Federal Department of Home Affairs FDHA
Federal Office of Meteorology and Climatology MeteoSwiss

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

OSCAR

Observation Systems Capabilities and Review Tool

A core element of the WMO Integrated Observing Systems (WIGOS) framework

Jörg Klausen, Bertrand Calpini, Peter Binder
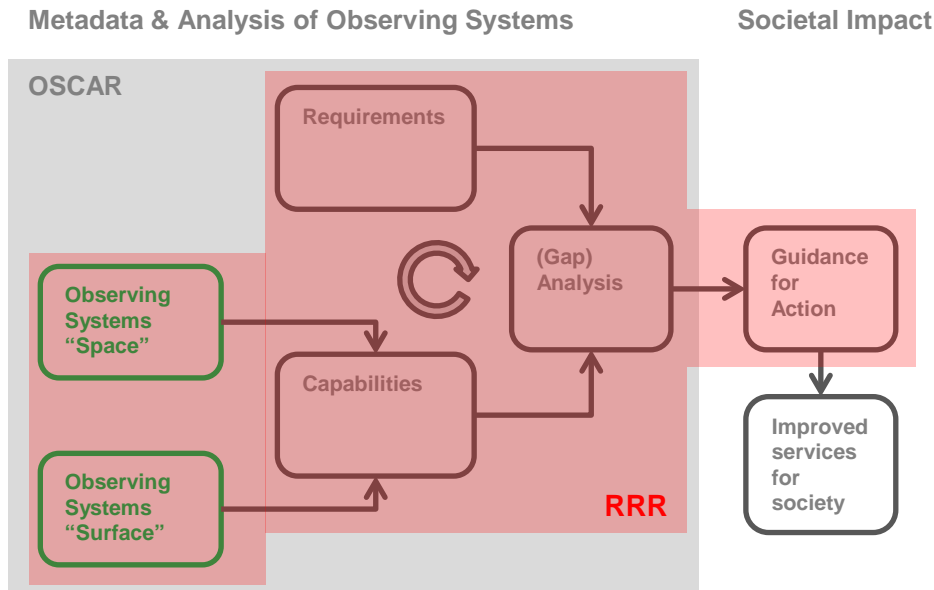MeteoSwiss

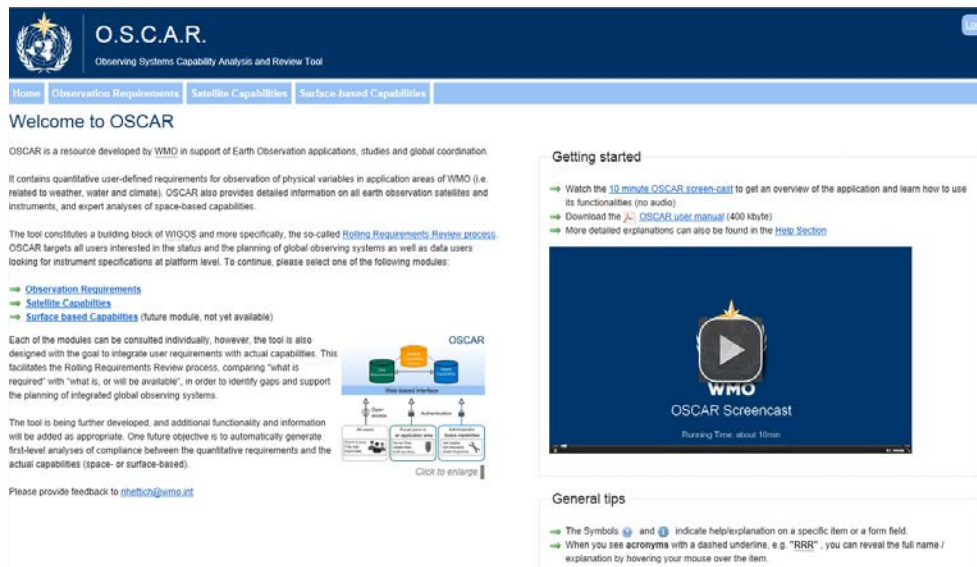February 2014

OSCAR and RRR

- Rolling Review of Requirements (RRR) process
  - Documentation of (Observing) Requirements
  - Documentation of (Observing) Capabilities
  - Critical Review (= gap analysis)
  - Statement of Guidance (= steps for improvement)
- OSCAR is the system to enable the RRR process.

