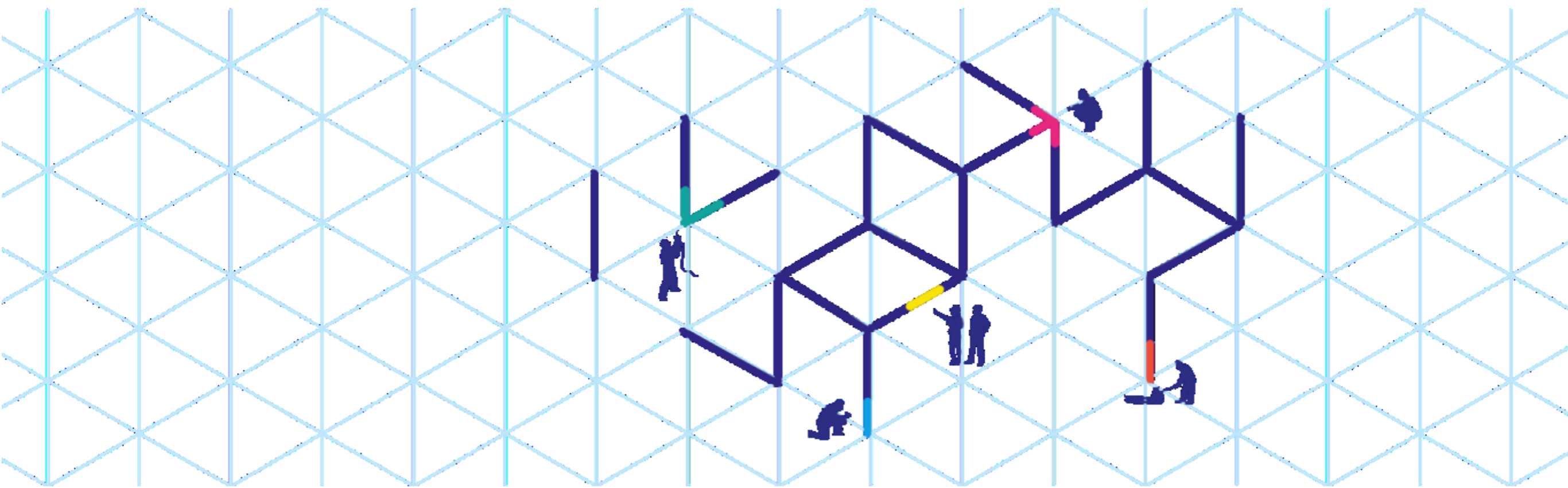


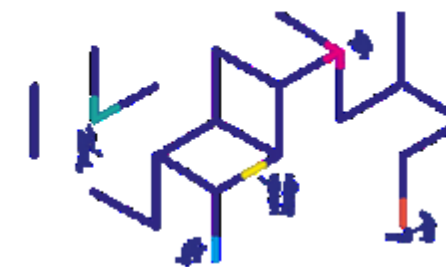


BUILDUP Skills

ENERGY TRAINING FOR CONSTRUCTION WORKERS



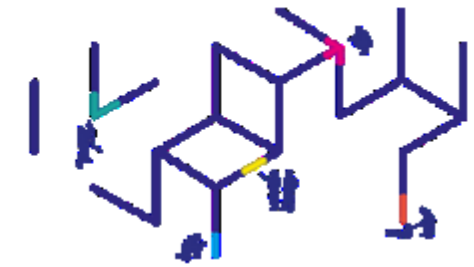
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TWG 3 Innovative training infrastructures, materials & methods: Overview of final results, sharing practices

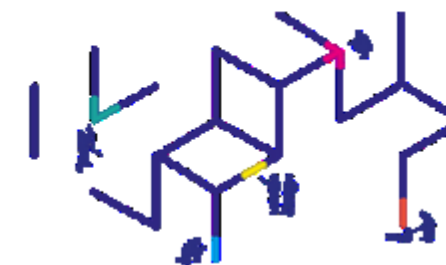
**BUILD UP Skills 10th EU Exchange Meeting
31 May 2017 (Day 1)**

Simonas Gaušas (Visionary Analytics)

