



DNV presentation at Norsk Informatica Brukerforum

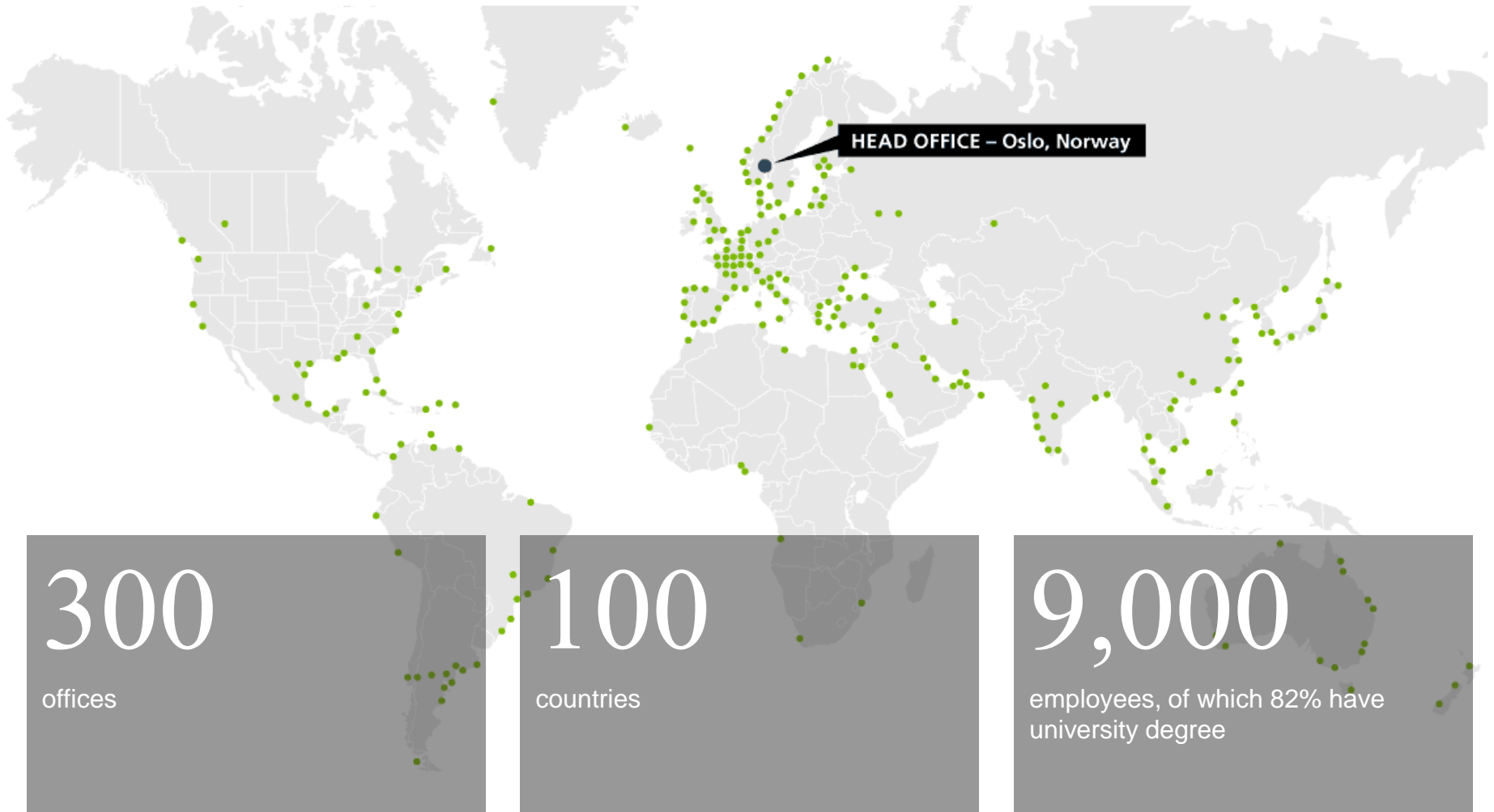
Experiences and solution strategies from DNVs use of Informatica

