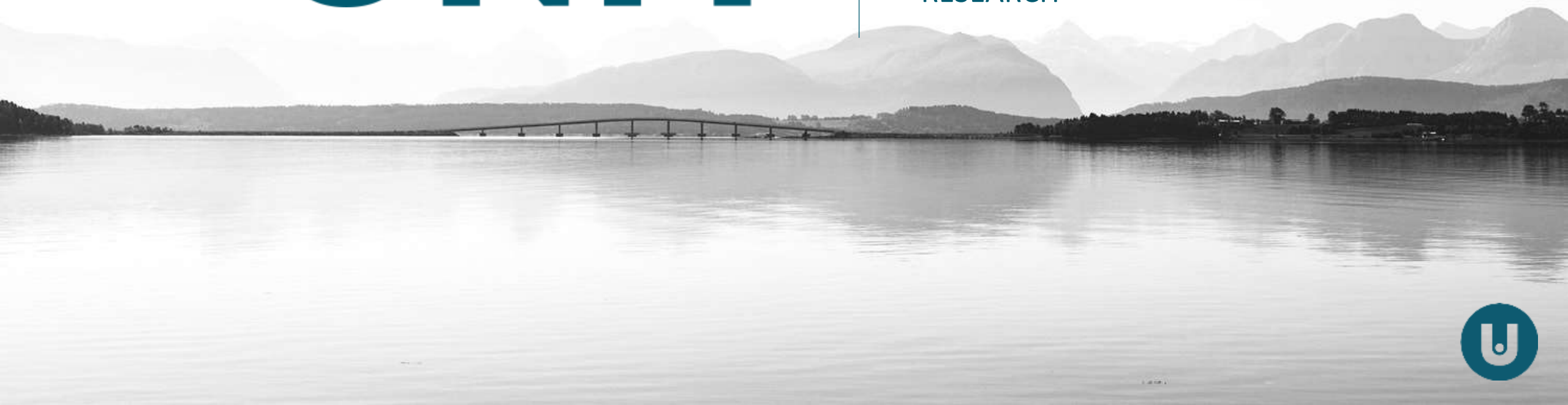
UNIT

THE NORWEGIAN DIRECTORATE FOR ICT AND JOINT SERVICES FOR HIGHER EDUCATION AND RESEARCH



European Blockchain Partnership

Timeline and deliverables


GITAL
AY
Signing Ceremony
Bulgaria
Austria
Belgium
Czech Republic
Estonia
Finland
France
Germany
Lithuania
Luxembourg
Malta
Norway
Portugal
Slovakia

Deliverables

- *Initial **set of use-cases of cross-border digital public services** to be deployed through the European Blockchain Services Infrastructure (EBSI) (deliverable 1),*
- ***Guiding principles and Specifications** for the future EBSI (deliverable 2) and*
- ***Governance model** that would underpin the EBSI in its development phase 2019-2020 (deliverable 3).*

MILESTONES 2018

Q2_2018

10 April 2018

Signature of the Joint declaration on the EU Blockchain Partnership

April-May 2018

Each signatory appoints an official representative to the partnership

May 2018

Launch of commission survey on applications og blockchain in digital public services (members of the partnership)

5 June 2018

First official meeting of European Blockchain Partnership (EBP) - Initial discussion on purpose, define the roadmap of activities of the Partnership. Agree on Milestones.

Q3_2018

5 July 2018

EBP meeting – Present survey of member states on use cases and discuss workshop of the eu blockchain observatory and forum on "Government Services and Transformation Scenarios".

17 September 2018

EBP meeting – Discussion on first set of cross-boarder public services that could be enhanced by a future blockchain services infrastructure

Agreement on first set of use cases of EBSI

Q4_2018

18 October 2018

EBP Meeting – First discussion on functional specs, governance and other conditions for the future blockchain services infrastructure

8 November 2018

EBP meeting – Present first draft functional specs, governance and other conditions plan for the future blockchain services infrastructure

6 December 2018

EBP meeting – Agreement on functional specs, governance and other conditions for the future blockchain infrastructure

2019

- *The Connecting Europe Facility (CEF) Work Programme 2019 which includes the development of the European Blockchain Services Infrastructure (EBSI) as a new initiative, has received a positive opinion of the CEF Telecom Committee of Member States on the 24th of January.*

