



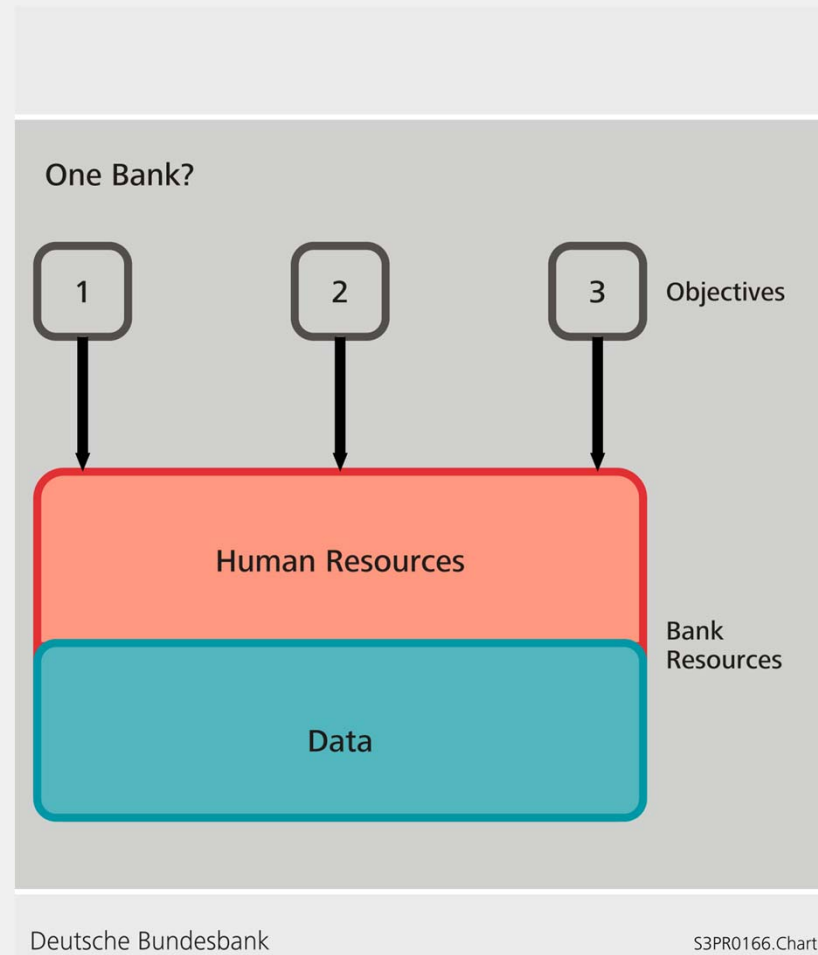
IMIDIAS: Mission, Concept and Organisation

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Deutsche Bundesbank, Statistics Department

Workshop Using Microdata for Macroprudential Policy. Data, Methods, Applications
Vienna, September 18 and 19, 2014

One Bank?

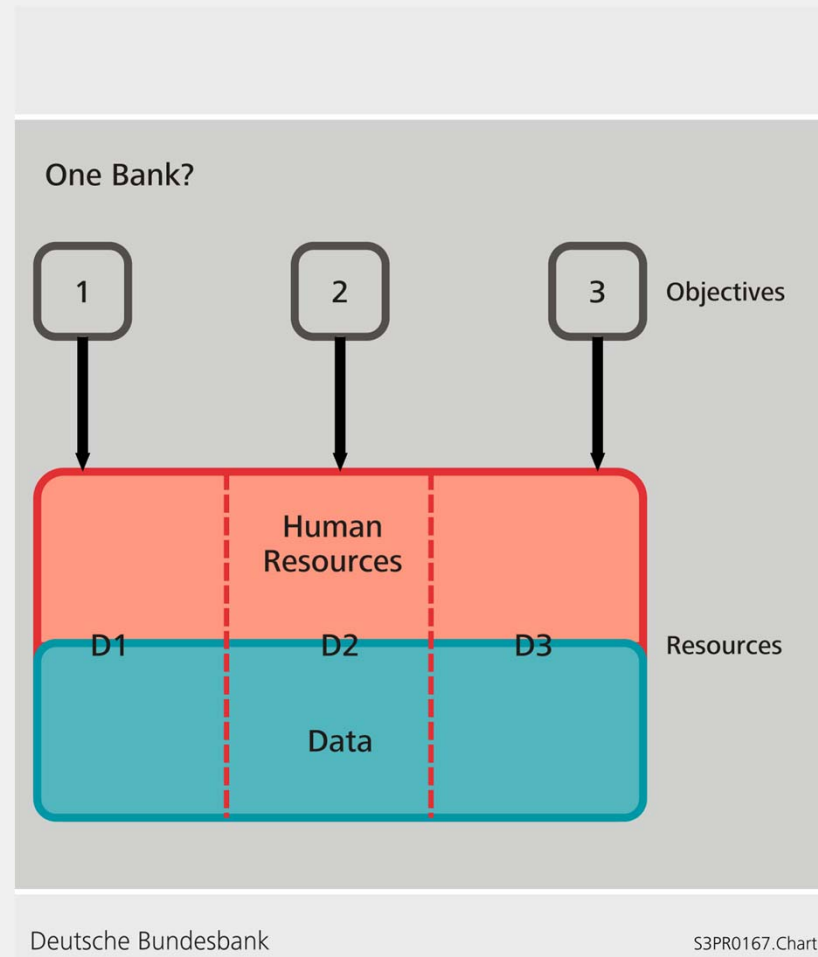
CBs have different objectives,
drawing from a common pool of resources



One Bank?