Jan Petter Holmberg and Kristian Ramsrud
03 February 2011

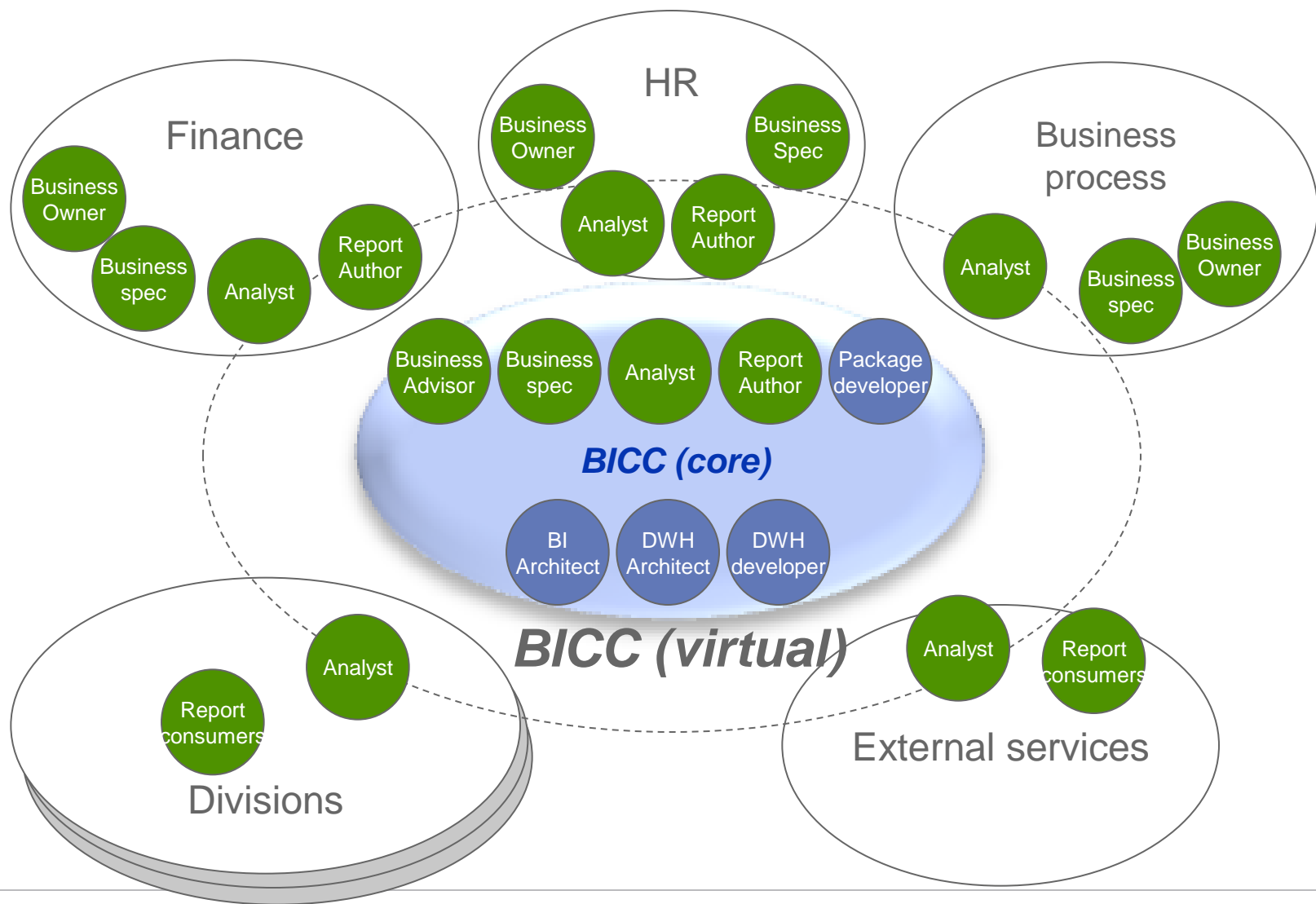
DNV's main services



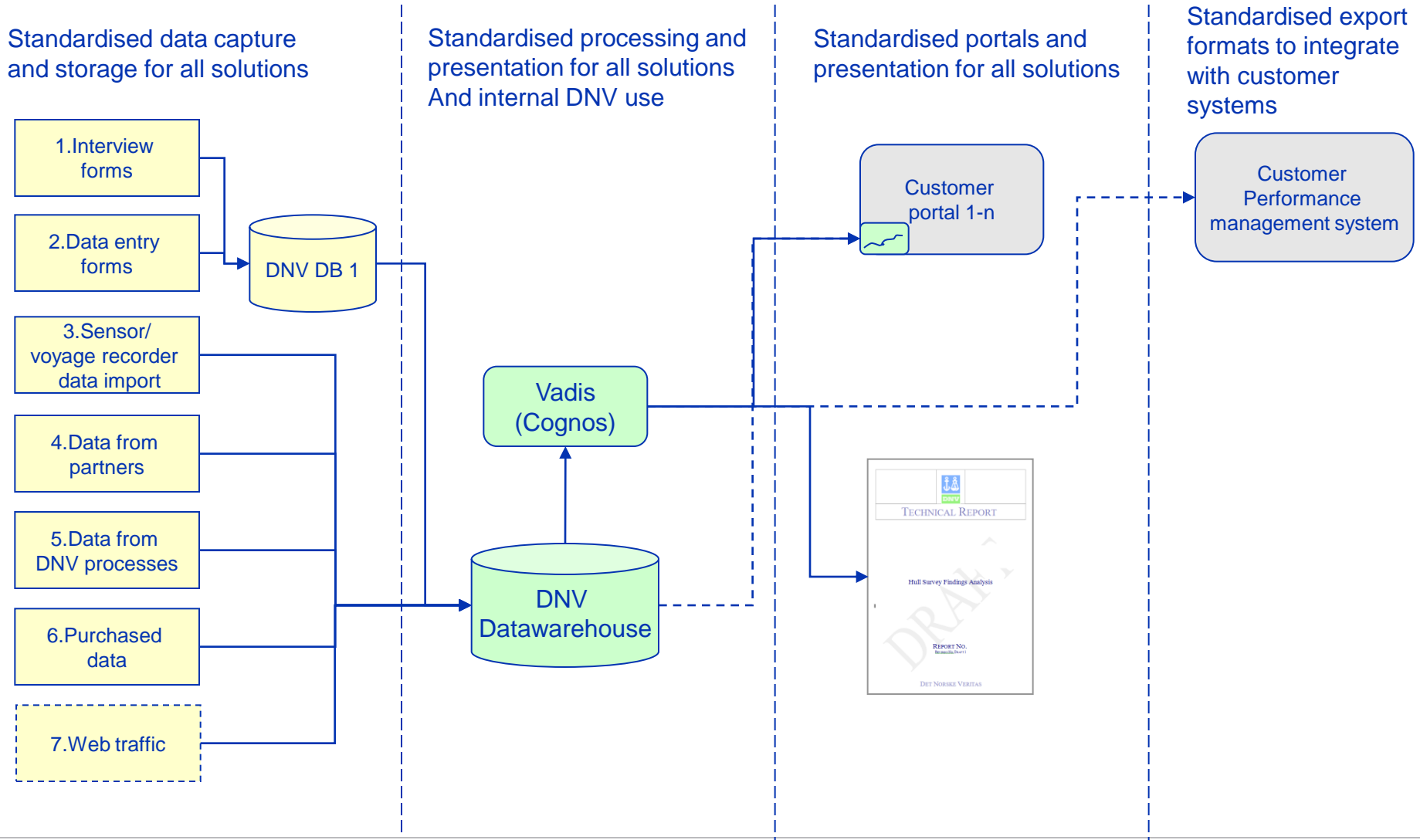
Highly skilled people across the world



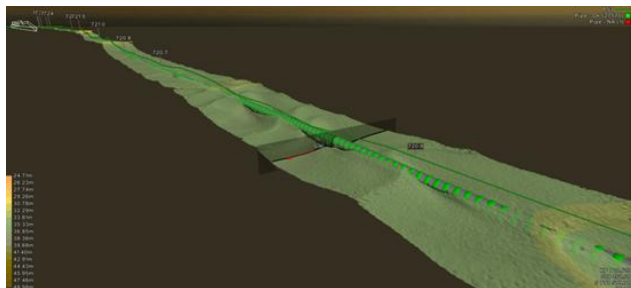
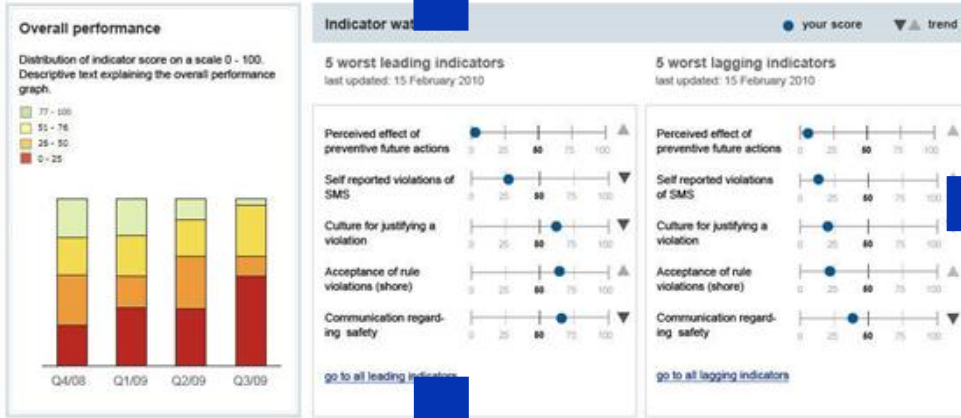
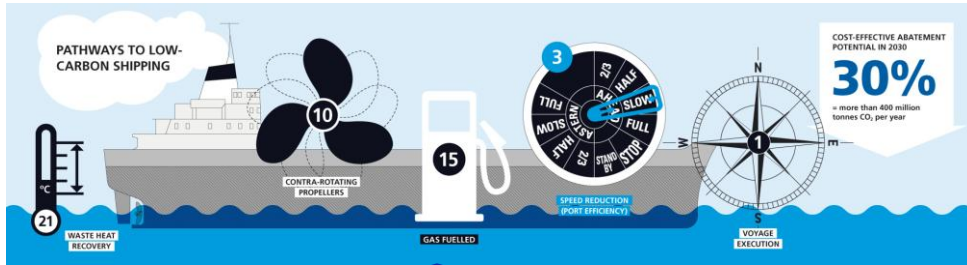
BICC organisation and roles