- *The first EBP meeting of 2019 focused on working with those signatories that have expressed agreement with the general orientations of the 3 deliverables, and agreeing on our organisation and milestones for 2019.*

OVERVIEW OF USE-CASES;

CROSS-BORDER DIGITAL PUBLIC SERVICES THAT COULD BE SUPPORTED BY THE

EUROPEAN BLOCKCHAIN SERVICES INFRASTRUCTURE (*EBSI)*

Proposals received from the partnership:

EU VetPass - European veterinary identification and other data ledger

Distributed remote voting – voting platform for EU institutions

Commercial EU vehicle register - Global EEE commertial vehicle data ledger

Database of EU Violations and Fines

Fair farmer income

Logistics and supply chain (Port of Rotterdam)

Vote Counting system 'Local Counting Votes'

Digital Company Identity

Energy blockchain to lower Co2 emissions

ID for public subsidies

Manure transport

Blockchain as a Service

EU Digital disabled parking card

Food certification Organic and Fairtrade

Generic Transaction and Attestation

Intercompany Transaction Management

CROSS-BORDER IMPLEMENTATIONS + SUPPORTED BY SEVERAL MEMBER STATES (HIGHER READINESS):

- Certification of Diplomas / Qualifications
- SSI for Public Services (eID)
- Registry sharing across National Taxation Authorities (DG TAXUD)
- Registry of audit-related files (European Court of Auditors)

The elegibility criteria and the selection parameters

- **Public sector services / processes**: The use-case should be based on a clearly identified need from public authorities and the service or process must be clearly identified within the public remit.
- **Cross-border dimension**: The use-case must refer to processes or services involving transactions or operations involving several Member States' administrations.
- **Clear business-case / added-value for using blockchain technology**: The use-case must be supported by sufficient indicators that decentralised ledger technology can add value to the that process / service through *inter alia* generating efficiencies in the delivery of service or completion of the process, enabling new or enhanced service-offers, supporting EU policy and industrial strategies etc.
- **Public policy parameter**: The processes or services that could be deployed through EBSI initial stages should be anchored in public interest considerations, aligned with industrial policy and if possible support compliance with EU laws and reporting obligations already in place.
- **Maturity parameter**: A significant number of Member States should be ready to support the deployment of the service or process through EBSI, there is a clear established regulatory framework across-borders and if possible there are some pilots / proof-of-concept.
- **Business-case parameter**: There is evidence that blockchain and distributed ledger technology will improve, enhance or enable the service or process by comparison with the current processes. Efficiencies or quality improvements will result from the use of blockchain technology to support the provision of the service or the completion of the processes.

5 use-cases initially selected to be deployed by the EBSI

- *EU system for cross-border exchange of excise data (SEED),*
- *Imports One-Stop-Shop (for VAT ID),*
- *Registry of EU audit-related files (EU-funded projects),*
- *Cross-border certification of diplomas / qualifications*
- *Building a European Self Sovereign Identity Framework (eSSIF) for Public Services linked to eIDAS*

- *Other use-cases to be deployed through EBSI will continue to be reviewed under the governance model proposed for the EBSI (see Deliverable 3 of the EBP "Governance Model 2019-2020").*

Excise Duties - The SEED (System for Exchange of Excise Data)

- This is a core component of the EMCS (Excise Movement and Control System) and only traders authorized by the Member States' administrations and included in the Central SEED have a permission to move harmonised excise goods (alcohol, tobacco and energy products) under duty suspension. The current System is a mixed of central and national components and is proving procedurally cumbersome and information intensive; trading companies and Member States are exposed to operational risks and to occasional delays due to information asymmetries and drops in procedural efficiency. EBSI and blockchain technology seems a natural fit to the SEED requirements. Already advanced testing done in this use-case.

Import One-Stop-Shop VAT ID

- The import scheme of the EC eCommerce Package allows traders established outside of the EU to appoint an intermediary in one Member State via which they will fulfil their VAT obligations (the Member State of identification). This will allow the imported goods to be exempt of VAT during the import procedure. The traders, via their intermediary, will be assigned by the Tax Authority an Import One-Stop-Shop (IOSS) VAT identification number. In order for the sales to be exempt of VAT at import, the Customs authorities of the importation Member States will have to verify the validity of the IOSS VAT numbers. To this aim, a database with the valid IOSS VAT numbers assigned to foreign traders by the Tax Authorities of all Member States must be made available to the Customs authorities of the import Member States. EBSI can implement a distributed registry of IOSS VAT identification numbers leveraging an EU-wide blockchain infrastructure. The solution shall ensure the transmission of registration information and notification of exclusion required by the legislation of the Import scheme.

