Developing participatory training on CWIS

GUIDANCE NOTE

September 2023

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User manual: how to use this guidance note

What is this guidance note?

This note shares easy-to-implement guidance on developing engaging training sessions that respond to the professional interests and requirements of participants.

The aim of this document is to provide guidance on the process of developing training, not to provide the content of the training course or session(s). The structure and content of each training session/course should be developed by trainers in response to participants' learning goals, which this guidance will help you to uncover and leverage.

Types of training or workshop participants may vary, but this guidance note is chiefly interested in those from the public sector i.e. staff who are integral to the delivery of urban public services, including utility and municipality staff and policy makers such as civil servants, politicians and regulators.

This guidance is 'topic agnostic': it can be applied to training sessions on any topic under the broad umbrella of 'Citywide Inclusive Sanitation'. Trainers and facilitators should identify the topics that are most relevant to participants, and provide/coordinate the requisite information and expertise per identified topic – including from among participants.

Which sections of this guidance note should you read?

This guidance note is for anyone developing training on CWIS, regardless of audience, sub-topic or delivery mode. This guidance note does not have to be read all at once; it is split into three sections and appendices that can be used independently of each other and to which you can refer as needed.

In addition, stock training collateral has been developed and is available online.[1] These are a starting point for those delivering short introductory sessions on CWIS and consist of PowerPoint presentations with standard messaging on the CWIS approach and framework. These can be adapted by trainers to suit their audience and are free for use. 'CWIS 101' is designed to support the delivery of a short orientation session of ~90 minutes. 'CWIS 201' is designed to support the delivery of a slightly more in-depth introduction to CWIS over three relatively short sessions.

While CWIS 101 and 201 are ready for you to use if a shorter introductory session is appropriate, **we still recommend that you read this guidance note in full at some point** as it contains practical guidance on tailoring training to different audiences (Section A) and useful training methods (Section B). These are all aspects that should be considered even when designing shorter, less in-depth sessions.

This guidance note can be used by anyone, regardless of level of perceived experience with delivering 'training'. However, experience of developing training and delivering training or facilitating a workshop will vary: some training methods may be familiar to some readers, so Section B ('Training methods') may not be as relevant. However, we recommend that all readers familiarise themselves with Section A, 'Preparing a course for CWIS implementers'.

The table below will help identify which section of this guidance note is the most relevant for you, as well as possible 'modules' you may want to develop after reading this guidance note.

[1] https://www.cwiscities.com/Home/LearningTools#trainingtools

Are you...		Refer to...
Designing, facilitating or overseeing a new CWIS course or workshop?	Is this a one-off introduction to CWIS for relative newcomers, under 90 minutes long?	Section A Appendix 4: Cheat-sheet 'CWIS 101' PowerPoint and guidance [online, see footnote 1]
	Is this a one-off CWIS session that lasts longer than 90 minutes but less than half a day?	Sections A and B Appendix 4: Cheat-sheet 'CWIS 201' PowerPoint and guidance [online, see footnote 1]
	Is this going to be a multi-session/day course?	All sections and appendices
Updating an existing CWIS course or workshop?	Are you updating this course for a new audience?	Section A
	Are you updating the content for the same audience (e.g. a repeat session or more in-depth course or a new topic that wasn't previously covered)?	Section B
Evaluating the delivery and/or outcomes of CWIS training/workshop?		Section C
Looking for training collateral or tools on a particular theme, topic or tool? *This is not an exhaustive list of material on CWIS, but suggested tools that could be integrated into training/workshops with CWIS implementers relatively easily.* *We recommend that you contact the organizations associated with each of these tools/topics if you would like them to form part of your CWIS training course/session.*	Training methods and guidance	CAWST (2019) Creating effective WASH training: Trainer essentials
	A summary of 'CWIS' tools and their use case, data requirements, etc.	Athena Infonomics (2023) Sanitation Tools Review [online PowerPoint, see footnote 1]
	Assessing City Sanitation Plans / Sanitation Master Plans	Strategic Sanitation Service Planning Guidance Note (October 2023) [online consultation document, see footnote 1]
	Developing a Strategic Sanitation Service Plan	Strategic Sanitation Service Planning Guidance Note (October 2023) Stakeholder Engagement Plan (via FSM Toolbox)
	Assessing the existing sanitation situation	FSM Toolbox (including SFDs and City Service Delivery Assessments) Athena Infonomics (2021) Survey toolkit for CWIS outcomes indicators [available on request from Athena]
	Analysing options for interventions as part of a strategic service plan	EquiServe
	Developing interventions	Infrastructure Planning, Business Model Selection (both via FSM Toolbox)
	Identifying data points along sanitation service chain and listing financial data points	Athena Infonomics (2021) City Sanitation Data Assessment Checklist
	Assessing sanitation data reliability and accuracy	ESAWAS (2023) Sanitation Data Collection Template [available on request]
	Costing interventions and approaches	World Bank (beta) CWIS costing tool IRC (ongoing) Lifecycle costing approach (overview here, tools here)

