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Ready for Industry 5.0

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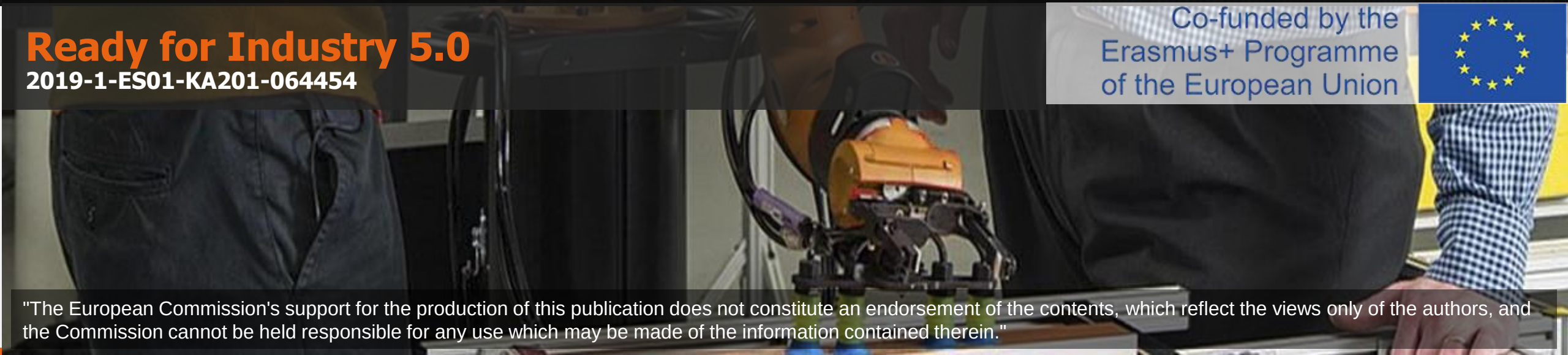

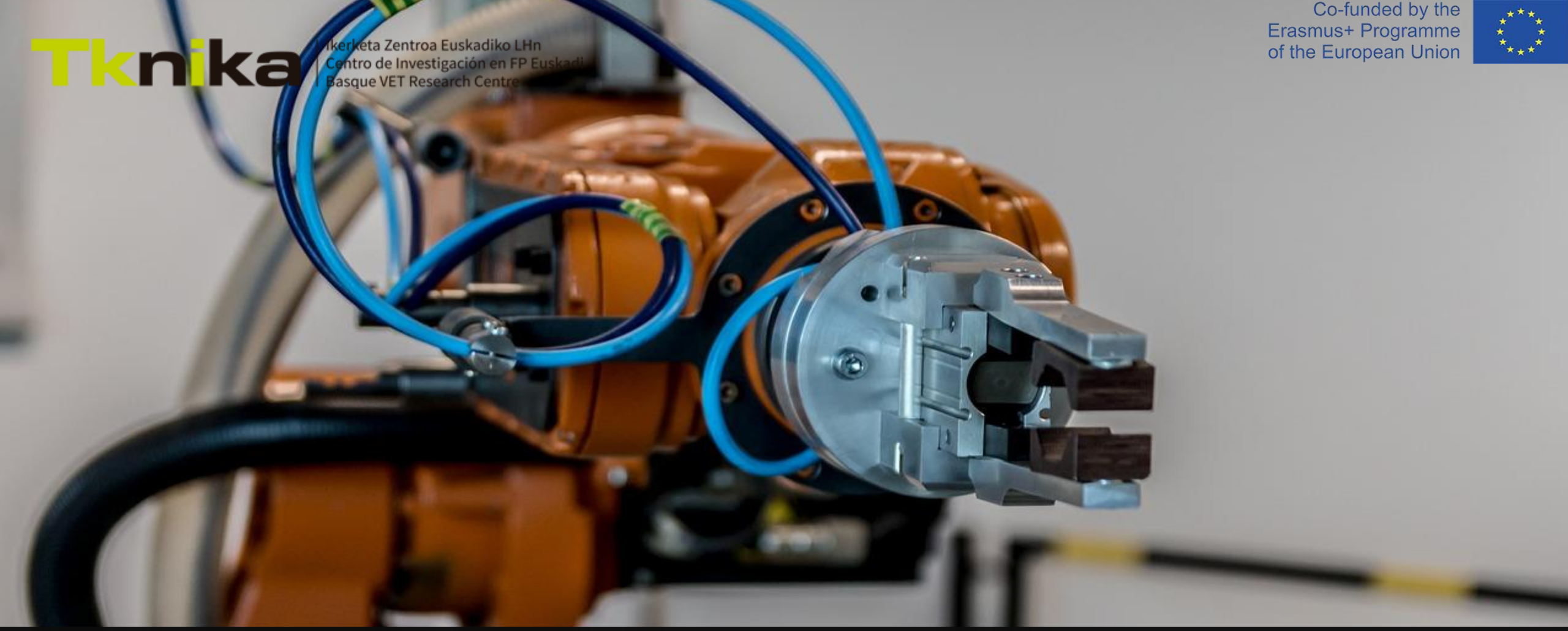

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CHALLENGE BASED LEARNING

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NEW CONTEST OF LEARNING

Reinterpretation of the MECHANICS OF LEARNING:

Understand learning as a **PROCESS OF EVOLUTION** which **STUDENTS ARE RESPONSIBLE** for

Collaborative learning Based on Challenges (CBL)

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CHALLENGE BASED LEARNING

Def.: The presentation of a **PROBLEMATIC SITUATION** transformed into a **CHALLENGE** to obtain a **RESULT:**

Transformation in CHALLENGE:

Situation + Process

→ **RESULT**

Structured based on the technical + specific + transversal **competences** of each study

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CHALLENGE BASED LEARNING

Problematic situations

1. Raised to class divided in different **TEAMS**
2. Work process: students live SITUATION as **CHALLENGE**
3. Opportunity: generate knowledge that allows teams provide **BEST SOLUTION POSSIBLE**

