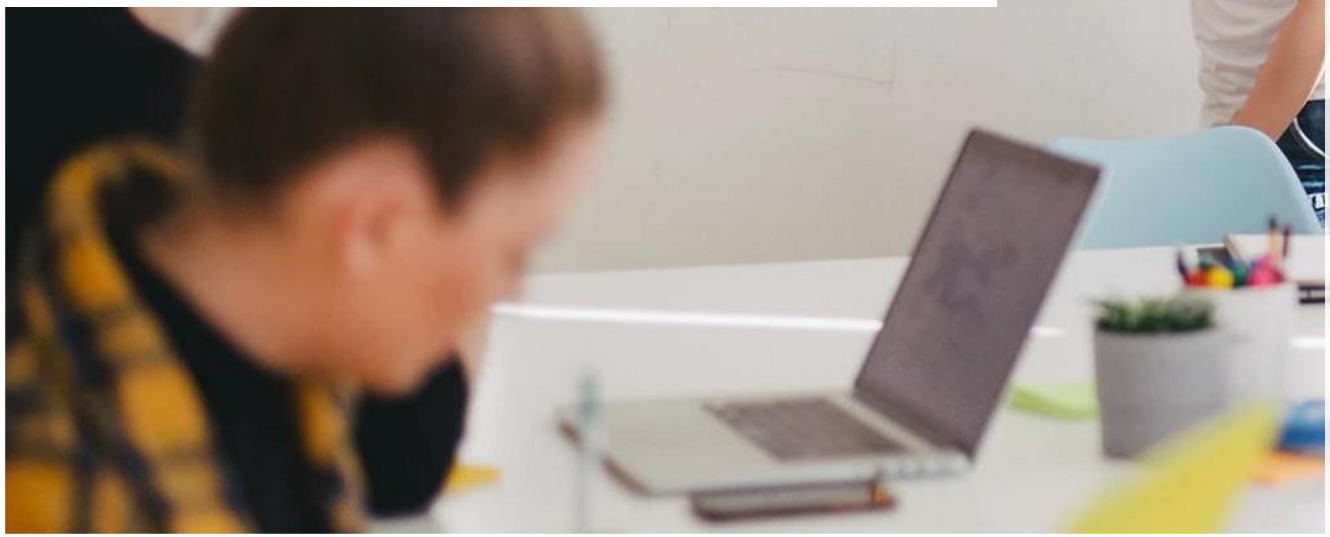
Photo by Billy Huynh | https://unsplash.com/photos/v9bnfMCyKbg

Project health?

- How secure and sustainable is the Open Source Software?
- Do we need to procure support or a packaged service to guarantee quality and availability?
- For checklists, see:
  - *https://chaoss.community*
  - *https://www.redhat.com/en/resources/open-source-project-health-checklist*

Photo by Markus Frieauff | https://unsplash.com/photos/IJ0KiXl4uys

Support needed?



- What can we do ourselves? What do we need help with?
  - Services and/or enterprise-packaged solutions?
  - Can the need be fulfilled through any existing framework agreements?
  - Need for a new procurement?
  - Direct procurement to boundary limit to develop missing functionality and build internal competence?
  - Divide customizations and new development in to separate parts?

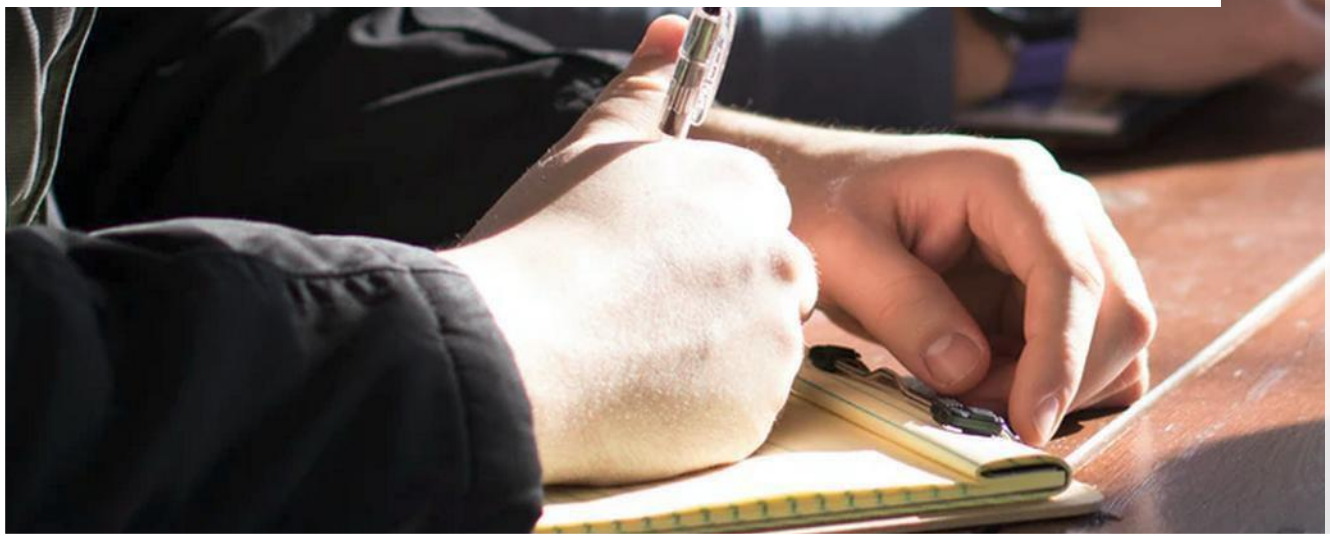
Photo by Leon | https://unsplash.com/photos/Oalh2MojUuk

Expected value gain?

- What are the expected value gains and drivers for choosing an open alternative?
  - Public money, public code
  - Sustainable management of information
  - Avoid reoccurring shifts of systems at new procurements
  - Benefit from and promote open innovation
  - Customize based on operational needs
  - Possibility to affect development pace
  - Reduce licensing costs
  - Benefits of scale when multiple administrations are involved
  - Increase competition on tenders

Photo by Annie Spratt | https://unsplash.com/photos/QckxruozjRg

Qualification requirements on suppliers?



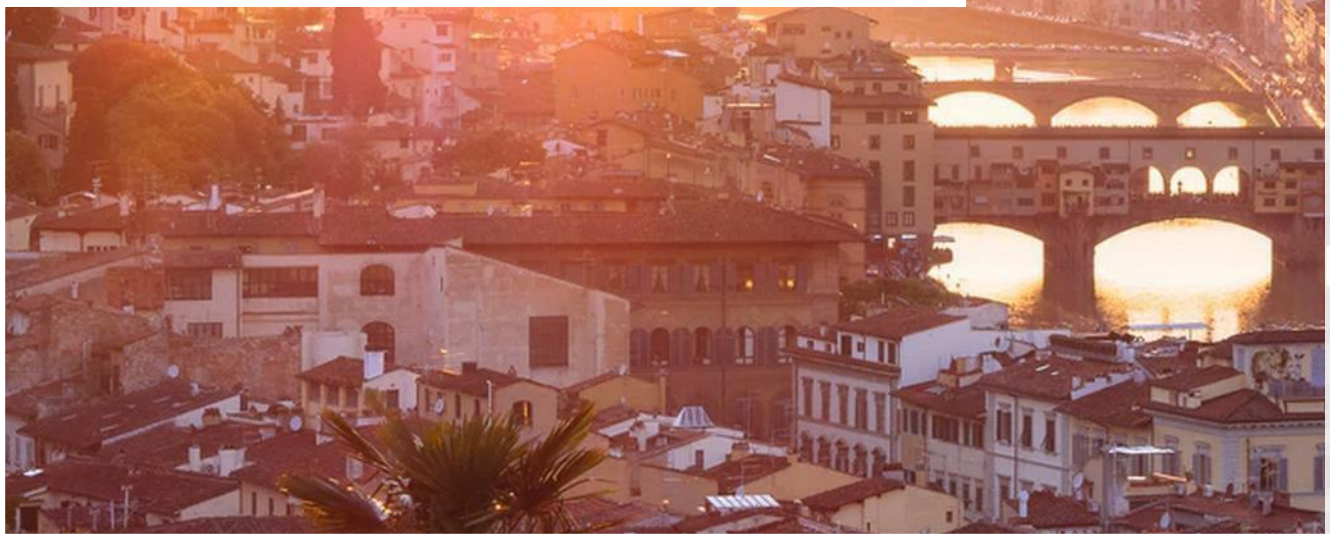
- Community-first approach for enterprise-packaged solutions
- Beneficial if a supplier can show record of experience of
  - Active participation in Open Source Software projects in general
  - Active participation in the Open Source Software at hand
- Experience should preferably be recent and stretch over a longer period of time
- Supplier should be able to present
  - Accepted code contributions
  - Active participation in technical discussions
- Extra qualifying if supplier is represented in the governance and technical steering of the Open Source Software at hand.

Weighing the different options*

	Proprietary option	OSS community ed.	OSS enterprise ed.
Procurement			
Security			
Cost			
Organization			
Technical reqs			