The role of professional training in CWIS

Wider and better understanding and acceptance of the CWIS approach are integral to the effective planning and delivery of appropriate, safe and sustainable sanitation services. Training should therefore be shaped by the professional needs of participants, not by what the trainer or facilitator feels they should impart.

Effective training can be a powerful tool to empower those who are committed to forging new paths or furthering a policy ideal. Given the number of public service professionals who could - at some point in their careers - take part in at least one training course, session or workshop, these **can** be a crucial communication and advocacy tool for socializing the CWIS approach… **if** they contribute to participants achieving outcomes that they value.

There are many reasons why training for adults in professional settings 'fails' to have any discernible impact on implementation outcomes or changes behavior. Many reasons are **internal** to the training: it may not be well-designed or it may be poorly executed. But many of the reasons are **external** to the training: it may be disconnected from the daily work or operations of enterprises or organizations; those who are trained may lack opportunities or authority to implement what they have learned; there may be opposition to change within organizations; or they may lack post-training tools or resources.

This guidance note can help trainers to establish a plan on how the training (or elements of it) can be implemented in a way that participants can adapt and use it in the "real world" outside the classroom.

What are the goals of this guidance note?

- Guide users on preparing courses that help policymakers, managers and decision-makers to integrate the CWIS approach into urban planning and service delivery
- Share training methods appropriate for implementers and professional problem-solvers
- Highlight materials and modules that trainers can refer to as they develop their course

This guidance note will help trainers to design a course that does the above, by providing information on a) how to assess the interests, needs and objectives of audience/participants as a fundamental first step of designing and delivering a CWIS implementation course, and b) which training methods may be suitable for different participants, group sizes, resource, and time constraints, etc.

Contents of this Guidance Note

Section A: Preparing your course
This section outlines the fundamental pre-training preparation that trainers/facilitators should undertake before designing a training course and developing content.

Section B: Training methods
This section outlines the different approaches that can be adapted and combined to ensure that the training course is engaging, participatory and effective for adult learners and busy professionals. This section also provides guidance on assessing the achievement of learning outcomes, the effectiveness of the training itself, and changes in knowledge and behaviours among participants.

Section C: Evaluating training
This section outlines the main methods by which you can evaluate the achievement of your learning outcomes, and the quality of the training itself.

SECTION A: Preparing your course

Pre-training preparation

Research and co-creation are fundamental first steps, and the bedrock on which your course / training schedule sits. If this stage is skipped or not adequately considered, then the long-term impact of your course may be at risk.

Reviewing relevant programme documents, investment documents, policies, etc. will help you to understand where your training will 'sit' within a program, an investment, an intervention, an organisation, etc. Trainers/facilitators should ask and answer the following questions before they move on to building the course structure and the content for each module:

Who has asked for this training to be delivered?

- Has this training package for public officials been requested by a national/state government body?
- Has the training package been recommended/required/resourced by an external agency/funder?
- Is the implementing organization designing the course? Is the training linked to a specific objective or deliverable e.g. a new policy or strategy, or to project implementation including budgeting, engineering, design etc.?
- Will staff self-select to be in the course or will they be required to attend? Who is accountable for ensuring that staff take part in the training?
- How directly relevant is this training to participants' day-to-day work?

Is the training linked to a specific programme/intervention?

- Is the program a 'CWIS' intervention, program or investment package? If not, how can you build the CWIS approach into this program?
- Is the scope of the training very broad i.e. is it part of the trainers' responsibilities to identify relevant content and modules? Or is the scope of the future training already very prescribed (e.g. training on one 'CWIS' topic, tool, problem, etc.)?
- Is this training part of preparatory work for an upcoming program/intervention, which has not yet been finalized? If so, is this training course for staff who will be contributing to the design of that program/intervention?
- Is this training directly linked to an organizational and/or personal professional objective/required deliverable?