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CBL-CHARACTERISTICS

1. **INTERMODULARITY** =

   - reflects reality at work

   - challenges based on analysis of professional competences and learning outcomes

2. **SELF-MANAGED CYCLE TEACHING TEAMS** = promote teamwork and responsibility

3. **EVALUATE TO EVOLVE IN COMPETENCE DEVELOPMENT** = key in students' learning process - frequent FEEDBACK by team members and teachers

4. **ADAPTATION OF LEARNING SPACES** = flexible, open and interconnected

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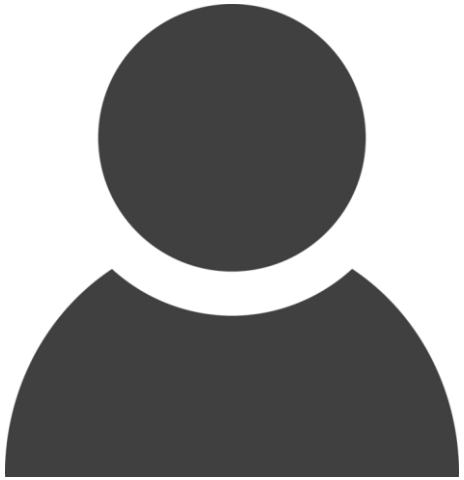
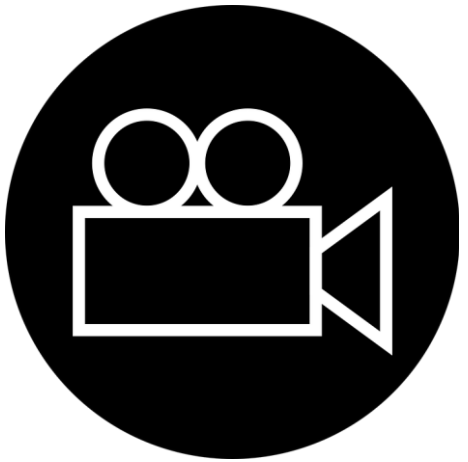
KEEP IN MIND

MICROPHONES OFF



NAME AND SCHOOL



THE SESSION
WILL BE RECORDED

OBJECTIVE

- **Goal:** To create coherent designs in the collaborative learning process based on challenges (in the 11-step process).
- Each participant will analyse one of their challenges while being guided by the experts.
- **Language:** English

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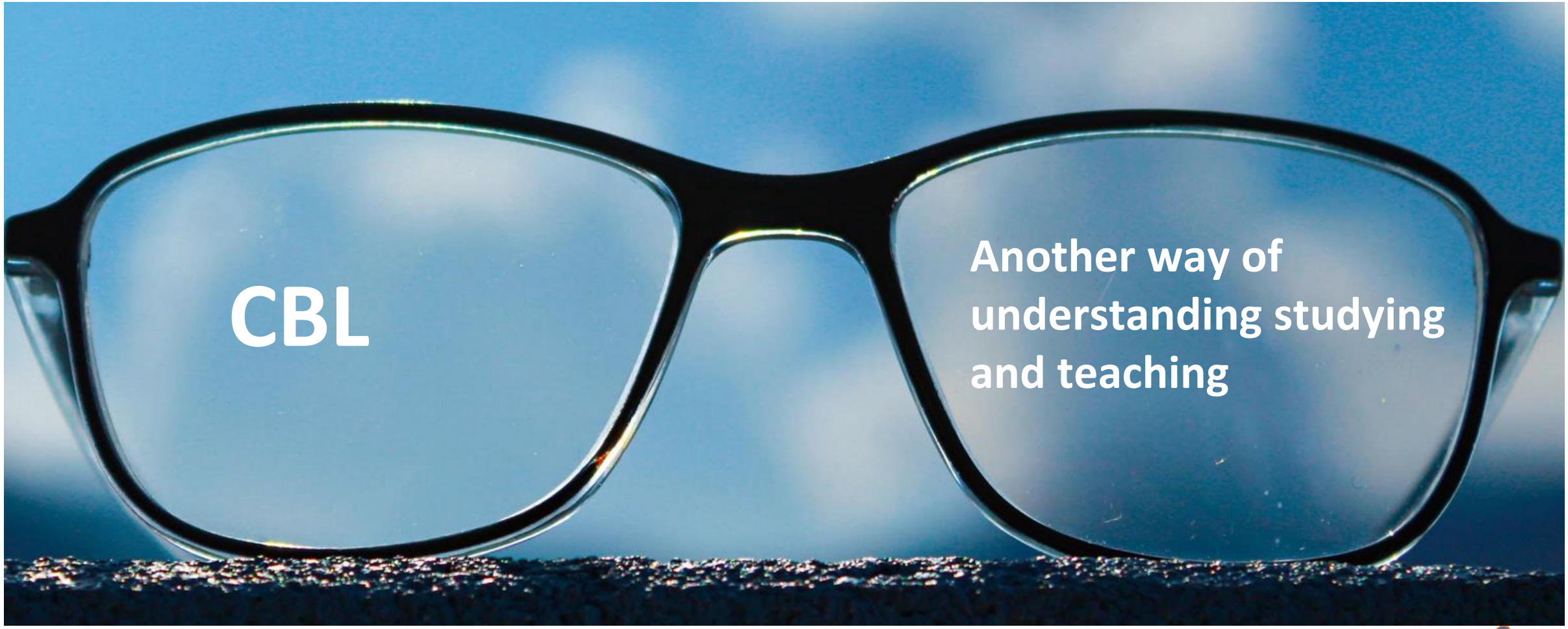