CBs have different objectives,
drawing from a common pool of resources

Specialisation needed!

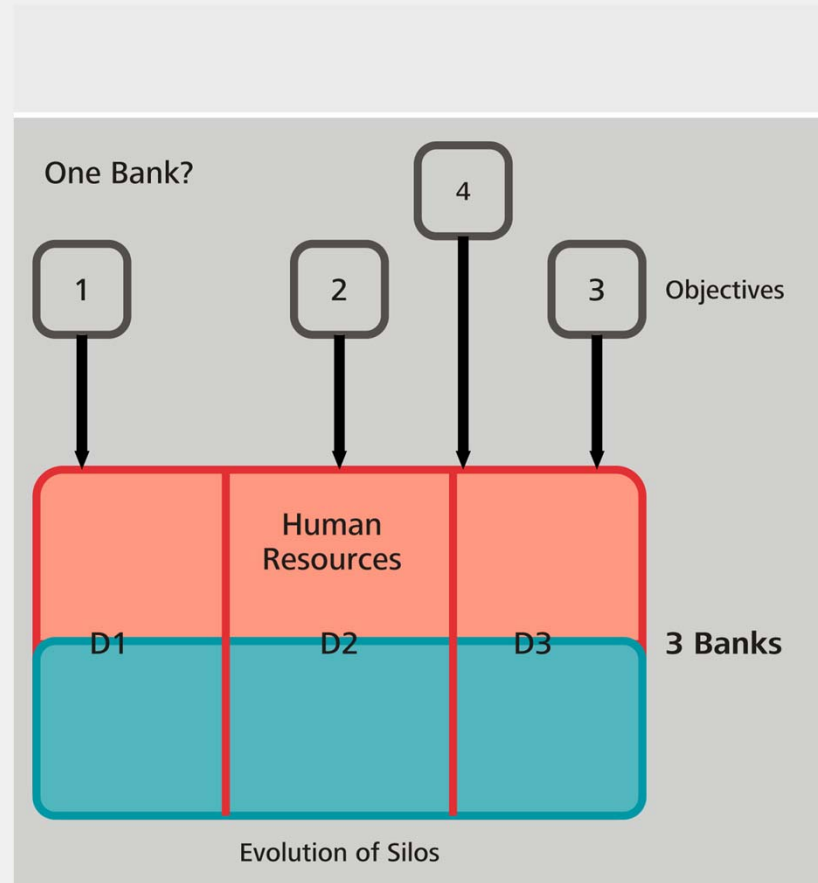


One Bank?

In the reality of CBs, **silos evolve.**

Bank **slow to react to new needs.**
Data and human resources
are compartmentalised

→ CB gets „dumb“!



Deutsche Bundesbank

S3PR0168.Chart

Research and IMIDIAS

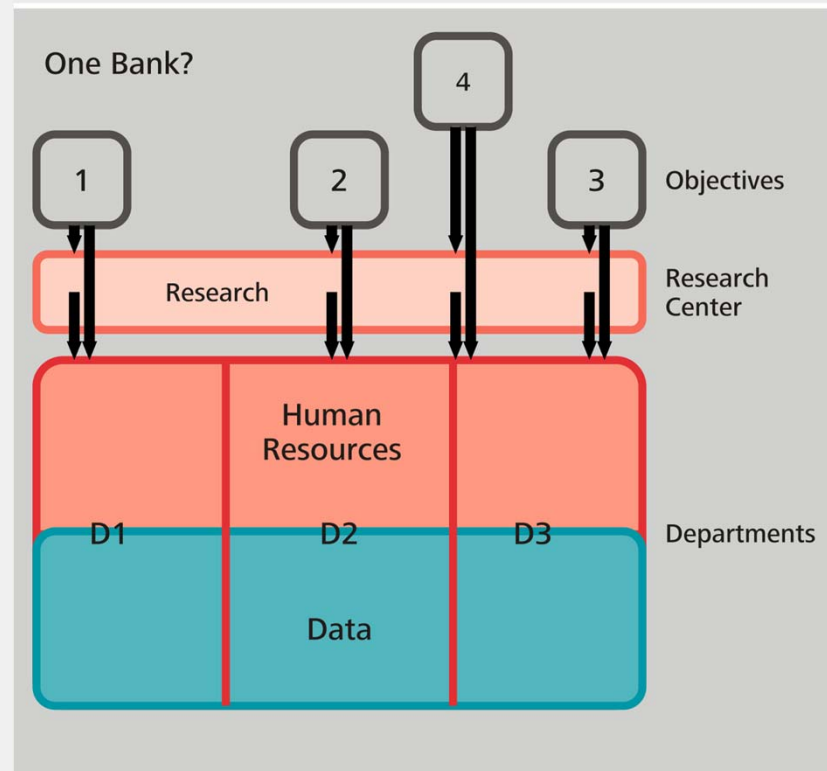
Scientific research can be an important integrating force