Answering these initial questions will help to gauge how incentivised participants are to actively engage, beyond rote attendance. It will also give the trainer a sense of how much time and energy the participants can devote to the process of learning.

For example, if the training is a requirement of an external organisation, agency, or funder other than that of the participants, this may imply that the trainer will have to consider how to relate training to participants' operational work. If the given scope of the training is very broad, then the trainer should consider what lens may be the most pertinent to frame the training. For example, is the city masterplan due to be updated in the near future? Does the organisation for whom you are delivering the training have a very specific mandate for service delivery and key performance indicators?

If that is the case, then you potentially have a 'hook' with which to bring participants to you - use it!

Who is taking part in this training?

Trainers sometimes have a say in deciding who should take part in the training, but this often not the case. Those attending the training may have been nominated, selected by others or self-selected. Attendees may have limited time to attend sessions before returning to their normal duties. If they have travelled to attend the training, they will likely return home in a short period. Thus, understanding exactly who will or should be attending the training and ensuring that they can be fully engaged in the allotted time is of paramount importance.

The table below can be used to outline the likely attendees/participants of a training session/course/workshop.

Table 1: Who are the participants?

Question	Answer
Who is invited to the training and by whom? *Describe attendee responsibility and interest (if self-nominated) in the training.*	
How big is the group?	
Are participants required to attend? *Describe who is requiring them to attend and why*	
Will senior officials from the local or national government attend? For how long will they attend – hours, days? *Name the officials and their time commitment*	
Will attendees be required to stay for the entire duration of the training, including virtual and in-person training? *Describe in-person and online requirements and penalties for failing to attend, non-participation etc.*	

The type of attendee matters, not just for identifying relevant learning outcomes (see below), but also for more practical purposes:

- **Senior decision makers** such as ministers, mayors and governors often have the *least time to prepare for a training or to attend it*. They may not have the ability or the desire to complete an evaluation of the training, and thus it is very difficult to gauge the utility of any training for them.

  Any training that includes or is generally targeted to such senior decision makers must be **designed with very specific messages and outcomes in mind.** Linking the training or workshop to ongoing or upcoming initiatives or decisions that they may have to make may be a good point of entry for you to consider.

- **Senior bureaucrats or 'technocrats'** (e.g. civil servants, regulators) who have the authority to make financial or other decisions that impact sanitation have more time than ministers but *may not be open to attending a multi-day training because they do not understand its relevance to their work or because they lack the time*.

  Tailoring sessions to **reflect on and positively build on the work that they already do, the progress that they have made and the problems that they identify is critical to ensuring their active engagement**. For example, a detailed lecture on decentralized sewage management may be irrelevant to Secretaries of Finance but they could be engaged in a dialogue on how budgetary decisions can impact equitable outcomes of sanitation services.

- Lastly, *most training does not cut across sectors and loses the interest of those who either already know the material that is being presented, or do not know it all, and cannot foresee how they could apply it* (health, gender, disability rights-focused groups, for example). Many effective trainings are **cross-sectoral** and reach decision makers and stakeholders who may be involved in a wide spectrum of CWIS activities and decisions.

Engage them in a series of dialogues that acknowledge their contributions, invite their point of view and assist them in locating and solving problems.

This is not an exhaustive list of the kinds of people who may take part in CWIS training, but underlines that you should be aware of the differing constraints and points of interest that you may encounter, given how many stakeholders should be actively engaged in various aspects of sanitation service delivery.

What drives those participating in this training?

With the lead point of contact from the organisation leading the training (this could be a colleague/s if you are designing an 'internal' training course), establish the desired learning outcomes of this course, keeping in mind the attendees' own experience, interests and objectives.

You are trying to tease out answers to fundamental questions:

- What are you trying to achieve with these participants?
- What do you think these participants want to achieve?

Using the research you have already done and what you already know about the participants – how many of them are likely to take part, their existing knowledge of CWIS, their likely incentives for engaging in the training process, and what you can establish of their professional routine and operational realities – answer the following questions.

Table 2: Connecting training to professional practice

What is the vision for this training course?	
What is the purpose of this training course for participants and/or their organisation?	
What specific needs will this training meet? How have these needs been identified?	
How will you account for the time taken out of working schedules to participate in this course? Or how will you juggle the demands of this course with your regular work demands?	
What are the specific (professional/project/organisational) problems or difficulties that this training will help participants to resolve?	

The answers to these questions may emerge over several conversations; this should be a **collaborative process**, through which the overarching 'vision' and key tenets for the course are agreed among the interested parties. These **learning objectives** will serve to guide the content and structure of the training, and should be revisited often.

