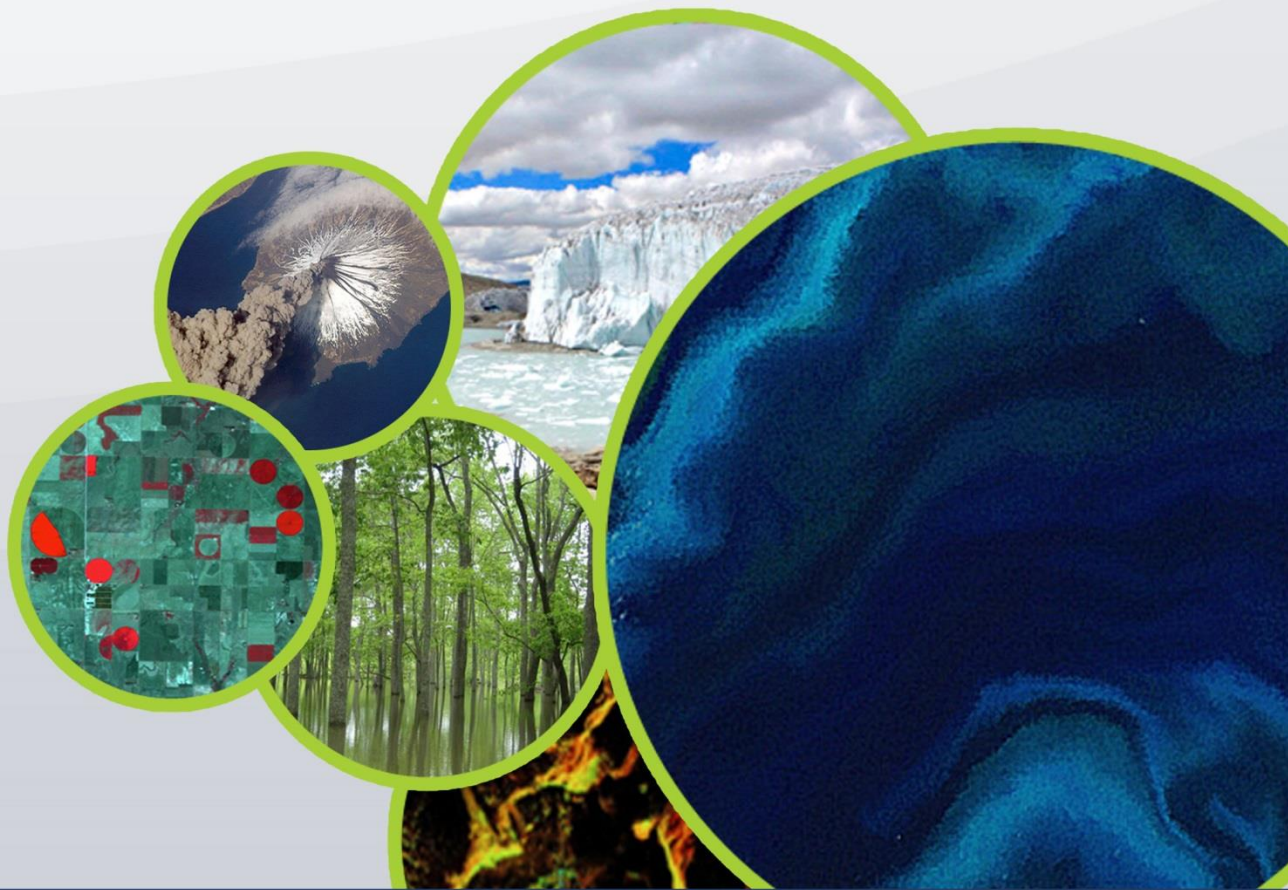




Committee on Earth Observation Satellites



CEOS Webinar Creation Guide

CEOS Working Group on Capacity Building & Data Democracy

Feb 2021 | Version 1.1

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Version Control

Version #	Authors	Purpose/Change	Date
0.1	Lauren Childs-Gleason (NASA)	Initial Draft	Dec 2020
1.0	Sydney Neugebauer & Lauren Childs-Gleason (NASA)	Finalized Draft 1.0	June 2021

Overview

In support of the CEOS mission and goals, the Working Group on Capacity Building and Data Democracy (WGCapD) aims to raise awareness of the value of Earth observation data products and services and to help user communities access data, products, and tools and effectively apply those data to solve real-world problems. Our Working Group members possess a wealth of knowledge and experience conducting trainings and capacity building activities, which we seek to offer as a resource to CEOS working teams that undertake their own capacity building initiatives.