Can act as a rail for

- ideas
- specialised know-how
- people

and be an inhouse-R&D, to cope with new challenges

A rationale for the Research Centre of the Deutsche Bundesbank



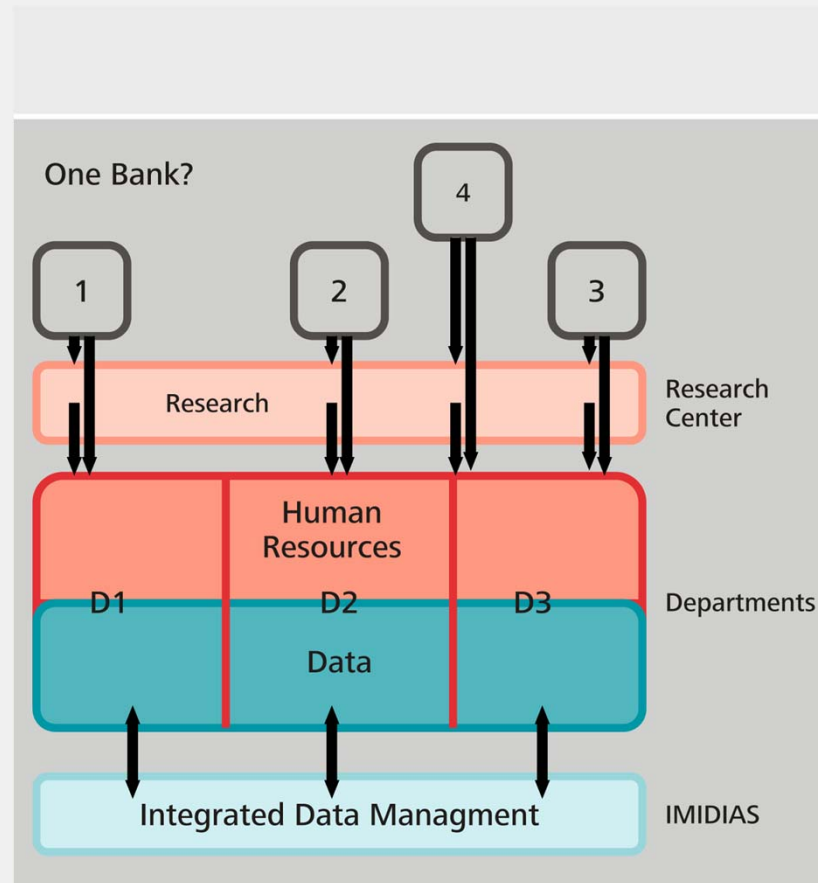
Deutsche Bundesbank

S3PR0169.Chart

Research and IMIDIAS

Pull down those data silos, too!
IMIDIAS will be a hub for microdata:

- **House of Microdata (HoM)** is statistical data warehouse, **enabling access**
- **Research Data and Service Centre** creates new resources for research and analysis



Deutsche Bundesbank

S3PR0170.Chart

A mandate to Statistics

Strong and broad mandate given to the Bundesbank Statistics Department by the Board:

- to establish an integrated interdepartmental information system for analytical and research purposes
- to define governance and roles
- to develop a Research Data and Service Centre...
- ... and a statistical microdata warehouse (House of Micro Data)
- to step up active support for research projects

Micro Data Treasures in the Bundesbank – a selection

| Statistics Dept.

- Non financial enterprises accounts
- FDI Statistics
- Security Holdings Statistics
- Data on Financial Institutes, such as annual or monthly accounts
- Insurance Statistics
- Foreign Trade and Services data, Capital Accounts data

| Research Centre

German HFCN

| Economics Dept.

- Bank Lending Survey

| Banking and Financial Supervision Dept.

- Supervisory data

| Payment and Settlement Systems Dept.

