Interoperability challenges for the Norwegian Tax Administration (NTA)

Semantic days 2010

Geir Myrind

Tax Norway

Norwegian Tax Administration - main strategic goals

Tax Norway

- Correct and timely assessment of taxes
- Timely payment og taxes
- A high-quality National Population Register
- Good service to users

From the It-strategy

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- New generation of tax payers demand modern and "smart" solutions
- Government expect higher return on investment due via inter-governmental cooperation and interaction
- Public sector shall interact and share data better
- A coordinated and "overviewable" public sector is a political goal
  - Shared processes, services, data and technical architecture across traditional sector boundaries

Also valid within the tax administration

More from the IT strategy

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”Processes and data flow with the organisation must be reviewed and changed if necessary. This is required for development of a interactive, unitary and integrated system architecture based on components, reuse and service orientation (SOA).”

"Business rules and data definitions shall be defined and used throughout the organisation.”

”Efforts shall be taken into storing data in one place (avoid duplicates).” (Masterdata Management)

”Create rules for data strategy, data ownership, data management and data quality in accordance with rules and best practises in public sector."

Internal system map

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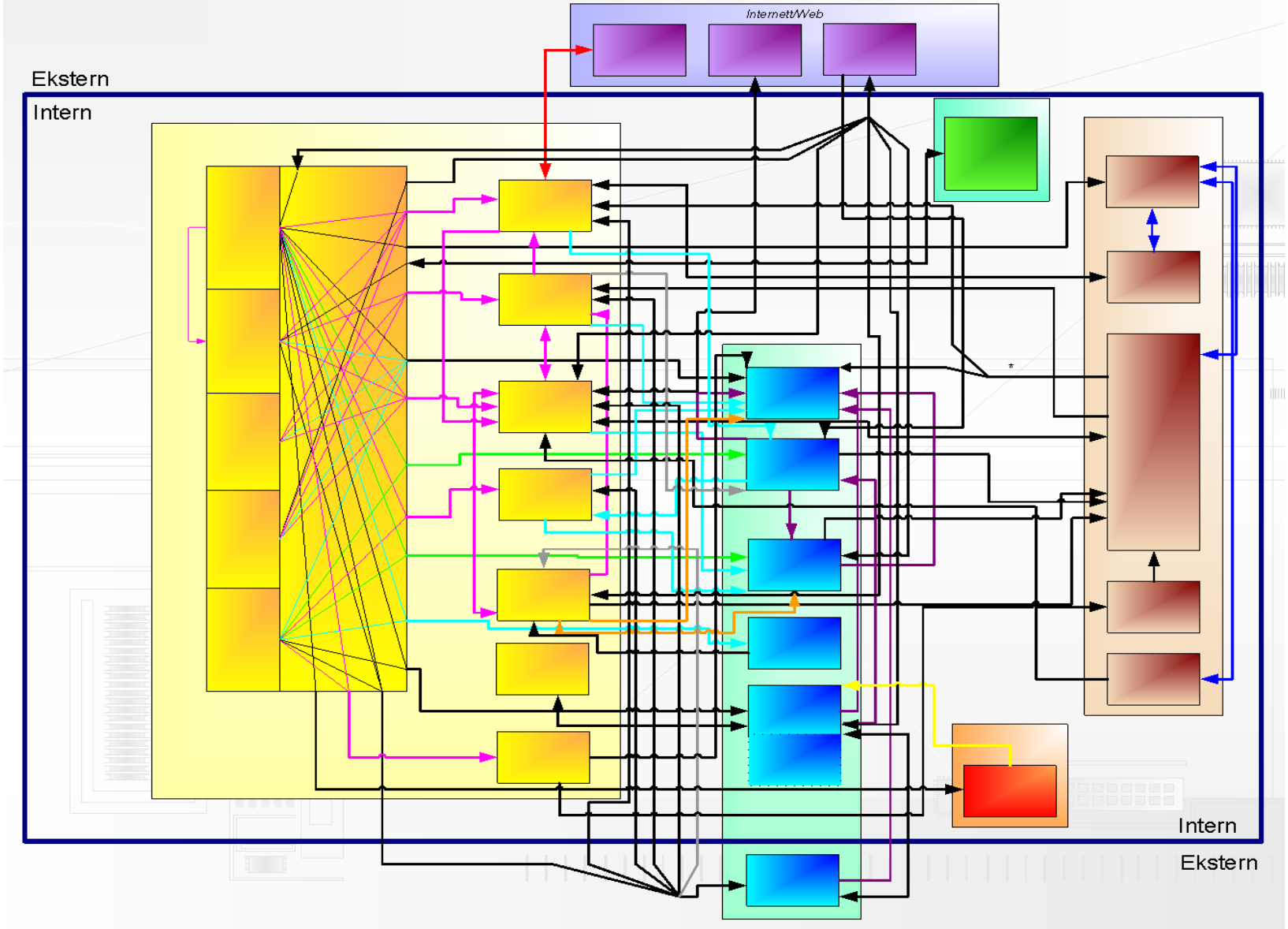