Metadata & Analysis of Observing Systems   **Societal Impact**

OSCAR

Requirements

Observing Systems "Space"

(Gap) Analysis

Capabilities

Guidance for Action

Improved services for society

RRR

OSCAR Today

- OSCAR developed by WMO/SPACE (Jerôme Lafeuille, Nils Hettich et al.) in collaboration with CEOS
- Web-based and available to the public (www.wmo.int/oscar)
- Supporting the needs of satellite community
- Supporting different application areas

OSCAR Tomorrow

- Web-based and available to the public (www.wmo.int/oscar)
- Supporting the needs of satellite community

- Supporting all observing systems (satellite and surface)
- Considering all application areas
- Joint-venture between WMO and MeteoSwiss
  - Seed funding from Swiss Federal Department of Foreign Affairs
  - Contributions from MeteoSwiss, WMO, and WIGOS Trust Fund (so far: Norway)
- Fully integrated 24/7 in operations of MeteoSwiss
  - National weather service of host country of WMO
  - State-of-the-art data warehouse with 24/7 ICT support
  - Expertise with metadata management
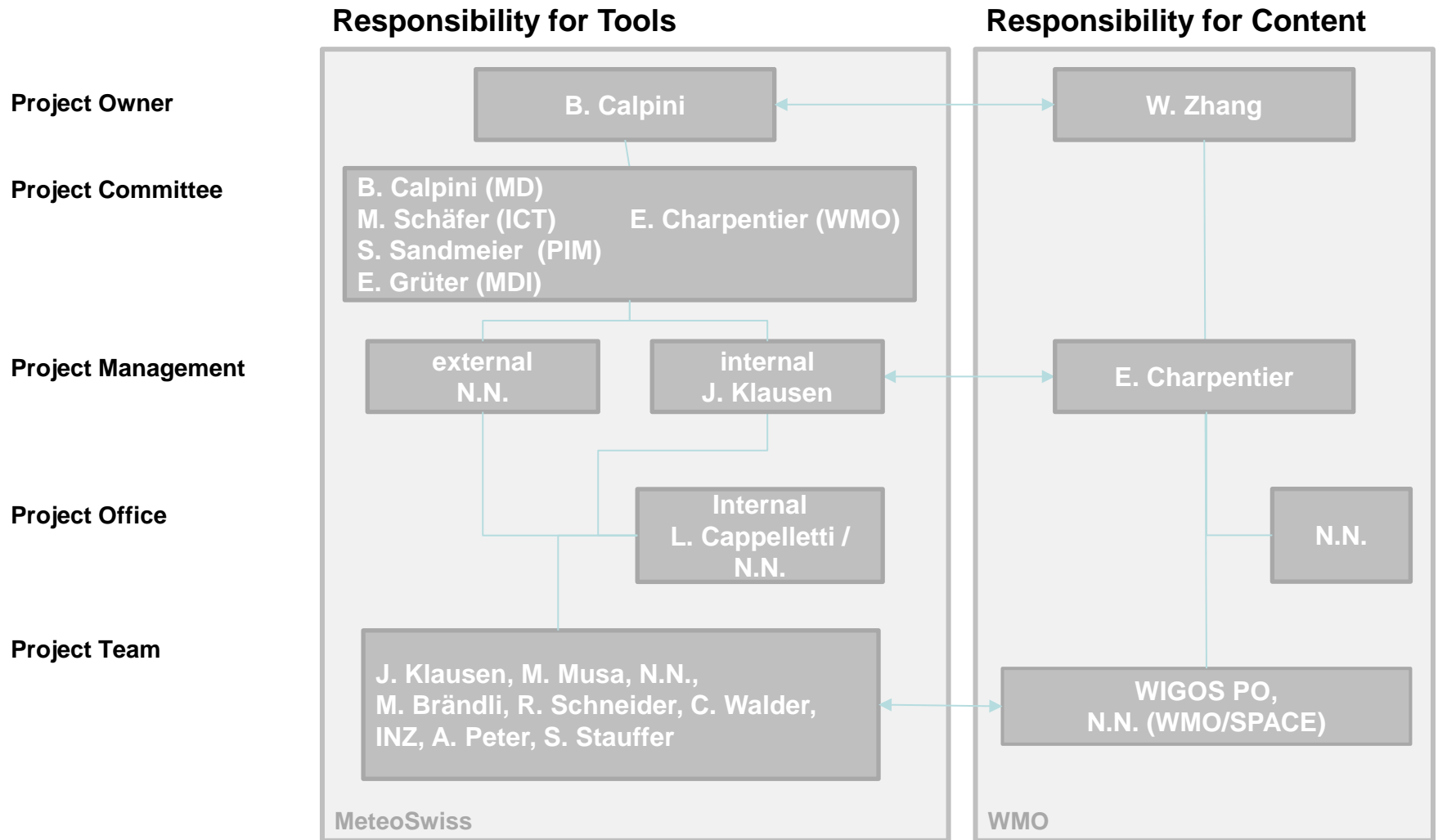 - International reputation of supporting WMO