Registry of audit-related files (European Court of Auditors)

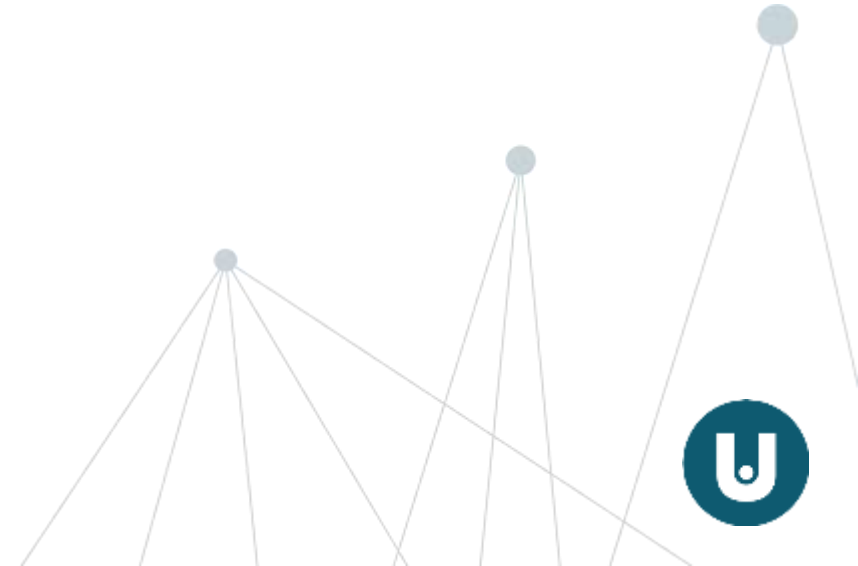
- This use-case proposed by the European Court of Auditors (ECA) aims to develop a blockchain-based “ECA Registry” that provides beneficiaries of EU funds with a tool to systematically register audit-relevant documents (e.g. invoices, proof of payments, supporting documents, bids, etc.), thus creating a trusted, fully digital audit-trail. The ECA Registry acts as a notarisation service that leverages on the unique features of (public) blockchains: security, transparency and immutability of the data. The system allows to: record on blockchain(s) imprints (hashes) of documents, as well as their metadata; link together imprints; grant third parties, including EC and member States’ authorities, access to imprints, metadata and the underlying documents (which are stored off chain) in real-time instead of ex-post.
- The object of a procurement could also be a document registered on the blockchain and containing all conditions of the procurement (this is a very simple equivalent to the “call”) the “bidders” could register the submission of their offer, thus building proof that the minimum number of offers were received and the deadline were respected (these elements could also be made publicly available, without disclosing In the context of an audit on public procurement, a registered imprint can be used as irrefutable proof of existence, authenticity and integrity of the related document. Since each registered imprint is time-stamped, it is also possible to prove that time-sensitive documents were produced/registered before a given deadline. In addition, the registry allows for bi-directional exchange of imprints between the ECA and third parties who have granted the Institution the rights to receive and process auditable information.

Certification of Diplomas / Qualifications

- The Netherlands, Belgium, Italy, Malta, France, Norway and Croatia (and other countries) submitted a joint request to work on a blockchain application to support cross-border diploma exchange to build a network of trust for education. The case implies that the enrolment by a (prospective) student in higher education at an institution abroad is as easy as registering with an institution in their home country. The proposed project will encourage and facilitate student mobility by setting up a Blockchain network in which higher education institutions (in many cases via central education administrations) can share validated and authenticated diploma data with the owner of the data: the student/citizen. It is essential here that the citizen can link their various identities (to which diploma data from various member states or institutions can be added) to a self-managed identity (self-sovereign identity) in order to simplify management and sharing.

Building an European Self Sovereign Identity Framework (eSSIF) for Public Services linked to eIDAS

- Proposal for the creation of a Europe-wide uniform public blockchain infrastructure for the operation of legally binding digital identities for the public sector. Existing electronic signatures must be made compatible with the model of self-sovereign identity by using Decentralized ID and Verifiable Claims. eSSIF will be a key component of the European blockchain service infrastructure and is best understood as a decentralized register infrastructure operated jointly by all 28 countries of the European Union.