Complex system architecture leads to several problems

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- Same information exists in multiple locations
  - Person
- Same information represented in many different ways
  - Adresses, person
- Different concepts used to represent same/similar information
  - 267 different terms for salary
- Same concept used about different types of information
  - Clearing (avregning)
- No clear "ownership" of concepts
  - Person owned by national population register ? Only?
- Separation between domains is blurred

These problems are just as relevant for interoperability in public sector!
And not at all less challenging

Same concept – different meaning

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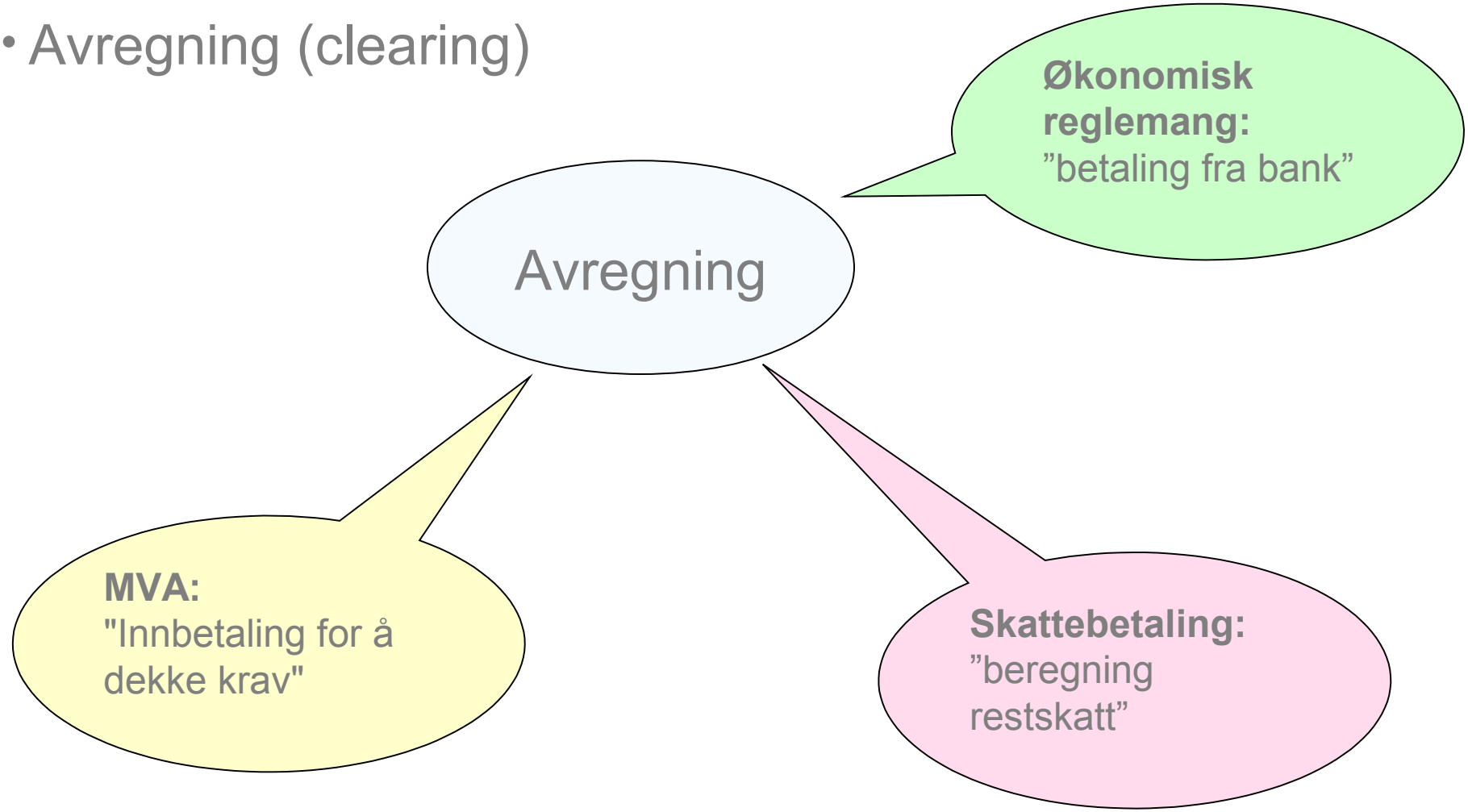
- Avregning (clearing)