Learning outcomes should be specific, attainable, and measurable. This will not only help you tailor training more efficiently, but will also help you evaluate its effectiveness (see Section C). Learning outcomes are focused on what the learner should be taking away from the course or training and **not** on what the instructor will do.

For example, a learning outcome could be: "*At the end of the training, all the participants will have a strong, contextual, understanding of the costs and benefits of incorporating informal sanitation providers in the service delivery chain*", compared to a more instructional outcome like: "*The training will introduce all participants to informal service providers who are part of the service delivery chain for sanitation.*"

If this is to be internal organisational training, then learning outcomes could be entwined with professional objectives, so engaging with managers and senior staff is crucial. They will be holding staff accountable for implementing what they have learned in their daily operations.

Once you have completed the table above, keep your answers as a reference point for when you think about what you will be asking participants to do over the length of the course, and as you consider the most appropriate methods to deploy at different stages to help them to achieve these outcomes.

SECTION B: Training methods

Training methods may center around the *Teacher* – their knowledge and expertise – or around the *Student* – their knowledge, learning needs and abilities. The two types of methods can be combined, but facilitators/trainers should be aware of the differences in Teacher-focused and Student-centred methods and when they are best deployed. All those taking part in your workshop or training course will be bringing their own professional (and personal) experience – they are sources of information and expertise that you should leverage as much as possible, even if you decide it is appropriate to use more 'teacher-focused' methods.

Those following a teacher-focused method may decide to use a combination of approaches (lectures, teacher-led seminars, or small group discussions, expert panels etc.) but it is generally understood that most learners absorb materials through a **combination of listening, reading and doing**. Trainers may direct all these activities by setting goals, providing detailed instructions and checking-in regularly to ensure that learning goals are being met.

Teacher-centered didactic methods

- **Lectures** that share content, pose questions and suggest solutions (e.g. 'CWIS 101' PowerPoint-led introductory session)
- **Seminars** in which the teacher and the learners share content. Small groups discuss pre-assigned texts or other content.
- Teacher-led **small group discussions** in which a small group works with a teacher to drill down on specific concepts
- **Expert panels** in which trainees learn from a panel of experts, through a moderated discussion
- **Case studies** that illustrate concepts, theories, problems and solutions

Student-centered learning, on the other hand, allows participants to define or redefine problems, and reach solutions through a range of activities, which may or may not require collaborating with others. For larger groups, this could begin with an enquiry-based exercise in which participants are simply given instructions to list questions that they have on a particular topic. Participants could also come up with their own presentations, talks or games on a topic of their choice. Student-centered learning is typically done in-person but it is possible to devise cooperative games and presentations online.

Student-centered pedagogical methods

- **Cooperative learning-by-doing**. This may include using tools, games, designing new strategies to which each participant can bring skills and knowledge to solve a problem or a series of problems. These can be designed and directed by the trainer or self-designed and self-directed.
- **Role plays and jigsaws**. A larger puzzle or problem is broken into smaller pieces to be tackled either by individuals or by small groups. Each individual/ team must bring their solution back to the larger group.
- **Individual presentations** e.g. lectures, 'Ted Talks', short films.

In this section, we will highlight a selection of methods that can be used by trainers based on the characteristics of the groups taking part in training, their own comfort with alternative pedagogical methods, and the desired outcomes of your training course.

Note that a combination of methods should be used to bring out different elements of discussion, to ensure that all participants are willing and able to contribute, and to engage all participants in active discussion and practical problem-solving.

Regardless of the professional 'type(s)' that you may have identified among your participants, you may want to consider taking an ***Appreciative Inquiry*** approach, which acknowledges existing strengths, and is often used by organisational change managers. Focusing solely on needs and deficits, while ignoring knowledge and progress by made those 'in the room', could lead to participants losing the drive to positively engage.

Which training method(s) should you use?

The type and number of training methods you will select will depend on: the **number** of participants, the **types** of participants, **length** of training course, whether the training will take place **in-person or remote or a hybrid** of the two, the **base level of knowledge** among participants, and the **diversity** of the group taking part. Before bringing in your learning outcomes and your research on the incentives and requirements of your training participants, answer the following questions.

What is the...