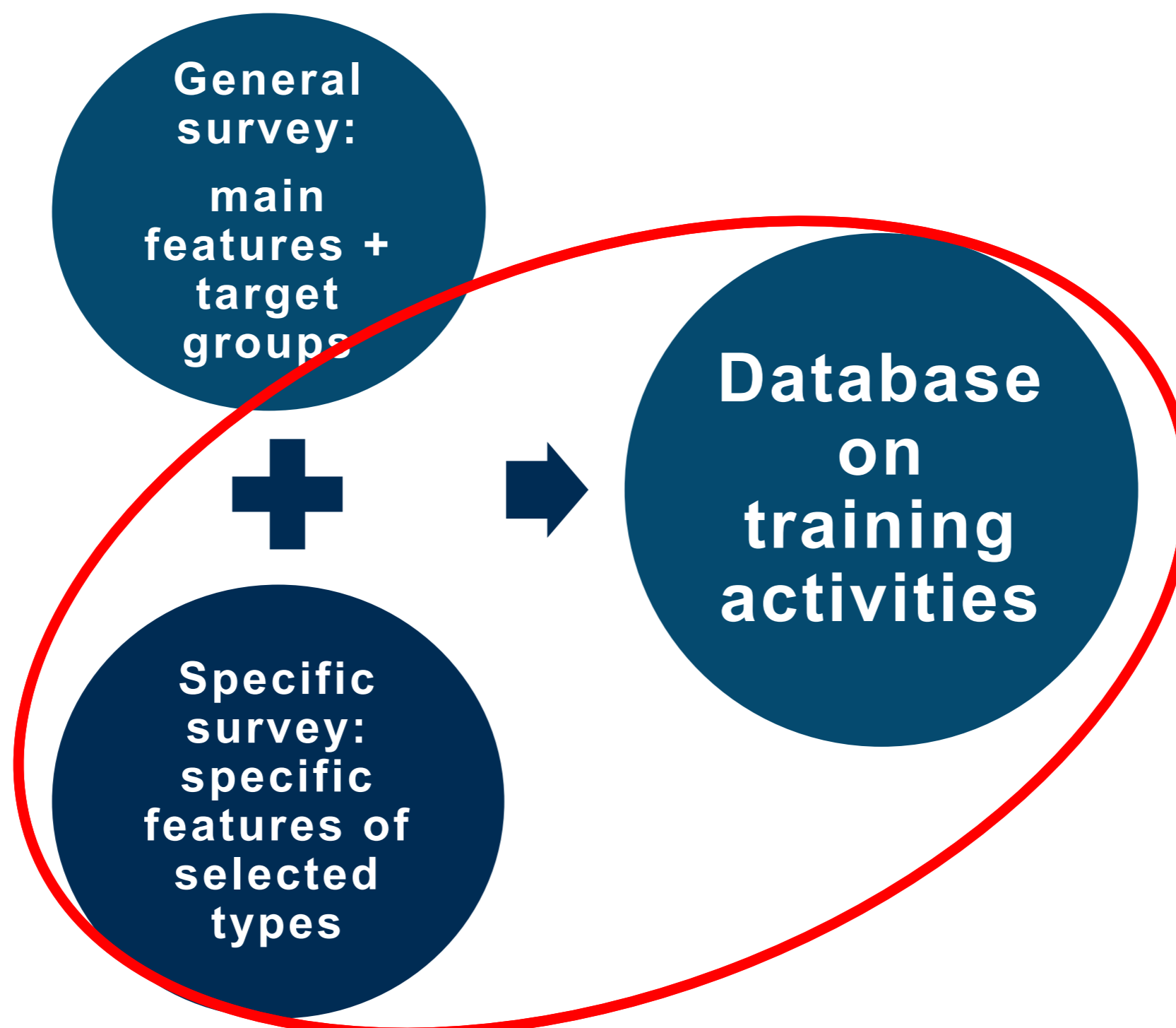


Background

- TWG3 **aims** to engage the project coordinators and partners in an interactive exchange of information including the following:
 1. Identify and share good practices
 2. Map the most important difficulties and achievements
 3. Discuss the topics
- **Topics:**
 - Training infrastructure: where training takes place
 - Training materials: tools used to deliver training
 - Training methods: techniques or approaches how training is delivered



