ETH WEEK 2019 SCRIPT

↘ Welcome Tutor of 2019!

Engaging ETH students in interdisciplinary group work is at the very core of ETH Week. One tutor guides one team through the whole week. As these students only meet at the beginning of the week, they do not know each other beforehand. They also come with a backpack of different backgrounds, experiences and knowledge. All have different attitudes and personalities, maybe even different cultures.

To work together in such a team and under time pressure is challenging. Your role is to facilitate the team process so that they learn to deal with each other, to take decisions together and eventually become really productive, share tasks, coordinate and produce a presentation by Friday afternoon.

Your role might change depending on the task at hand. Sometimes you will only observe or keep the time. Sometimes you might need to moderate a discussion and help them focus on a taking a decision or have them reflect and ask 'why?' until the team finds a clear answer they can build upon.

There is one rule you need to stick to:

You are neither responsible for the content of the projects nor for the outcome.

This includes that you should not take content decisions for them, even if you know better. ETH Week is also not a competition between tutors.

Instead, you are responsible for the process and your central task is to encourage self-directed learning.

There are three different kinds of time slots during the week.

1. Tutors have the lead. These are the four milestone time slots that you prepare together with the trainers during the online phase of the tutor training: Team-building (Sunday), Check in (Daily), Check out (Daily), Wrap up (Friday).

2. Tutors facilitate the team process. These are most time slots, especially during Sunday, Monday, Tuesday and Friday.

3. Tutors support facilitators. These are the time slots on Wednesday and Thursday.

For all time slots, it is your responsibility to know the tasks at hand and understand what the learning outcomes (goals) are. Students will rely on you to clarify what it is they need to do and how it links to the rest of the week and their presentation on Friday.

This script will give you a solid basis for that responsibility. Each spread explains one half-day in detail, from the moment the students leave the plenum and start the team process until the moment where you hand them back off to us. During most slots, you have a certain flexibility in the procedure as you might have to adapt to the needs of your team.

LEGEND

Dedicated team process time slot designed by tutors.

◀▶ ◀▶ Relates to one of the four design thinking phases.

Team works as a whole.

◀ ▶ Team splits up in sub-teams.
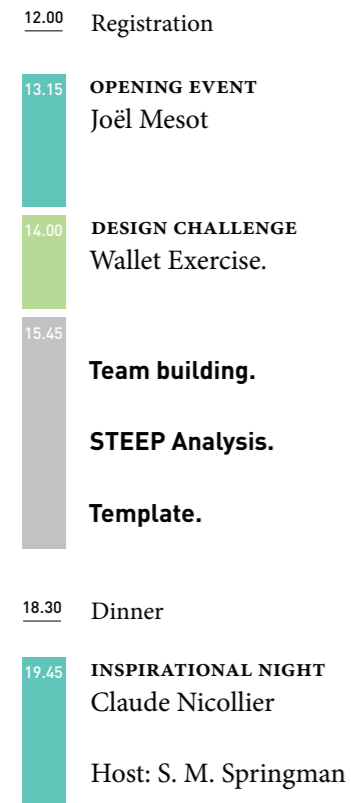
Students work in pairs.

Students work individually.