Er@-programM

Tax Norway

- Er@ is Directorate of taxes program for electronic services

- Main goal is to:
  - Establish next generation of electronical services.
  - Contribute to Direcorate of taxes position as "locomotive" in public e-government.
  - Establish e-Dialog og contribute to a seamless interaction within the organisation and between public organisations and municipalities
- The program incorporates:
  - Altinn II delivery project
  - eDialog and new services
  - EDAG
  - Rule, technology and architecture development

Purpose of E-dialog

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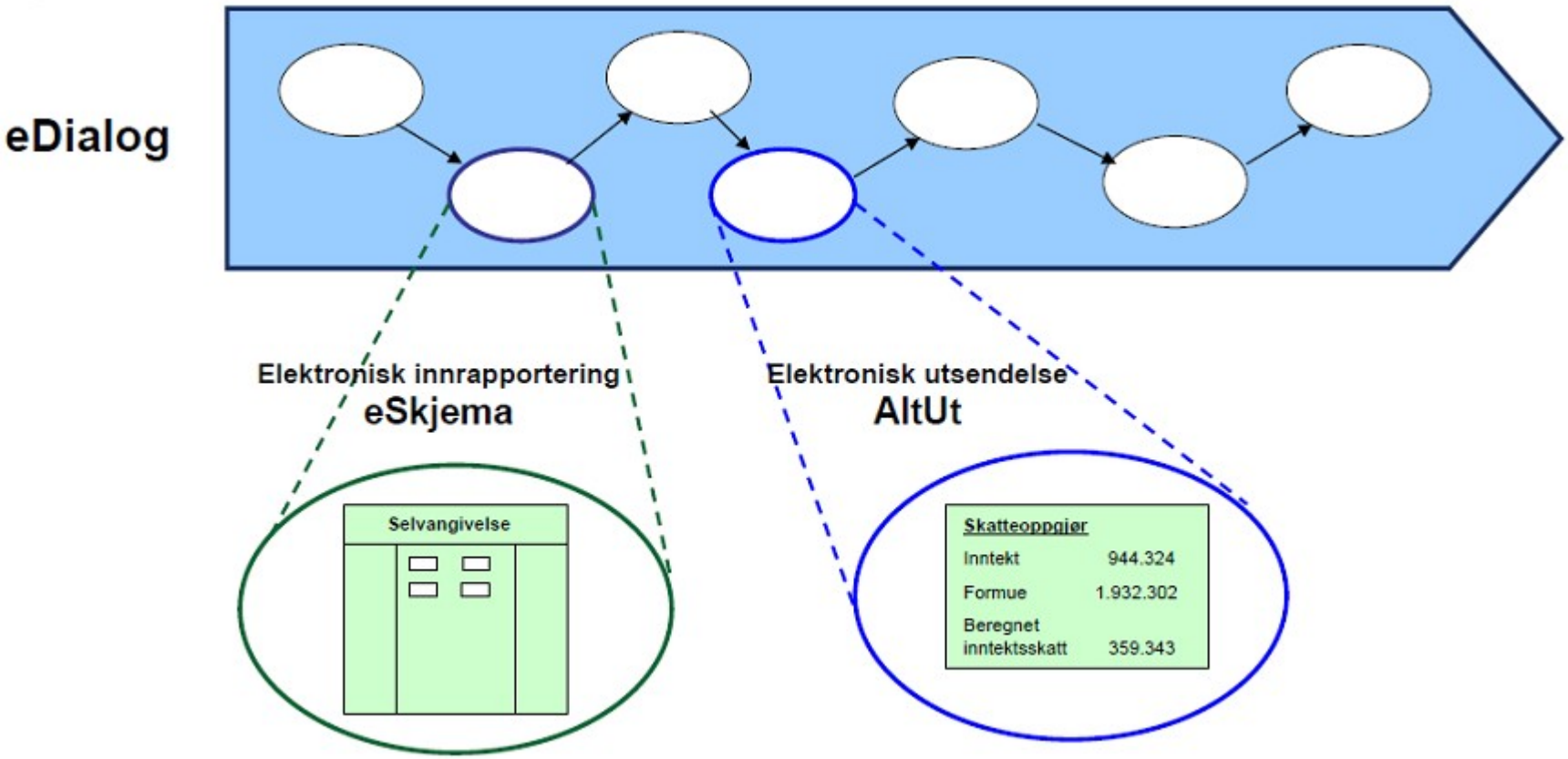

