Barcelona Supercomputing Center
Centro Nacional de Supercomputación

EXCELENCIA SEVERO OCHOA

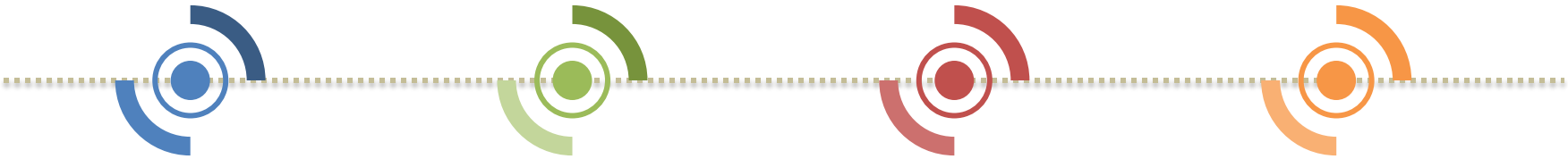
Good practices for user engagement and communication of operational services

1 June 2018

Second WMO Workshop on Operational Climate Prediction

USER'S JOURNEY

Establishing '**good practices**' for a user's journey that has different stages



User engagement

Visual communication

Capacity building

Exploitation

Language matters

Language
Speak the language of users

Terminology
Need for more precise terminology and definitions

Understanding
Be in the place of the user

USER ENGAGEMENT

Terminology: more precise terminology and definitions

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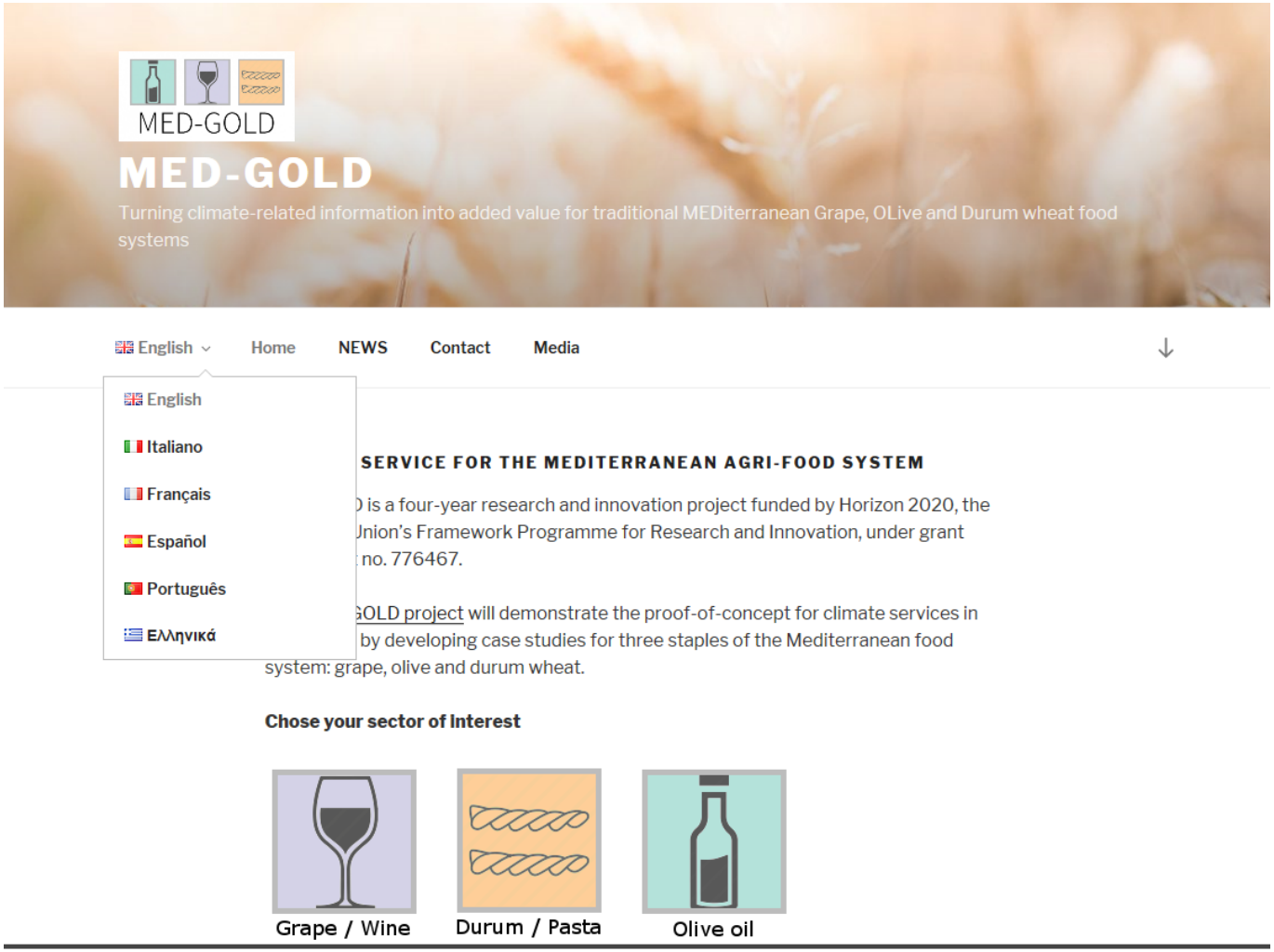
Language: speak the language of users