GUIDING PRINCIPLES OF THE EBSI

Developing a gold-standard for trusted blockchain infrastructures through Guiding Principles

- **LEVEL 1: GUIDING PRINCIPLES**

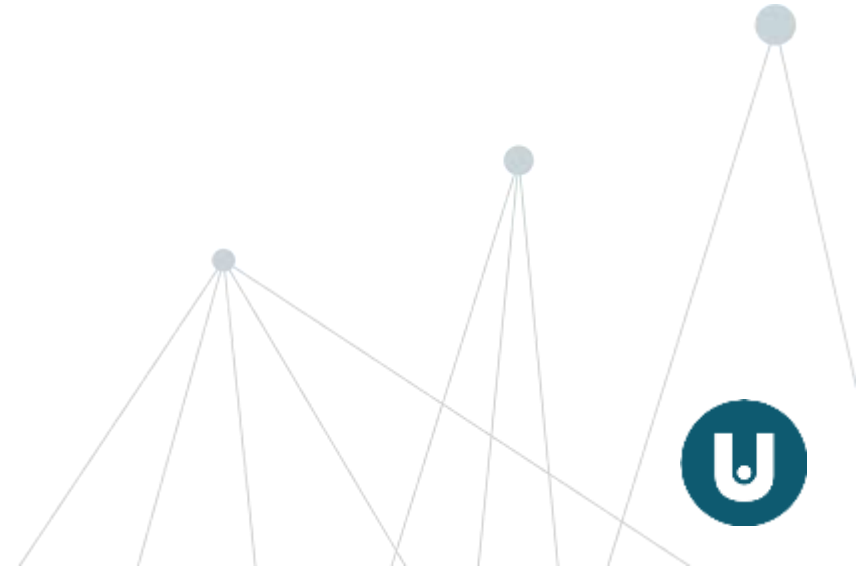
  Description of the overall characteristics of the EBSI in areas such as security, privacy, interoperability etc.

- **LEVEL 2: TECHNICAL / FUNCTIONAL SPECIFICATIONS**

  Characterisation of the technical and functional features of the EBSI in order to meet the needs of the use-cases and respecting the guiding principles (e.g. consensus mechanism, time-stamping etc.)

Principles discussed

- *Data protection and confidentiality*
- *Cybersecurity*
- *Auditability*
- *Identification and authentication of users*
- *Continuity of Services*
- *Energy efficiency*
- *Transparency*
- *Scalability*
- *Infrastructure Liability and Responsibility*
- *Interoperability and Open-Source*



Principles discussed

- Compliance to / leveraging EU laws
- Auditability and liability
- Infrastructure sustainability
- Tokens and cryptocurrencies
- Scalability
- Interoperability
- Transparency, security and privacy
- Open source and Public License

SUGGESTED GOVERNANCE FRAMEWORK

- *Blockchain technology could transform the world of digital services, but for Europe to lead in the development and uptake of this new technology, close cooperation between the public and private sectors will be needed.*
- *The European Commission is already working together with governments (through the **European Blockchain Partnership**), with industry and stakeholders (through the **EU Blockchain Observatory and Forum** and through the soon to be established **International Association of Trusted Blockchain Applications** – IATBA).*
- *This cross-cutting approach is instrumental to overcome regulatory obstacles, increase legal predictability, lead international standardisation efforts and accelerate research and innovation to support innovative blockchain technologies.*

- *The development of a **European Blockchain Services Infrastructure** (EBSI) is a central piece of the EU blockchain strategy. It will be developed in two different stages (start-up phase funded under the Connecting Europe Facility and the Maturity stage funded under the Digital Europe Programme).*
- *Both the European Public Blockchain Partnership and the new multistakeholder association (IATBA) will work together throughout both phases of the EBSI development and implementation. Progressively the driving force behind the EU blockchain strategy will be a multistakeholder group that will encompass public authorities (EBP), the private sector and civil society (IATBA).*

Further work

- EBSI Policy group
- EBSI Technical group
- ESBI User groups
  - Notarisation, Authentication and Verification of Documents for auditing EU-funded projects
  - Diplomas and Education Credentials
  - European Self-Sovereign Identity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UNIT
VI DRIVER
KUNNSKAPS-NORGE
FRAMOVER

SAMFUNNSOPPDRAG

Unit skal være en nytenkende pådriver for digitalisering i høyere utdanning og forskning.