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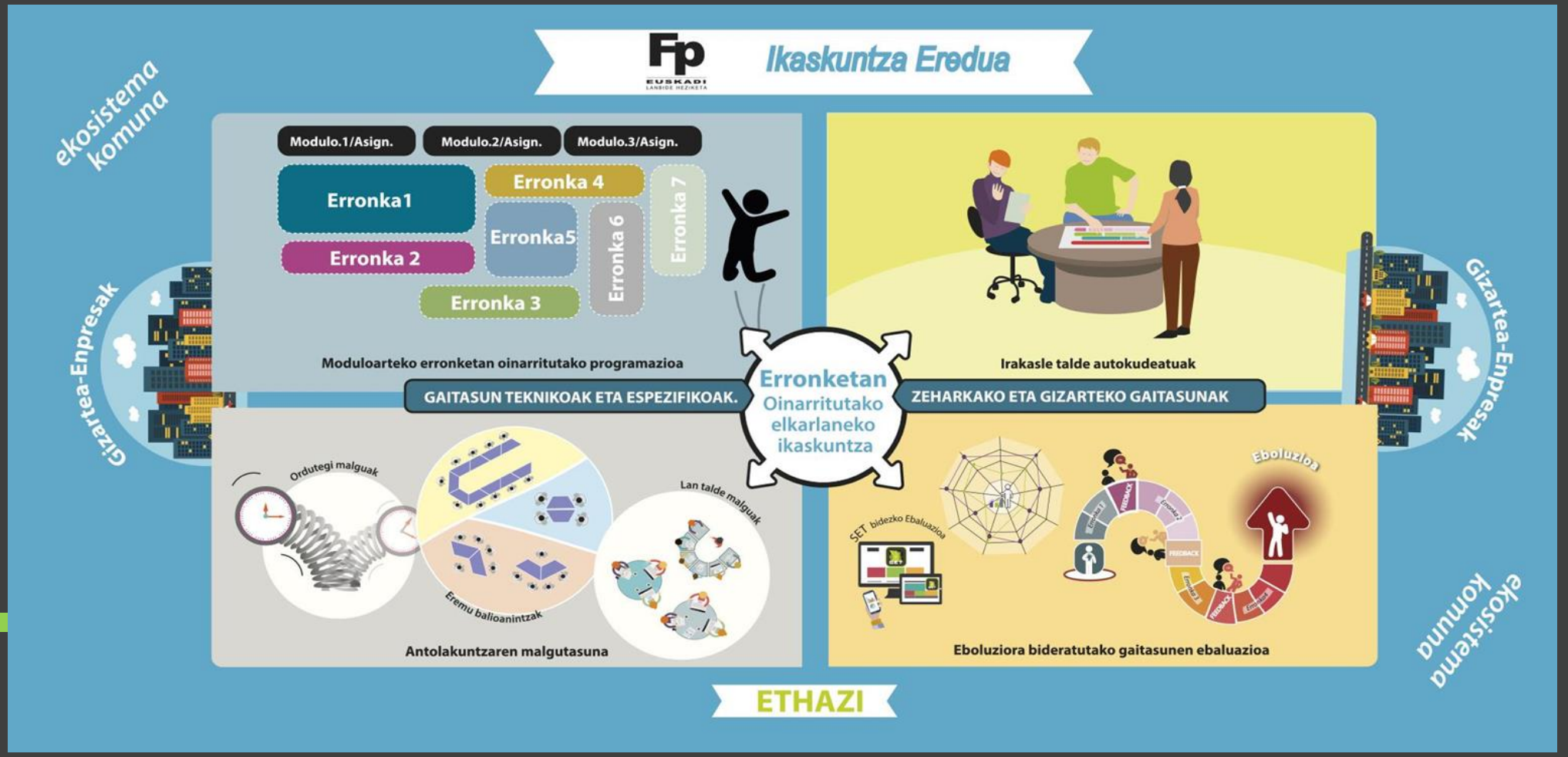
HIGH PERFORMANCE CYCLES



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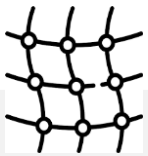
CYCLE VISION

1. Faculty 
2. Competency Profile (Map) 
3. IE Analysis (Questioning) 
4. Assessment strategy (Towards the evolution) 
5. Timeline and network  

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CHALLENGES ARE THE WAY

WHAT FOR?

To help students develop their skills

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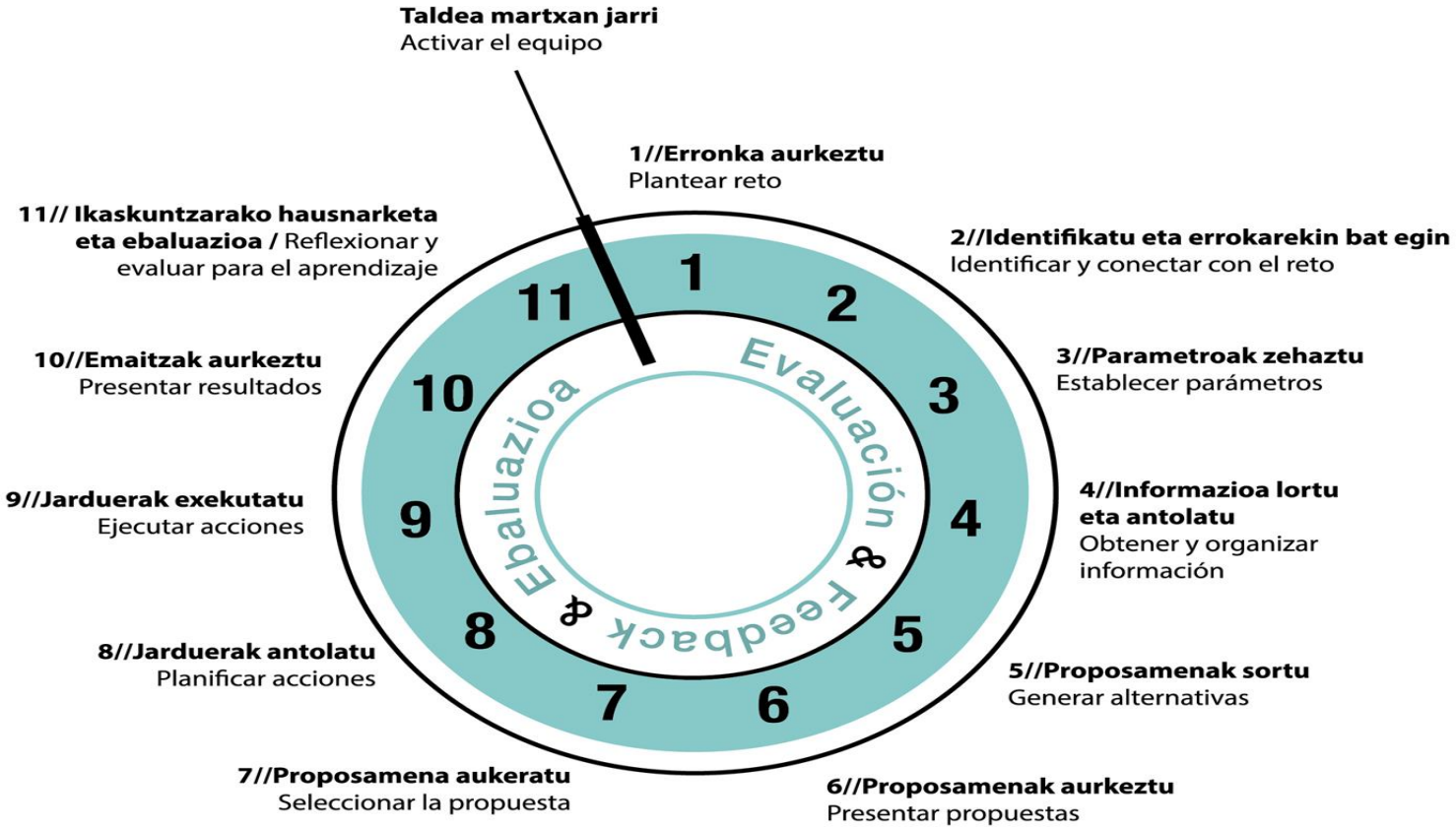
What is the process?