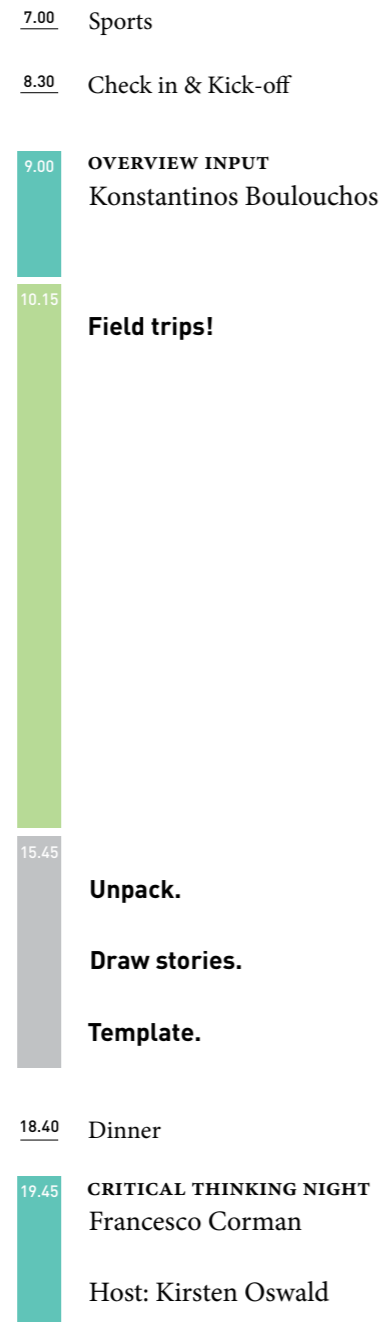- - - Transit

sunday **sept 08** ↘ meet	**monday** **sept 09** ↘ experience	**tuesday** **sept 10** ↘ funnel	**wednesday** **sept 11** ↘ refine	**thursday** **sept 12** ↘ test	**friday** **sept 13** ↘ communicate
	7.00 Sports	7.00 Sports	7.00 Sports	7.00 Sports	7.00 Sports
	8.30 Check in & Kick-off	8.30 Check in & Kick-off	8.30 Check in & Kick-off	8.30 Check in & Kick-off	8.30 Check in & Kick-off
	9.00 **OVERVIEW INPUT** Konstantinos Boulouchos	9.00 **INPUT TALKS** Christopher Onder Gil Georges Vanessa Wood Margarita Chli Eleni Chatzi Emilio Frazzoli	9.00 **KEYNOTE** Andreas Meyer	9.00 **Prototype.**	9.00 **KEYNOTE** Cathy Macharis
	10.15 **Field trips!**		10.15 **Ideate.**		10.00 **Polish your presentation.**
12.00 Registration		11.30 Lunch break	12.00 Lunch break	12.00 Lunch break	
13.15 **OPENING EVENT** Joël Mesot		12.30 **Prepare for knowledge fair.**		13.00 **FEEDBACK FROM RESEARCHERS**	**Last Template.**
14.00 **DESIGN CHALLENGE** Wallet Exercise.		13.30 **KNOWLEDGE FAIR** Representatives from industry, research and public sector.	13.00 **Research and test.**		13.30 Lunch break
15.45 **Team building.**	15.45 **Unpack.**	15.00 **NETWORKING EVENT** Informal exchange.		14.30 **Integrate feedback.**	14.45 **FINAL EVENT** Opening by S. M. Springman
STEEP Analysis.	**Draw stories.**	15.45 **Unpack.**	**Problem statement 2.0.**		**Students present their work.**
Template.	**Template.**	**Problem statement 1.0.**			
		Template.	**Template.**	**Template.**	
18.30 Dinner	18.40 Dinner	18.40 Dinner	18.15 **COMMUNITY NIGHT**	18.30 Dinner	18.00 **Wrap up.**
19.45 **INSPIRATIONAL NIGHT** Claude Nicollier	19.45 **CRITICAL THINKING NIGHT** Francesco Corman	19.45 **PANEL DISCUSSION** Ulrich Weidmann Tom Marty Dirk Boedeker Host: Gloria Romera	Table conversations, activities, informal exchange and Street Food.	19.30 Stage Test	19.15 **FINAL EVENT** Award Ceremony.
Host: S. M. Springman	Host: Kirsten Oswald				
					20.00 Celebrations and Dinner

■ Plenary Sessions   ■ Team work   ■ Special formats

sunday
sept 08
↘
meet

TUTOR MEETING
11.00 Tutors arrive at ETH Week Hall (werkstadt).
Team Kick off.

12.00 Registration

OPENING EVENT
13.15 Joël Mesot

DESIGN CHALLENGE
14.00 Wallet Exercise.

15.45 **Team building.**

STEEP Analysis.

Template.

18.30 Dinner

INSPIRATIONAL NIGHT
19.45 Claude Nicollier

Host: S. M. Springman

monday
sept 09
↘
experience

7.00 Sports

8.30 Check in & Kick-off

TUTOR MEETING
9.00 at info desk

10.15 **Field trips!**

15.45 **Unpack.**

Draw stories.

Template.

18.40 Dinner

CRITICAL THINKING NIGHT
19.45 Francesco Corman

Host: Kirsten Oswald

tuesday
sept 10
↘
funnel

7.00 Sports

8.30 Check in & Kick-off

TUTOR MEETING
9.00 at info desk

11.30 Lunch break

12.30 **Prepare for knowledge fair.**

KNOWLEDGE FAIR
13.30 Representatives from industry, research and public sector.

NETWORKING EVENT
15.00 Informal exchange.

15.45 **Unpack.**

Problem statement 1.0.

Template.

Dinner with Facilitators
18.40

PANEL DISCUSSION
19.45 Ulrich Weidmann
Tom Marty
Dirk Boedeker
Host: Gloria Romera

wednesday
sept 11
↘
refine

7.00 Sports

8.30 Check in & Kick-off

TUTOR & FACILITATOR MEETING
9.00 at info desk

10.15 **Ideate.**

12.00 Lunch break

13.00 **Research and test.**

Problem statement 2.0.

Template.

TUTOR & FACILITATOR MEETING
18.30 at team space 9 (Gebäude A)

COMMUNITY NIGHT

Table conversations, activities, informal exchange and Street Food.

thursday
sept 12
↘
test

7.00 Sports

8.30 Check in & Kick-off

9.00 **Prototype.**

12.00 Lunch break

FEEDBACK FROM RESEARCHERS
13.00

14.30 **Integrate feedback.**

Template.

TUTOR & FACILITATOR MEETING
18.30 at info desk

19.00 Dry Run

19.30 Dinner for tutors

friday
sept 13
↘
communicate

7.00 Sports

8.30 Check in & Kick-off

TUTOR MEETING
9.00 at info desk

10.00 **Polish your presentation.**

Last Template.

13.30 Lunch break

FINAL EVENT
14.45 Opening by S. M. Springman

Students present their work.

18.00 **Wrap up.**

FINAL EVENT
19.15 Award Ceremony.

20.00 Celebrations and Dinner

■ Plenary Sessions   ■ Team work   ■ Special formats

↘ Tutors and facilitators

RESPONSIBILITIES OF THE FACILITATORS

They will join us on Tuesday afternoon, to observe progress of teams and get aquainted with your tutors, teams and work space.

On Wednesday and Thursday, they will:

— Give instructions and run the students teams
  through the different activities as planned
  in the facilitator agenda;
— Ensure all teams obtain the desired results from each
  exercise to be able to move forward;
— Give expert input and feedback if needed
  (process/method);
— Quality assurance (content) by asking reflective questions;
— Establish and maintain a positive environment
  in which students are encouraged to be actively
  engaged in the learning process throughout
  the workshop.

RESPONSIBILITIES OF THE TUTORS

You will have the lead during the four milestone time slots that you designed during the online phase of the tutor training: Team-building (Sunday), Check in (daily), Check out (daily) and Wrap up (Friday).

On Wednesday and Thursday, you will:

— Support the facilitators
— Monitor effective participation
— Promote positive and engaged team dynamics
— Watch timing of your team
— Take care of space and material

Otherwise, you are in charge of facilitating the team process. This reader will help you doing that.

SUPPORT

If you need support with the team process or if it is unclear how you can assist the teams for a specific task, you may talk to one of the tutor trainers or organisers directly. They will regularly be present in the team spaces or the ETH Week Hall. If you cannot find them and it is urgent, contact the Info Desk.