Gjennom samarbeid skal Unit sørge for tjenester som hjelper sektorene med å nå sine mål.

Units verdier

PROFESJONELLE

- Vi fremstår enhetlig og helhetlig utad
- Vi leverer resultater til forventninger og krav
- Vi er løsningsorienterte

SAMARBEIDENDE

- Vi spiller på lag med kunder og partnere
- Vi engasjerer oss i sektorenes og hverandres oppgaver
- Vi bruker hverandres styrker og gjør hverandre gode

MODIGE OG NYSGJERRIGE

- Vi er åpne for nye ideer, perspektiver og innspill
- Vi stiller spørsmål og utfordrer
- Vi tar beslutninger og er raske til å realisere gode idéer

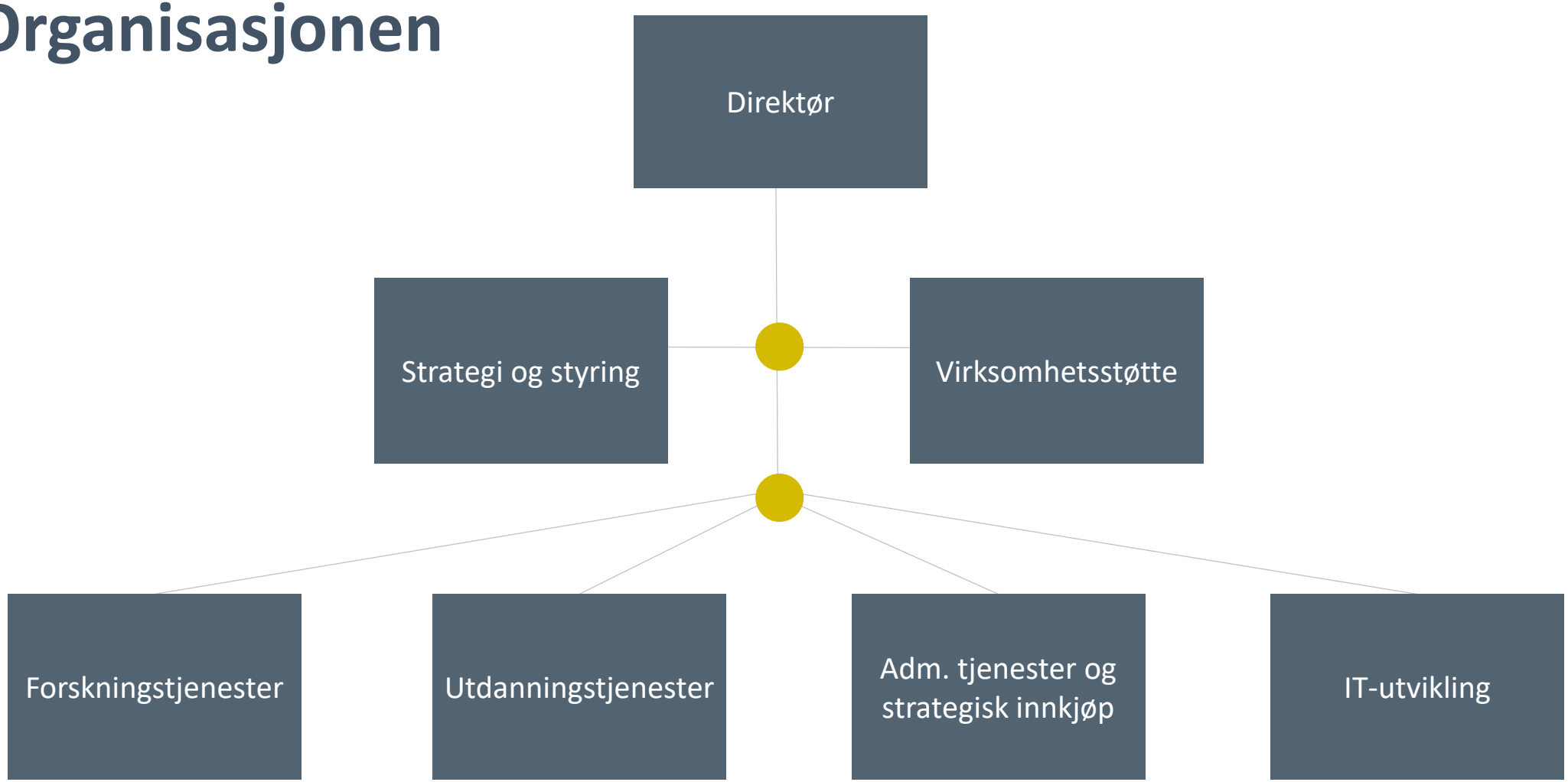
KOMPETENTE OG LÆRENDE

- Vi er oppdatert på teknologi og trender som påvirker sektorene
- Vi gir og etterspør tilbakemeldinger slik at vi utvikler oss
- Vi jobber tverrfaglig og har respekt for fagkompetanse

Om oss

- 200 ansatte
- 520 millioner kroner i omsetning
- Forvalter avtaler for rundt 750 millioner kroner