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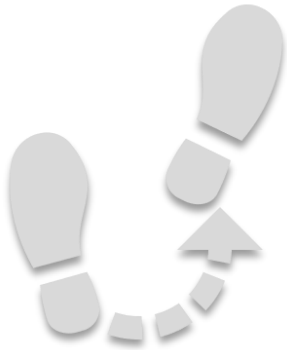
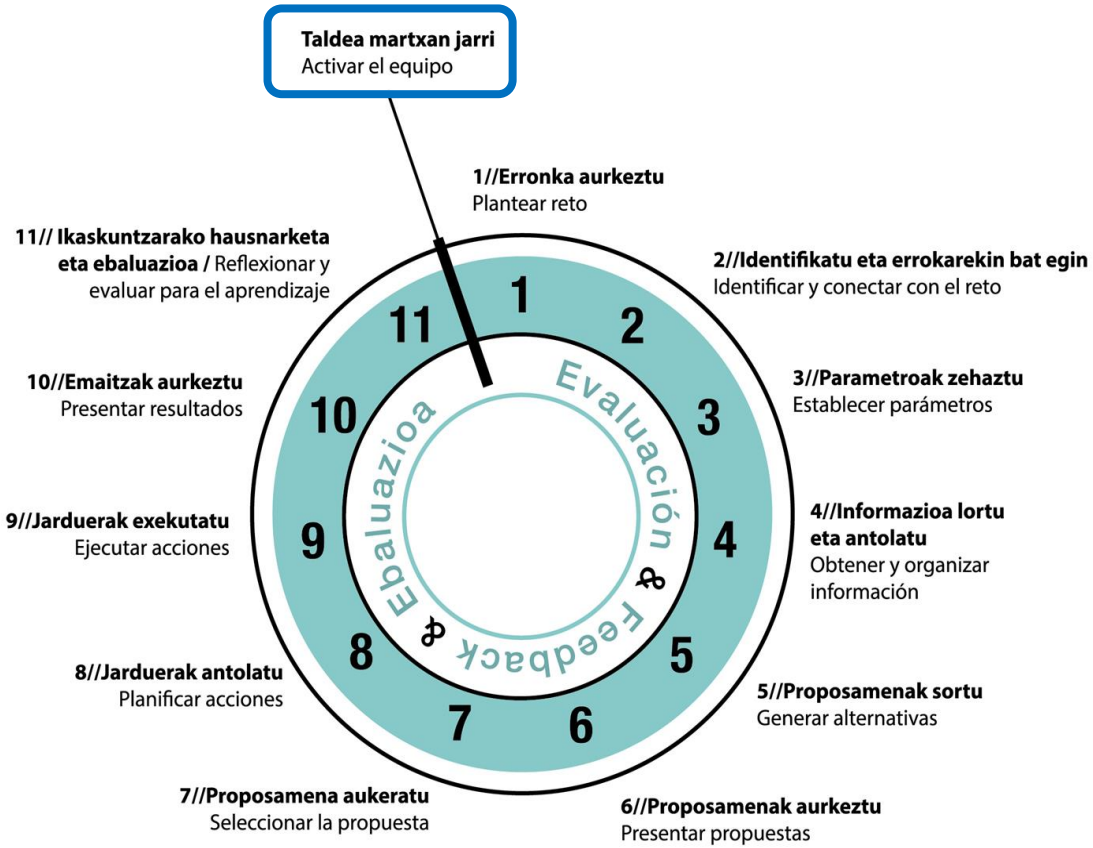
How are we going to do it



1. Starting up the teams
2. Presenting and identifying the challenge
3. Setting parameters and collecting information
4. Proposals
5. Organising actions and carrying them out
6. Presenting results
7. Analysing and evaluation the teaching process

Starting up the Team and activating it



Main Goals:

1. Create/reinforce the collaborative environment
2. Starting the teaching process
3. Getting to know the students and their profiles
4. Establish/agreement on operating rules
5. **ACTIVATE the team and prepare it for action**

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Starting up the Team and activating it

- Does this phase apply to our challenge? What for?
- How do we do the work groups? Do we use any dynamics?
- Is it written in such a way that the whole faculty understands it?
- Should we identify and distribute roles?
- Is it written down in the teacher's challenge?
- Should we activate the team in every challenge? How? With what dynamics?
- Is the contract drawn up and reviewed/reinforced at each challenge?