	Answer	Trainer guidance
Group size?		Teaching and learning methods should be adapted to the size of the group. While **lectures** work well for *sharing information with large or small groups*, other types of activities including discussing **case studies, debates, role-playing, or games** *require smaller numbers* of participants. Larger groups can be broken up into smaller ones for these types of learning.
Length of the training?		The amount of time available for training is a key variable for designing the training. For very **brief training** (i.e. one or two short sessions) it is key to stress the **main principles and takeaways** that you most want your audience to understand over only one session (e.g. CWIS 101 and CWIS 201 training packages). In some cases, this might mean orientating the session so that the most **relevant aspects of the CWIS approach for the participants** are highlighted.
Mode of attendance?		A combination of in-person and remote training can aid participants who prefer to learn at their own pace. It can be extremely helpful for participants who are less likely to pose questions in-person. Remote learning **may require participants to read materials, watch content or complete assignments prior to in-person meetings**. In-person meetings can be used for field visits, laboratory experiments, co-creation activities, attending expert panels, etc. **Remote learning does not have to be passive**. Remote learning also reduces costs for organizations who may be able to adapt and update existing modules on an ongoing basis.
Pre-existing knowledge and experience in sanitation?		Begin with an assessment of what participants have done and what they know. This can be done through a simple written or verbal pre-assessment which allows participants to share their accomplishments as well as their challenges. If there is a <u>moderate to low level of understanding,</u> use the pre-assessment to understand knowledge gaps. It may be helpful to **begin with fundamentals**, for example through sessions similar to **CWIS 101**/**CWIS 201**. If there is a <u>moderate to high level of understanding</u> of CWIS among the group, participants may want to present **problems to be solved collaboratively** within smaller groups; be **trained in the use of certain CWIS tools**; dig deeper into **engineering, financial or social analysis, monitoring and evaluation** etc.; or use the opportunity to **strategize or plan an upcoming program**. If the goal of the training is to overcome specific obstacles, it is critical that everyone understand the nature of the problem and present their perspective on both the problem and the solutions they envision. This could require deep dives into technical engineering design or financing, for example.
Diversity within the group of trainees?		When engaging with a group of diverse learners it is critical to understand not just their **familiarity with concepts and ideas** but also their experiences in the field. Engaging in **smaller group activities** that encourage everyone to share their ideas and experiences can be a rewarding way of leveraging diversity within the group.
Power dynamics within the group?		If participants are a mixture of managerial and junior staff from the same organisation, more junior staff may not be comfortable speaking up or sharing experiences of professional setbacks in an open forum. Similar dynamics may also be at play if some participants are from service provider organisations and some are from 'parent' government ministries, regulatory agencies, funders or similar – this should be something you identify from the very outset of the 'Preparation' phase and account for when selecting training methods.

Using the guidance in the table above, sketch out a **skeleton for your proposed training course schedule**. A template is provided in Appendix 1. Refer back to your **learning outcomes** to make sure that each of your proposed sessions (topic, training method) tracks to the achievement of those outcomes.

Putting theory into practice in the 'classroom'

These are some general points that you should remember as you deliver each session, regardless of topic or learning method[2]:

- Most learners are only able to focus on new material for a **maximum of 20 minutes**.
- Allow time for **questions, repetition of main concepts, and explanations** at regular intervals.
- Cooperative **games and exercises usually last longer** as participants are actively engaged.
- It is critical to provide sufficient time for **participant-led activities to be completed** thoughtfully.
- Involve all participants to **co-create a knowledge base accessible** to everyone e.g. a shared drive or folder.
- Organize all participants to **respond to CWIS-specific questions** and make brief presentations on how their work is relevant to implementing CWIS.
- Invite all participants to **co-create their own training modules for their colleagues** (i.e. Training of Trainers).

[2] For a quick checklist of 'good practice' when developing and delivering your training, see Appendix 4

The following training methods should be used in combination, depending on the time you have available, your audience, and the purpose of these sessions (as you have outlined above). This is just an outline of what may be required – of you and of your participants – for each of the most common training methods.

Trainer-delivered lectures

Materials required:

- Pre-recorded videos, assigned reading.
- PowerPoints are overused and should be carefully considered as optional.

Trainer-led workshops

If your participant group is large (i.e. more than 35), then it is recommended that you assign a training assistant to small groups of ten, that you assign a group leader if groups are doing collaborative work, and use a mixture of lectures, individual and group work.

Materials required:

- Prepared reading and discussion material distributed in advance
- Agenda with objectives (based on participants)
- Guided discussion and activities on relevant CWIS principles/implementation examples for small groups and individuals

Cooperative tasks

Cooperative games or activities are typically done in smaller groups. They can take many forms from simulations to role-playing. A sample cooperative activity has been provided in Appendix 2 – this has been provided to inspire trainers to design their own relevant activity.

