



Supporting our Aquaculture
& Fisheries Industries

www.safiservices.eu

8th Irish Earth Observation Symposium

30 October 2014, NUI Maynooth, Ireland

**Satellites & Requirements:
The chicken and the egg conundrum**

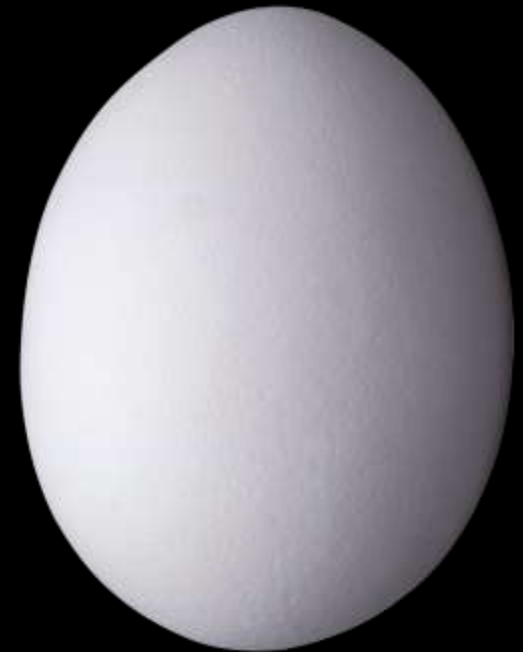
Rory Scarrott (CMRC-UCC) Dee McElligott (DOMMRS)