MEETINGS

We organise meetings every morning in parallel to the plenum sessions:

9.00
~1h
TUTOR MEETINGS
Monday, Tuesday, Wednesday, Friday
at InfoBar.

18.30
~1h
TUTOR & FACILITATOR MEETINGS
Wednesday, Thursday
at Teamspace 9 / InfoBar.

While the meetings in the morning are there to answer your questions, the evening meetings help us monitor the progress of the teams. On Wednesday, it will impact how each team continues the morning after.

The meeting on Thursday is important for the preparation of the final event. During dinner, we ask you (for about 5') to bring one or two students to the Process wall, so that we can understand what your team is working on and how they evolved during the week.

↘ The process wall

Instead of handing the students a problem to solve, we ask them to define their own challenge, to frame a problem that they identify within the topic of 'Rethinking Mobility'. They will go through a process, where every step of the way helps them find answers to the following three questions, that we call the brief.

1. Define a problem statement that describes the challenge
   you want to address. It needs to be linked to a Swiss
   actor and to one of the 6 key topics of ETH Week.

2. Tell an inspirational story that explains where your ideas
   come from, why your problem statement is relevant and
   how a possible solution could look like.

3. Critically reflect your ideas by answering the following
   questions:

SCIENTIFIC RIGOR

— What are your underlying assumptions?
— What facts and figures did you rely on?

FEASIBILITY

— How feasible is your solution?
— What are your underlying assumptions?

SYSTEMS THINKING

— How is the problem embedded in the ecological,
  societal and economical context?
— What are the implications and tradeoffs of your
  solution?

We document this process by filling a template at the end of each day. Using this tool, the students document their preliminary results. When they are finished working, they hang the template on their Process Wall in the ETH Week Hall where it remains until the end of the week. In this way, experts who are part of ETH Week are able to understand what students are currently working on. It also emphasises how a constructive and iterative process is the main goal of ETH Week.

By making the different building stones visible, we hope to encourage spontaneous discussions between experts and students but also between students of different teams, so that ideas can build on each other. The templates, together with the final prototypes will be part of the exhibition on Friday evening.

The tutors and the students also meet every morning during the Check-in in front of the templates where they will serve as a roadmap for the week. In the evenings, they recapitulate the day during Check-out. The sides next to the daily templates are reserved for team-related matters (mood boards etc.).
A short overview of content of the templates:
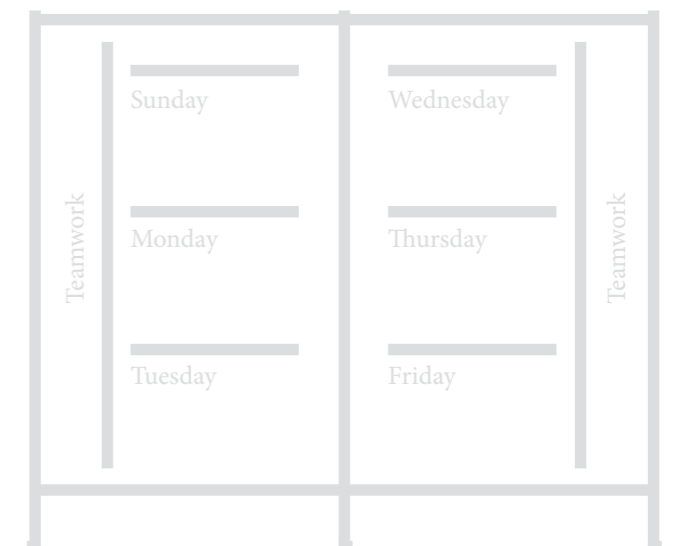
↘ Daily Templates.

SUNDAY

The template contains two future scenarios that contain aspects along STEEP categories that your team links to mobility. It contains the essence of their first discussions on the topic and shows the knowledge already present before any content inputs.

SCENARIO A drawing
S T E E P

SCENARIO B drawing
S T E E P

3 CHANCES   3 RISKS   3 CHANCES   3 RISKS
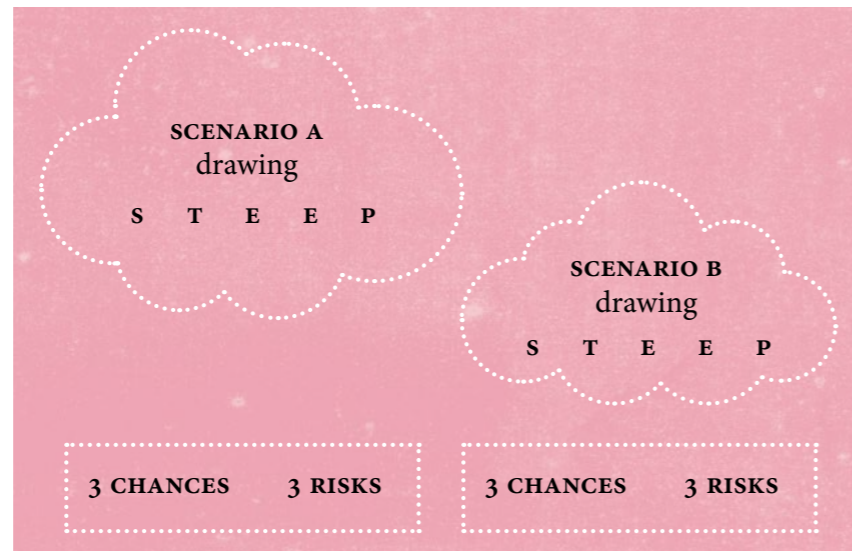
MONDAY

The second template shows three comic strips that highlight the most significant stories of the field trips. They are the result of a first funneling step, where the team needs to digest a large amount of information from about ten excursions to just three stories.

