

ECVs: What's Operational and what requires R&D?

CCI 6th Colocation, ESRIN, 29 Sep 2015

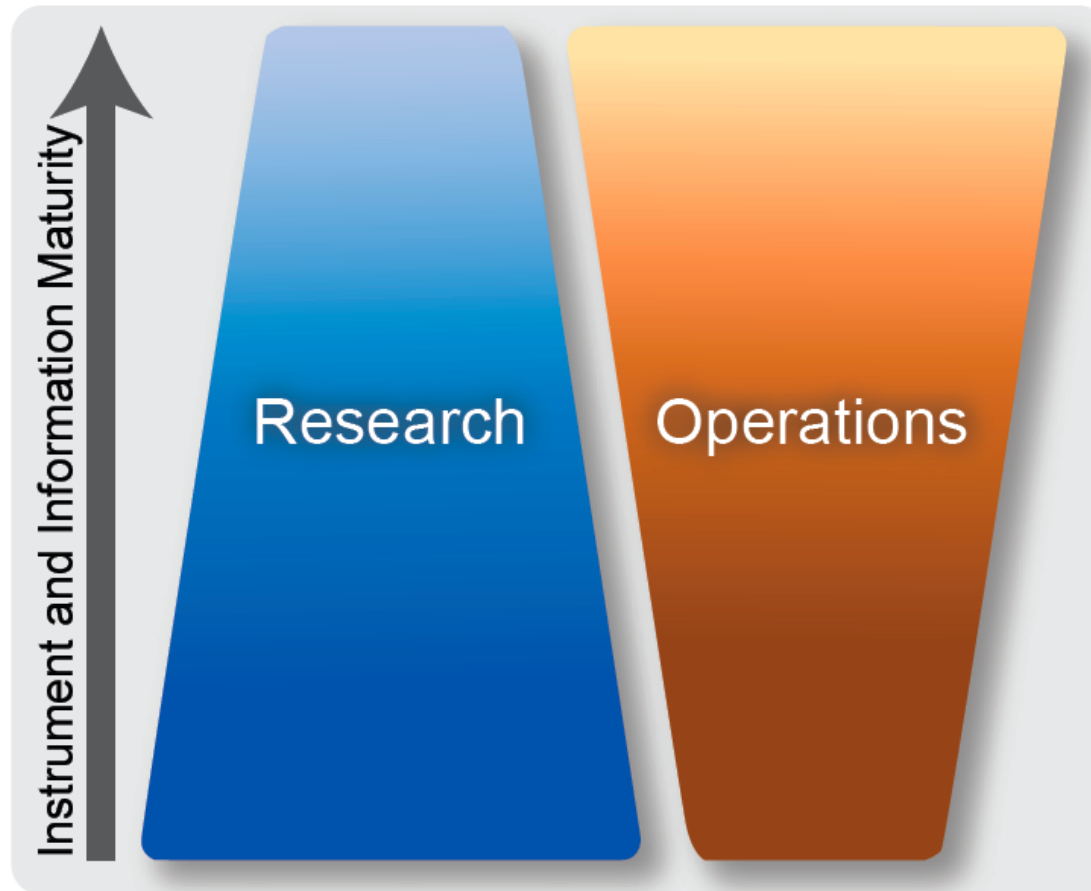
Why are we asking this question?

Because the sources of funding for Operations are separate from the sources of funding for R&D.