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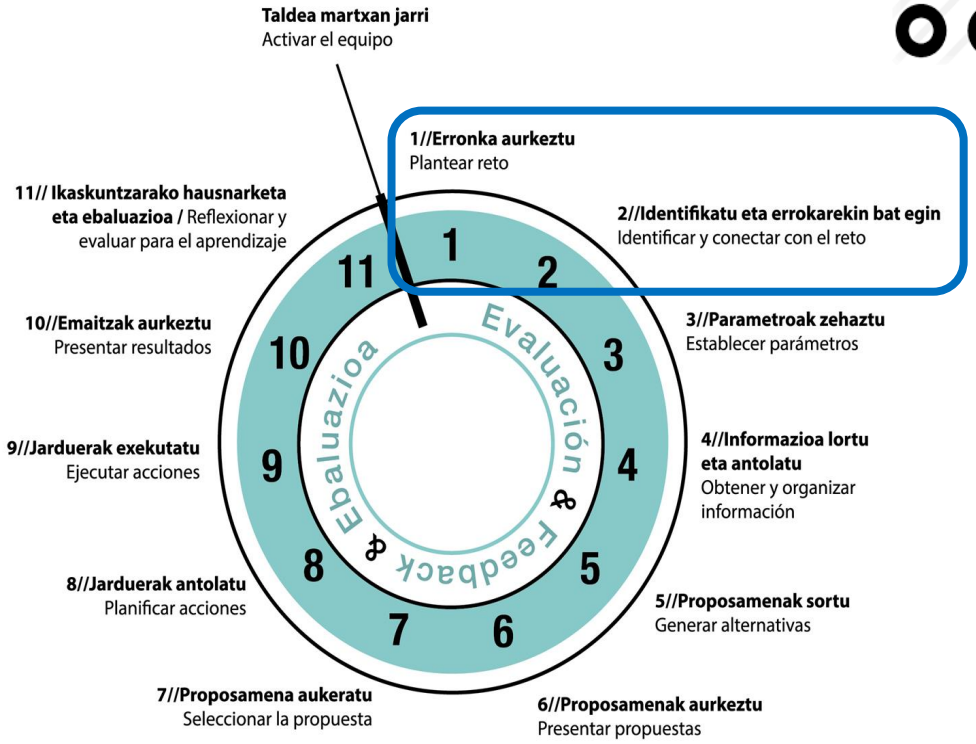
Presenting and identifying the challenge+CONNECT

AIMS OF THE PRESENTATION

1. Present the tasks to the students in an **attractive** way
2. Give them a **picture** of what you are about to start
3. Explain the new scenario to them

IDENTIFYING AND CONNECTING AIMS

1. Understanding the problem and what needs to be done
2. Identify previous knowledge
3. Motivate students and turn problem solving into a challenge for them.



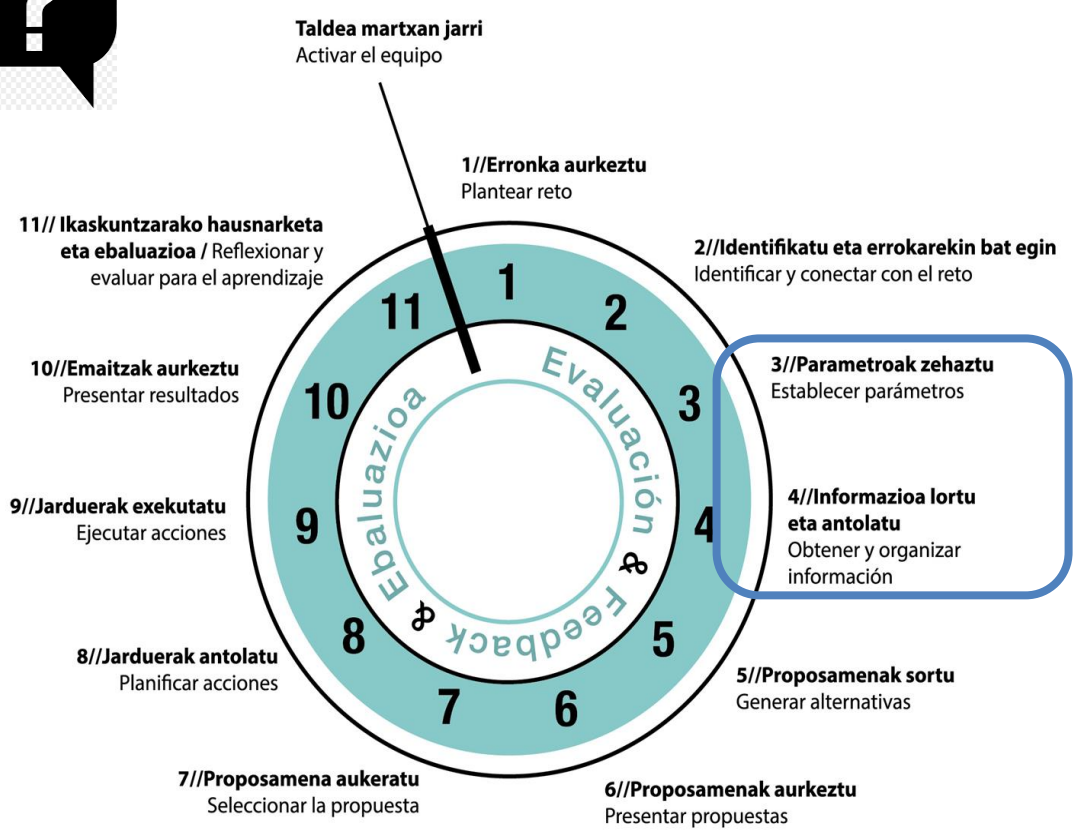
INCOBOTICS

Presenting and identifying the challenge+CONNECT

- What is the problem we propose? Is it real? Is it an everyday occurrence in the student's life?
- Is it confusing? Can it have more than one solution?
- Have you taken into account the profile of the student? (High/medium, ½,...)

- Do you have dynamics to identify what needs to be done/worked on?
- Are you going to work on transversal competences? Which ones? How? What evidence are you going to collect?
- How will students connect with the problem and accept it as a challenge? (What is the dynamic?)