STORY A comic strip   **STORY B** comic strip   **STORY C** comic strip
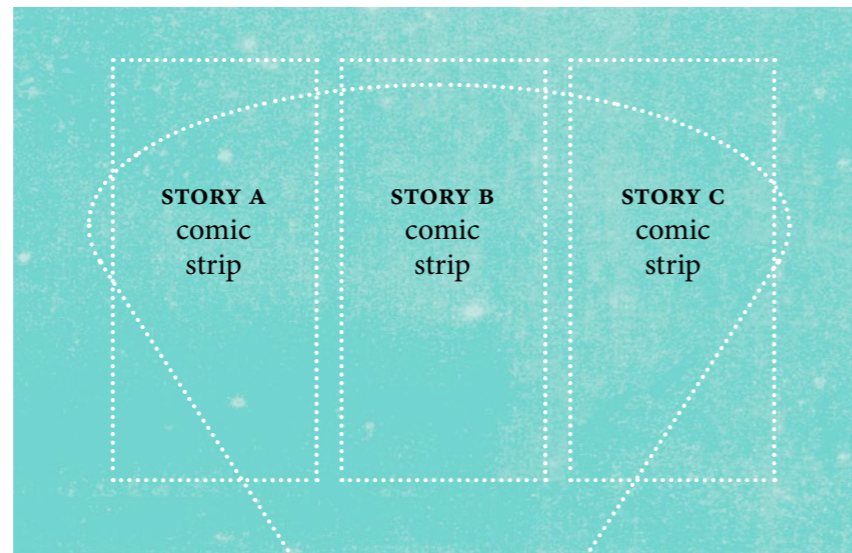
TUESDAY

More decisions on Tuesday result in a first selected and articulated problem statement (Version 1.0) and 3–4 other problem statements in the buckets (actors, needs, insights). You may use pieces of thread to connect possible combinations. By starting to visualise the evolution of their problem statement, students document how their understanding of the problem deepens.
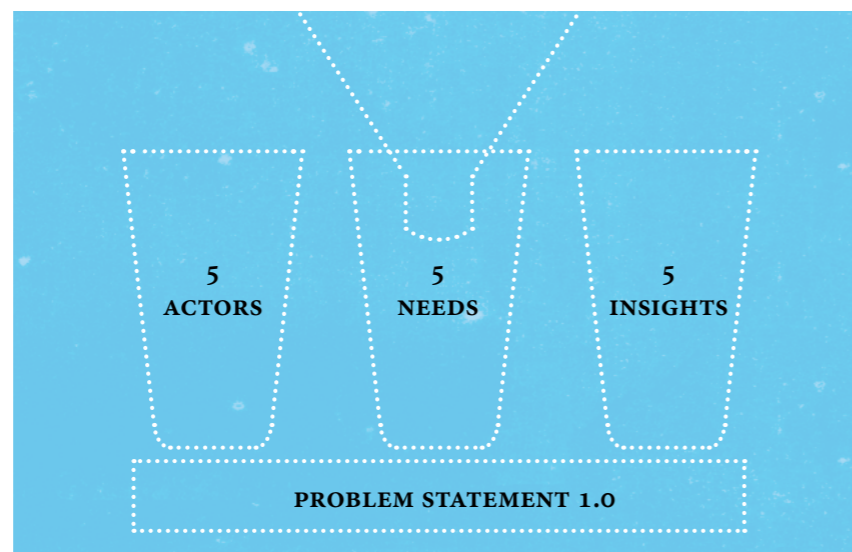
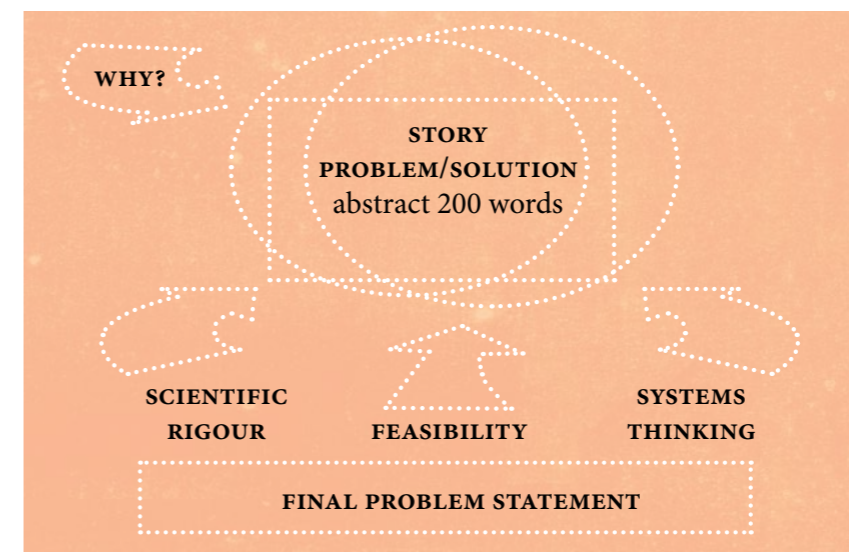5 ACTORS   5 NEEDS   5 INSIGHTS

PROBLEM STATEMENT 1.0

WEDNESDAY

The main result of the day is an improved problem statement (Version 2.0). The template will contain two solution ideas (the sketches of the morning), and first building blocks to answer the questions in the brief for scientific rigour and feasibility.