User-engagement activities

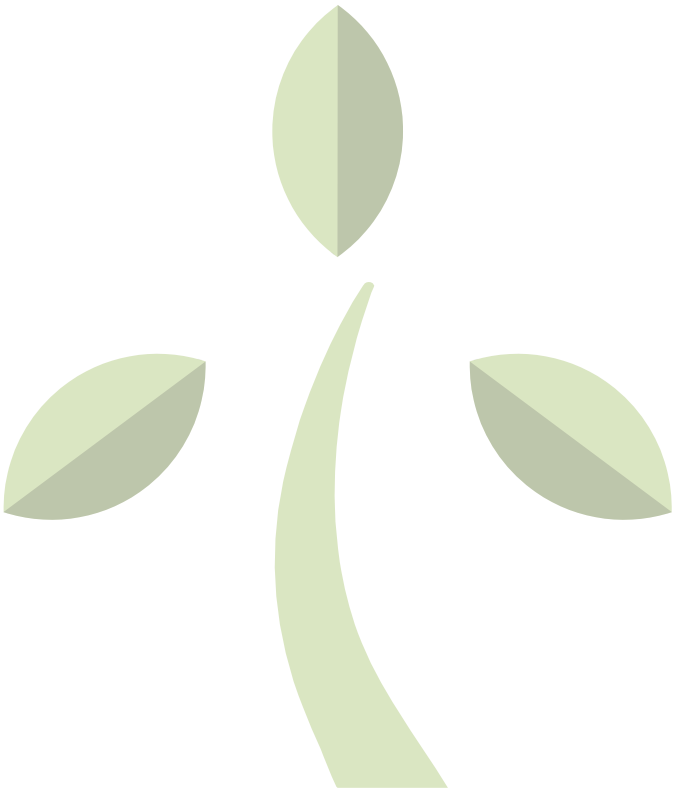
- Focus groups (Portuguese)
- Workshop (Italian)
- Workshop (Spanish)

