Statistics Netherlands Application Strategy

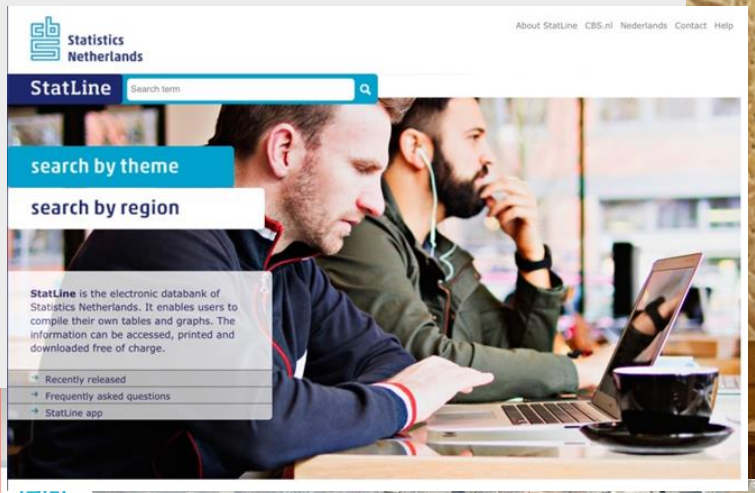
CSPA Workshop Wiesbaden

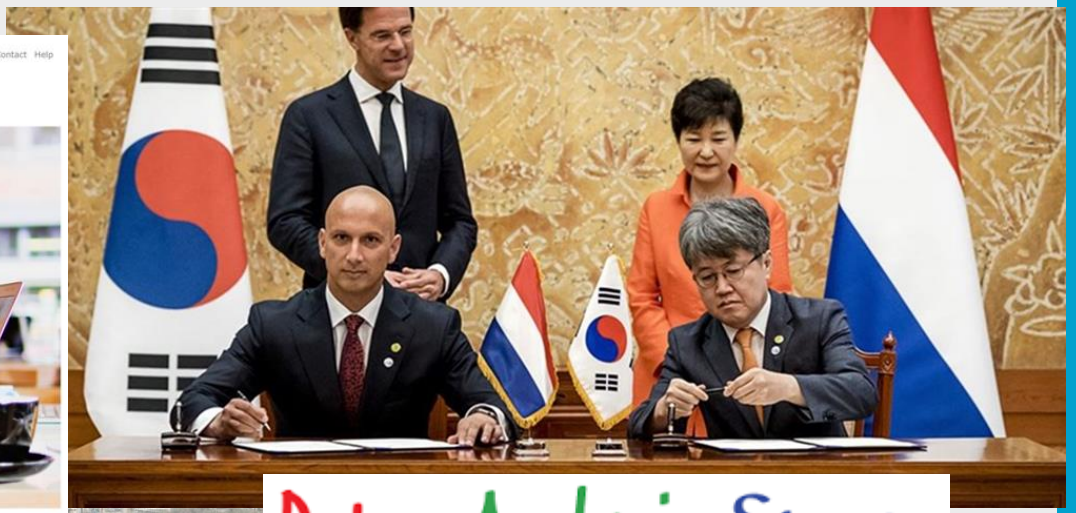
Centraal Bureau voor de Statistiek

Content

- Strategic Drivers
- Application Strategy
- Implementation
- Three flavours of CSPA

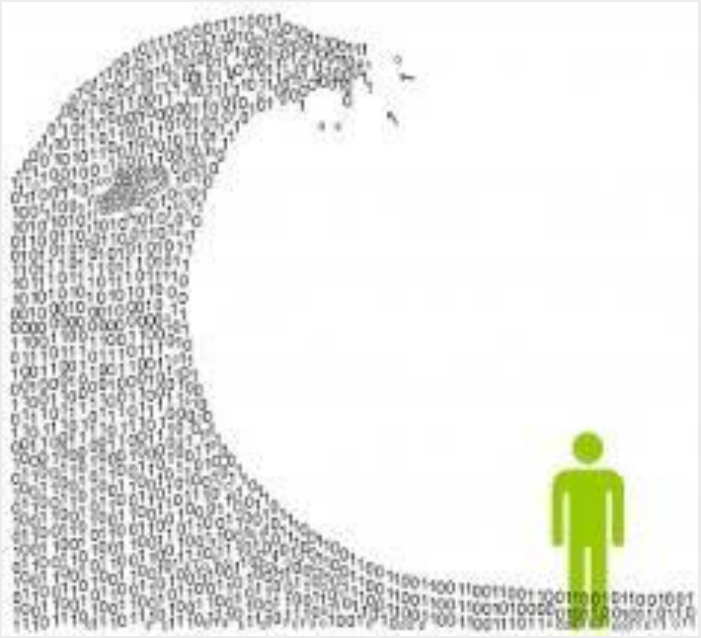
New ambitions..