Database on training activities



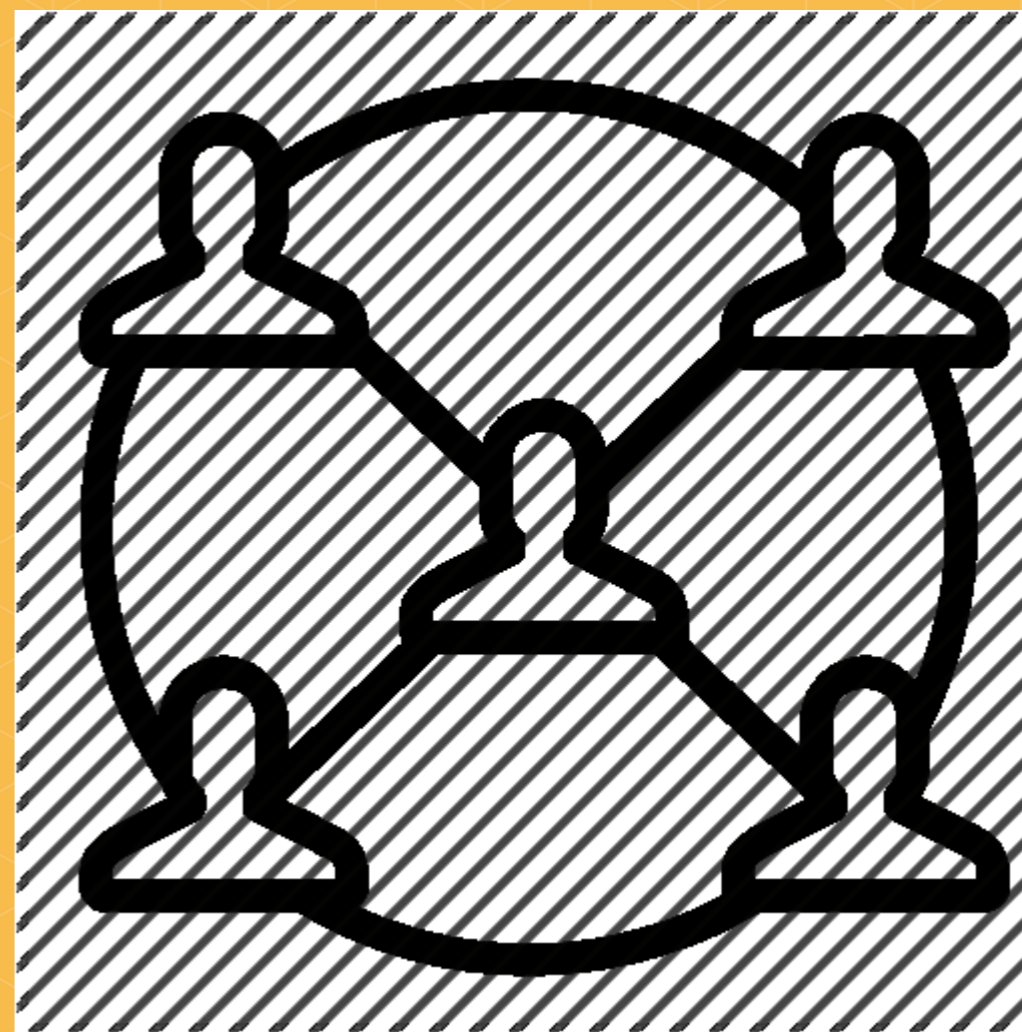


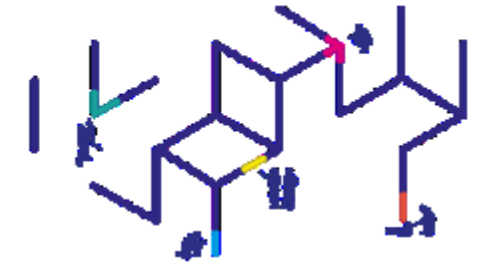
Overall logic of the specific survey

- **November 2016 – April 2017 with 100% response rate**
- **Info collected for each main type of training infrastructure/ material/ method used in the project (3 per project):**
 - Country coverage
 - Objectives
 - Level of progress
 - Target group characteristics (type, age, experience, etc.)
 - Training characteristics (category, duration and timing)
 - **Innovativeness**
 - **Transferability/ replicability**
 - **Feedback incl. strengths and weaknesses**
 - **Recommendations**



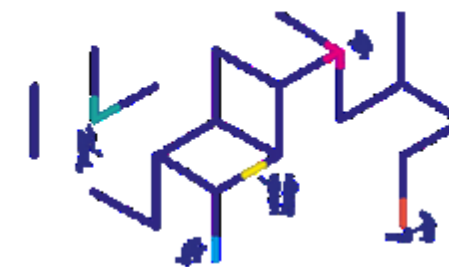
**How we are
going to work
in DAY1?**



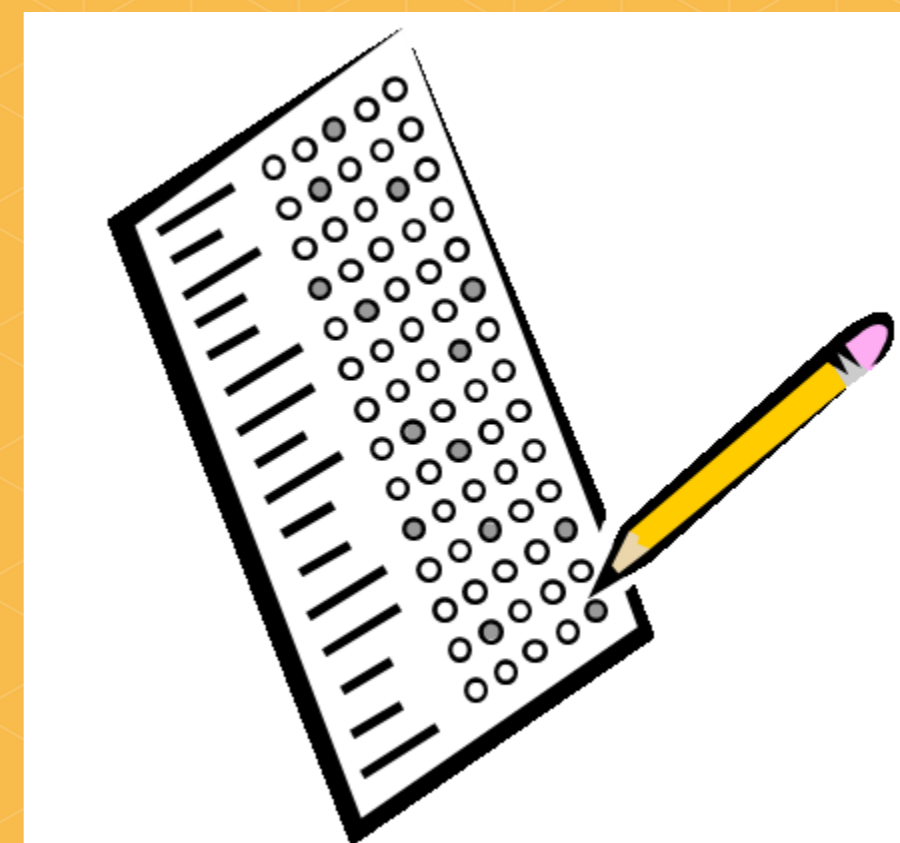


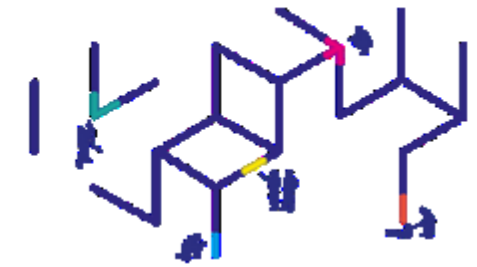
Plan for Day 1

- **No division into sub-groups**
- **Focus on sharing of experiences:**
 - **Javier González**, CONSTRUYE 2020: Training materials – participant satisfaction results;
 - **Helder Gonçalves**, FORESEE: Training materials used in building envelope insulation, solar thermal, PV and wind systems
 - **Peter Op 't Veld**, PROF/TRAC: Training methods – mixed classroom- and ICT-based training innovations
- **Time for presentation & questions ~15 minutes**
- **Wrap-up and plan for Day 2**