Help cover underrepresented areas

Understanding: go where the users are

Do not underestimate visual communication

Color scales fit/ color-blind friendly

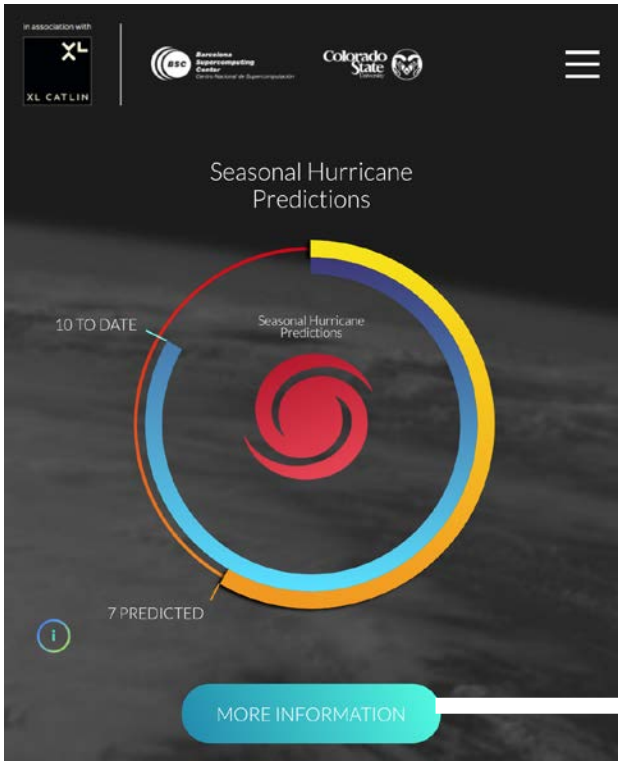


Access to easy-to-understand information (depending on user sector, intended use of information & capabilities)