Associate single services that naturally belong together in one process for the user

Goal of eDialog

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Create a framework for developing E-dialogs and realise two pilot dialogs:

- eDialog for private tax

All communication between taxpayer and Tax administration related to taxes from tax deduction card to tax settlement and eventual complains

- Childbirth - choice of name

Includes parental responsibility, choice of name, change of name, birth certificate and other communication with the Population Register in connection with birth

Future dialogs to be a cross sectors and involve services from different public organisations. Demands interoperability at all levels!

EDAG (electronic dialog with employers)

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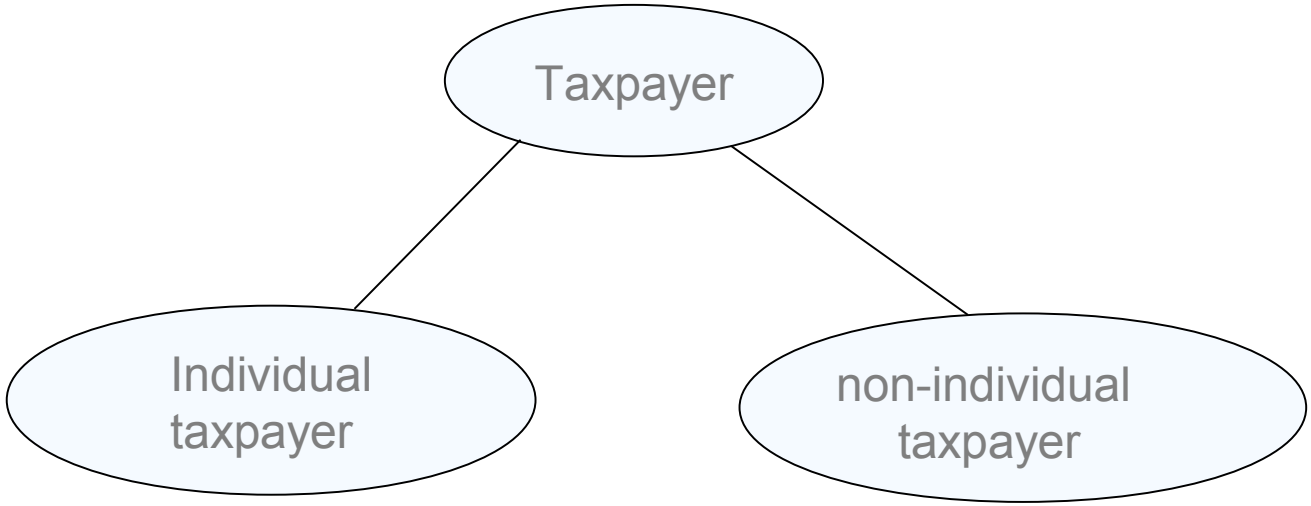
- Simplify many processes into one
- Many tasks and processes will be superfluous
- Avoid many "similar" version on the same concept