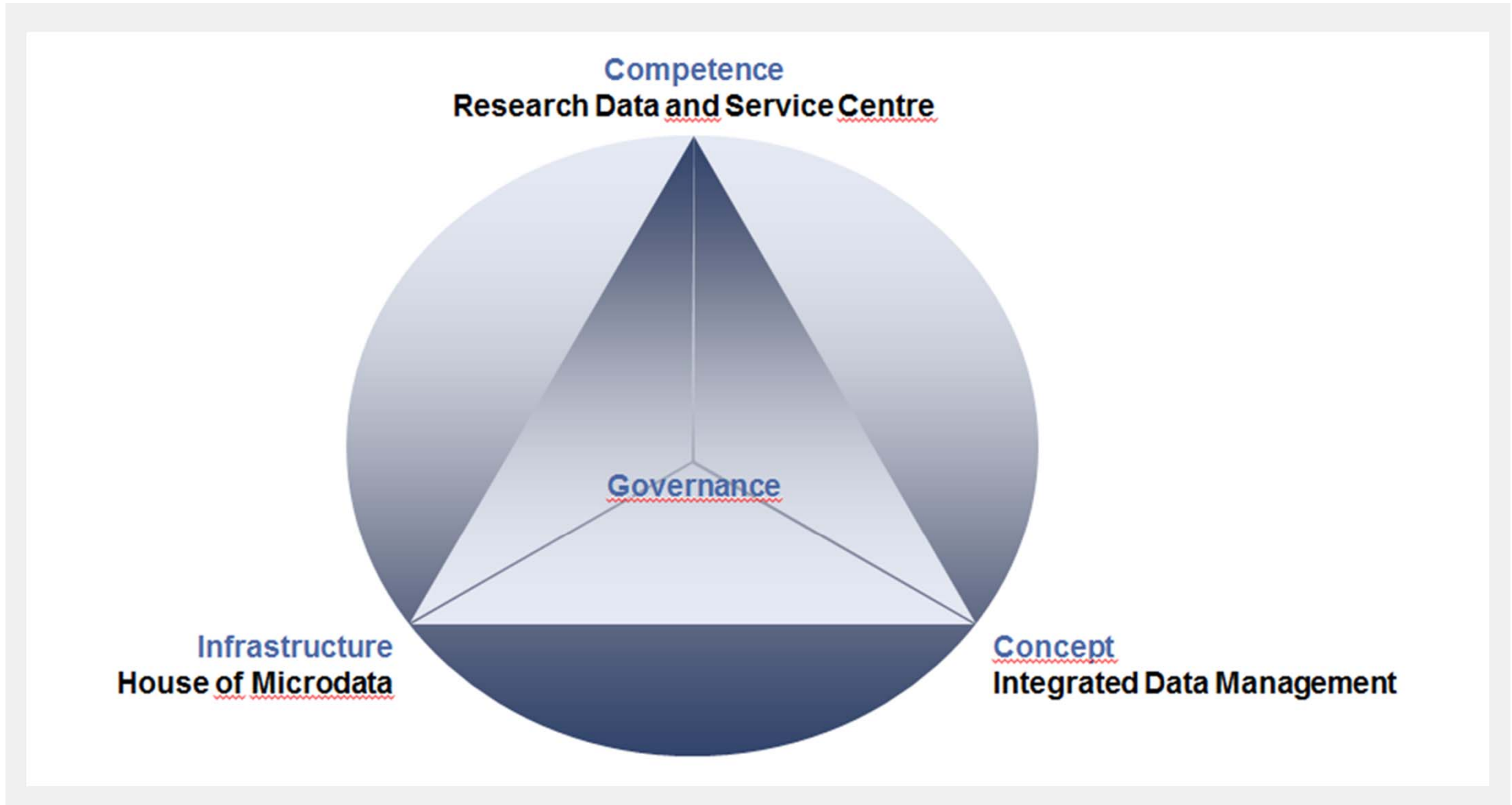
- TARGET

| Markets Dept.