The WGCapD's collective experience in effectively designing and hosting webinars has been compiled in this document to support the strengthening and branding of CEOS webinars. This CEOS webinar creation guide is intended to be a living document, for exchanging experiences and sharing knowledge.

Webinar Creation & WGCapD Support Summary

The following diagrams and descriptions highlight the progressive steps and good practices for webinar creation and identify where WGCapD can provide review (gold circles) and actively support specific actions (green circles) throughout the process.

Pre-Webinar Activities



1. Conduct a **Needs Assessment**.

- ✓ Communicate with potential participants who fit the demographic of your target audience about their needs and what kinds of capacity building would best serve them through surveys, meetings, videoconferences, etc.
- ✓ Identify the ideal language in which this training should be delivered.

Note: WGCapD will review your needs assessment survey/materials prior to you conducting the assessment as well as help you identify key takeaways after the needs assessment is complete.

2. **Identify your trainers** and clearly define your **target audience**.

- ✓ Take into consideration the number of participants you are looking to engage and their characteristics: age, gender, level of education, professional experience, technical expertise, sector, etc.
- ✓ Identify subject matter experts and/or trainers who can develop and conduct the training and have training experience and expertise in the training topic/theme/application. Multiple trainers for various modules may also be beneficial, provided they work together to ensure proper transitions from one module to the next and communicate how their various modules interrelate.

3. Define the webinar's **learning objectives**.

- ✓ What is the **scope** of the webinar? Define the scope based on stated needs and available resources and confirm the scope is appropriate for the intended audience.
- ✓ Will this training focus on building **awareness** or **skills**? To build awareness, focus on lower order thinking skills – Remember & Understand. To build skills, focus on higher order thinking skills – Apply, Analyze, Evaluate, and Create.

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- ✓ Consider the depth and breadth of knowledge the attendees can realistically gain through the training to **define training level: introductory to advanced**.
- ✓ Help **focus** the training by defining a **specific topic/theme/application** (e.g. urban planning).
- ✓ Define a set of learning objectives focused on your target audience and what you aim for them to leave your training having gained.

Note: WGCapD will review your draft learning objectives and offer feedback.

4. Develop your webinar content and **design webinar materials**.

- ✓ Determine the **technology** and **platform** that will be used and **how many participants** it can accommodate – this can be a limiting factor. See Appendix IV for guidelines to consider when choosing your platform.
- ✓ Understanding your platform and the types of media that can be presented/displayed, **identify your approach** to the webinar – live lecture, pre-recorded lecture, discussions, hands-on activities, etc.
- ✓ Create a **storyboard** for your content to help organize and create a synoptic view of the training. When conducting a series of webinars, consider how each webinar can expand on the previous one.
- ✓ **Develop the training materials** and where possible explore **co-development** of training materials with leading experts and subject matter experts. Training materials often include: agenda/syllabus, handouts, presentations, case studies, user guides, hands-on exercises, assignments, and group projects.
- ✓ **Evaluation** is an important piece of conducting a training. Develop an assessment to collect input and feedback on the effectiveness of your webinar. This can include pre- and post-training assessments/surveys.
- ✓ Consider ways to make the webinar **interactive**: group discussions, group projects, hands-on exercises, Q&A sessions, etc.
- ✓ **Branding** is key to effectively convey CEOS and its members' involvement and thematic areas addressed. Utilize the CEOS webinar logo and icon bank, documentation templates, etc. [See References & Resources](#).

Note: WGCapD will review your webinar materials and provide inputs on ways to strengthen.