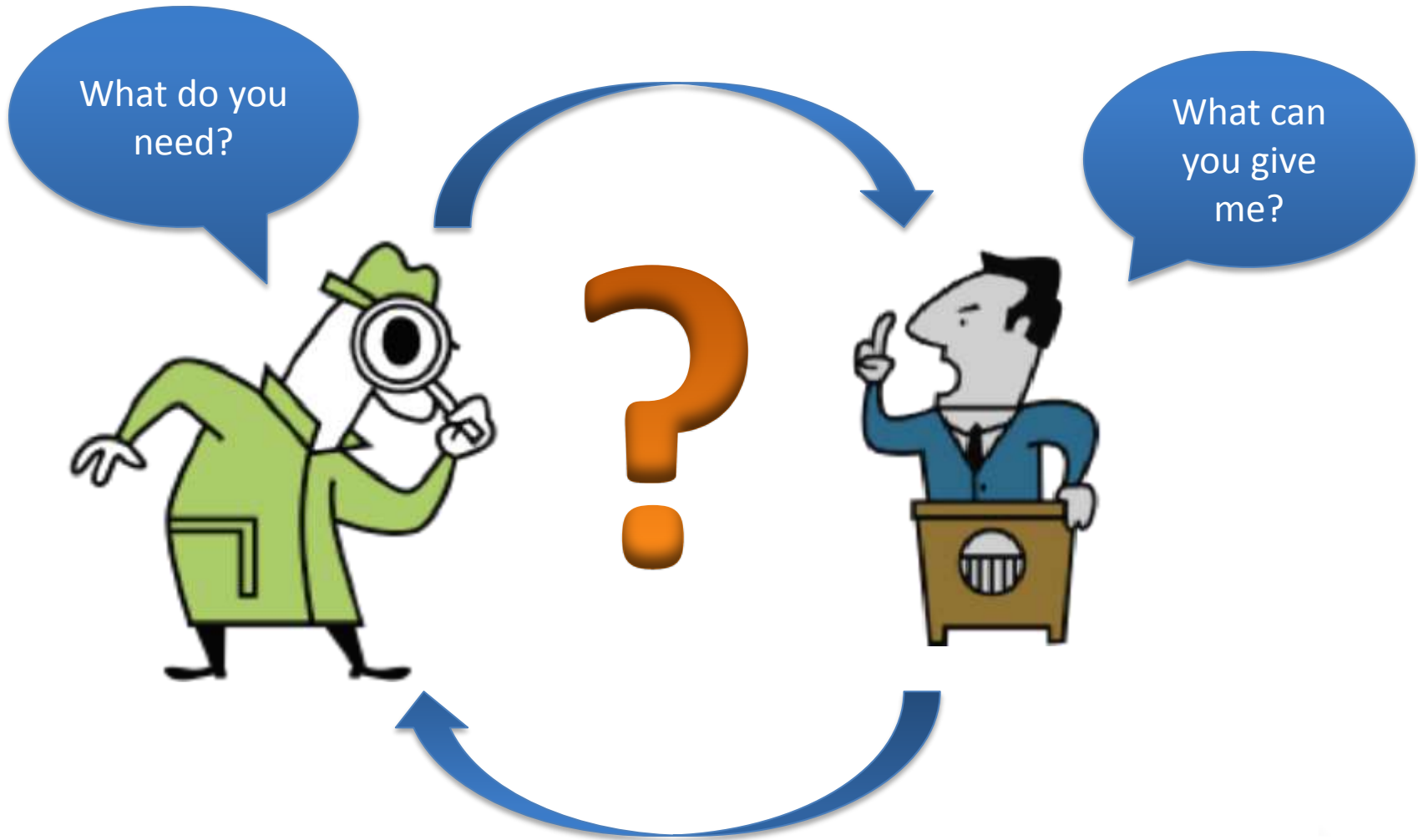


SATELLITE SERVICES AND REQUIREMENTS



**The chicken
and
the egg
conundrum**

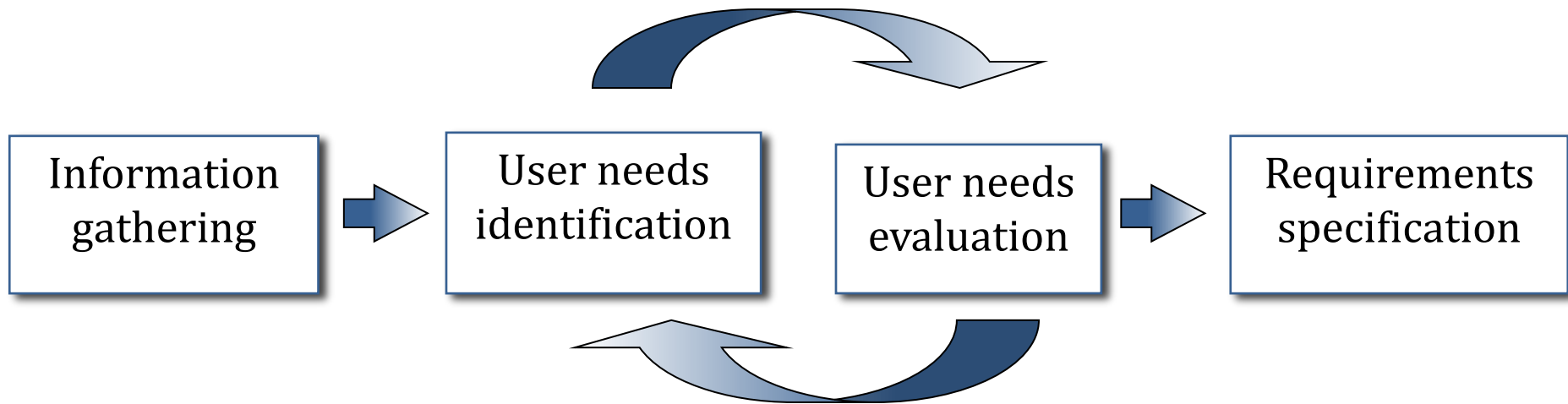




The project aims to develop tools & services:

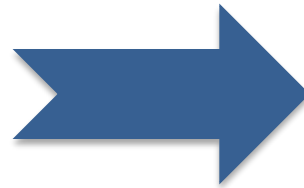
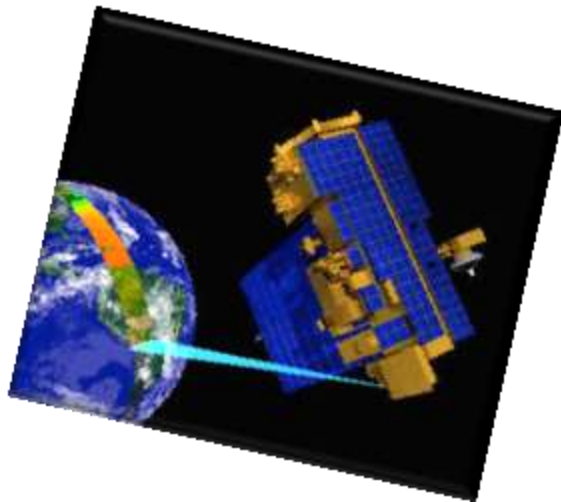
- to assist aquaculture deployment and environmental monitoring during operations
- to support fisheries by providing indicators of recruitments, abundances and shell/fish locations