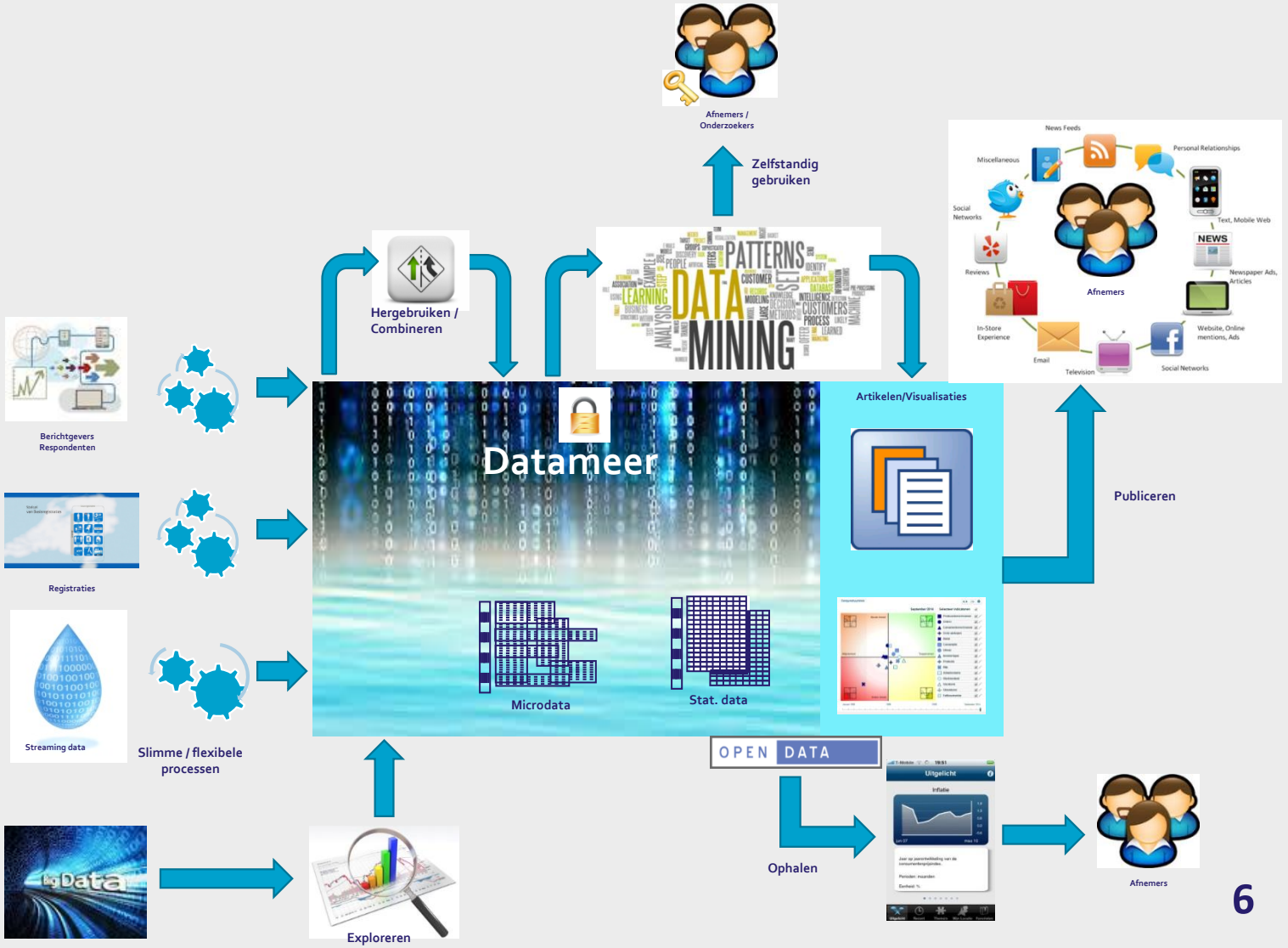
..new partnerships..

