

DATA SPACES:

HVAD ER DET? OG HVORFOR OG HVORDAN RYKKER EU PÅ OMRÅDET

Lea Schick, Alexandra Instituttet, Insight Lab

Digital Lead Tech Celebration, 12. april 2023

Sammen kommer vi #**ForanDigitalt**



ALEXANDRA
INSTITUTTET

Godkendt til at omsætte forskning til vækst

Godkendt Teknologisk Service
Institut siden 2006

Baserer vores arbejde på den nyeste
it-forskning og udbreder teknologisk
viden i Danmark

Eneste GTS-institut med fokus på it



Forretnings- områder med potentiale



IoT og smarte
produkter



Digital grøn omstilling



Cybersikkerhed



Kunstig intelligens



Digital sundhed



Computergrafik, vision
og simulering

Agenda

- EU og industrien in union
- Hvad er data spaces og hvad består de af?
- Centrale aktører indenfor data spaces
- Data spaces i en dansk kontekst



https://alexandra.dk/wp-content/uploads/2023/01/Data_Spaces_kortlaegning_aktorer_initiativer.pdf

Baggrund for data spaces

Den grønne dagsorden



[Eco Design Directive](#)

[Renewable Energy Directive](#)

[Fit for 55-programmerne](#)

[REPowerEU](#)

Den digitale dagsorden



"Den europæiske datastrategi har til formål at gøre EU førende i et datadrevet samfund. Et indre marked for data vil gøre det muligt for data at bevæge sig frit inden for EU og på tværs af sektorer til gavn for virksomheder, forskere og offentlige forvaltninger."

Industri og EU i partnerskab

Lovgivning:



Konsolidering og udvikling:



Funding:



Hvad er data spaces?

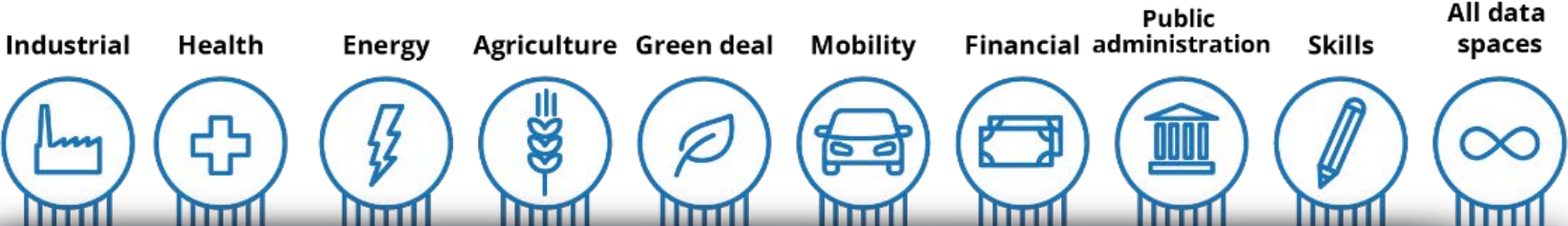
A data space is defined as a decentralised infrastructure for trustworthy data sharing and exchange in data ecosystems based on commonly agreed principles.

- Skal skabe en ny dataøkonomi, hvor virksomheder har nem og sikker adgang til at dele og handle data.
- Skal sikre juridiske subjekter (individer, virksomheder og organisationers) suverænitet over data
- Skal sikre teknologineutral, decentraliseret (ikke monopol) og standardiseret deling af data på tværs af sektorer og lande



<https://design-principles-for-data-spaces.org/>

Data spaces er interoperable økosystemer



Data spaces as ecosystem

Data spaces based on common design principles enable a dynamic, secure and seamless flow of data/information between parties and domains as well as entirely new services for users, based on enhanced transparency and data sovereignty. A new user behavior and digital culture arises, as users learn to play by the rules and use data (both their own and other users' data) in an ethical way. Data spaces as federation enable multiple participants to discover data resources across underlying platforms and their administrative domains.