5. Schedule and **promote** the webinar.

- ✓ Identify the **ideal date and time** to conduct the webinar taking into consideration international holidays and different time zones.
- ✓ Determine the **time requirement** in advance of the training to advertise the event, and **establish deadlines** for participants to complete any pre-requisites and registration.
- ✓ **Market/advertise** the webinar to your target audience, ensuring they are aware of training objectives, prerequisites and time they are expected to dedicate to training. Organizers and stakeholders should ensure all communications/marketing efforts specify the background, educational, professional, and other prerequisites required for participants to qualify for this training.
- ✓ Prior to the start of the training, send participants an **introductory message** with relevant details such as a list of software and hardware requirements and installation procedures, details on timing and location, schedules, agendas, and any pre-training assessment questions.

Note: WGCapD can help promote the training by sharing information with the CEOS training distribution list and other targeted audiences, as well as add the event to the CEOS Training Calendar.

During Webinar Activities



1. At the start of the training **share a rubric** or agenda for the training to provide insight into organization of the content and what participants can expect.
2. **Anticipate challenges** and address and **troubleshoot problems** as they arise.
 - ✓ Provide sufficient time for performing tests: software/platform access, internet speed, video playback, audio/video of presenters, etc.
 - ✓ While conducting the training, ensure open lines of communication between trainees and trainers.
3. **Publicize** the event before and after it begins through mailing lists, websites, and social media (LinkedIn, Facebook, Twitter, Instagram, etc.).
Note: WGCapD can help communicate about the event on the CEOS website, through the CEOS training distribution list, etc.
4. Offer **interactive participation** opportunities for participants: group discussions, group projects, hands-on exercises, Q&A sessions, etc.
5. **Employ exercises** to effectively convey concepts and material presented. This can include small process-oriented activities to visit websites, use online tools, download data from repositories, etc.

Post-Webinar Activities



1. Conduct a **post-training evaluation** using a survey or some means of collecting feedback from participants. If not already done, share training materials and files, and other resources for trainees to revisit as interest and timing allows. Consider providing **certifications** following the training to provide recognition and credibility to participants, such as digital certificates or badges. See Appendix V for more considerations on certifications.
2. Combining the trainee survey responses and trainer experiences, **prepare a lessons learned document** that identifies interesting findings, opportunities for improvement, things that could have been done differently, ideas for future webinars, etc.
3. **Draft a training report** using the WGCapD-provided training report template that incorporates lessons learned and other facts about your training along with a participant spreadsheet. Participant feedback is very useful to learn effectiveness of training undertaken and obtain future course recommendations. Document

students' quotes.

4. **Post information on the CEOS website** about the webinar (and potentially supporting training materials).

Note: WGCapD can help post information, materials, and training report on the CEOS website.

5. Send the participant spreadsheet of those who have opted-in (or not opted out) to the WGCapD for inclusion in the **CEOS training distribution list**.

Note: WGCapD will add the trainees to the CEOS distribution list for future communications.

Branding: Logos, Themes & Attribution

Webinars should follow CEOS Branding Guidelines, accessible at <https://ceos.org/resources/ceos-branding-guidelines/>. These Branding Guidelines are also designed to visually and thematically reinforce the CEOS mission: "CEOS ensures international coordination of civil space-based Earth observation programs and promotes exchange of data to optimize societal benefit and inform decision making for securing a prosperous & sustainable future for humankind."

It's suggested that CEOS-branded webinars include the CEOS logo and when possible use the CEOS presentation template for content.

Training Evaluation

Pre-Webinar: Survey participants before training events to assess their demographics (location, skill level, career field, etc.) and their current level of understanding, experience, needs, and objectives. This sets the baseline for your evaluation.

During Webinar: Survey participants during training events to allow feedback and mid-course correction.

Post-Webinar: Survey participants after training events to identify what they've learned to determine if their objectives were met and to solicit feedback on the training itself. Have trainees rate the training materials, the instructors, the delivery channels, etc. The CEOS Systems Engineering Office has a license to use Wufoo, which can be used to conduct surveys of large numbers of people.

See Appendices I, II and III present some tips on how to create surveys, for participants and instructors.