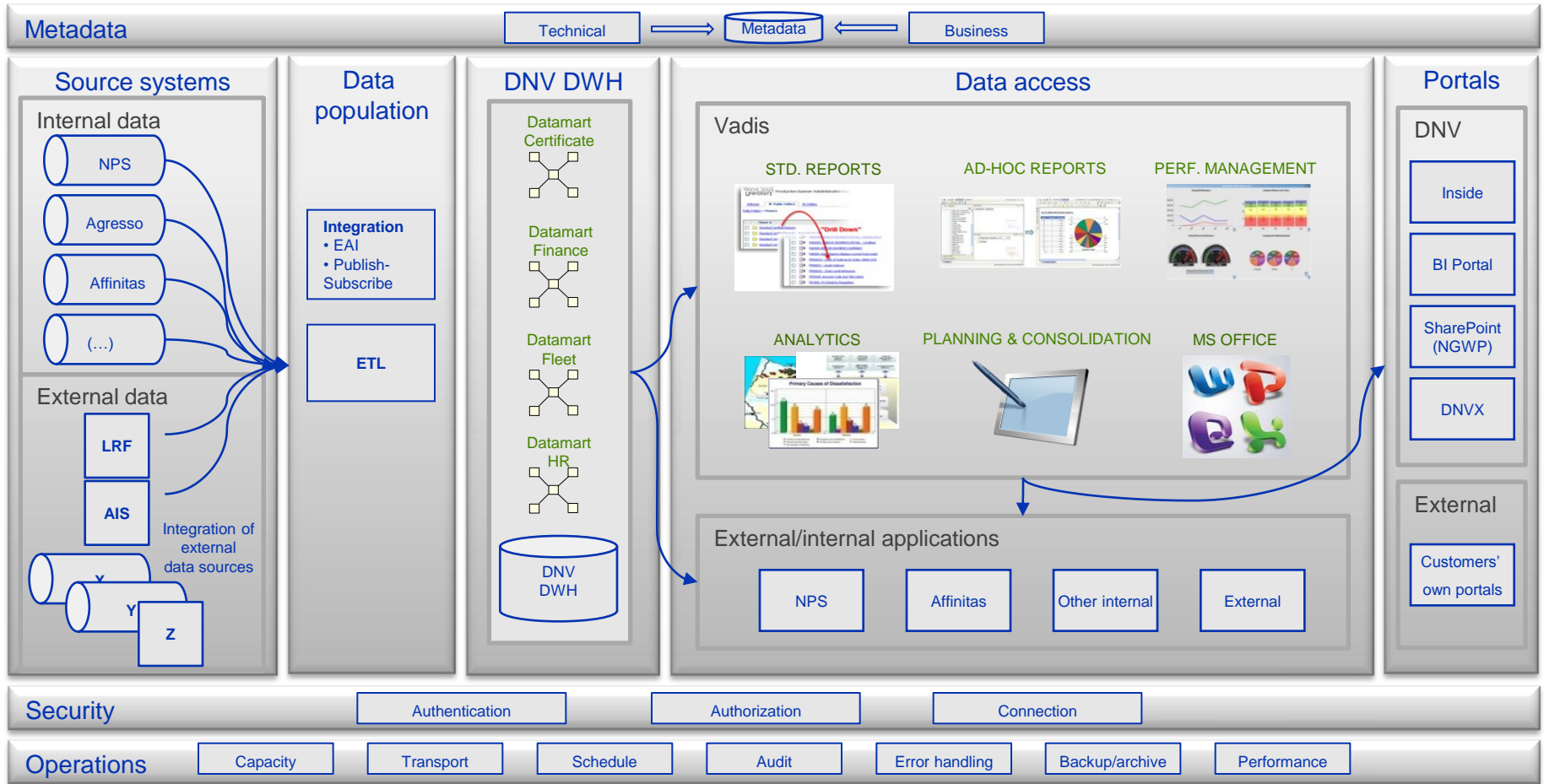
DNV Data centred services – common platform



External services



High level BI architecture



System landscape



In production Jan 2009 – branded as “Vadis”
200 Reports
Already 1000 distinct users