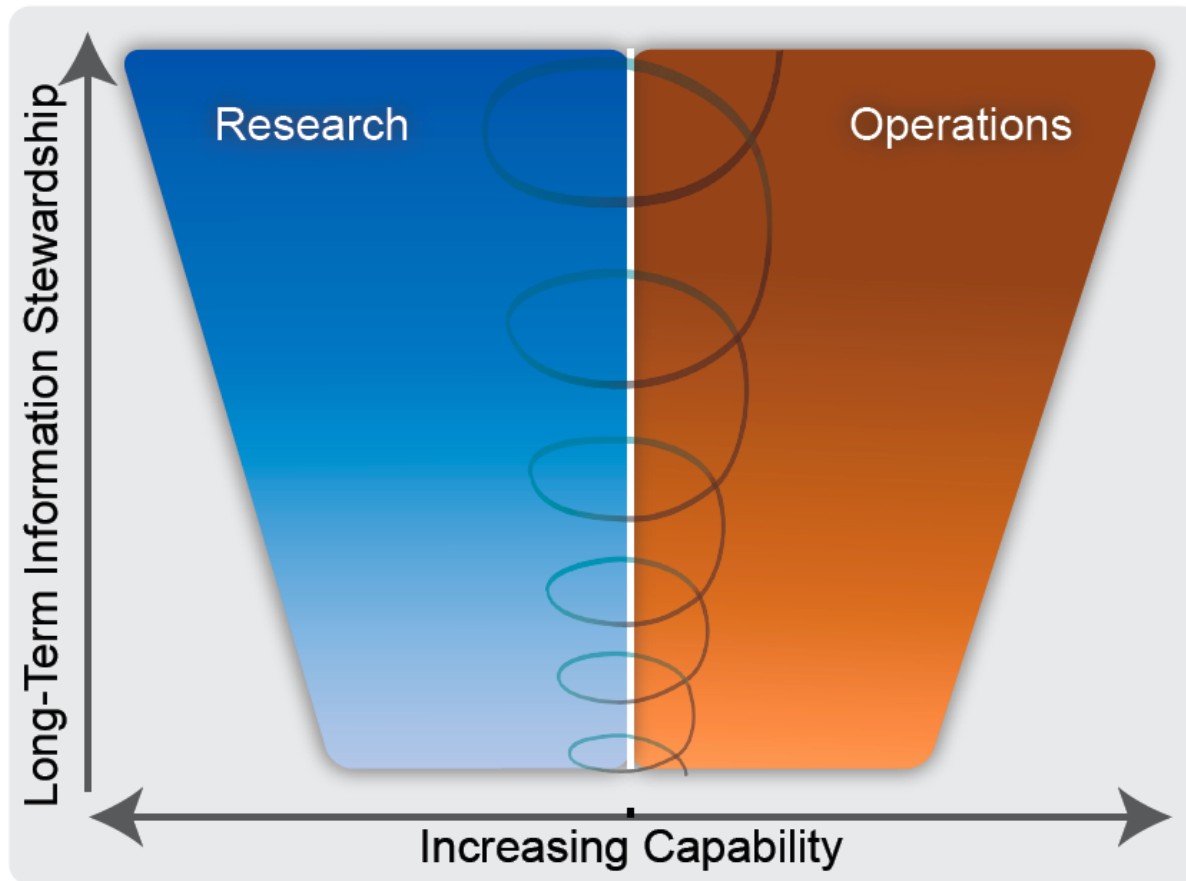
i.e.