Materials required:

- Instructions and materials for the game using a real-world and relevant example, preferably using local data;
- Adequate space for teams to engage in the game without disturbance.

Participant-led joint problem and solution discovery

Materials required:

- Brief case study (reading) or film to set the stage;
- Shared question to be answered or problem to be solved (can provide CWIS principles and additional materials for reference);
- Individual assignment to reflect on prior knowledge, how it was applied in problem solving.

For an example of such an activity for technical staff such as engineers, see Appendix 3.

Trainer-identified question with small group discussion

Materials required:

- A question that is answerable but complex and may inspire debate posed to the whole group
- Pairs of trainees to work on the question
- Notecards for trainees to record the question, their individual answers, points of agreement and disagreement and a one sentence answer to the question.
- Timer to ensure that every group has a chance to debate and dialogue to come up with an answer.

Field study or visit

Materials required:

- Guiding document and agenda detailing objectives, activities and learning outcomes;
- Questions for participants on their learning priorities;
- Local guides - managers of utilities, community leaders
- Maps if needed;
- Note-taking directions
- Debriefing notes

Expert panels and interviews

Materials required:

- Moderator materials and questions to prepare experts on the panel regarding the goals of the panel;
- If possible, questions from participants in advance of the panel.
- Panel CVs and introduction
- Time-keeping materials.

Trainee presentations (individual)

Materials required:

- Pre-recorded or in-person 'Pecha Kuchas' (10/20 slides, 10/20 seconds per slide);
- Ted-X type presentations with one or two visuals at most;
- Brief PowerPoint presentations;
- Large poster paper for drawing and writing.

Trainee presentations (team)

Materials required:

- Role-playing script to enact real-world scenario;
- PowerPoints with sections (no longer than 20 minutes);
- Large poster sized paper for writing or illustrating;
- Short videos.

Section C: Evaluating training

Assessing whether and what participants are learning should be a continuous process throughout your course. This should not be relegated to the last session, under any circumstance, as you should be seeking participant feedback to tweak remaining sessions.

There are multiple ways in which training can be improved through active evaluation, correction and feedback. Different methods are used to measure learning outcomes versus teaching or training quality.

If a course is intending to create a change in behavior or attitudes, it can be difficult to measure or assess its success just through learning outcomes, and instructors may have to be creative in their assessments and require some creativity in turn from participants. Brief personal statements and action-plans are sometimes used to understand the extent to which attitudes or behaviours may have changed or could change as a consequence of the training.

Evaluating learning and comprehension among participants

Recitation or tutorial

In a large group, where multiple trainers or facilitators are available, a simple way to ensure that everyone is learning and has the chance to ask questions and get the assistance they need is to create opportunities for “recitations” or “tutorials.”

At the end of each session or the beginning of each new session, a small group can work with a trainer on a specific exercise; asking and answering questions on what has been covered, e.g. using a software, interpreting results from data analysis tools, or building maps or databases.

This approach allows both participants and trainers an opportunity to do detailed work with a smaller group. Such exercises can be experiential - in the field, or they can be undertaken in a classroom or office. The number of people in the group should not exceed 5.

- Discussion-based seminars: these focus on a deeper exploration through discussions and debates. Discussion-based seminars are excellent for fostering a deeper or shared understanding of a particular theoretical concept such as accountability. They also provide opportunities for those who are unlikely to speak up in a larger group.
- Problem-solving seminars: these are common in engineering and focus on problem solving processes and quantitative reasoning. These seminars can give both the trainee and trainer a better sense of how much or how well they know a topic.
- Review and Q&A seminars: in these seminars, learners ask questions about the course content and assignments, review key content in preparation, and consolidate their learning in the guiding presence of the trainer or facilitator (or an external expert if one has been contracted to deliver a certain CWIS session on a particular topic).

However, judging the success of a training based on improvements in comprehension can be difficult if participants come from varied backgrounds with different levels of knowledge or understanding, or if they are in the training for different reasons.

Exercises or assignments

If the goal is to evaluate learning outcomes, in-class exercises or practice could be used. If this is the case, more time should be budgeted to complete these.

For example, if the day’s training focused on creating lifecycle cost-reflective budgets for new infrastructure proposed in a City Master Plan, the only way to ensure that the participants can prepare such budgets on their own is to create a brief assignment on Excel or other tool that can be completed in class, either individually or in small groups.