How to get the most out of satellite data

- Identify potential users
- Assess the best approach
- Ask the right questions



1. Administration
2. Advisory bodies (e.g. BIM)
3. Sector (i.e. industrial sector)
4. Research
5. Consultancy



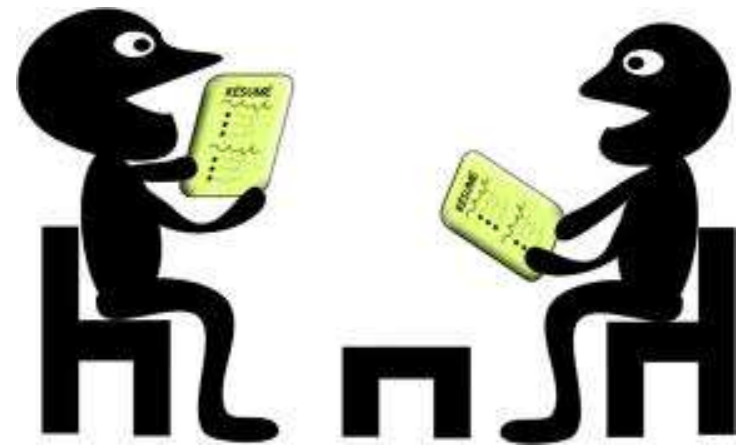
- Questionnaire
- Interview
 - Structured
 - Semi structured
 - Focused conversation
- User Board consultations
 - Group Facilitation Methods
 - Focused Conversation



- One to one semi-structured interview
 - gauge questions according to the level of knowledge of the interviewee on the subject
 - Allows interviewees to express ideas
 - Enables comparisons between interviews