4 principles for data spaces

Design Princip 1:

Datasuverænitet

Design Princip 4:

**Offentlig-privat
styring/governance**

Design Princip 2:

En lige og retfærdig spilleplade

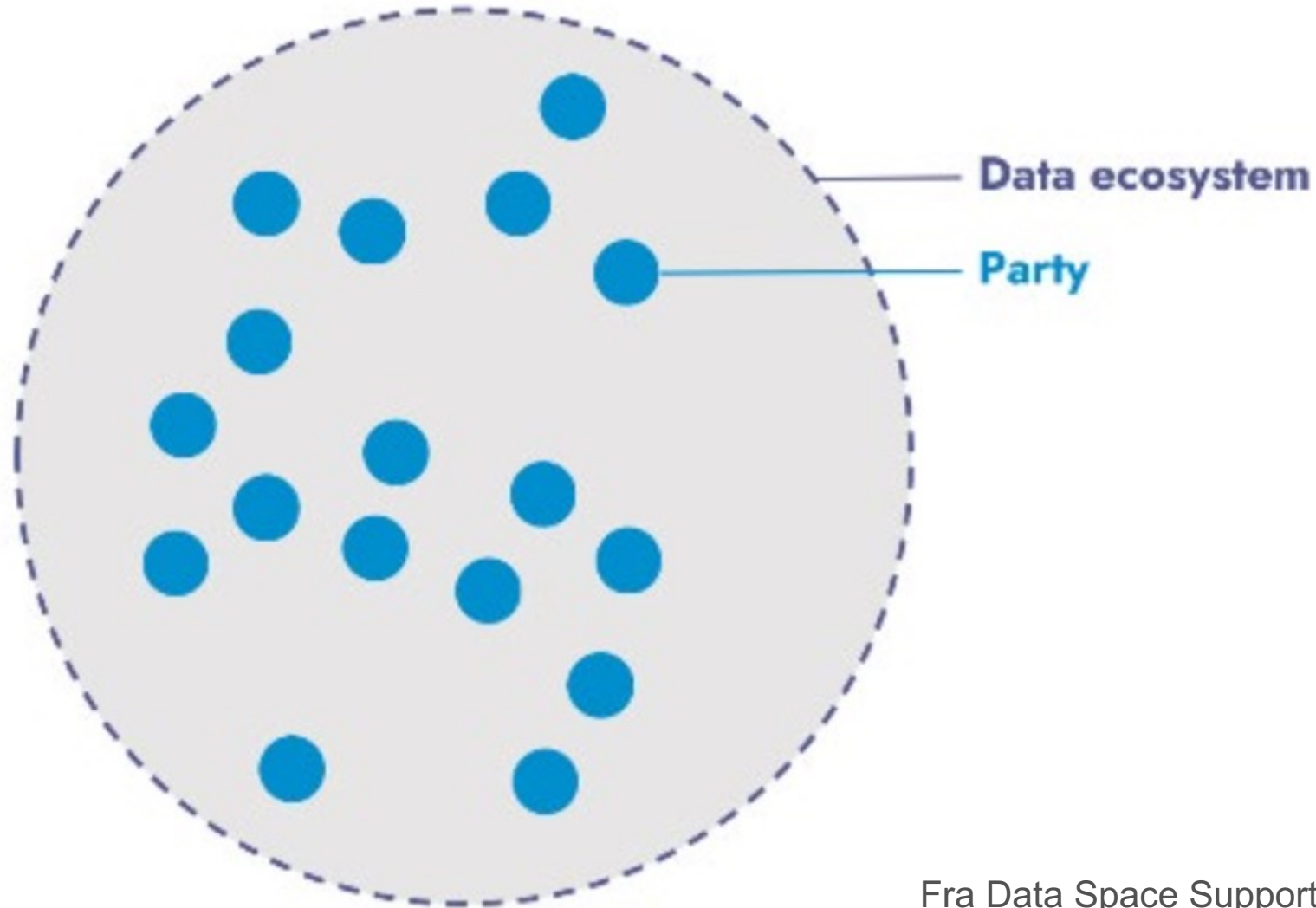
Design Princip 3:

**En decentraliseret og 'blød'
infrastruktur**

Data Spaces report afsnit 2.3

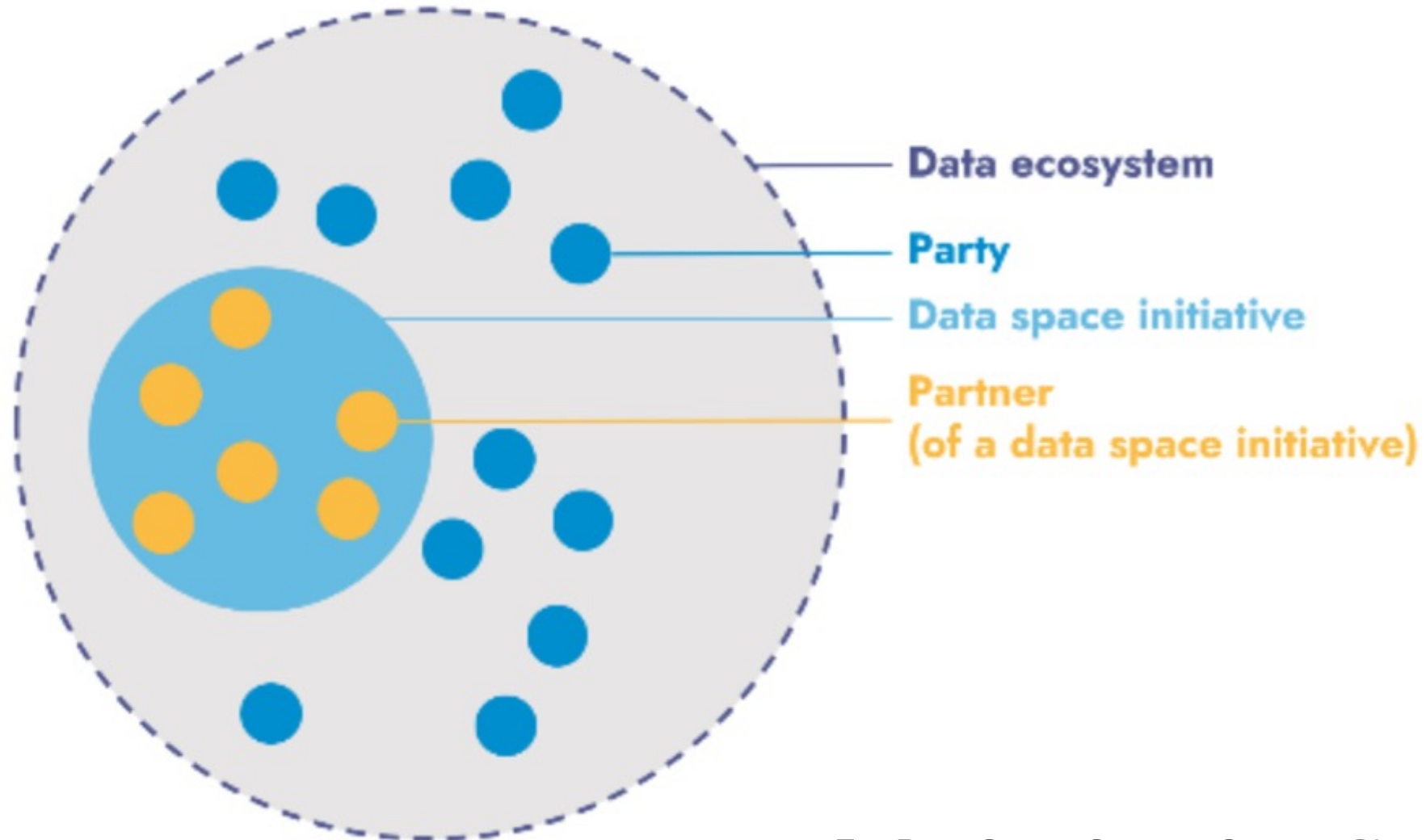
https://alexandra.dk/wp-content/uploads/2023/01/Data_Spaces_kortlaegning_aktoerer_initiativer.pdf

Hvad er et dataspace?