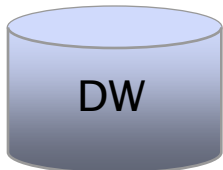
Cognos[®]
software

Components: Cognos 8 BI, Planning, Consolidation, Metric Studio



INFORMATICA

1640 daily run sessions



Microsoft[®]
SQL Server

1,6 TB
110 Fact tables
260 Dimensions

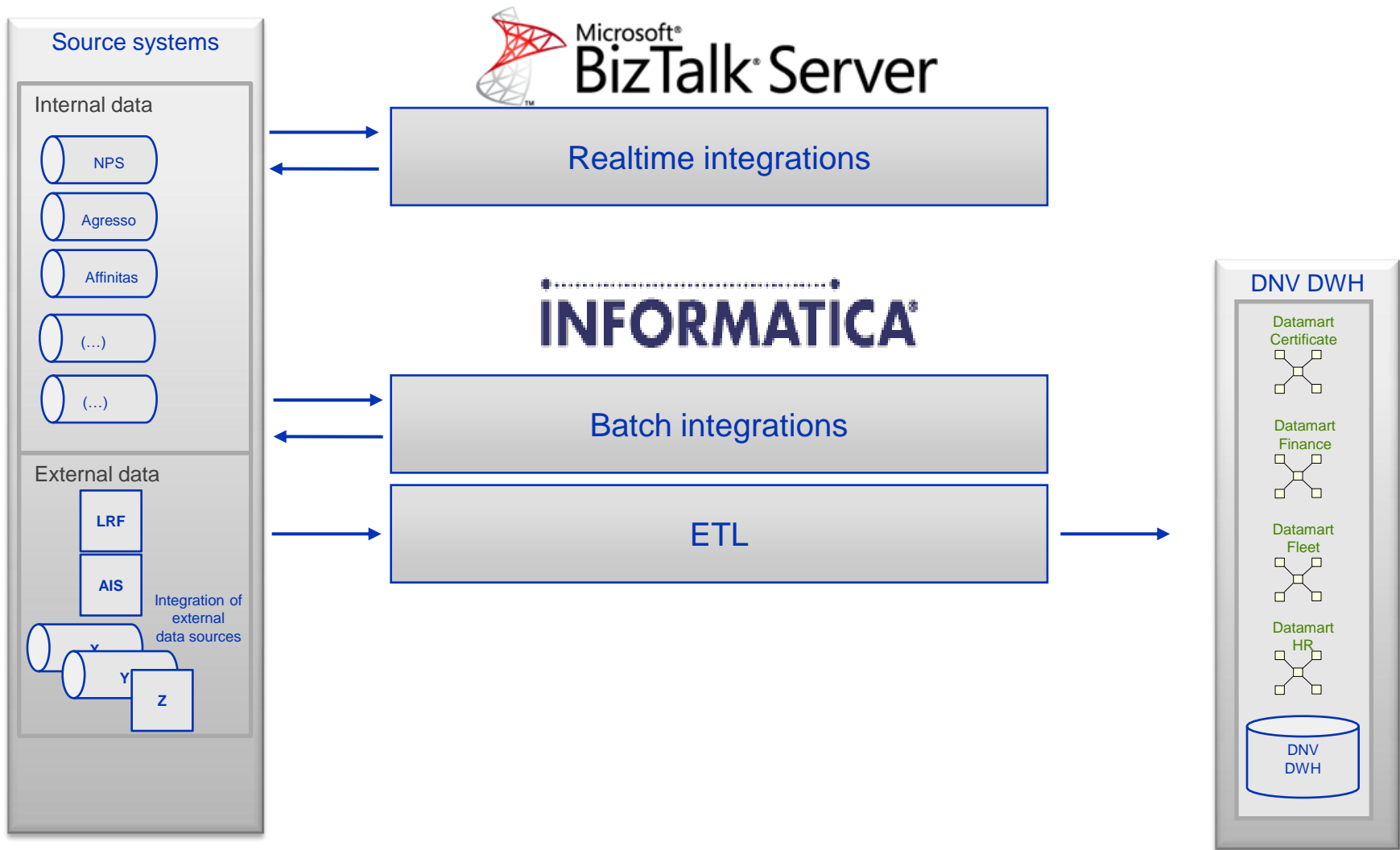
SIEBEL

Used for some source system specific BI services

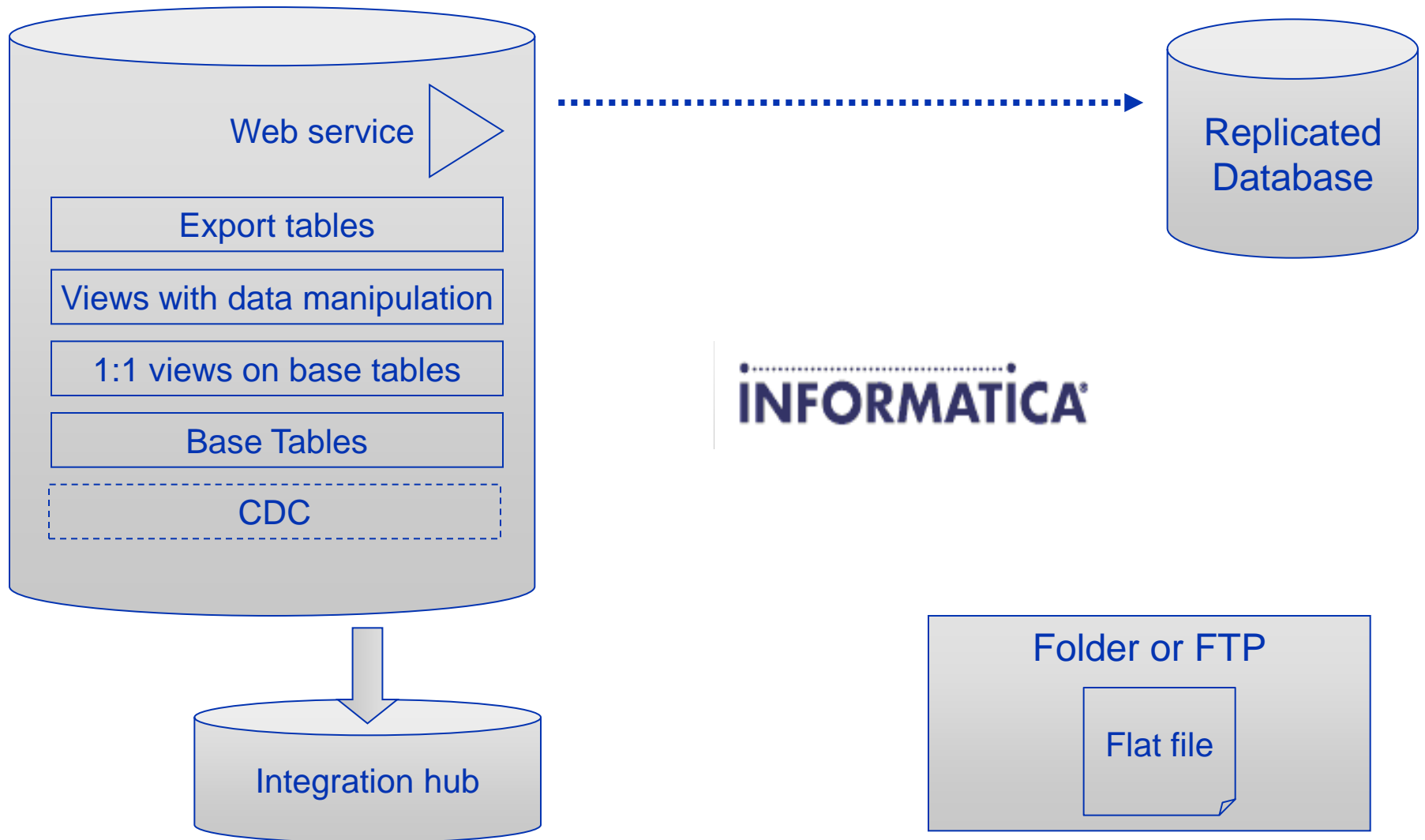
Technical details

- Dev – Test – Prod environments on both PowerCenter and SQL Server
- PowerCenter 8.6.1. Upgrade to PowerCenter 9 before summer
- SQL Server 2005 Upgrade to SQL Server 2008 R2 before summer
- From March 24 core CPU, 164 GB memory on SQL Servers
- Supplementary PowerCenter modules
 - RealTime
 - Informatica Data Quality