- Hovedkontor i Trondheim, avdelingskontor i Oslo
- Betjener 220 virksomheter innen høyere utdanning, forskning og formidling

Organisasjonen



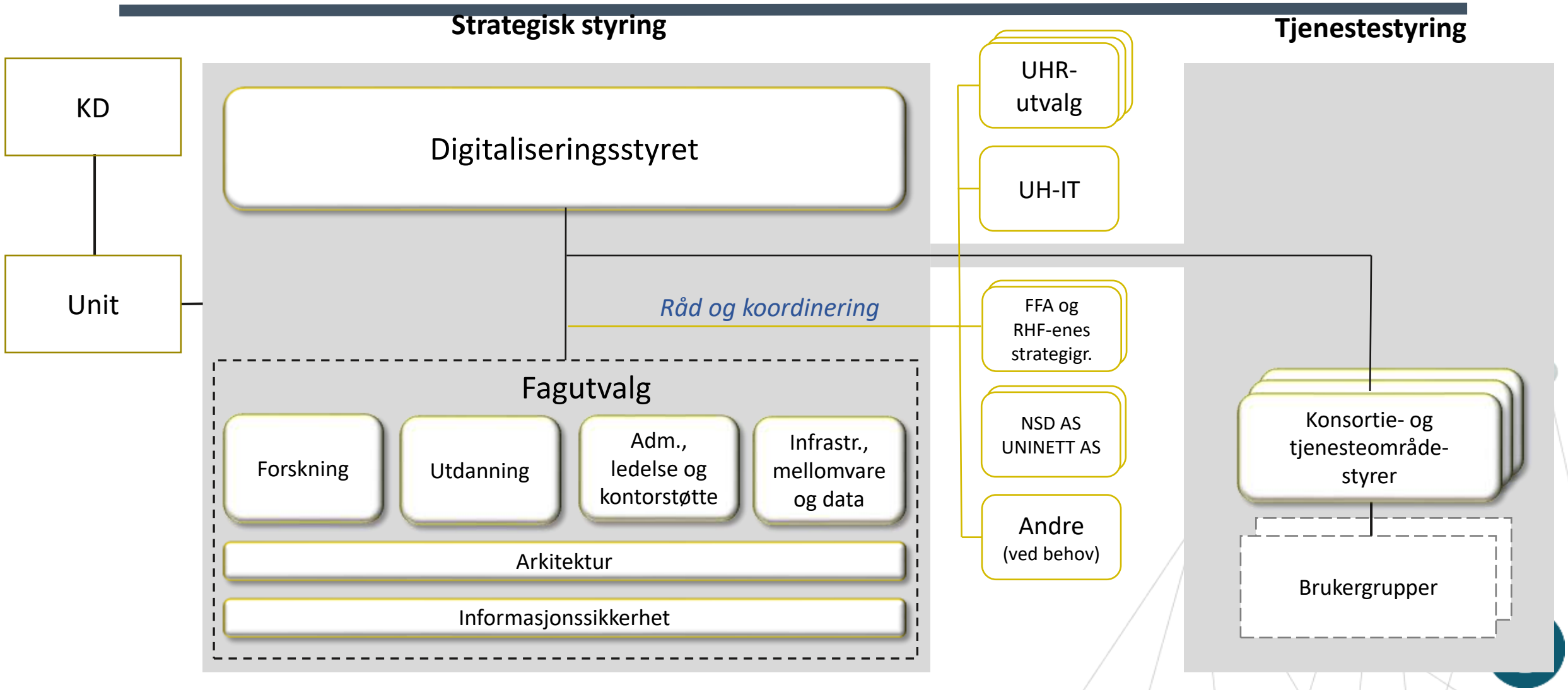
Utdanning	Forskning	Administrasjon (administrasjon ledelse og kontorstøtte)	IMD Infrastruktur, mellomvare og data	Informasjons-sikkerhet	Internasjonalt samarbeid
Samordna opptak vitnemålsportalen GAUS - Godkjenning av utenlandske studier RUST - Register for utestengte studenter NVB - Nasjonal vitnemålsdatabase mooc.no OPENedX BIBSYS DLR Semantic Web	CRISTIN doi BiRD Brage DUCT	STAR	Systemintegrasjoner Datavarehus FILESENDER BARE	på den sikre siden UH-sektorens sekretariat for informasjonssikkerhet	mrex ESMO ORCID DataCite GÉANT OpenAIRE euroCRIS NORDUnet
TechSmith Relay canvas mediasite WISEflow ExLibris Alma Leganto oria.no Kaltura TimeEdit inspera URKUND	OJS	Public 360 SAP UNIT4 amesto Jobbnorge basware Office 365	amazon web services box salespring Azure		