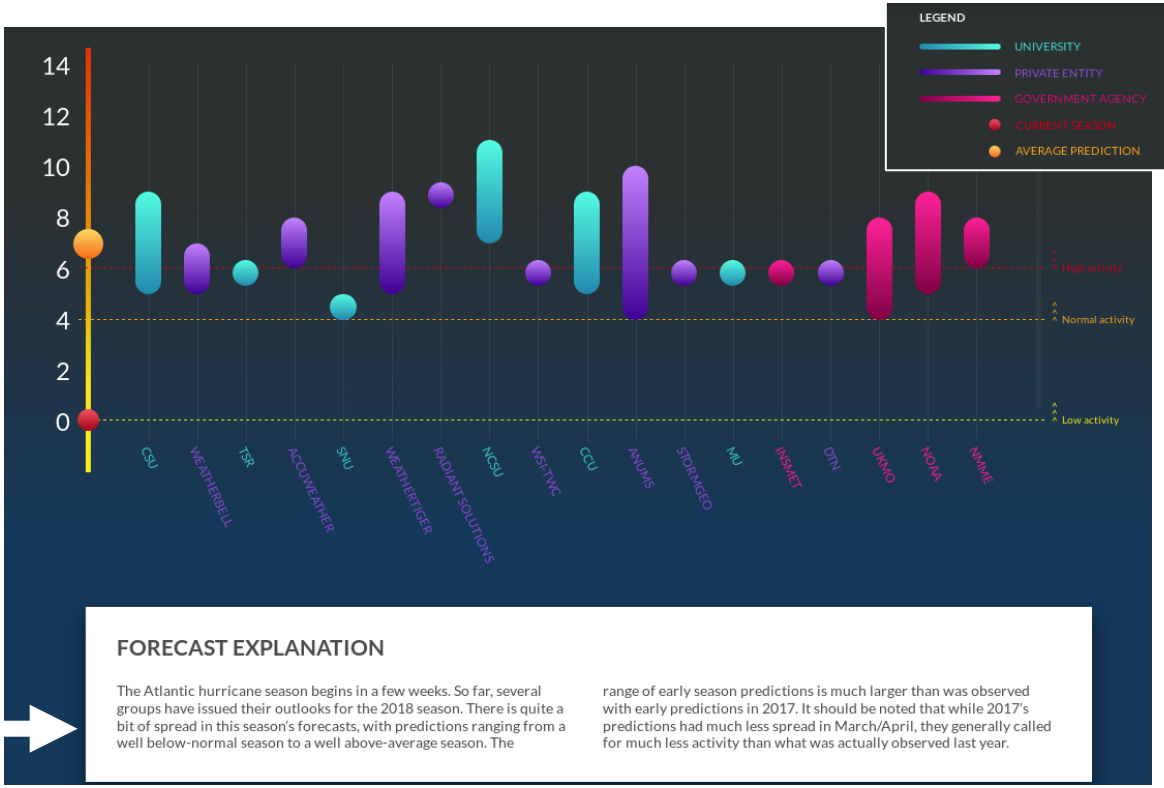
Visually appealing

Access to easy-to-understand information

www.seasonalhurricanepredictions.org

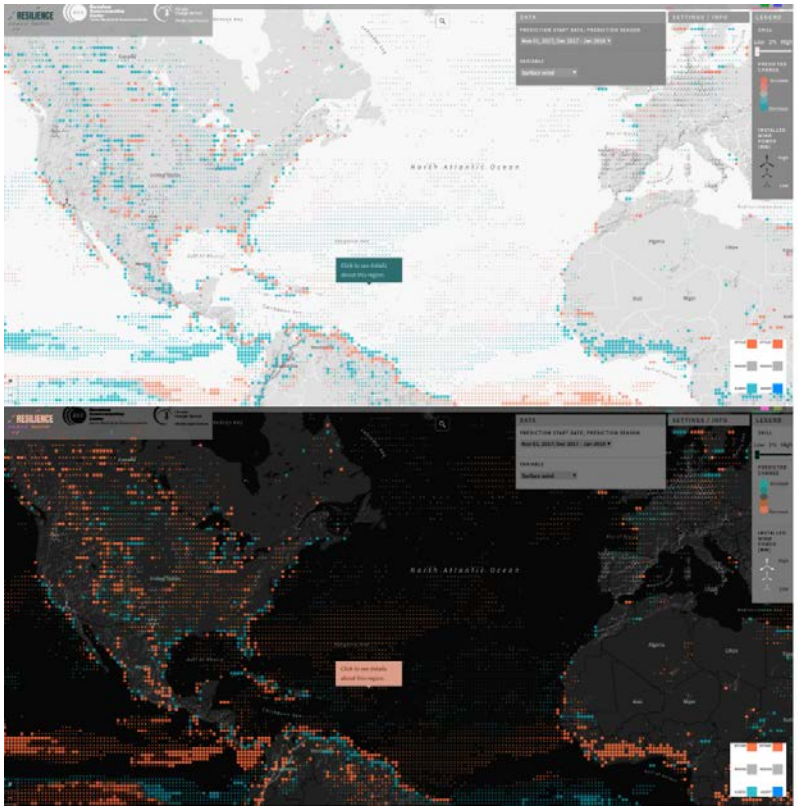


Season 2017



Season 2018

Color scales fit



#FF764D

#b5b5b5

#33BFD1

- High contrast
- Intuitive colors