However

- Time consuming
- Possibly smaller audience



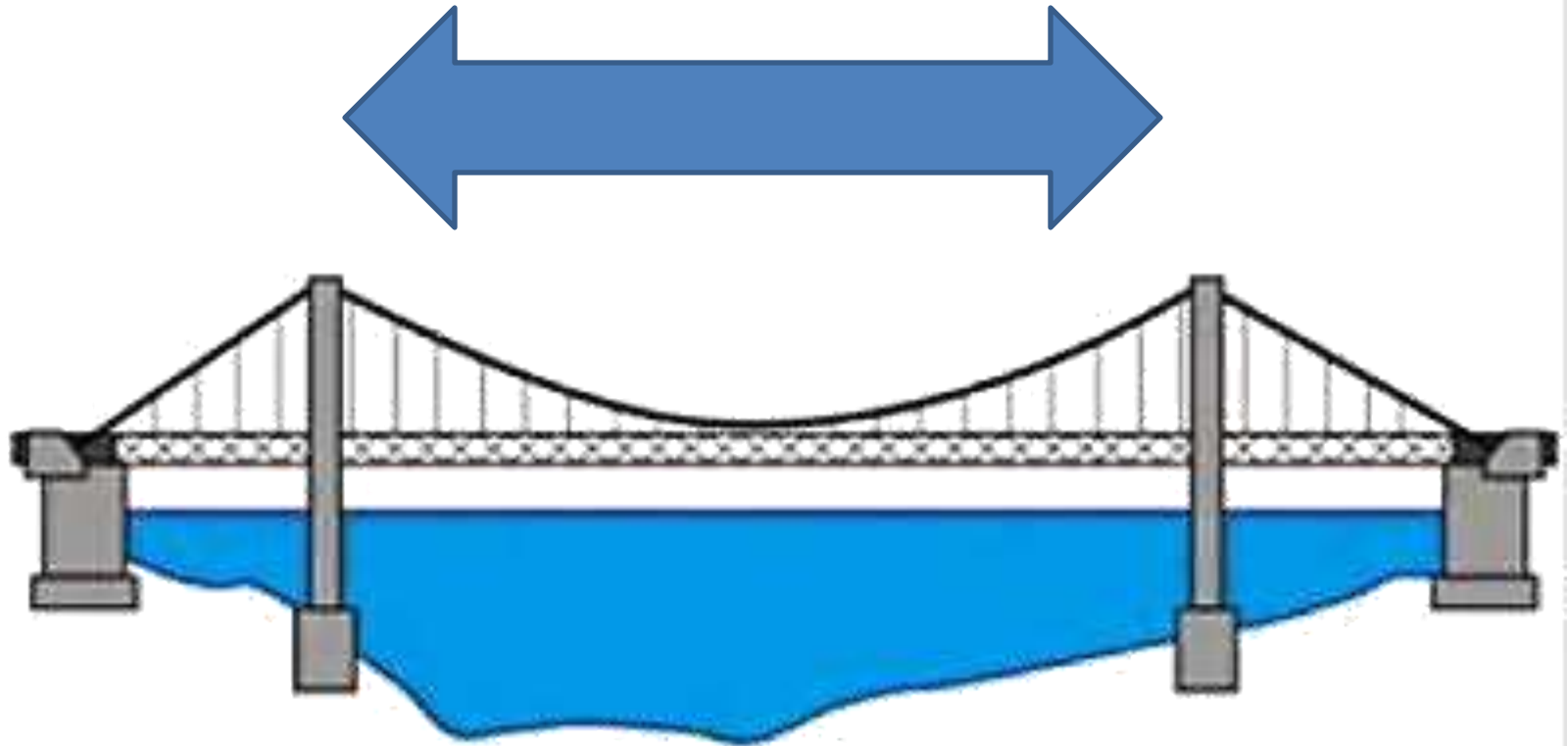
User Board Consultations

- Information was sought on the following subjects:
 - The key characteristics of an online service for decision support
 - The information these decisions require
 - The temporal and spatial characteristics such information needs to have
 - Outlining the impact that addressing these issues would have on potential users.



N.b. the Human Factor

How are you going to talk to people???



SAFI 's Comms. 'Infrastructure'



Apoiar o sector da Aquacultura e da Pesca

European Commission | Seventh Framework Programme | Copernicus

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English

Supporting our Aquaculture and Fisheries Industries (SAFI)

Welcome to the SAFI website. Here, you can find out about SAFI, its aims and how you can contribute to enhancing the products and...

Events

Userboard Meeting 1
Cork, March 20th, 2014

SAFI NEWS

Supporting our Aquaculture & Fisheries Industries
ISSUE 01, Autumn 2014

In This Issue

- EU Blue Growth & Aquaculture
- The SAFI Consortium
- Asimuth: EO & HABs
- Copernicus, fisheries & aquaculture
- The People behind SAFI
- SAFI's Correlation Research
- Perspectives: SAFI in Morocco
- News snippets

SAFI: Bringing Earth Observation to the heart of Aquaculture and Fisheries

The SAFI partnership has been built to bring together all the expertise and skills needed to derive information from Earth Observation (EO) data, and deliver it to match the actual information needs of the aquaculture and fisheries sectors, with respect to marine environmental knowledge. Under the leadership of ACRI-ST (France), University College Cork (Ireland), COFREPECHE (France), IPMA



A confluence of talent

It gives me great pleasure to introduce you to the first issue of the SAFI newsletter, introducing our team, highlighting potential applications, and the possibilities being unlocked by SAFI. I am also proud to lead the SAFI team in this exciting venture, this synergy if you will, which links a number of established research and industrial areas, and wells of expertise, to form the foundations of a real support service to our fisheries and aquaculture sectors.