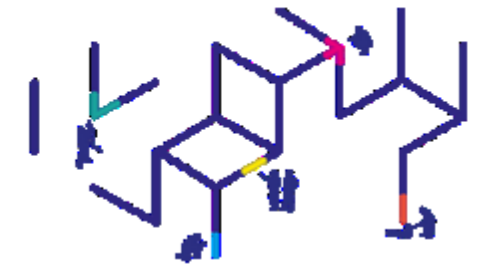
Overview of final results of the specific survey





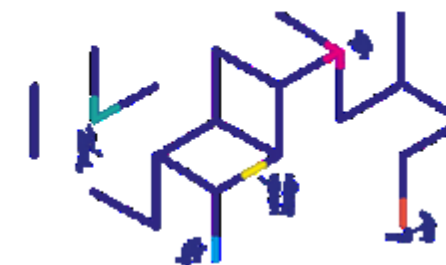
Outline for each group

- Distribution of main types
- Inovativeness
- Replication
- Feedback
- Strengths & weaknesses
- Lessons learned



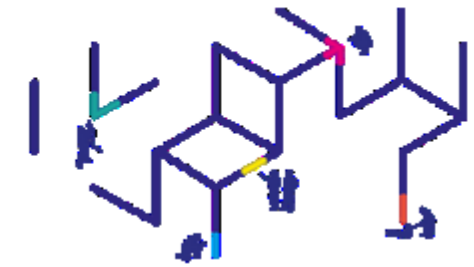
Overview of final results: Training materials





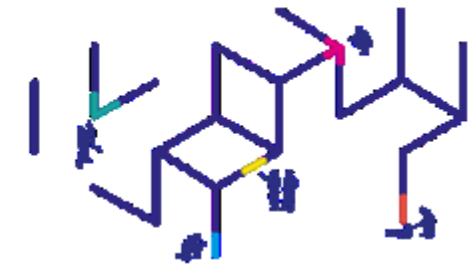
Main types of training materials

- 15 Didactic materials – mostly Power Point Presentations or similar (e.g. Prezi)
- 5 Training manuals
- 4 Reference manuals
- 3 software tools (2 mobile applications – CONSTRUYE and BUSTOB and 1 online module - SWEBUILD)



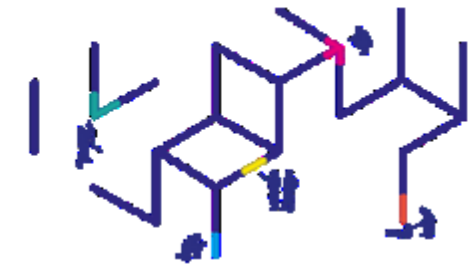
Didactic materials

- 2/3 projects completed their activities for this type
- Focused on workers/ technicians
- An **innovative** practice? Yes – 67%, e.g. can be used on site/ mobiles, first time, specifically adapted, include innovative technologies, ambassadors
- Easy to **replicate**? Very easy – 33% or easy – 67%
- **Feedback** available? Yes – 53%
 - Strengths: easy to understand/ use, up-to-date, in-depth (incl. mistakes/ good practices)
 - Weaknesses: lacks focus and illustrations, complex and too theoretical
- **Lessons:** ADAPT to local context (incl.target groups)



Training and reference manuals

- 2/3 projects (partly) completed their relevant activities
- Focused on workers/ technicians, but also **trainers**
- An **innovative** practice? Yes – 67%
- Easy to **replicate**? Very easy – 33% or easy – 67%
- **Feedback** available? Yes – 44%
 - Strengths: good theory/ practice balance; graphs & figures; useful after the course; examples of real projects
 - Weaknesses: difficult to fit in the time available; important to adapt to target group; requires high level of practical skills from trainers; more examples/ standard solutions
- **Lessons**: classic, but the most typical and user friendly way to achieve the learning outcome; dividing tasks into sub-tasks for easier application; reorganise courses from few days to few weeks