EDAG – all reporting through a single system

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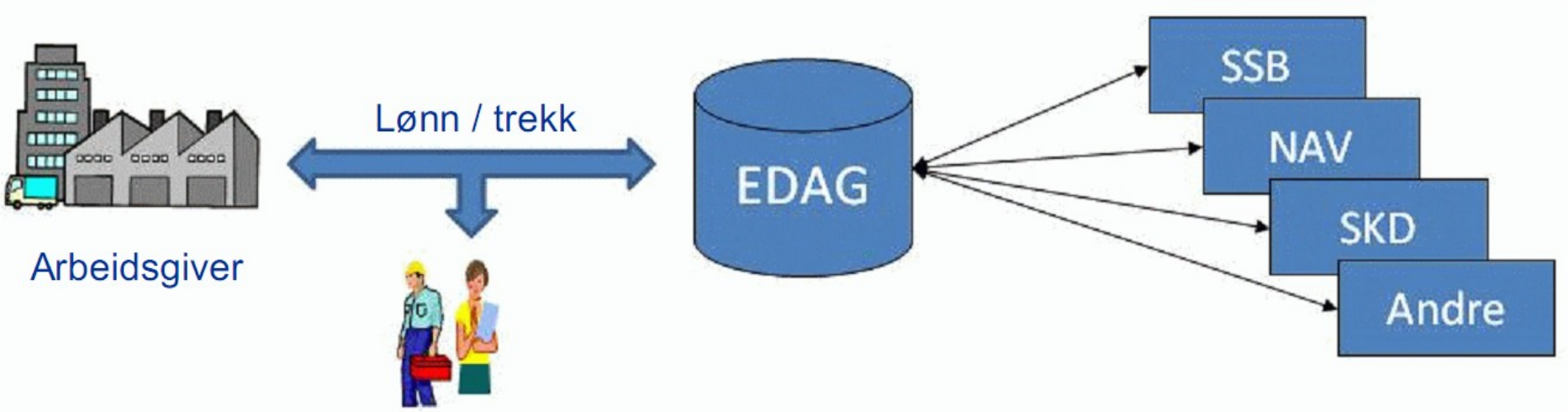
altinn Skatteetaten nav Statistisk sentralbyrå Statistics Norway Brønnøysundregistrene



Harmonization of concepts requires changes
in rules and splitting of concepts

Source: EDAG project

Altinn – development of electronical schemas

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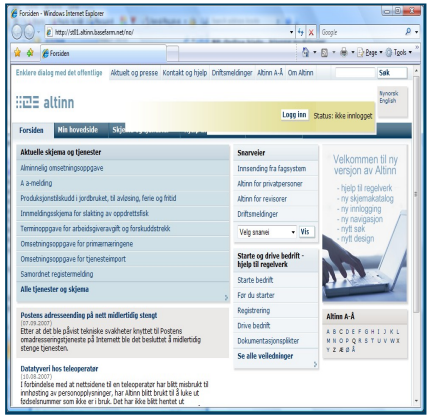
- Using data definitions from OR (oppgaveregisteret)
- Plan is to change from OR to SERES as metadata register for data definitions
- Support current solution for registration and revision of data definitions (metadata)
- Build electronical schemas using SERES
- Provide a solution for SKD schema "factory"
  - Avoid excessive training of personnel to be able to understand SERES
  - Simple tool to support schema development for non-modelers



Metadata source for Altinn

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Step

0 – Current solution:
Todays Altinn I services is based on message specifications from OR