Setting parameters and collecting/organising information



Goals: Parameters

1. **Create** questions
   - What do I have to study?
   - What do I have to learn to do?
   - What information do I need?
2. Split the challenge into **areas of expertise**
3. Create **research**

GOALS: Collecting/organising information

1. Answer the **previous questions**
2. Raise new questions (based on these answers)

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Setting parameters and collecting/organising information

-Have we identified the parameters/questions to be extracted?

-Do we have in writing how we are going to make it dynamic?

-Will we do it individually, in working groups or in the whole group?

- If all the parameters are not present, how will you take action?

-Are the information gathering activities identified and planned?

-Are the activities designed to seek the answer to all parameters?

-What evidence will you collect to know where the student is with regards to the technical competences to be acquired? Will you give feedback?

-What transversal competences will you work on? What evidence will you receive?

-Will the evidences be individual or group?

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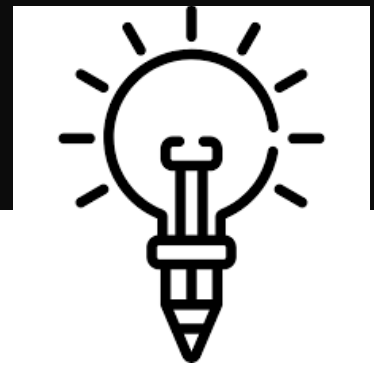
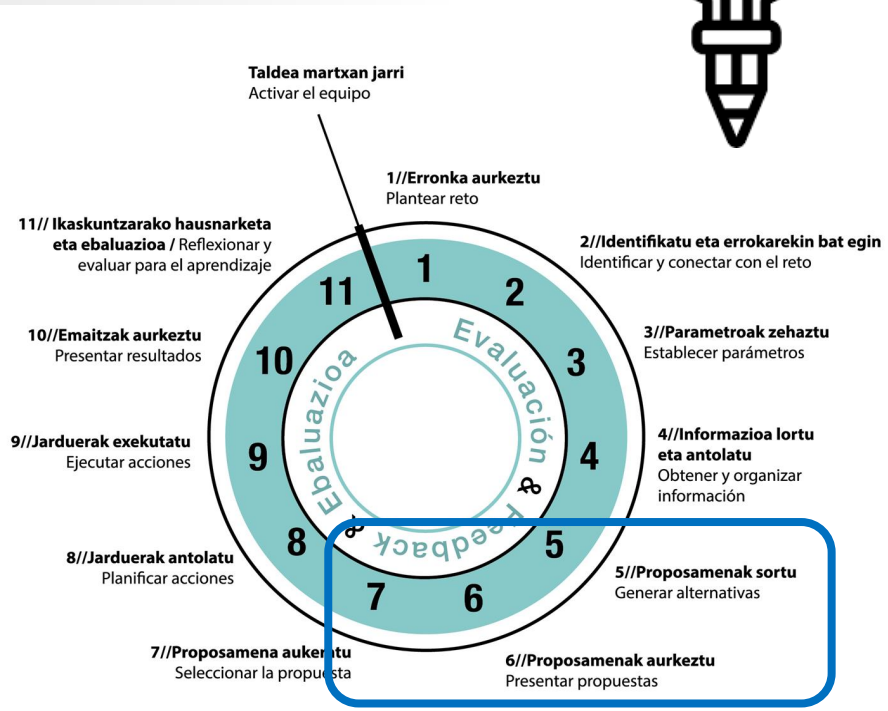
Proposals (Create-Present-Choose)



GOALS of the proposals

1. Each student has to bring at least one solution to the problem (**DIVERGENCE**)
2. Working on creativity
3. The more solution ideas the better
4. Presentation and defence of the student's solution
5. Learning from others
6. Working on communication
7. The group of students has to choose one of all the solutions (**CONVERGENCE**)
8. Decision-making: individual and group.
9. Searching for a common solution through teamwork



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Proposals (Create-Present-Choose)

- Is it clearly written how this will be done, and how will the dynamisation be carried out?
- With what has been worked on, will each student be able to make a proposal?
- Is it written down what skills will be worked on and what technical skills will be cultivated?
- Is it clearly described how it will be carried out? What about dynamisation?
- Can each student be able to make a proposal with what has been worked on previously?
- Are the competences to be worked on written down? What about technical competences? What evidences are we going to collect?

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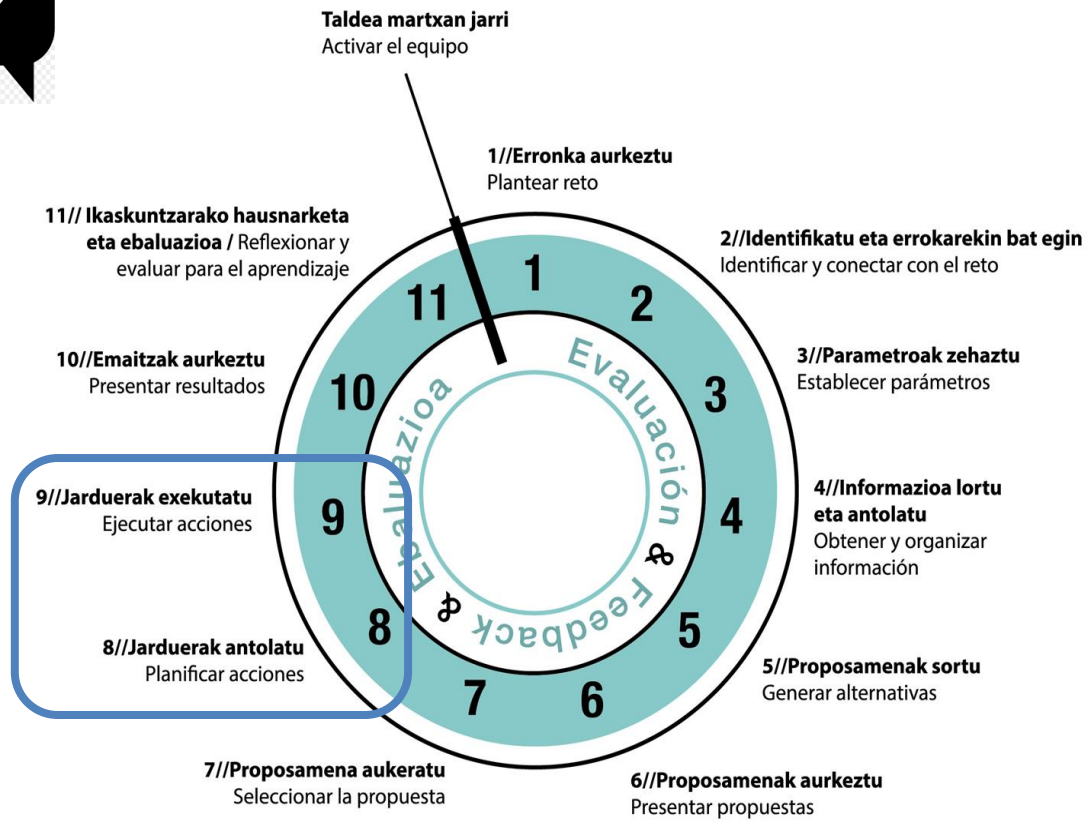
Organising actions and carrying them out