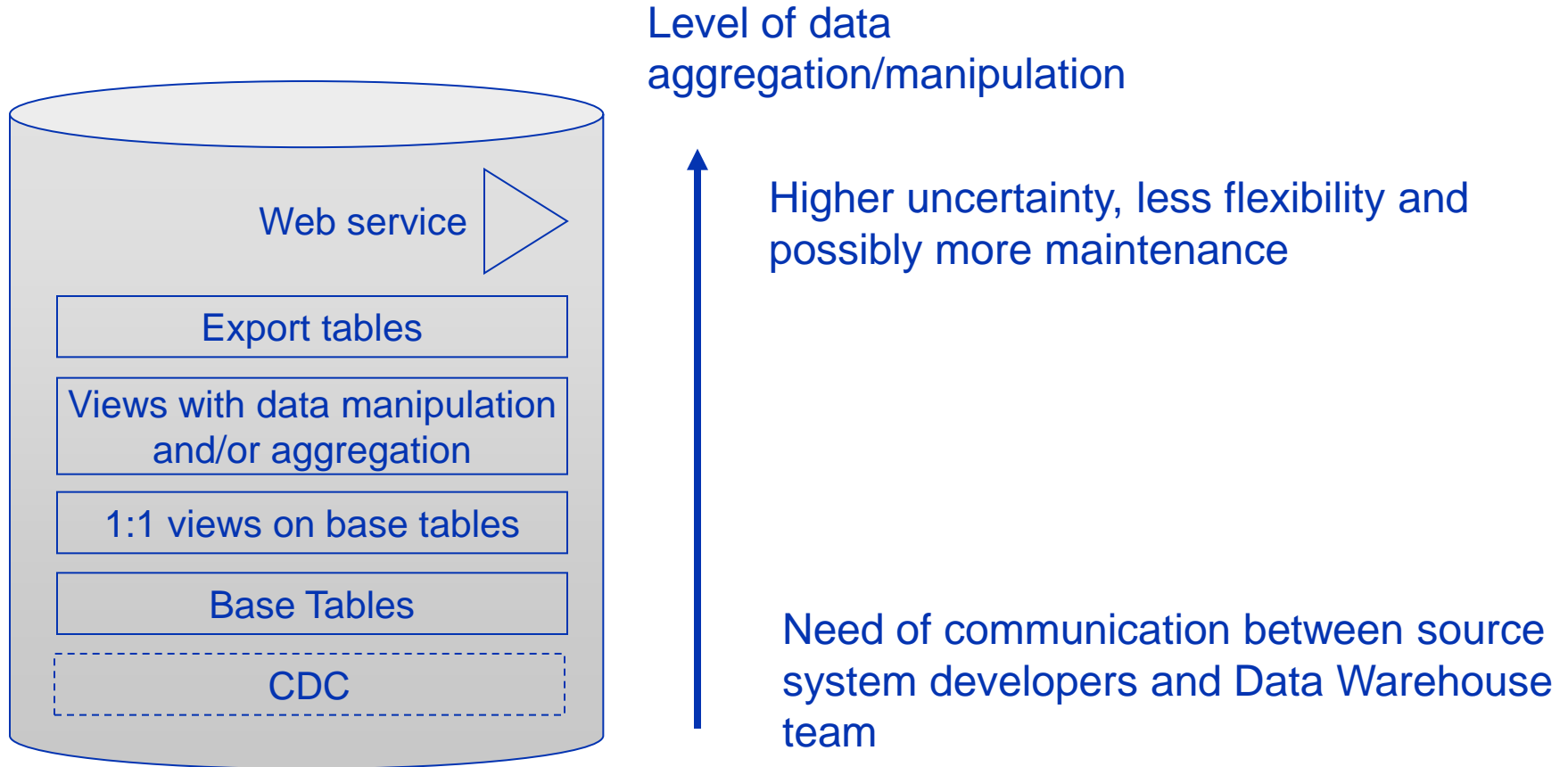
Use of Informatica in DNV



Accessing source systems



Accessing source systems



Data access - Preferences and Requirements

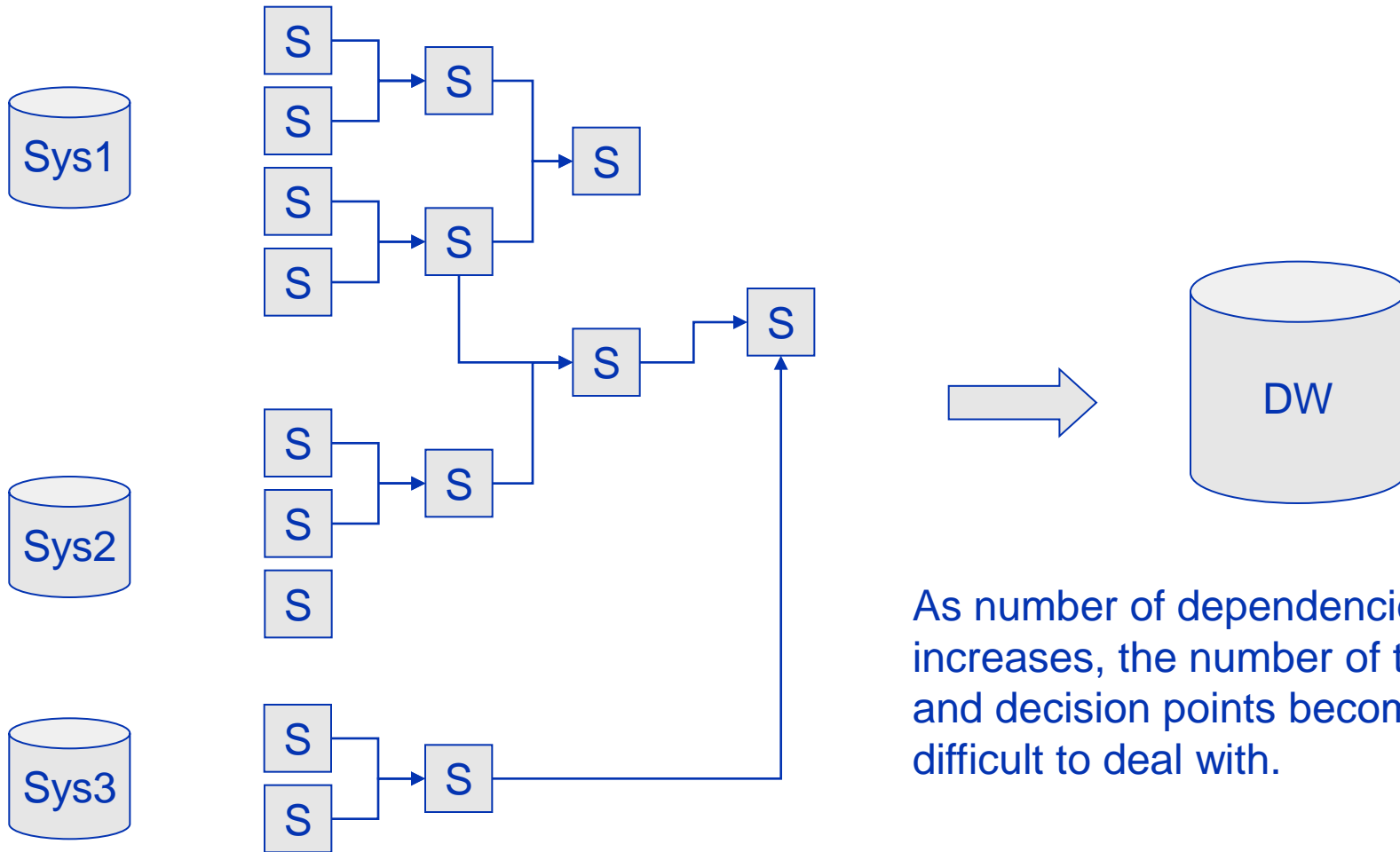
- Transactional data are required
- Reliable timestamps (if available)
- Consistent keys – also after source system conversions
- "Untouched" data
- Complete data sets

→ From a data warehouse point of view, we prefer access to the base tables

All ways of accessing source system data have elements of risk. Navigating in the landscape of control, flexibility and stability is a political process.

→ Standard methods for accessing data with corporate support.

Tailor made solutions in DNV



As number of dependencies increases, the number of threads and decision points becomes difficult to deal with.

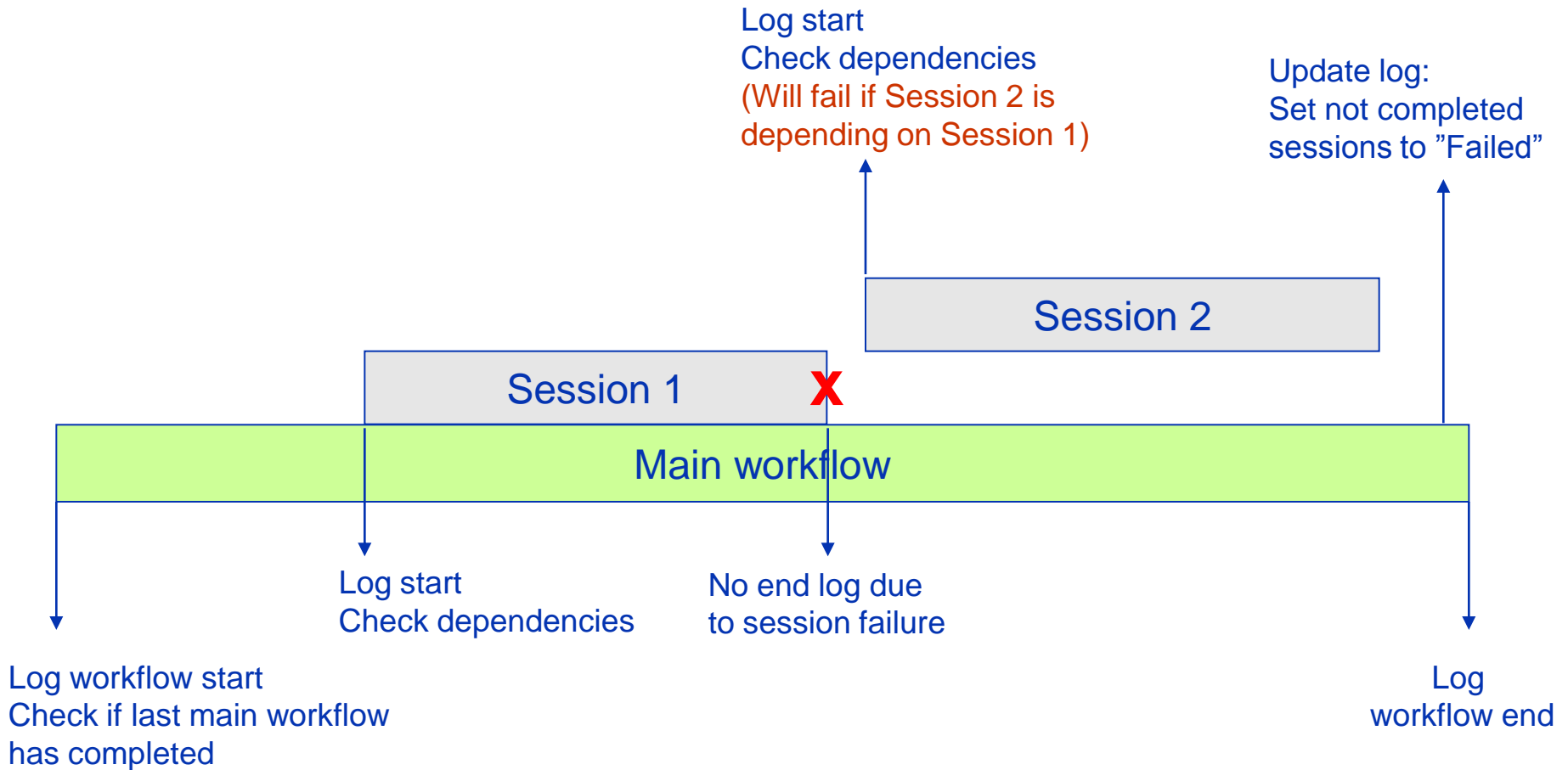
Ensuring data consistency

- Large number of sessions
- One, consolidated data warehouse
- Data quality and integrity?
- What happens if one source system is down or session fails?