- separate ITTs
- separate contracts

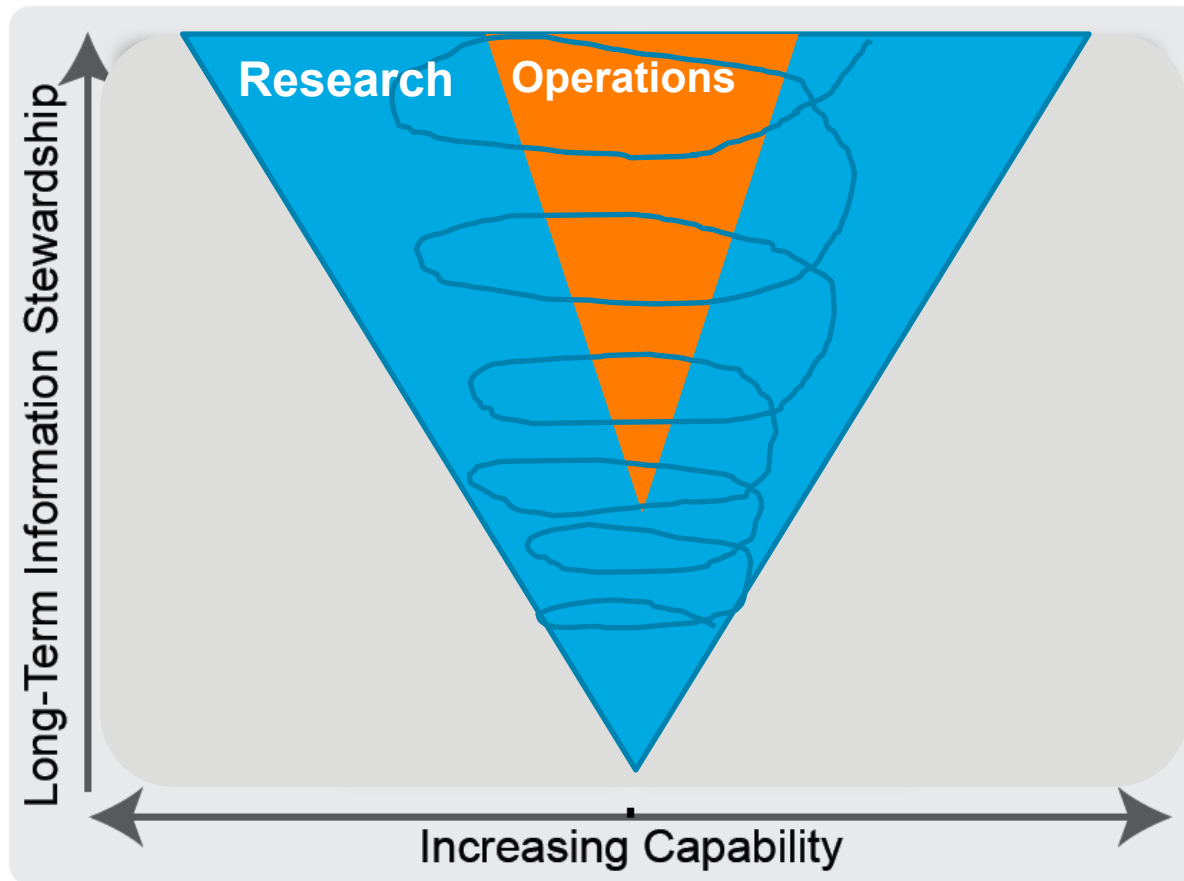
(Also, because our Member States delegates are asking us this question)



Notional evolution of the level of effort in a research to operations transition for a satellite mission



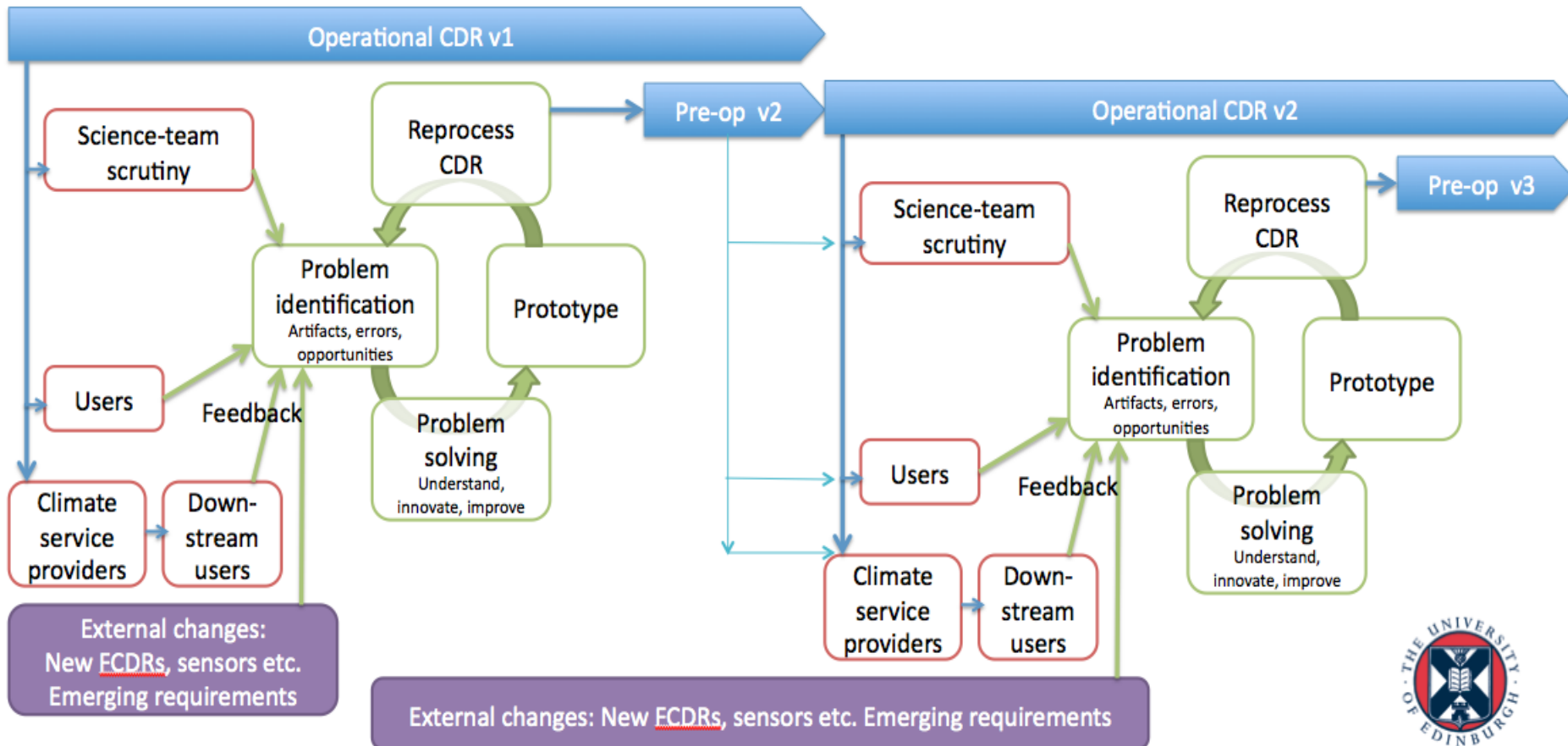
A more realistic view of the interdependency of research and operations needed for sustained and routine climate monitoring?