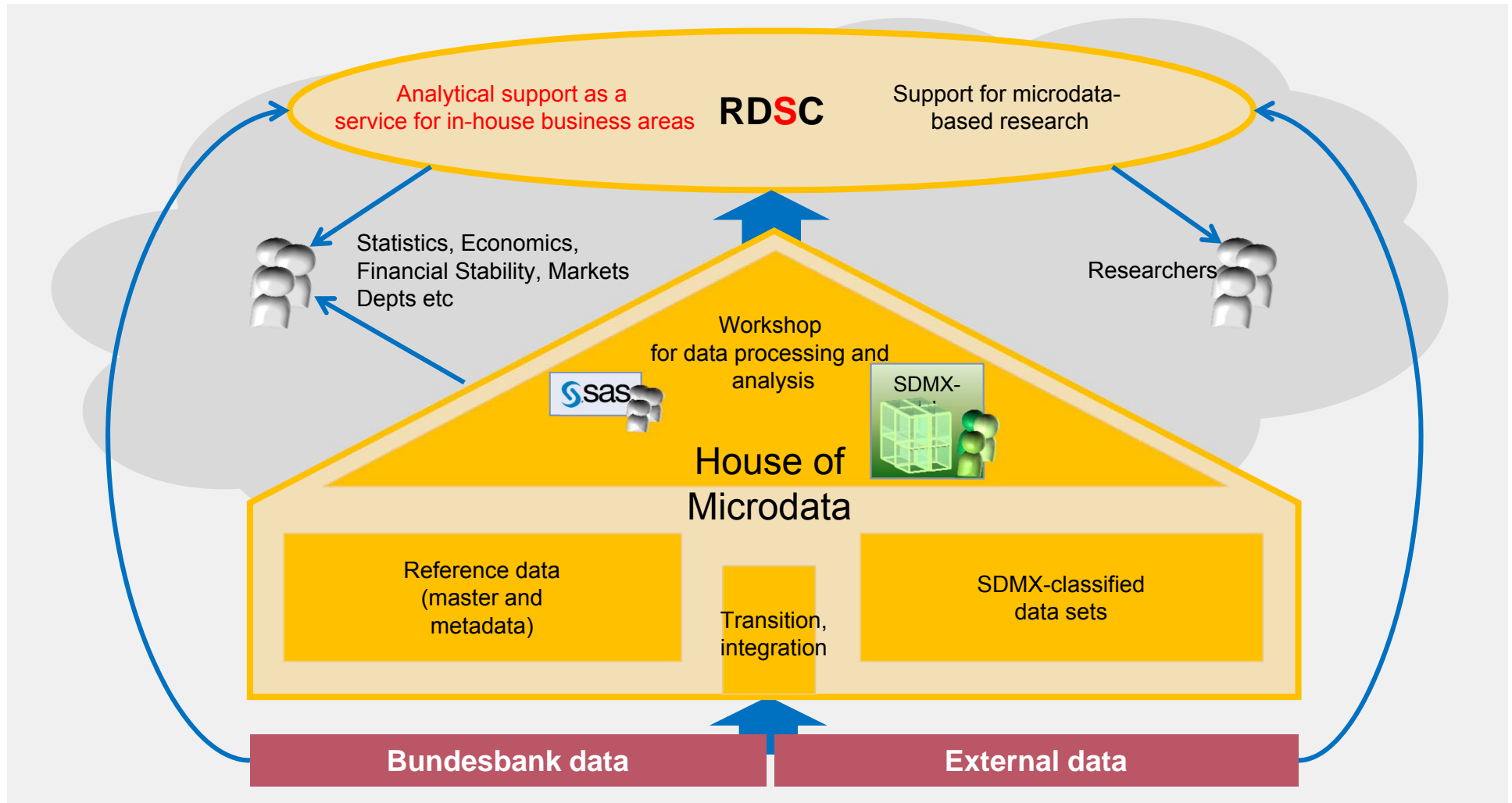
- Transaction information

| Linked data sets

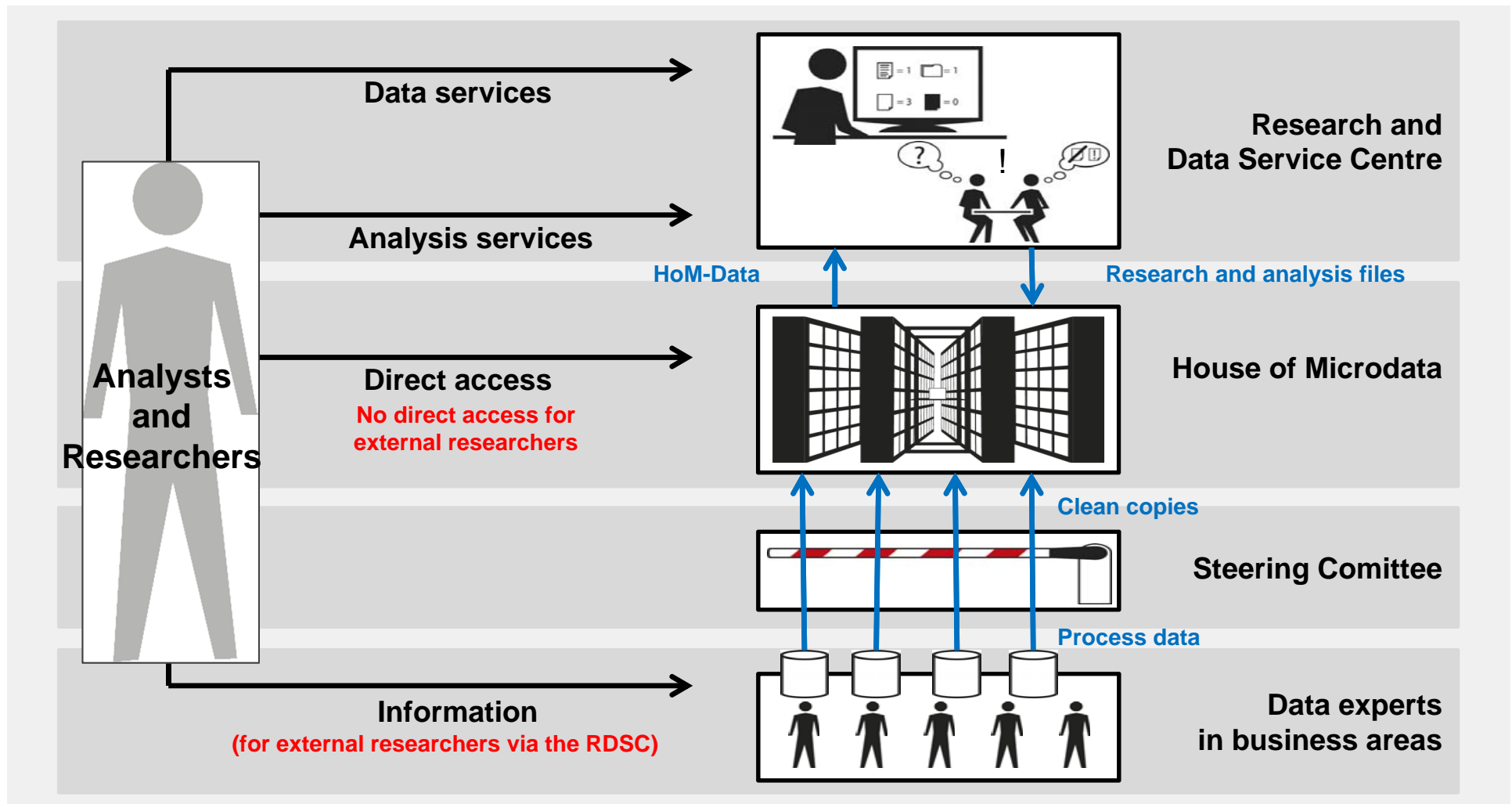
IMIDIAS = integrated microdata-based information and analysis system



Architectural sketch



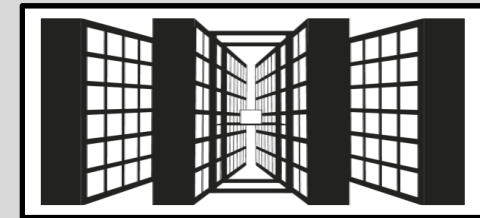
IMIDIAS –Value added for analysts and researchers



House of Microdata (HoM)

Functions and design features

- The HoM is the **statistical infrastructure component** of IMIDIAS and constitutes the technical basis for data transmission and data usage – a statistical data warehouse for the „**golden copies**“)
- The world wide ISO standard SDMX constitutes a superstructure for
 - the formation of a **consolidated data repository**
 - a **bank wide data sharing**
 - the **support of interdepartamental analysis**, as well as **internal and external research**



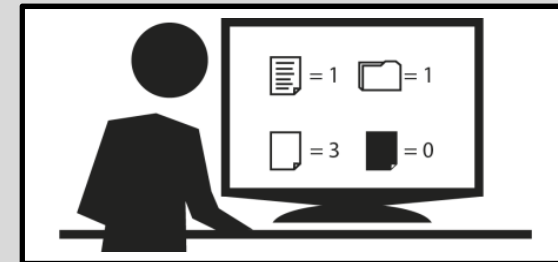
- The HoM design features are:
 - **sharing access and sharing burden**
 - **decentralised governance**
 - **graduated access rights**
 - **no interference with the operative systems**
 - **no analysis functions** for the process data **in the operative system**

Research Data and Service Centre (RDSC)

Services for internal and external users

Data services

- Research and analysis files
- Documentation
- Tabulation
- Matching and merging
- Reference data administration