Tips to Creating Effective Webinars

General Tips

- Make course recordings and materials accessible to participants (and possible the general public) once the course is complete.
- Consider providing participants with a certificate for completing the training.
- Have contingencies in place for unexpected obstacles/limitations: power failure, interrupted internet access, technical failures, etc.
- Online trainings typically have higher rates of students' dropout. Make sure students are clear about how much time they are expected to dedicate to the course and engage them, from the beginning:
 - Send email to all participants one week before the course starts with clear instructions:
 - Information on the videoconference platform and its use
 - General netiquette

- Course rules and methodology
- Software, hardware, and internet connectivity requirements
- Utilize efficient methods for communication during the course and keep communication lines open.

Webinar Tips

- Free trainings typically have more people register than actually attend. Therefore, it can be appropriate to accept at least 20-30% more students than you plan to have in the course. This will accommodate the dropout rate usually experienced.
- Set up the time for sessions to allow different time zone participation (one solution is to offer the session at two different times for the Eastern and Western Hemispheres).
- The meeting platform shall be opened for participants 10 minutes prior the webinar.
- Provide clear instructions regarding sessions, rules and netiquette (rules of etiquette when communicating virtually).
- All participants shall be muted by entry to the webinar.
- Cameras should be on at the beginning of the training, it looks more personal, increases social pressure to participate, and then turned off during the session.
- Allow enough time for questions from the audience, which shall be addressed in the chat box when using software with this capability.
- Make your training session more active:
 - Get to know your audience:
 - Conduct a quick investigation by sending a questionnaire before the training.
 - Engage participants during the session by:
 - Having a simplified design of presentation, visual and with an appropriate level of information
 - Introducing content actively
 - Using interactive videos and animated demos (remember to send these material in advance)
 - Using quick polls and surveys during the webinars to prevent participants from losing focus and engaging too heavily in unrelated tasks during the webinars (i.e. multitasking). Polls and surveys also help instructors gauge how well the students are understanding the information (or how much they already know)
 - Presenting lower cognitive questions, yes/no, easy answers
 - Saying their names when answering questions
 - Showing scenarios and engaging participants
- Consider having a person to help the instructor with the chat box.
- Consider having a moderator present in each webinar to help troubleshoot webinar technology without distracting the instructors. The moderator may also manage questions from students during the session.
- Learning is a social activity:
 - Solve problems together
 - More memorable
 - Foster dialogue specially with large audiences
 - Make better actions in the chat box
 - Acknowledge comments, use people's names, link comments, encourage peer-to-peer interaction
- Two-way communication: enable post-webinar interaction: instructors-participants; participants-participants.

References & Resources

- CEOS WGCapD Resources Page (<https://ceos.org/ourwork/workinggroups/wgcapd/resources-2/>).
Includes:
 - CEOS WGCapD *Training: Methods & Best Practices* document
 - Training Report Template
 - Trainee Tracking Spreadsheet
 - Post-Training Questionnaire
 - CEOS ARD Logo Guidance
 - Needs Assessment Template
 - Promotional Flyer / Agenda w/Learning Objectives Template
 - Storyboard Template
 - Promotion Guidance Document
 - Promotional Email Example
 - CEOS Logo & **Thematic Observation Area Icon Bank** (logos going through new CEOS branding review and approval process)
 - **PowerPoint/Google Slides Presentation Template (will be finalized after logos are approved)**
- WMO Resources for Trainers – WMO Education & Training: Checklist of Organizing Webinars (<https://etrp.wmo.int/mod/resource/view.php?id=9002>)
- SERVIR Service Planning Toolkit – Capacity Building and Training Definition Document Template (https://www.servirglobal.net/Portals/0/Toolkit/Capacity%20Building%20and%20Training%20Definition%20Document%20Template_2017-09-19.docx)

Appendix I: Feedback Survey – General Tips

Types of Feedback:

1. Anonymous
2. Identified (name or email)

Types of Questions:

1. Multiple Choice – Likert Scale
 - Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
2. Dichotomous – Yes/No
3. Ranking something in order of preference from best to worst
4. Rating your opinion bases on a scale:
 - Poor
 - Fair
 - Good
 - Very Good
 - Excellent
5. Rating something from 1 to 10
6. Short Answer
7. Long Answer

Possible Survey Sessions:

1. Personal Information (in case not anonymous)
2. Training Organization
3. Experience from participant’s perspective
4. Training Expectations
5. Contents
6. About Instructors
7. Assessment and Self-Assessment