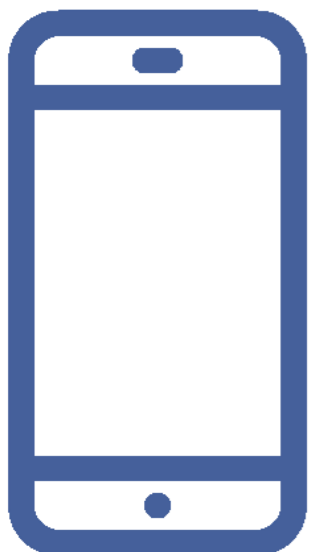


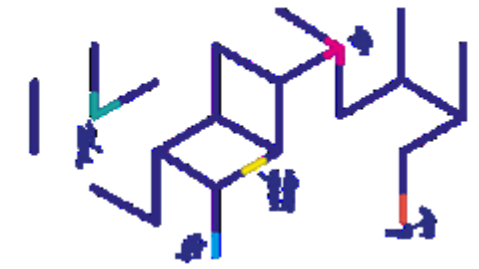
Software tools

- All projects (partly) completed their relevant activities
- Focused on workers/ technicians
- An **innovative** practice? Yes – 100%
- Easy to **replicate**? Very easy – 67% or easy – 33%
- **Feedback** available? Yes – 67%

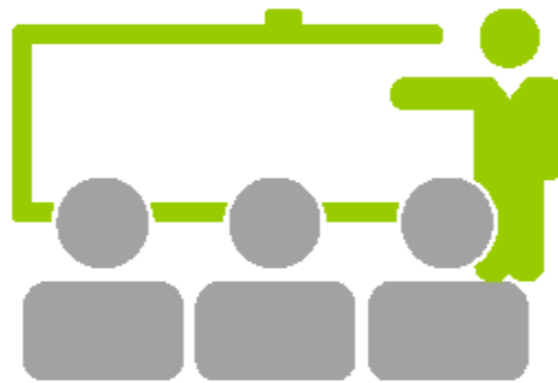
Strengths: new approach to training; accessible anywhere; Free of charge; easy to understand; interactive

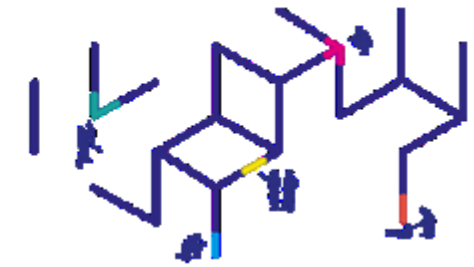
Weaknesses: costly/ difficult to update without EU funding; trainers reluctance to use new technologies; requires internet; not too in-depth and practical





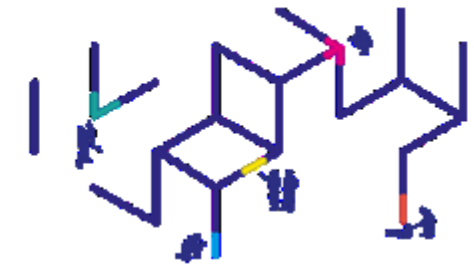
Overview of final results:





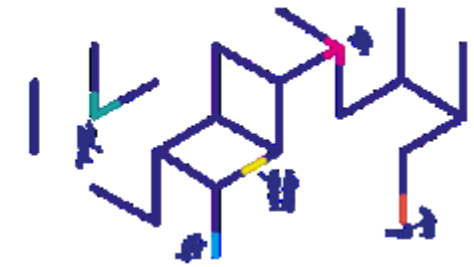
Main types of training methods

- 13 interactive classroom-based training (group or peer-assisted learning)
- 5 hands-on or direct practical training – Work-based training
- 3 mixed classroom- and ICT-based training – Blended learning, flipped classroom and other (e-learning)
- 2 Passive classroom-based training (lecture or seminar based instruction)
- 1 Hands-off or indirect guidance-based training-Mentoring (CROSKILLS II)
- 1 Hands-on training – Apprenticeship (QualiShell)
- 1 Hands-on training – Job-shadowing (BRICKS)
- 1 ICT-based training techniques – Internet-based training (BUStoB)



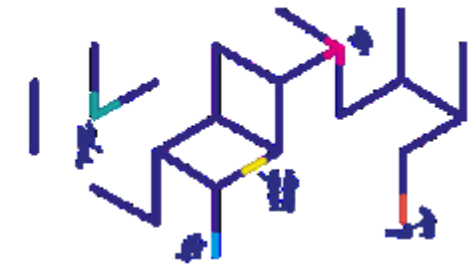
Interactive classroom-based training (1)

- 92% projects (partly) completed their relevant activities
- Focused on workers/ technicians, but also **trainers, managers/ supervisors and foreign workers**
- An **innovative** practice? Yes – 77% due to:
 - Train the trainer approach
 - Better solution to meet personal training needs within a varied background group
 - Contents
 - Addresses cross-craft understanding issues
 - Involves training ambassadors, participants as change agents
 - Combination of classroom with demo sessions and practical (hands-on) exercises
- Easy to **replicate**? Very easy – 38% or easy – 62%



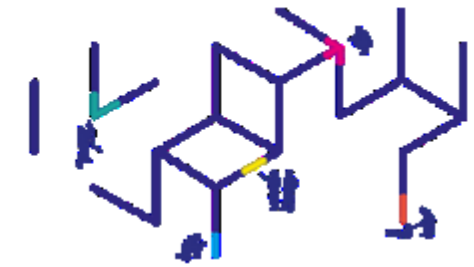
Interactive classroom-based training (2)

- **Feedback** available? Yes – 62%
 - Strengths: builds on group work/ interactive; **facilitates cross-craft exchange**; flexible in terms of content and time; can be used on-site; can be adapted to different needs and competences; could involve some practical elements;
 - Weaknesses: too technical and less systemic; limited in-depth knowledge transfer; very much depends on experience of the trainer (esp. in practical tasks); too long for workers; heterogeneous group of participants; expensive
- **Lessons:** Training should be given in even shorter sessions: (training>work>training>etc.); build on a system ("house as a system"); high investment in trainers; more time for practical tasks, examples of trainees; flexible schedule