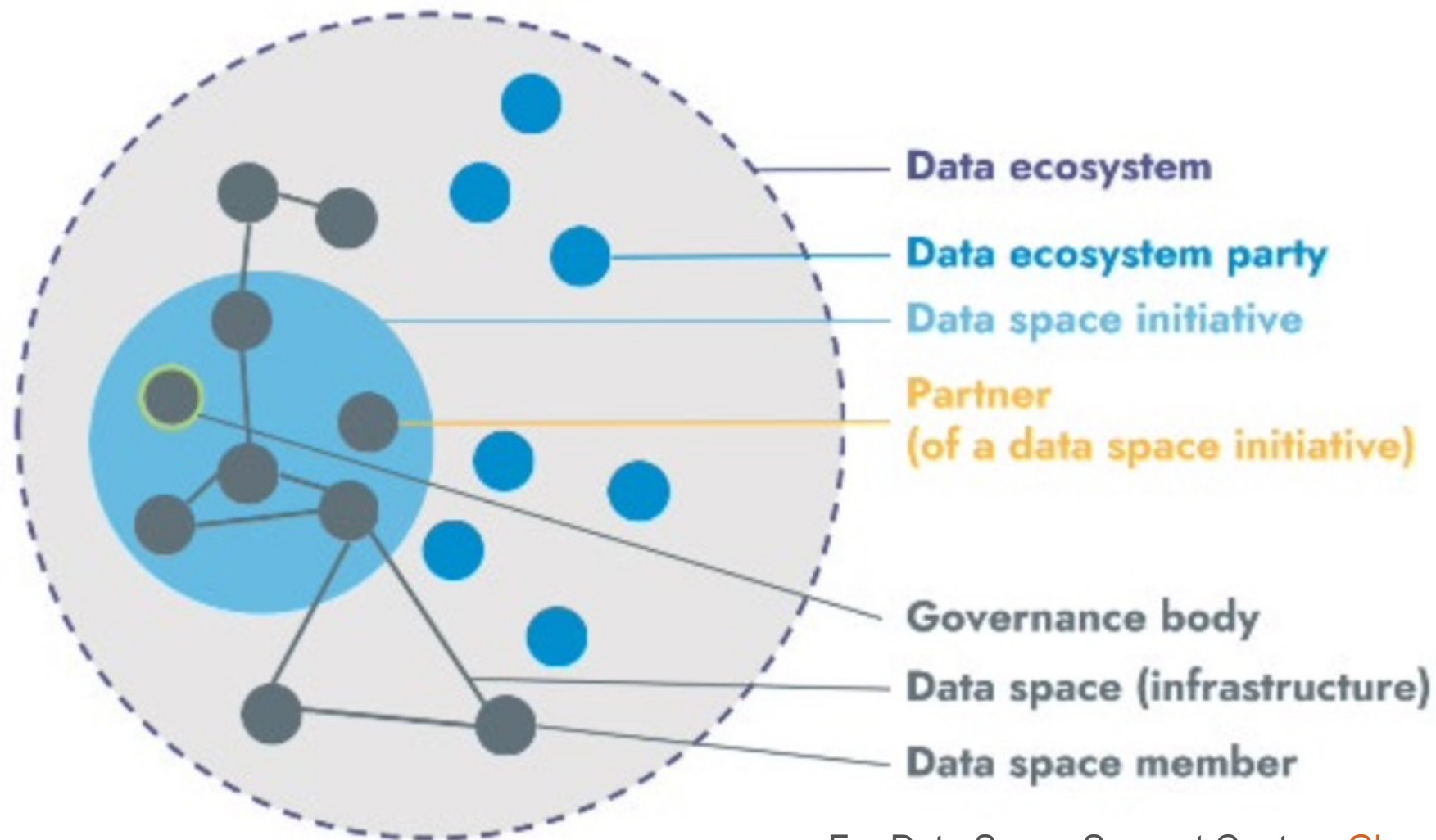
Fra Data Space Support Centres [Glossary](#)
side 4

Hvad er et dataspace?