WMO and MeteoSwiss
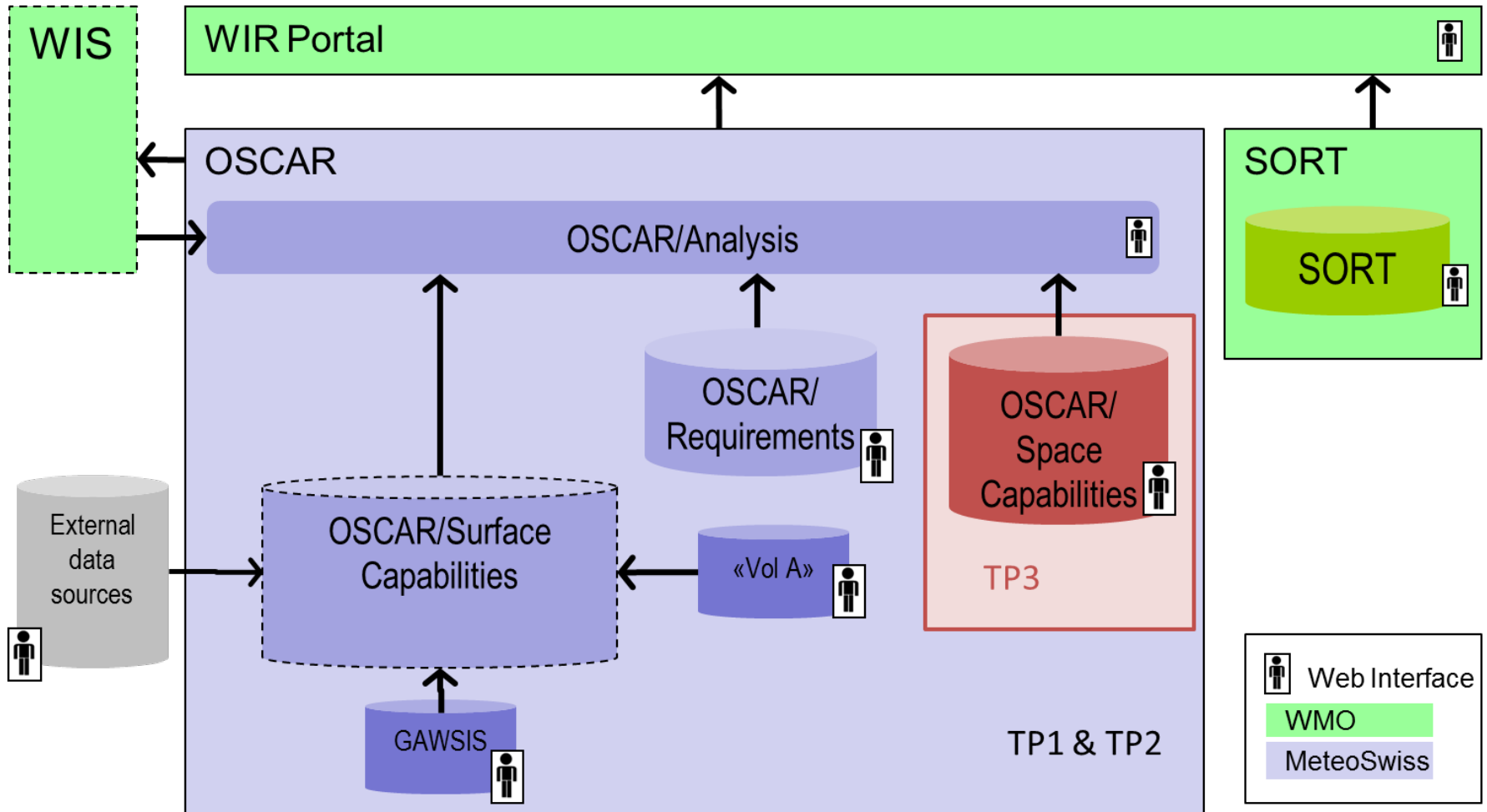## Shared Responsibilities, Strong Partnership