IDEA A drawing   **IDEA B** drawing

SCIENTIFIC RIGOUR	FEASIBILITY	SCIENTIFIC RIGOUR	FEASIBILITY
3 facts or figures	3 open questions	3 facts or figures	3 open questions

PROBLEM STATEMENT 2.0
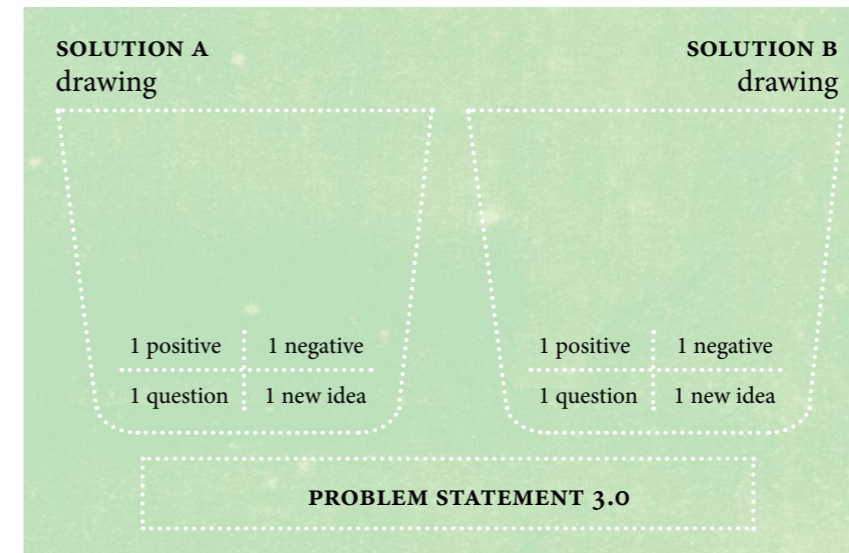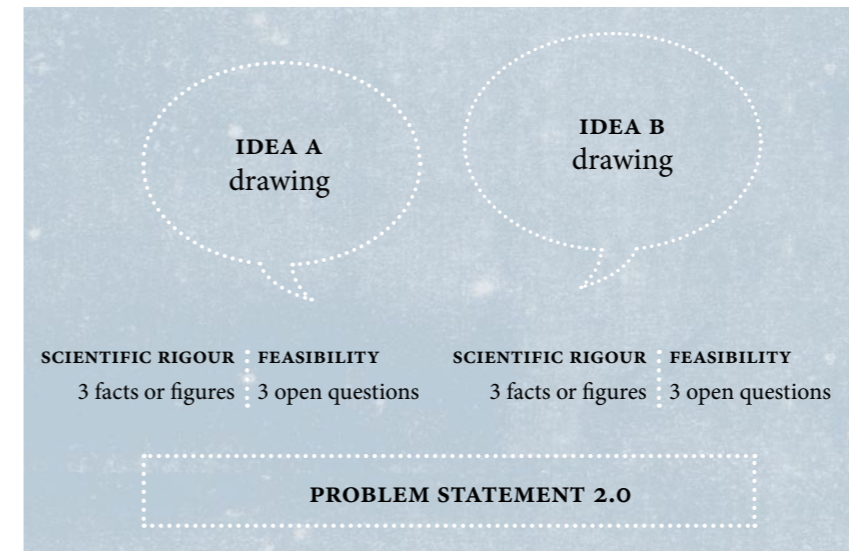
THURSDAY

The thursday template contains a visualisation of both prototyped ideas that were presented to the experts and the problem statement (Version 3.0). It will also contain the lessons learned from the feedback and answers to the systems thinking questions of the brief.

SOLUTION A drawing   **SOLUTION B** drawing

1 positive	1 negative	1 positive	1 negative
1 question	1 new idea	1 question	1 new idea

PROBLEM STATEMENT 3.0

FRIDAY

Finally, the last template will contain the final version of the problem statement. Answer to the brief: write an abstract describing how your solution connects to the problem and why your problem is relevant. Document the answers of scientific rigour, feasibility and systems thinking. Your prototype will be exhibited in front of the Process wall.

WHY?

STORY PROBLEM/SOLUTION abstract 200 words

SCIENTIFIC RIGOUR   FEASIBILITY   SYSTEMS THINKING

FINAL PROBLEM STATEMENT

↘ Daily Routines.

☐ Set up Process wall so that it serves your purpose.

☐ Meeting with Alan and Tutors at 9.00 at Info Desk. (except on Thursday)

☐ Hang up your template

↘ Check in.

Before the formal kick-off of the day, meet at your Process wall. Tutors have the lead and design the procedure of the time slot themselves. Make use of the daily templates as a roadmap for the week. Clarify open questions about the process and make sure all team members feel included and are committed.

GOALS

— Review the results of the previous day(s).

— Understand the goals of the day at hand.

— Link the next tasks to the general goal of the week.

MATERIALS

Daily template. Other material if necessary.

TUTOR ROLE

Design the slot in coordination with trainers. Lead and keep time.

PROCEDURE

1.1 - - -
Gather students at your Process wall. Make sure you start on time.

1.2 ✿
Review the results from the previous days. Facilitate a discussion. Ask why? Clarify open questions.

1.3 - - -
Make sure you and the students are back at the plenum in time for the kick off.

8.30	8.35	8.45
5'	10'	
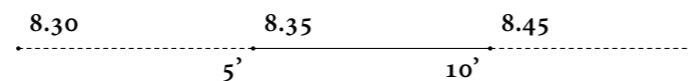
TIMING

Strict. 10' for the task, account for 5'+5' of transit time. Kick-off at **8.50**.

↘ Check out.

After a demanding and inspiring day, meet at your Process wall. Bring the prepared template, hang it up and discuss. Tutors have the lead and design the procedure of the time slot themselves. Make use of the daily templates as a roadmap for the week. Clarify open questions about the process and make sure all team members feel included and are committed.

GOALS

— Briefly recap the progress of the day.

— Reflect about teamwork and participation.
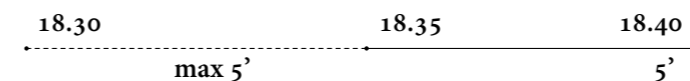
— Head off to dinner and enjoy the evening.

MATERIALS

Daily template. Other material if necessary.