Output from Science Leaders' discussion at Colocation 5 (Oct 2014)

Acknowledgement: M. Buchwitz

ECVs: Operational vs R&D



Acknowledgement: C. Merchant

Which elements could be eligible for operational funding?

Separating ECV Operational Production from ECV R&D is not simple.

- Development of a new retrieval algorithm for a GCOS ECV product
- Develop a harmonised CDR across multiple satellite instruments
- Adapt an existing retrieval to a new satellite instrument (e.g Sentinels)
- Algorithm round-robin and selection
- Development of processing chain
- Maintenance of a processing chain
- Data processing and re-processing
- ECV product validation
- ECV product assessment by Climate Users

FACTS:

- In 2018-2020, C3S plans to provide ~33 ECVs operationally, including all 13 ECVs included in CCI so far.
NB: the first call is in early 2016.
- Until the C3S competitive ITTs are released, we won't know for sure exactly what technical activities C3S will consider to be eligible for operational funding.
- There are also other potential operational homes: EUMETSAT SAFs, national activities, commercial, etc.
- ESA doesn't have a mandate to operate ECV production systems.
- Current funding for CCI ends in 2017/2018. CCI+ is a potential extension of the CCI for new ECVs, and is in very preliminary discussion.
- In order to extend the CCI programme, we need to show that CCI was a success.
- One of the measures of success will be whether operational production of CCI ECVs is transferred to operational funding outside CCI.

Purpose of this Session:

- Difficult question and diversity of views among CCI teams
 - => Provide an opportunity to present the different views and examples from different CCI teams on how to make the split between operational and R&D activities, given the separate funding lines.
- Try to work towards a common view across the CCI, on how to make the split.
- Determine if there are still elements of your ECV which need more R&D – given that CCI+ is currently focussed on "new" ECVs, e.g. salinity, long-lived GHGs, snow, ...
- To help us (ESA) respond to questions from delegations on Operational vs R&D, and to provide input to the CCI+ programme proposal.

- Copernicus programme (B. Pinty, Copernicus Bureau) – silent presentation
- Copernicus C3S (D. Dee, ECMWF/C3S)
- Intro to the session (S. Pinnock, ESA Climate Office)
 - Soil Moisture (W. Wagner)
 - Fire (E. Chiuvienco)
 - Land Cover (P. Defourney)
 - Glaciers (F. Paul)
 - Ice Sheets – Antarctica (A. Shepherd)
 - Ice Sheets – Greenland (R. Forsberg)
 - Ocean Colour (S. Sathyendranath)
 - Sea Level (G. Larnicol)
 - SST (C. Merchant)
 - Sea Ice (S. Sandven)
 - GHG (M. Buchwitz)
 - Ozone (M. Van Roozendaal)
 - Aerosol (T. Popp)
 - Cloud (R. Hollmann)
- Discussion