- Color-blind friendly

Visually appealing

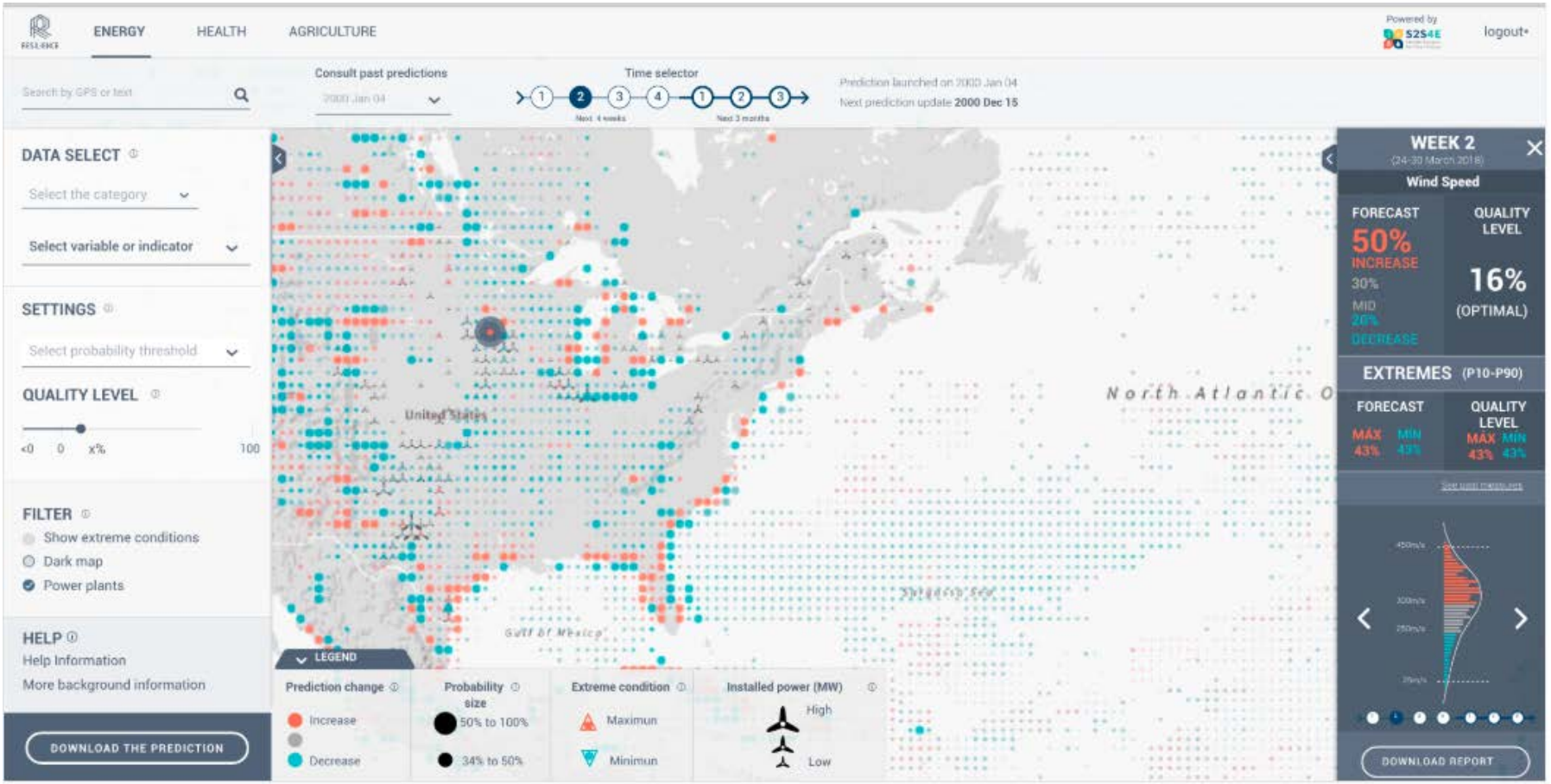
EUPORIAS Clim4Energy

S2S4E Climate Services for Clean Energy

Visually appealing

EUPORIAS Clim4Energy

S2S4E Climate Services for Clean Energy



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Capacity building needs time