Keep these in-class exercises simple. For example, you could focus on helping participants to find errors or highlight missing information.

Sample evaluation exercise:

Q: For a hypothetical city, provide the formula used for calculating the current tariff rate for water and wastewater, connection charge, approximate costs to households for on-site sanitation - construction, maintenance, emptying and off-site sanitation.

Guidance for trainers: Allow the participants to construct a table of tariff rates for their own city based on the information you share: what level of tariff would cover the cost of providing a service to all households in the city; what level of service? The assignment could include calculating or estimating missing data points.

Evaluating the training and the trainer

Surveys

One way to regularly assess the training itself is to provide a survey for participants at the end of each session or a module to be completed in-person prior to the end of the session. Providing a simple survey/questionnaire that evaluates comprehension and application of training content can be very useful. Conversely, a long survey that asks participants to give each module or session a score from 1-10 is not useful because it does not seek any information on how content could be improved.

It is also important that surveys, especially for training adults who may be peers, be done in the spirit of learning. For example, the trainer can introduce the concept of appreciative inquiry to begin all feedback with *what worked* and *what was learned*. The same spirit can be applied to the trainer or training, and participants or trainees can provide feedback to improve the quality of training for future users. Criticism should never be personal or offensive.

Questions on the survey can address the quality of each module/session, including its utility, the effectiveness of the teaching methods used, and feedback on the trainer's ability to convey the information. A simplified questionnaire can also be used at the beginning of each new module to assess the prior module. Survey results should be simple to tabulate and understand.

All surveys should have a comments section in addition to Likert scales or other simple multiple-choice options. Simple ways to understand learning outcomes in small groups could include open-ended questions that encourage the participants to reflect on what they enjoyed most and least about the training; what they wish they could have learned; how they would change or improve a particular aspect of the training.

Suggestion boxes with index cards

Suggestion boxes are a simple and anonymous way to evaluate learning and teaching. They can be used throughout the training or just at the end. Providing all learners with an (online or physical) index card each time a module is completed or at the end of the training, with either an open or close-ended question, can help elicit both general and specific responses.

Appendix 1: Skeleton CWIS training course schedule (template)

Session #	Length of time (hours)	Topic	Proposed methods	Purpose of this session
1				
2				
3				
...				

Appendix 2: Example multi-stakeholder co-operative game or activity

Scenario: You have been invited to a mid-sized city (10,000 to 2 million, depending on country) to train officials in the Department of Infrastructure, the Department of Transport and the Department of Planning. The Department of Infrastructure is responsible for water, sanitation and solid waste services. The Department of Transport is responsible for sewerage as most sewers run alongside roads, and the Department of Planning has the ultimate say in budget preparation and allocation. The small city has limited piped water, drainage or sewage networked infrastructure.

Questions to consider as you plan your training this activity:

If all the participants work together on a daily basis you can assume that they know similar facts about CWIS. However, if they do not work together on a daily basis, they may have differing ideas about CWIS. They may be completely unfamiliar with the concept or they may know about some principles and not others. Thinking through the following can be helpful:

- What is the level of knowledge about sanitation amongst the participants? How will you establish what they know?
- Is the training required to undertake an assessment or is it required for implementing a new strategy or investment plan?
- Have the participants or their organizations requested the training because they are confronting a roadblock in implementing CWIS-related investments or strategies?
- Will you combine practical, theoretical and field-based methods?

Appendix 3: Example training activity for technical engineering design staff

Context: Engineering teams can often be cross-disciplinary: water, land, soil experts; those with knowledge of machinery; operators, etc. It is important for the trainer to understand if the trainees have complementary training and experience; if they normally work together; their level of experience and comfort with engineering design and construction.

The following example is relevant for a team that has a medium to high level of comfort with engineering design and has implemented infrastructure projects.

This activity should occur over several sessions to be meaningful. This could include a field trip.

Goal of the active learning: Create a detailed engineering design plan for a low-cost non-conventional sewerage investment in location X (to which they can travel). The plan should be detailed enough to be implemented with minor clarifications and changes.

Materials: The team will have access to the EquiServe tool; a field visit to the location; training materials used to share information on guiding principles of CWIS; and an engineering software with which they are familiar (AutoCAD etc.).

Method: The working groups could be organised by the trainer. Each individual can be assigned a professional role and a functional role for the activity - either by the trainer in consultation with the team or by members of the team. For example, in reality engineering teams can be composed of many different technical experts. Training teams may be able to mirror one based on their current jobs, or attendees can be assigned the professional/technical roles of drainage expert or hydrologist, geologist, civil engineer, machinery operator etc.