DIGITALISERING

Digitalisering handler om å bruke teknologi til å fornye, forenkle og forbedre

- ***OPTIMALISERE***
- ***TRANSFORMERE***

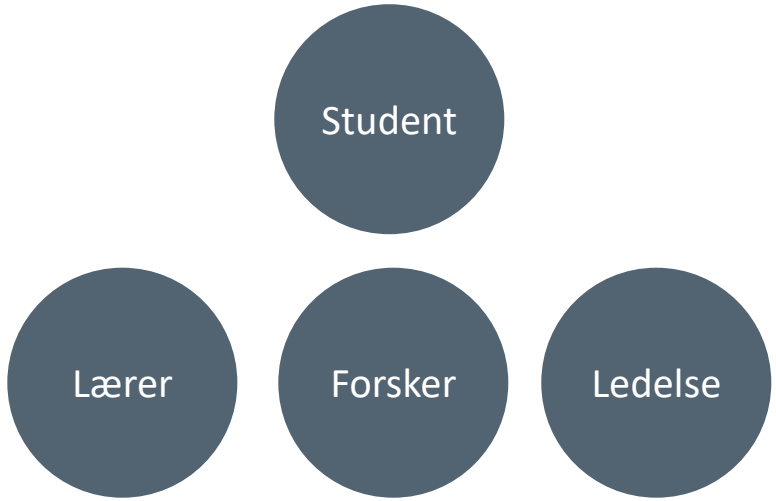
Modell for medvirkning og brukerinvolvering



Digitaliseringsstrategien angir ambisiøse målbilder

Veivalg og prioriteringer må avklares

- Digitalisering av utdanningen
- Læring hele livet
- Helhetlige og sammenhengende brukerreiser
- Verdensledende forskning
- Open science
- Effektiv administrasjon
- Godt personvern, god informasjonssikkerhet og dannelse/kompetanse i bruk av data og moderne teknologi



Handlingsplan for å realisere digitaliseringsstrategien

Skal lanseres i løpet av juni 2019 – første utkast til jul 2018

1. **Innledning**
2. **Utdanning**
   a) Målbilde
   b) Strategiske valg
3. **Forskning**
   a) Målbilde
   b) Strategiske valg
4. **Administrasjon, ledelse, kontorstøtte**
   a) Målbilde
   b) Strategiske valg
5. **Informasjonssikkerhet**
   a) Målbilde
   b) Strategiske valg
6. **Infrastruktur, mellomvare, data**
   a) Målbilde
   b) Strategiske valg
7. **Styring, finansiering, organisering**
8. **Initiativoversikt**

Kilder/Referanser

Målbilder

Fra Digitaliserings-strategien og andre styrende dokumenter

Strategiske valg

Hovedgrep/valg nasjonalt for å nå målene

Kilder: Digitaliseringsstrategien, delstrategier, andre utredninger, erfaringer, workshops

Initativ

Initiativ	2019-21 (2025)	Formål	Ansvar