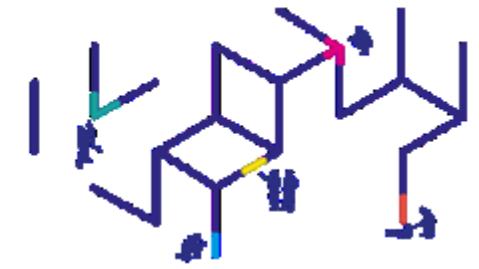
Work-based training

- All projects (partly) completed their relevant activities
- Focused on workers/ technicians
- An **innovative** practice? Yes – 80% due to:
 - Combination of practice/ theory, of self-/ interactive training
 - Using specific tools (e.g. specially constructed house, app)
- Easy to **replicate**? Very easy – 60% or easy – 20%
- **Feedback** available? Yes – 80%
 - Strengths: possibility of self-learning; close to daily practice; adapted to workers
 - Weaknesses: trainees reluctant to new technologies; costly; fixed location; too short; limited number of participants
- **Lessons**: the most adapted to multilingual workforce, however need to provide guidelines how work-based training is carried out; should led to certification



Mixed classroom and ICT training

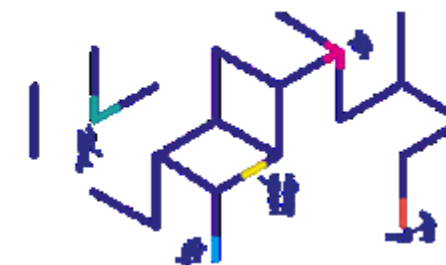
- All projects (partly) completed their relevant activities
- Focused on managers, architects and engineers
- An **innovative** practice? Yes – 100% due to:
 - Combines self-/ interactive training, multidisciplinary
 - Portal promotes distant learning and dialogue
 - Application of case study method
- Easy to **replicate**? Very easy – 33% or easy – 67%
- **Feedback** available? Yes – 67%
 - Strengths: useful content; good organisation; flexibility
 - Weaknesses: too dense; too theoretical; too general; costly
- **Lessons**: your experience?



THANK YOU!



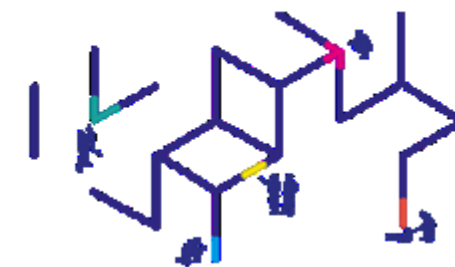
For more information, please contact:
simonas@visionary.it



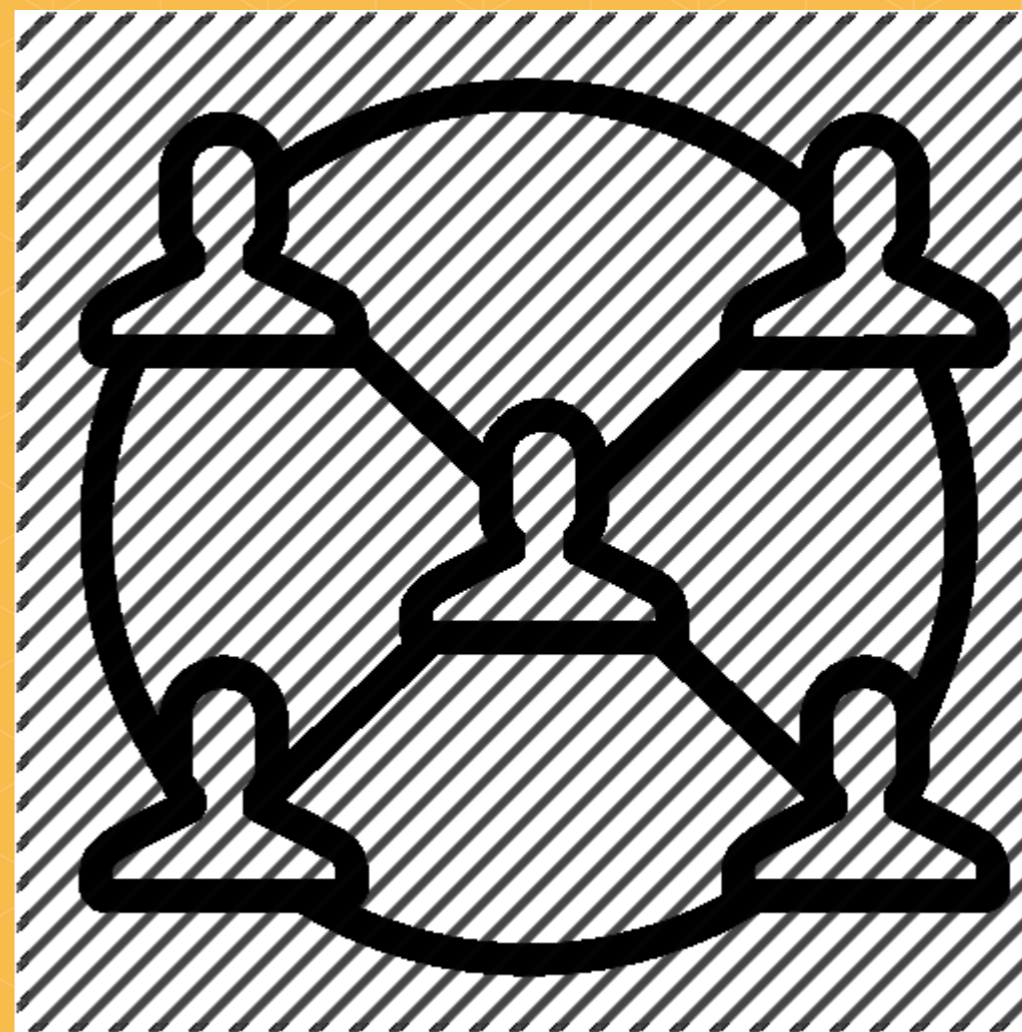
**TWG 3 Innovative training infrastructures,
materials & methods:
Overview of final results, sharing practices,
database and TWG3 report**