In addition, every member of each team should also have a functional role such as Leader (initiator of activity); Facilitator; Collector of information; First Drafter etc.

Team deliverables and calendar: Create and share a deliverables calendar with the teams. What are their interim deliverables, how long do they have to prepare them, when will they be presented? How will the teams present the final deliverable?

Feedback and criticism: Create and share a rubric for feedback with each team so that they are aware of the expectations.

Appendix 4: Training and workshop fundamentals: best practice 'cheat sheet'

The following checklist outlines the fundamental actions for trainers/training facilitators to complete, regardless of the structure of the training, the content, the length and the participants. The below tasks are simple 'best practice' for holding workshops.

Task and purpose	When	Action	Completed?
Define the purpose of this training and your audience Each training session must be tailored to who is in the room (online or physically). As a general rule of thumb, training preparation should take you longer than the training itself – this preparatory phase will also help prioritize content.	Preparation stage: at least one month prior to training itself	Ideally, learning outcomes for this session/s will be a co-creation process between you and whoever is asking you to provide this training (including your boss, a funder, an organization or company). Answer the questions below and develop relevant learning outcomes for these attendees: • **Who** has asked you to deliver this training? • **What** is the vision for this training session? • **What** is the impact that this training is aiming to achieve? • **Who** is attending this training? Are they service providers, funders, trainers, regulators, government, other, or some mixture of all of the above? • **What** is your audience being asked to do? • Is there a defined deliverable or an organizational objective that is driving this training?	
Write training session outline, including content, structure and methods, referring to Sections A and B as needed.			
Write and share an agenda. No matter how long or short the session, detailed agendas provide helpful reminders of the length and purpose of each session	No more than one week prior to the session	Share the meeting agenda with all participants.	
	The day before the session	Send a reminder email (/WhatsApp) to participants reminding them of the start time, share any (short) readings or videos that can set up discussion during the session	
	At the start of the meeting	Post copies of the agenda in the room (if in person) or in the chat/on a slide (if online) so that it is visible to everyone.	
Time-keeping. This will ensure that your agenda runs to time, and signals to participants that you are aware of their schedules.	Prior to the meeting	Consider using a "non-human" timekeeper such as an alarm. If this is to be an in-person session, a clock at the front of the room, visible to everyone is helpful. If this is an online session, you may need to assign someone the responsibility of setting a timer per session.	
Introductions	Prior to the meeting:	Establish if participants already know each other	

	During the session:	If a small session (>15 people): facilitate a short round of introductions at the start of the session, with participants stating name, affiliation and their reason for attending the meeting. If a large session (15+): Leave introductions for the middle of the meeting, once the opening session and purpose of the training has been established. This will help participants to tailor their introductions to the training/meeting. If a very large session (30+): share everyone's bios beforehand. If in person, use name tags with photos. If a multi-day training with the same group of attendees: Consider introducing a mid-session activity just for participants to meet each other. This could be facilitated through small groups e.g. two truths and a lie (if online, this can be done in small break-out rooms). These groups can rotate throughout the training programme.
Keeping attendees' attention Attention spans, even if attendees are specialists, are short. If you don't provide new information, invite discussion and participation, or vary the format of the session, you will lose even the most dedicated attendees.	During session design:	Allow and encourage everyone to participate by varying the format of the activities all day. Some ideas for different formats and modes are given in the guidance below for [CWIS orientation package / CWIS training session / CWIS multi-session syllabus guidance].
	During the session	Take a break at least once every 60 minutes. A brief break to stretch, change formats, move seats, get something to eat or drink.
	During the session	If attention appears to be fading, STOP and TAKE A BREAK. When reconvening, remind everyone where you stopped and what the next milestone is.
	During the session	Address the issue of lack of attention or participation head-on. Attention and energy wane in the afternoon and evening. These may be good times for games and field visits. Small group activity can be helpful to keep everyone focused.
	During the session	Optional: A no phone policy for at least a part of the day may be useful (if in person). A simple way to do this is to place a basket in the middle of each table and request that all phones be placed in the basket for a pre-determined duration
Recap, review, reset	At least 10 minutes before the end of the session	Close out the session with a list of learning, decisions, next steps. If a multi-day training, review the next day's agenda, readings, field visits, and feedback from participants. Begin the next day with a review of the same and a reset.