Co-production

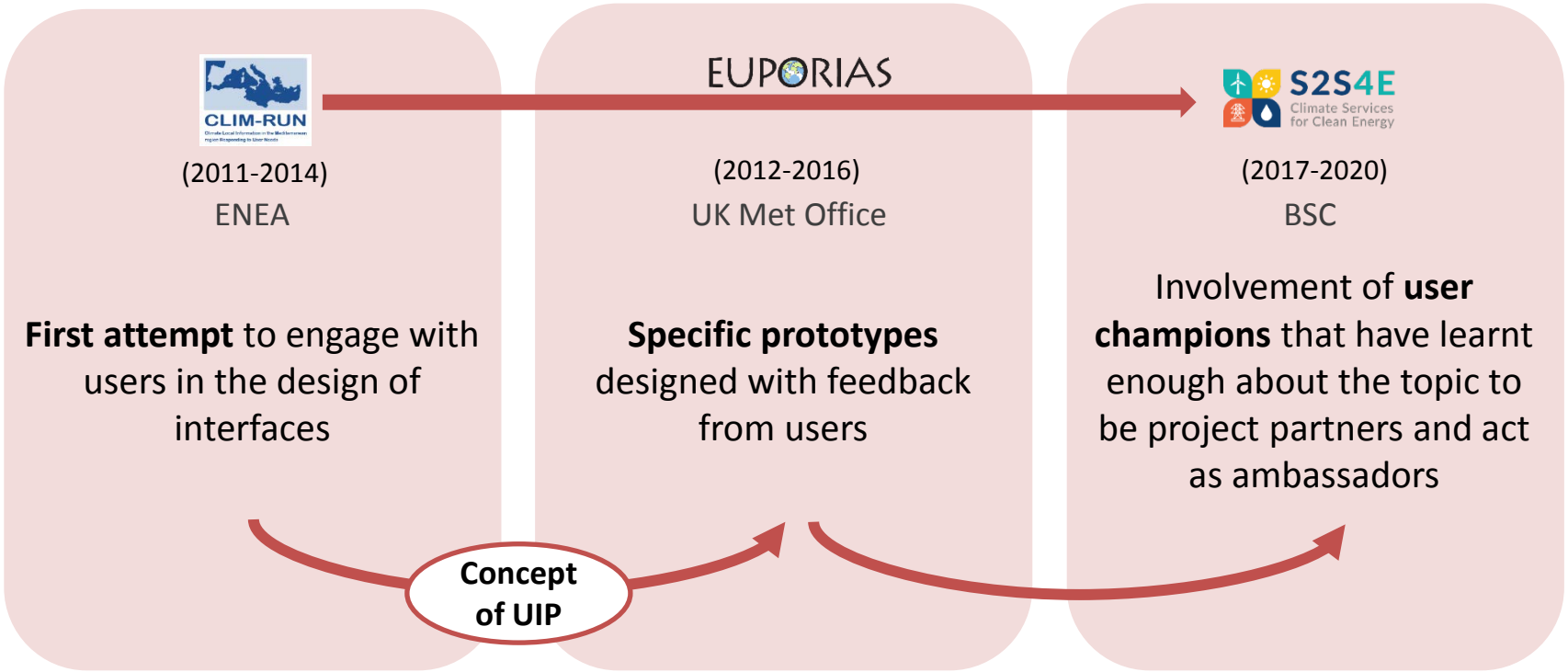
Guidance and training

Guidance and training

inDust **International network to encourage the use of monitoring and forecasting dust products**

- Strengthen links and collaboration with different communities
- Enhance understanding on scientific processes that impact relevant sectors
- Enhance technical capacities of local operational specialists (meteorologists, climatologists…)

Co-production



Make use of results

Knowledge transfer to other sectors and actors (society, policy, public and private action)

Added value assessment

Users' uptake of products that ensures **continuity** after the project

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THANK YOU!

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MED-GOLD · VISCA Vineyards Integrated Smart Climate Application · EUPORIAS · Ukko · S2S4E Climate Services for Clean Energy · Seasonal Hurricane Predictions · Clim4Energy · CLIM-RUN · SDS-WAS · inDust

The research leading to these results has received funding from the EU Seventh and Horizon2020 Framework Programme under grant agreements nº 776767, 730253, 308291, 776787 and 265192, and is part of the Copernicus Climate Change Service (C3S_441_Lot2_CEA), a program implemented by ECMWF on behalf of the European Commission

www.bsc.es

User engagement

Involve users in the proposal from the beginning

Language
Speak the language of users

Be there
Go where the users are

Language
Need for more precise terminology and definitions

Provide something back
To hold users' interest

Terminology: more precise terminology and definitions of the user communities

Involve users in the proposal

MED-GOLD

VISCA
VINEYARDS INTEGRATED SMART CLIMATE APPLICATION

SOGRAPE VINHOS

Barilla
The Italian Food Company. Since 1877.

