



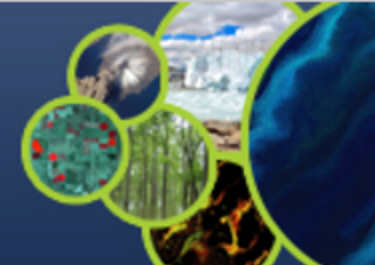
Committee on Earth Observation Satellites

Innovations in VLab Training

Session 2: Spotlight on Innovation
WMO Virtual Laboratory
Luciane Veeck

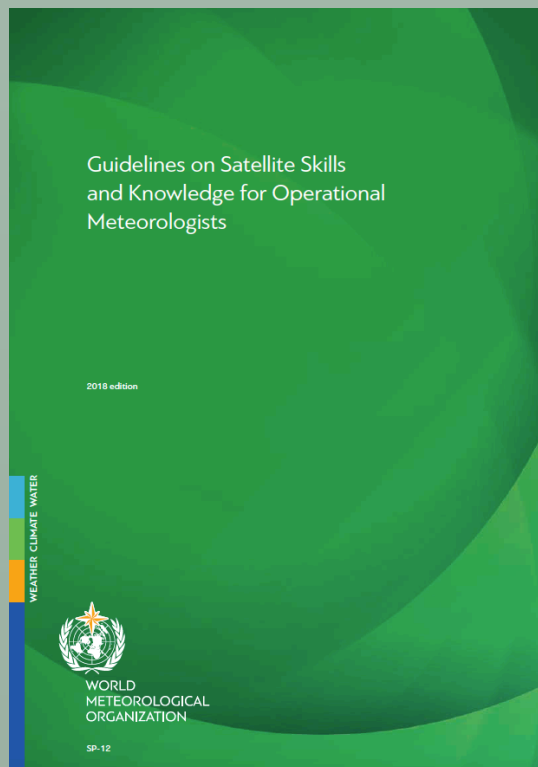
CEOS WGCapD-9 Annual Meeting
Sunnyvale, California
10-12 March 2020





Competency-based Training

- Competency is a combination of skills, knowledge and behaviours.
- VLab training focus on skills.
- The satellite skills framework was developed by VLab and it is revised every two years.