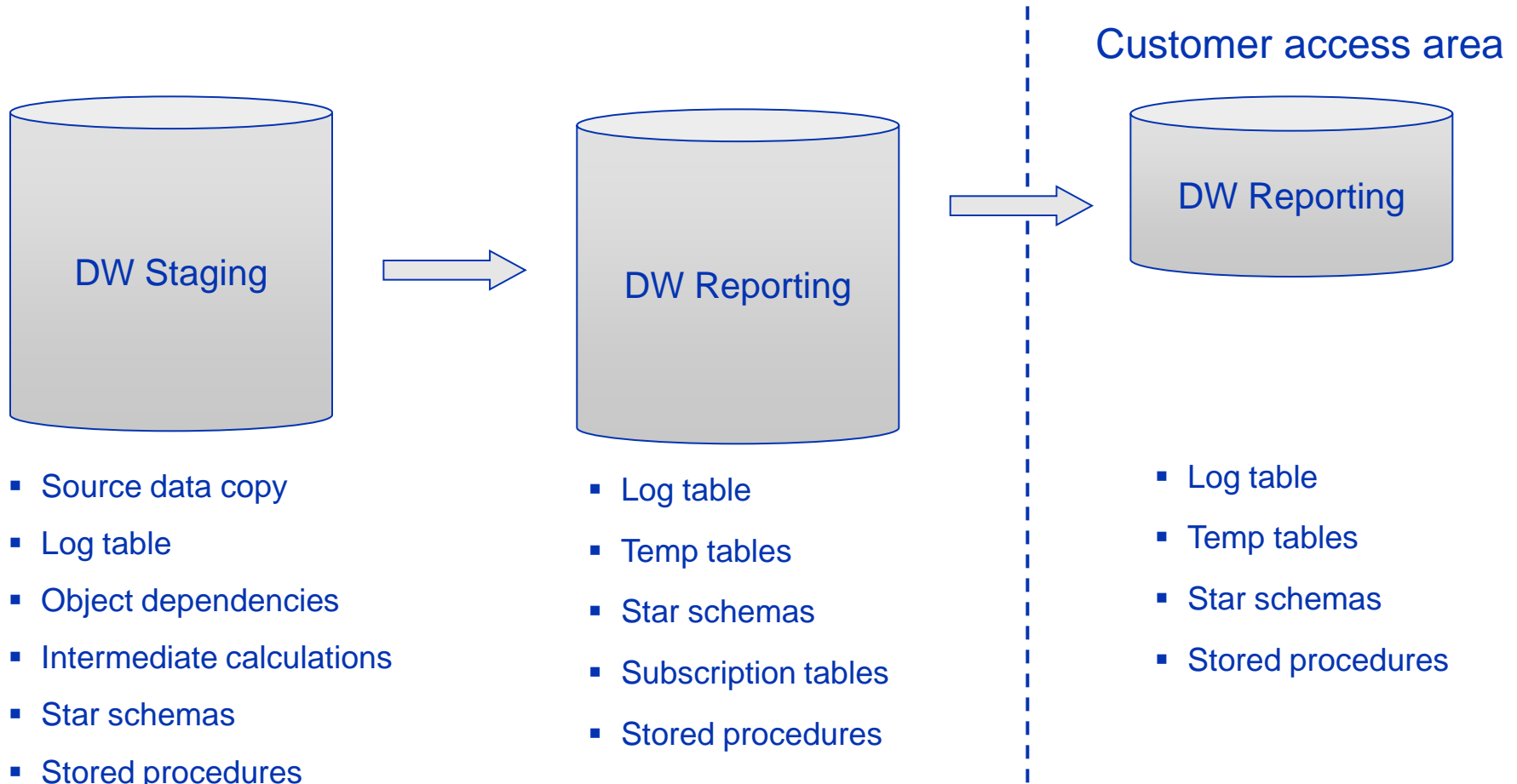
- Informatica's integrated workflow tools:
 - Decision points
 - Threads with conditions
 - Demanding to maintain when the number of sessions and dependencies grow

- DNV's solution
 - All sessions write to a tailor made log table in the data warehouse
 - Table and session dependencies are registered
 - Stored procedures: Fail session if dependent objects are not completed
 - Dependent on developer's input to the dependency system