...and new (but also old) challenges



IV Vision 2020

IV: capabilities CBS needs to realise strategic goals
(process, methodology, applications, infrastructure, people)



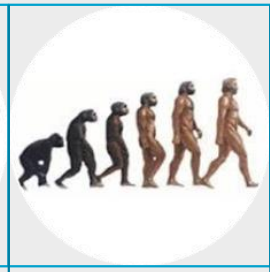
Application strategy principles

- The automation of work as much as possible done by statistical employee (increased flexibility, less support costs)

- Differentiation of application architecture and governance for different change dynamics (fit for purpose IT)

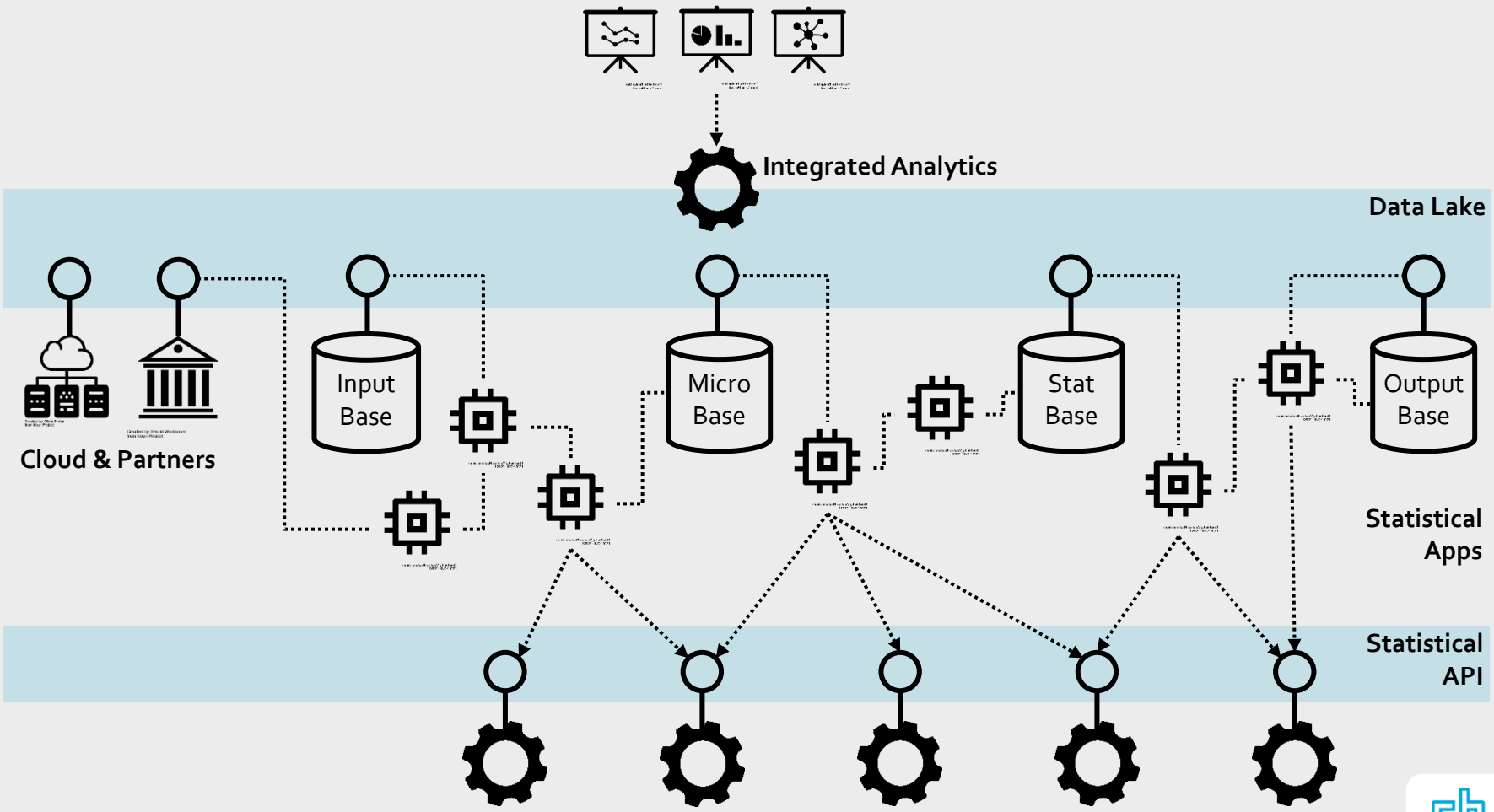
- Sharing of ICT skills in communities and pooling of scarce specific IT skills in centers of excellence (less risk of single point of knowledge)