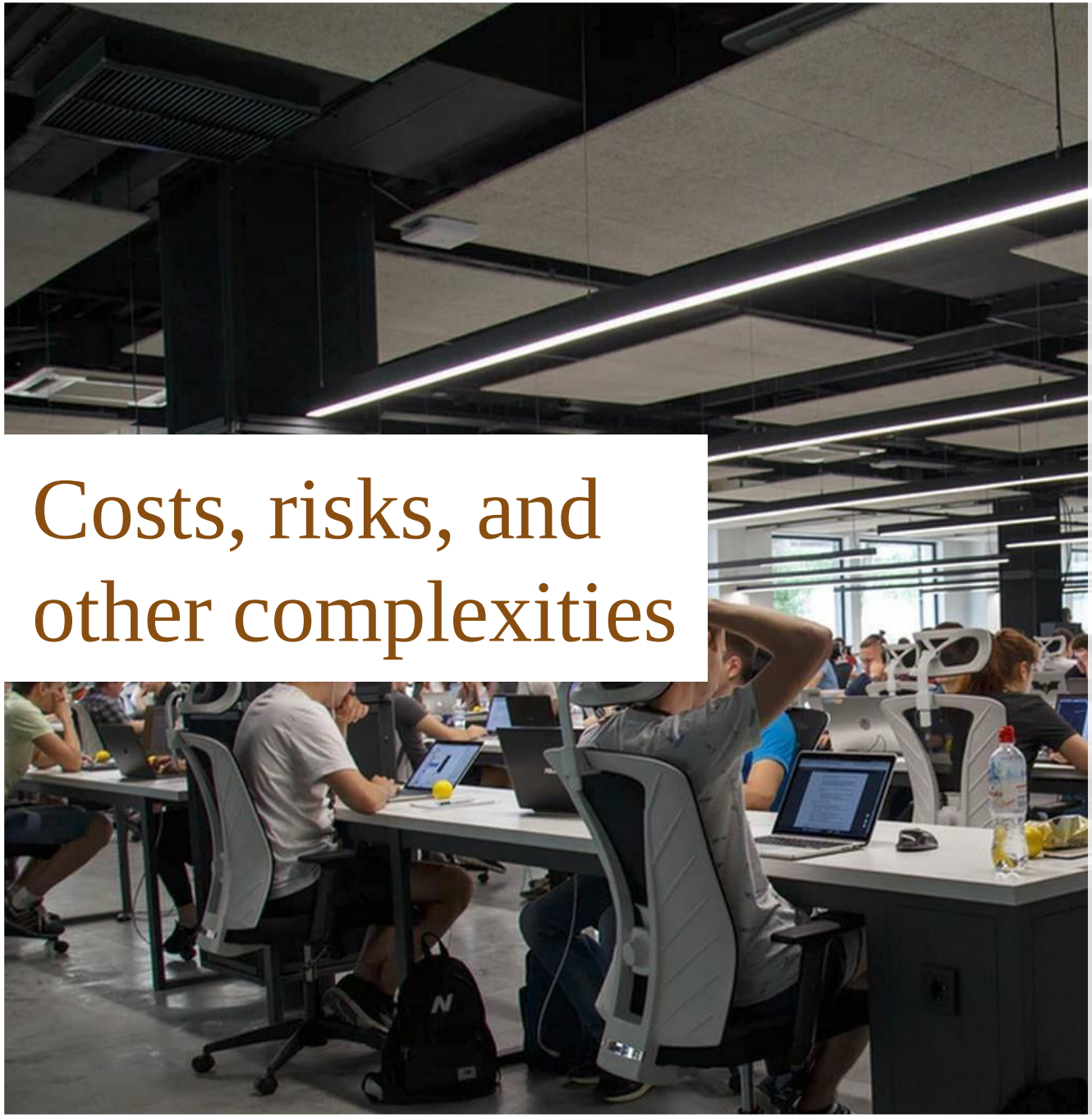
- Comparison from a pre-study of e-archival solutions by the Swedish Governmental Service Center
- (Record ID: 2019-00742-1.7-2.)

Example: Italy



- Must according to law consider open alternative (if available)
- Any newly developed software must be released as Open Source Software
- A joint decision model to rank Open Source Software based on:
  - Technical aspects (ex. requirements fulfillment, interoperability, security, personal data management, project health, other administrations that are using it, availability of support...)
  - Total cost of ownership (e.g., installation, integrations, customization, verification, hosting, maintenance, training…)
- See: *https://docs.italia.it/italia/developers-italia/gl-acquisition-and-reuse-software-for-pa-docs/en/stabile/index.html*

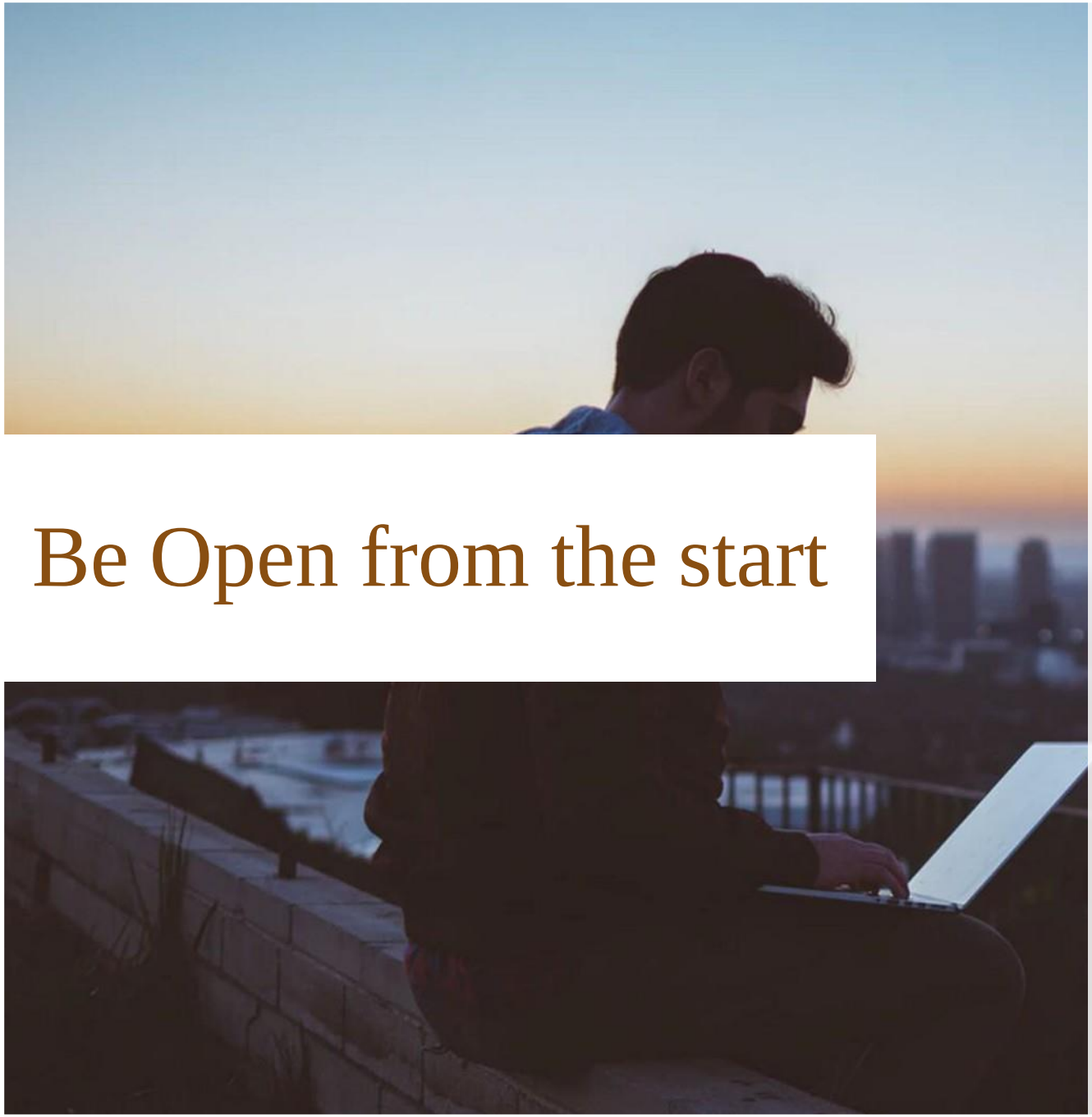
Development of a new Open Source Software



Costs, risks, and other complexities

- Be sure of the purpose and value gains that are expected
- Consider costs, risks, and weigh against other alternatives
- Find other stakeholders with the same vision/problem and initiate an open collaboration from start.
- Consider (among other things)
  - Internal vs. acquired development resources?
  - Ownership of copyright?
  - Long-term maintenance and management?
  - Expectations on stakeholders? How can further join?
  - Business opportunities for suppliers?

Photo by Alex Kotliarskyi | https://unsplash.com/photos/QBpZGqEMsKg



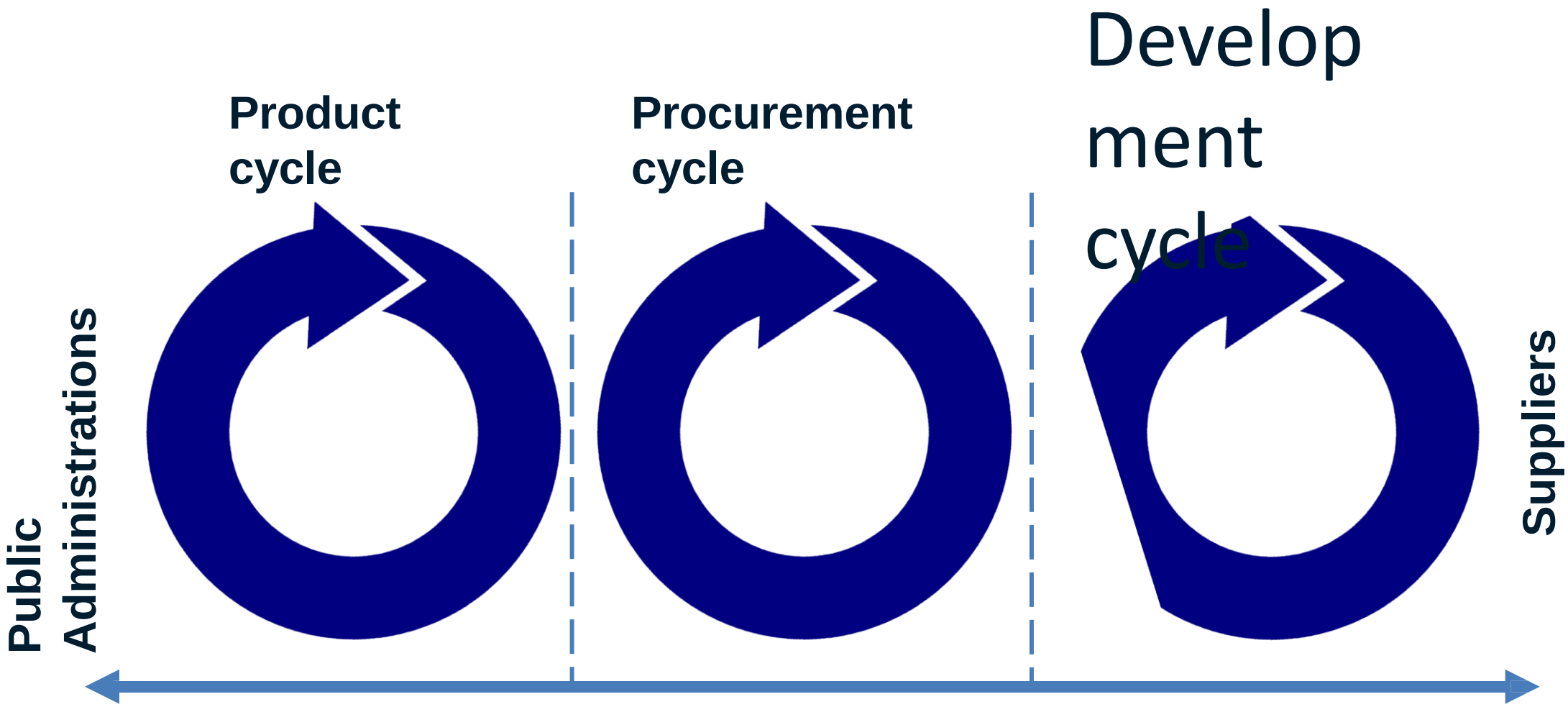
Be Open from the start

- The software should...
  - Be developed on an open social coding platform along with an open and transparent infrastructure from the start
  - Be licensed under an Open Source Software license
  - Include or be accompanied by necessary documentation and tooling for anyone to run and develop
  - …
- In other words...
  - Be developed as an Open Source Software project from the start
  - See *https://standard.publiccode.net/*, *https://opensource.guide/*, *https://joinup.ec.europa.eu/collection/open-source-observatory-osor/guidelines-creating-sustainable-open-source-communities*