TUTOR ROLE

Design the slot in coordination with trainers. Lead and keep time.

PROCEDURE

1.1 - - -
Walk from the team spaces to your Process wall. Make sure you start on time.

1.2 ✿
Recapitulate the day. Facilitate a discussion. Ask why? Clarify open questions.

1.3 - - -
Bon appetit!

18.30	18.35	18.40
max 5'		5'

TIMING

5' for the task, account for 5' of transit time.

Sunday.
Meet.

☐ Help Alan with the wallet exercise.

☐ After the wallet exercise, stand at your team wall and take your team to your space, take team box.

☐ Remind students to register for sports before 20.00.

☐ Leave the team space at 18.25 and remind students to be in the Hall at 18.30.

☐ Go to to Process wall for Check out.

☐ Hand out excursion sheets, inform about special requirements

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11.00 — Tutors arrive at ETH Week Hall (WERKSTADT). Team Kick off.

12.00 — Welcome students to ETH Week Hall at Info desk, snack.

13.15 45' ◆ OPENING ETH WEEK Welcome, introducing tutors. Joël Mesot (President)

14.00 1h45' ◆ DESIGN CHALLENGE The wallet—a demonstration.

15' ---- Bring students to team space.

16.00 2h20' Team-building.

STEEP Analysis.

Template.

5' ---- Transit to Process walls.

18.25 5' Check out.

18.30 — Dinner.

19.45 1h30' ▲ INSPIRATIONAL NIGHT With Claude Nicollier.

Bar closes at 22.30. Hall at 23.00.

14

↘ Team building.

The first time slot is dedicated time for students to get to know their tutor and fellow team members. The tutor will design this slot together with the trainers in the online phase of the tutor training. The team members learn about their respective backgrounds, experience and motivation to join ETH Week. They select a name to establish the team and discuss the expectations for the week.

GOALS

— Become comfortable working in a team setting.

— Acknowledge the diversity of the team.

— Commitment to the team and to the task of ETH Week.

MATERIALS

Depends on how you designed the slot.

TUTOR ROLE

Design the slot in coordination with trainers. Lead and keep time.

PROCEDURE

1.1 ---
Meet your team at the Process wall, explain the road map. Walk over to settle into the team space.

1.2 ✿
Start with the team-building activity you designed. Make sure they establish a team name, too.

1.3 ✿
Explain the brief and facilitate a discussion about the expectations of the week.

15.45   16.00   16.45
        15'   45'   15'
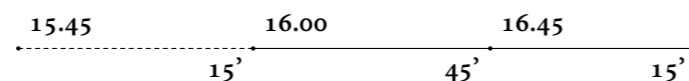
TIMING

Flexible, allow for 1h15'. Use timeline as a guide.

↘ STEEP Analysis.

Introducing the topic: Mobility. Students will bring in their ideas about the topic by going through a STEEP Analysis (Societal, Technological, Economical, Environmental, Political). In this way, we start to build on the knowledge, motivations and interests of your team. To set it up: split your team wall vertically into 5, one layer for each category.

GOALS

— Identify existing knowledge about the topic.

— Start framing the topic informally.

— Become familiar with systems thinking.

— Learn how to build on each other's knowledge.

MATERIALS

Workbook. Paper.

TUTOR ROLE

Keep time. Moderate the discussion. Encourage them to be crictical and discuss about normative concepts like sustainability. Balance out the different STEEP categories.

PROCEDURE

2.1 ✿
Hang up post-its with aspects/trends that you believe will have an impact on 'mobility' for all STEEP categories.

2.2 ◄►
In subteams, combine the ideas into scenarios of possible futures. Draw an image for each and link to the underlying aspects.

2.3 ✿
Present to each other and discuss the chances and risks for each scenario. Use post-its to document this critical reflection.

17.00   17.10   17.20
        10'   10'   40'
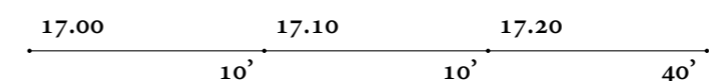
TIMING

Flexible, allow for 1h. Use timeline as a guide.

↘ Template.

Students learn the first habit of ETH Week, i.e. to document their daily process. The templates contain the essence of the day and function as a roadmap for the week. You will discuss them every morning at the process walls in the ETH Week Hall. The first template contains the two scenarios (and at least one STEEP aspect each) and their critical reflection (chances and risks). Also, add the team name to the template.

GOALS

— Visualise the results of the day onto the template.

— Understand to work under time pressure.

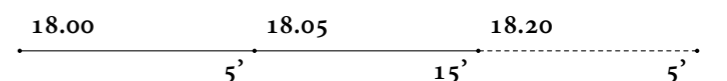— Learn to be critical about your own ideas.

MATERIALS

Sunday template.

TUTOR ROLE

Moderate the discussion. Keep time. Guide the template completion process.

PROCEDURE

3.1 ✿
Explain the goal of the daily tempates and how this will look. Use it as a roadmap for the week.

3.2 ✿
Transfer the two scenarios onto the template by being as visual as possible. Mention the identified aspects, chances and risks.

3.3 ✿
Briefly wrap up and walk back to the ETH Week Hall to hang the template back onto the Process wall.

18.00   18.05   18.20
        5'   15'   5'

TIMING

Allow for 20'. Use timeline as a guide.   Plenum session at **19.45.**

15

Monday.
Experience.

☐ Gather the students by holding up your excursion sign.

☐ Public Transport groups gather outside with both tutors present.

☐ Bus groups gather with one tutor present and one waiting by the bus (Entrance Werkstadt). Both use their lists!

☐ Remind students to ask experts for their business cards and if they could send them an email before noon on Wednesday to arrange a phone call later that afternoon for follow-up questions.

☐ Make sure you have the excursion package.

☐ Track of the head-count during excursions.