Application Strategy Scenarios

					
Innovative	Ad hoc	Simple	Frequently changing & complex	Evolutionary changing & complex	Corporate

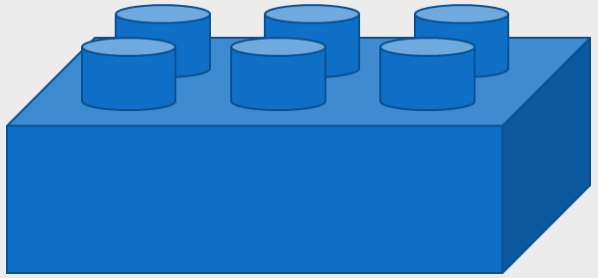
- Agile methodologies
- Multi-discipline teams
- Continuous delivery
- Design Board

Architecture



What is the CSPA?

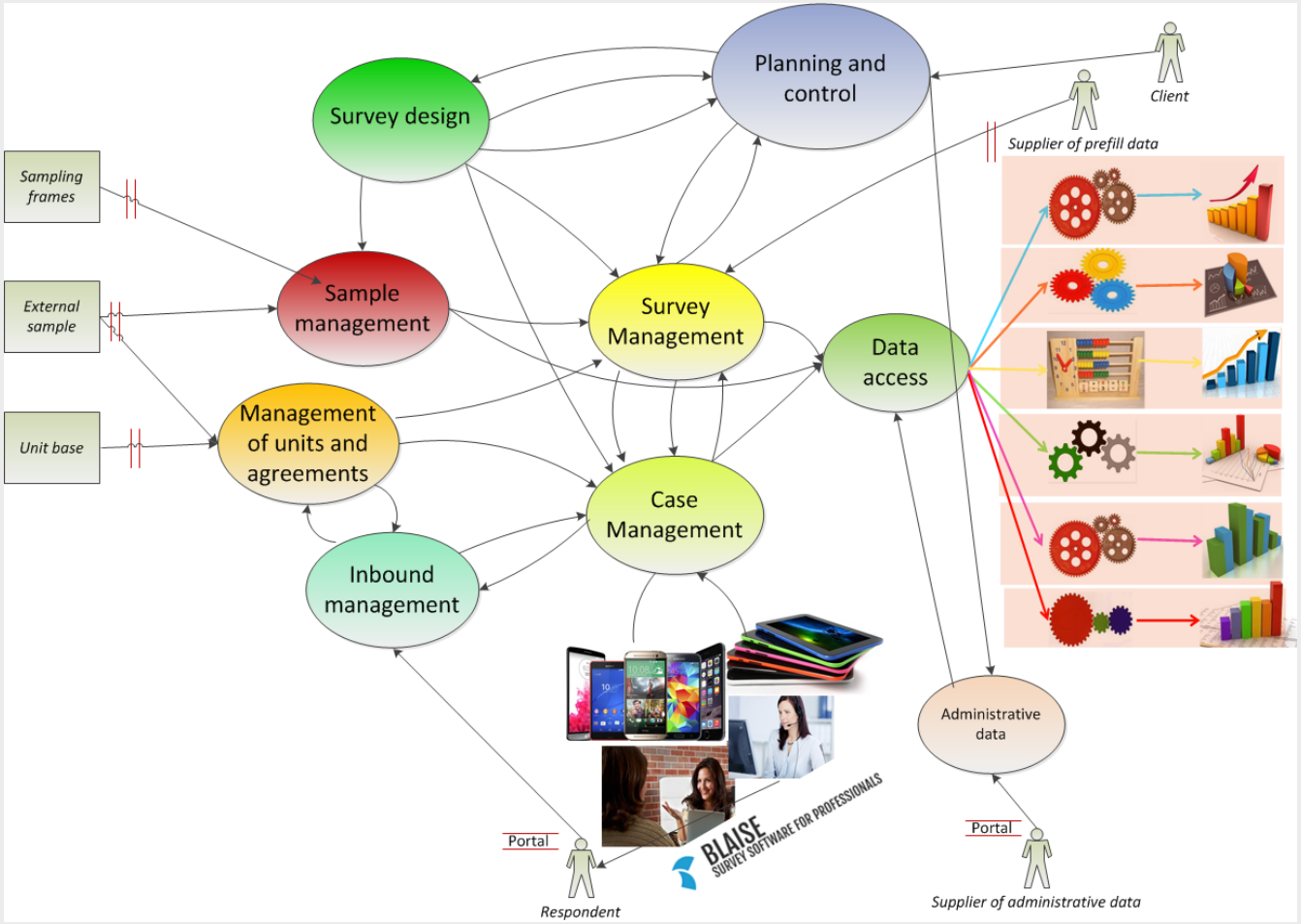
- A template **architecture** for official statistics
- A set of standard specifications for new **statistical components** (services) that can be used in a **modular way**