Analysis services

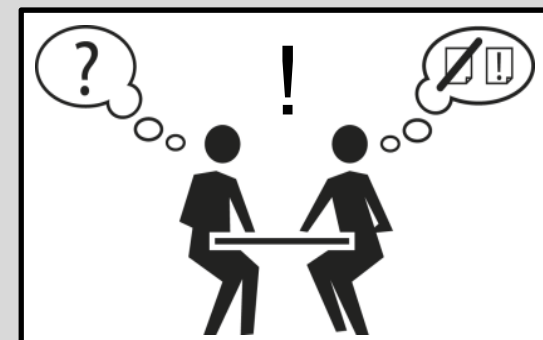
- Advice
- Clarification of access rights

Internal users

- Guidance
- Ad-hoc evaluations on analysis files

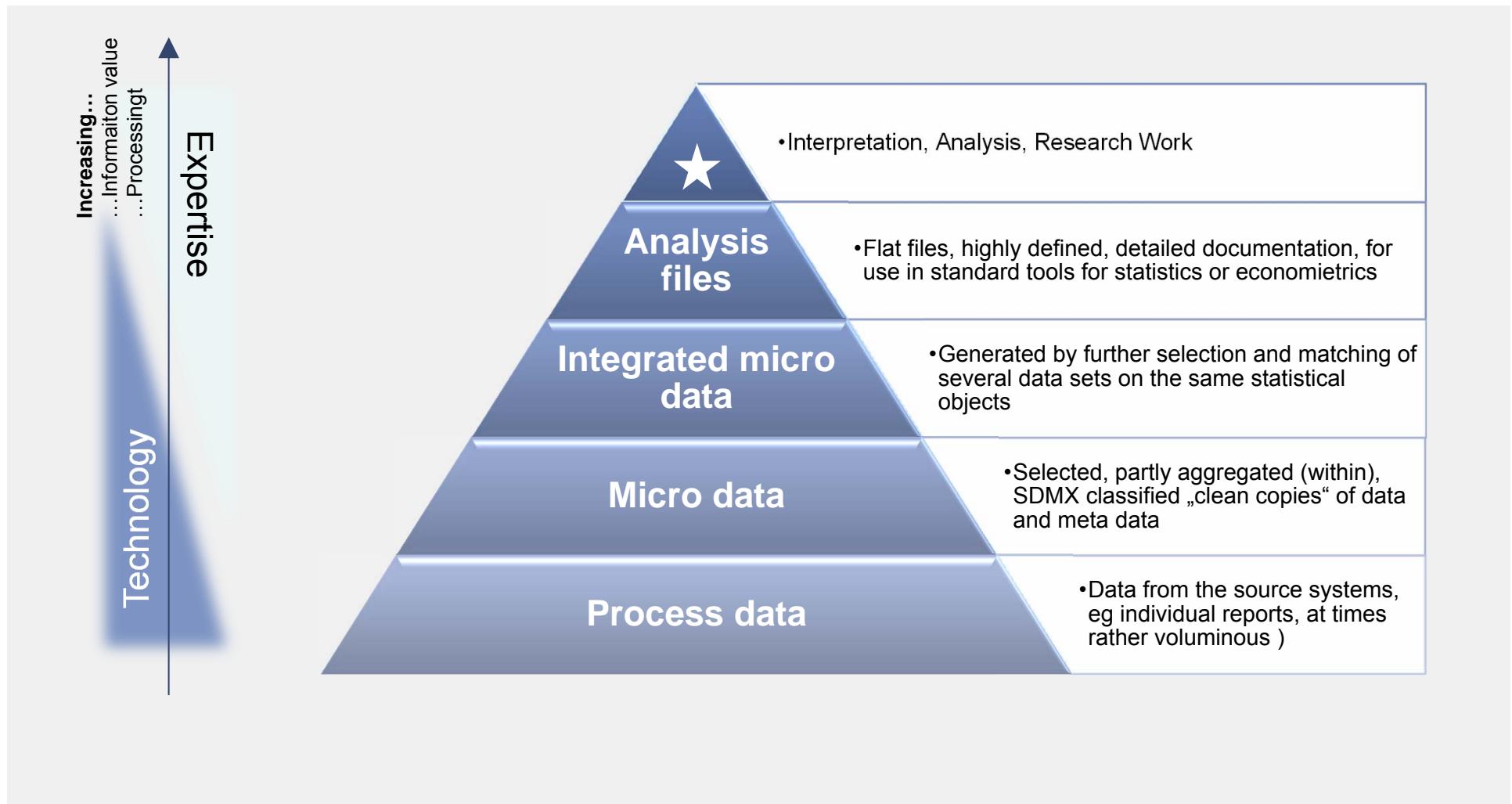
External Users

- Processing of applications
- Dissemination of data, making available on-site
- Output control and clearing