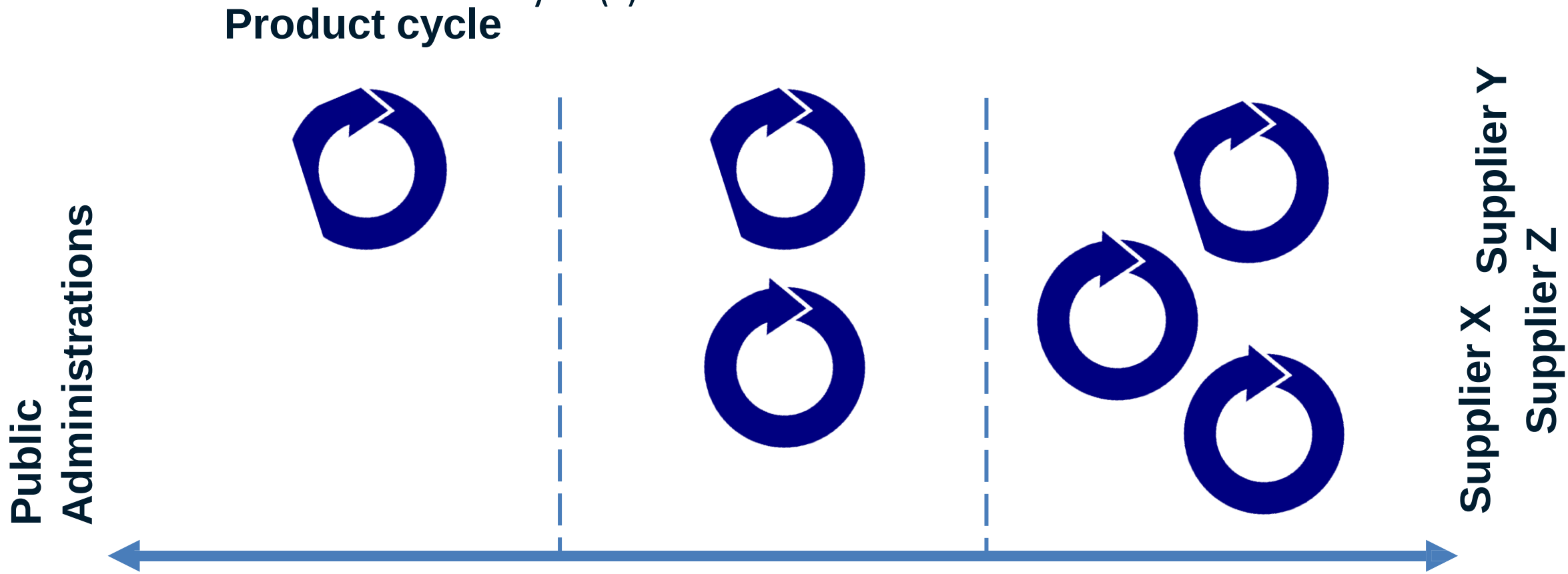
Photo by Avi Richards | https://unsplash.com/photos/Z3ownETsdNQ

Bridging sequential and agile processes

- Procurement is (typically) a one-way sequential (waterfall) process, from requirements specification, to procurement, to realization.
- Development is (nowadays mostly) an iterative (agile) process where development is carried out in smaller cycles.
- How do we bridge these two worlds?



Procurement cycle(s) Development cycle(s)



Dynamic Purchasing Systems

- An ”open framework agreement” where suppliers, who meet basic qualifying requicements, can join dynamically during the DPS’ lifetime.
- May enable a dynamic and modular development with a bazaar of developers and users
  - Tickets as tenders
  - Pull requests as solution proposals
- Challenge: tool support not mature
- (+ culture, processes, training, etc.)

Photo by Kazuo ota | https://unsplash.com/photos/5r935yRz8Kg

Need for collaboration and coordination

- OSPO-model: National and regional competence centers in Italy
- Foundation-model: OS2 in Denmark, a (mainly) municipal collaboration
- Network-model: NOSAD in Sweden, an open network for public sector to share and develop knowledge on how to use and collaborate on Open Source Software

Photo by Hannah Busing | https://unsplash.com/photos/Zyx1bK9mqmA

Follow-up on development

- Open development enables
  - continuous monitoring and follow-up on planning, development, and delivery
  - possibility to engage in requirements discussions and provide a product owner's perspective
  - Review of quality and security aspects as work progresses

Photo by Headway | https://unsplash.com/photos/5QgIuuBxKwM

Overall procurement strategy

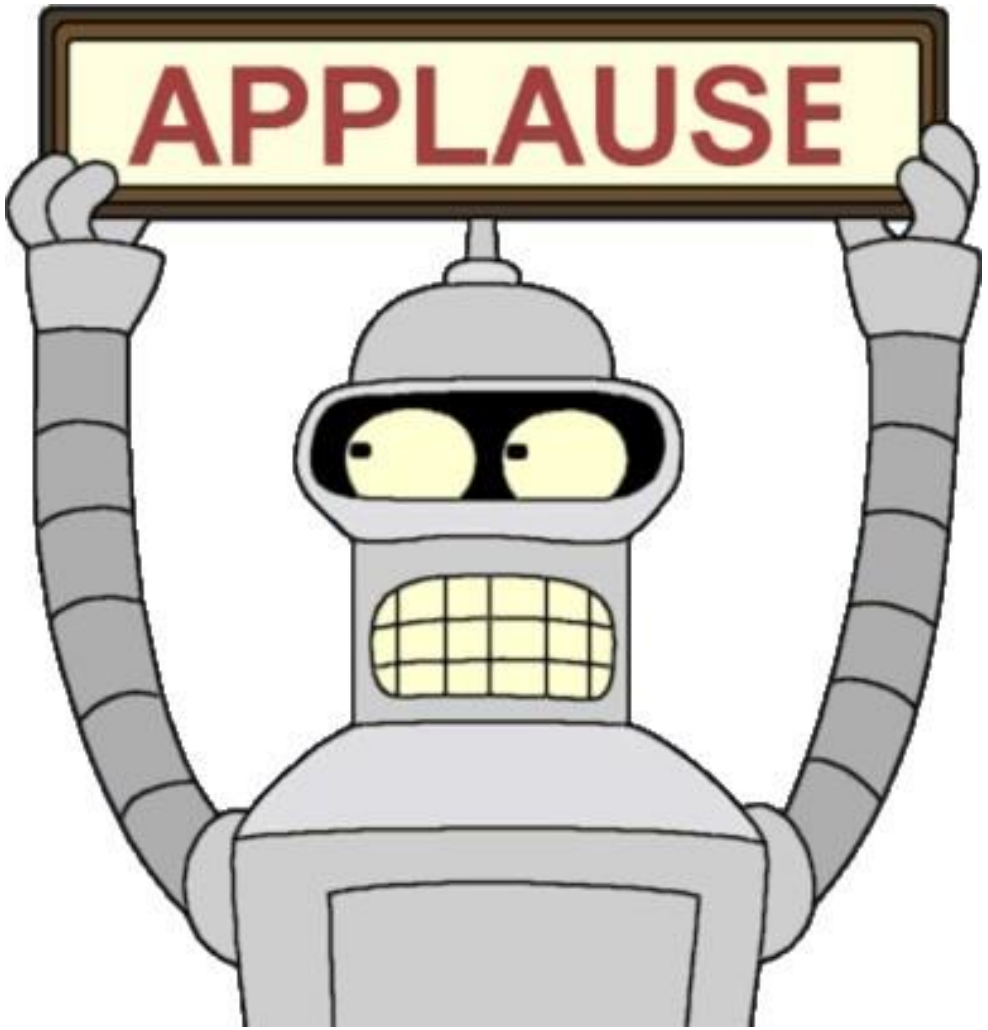
- General strategy for how to consider Open Source Software during an acquisition process that enables
  - synergies between projects
  - collaboration between operations and procurement office
  - common governance models and forms of collaboration
  - training and knowledge sharing

Photo by Heidi Walley | https://unsplash.com/photos/YuAL07NpidY

Need for training, culture, and resources

- Catalog over Open Source Software
- Process for procurement planning
- Real-world examples and case studies
- Cost, and risk evaluation models
- Example requirements for tenders
- Evaluation models for Open Source Software projects
- Evaluation models for suppliers
- Maintenance and collaboration models for public administrations

Photo by Lucas van Oort | https://unsplash.com/photos/_FjIWDrtfmU




Question time

Rasmus Frey

Danish Municipalities and Open Source procurement - How we do it the OS2 way

European Commission

Rasmus Frey

rasmus@os2.eu

+45 31 15 45 25

rasmusfrey

OS2

Public Collaboration

Open Source

Why should you listen to me?