- A new way of developing **statistical tools**, with **sharability as a design feature**, not an afterthought

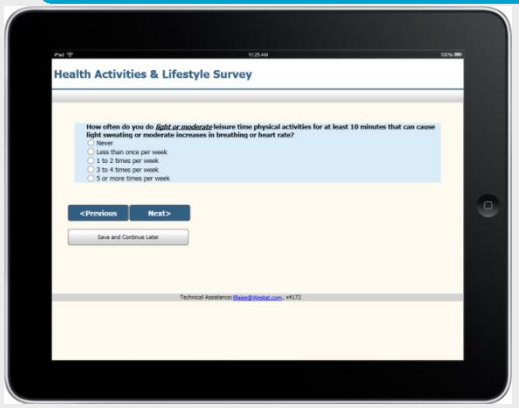
Generic application development

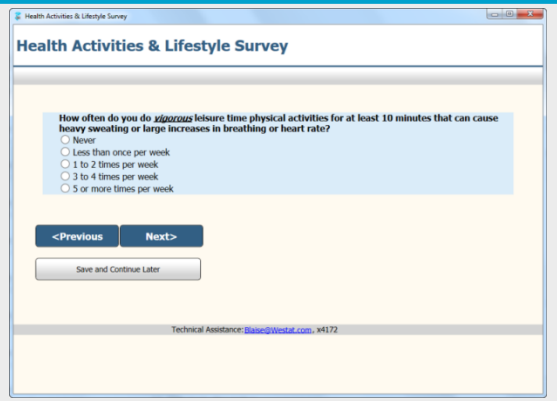
Service-Oriented Architecture



Designed for reuse - Blaise 5

BLAISE
SURVEY SOFTWARE FOR PROFESSIONALS





sharability as a design feature

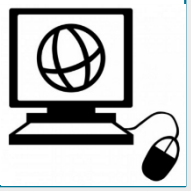
CAPI

CATI

CAMI

CARI

CAWI



Complex and Large Surveys
Intricate Routing Rules

Open Architecture (APIs)
Device Adaptive
Intelligent Screen Generation
Multi-Lingual (incl. Non-Western)
Fast Compilation
Mixed Mode
WYSIWYG
Paradata – Audit Trail

DDI repository (Colectica)

Multi Platform

Multi Mobile Devices

CSPA "classic" (top-down)