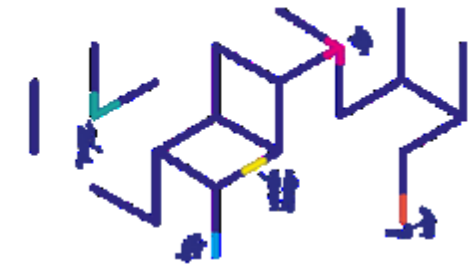
**BUILD UP Skills 10th EU Exchange Meeting
31 May 2017 (Day 2)**

Simonas Gaušas (Visionary Analytics)



**How we are
going to work
in DAY2?**





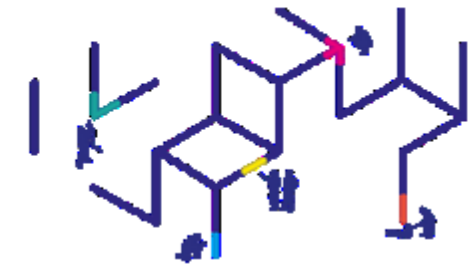
Plan for Day 2

- **No division into sub-groups**
- **Continue sharing experiences:**
 - **Elisa Sirombo**, I-TOWN: working groups on cases, workshops and mock-up construction training and e-learning – progress and lessons learned
 - **Savvas Vlachos**, WE QUALIFY: Training infrastructure – organizing workshops in energy efficient buildings for the first time
 - *Other contribution(s)*
- **Expectations regarding the database**
- **Expectations regarding the TWG3 report**
- **Wrap-up and last steps**



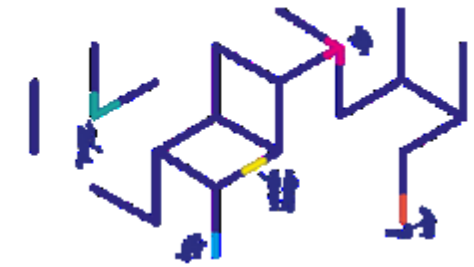
Overview of final results: Training infrastructures





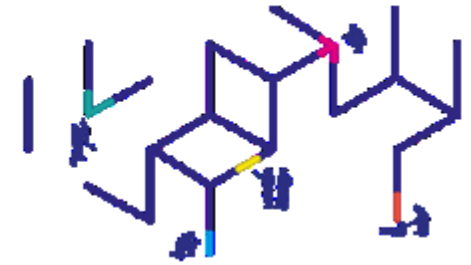
Main types of training infrastructures

- 11 Classrooms (traditional) – Seminar rooms
- 10 workshops for simulation of different work tasks
- 3 In-company/ practical training – Company production facilities
- 1 Study visits (TRAINBUD)
- 1 Computer-based training, i.e. training via PCs, tablets, smartphones, etc. (BUSTOB)
- 1 Online training, i.e. training via webinars, learning management systems like Moodle (PROF-TRAC)



Workshops (1)

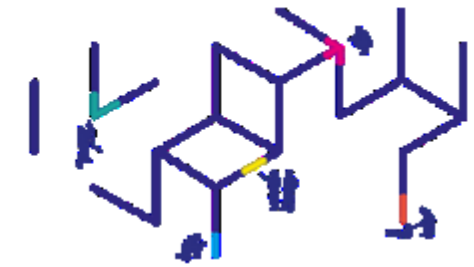
- 90% projects completed their activities for this type
- Focused on workers/ technicians, but also **trainers** and **supervisors**
- An **innovative** practice? Yes – 89% due to:
 - Combination of classroom and practical training
 - First time in a country (e.g. CY, SK)
 - Tools (e.g. full-scale demo wall for insulation)
- Easy to **replicate**? Very easy – 33% or easy – 67%
- **Feedback** available? Yes – 44%
 - Strengths: good facilities; possibility to try out construction materials; Includes field visits; good trainers; presence of manufacturers
 - Weaknesses: expensive; long; stronger practical element (e.g. not suitable simulations/ demo); more interactive



Workshops (2)

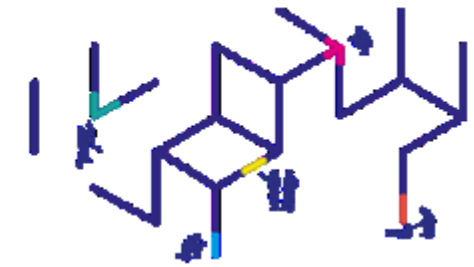
➤ Lessons:

- Significant investments in adapting and using available space to prepare good demo models (e.g. building constructions, RES installations, ventilation facilities, airtightness testing, etc.)
- Practical experience should be similar to the actual conditions that might appeared in the field
- Distribution of few days of training over few weeks to get better results



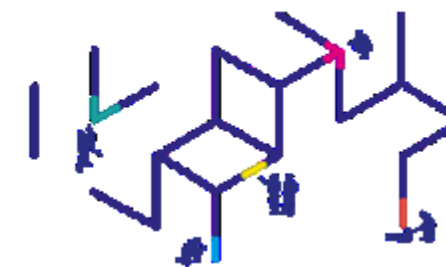
Classrooms

- All projects (partly) completed their relevant activities
- Applied to all groups
- An **innovative** practice? Yes – 50% due to combination with e-learning, training on-site, immediate clarifications
- Easy to **replicate**? Very easy – 50% or easy – 50%
- **Feedback** available? Yes – around 60%
 - Strengths: easy to use; possibility to update; flexible; easily transferable; suitable for different needs; good experts
 - Weaknesses: too general/ unsuitable for experienced; difficult to bring workers; non-active listeners;
 - trainees reluctant to new technologies; costly; fixed location; too short; limited number of participants
- **Lessons**: must be combined with practical training/ demo models and more detailed handouts; trainers are the key



In-company/ practical training

- All projects (partly) completed their relevant activities
- Applied to workers/ technicians
- An **innovative** practice? Yes – 67%
- Easy to **replicate**? Very easy – 67% or easy – 33%
- **Feedback** available? Yes – 33%
 - Strengths: practical experience; good transfer of knowledge
 - Weaknesses: too short; training laboratory needed; risks (e.g. workers hired by other employers)
- **Lessons:** Infrastructure can be developed in schools (e.g. can be provided by producers based on partnerships)

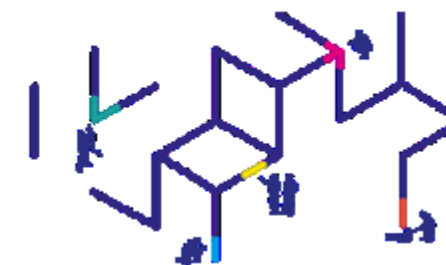


TWG 3 Innovative training infrastructures, materials & methods: **Database**



BUILD UP Skills 10th EU Exchange Meeting
31 May 2017 (Day 2)

Simonas Gaušas (Visionary Analytics)



Expectations

- Will be in **MS Excel only**
- **Formatting** suits your needs? Any improvements needed?
- **Content** is accurate?
 - A number of clarifications of specific survey have been already made
 - Some further changes are due (study visits)
- We will ask you to send **links to major outputs** of your projects (esp. for training materials)
- **Accompanying files** useful?
- **Anything else** to add or amend?

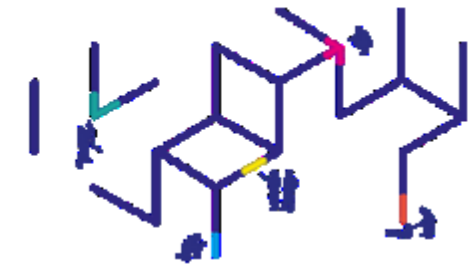


TWG 3 Innovative training infrastructures, materials & methods: **TWG3 report on findings**



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31 May 2017 (Day 2)

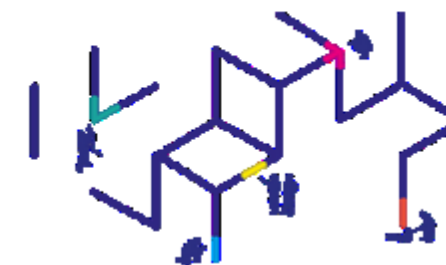
Simonas Gaušas (Visionary Analytics)



Structure of TWG3 report

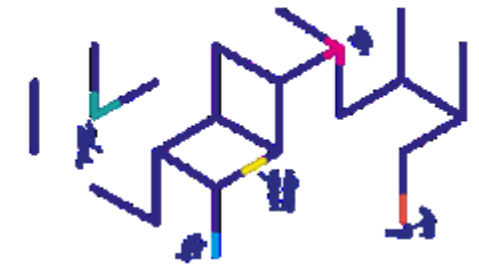
For each group (infrastructures, materials, methods)

- 1. Definition** (what it is and what it is not)
 - 2. Major characteristics** (target groups, content, etc.)
 - 3. Innovativeness** (where/ how to innovate)
 - 4. Assessment** in terms of:
 - Pains (weaknesses, challenges)
 - Gains (strengths, successes)
-
- **Good practice examples** from presentations, database to be inserted where relevant
 - Need for a useful document, not another report – **how to make this document more useful for you?**



TWG3 wrap up

- **Background** (aims, tasks, topics)
- Overview of **final results** of the specific survey on training infrastructures, training materials and training methods incl. project **presentations**
- Expectations regarding the **database** (links to major outputs of projects to be collected)
- Expectations regarding the **TWG3 report**



THANK YOU!



For more information, please contact:
simonas@visionary.it