- MoU between WMO and MeteoSwiss

- Specification of functional requirements of OSCAR

  → Business lead with WMO, technical lead with MeteoSwiss

- Implementation of OSCAR by MeteoSwiss in 2 parts

  - Part I: OSCAR/Surface, including requirements and analysis
  - Part II: OSCAR/Space (2015/Q3 onwards)

  → Technical lead with MeteoSwiss

- Operation and maintenance of OSCAR

  → Technical lead with MeteoSwiss

- Responsibility for content of OSCAR

  → Business lead with WMO

- Evolution of system through CR (~3 releases per year)

  → Joint lead

OSCAR Management

Responsibility for Tools

Responsibility for Content

Project Owner

| B. Calpini | W. Zhang |

Project Committee

B. Calpini (MD)
M. Schäfer (ICT)   E. Charpentier (WMO)
S. Sandmeier (PIM)
E. Grüter (MDI)

Project Management

external
N.N.

internal
J. Klausen

E. Charpentier

Project Office

Internal
L. Cappelletti /
N.N.

N.N.

Project Team

J. Klausen, M. Musa, N.N.,
M. Brändli, R. Schneider, C. Walder,
INZ, A. Peter, S. Stauffer

WIGOS PO,
N.N. (WMO/SPACE)

MeteoSwiss
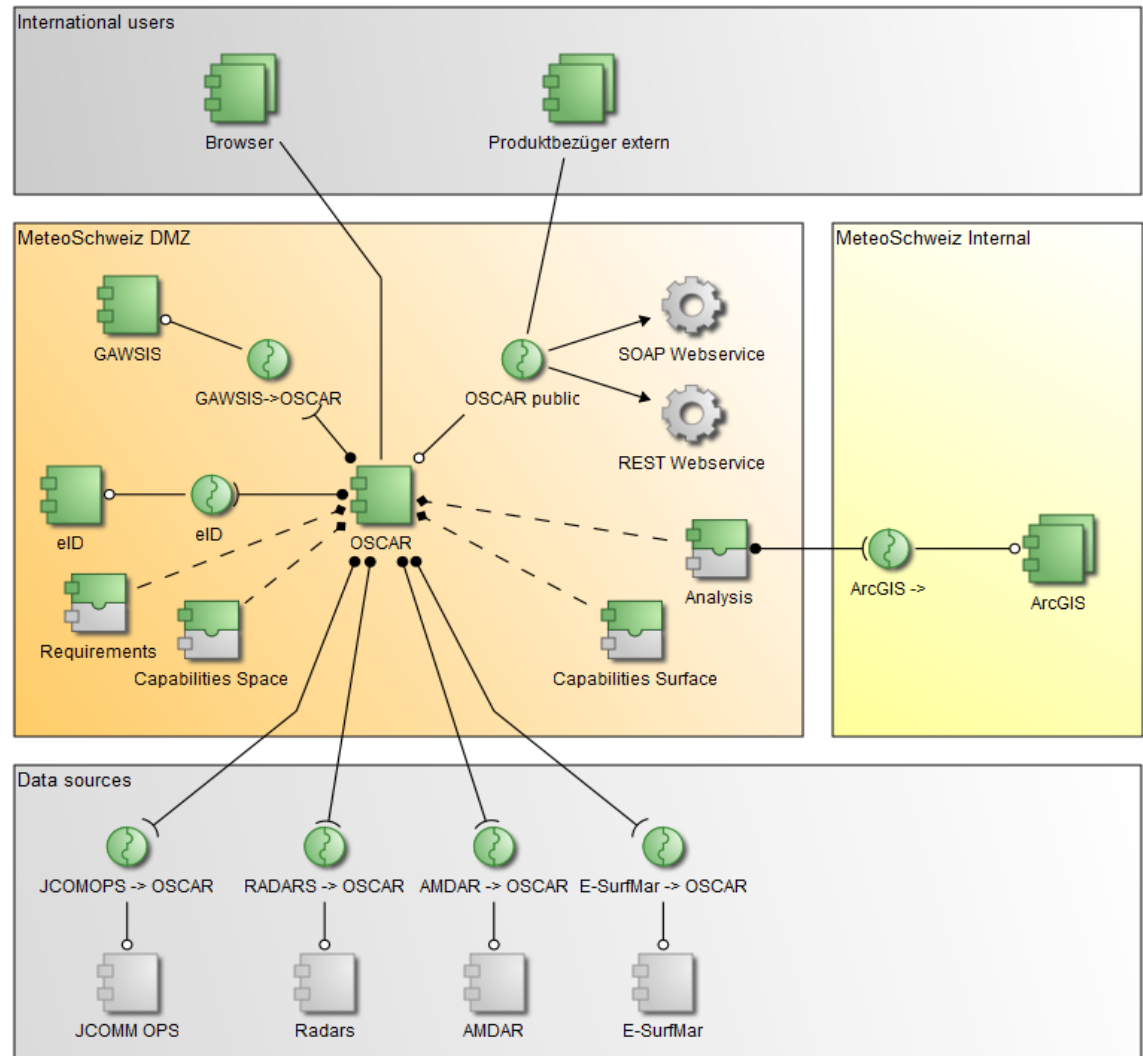
WMO

WIR Functional Architecture

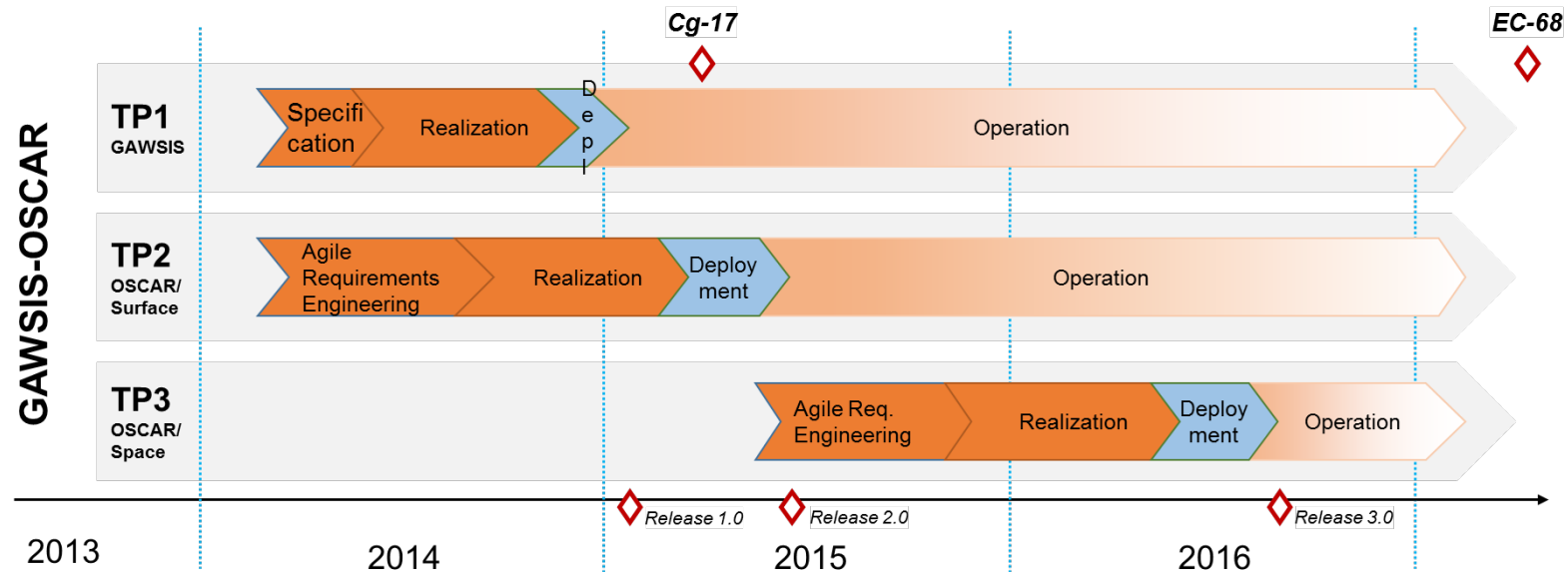NB: «Vol A» refers to the catalogue of surface and radio sonde stations