GOALS of organising actions

1. Structure how they will take the proposal forward.
2. Use of **planning** tools
3. Timing, sequencing, responsibilities, risk agreement.

GOALS of carrying actions out

1. Carry out what they have identified, enhancing specific skills and abilities
2. Develop what they have learned in the process
3. Follow up on what has been done by correcting deviations.

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Organising actions and carrying them out

-Has the teaching team identified the following activities to be carried out?

-Have the risks been taken into account?

-Will we provide them with the necessary resources?

-Have we taken into account whether they are medium or higher grade?

-What evidence are we going to collect? Have we worked on this evidence before?

-Can they carry out what they have planned? (time, resources, responsibilities)

-Are there activities that work on competences?

-When evaluating the competences, has the necessary evidence been identified?

-Is a review of the planning foreseen?

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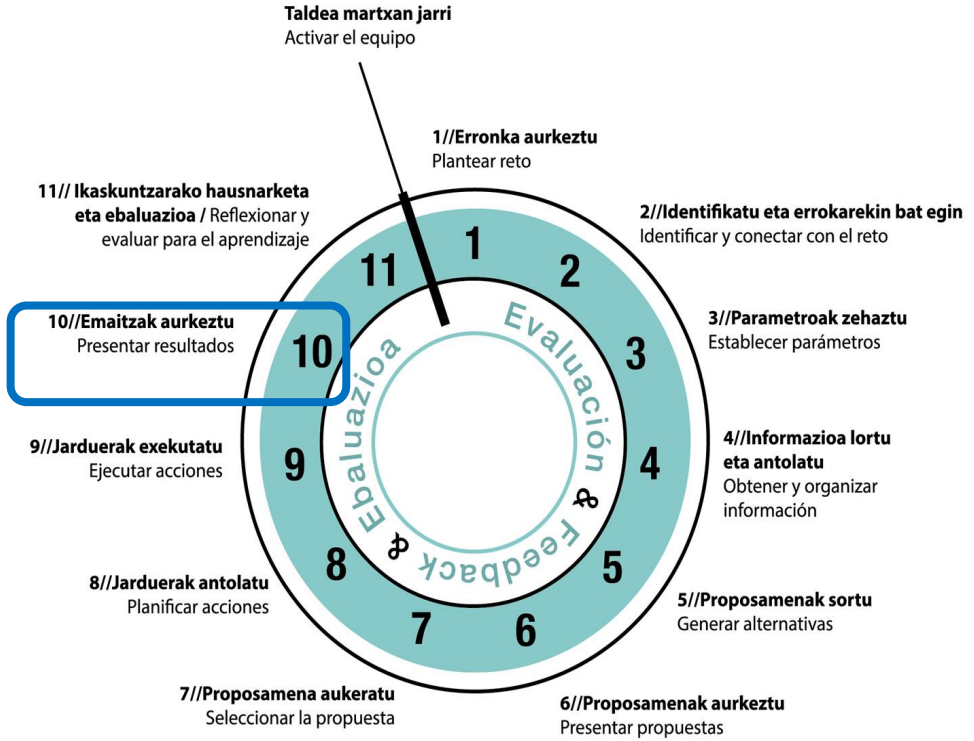
Presenting results

GOALS OF THE PRESENTATION

1. Present the tasks to the students in an **attractive** way
2. Give them a **picture** of what you are about to start
3. Explain the new scenario to them