Challenges ☹

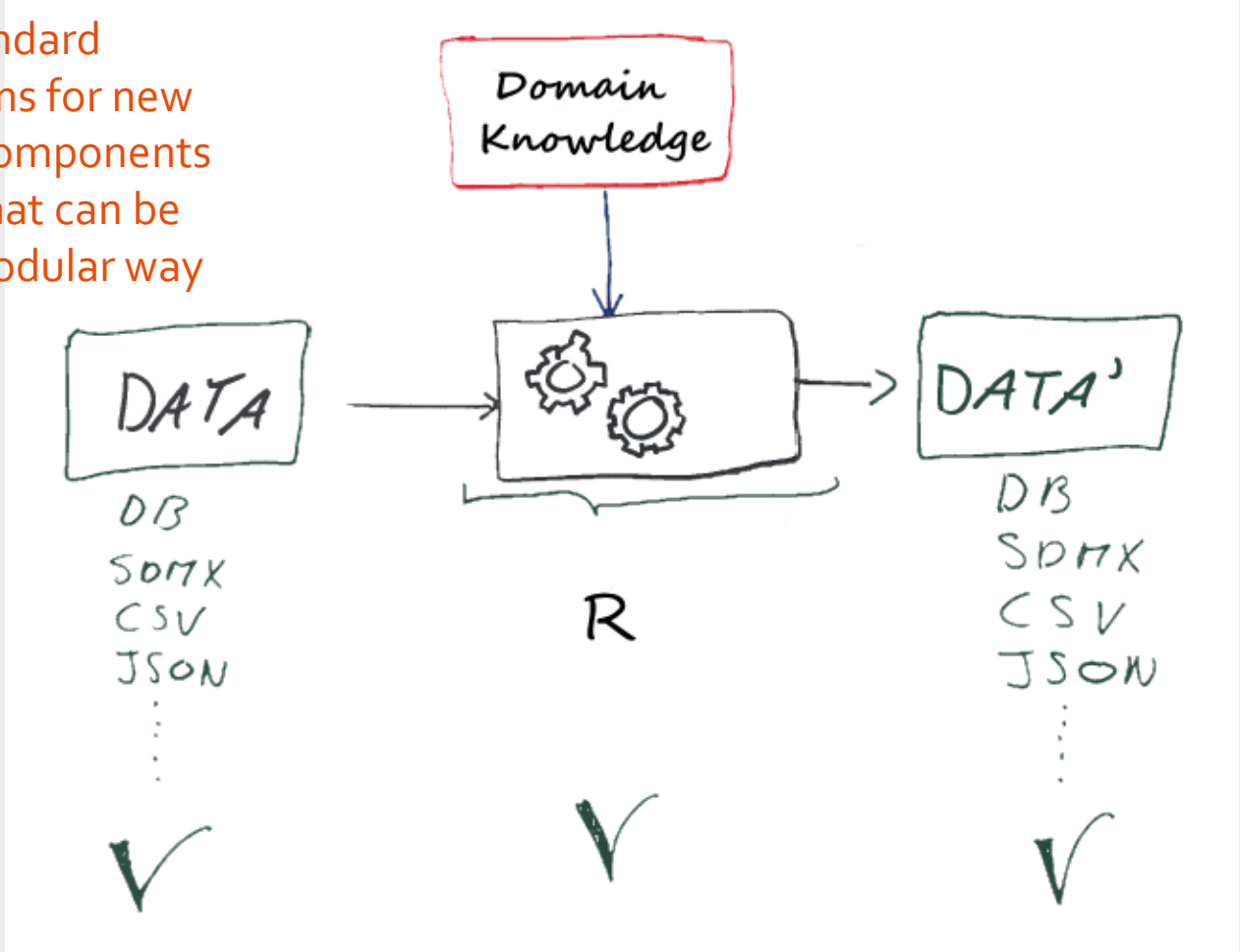
- Low number of available services
- Requirement to do design for reuse from start
- Complexity (SOA, GSBPM/GSIM, LIM..)

Opportunities ☺

- ESS/ESSNet projets
- Use in other international SW collaboration (.stat, Blaise..)
- In projects where sharing is primary goal CSPA is state-of-the-art approach

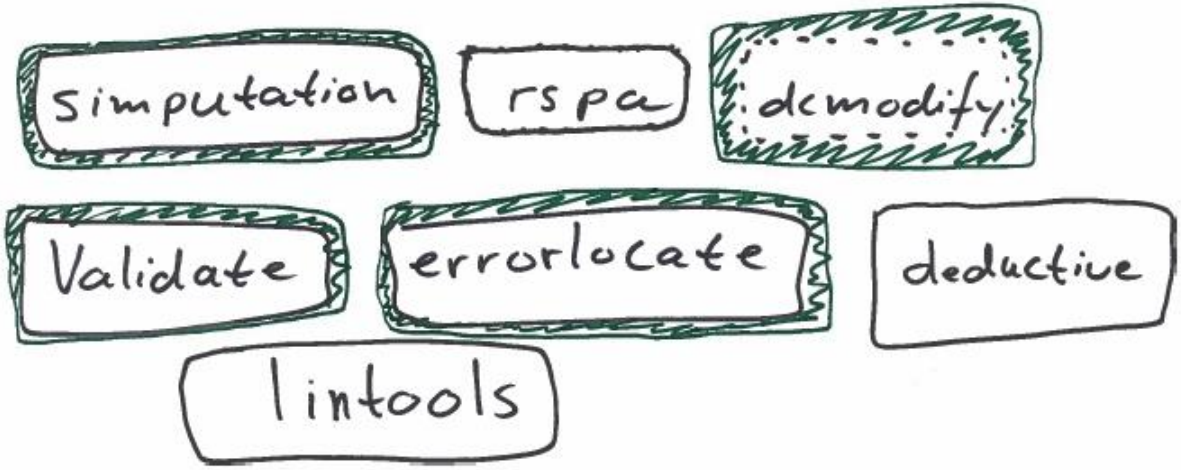
Reuse of core functionality in R packages