☐ Thank the external partner(s) and hand them the gratitude.

☐ Bring students back to the hall by 15:30. Students regroup and head back to the team spaces by 16:00.

Time		Activity
7.00	——	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 10'	↘	**Check in.** ♣
5'	- - - -	Transit to Stage.
8.50 10'	▼	**KICK OFF** Monday, explained on Stage.
9.00 45'	●	**TUTOR MEETING** at info desk.
15'	- - - -	Transit to Meeting Point.
10.15 5h15'	↘	**Field trips!** ◀▶ ◀▶
15'	- - - -	Transit from Hall to team spaces.
16.00 2h30'	↘	**Unpack.**
	↘	**Draw stories.**
	↘	**Template.**
5'	- - - -	Transit to Process walls.
18.35 5'	↘	**Check out.** ♣
18.40	——	Dinner.
19.45 1h15'	▲	**CRITICAL THINKING NIGHT** Keynote by Francesco Corman

Hall closes at 23.00.

DESTINATIONS

#1 Carrosserie Hess, Bellach (BUS 1)
　　　Louisa Buttsworth and Keegan McNamara

#2 ESI Platform, PSI, Villigen (BUS 2)
　　　Ann-Christin Kerl and Nicole Aegerter

#3 Policy in Uri, Altdorf (BUS 3) - *German*
　　　Noëmi Kaufmann and Leonard Zourek

#4 Gotthard Base Tunnel, Erstfeld (BUS 3)
　　　Patrick Althaus and Aleksandra Kim

#5 Siemens Mobility, Wallisellen (ÖV)
　　　Christos Gountis

#6 Airport Zurich (ÖV)
　　　Daniel Reichmuth and Prabhat Joshi

#7 Designwerk, Winterthur (ÖV)
　　　Joel Zeder and Simona Meiler

#8 SBB: Operation Control Centre Olten (ÖV)
　　　Adam Bufacchi and Irene Hanke

#9 SBB: Smart City Lab, Basel (INTERMODAL)
　　　Michael Liem

#10 SBB: Maintenance Facility Zurich Herdern (BICYCLE)
　　　Saijoscha Heck and Daniel Flavián Blasco

#11 MOVE, EMPA, Dübendorf (ÖV)
　　　Laura Guerrini

#12 Solar Reactor Research Plant, ETH Zürich (ÖV)
　　　Tanmay Sinha and Sara Cerar

#13 Rhine Port, Basel (ÖV)
　　　Klara Uher and Eva-Maria Manz

#14 Stadler Rail, Bussnang (BUS5)
　　　Lino Cereghetti and Cyprien Hölzl

↘ Field trips!

Each team member joins a different field trip, visiting a different real-world setting. Students are responsible for leading the discussions and engaging in a dialogue, collecting information that they judge to be relevant. Guiding questions are available in the workbook.

Students will be asked to bring back a story: Someone… (a person, a group), wanted… (sought, desired, had a goal), but… (complication, obstacle, conflict), so… (climax, outcome, learning, resolution). On the way back students discuss these stories in pairs. Each student then writes his story down on color-coded post-it notes.

GOALS

— Link the global overview talk to the local context.

— Engage with real-world partners by formulating own questions, keeping an open and critical mindset.

— Put yourself into someone else's shoes and build empathy.

— Distill an experience to a story that others can relate to.

MATERIALS

Excursion brief for tutors, including participants list. Color-coded post-it notes: Someone (yellow), Wanted (green), But (pink), So (orange). Gratitude for external partner. In some cases: additional lunchbags.

EXCURSION COORDINATOR ROLE

During the excursions tutors become coordinators, meaning you only have organisational tasks.

The coordinator keeps track of all students, keeps the time and encourages students to interact with the people on site.

The coordinators are also the contact person for our external partners: introduce yourself, be the face of ETH Week, make sure to respect the external partners rules and wishes. Make sure students behave professionally and like a guest.

Contact the Info Desk, if you should run late or if you run into any troubles.

PROCEDURE

2.1 ☉	**2.2** ❀	**2.3** ❀	**2.4** ❀	**2.5** ⁝	**2.6** ·
Wait for students at meeting point. Introduce yourself. Check participants list, headcount. Leave on time.	Explain rules and attitude. Remind students to ask why. Contact external partner and confirm arrival.	Introduce yourself to external partner, explain your role. Help him to stick to the schedule.	Encourage discussions by students. Repeat the goals if necessary.	On the way back, students discuss the excursion in pairs and distill it to a story using the workbook.	Hand out the color-coded post-it notes where students record their story individually.