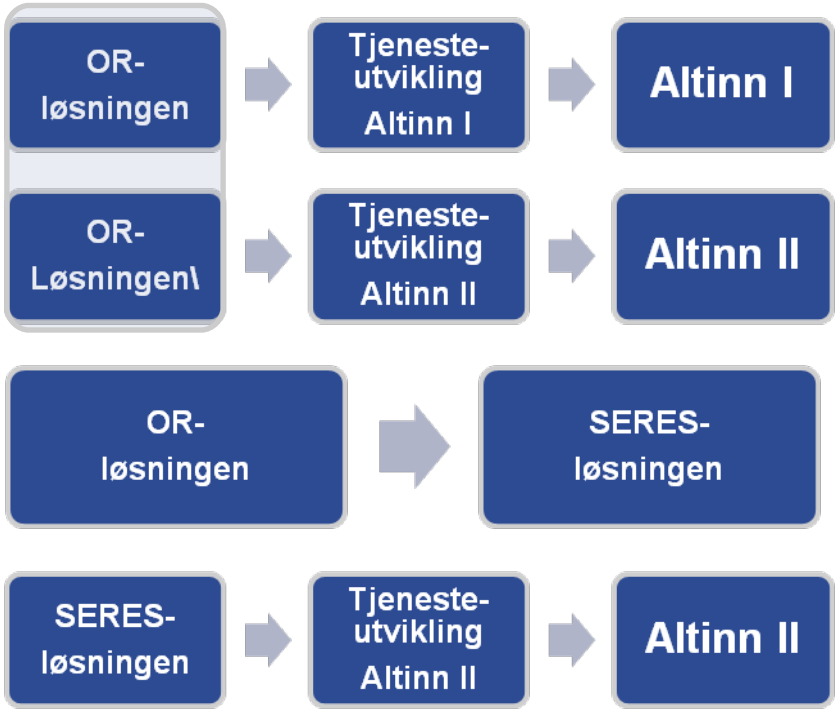
1 – Migration to Altinn II:
Todays Altinn I services and pilotservices is established in Altinn II based on message specifications from OR

2 – Migrere fra OR til SERES:

OR metadata is migrated to SERES independent of Altinn

3 – SERES in Altinn II service development:
SERES used as metadata source for existing OR-based and new Altinn II services

Service migration and metadata source



Necessary for continuity in service development

Tool support for Altinn service development

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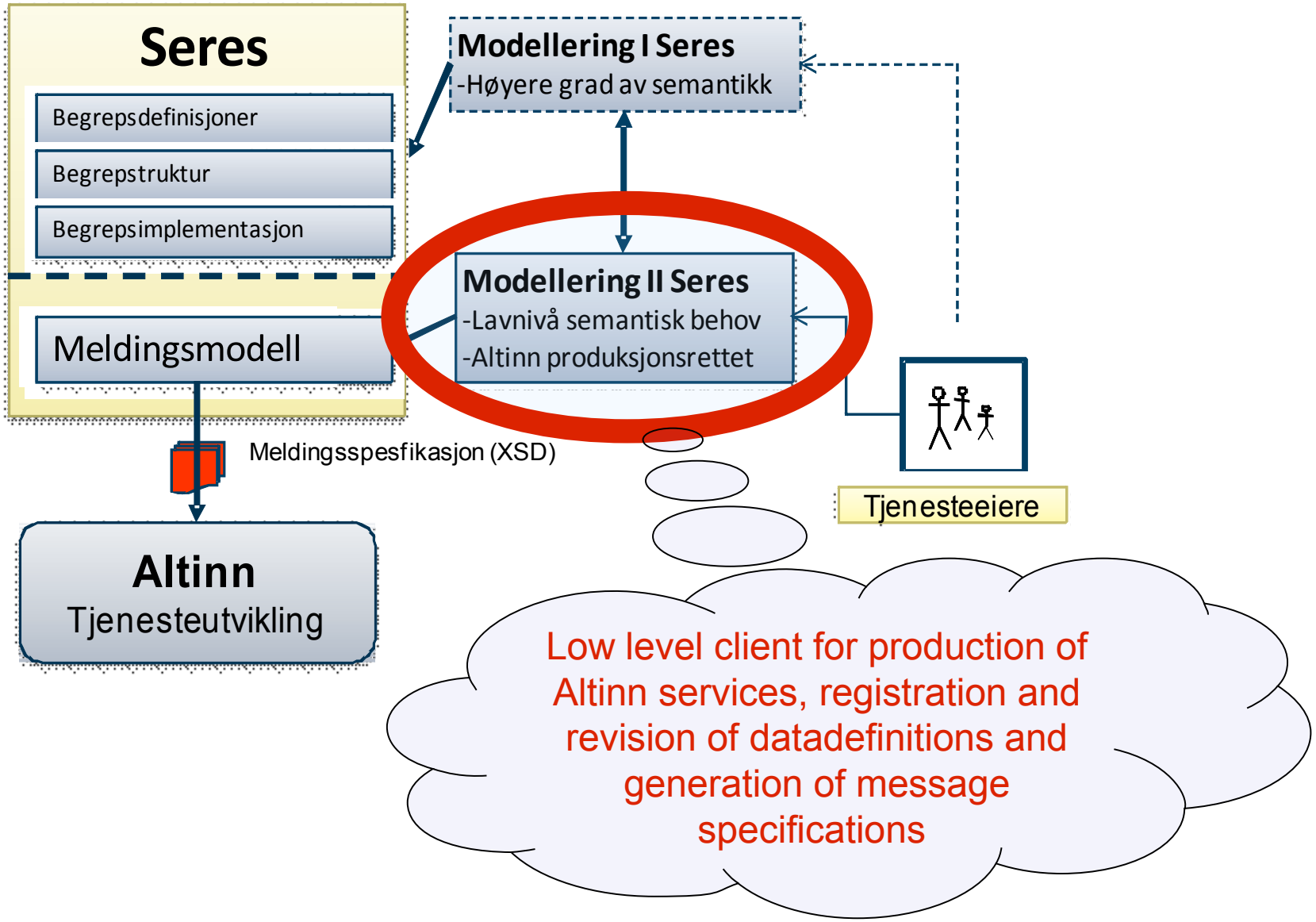