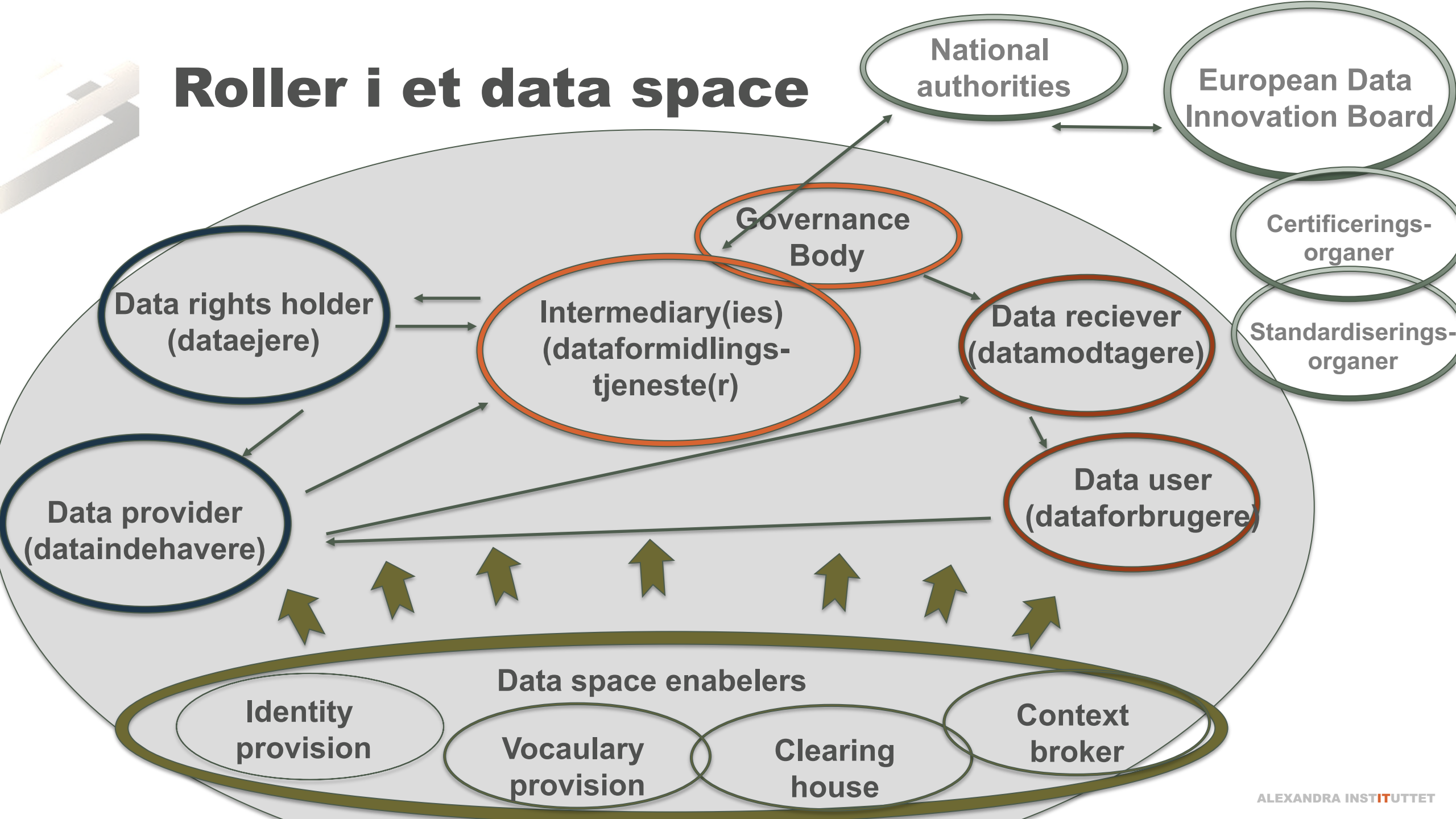
Fra Data Space Support Centres [Glossary](#)
side 4

Hvad er et dataspace?



Fra Data Space Support Centres [Glossary](#)
side 4

Roller i et data space



Fælles spilleregler: BLOFT

[-space/](#)

Data Spaces Start-up Checklist



DATA SPACES
SUPPORT CENTRE

- Business
 - How does the data space create value?
 - Who are the active stakeholders or participants of the data space?
 - What is the business and governance model of the data space?
 - What are the individual and collaborative business models (Incentives) for actors in the data space?
- Legal
 - What legal aspects are relevant to navigate when setting up a data space?
 - What are the legal requirements and challenges?
 - What are the legal dimensions of data governance?
 - How can data spaces ensure the full uptake of EU values?
- Operational
 - What is the operational governance framework for the data space?
 - What day-to-day activities and processes are essential for sustaining a data space?
- Functional
 - What core functionality should a data space offer?
 - What are the essential building blocks that make up each functionality?
- Technical
 - What are the formal and de-facto standards that should be followed when deploying a data space?
 - What software requirement specifications to use as references when implementing a data space?
 - Which open source software implementations are compliant with the recommended standards and specifications?

Figure 1: Data spaces start-up checklist according to the BLOFT framework.

Centrale aktører indenfor data spaces



Mission

The Data Spaces Support Centre will explore the needs of data space initiatives, define common requirements and establish best practices to accelerate the formation of sovereign data spaces as a crucial element of digital transformation in all areas.

We are here to help you with your data space endeavor!