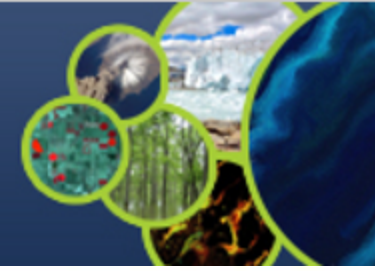


VLab				SATellite SKILLS AND KNOWLEDGE FOR OPERATIONAL METEOROLOGISTS	
LEVEL 1 - Skills	LEVEL 2 - Performance components	LEVEL 3 - Performance components detailed	Skills, techniques and knowledge requirements		
1. Identify satellite features	1.1. Identify the main components of a satellite system. 1.2. Identify the main components of a satellite system. 1.3. Identify the main components of a satellite system. 1.4. Identify the main components of a satellite system. 1.5. Identify the main components of a satellite system.	1.1.1. Identify the main components of a satellite system. 1.1.2. Identify the main components of a satellite system. 1.1.3. Identify the main components of a satellite system. 1.1.4. Identify the main components of a satellite system. 1.1.5. Identify the main components of a satellite system.	1.1.1.1. Identify the main components of a satellite system. 1.1.1.2. Identify the main components of a satellite system. 1.1.1.3. Identify the main components of a satellite system. 1.1.1.4. Identify the main components of a satellite system. 1.1.1.5. Identify the main components of a satellite system.	1.1.1.1.1. Identify the main components of a satellite system. 1.1.1.1.2. Identify the main components of a satellite system. 1.1.1.1.3. Identify the main components of a satellite system. 1.1.1.1.4. Identify the main components of a satellite system. 1.1.1.1.5. Identify the main components of a satellite system.	
2. Identify satellite types and their characteristics	2.1. Identify the main types of satellite systems. 2.2. Identify the main types of satellite systems. 2.3. Identify the main types of satellite systems. 2.4. Identify the main types of satellite systems.	2.1.1. Identify the main types of satellite systems. 2.1.2. Identify the main types of satellite systems. 2.1.3. Identify the main types of satellite systems. 2.1.4. Identify the main types of satellite systems.	2.1.1.1. Identify the main types of satellite systems. 2.1.1.2. Identify the main types of satellite systems. 2.1.1.3. Identify the main types of satellite systems. 2.1.1.4. Identify the main types of satellite systems.	2.1.1.1.1. Identify the main types of satellite systems. 2.1.1.1.2. Identify the main types of satellite systems. 2.1.1.1.3. Identify the main types of satellite systems. 2.1.1.1.4. Identify the main types of satellite systems.	
3. Identify and interpret satellite imagery, maps and products	3.1. Identify and interpret satellite imagery, maps and products. 3.2. Identify and interpret satellite imagery, maps and products. 3.3. Identify and interpret satellite imagery, maps and products. 3.4. Identify and interpret satellite imagery, maps and products.	3.1.1. Identify and interpret satellite imagery, maps and products. 3.1.2. Identify and interpret satellite imagery, maps and products. 3.1.3. Identify and interpret satellite imagery, maps and products. 3.1.4. Identify and interpret satellite imagery, maps and products.	3.1.1.1. Identify and interpret satellite imagery, maps and products. 3.1.1.2. Identify and interpret satellite imagery, maps and products. 3.1.1.3. Identify and interpret satellite imagery, maps and products. 3.1.1.4. Identify and interpret satellite imagery, maps and products.	3.1.1.1.1. Identify and interpret satellite imagery, maps and products. 3.1.1.1.2. Identify and interpret satellite imagery, maps and products. 3.1.1.1.3. Identify and interpret satellite imagery, maps and products. 3.1.1.1.4. Identify and interpret satellite imagery, maps and products.	