A set of standard specifications for new statistical components (services) that can be used in a modular way

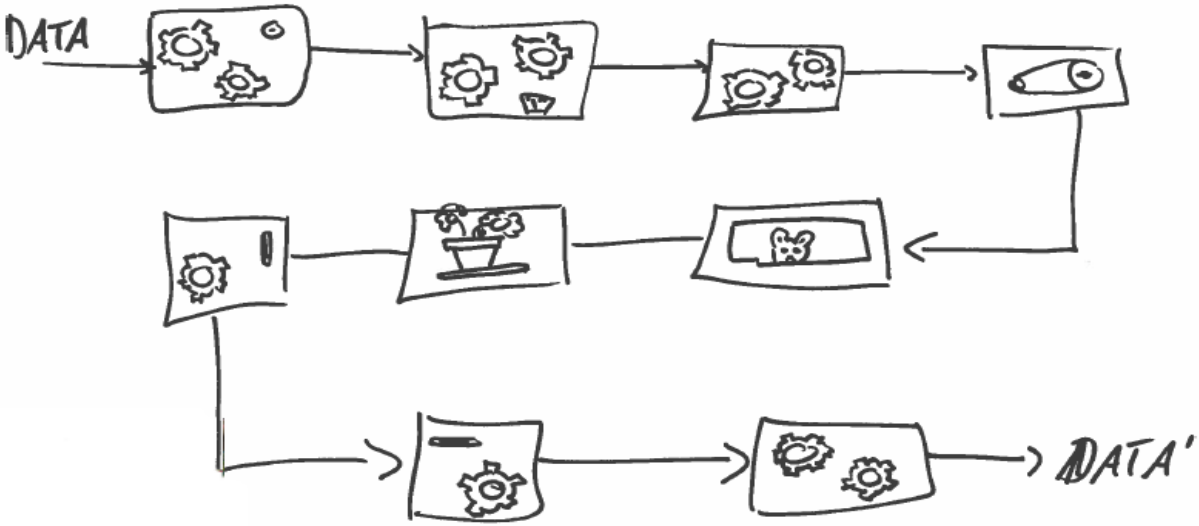


R tools for data validation, correction and imputation

Available Packages



Chainable



SNStatComp / awesome-official-statistics-software

Unwatch 10 Unstar 12 Fork 2

Code Issues 0 Pull requests 0 Projects 0 Wiki Settings Insights

An awesome list of statistical software packages useful for creating official statistics.

Edit

Add topics

60 commits 1 branch 0 releases 5 contributors

Branch: master New pull request Create new file Upload files Find file Clone or download

donthebike link fix Latest commit 901611e 5 days ago

README.md link fix 5 days ago

README.md

Awesome official statistics software

An awesome list of open source statistical software packages useful for creating and accessing official statistics.

An item on this list is awesome because

1. it is free, open source, and available for download;
2. it is confirmed to be used in the production of official statistics by at least one institute, or
3. it provides access to official statistics publications.

We prefer packages that are reasonably easy to install and use and that are actively maintained.