Underpin strategy, projects and e-government in general

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Statement from Directorate of taxes:

”A growing information exchange and interaction between governmental organizations leads to a more complex integration between our own systems and also between systems in other organizations.

To enable and follow this up we expand our efforts on information modelling and metadata both at enterprise-, domain- and applicationlevel."

Why metadata

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- Metadata describes data, including:
  - Meaning of concepts
  - Administrative data as ownership, validity, rights, formats, languages, location, representation
  - The context data and concepts appear within
  - Structure and relations between data (data models)
- When data is described and made available data can be found, used and understood
- Metadata is a essential part of all information management
- The quality of information management in an organisation is directly related to its quality of metadata

A framework for metadata management

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A framework for definition, maintenance and usage of metadata is required, both internally and for external interaction and cooperation.

Must support:

- Description of concepts and relations between them

- Modeling of information structures based on defined concepts

- Create realizations of defined information models for different needs and platforms

- Different domains and connections between them

- Means to disseminate and agree upon concepts and information models for cross-sector sharing

More about a metadata framework

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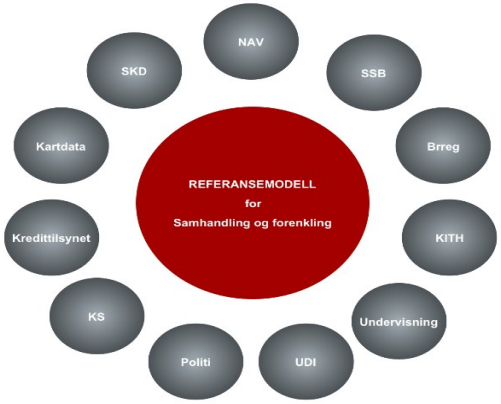
Common language, methods, techniques, tools and guidelines for describing, visualizing and sharing metadata.

National strategy for metadata - a national metadata component

difi Direktoratet for forvaltning og IKT

SERES is such a framework



Work on metadata must be aligned with other activities within NTA

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- **Definition of a Enterprise architecture**
  - IT City Plan
- **New development platform (NUPAS)**
  - Focus on service orientation
  - Standards and open solutions
  - Lean development methods
  - Test-based development
  - Integration platform

Internal focus on metadata and information modeling

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- Create relations to projects and give support on metadata and information modeling issues:
  - Altinn
  - National population register
  - EDAG
  - eDialog
  - and more…
- Establish a metadata forum inn close connection to projects and stakeholders
- Create consciousness and awareness about metadata
- Establish a framework for metadata management for internal and external concept and information models (SERES)

Connect to external projects and activities

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- Follow Semicolon and learn from the project. Use Semicolon as a resource in some internal activities:
  - Procedures for developing quality assured concept models using SERES
  - Identify how concept models can be used in quality assurance of data
  - Assess NTAs Altinn models for usage in other areas
- Follow SERES and get to know the framework. Evaluate the solution and contribute to make it better (suit our needs).

- Join and contribute to the National Metadata Strategy to reach the goals, get consensus and interact with other governmental organisations

- Follow national, european (EU and the ISA program) and international standards within the domain.

Questions ?

Thank you for the attention!