You will learn how Danish Municipalities buy and use open source on a practical level

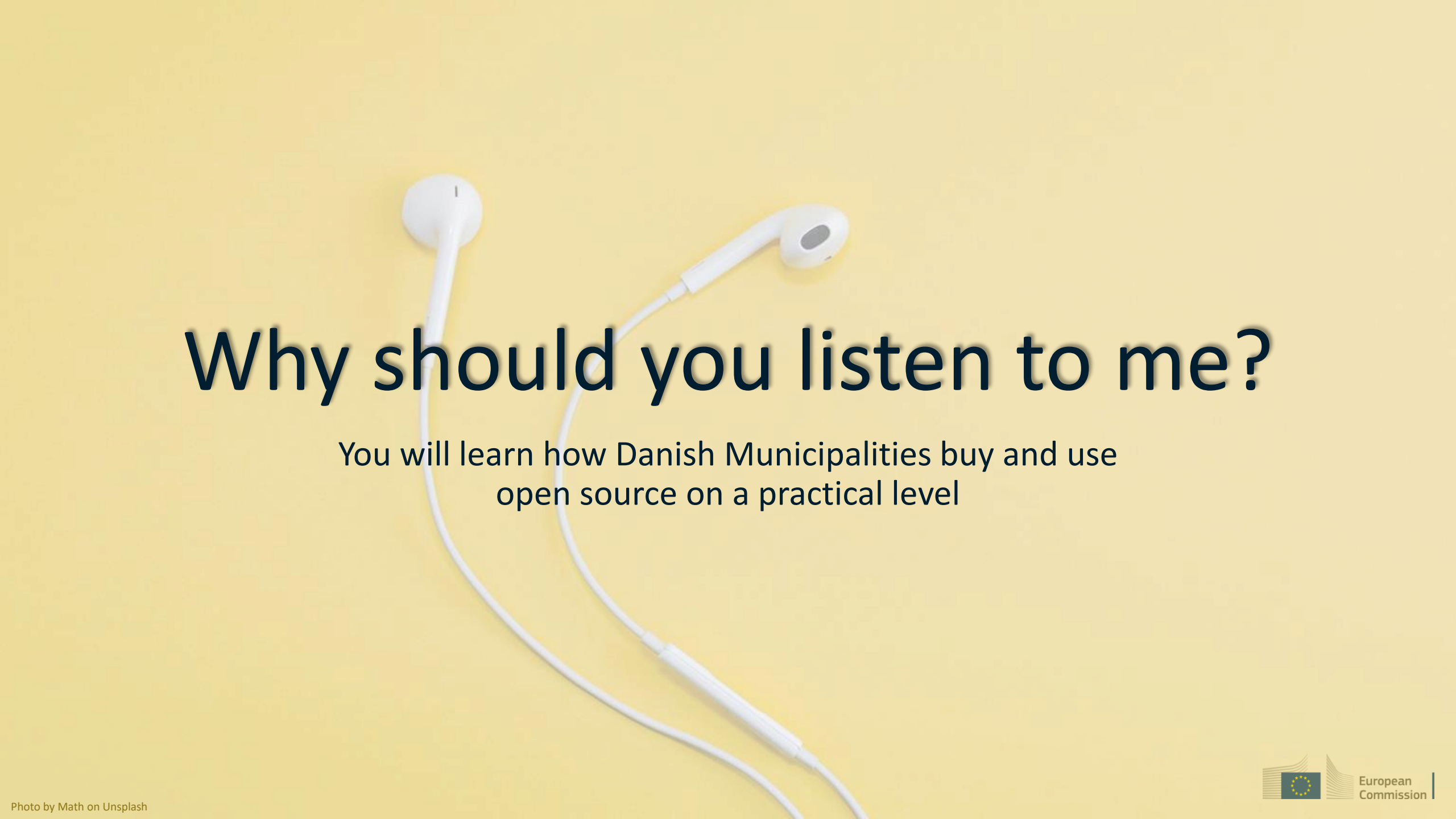


Photo by Math on Unsplash

European Commission

3 + 4 = 98

When 3 municipalities develop a solution and
the next 4 improve it – It benefits all 98*

*There are 98 municipalities in Denmark

European Commission

Photo by Kelly Sikkema on Unsplash

Danish Municipalities Want

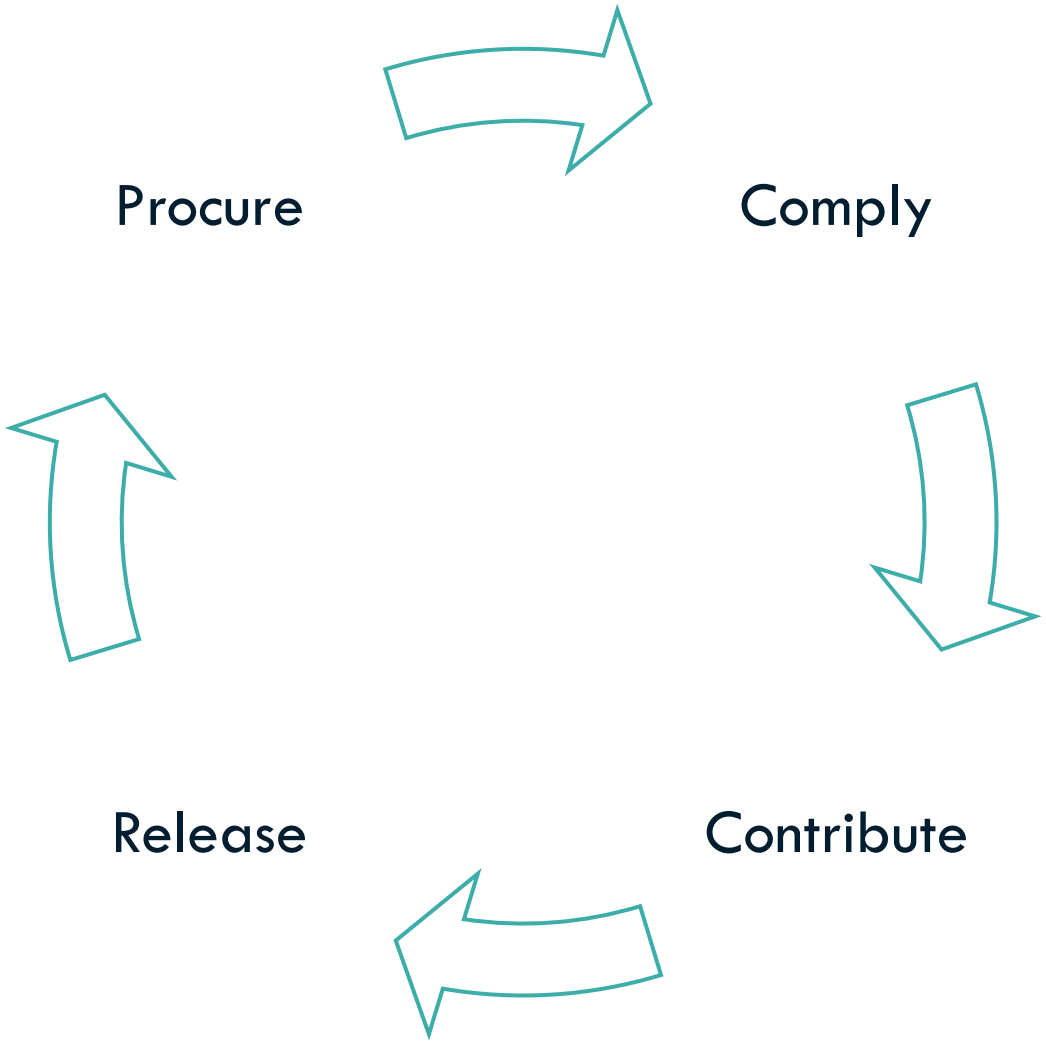
Coherent IT-solutions

To build for reuse and change

Data as a value-adding resource

Trust and Security

Multiple Vendors

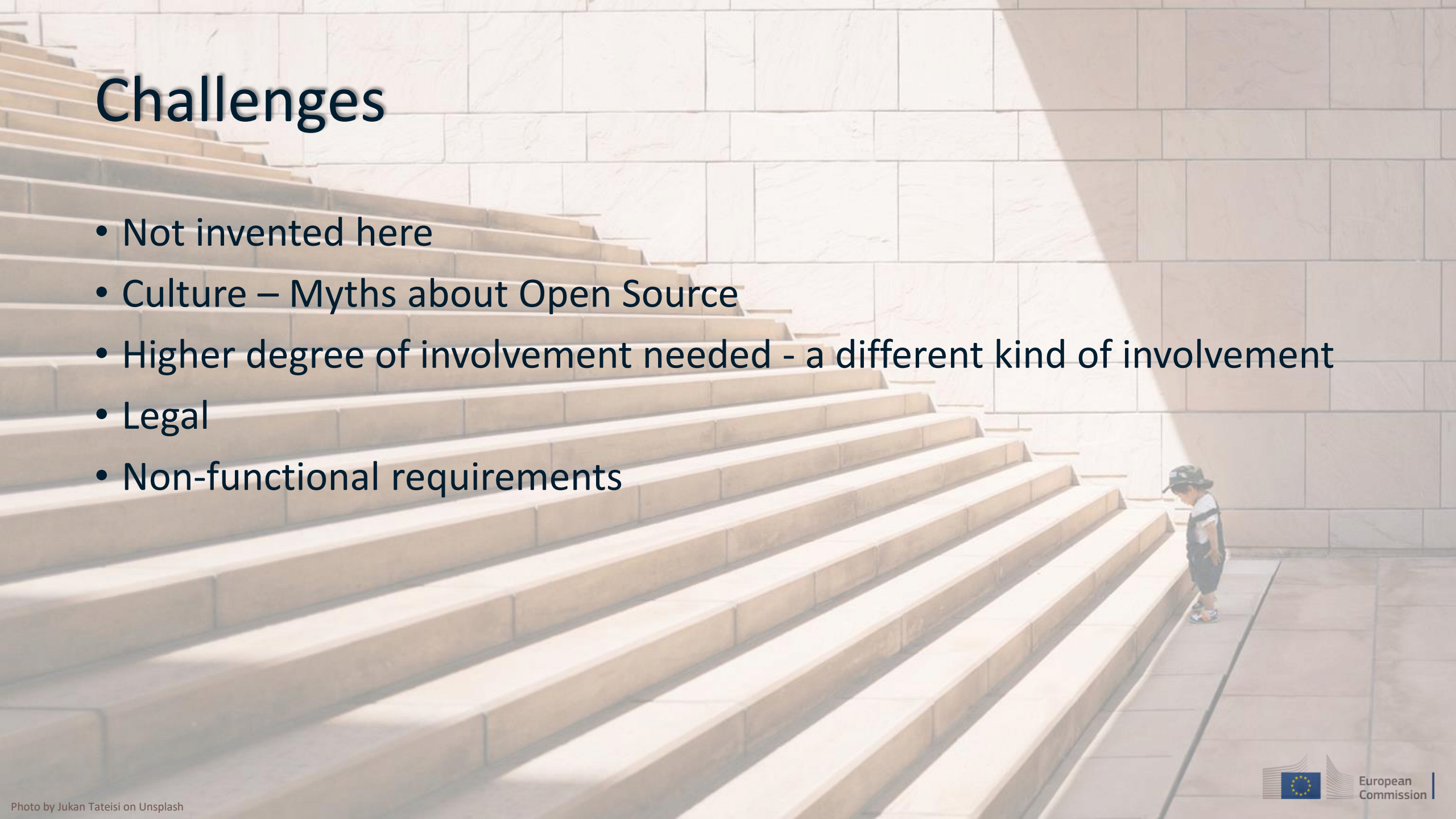


OS2 is here to

ensure a governance framework that enable technical exchange and sharing of knowledge in the Danish public sector.