CSPA "light" (bottom-up)

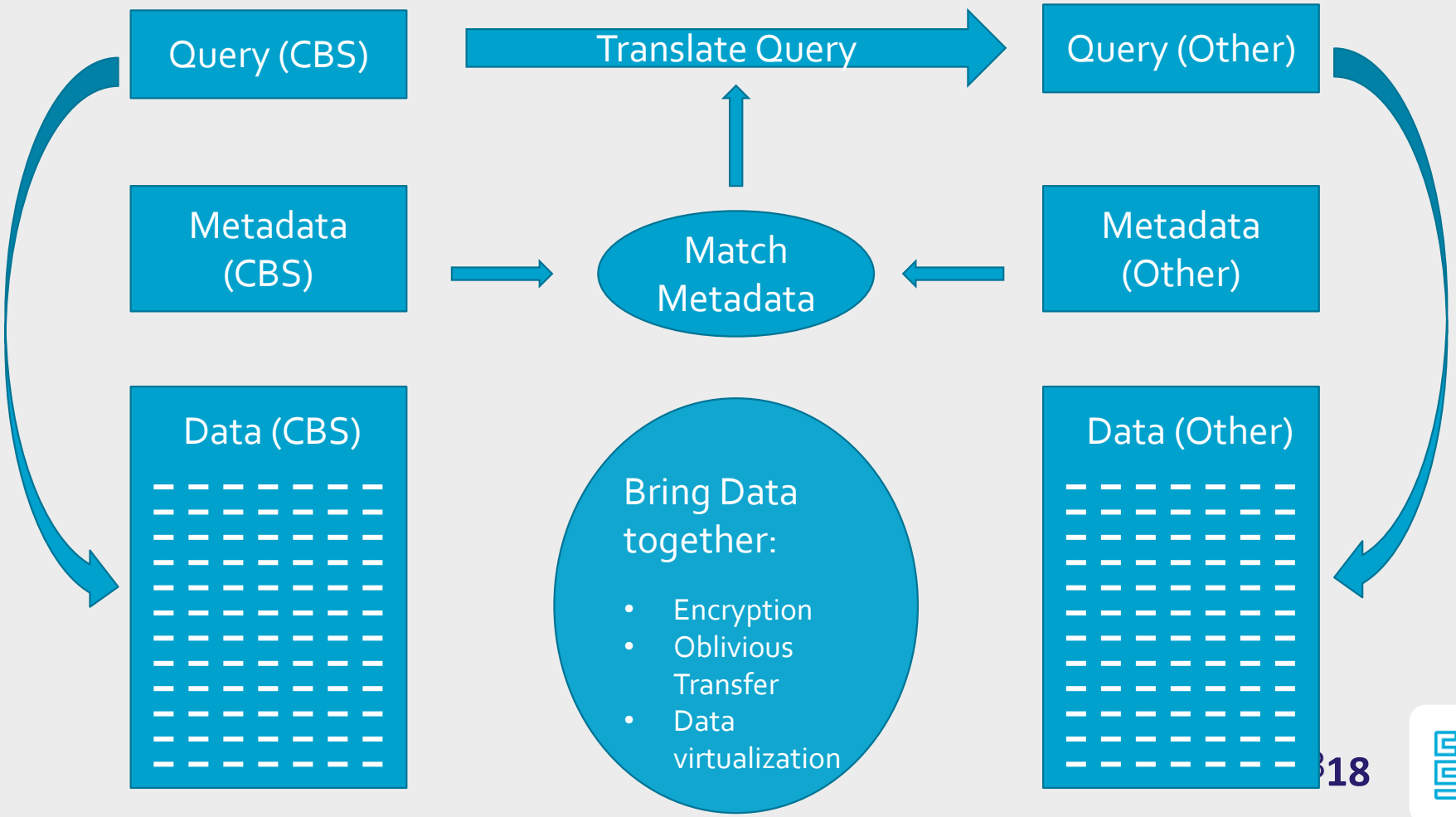
Challenges ☹

- Integration not completely plug and play
- Visibility
- Non-functionals (performance..)

Opportunities ☺

- Lots of stuff already out there (CRAN, Awesome SW..)
- de-facto open-source standards (machine learning..)
- Reuse of core code in various scenarios (R programs, BI tools, big data platforms, cloud..)

Distributed Processes and Secure Data Sharing (Multi-Party Computation)



CSPA “future” (algorithms, models, MPC..)

Challenges ☹

- What is it? Do we need it?
- Variability - can't rely on single standard
- Evolving - things are changing as we speak

Opportunities ☺

- Important if we want to harvest alternative data sources
- New area (no legacy)
- New partnerships (beyond NSO community)