Links til nyttige dokumenter:

- [Starter Kit](#)
- [Glossary](#)
- [Data Space Support Centre Insights](#) på Youtube

<https://dssc.eu/>

Centrale aktører indenfor data spaces

IDS eller IDSA

The logo for the International Data Spaces Association (IDSA) is displayed on a black rectangular background. The text "INTERNATIONAL DATA SPACES" is in white, and "ASSOCIATION" is in blue.

<https://internationaldataspaces.org/>

Arbejder særligt på Reference
Arkitekturmodeller og almen udbredelse

Nyttige links:

- [Data space radar](#)
- [Data spaces Rulebook](#)
- [Reference arkitektur model](#) og udviklingen af [RAM 4.0](#)
- [Minimum Viable Data Space](#)

Centrale aktører indenfor data spaces

Gaia-X: European
Association for Data
and Cloud AISBL

gaia-x



<https://gaia-x.eu/>

Nyttige links:

- [Gaia-X Framework Knowledge base](#)
- [Gaia-X Federation Services GXFS](#)
- [Gaia-X Hubs](#)

Arbejder særligt på såkaldte 'federation services og compliance

Danmark på verdenskortet?

Close (Esc)

DSBA HUBS LANDSCAPE



<https://data-spaces-business-alliance.eu/dsba-hubs/>



Gaia-X HUBS

- * National Hubs
- * Europe
- 01 Austria
- 02 Belgium
- 03 Finland
- 04 France
- 05 Germany
- 06 Greece
- 07 Hungary
- 08 Italy
- 09 Japan
- 10 Luxembourg
- 11 Netherlands
- 12 Poland
- 13 Portugal
- 14 Romania
- 15 Slovakia
- 16 Slovenia
- 17 South Korea
- 18 Spain
- 19 USA, California
- 20 USA, Texas
- 21 USA, Washington DC



IDSAs HUBS & COMPETENCE CENTRES

- * National Hubs
- * Regional Competence Centers
- * Europe
- 01 Belgium, facilitated by IMEC Leuven
- 02 Bulgaria, facilitated by GATE Sofia
- 03 Czech Republic, facilitated by Czech Technical University Prague
- 04 Finland, facilitated by VTT Espoo
- 05 France, facilitated by IMT Paris
- 06 Greece, facilitated by CERTH/ITI Thessaloniki
- 07 Italy, facilitated by Cefriel Milan
- 08 Poland, facilitated by PSNC Poznan
- 09 Spain, facilitated by Innovalia Association Bilbao
- 10 The Netherlands, facilitated by TNO The Hague
- 11 Fraunhofer ISST Dortmund, Germany
- 12 LIS Research Center, Leibniz University Hannover, Germany
- 13 LMS, University of Patras Patras, Greece
- 14 Tecnalia Bilbao, Spain



FIWARE IHUBS

- * Regional Hubs
- * Europe
- * Global
- 01 A. Castro Servicios & Tecnología Montevideo, Uruguay
- 02 Astrid Wolfsburg, Germany
- 03 ATIO Barcelona, Spain
- 04 Centifo Hub Grasse, France
- 05 Ciudades del Futuro iHub Buenos Aires, Argentina
- 06 Detecon FIWARE iHub Cologne, Germany
- 07 DigiCity Connect Atlanta, USA
- 08 DIHBAI-TUR Balearic Islands, Spain
- 09 Faubourg Numérique Saint-Quentin, France
- 10 FIHub Azores DIH Azores, Portugal
- 11 FIHub Canary Islands Tenerife, Spain
- 12 FIWARE iHub UPS Medellin, Colombia
- 13 FIWARE Innova iHub Perugia, Italy
- 14 FIWARE OIL iHub Lund, Sweden
- 15 FIWARE Space Rijadoc, Spain
- 16 FIWARE Zone Sevilla, Spain
- 17 Future City iHub Amersfoort, Netherlands
- 18 Hellenic FIWARE iHub Athens, Greece
- 19 IDEASFORUM Hanau, Germany
- 20 I Hub Base Tokyo, Japan
- 21 iHub FIWARE Bridge Tunis, Tunisia
- 22 IoT Lab iHub Geneva, Switzerland
- 23 La Lonja de la Innovacion Hulvosa, Spain
- 24 LaNIF Mexico City, Mexico
- 25 Madeira FIHub FIWARE iHub Madeira, Portugal
- 26 Maroc Numeric Cluster Casablanca, Morocco
- 27 MIL Al Madinah, Saudi Arabia
- 28 MOA GLOBAL Santana de Parnaiba, Brazil
- 29 Nivid Technologies Sterling, USA
- 30 The Texas Project iHub Austin, Texas USA
- 31 Uni FIWARE iHub Athens, Greece