Challenges

- Not invented here
- Culture – Myths about Open Source
- Higher degree of involvement needed - a different kind of involvement
- Legal
- Non-functional requirements



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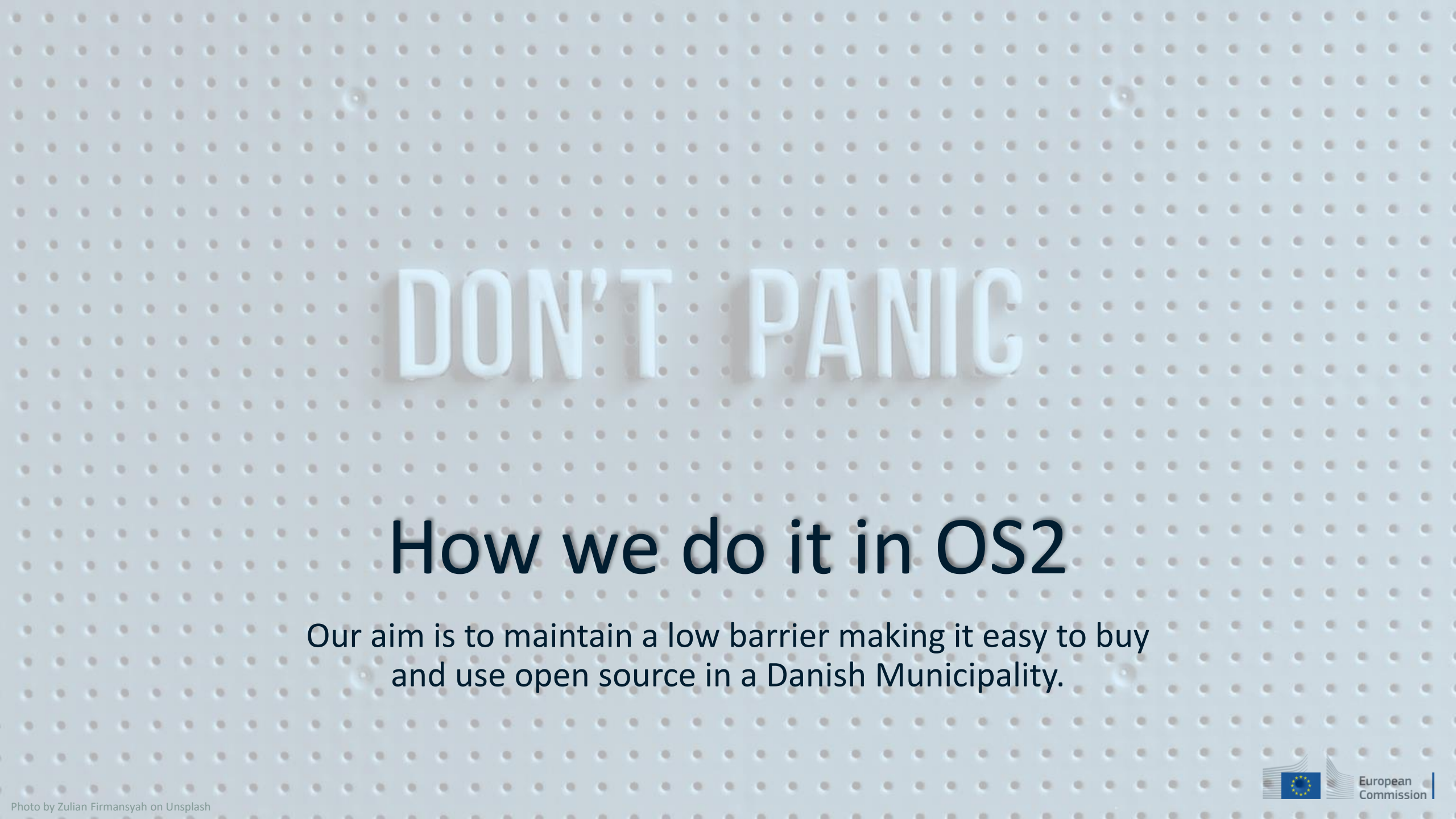
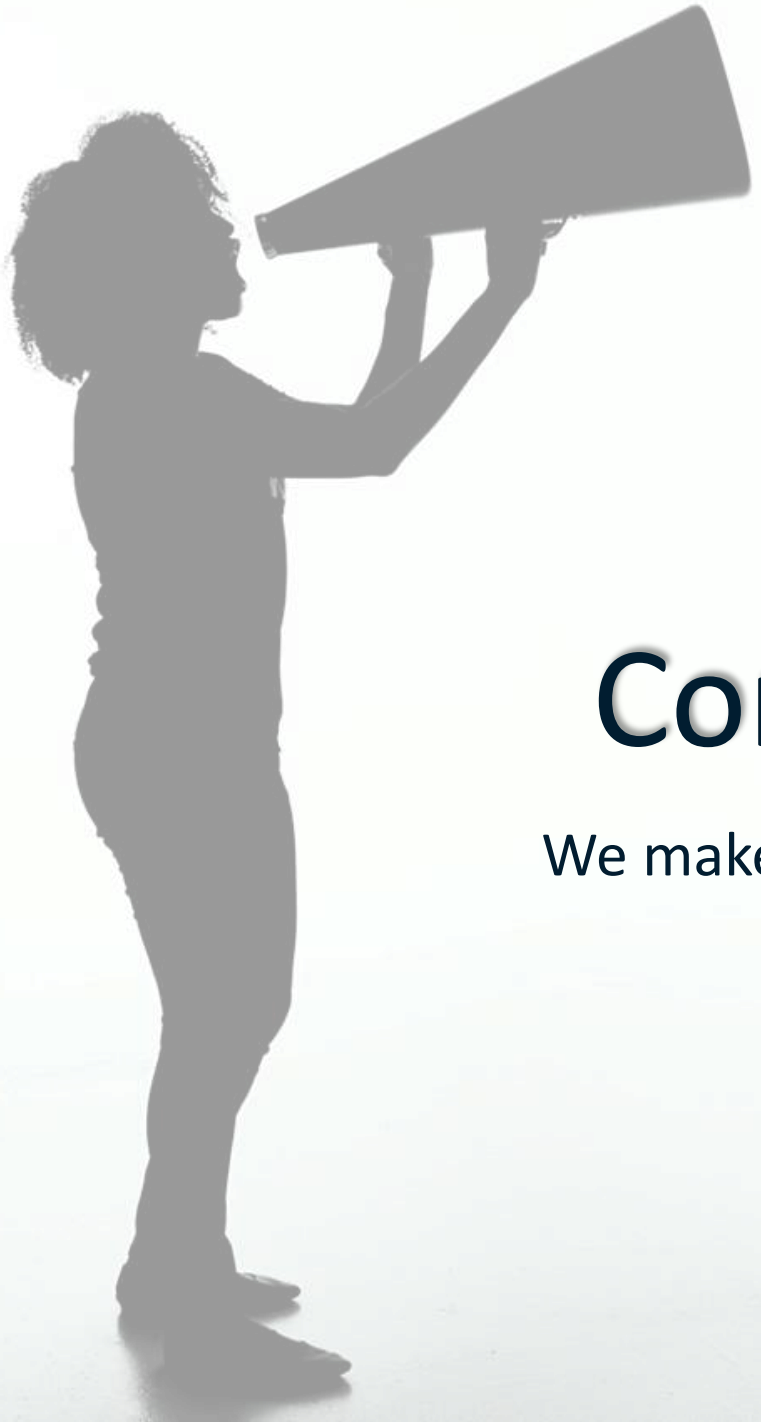


How we do it in OS2

Our aim is to maintain a low barrier making it easy to buy and use open source in a Danish Municipality.