SAFI is a synergy of people of multi-disciplinary

- **Awareness and perception of satellite data**
 - Aware but **limited** knowledge of the satellite **products** available and few interviewees use it directly
 - **Assumption** of **cost** associated with using satellite data
 - There was some **confusion** between EO data and Google earth type images and satellite positional data e.g. VMS



- **Risk of using the data**
 - Data protection
 - Inaccurate results or incorrectly interpreting results
- **Industry Image**
 - Generally positive - new sites
 - However some negativity – scepticism
 - Lack of awareness hinders the use of EO data.
 - Lack of technical expertise could be a hindrance to progress.



Users Wish-list – system requirements

Preferential webGIS deliverance

- Reliable information given – quality control
- Ease of use and navigation
- Different user types targeted in clear and focused ways
- Up-to-date information
- Available in different languages
- Suitable temporal span of data supplied



Other considerations for the wish list

- Be able to create time series for analyses of different parameters for a selected area
- Interoperable with information systems they currently use
- Be available for both:
 - PC – time series data - planning/research
 - mobile devices – real-time data HABs forecast and fish finding
- Option to change spatial and temporal resolution according to preferred application

So what do folks actually need?

- Following 32 consultations the main potential applications for SAFI by user group are:

User group 1 Administration

- Water quality
- **HABs forecasting**

User group 2 Advisor

- Aquaculture site selection
- Assisting farmers in obtaining licences

User group 3 Sector

- **HABs and jellyfish detection and forecasting**
- Aquaculture site design

User group 4 Research

- Correlation studies
- Understanding anomalies

User group 5 Consultants

- **HABs forecasting**
- Monitor environmental conditions

- **Parameters of interest:**

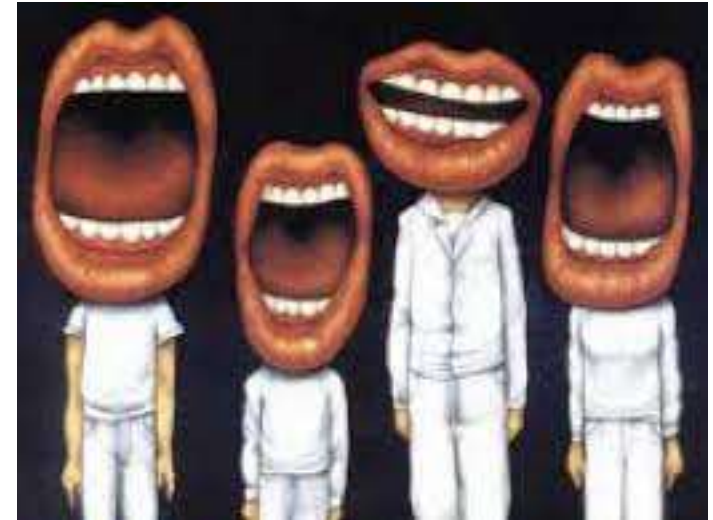
Environmental conditions (optimal for presence/growth)	Logistical conditions (aquaculture)
<ul style="list-style-type: none">• Chlorophyll/Primary productivity• Currents• SST• Fronts• Wind• Depth• Salinity• Suspended solids• Salinity• Flushing rate of an area• Substrate• Nutrient load	<ul style="list-style-type: none">• Wave height• Wave period• Wave climate analysis• Proximity to pier & infrastructure• Exposure



# Requested service	Description	Description	Users
RS1	Aquaculture Site Optimisation (statistical information)	Support to Aquaculture Development Aquaculture Site Optimisation, Spatial Planning, and Licensing Support	Aquaculture farmers, Administration Advisors Consultants
RS3	Streamline Aquaculture Licensing Procedure		
RS4	Marine and Coastal Spatial Planning		
RS2	Aquaculture Site Monitoring in near real time (NRT)	Aquaculture Site Monitoring in near real time	Aquaculture farmers, Administration
RS6	Support to Fishery Management (Ecosystem Indicators)	Support to Fishery Management (Ecosystem Indicators)	Advisors Administrations Researchers Fishermen Consultants
RS7	Fish Probable Location in NRT	Indicators of fish probable location	Fishermen Researchers Advisors

Next stage

- Keep in direct communication with consulted potential users
 - Inform them of developments, maintain interest.
- Test the webGIS on members of the User Board
- Reassess the applications as necessary



THE KEY IS...

COMMUNICATION





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