Integration Architecture

- Multi-tier web application with interfaces to external sources
- State-of-the-art technologies (Oracle, JAVA, ArcGIS)
- Fully integrated into operations of MeteoSwiss
- Release plan and CR mechanism for evolution of system
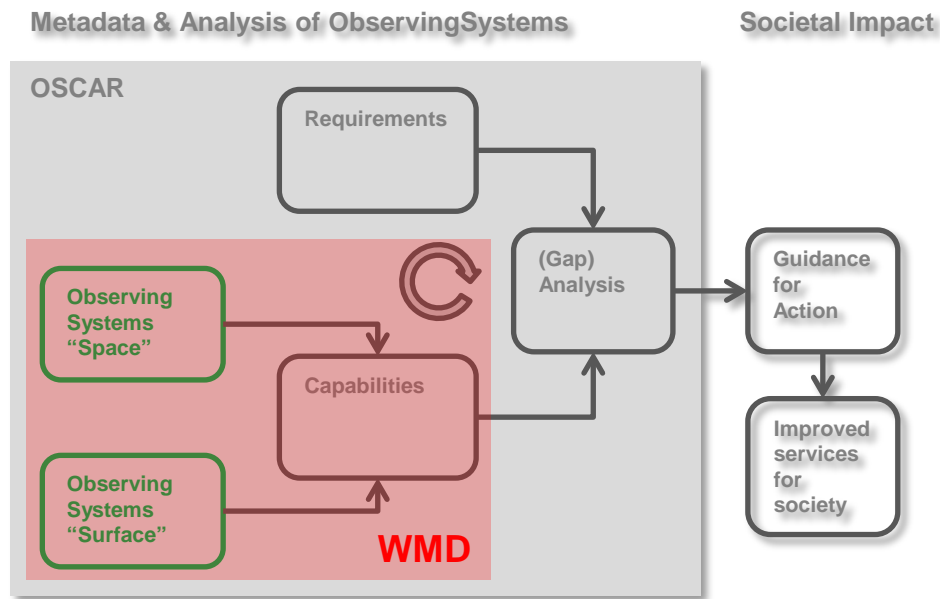
Planning and Milestones

- Milestone Cg-17
  - Development of OSCAR/Surface
  - Functional migration of Requirements and Analysis parts
  - Web services interface to Requirements database

- Milestone EC-68 (OSCAR/Space)
  - Functional migration of OSCAR/Space incl. Analysis part
  - Full integration of all components

OSCAR and WIGOS Metadata

- "Capabilities" part of OSCAR is a natural candidate as a repository for certain WIGOS metadata (WMD).

- OSCAR targets all users interested in the status and the planning of WMO observing systems as well as data users looking to "make adequate use of observations".

Metadata & Analysis of ObservingSystems   **Societal Impact**

OSCAR

Requirements

Observing Systems "Space"

(Gap) Analysis

Capabilities

Observing Systems "Surface"

WMD

Guidance for Action

Improved services for society

Summary

- OSCAR is critical for implementation of WIGOS RRR
- Joint-venture between WMO and MeteoSwiss will result in a fully operational system with long-term perspective
- Milestone Cg-17 for OSCAR Requirements, Analysis and Surface Capabilities @ MeteoSwiss
- Milestone EC-68 for migration of OSCAR/Space to MeteoSwiss

- OSCAR is a natural candidate for long-term archiving of certain WIGOS metadata in support of "adequate use of data"

Thank you for your attention!

There are risks and costs to a program of action, but they are far less than the long-range risks and costs of comfortable inaction.
 -- JFK

WORK
IN PROGRESS