Communication

We make sure to tell all the great stories

Photo by Patrick Fore on Unsplash

European Commission

The Open Source note

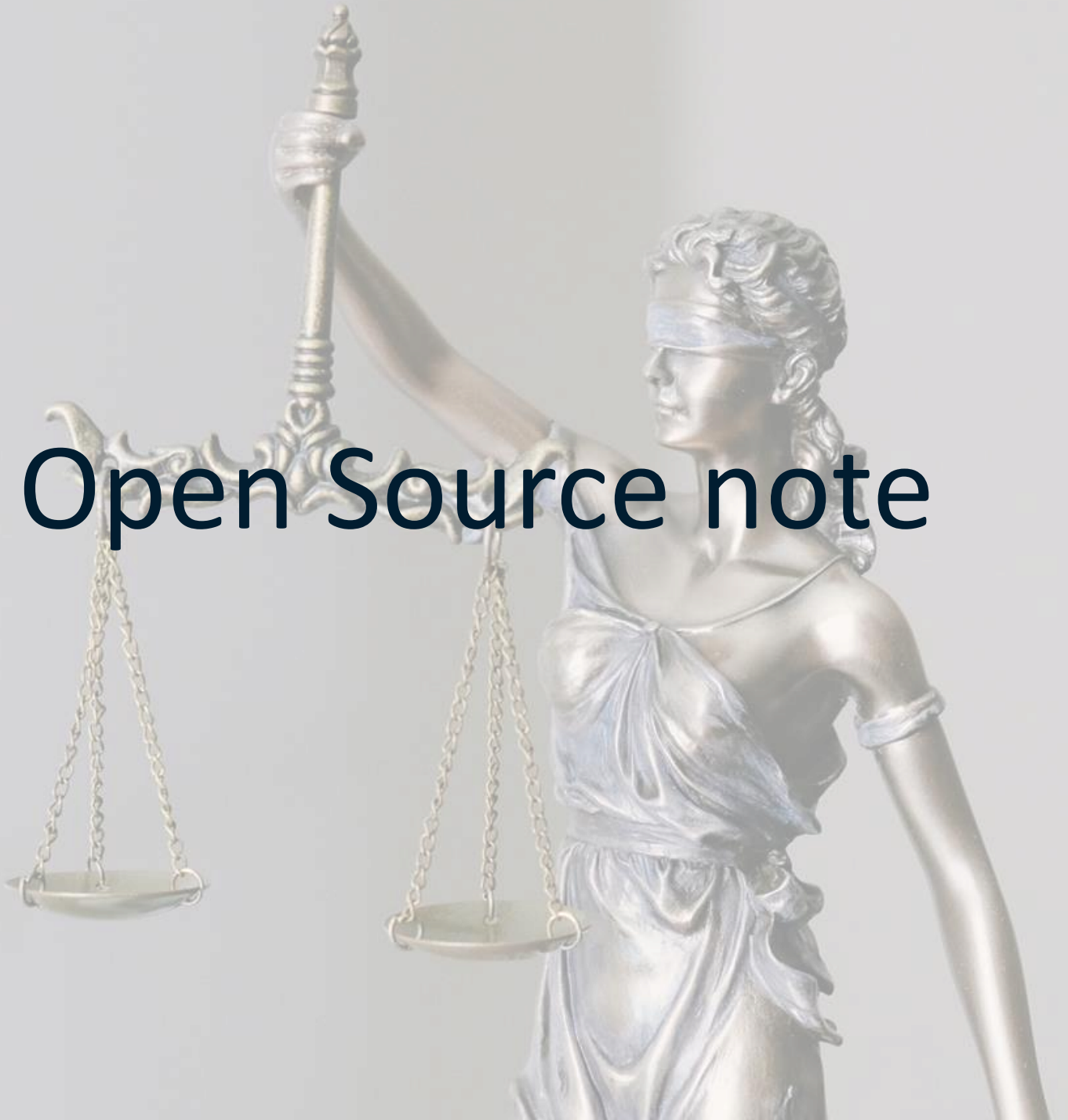


Photo by Tingey Injury Law Firm on Unsplash

European Commission

Decision tree

BESLUTNINGSTRÆ FOR KOMMUNALE MEDLEMMER

Understøtter den digitale løsning kommunens egne interesser i at opfylde en egen kommunal opgave?
Se punkt 4.1 i notat af 4. maj 2020

Nej

Overvej alternativ

Ja

Har kommunen en egen interesse i, at den digitale løsning deles blandt eller løses med OS2's medlemmer og gøres offentligt tilgængelig under licensen MPL 2.0?
Se punkt 4.2 og 4.3 i notat af 4. maj 2020

Nej

Ja

Hvilket hensyn er bærende?

Begge

Er interessen begrundet i reelle eller ideelle hensyn?
Se punkt 4.1 i notat af 4. maj 2020 – særligt sidste afsnit

Ideelle

Overvej om hensynet sagligt kan forfølges – eventuelt som led i andre saglige hensyn

Reelle

Skal andre i OS2 fællesskabet udføre opgaver for kommunen mod betaling?

Ja

Kan opgaven udføres indenfor rammerne af udførelsesloven?
Se punkt 4.1 i notat af 4. maj 2020

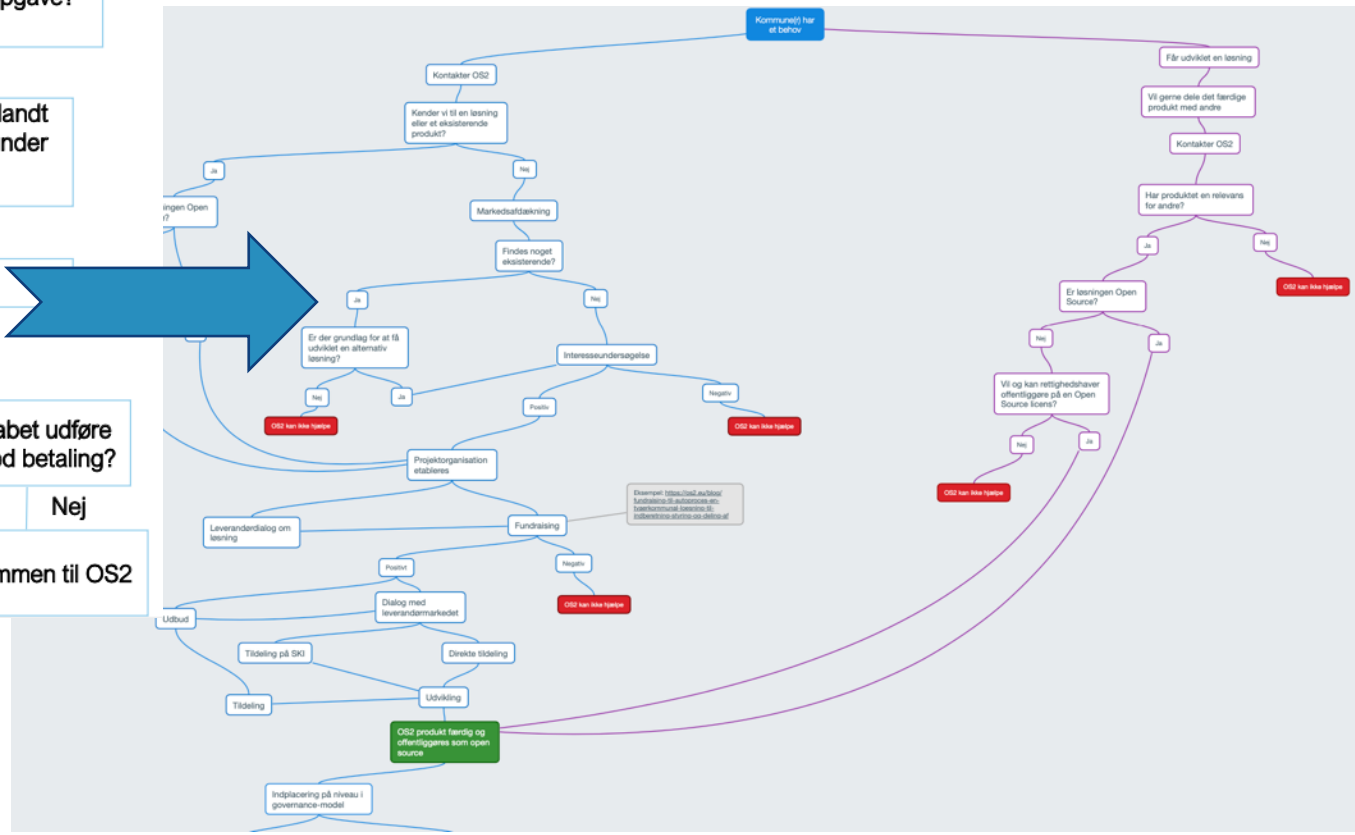
Nej

Overvej alternativ

Nej

Ja

Velkommen til OS2



European Commission

Getting help from professionals

A typical Danish municipality don’t have many technical skilled people on staff.

Photo by Matthew Waring on Unsplash

Non-functional requirements

- Digital tool – OS2kravmotor (requirements engine)
- Guides you through a simple set of basic questions
- Result is a list of recommended non-functional requirements
  - From a pool of 79 different requirements

OS2 kravmotor

The quality of an Open Source product is reflected by the community behind it.

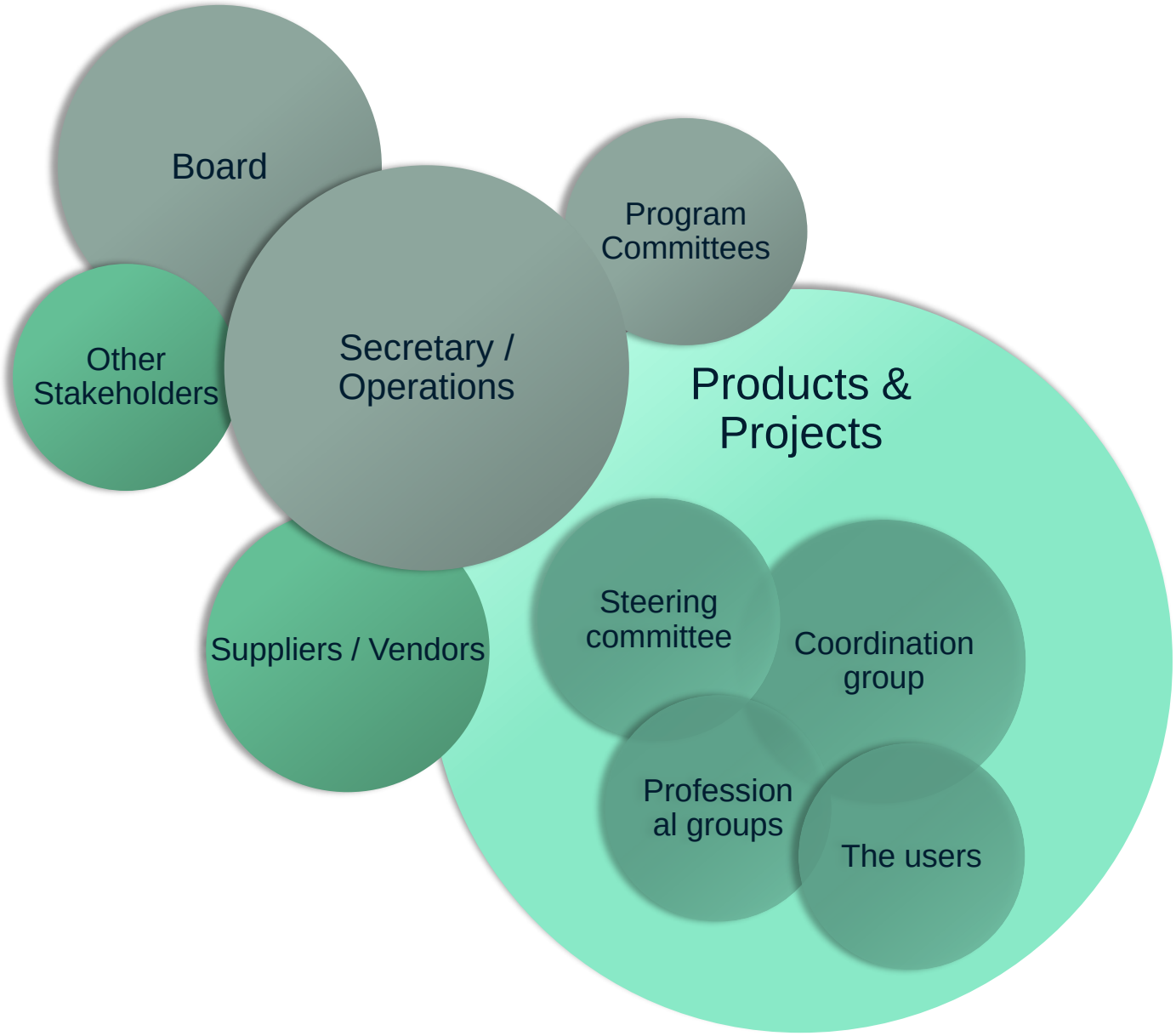
Governance report

3 levels with minimum requirements for:

- Relevance
- Formal requirements
- Governance
- Strategic context

OS2's Governance report:
https://github.com/OS2offdig/Governance_Reports

Photo by Max Ostrozhinskiy on Unsplash



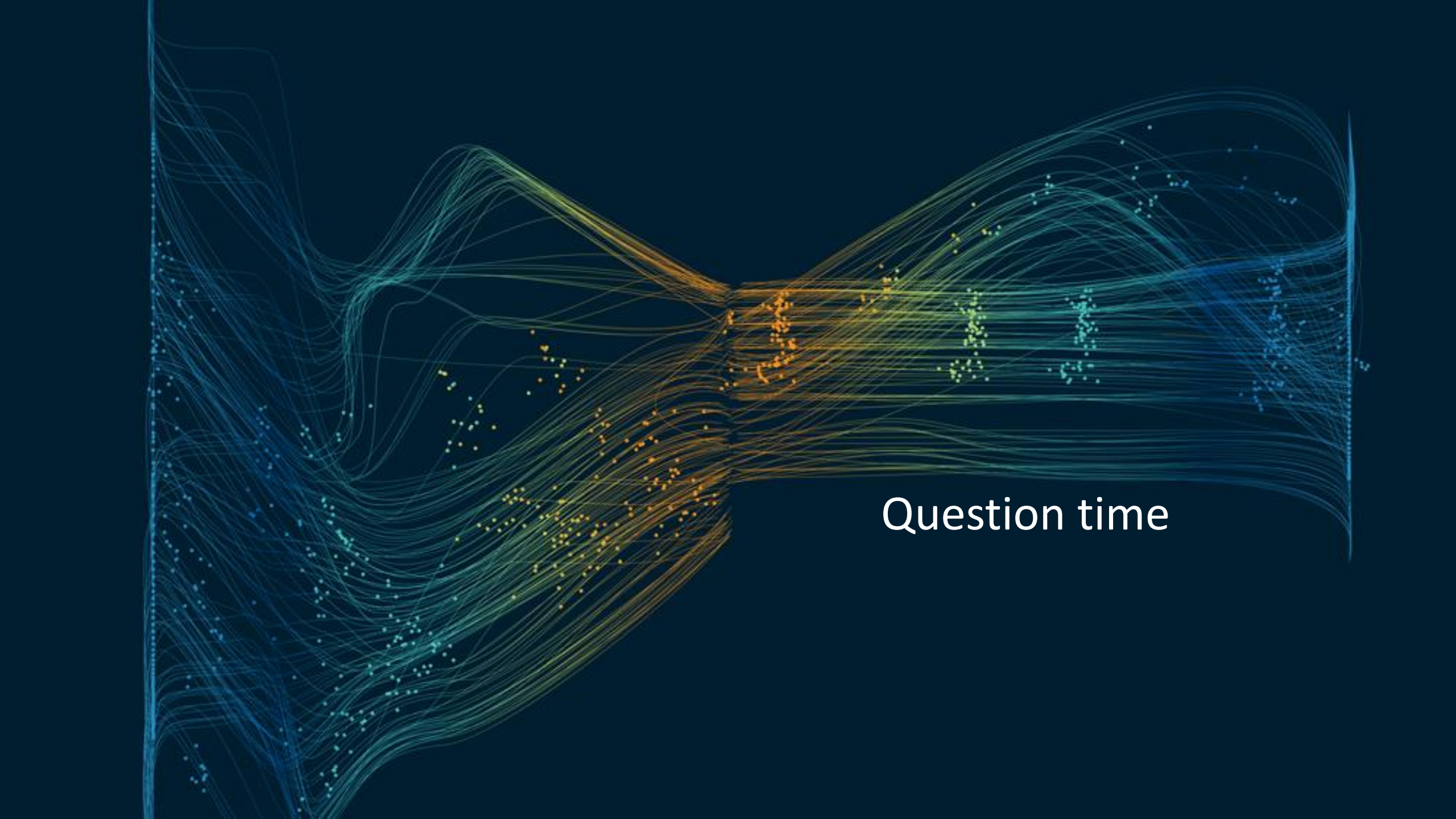
It’s a success when we have

- a common goal / a shared purpose
- a good framework
  - OS license
  - Guides / Templates
  - Code of conduct
  - Governance
  - Principles (community, code, it-architecture)
  - Toolbox
- a plan for own participation and contributions to the community

Questions ?

Also hit me on rasmus@os2.eu

Or find me on LinkedIn as Rasmus Frey


Question time

Patrice-Emmanuel Schmitz

Legal perspective

European Commission

23 May 2022

Open Source Software Procurement

Digital Europe Programme

Patrice-Emmanuel Schmitz
Legal support

ICT needs in Public sector

Transparency, sustainability, cost-effectiveness

Concerns about dependence on single ICT service providers and producers

Need for competition

Need for interoperability (for multiple users, infrastructures, and technologies)

- Interoperability is depending on open standards and “technology-neutral” specifications

➡ Preferential software procurement based on open standards wherever it is available

Contracts concluded on behalf of public authorities are subject to the principles of:

- Equal treatment
- Non-discrimination
- Transparency
- Best value for money spent.

Open Source fundamentals

Open source software is software that a user can:

- use for any purpose
- study, by examining the source code
- modify and improve
- distribute, with or without modifications.

OSS copyright licences provide ALL the above freedoms.

Legal framework response

Directive 2014/24/EU on public procurement

+ art. 38 on joint procurement

Directive 2004/17/EC on utilities

Directive 2015/1535/EU on information in the field of technical regulations

European Interoperability Framework (2017)

Various Open Strategies (2014, 2020) and Open Source Programme Office (OSPO).

Some EU Member States have specific policies and "catalogues" regarding open source software procurement.

Article 42 - 4. Unless justified by the subject-matter of the contract, technical specifications shall not refer to a specific make or source….

Such reference shall be permitted on an exceptional basis, where precise and intelligible description of the subject of the contract pursuant to paragraph 3 is not possible.

Such reference shall be accompanied by the words 'or equivalent'.

OSS fits public procurement

Why?

- **Transparency**: open source software is available along with its source code.
- **Interoperability**: whether implemented in open source software, open standards ensure interoperability, the ability of systems from different vendors to function fully with each other without technical or legal obstacles.
- **Independence**: transparency and interoperability allow current and future vendors to work with, adapt and maintain the software, eliminating the dependence of purchasers or third party support and service providers on the vendors of the original version of the software.
- **Flexibility**: open source software allows systems to be adapted and extended as user needs evolve. It does this without requiring that the user go back to the original vendor - new suppliers can be selected on a competitive basis.

Sustainability

lower costs over the longer term

reduces the users' reliance on the original vendors (or “locking”)

EIF (2017)

Recommendations

Procurement *(Recommendation 3):*

Ensure a level playing field for open source software and demonstrate active and fair consideration of using open source software, taking into account the total cost of ownership of the solution.

Sharing and Reuse *(Recommendation 6):*

Reuse and share solutions, and cooperate in the development of joint solutions when implementing European public services.

Decisions?

COMMISSION DECISION of 8.12.2021 on the open source licensing and reuse of Commission software

C(2021) 8759

The Commission services ***may*** choose to make Commission software available for reuse…

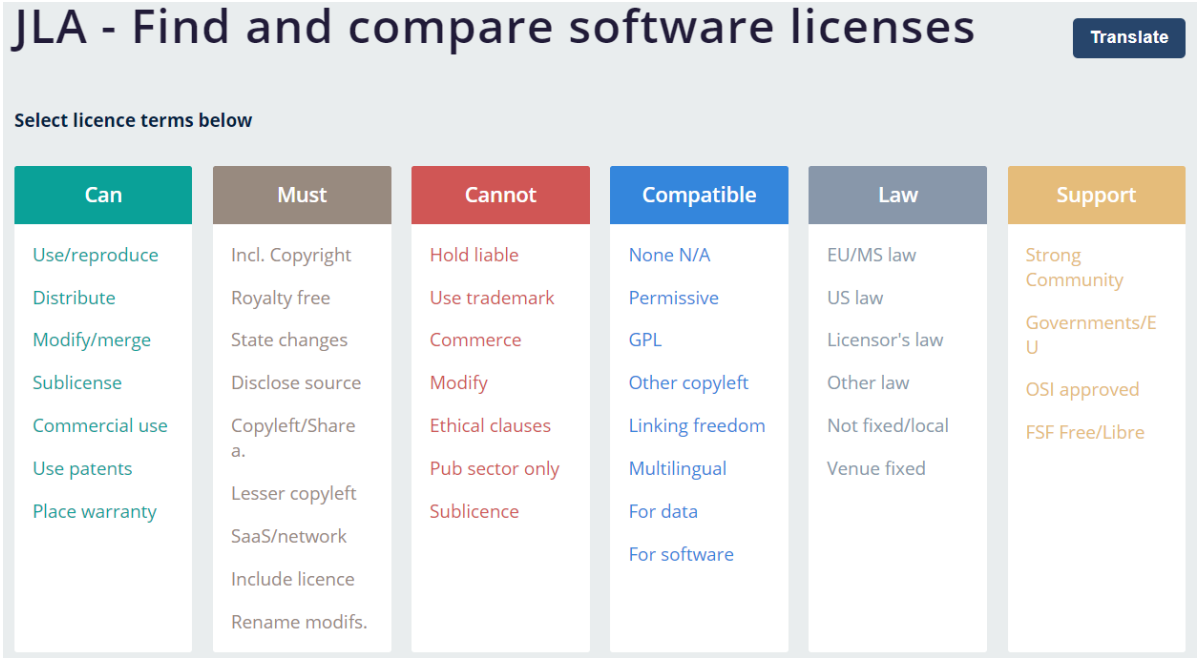
Such software ***shall be licensed*** under an open source licence

The open source licence granted by the Commission ***shall be the EUPL*** (with possible exceptions due to third party obligations or copyleft provisions)

Joinup tools

Joinup licensing assistant

Joinup proposes a new solution: the JLA, a unique tool allowing everyone to compare and select open licences based on their content.