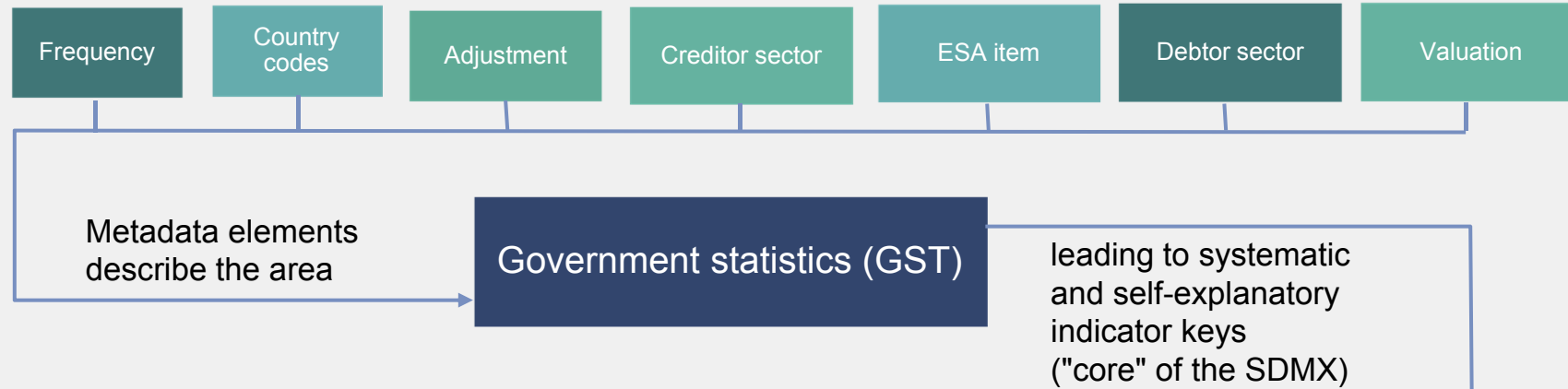


From the process data to the analysis files

Value creation in IMIDIAS



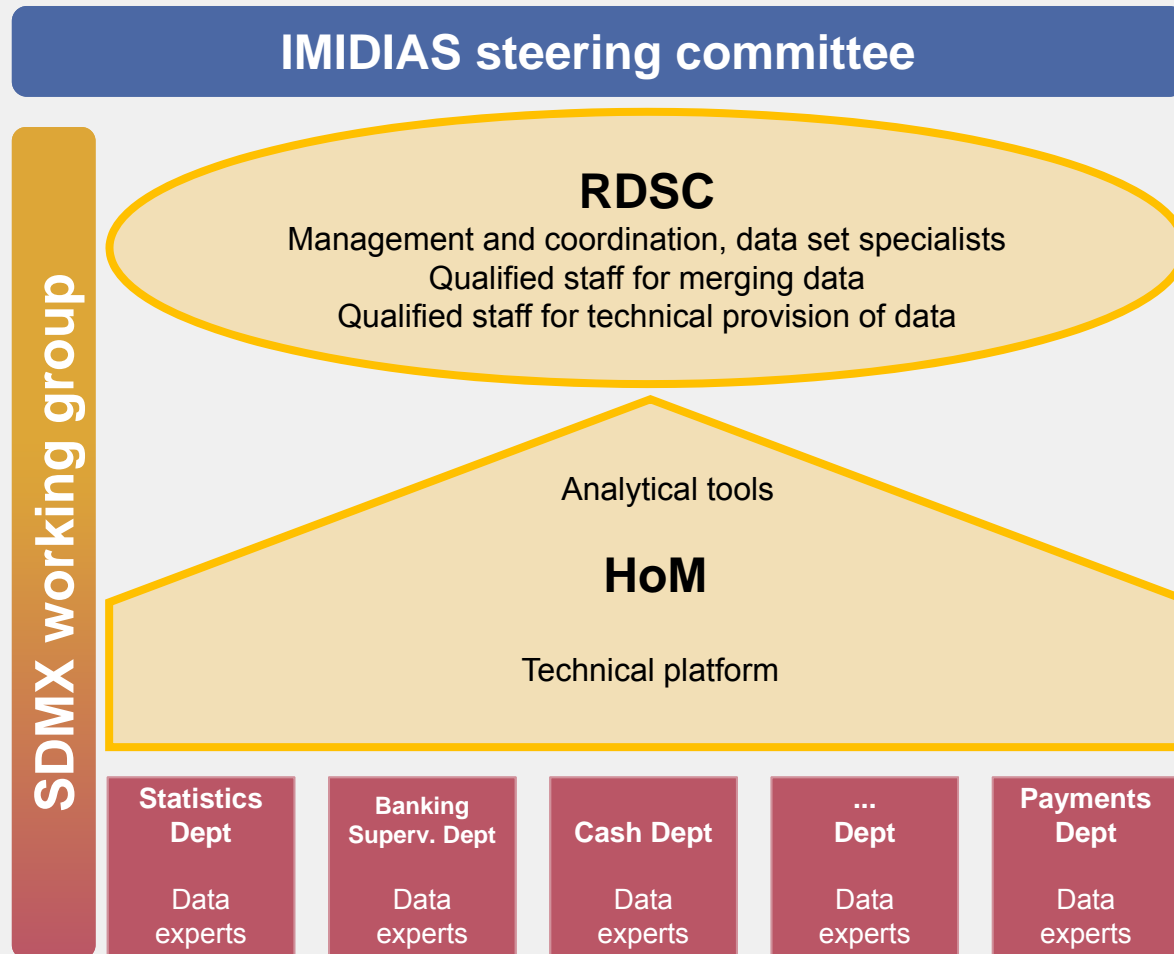
SDMX in a nutshell



Interpretation of key **GST:A:AT:N:B0MFI:MAL:B1300:SA:H**

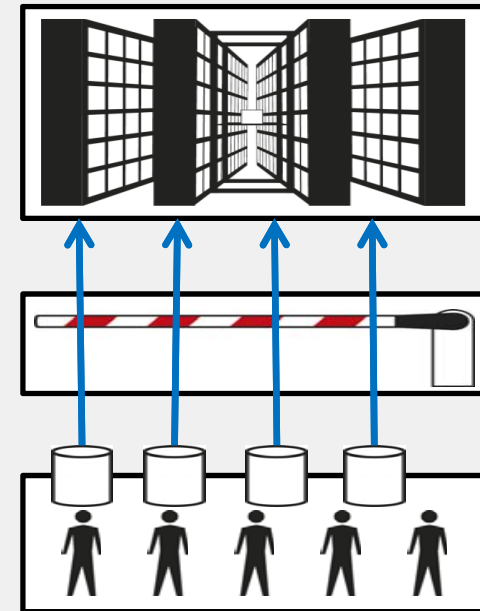
No	Description	Key	Explanation
1	Frequency	A	Annual
2	Reference area	AT	Austria
3	Adjustment indicator	N	Neither seasonally nor working day adjusted
4	Creditor user assets sector	B0MFI	Monetary financial institutions (ESA95)-NCBs
5	ESA item - GST context	MAL	Maastricht assets/liabilities
6	Debtor resource liabil sector	B1300	General government (ESA95)-NCBs
7	Valuation - GST context	SA	Financial stocks at nominal value
8	Series variation - GST context	H	Percentage points, series(t)/ debt(t)

IMIDIAS: strategic and operational levels



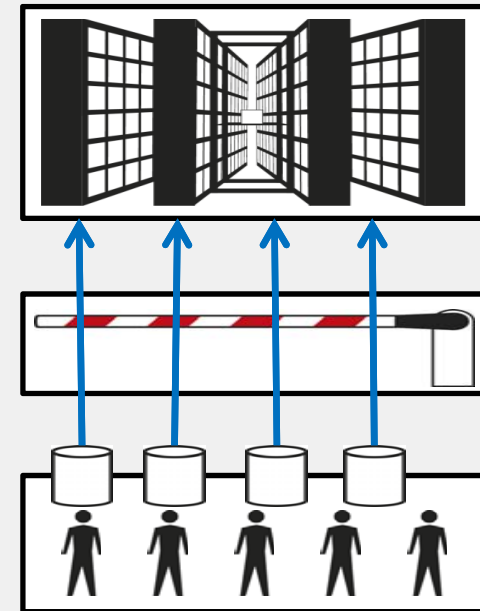
A Bank-wide inventory

- Basis for decision making is an **inventory of existing data** throughout the bank
- **Users benefits and costs for data providers** need to be assessed
- The inventory is **standardised** to allow **evaluation and prioritization** in the steering committee
- The inventory aims at completeness and transparency.



Furnishing the House of Microdata

- The HoM is filled by way of content projects of data providing business areas:
- **Identification** of relevant data by IMIDIAS steering committee (legal accessibility, relevance, stability)
- Creating SDMX structures for HoM
- **ETL-Processes** (ETL = Extraction, Transformation, Loading) to generate a clean copy
- **Regular maintenance** (Quality control, maintenance of transmission systems)



The pilot projects

Four pilot projects:

1. Bank Lending Survey
2. PHF (Survey „Panel of Household Finance“)
3. Direct investment statistics (MiDi data base)
4. Integrated bank statistics: Balance sheet statistics, profit and loss statements and interest rate statistics

Mostly completed

Completed!

A „prototype“ for IMIDIAS!

Two data sets from outside Statistics!