4. Identify and interpret meteorological observations	4.1. Identify and interpret meteorological observations. 4.2. Identify and interpret meteorological observations. 4.3. Identify and interpret meteorological observations. 4.4. Identify and interpret meteorological observations.	4.1.1. Identify and interpret meteorological observations. 4.1.2. Identify and interpret meteorological observations. 4.1.3. Identify and interpret meteorological observations. 4.1.4. Identify and interpret meteorological observations.	4.1.1.1. Identify and interpret meteorological observations. 4.1.1.2. Identify and interpret meteorological observations. 4.1.1.3. Identify and interpret meteorological observations. 4.1.1.4. Identify and interpret meteorological observations.	4.1.1.1.1. Identify and interpret meteorological observations. 4.1.1.1.2. Identify and interpret meteorological observations. 4.1.1.1.3. Identify and interpret meteorological observations. 4.1.1.1.4. Identify and interpret meteorological observations.	
5. Identify and interpret meteorological forecasts	5.1. Identify and interpret meteorological forecasts. 5.2. Identify and interpret meteorological forecasts. 5.3. Identify and interpret meteorological forecasts. 5.4. Identify and interpret meteorological forecasts.	5.1.1. Identify and interpret meteorological forecasts. 5.1.2. Identify and interpret meteorological forecasts. 5.1.3. Identify and interpret meteorological forecasts. 5.1.4. Identify and interpret meteorological forecasts.	5.1.1.1. Identify and interpret meteorological forecasts. 5.1.1.2. Identify and interpret meteorological forecasts. 5.1.1.3. Identify and interpret meteorological forecasts. 5.1.1.4. Identify and interpret meteorological forecasts.	5.1.1.1.1. Identify and interpret meteorological forecasts. 5.1.1.1.2. Identify and interpret meteorological forecasts. 5.1.1.1.3. Identify and interpret meteorological forecasts. 5.1.1.1.4. Identify and interpret meteorological forecasts.	
6. Interpret satellite data with meteorological products	6.1. Interpret satellite data with meteorological products. 6.2. Interpret satellite data with meteorological products. 6.3. Interpret satellite data with meteorological products. 6.4. Interpret satellite data with meteorological products.	6.1.1. Interpret satellite data with meteorological products. 6.1.2. Interpret satellite data with meteorological products. 6.1.3. Interpret satellite data with meteorological products. 6.1.4. Interpret satellite data with meteorological products.	6.1.1.1. Interpret satellite data with meteorological products. 6.1.1.2. Interpret satellite data with meteorological products. 6.1.1.3. Interpret satellite data with meteorological products. 6.1.1.4. Interpret satellite data with meteorological products.	6.1.1.1.1. Interpret satellite data with meteorological products. 6.1.1.1.2. Interpret satellite data with meteorological products. 6.1.1.1.3. Interpret satellite data with meteorological products. 6.1.1.1.4. Interpret satellite data with meteorological products.	
7. Compare satellite data with meteorological products	7.1. Compare satellite data with meteorological products. 7.2. Compare satellite data with meteorological products. 7.3. Compare satellite data with meteorological products. 7.4. Compare satellite data with meteorological products.	7.1.1. Compare satellite data with meteorological products. 7.1.2. Compare satellite data with meteorological products. 7.1.3. Compare satellite data with meteorological products. 7.1.4. Compare satellite data with meteorological products.	7.1.1.1. Compare satellite data with meteorological products. 7.1.1.2. Compare satellite data with meteorological products. 7.1.1.3. Compare satellite data with meteorological products. 7.1.1.4. Compare satellite data with meteorological products.	7.1.1.1.1. Compare satellite data with meteorological products. 7.1.1.1.2. Compare satellite data with meteorological products. 7.1.1.1.3. Compare satellite data with meteorological products. 7.1.1.1.4. Compare satellite data with meteorological products.	