Joinup licensing compability checker

The objective of this functionality is to determine how far and on which licences a work using/combining data or software components licensed under different licences can be distributed and under which licence(s).

Compatibility Checker (example)

Select
ONE **inbound** licence
+
ONE **outbound** licence

Inbound:
GNU AGPL v3.0

Outbound:
EUPL-1.2

Compatibility is depending on the type of "Use".
- Private or internal use is never restricted by any open licence and the resulting combined work does not need specific licensing, as soon it is not distributed to third parties.
- In case the two components are not merged, but used according their normal usage instructions and distributed together to third parties (i.e. on the same media or distribution), each component - even modified - keeps its primary licence: inbound licence or outbound licence.
- In case the two independent components are linked for ensuring their interoperability, the European law states that it has no impact on copyright: each component keeps its licence…
- In case significant parts of the source code covered by the inbound licence have been merged / integrated with code covered by the outbound licence, the outbound licence authorise distribution of the whole combined work under the inbound licence. This is applicable to this new combined work only (a derivative or "forking" from both source codes, which is a specific project with a specific name), and this is not a relicensing (changing the licence) of the original code covered by the EUPL.

Off-the-shelf or custom-built?

Historically (2006) packaged software in European software spending is only 19%. Much more is spent on custom- built software (52%) and internal software development (29%).

In the public sector, a lot of software is custom-built, or developed in-house. Public sector information system is not a domain with a large private-sector market.

About 10% of local public authorities in the EU had or were in a position to release software they owned (custom-built or developed in-house) as open source.

Joint software procurement still has to be promoted.

Off-the-shelf?

Case study on France

The « **socle interministériel de logiciels libres** (SILL) » is a catalogue of Open Source software

As from 2013 (updated in 2021), the SILL includes 227 software. For 165 software, the SILL is a « **recommandation** ».

For 49 software, the SILL reports a simple mention (« observation »).

The CRPA limits procurement licences:

- Permissives: **MIT, BSD or APACHE**
- Reciprocal: **EUPL, CeCILL, GPL, LGPL, MPL, EPL**

Fonctionnalité	Logiciel
Gestion des mots de passe	KeePass
Compression	7-zip
Suite bureautique	LibreOffice
Éditeur de texte	Notepad++
Lecture et modification de fichiers PDF	Sumatra PDFMuPDF
Système d'information géographique	QGIS
Publication (PAO)	Scribus
Dessin (matriciel)	Gimp
Dessin (vectoriel)	InkScape
Courrielleur	Thunderbird
Client de messagerie instantanée	Jitsi
Microblog	Mastodon
Client FTP	Filezilla
Navigateur web	Firefox ESR
Moteur de recherche	Qwant
Grapheur d'idées	Freeplane
Gestion de projet	RedmineProjectLibre ProjeQtOr [archive]
Wiki	MediaWiki
Lecteur multimédia	VLC
Régie vidéo enregistrement et/ou streaming	Open Broadcaster Software
Capture d'écran photo	Greenshot
Montage vidéo	OpenShot Video EditorAvidemux
Webconférence à usage pédagogique	BigBlueButtonJitsi
Datavisualisation	Apache Superset
Visualisation d'arborescence	Archifiltre
Éditeur HTML	BlueGriffon
Antivirus (orienté serveur)	ClamAV
Créateur menus pour DVD	DVD Styler [archive]
Forum	Discourse
Schémas	Draw.io Desktop [archive]
Sondage pour dates	Framadate
Synchronisation et sauvegarde de fichiers	FreeFileSync
Édition d'OpenStreetMap	JOSM
Scan de documents	NAPS2 [archive]
Modification de fichiers pdf	PDFSam Basic
Messagerie instantanée	RocketChat [archive]

Custom-built software

Procurement must be based on:

- Definition of IT architecture (the European Interoperability Framework provides a high- level structure for many aspects of an IT architecture).
- Functional and technical definition of requirements (no vendor- or brand- based terms)
- Definitions of required open standards when applicable
- Complete and "long term" costs estimation:
    - Isolated migration costs when imposed by the old system
    - Development and implementation costs
    - Operational and maintenance costs
    - Exit costs

The case of “free downloading”

Convenient for Study, test and evaluation purpose.

Do not miss other evaluation steps:

- Functional (comparisons)
- Legal (impact of licensing – EUPL compatibility ?)
- Evaluation of language, repositories, support, maturity, reliability
- Sustainability for long term support - by the service provider (minimum turnover, capital) and by the size and quality of the developer’s community

Downloading software free of charge	**Purchasing software**
Large emphasis on market research	Large emphasis on specification
Knowledge to search for the appropriate software to acquire (download) is required by the agency	Bidders provide some of the knowledge, though preparing the tender specifications may also require considerable knowledge
Services must be tendered separately	Software and services can be included in the same tender

Perspectives

It may be too late for trying to replace all proprietary « best sellers » (such as Windows/Office on PCs) or dominant proprietary services (GAFAM).

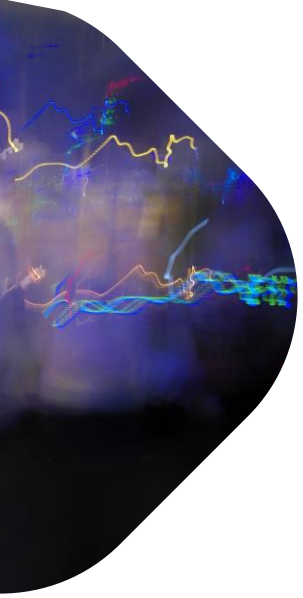
There are successful Open Source wins (LINUX on servers, Internet, Drupal, etc.).

Open Source becomes the norm for public sector assets sharing and reuse.

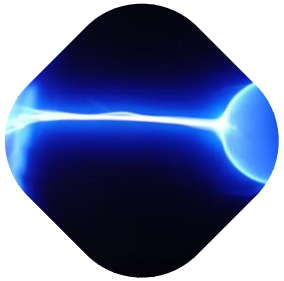
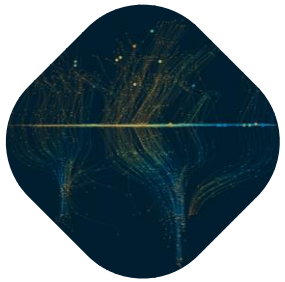
Going beyond « recommendations » concerning Open Source in procurement or mandating a portfolio of Open Source Solutions is difficult.

Alternatives:

- Regulating the « reality » (equal treatment and transparency in procurement, open competition, use of open standards, personal data protection, Digital Services Act)
- Investing on next generation open standards + legal interoperability tools (data algorithms, blockchain, New computing tech., EU common licensing/sharing tools)
- Use joint procurement for developing new common public sector tools (i.e. health)




Questions?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Question time

General Q&A Session

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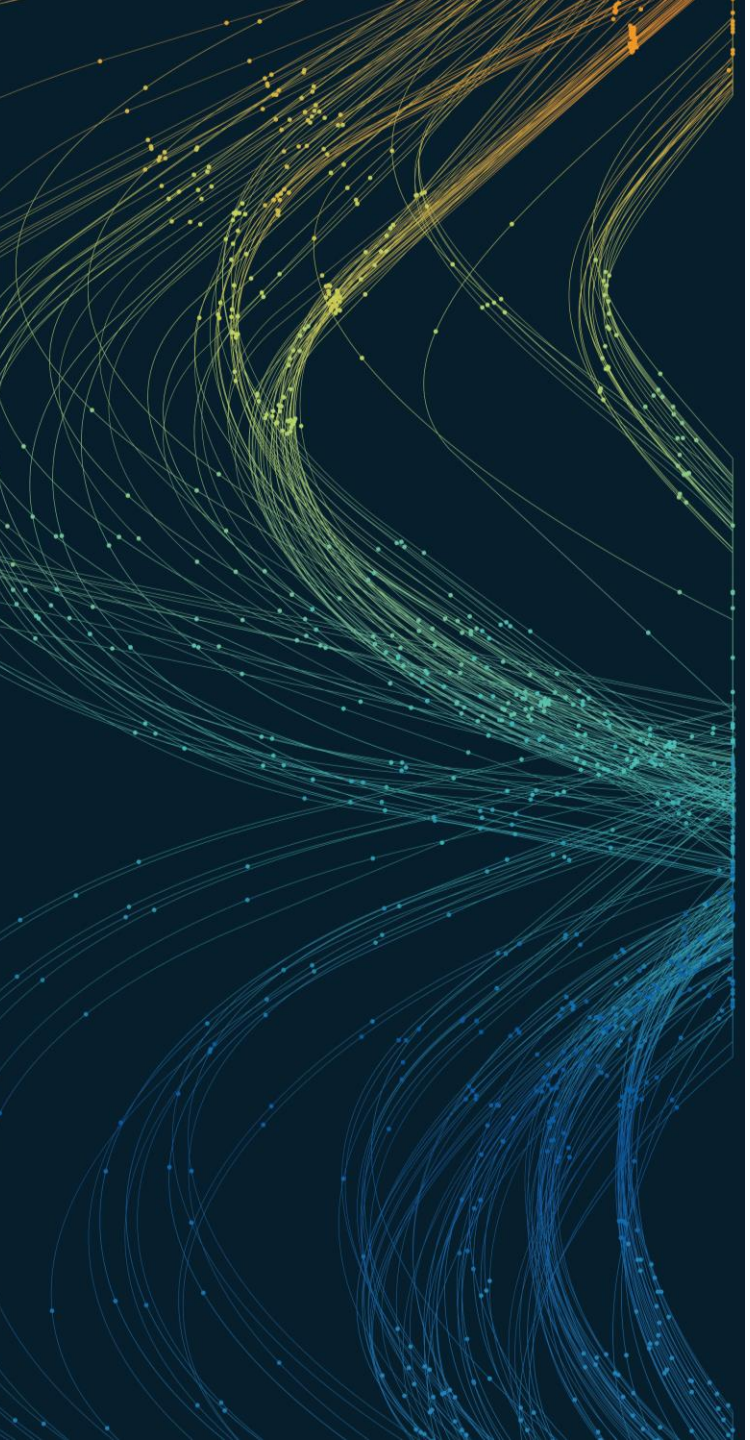

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Thank you

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