The piloting aims at **studying all parts of the chain of value creation** and at developing generic processes

The pilot projects

Pilot projects are targeting quite different links in the value chain

Most important results up to now: SDMX classified repository of reference data for banks needed – yet another piloted project!

Piloting the meta data management!

Integrated bank statistics – a prototype!

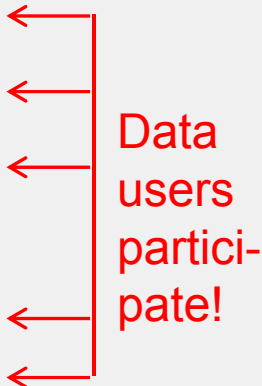
Balance sheets stat + profit & loss statements + interest rate stat

- **Criteria**

- Importance for monetary policy and financial stability
- Feasible with limited resources

- **Tasks**

- Selecting variables and coverage – **complete adoption!**
- Developing an SDMX classification – **done!**
- Integrating with reference data – **under way**
- Setting up ETL processes
- Developing analysis data files by RDSC
- Creating informative documentation

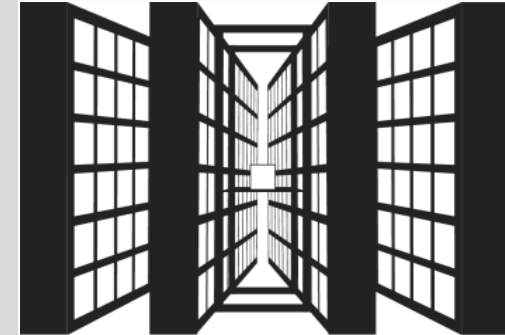


Data
users
partici-
pate!

Milestones

House of Microdata

- October 2014: - First draft of a bank wide **inventory of relevant data**
- March 2015 - Completion of pilot projects with micro data from Stat.
- Starting first mandated content projects.
- End 2015 - Completion of **data evaluation**, including prioritisation



Research Data and Service Centre

- End 2015: - Providing **important data from S**
- **Accreditation** as a research data center
- End 2016: - Developing efficient **analysis services**
- Providing important **data from outside Statistics**
- 2017 and 2018 - **Teleprocessing**
- „**Data enclaves**“ outside the Bank and cooperation with other research data centers



A win-win:

- **House of Microdata (HoM):**
Common platform facilitating the exchange of data throughout the bank
- **Integrated data management**
SDMX as the data model, common reference data
- **Research Data and Service Centre (RDSC):**
Data enrichment and analytical support
- **Governance**
Decentralised responsibility for data, participation, symmetrical access as guiding principles



Active involvement and ongoing support of departments needed!