[Guide to Competency \(WMO-No. 1205\)](#)

[Compendium of WMO Competency Frameworks \(WMO-No. 1209\)](#)

[Guidelines on Satellite Skills and Knowledge for Operational Meteorologists \(SP-12\)](#)



1. Consider the Skills in the training development plan

- Identify the Skills that will be addressed
- State the Skills in the course description

2. Add it to certificates

- State the Skills addressed by courses in the back of certificates.

3. Link the training to the existing competency framework

- In Calendar announcements
- In the Library of training resources



Challenge

Reaching wide adoption of the Satellite Skills in training.

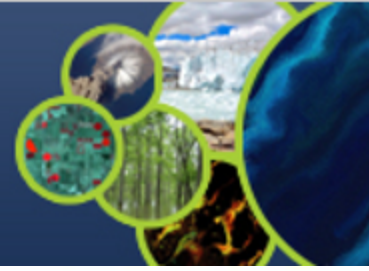
Solution

Awareness campaign to inform trainers and professionals (e.g. operational meteorologists).

Value observed

- Trainers reported the Skills helping to write clearer LOs for courses.
- Professionals reported using the satellite skills to identify gaps in their skills' set.

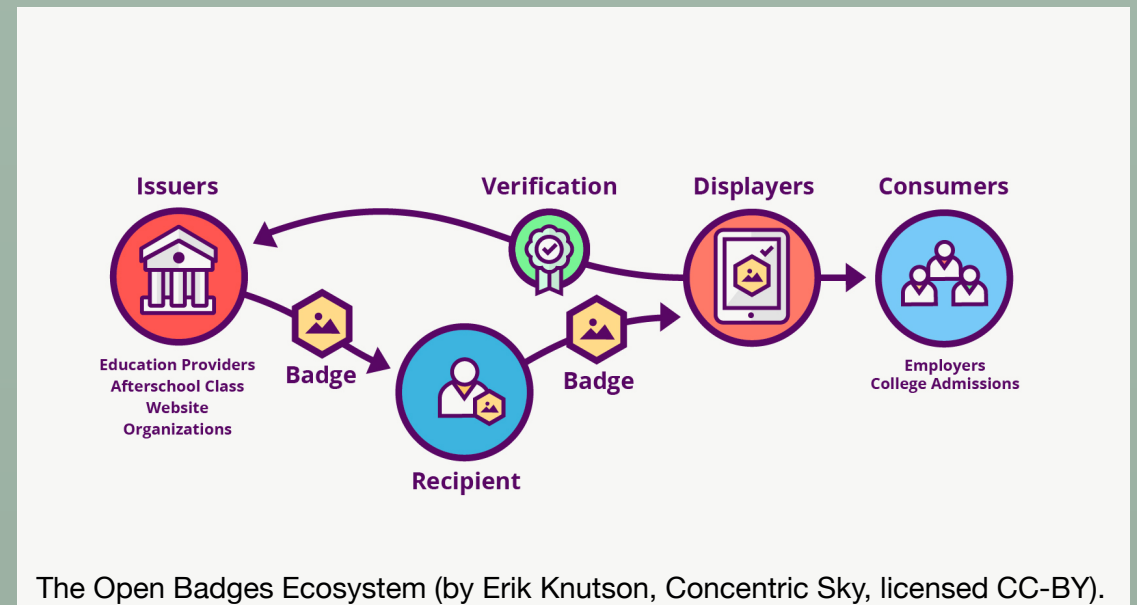




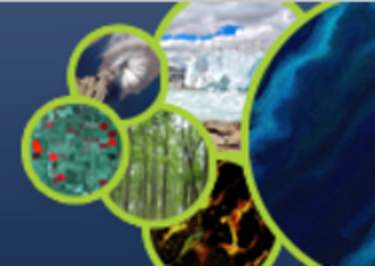
Digital Badges contain:

- Details about the organisation issuing the badge
- What the individual has done to earn the badge
- That the badge was issued to the expected recipient
- The badge earner's unique evidence (optionally included)
- When the badge was issued and whether it has expired

Digital Badges represent legitimate, authenticated achievements, described within a badge and linked to the awarding organisation.



The Open Badges Ecosystem (by Erik Knutson, Concentric Sky, licensed CC-BY).



1. Introduce the idea to VLab Members

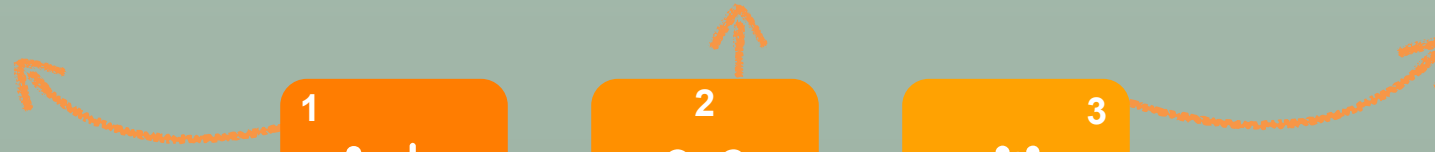
- Explain how it works
- Discuss advantages and workload involved

2. Procure partners

- Procure partners to participate in a Pilot

3. Provide Guidance and support

- Provide guidelines for implementation
- Support initial set up and testing



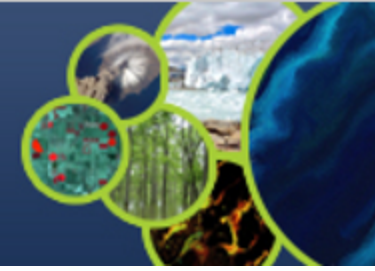
Challenge

- Getting training providers onboard;
- Informing users how to benefit from sharing their badges (and how to do it).



Benefits

- Provision of verifiable records of learning;
- Possibility to share records in various platforms;
- Sharing of records are controlled by learners.



Calendar of Events

All training events planned by VLab Members are shown in the Online Calendar. Browse the calendar at <http://trainingevents.eumetsat.int>

We are working in coordination with WMO Global Campus and CEOS calendar developers for sharing of data.

Training Resources

Since recent launching of the WMO Global Campus E-Library, VLab Members started sharing training resources at <https://library.wmo.int>

Check the “Global Campus” section of the library and browse the WMO competencies for resources in Satellite Skills and Knowledge for Operational Meteorologists.



Satellite Skills

Satellite skills are the main focus of VLab training to operational meteorologists. These were last updated by VLab and published by WMO in 2018. Download it from the VLab website at <https://www.wmo-sat.info/vlab/ss/>

Regional Focus Groups

Regional Focus Groups are organised by various VLab Members to widen the access to training events and training resources to neighbouring countries in their WMO Regions. Find out how to participate in the VLab RFGs by visiting our website at <https://www.wmo-sat.info/vlab/rfg/>



Publication coming soon! *WMO Global Campus Innovations: New Directions for Education and Training*