Appendix II: Feedback Survey for Participants (Sample Questions)

1. Personal Information (in case not anonymous)

- a. Name
- b. E-mail Address
- c. Institution

2. Training Organization

- a. Were you informed in advance about the content of the training and the way it would be organized? (Yes/No)
- b. How did you become aware of this training?
 - Mailing list X, Y, Z...
 - Website
 - Social Media: Facebook, Twitter, Instagram, YouTube, Other
- c. Did the training website meet your needs/expectations? (Yes/No)
- d. The administrative staff has been efficient and solved all the problems that were presented. (Likert Scale)
- e. Do you intend to access materials from the training (presentations, recordings, etc.) after the training is over, on the CEOS WGCapD Learning Center (<http://learningcenter.obt.inpe.br/doku.php?id=workshop-montreal>)? (Yes/No)
- f. Learning objectives, instructional and assessment activities are closely aligned. (Likert Scale) or (Yes/No)
- g. The workload is appropriate. (Likert Scale) or (Yes/No)
- h. The learning material provided facilitates the acquisition of content. (Likert Scale) or (Yes/No)
- i. The hand-on activities made easy the learning process. (Likert Scale) or (Yes/No)

3. Overall Experience

- a. I was satisfied with the overall quality of this training. (Likert Scale)
- b. The information presented at the training was useful and relevant to my work. (Likert Scale)
- c. Was this your first online education experience? (Yes/No)
- d. If you have had previous online education experiences, please list any Learning Management Systems (such as Moodle) that were used? (Open)
- e. Which kind of training do you prefer?
 - Online
 - Onsite
- f. How would you rate the Learning Management System used? (Rating Sale).
- g. How would you rate the quality of the session recordings? (Rating Sale).
- h. How would you rate the live webinar sessions given? (Rating Sale).
- i. LMS (Learning Management System) used is intuitive and is easy to navigate throughout the training. (Likert Scale)
- j. The interaction and communication student to student, student to instructor and student to content via LMS were satisfactory. (Likert Scale)
- k. Do you want to make some comments about the training? We will be glad to hear from you... (Open)

4. Training Expectations

- a. This training met my expectations. (Likert Scale)
- b. Your overall rating of this training (Rating Sale).
- c. Suggestions for how to improve this training. (open)
- d. Would you recommend your colleague/ friends to attend the similar training if organized in future? (Open)
- e. Which topics would you recommend to be added to next trainings? (Open)

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- f. Do you want to comment on specific aspects of the training such as: topics and issues; scenario-specific comments & suggestions; format and organization; collaboration and coordination or others? We will be glad to hear from you! (Open)

5. Contents

- a. How would you rate the training content? (Rating Scale).
- b. Which parts of the training did you find most/least helpful? (Open)
- c. Was the amount of time you spent taking this training appropriate for the amount of information you learned? (Yes/No)
- d. The training objectives were clear. (Likert Scale)

6. About Instructors

- a. In general, instructors were well-prepared and clearly presented their ideas. (Likert Scale)
- b. At least one of the instructors said something that led me to think differently about a specific project or initiative on which I am working. (Likert Scale)
- c. How would you rate the instructors? (Rating Scale)
- d. Instructors have deep knowledges of the training subject. (Likert Scale)
- e. Instructors created a positive climate of study. (Likert Scale)

7. Assessment and Self-Assessment

- a. How would you rate the assessment tools (X, Y Z..) that have been used? (Rating Scale)
- b. How would you rate the quizzes? (Rating Scale)
- c. Assessment and evaluation goals are clearly communicated and evaluation tools are appropriate for measuring outcomes. (Likert Scale)
- d. Please reflect on your own performance throughout this training. Based on what you have learned, how would you rate/grade your performance on a scale of 1 (Poor) to 10 (Excellent)? (Open)
- e. In case of building skills training: How would you rate your capability of applying what you have learned? (Rating Scale)

Appendix III: Feedback Survey for Instructors (Sample Questions)

1. Personal Information

- Full Name
- E-mail address
- Institution

2. Training Organization

- Were you informed in advance about contents and organization? (Yes/No)
- Were you well informed about your commitment as an instructor? (Yes/No)
- Was the training website complete? (Yes/No)