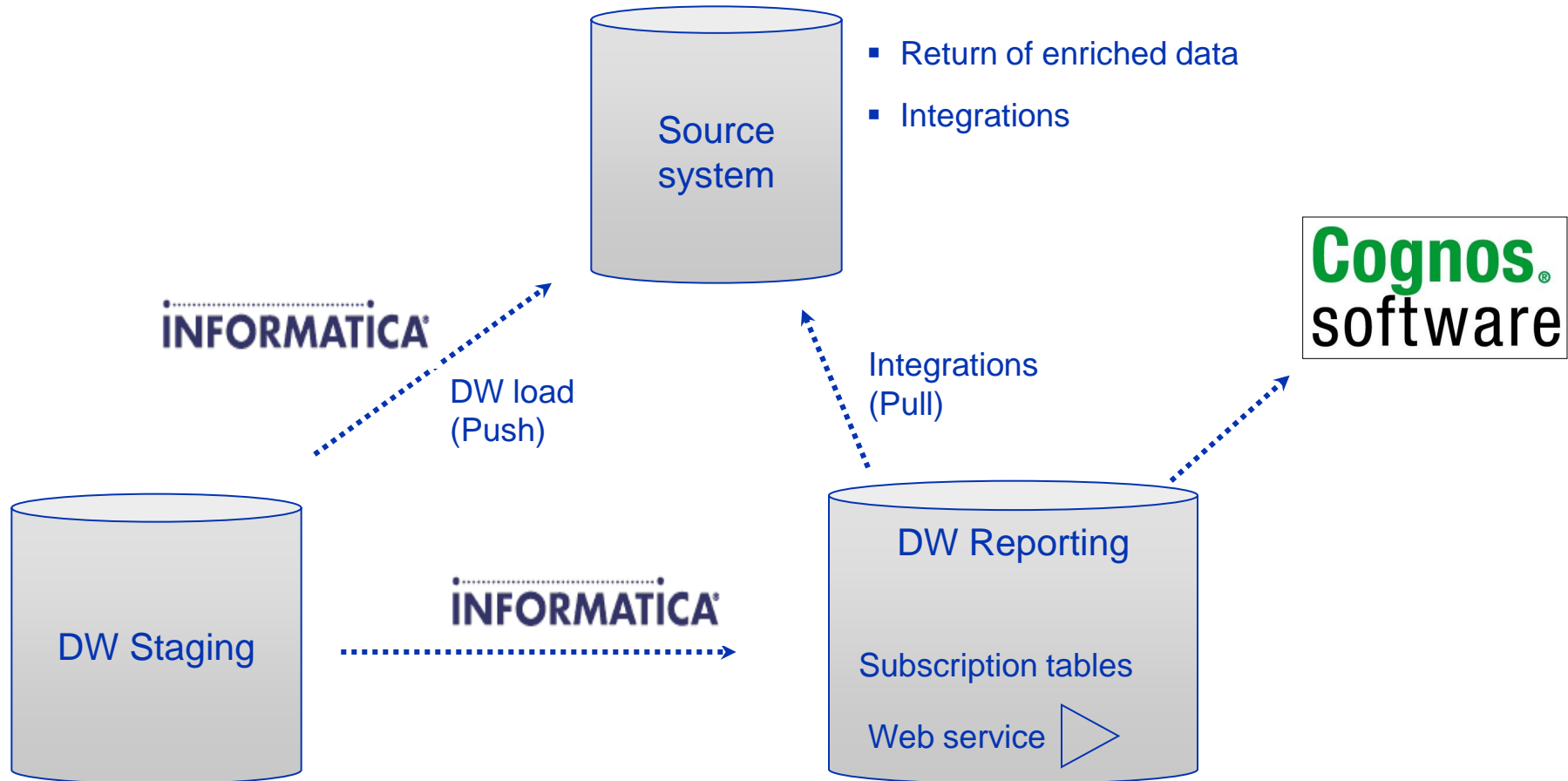
Dealing with dependencies



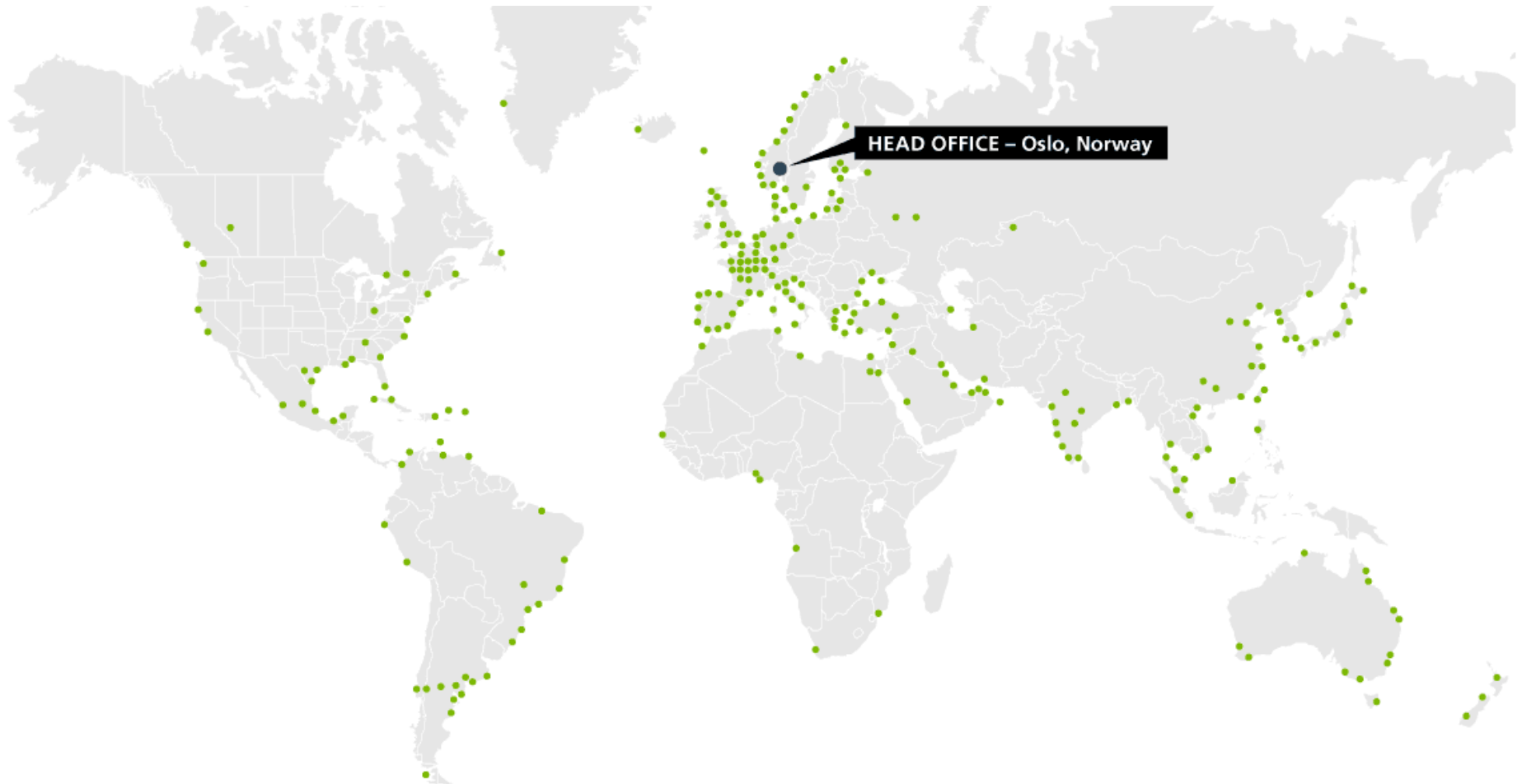
Data delivery infrastructure



Data delivery infrastructure



Information needed around the clock



Global organisation

- Consistent data while data are loading
 - Data have to be available
- Minimize time window for loading the data that are used by reports