DCOOP

CODORNÍU

Mastroberardino 1878

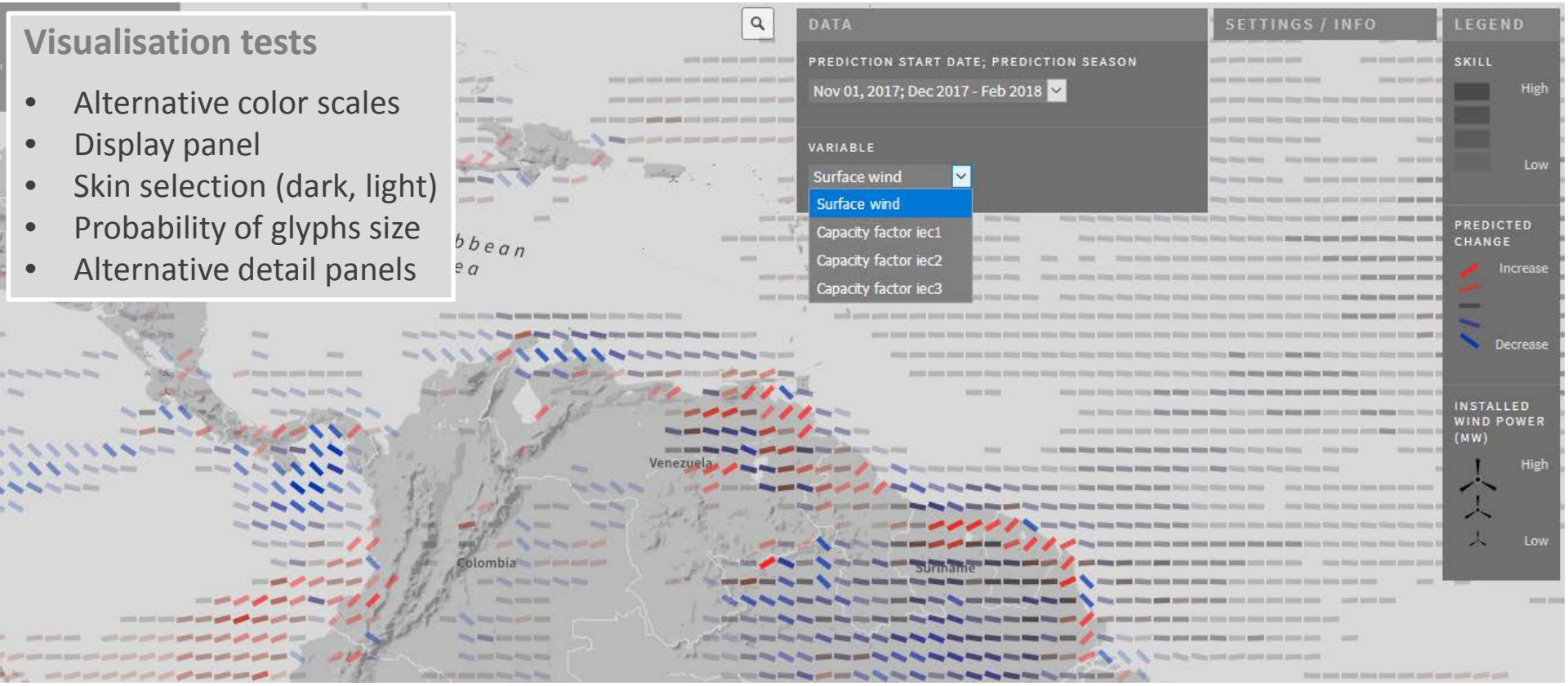
SYMINGTON Family Estates

Visually appealing

Ukko Clim4Energy S2S4E Climate Services for Clean Energy

Visualisation tests

- Alternative color scales
- Display panel
- Skin selection (dark, light)
- Probability of glyphs size
- Alternative detail panels



www.bsc.es/ess/resilience

Co-production

CLIM-RUN (2011-2014) → EUPORIAS (2012-2016) → S2S4E Climate Services for Clean Energy (2017-2020)

Static case study setting to engage with users in the design of interfaces

- Unrealistic expectations (exact amount of P and T months in advance)
- Uncertainty barrier
- Bigger effort on clarity (too difficult to understand)

Concrete prototypes designed with feedback from users

- Improve accessibility and usability
- Probability barrier
- Interest in forecasts of extreme events

Involvement of **user champions** that have learnt enough about the topic to be involved in the project

- User mostly – but not completely- aware of the benefits
- Interest in high resolution – Europe wide – extremes
- Improve skill & uncertainty

Concept of UIP