BDVA i-SPACES

- * Regional Hubs
- * Europe
- 01 Attica Hub for the Economy of Data and Devices Athens, Greece
- 02 AIRAS (Universidad Politécnica de Madrid) Madrid, Spain
- 03 Aragon DIH (ITA) Aragon, Spain
- 04 BIGDATA@CeE (Eurecat) Barcelona, Spain
- 05 CeADAR Dublin, Ireland
- 06 DIH GIGAL Viga, Spain
- 07 ICE Data Center (RISE) Luleå, Sweden
- 08 ITI Valencia, Spain
- 09 Know-Center Graz Graz, Austria
- 10 EGI Amsterdam, Netherlands
- 11 Gemini (Sinter) Dordrecht, Netherlands
- 12 SCAI (CINECA) Bologna, Italy
- 13 Stichting Smart Connected Supplier Network Eindhoven, Netherlands
- 14 PRODUCE DIH Porto, Portugal
- 15 TeraLab (Institut Mines-Télécom) Paris, France
- 16 Algebra Lab Zagreb, Croatia
- 17 Belgrade Data Innovation Hub Belgrade, Serbia
- 18 Cybersecurity Hub, z.s. Czech Republic
- 19 DataLife Santiago de Compostela, Spain
- 20 DIH4AISEC Leipzig, Germany
- 21 DIH TECHNICOM Kolos, Slovakia
- 22 ECIPA Venice, Italy
- 23 Edinburgh International Data Facility (EPIC) Edinburgh, United Kingdom
- 24 HPC@Poland (Poland Super Computing Centre) Poznan, Poland
- 25 Latvian IT Cluster DIH Riga, Latvia
- 26 Linz Center of Mechatronics GmbH Linz, Austria
- 27 nZEB Smart Home DIH Thessaloniki, Greece
- 28 Machine Intelligent Garage London, UK
- 29 MediTech Naples, Italy
- 30 Plan4AI Hanoi, Viet Nam, Czech Republic
- 31 Ruđer Bošković Institute Digital Innovation Hub Zagreb, Croatia
- 32 Smart Data Innovation Lab (KIT) Karlsruhe, Germany
- 33 Transilvania Digital Innovation Hub Cluj-Napoca, Romania
- 34 Innovation Cluster Drachten (ICD) Drachten, Netherlands
- 35 Minasmart Grenoble, France
- 36 Munich Innovation Hub for applied IT Munich, Germany
- 37 UDG Gorizia, Italy



Danske aktører

DTU, Brynskov er projektleder for Data Space for Smart Cities and Communities



AARHUS UNIVERSITET

Med i Horizon Europe projekt, Omega-X



SUNDHEDSDATA-STYRELSEN

Med i to Europæiske sundhedsdataspaces



WATER VALLEY DENMARK

15 mio projekt om Water Data Space



Med i et Europæiske meteorologisk data space projekt

TRE FOR

BORNHOLMS ENERGI & FORSYNING

Med i Horizon Europe projekt, Synergies



An NEC Company

ENERGINET



GREEN POWER DENMARK



DIGITALISERINGSSTYRELSEN



ALEXANDRA INSTITUTTET



Har du lyst til at være med?

- Er vi håbløst bagud så?
- Nej, de andre er først lige ved at gå i gang, og der ligger en masse generisk materiale vi kan bruge (modeller, elementer, komponenter etc.)
- Vi er digitalt meget mere modne end de fleste andre EU lande
- Lad os bare prøve...

Har du lyst til at lege med, så kontakt endelig Alexandra Instituttet.

Data Spaces i energisektoren



Er EU's Data Spaces vejen frem for deling af data i dansk energi- og forsyningssektor?

**Fysisk og online kick-off møde d. 12. april,
13.00-14.45**



Tak for nu

Lea Schick

Senior Research and Innovation Specialist



Lea.schick@Alexandra.dk



27265479



[Lea Schick](#)



ALEXANDRA
INSTITUTTET