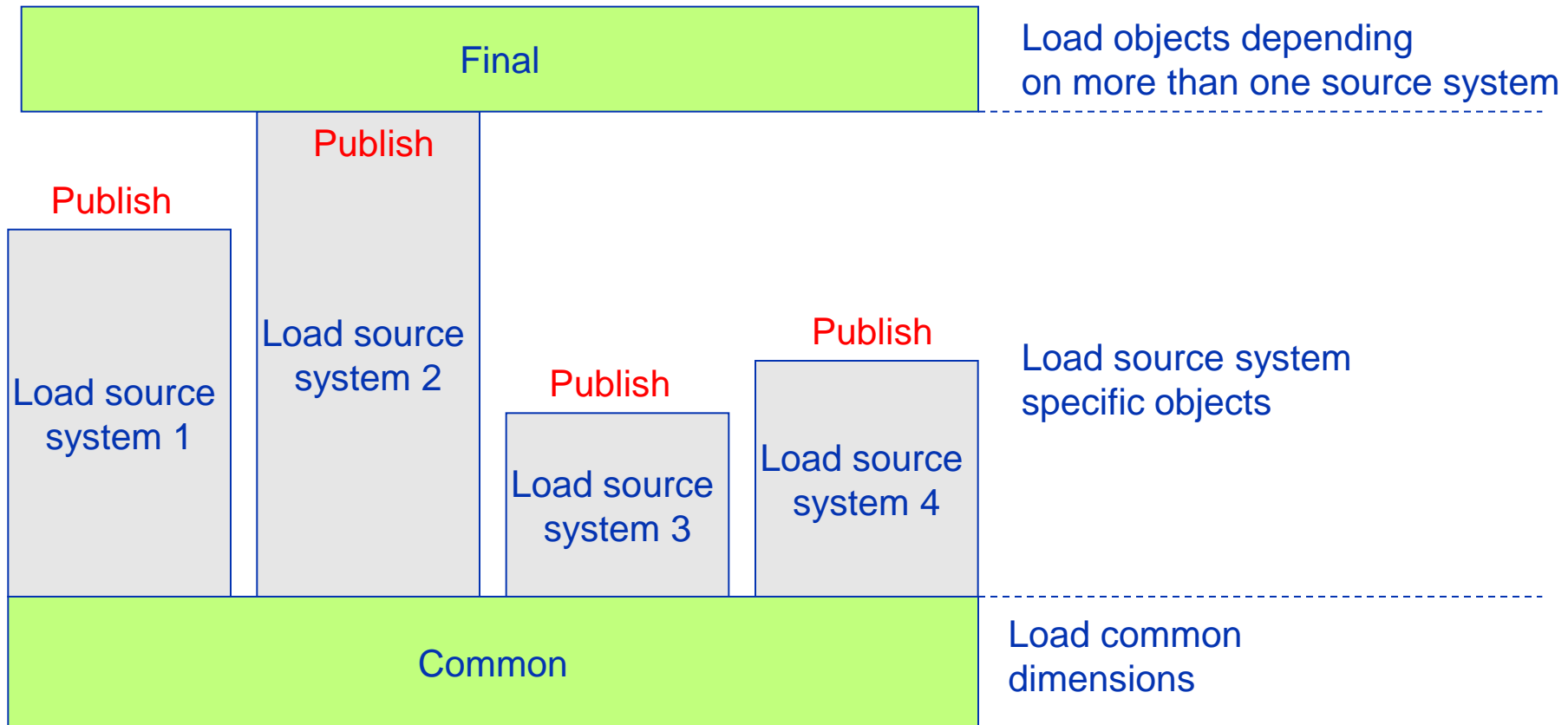
Data delivery

- Large number of sessions
- ETL time window is a limited resource

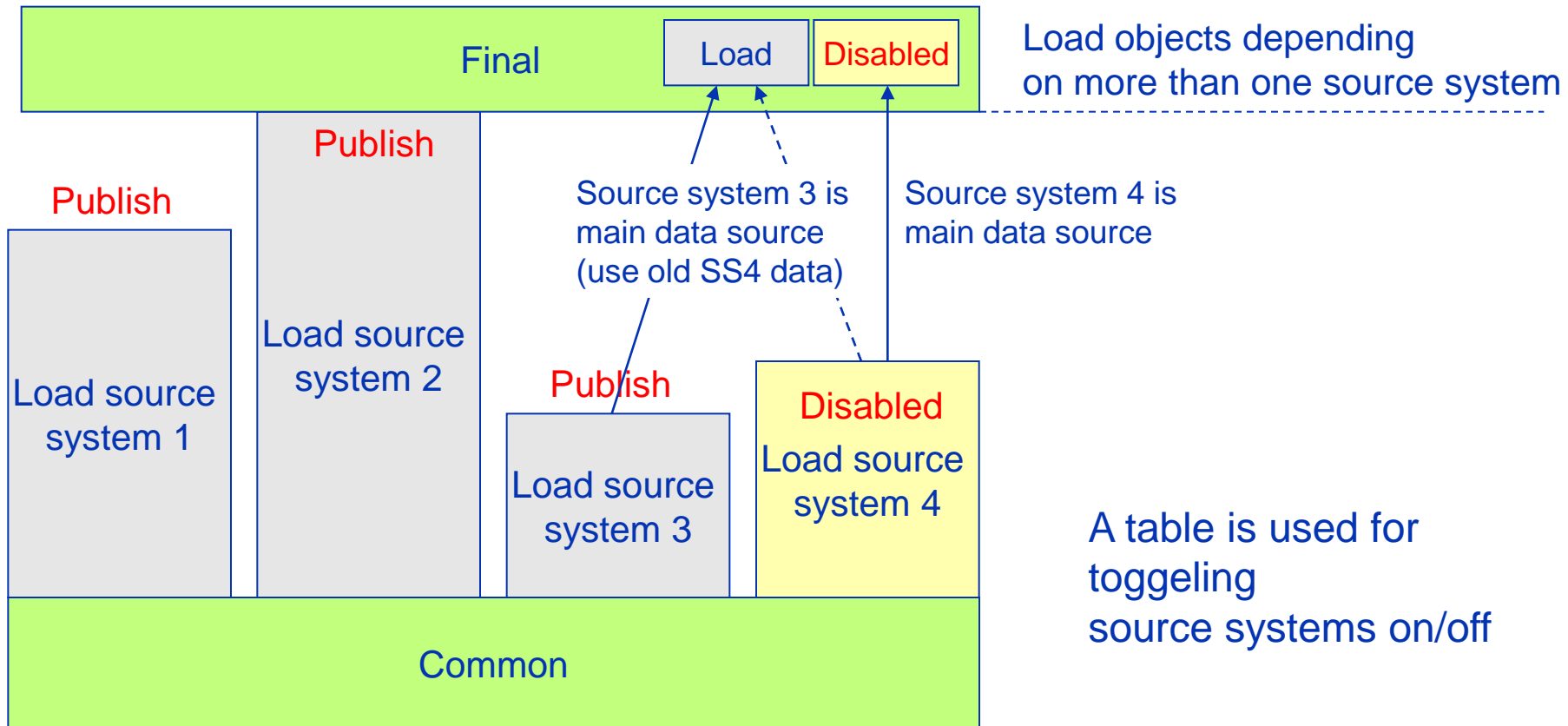
- Utilize the ETL load over time
- Deliver data as soon as they are ready

→ Strategies for parallel load

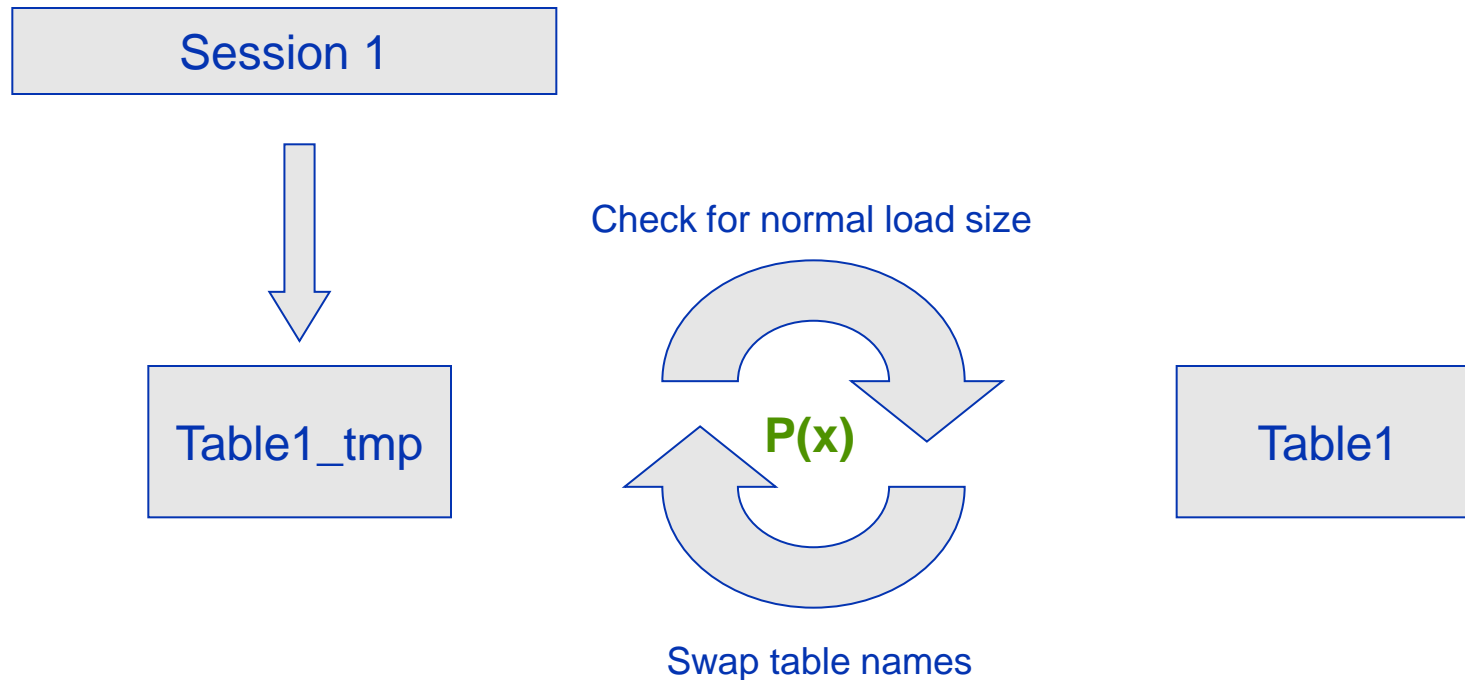
Parallel load



Disabling source systems when needed



Publish data to report marts



Tailor made stored procedures

- **Start Session**
 - Check dependencies, fail session if dependent tables is not completed
 - Write to DW log table
 - Session start

- **End Session**
 - Write to DW log table
 - Session end
 - Statistical info

- **Truncate table**
 - Empty table in a secure way.
(PowerCenter's truncate table option can not be used due to the use of stored procedures)

- **Swap Tables**
 - Swap table names
 - Check data integrity

ETL initiation

- Scheduled load
 - Nightly
 - Multiple times per day
- Cognos calls web services for initiating ETL load on near real time basis

Wrap up

- DNV has to deal with a large number of sessions that feeds one, consolidated data warehouse.
- We have tuned PowerCenter to fit with these special requirements

- Questions or comments?

Safeguarding life, property and the environment

www.dnv.com



MANAGING RISK **DNV**