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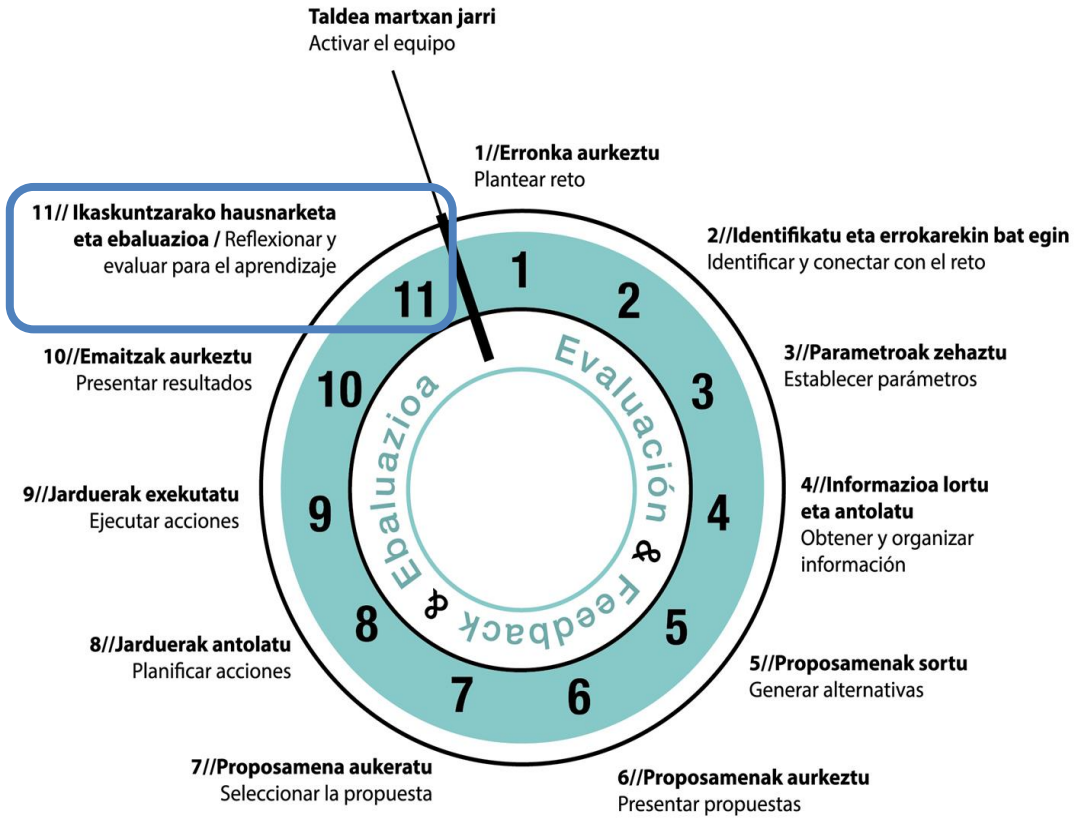
PRESENTING RESULTS

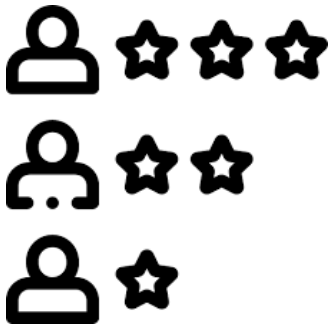
- Should the results be presented formally? Why?
- Which competencies are we going to work on, and which ones are we going to evaluate?
- What will the presentation tell us about how the learning process went or about the information of the product produced?

Analysing and evaluation the teaching process



GOALS of the analysis:

1. Refining the teaching process
2. To offer tools to see and improve the level they have in the different competences through feedback
3. Become aware of how far they have come, where they want to go, and what commitments they will make
4. Making compromises



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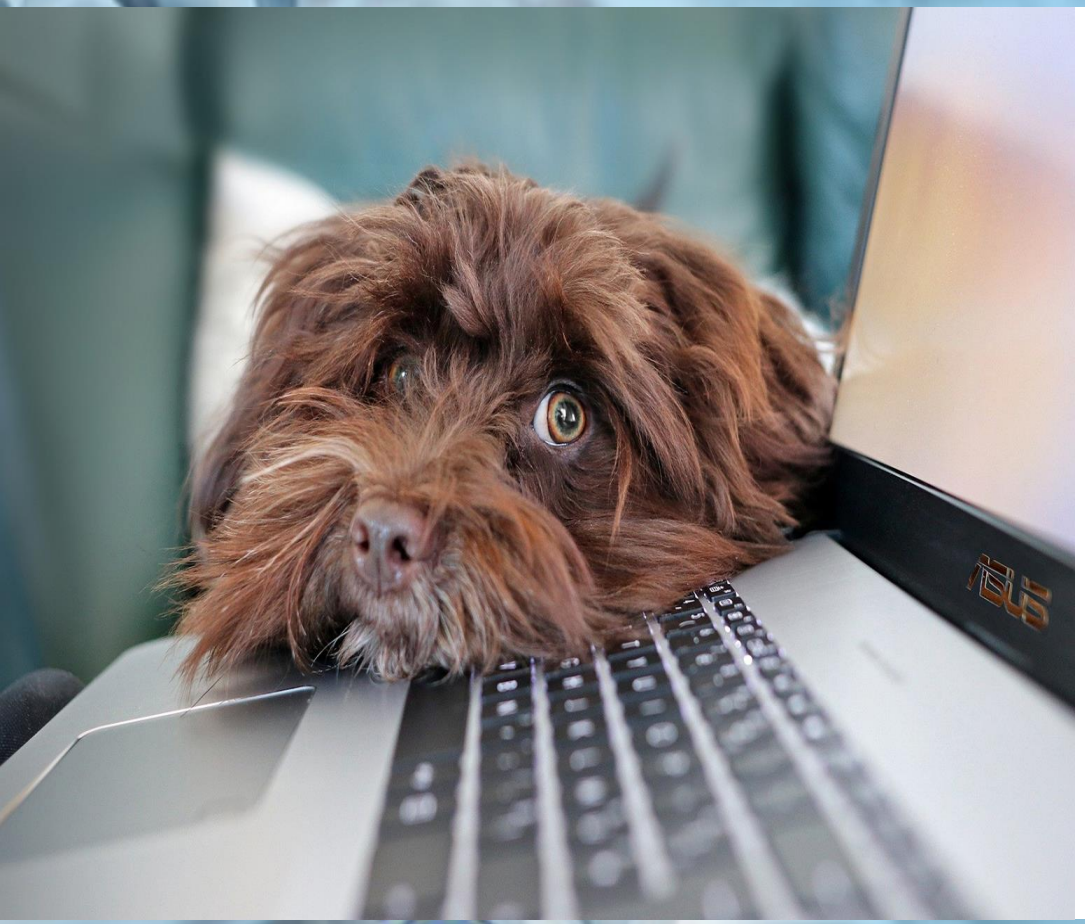
Reflection and evaluation of learning



- How does the teaching team participate? And the students?
- Is there an event to celebrate what has been achieved?
- Is there a plan for who is going to give feedback?
- Will a feedback report or similar be issued?
- Will those commitments be collected? How?
- Where is it and what improvement tools have been designed?

(To be offered to the learner)

-Will the student's progress be assessed?

-Is the same challenge expected to be assessed?

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Questions

Thank you for your participation!