3. Online Experience

- Was this your first online experience? (Yes/No)
- In case you answered “NO” before, what LMS was used? (Open)
- How did you get along technically with [insert name here] LMS? (Open)
- How did you get along technically with [insert name here] Communication Platform? (Open)
- Are you comfortable with the idea of teaching a training outside of the traditional classroom without daily/weekly face-to-face interaction between students and instructors? (Yes/No)
- How would you compare the online experience to other face-to-face trainings you have taught? (Open)

4. Overall Evaluation

- Did you have to dedicate more time for class preparation and students' follow-up than you expected? (Yes/No)
- Would you like to participate in the next edition of this training? (Yes/No)
- What is your overall impression of the Training? (Open)

Appendix IV: Platforming

As you navigate how to **platform your training**, consider the following factors: content, accessibility, structure, and communication.

Answering these questions will help identify which training platforms to consider:

- ✓ How **much** information will be presented throughout the training?
 - Identify what materials you will be providing to end-users during the training. Will there be assignments, PowerPoint presentations, projects, etc.?
 - Consider the amount of storage and data you may need to store all files, including presentation materials and submissions from end-users.
 - Consider the level of complexity of the material, which will inform the level of detail you plan to convey.
- ✓ How **accessible** will the training be?
 - Will the materials be easy to navigate for end-users?
 - Will the trainings be open for the public?
 - Do you intend to provide pre-recorded webinars and pre-links before the training begins?
 - Consider what additional softwares may be implemented during the training that end-users will need to access.
 - What additional technologies do your participants require to participate – a webcam, microphone, or call-in options?
 - What technologies will the trainer need to communicate most clearly – a webcam, microphone, appropriate lighting, or additional resources to increase image and sound quality?
- ✓ What is the **structure** of the training?
 - Consider if your training will be live, pre-recorded, or on-demand.
 - Consider if the topics you will cover require additional tools or software.
 - Will you offer assistance to participants during the training?
 - Identify the size of the audience. Will you be catering to small groups of individuals or broadcasting to hundreds of people?
- ✓ How will you **connect and build** a network of end-users?
 - Communicate with end-users via email, surveys, office hours, or other means.
 - Consider the tools available to communicate during the training, such as chat functions, question and answer boxes, or other features.
 - Consider facilitating a continued community of practice with networking platforms or social media such as LinkedIn, Slack, Mattermost, or other platforms.

Common Training Platforms:

- Video Meetings: Zoom, Microsoft Teams, Google Hangouts, Cisco Webex, GoToMeeting or GoToWebinar
- Storage Platforms: Google Drive, Microsoft Teams/Sharepoint, Slack, Dropbox, Canvas, Google Classroom

Appendix V: Certifications

Certifications, such as digital certifications or digital badges, provide recognition and credibility to learners who have been able to accomplish specific goals or criteria as acknowledged by the issuer.

In order to provide the appropriate certifications to individuals who have completed a training, it is important to consider variables such as training length, the level of qualification the earner will achieve, and whether the course is formally or informally taught. Providing digital certifications not only encourages end-users to complete a training, but always them to promote the training within their networks.

Digital Certificates vs. Digital Badges

When choosing the format of certifications, the two primary choices are digital certificates and digital badges. While digital certificates tend to have higher standards of usage and are best used for long trainings or significant levels of accreditation, digital badges are ideal for more casual levels of certification, such as for shorter trainings or unevaluated learning.

The following guidelines and content requirements will help identify which format will best suit your training:

1. Digital Certificates

Used if your training follows these guidelines:

- Longer course length (8+ hours)
- Highly significant achievement earned (career requirement accredited from a professional association)
- Formal assessment (supervised examination)

Content Recommendations

- Title
- Name of person/organization issuing the certificate
- Presentation line
- Recipient line
- Accomplishment description
- Date issued
- Issuer signature(s)

2. Digital Badges

Used if your training follows these guidelines:

- Shorter course length (within a few hours)
- Moderately significant achievement earned (conference attendance requirement)
- Informal assessment (ungraded quiz)

Content Recommendations

- Badge title
- Course title
- Recipient name
- Accomplishment description
- Accomplishment criteria
- Date issued
- Issuer name