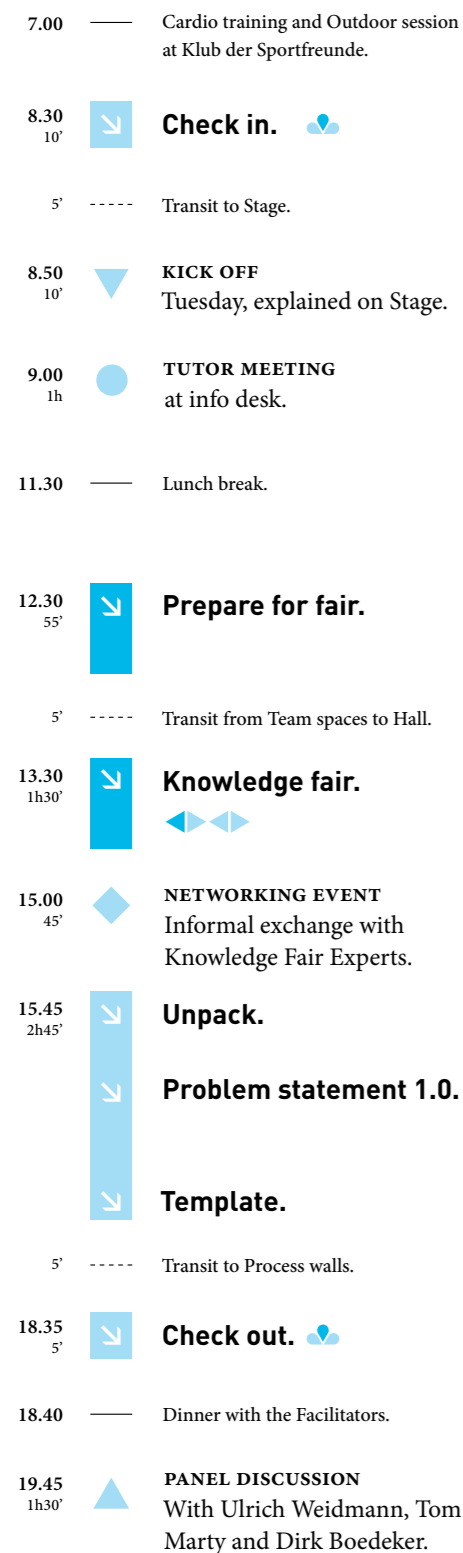| **10.15**		**ON SITE**		**IN TRANSIT**	

ARRIVAL　　　　　　　　　　　　　　　　　　　　　**RETURN**

TIMING

Depends on excursion. See excursion factsheet.

Be back at the Hall before **15.30**. Next task starts at **16.00**.

☐ Make sure everyone used the same color coding: Someone (yellow), Wanted (green), But (pink), So (orange).

☐ Leave the team space in time for dinner which is served at 18:40.

☐ Remind students to register for sports before 20.00.

Time		Event
7.00	—	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 / 10'	↘	**Check in.**
5'	- - - - -	Transit to Stage.
8.50 / 10'	▼	**KICK OFF** Monday, explained on Stage.
9.00 / 45'	●	**TUTOR MEETING** at info desk.
15'	- - - - -	Transit to Meeting Point.
10.15 / 5h15'	↘	**Field trips!**
15'	- - - - -	Transit from Hall to team spaces.
16.00 / 2h30'	↘	**Unpack.**
	↘	**Draw stories.**
5'	- - - - -	Transit to Process walls.
18.35 / 5'	↘	**Check out.**
18.40	—	Dinner.
19.45 / 1h15'	▲	**CRITICAL THINKING NIGHT** Keynote by Francesco Corman

Hall closes at 23.00.

↘ Unpack.

This time slot brings the team members up to speed about the experiences had during the excursions. By listening and engaging in short discussions, relating them to each other, the team starts the synthesis process. The post-it sets (Somone, Wanted, But, So) capture an interesting story. Students explain in their own words why they chose this story and what aspect fascinated them. Putting them up, the team starts the 'space saturation' process, filling their walls with tangible information that documents thoughts and experiences.

GOALS

— Condense information and convey it efficiently.

— Acquire an overview about key actors and stakeholders within the topic of manufacturing, understanding some specific needs and solutions.

MATERIALS

Use the walls in the team space to hang up the story post-its.

TUTOR ROLE

Moderate and keep time. Make sure all team members speak equally. Make sure the stories told are well documented on the walls in the team space.

PROCEDURE

1.1 ✿
Make sure everyone uses the same color code. Explain the goals and timing of the next two steps.

1.2 ◢
Everyone shares his/her story while the others then probe for more information. Balance out time.

1.3 ✿
They redistribute and cluster the post-its so that it makes sense to the team. Add labels, descriptions.

16.00	16.05	17.20
5'	1H15'	10'

TIMING

Flexible, allow for 1h30'. Use timeline as a guide.

↘ Draw stories.

Learning how to take decisions as a team will be crucial in order to be productive during the week. Time pressure helps this process. Consider this slot a dry-run for more important decisions to come later. Condense the large set of observations to the 3 most significant stories and visualise them into 3 comic strips. Students are allowed to mix and match stories from different excursions.

GOALS

— Take decisions as a team.

— Visualise information creatively.

— Identify connections, systems thinking.

MATERIALS

A4 paper, to stick to the Monday template.

TUTOR ROLE

Keep time. Moderate the discussion. Make sure they take the decisions in time. You may suggest a tool to speed up the process. Point out connections below stories.

PROCEDURE

2.1 ✿
Moderate the selection process so that students manage to choose 3 stories.

2.2 ◀▶
In parallel, have students (in subteams) produce the 3 comic strips. Use text to make ideas clear.

2.3 ✿
They explain them to one another. Make sure stories are understandable.

17.30	17.45	
15'	30'	

TIMING

Flexible, allow for 45'.

↘ Template.

The three comic strips contain the essence of the discussions of the day. Stick them onto the daily template. Hang them up at the ETH Week Hall where they will be ready for tomorrow's Check in.

GOALS

— Visualise the results of the day onto the template.

— Understand to work under time pressure.

MATERIALS

Monday template.

TUTOR ROLE

Moderate the discussion. Keep time. Guide the template completion process.

PROCEDURE

3.1 ✿
They finish the comic strips and hang them onto the template

3.2 ✿
Wrap up the day.

3.3 ✿
Walk back to the ETH Week Hall to hang the template back onto the Process wall.

18.15	18.30	
	15'	5'

TIMING

Flexible, allow for 15'. Break for dinner at **18.40.**

Tuesday.
Funnel.

Time		Activity
7.00	———	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 10'	↘	**Check in.** ♨
5'	- - - - -	Transit to Stage.
8.50 10'	▼	**KICK OFF** Tuesday, explained on Stage.
9.00 1h	●	**TUTOR MEETING** at info desk.
11.30	———	Lunch break.
12.30 55'	↘	**Prepare for fair.**
5'	- - - - -	Transit from Team spaces to Hall.
13.30 1h30'	↘	**Knowledge fair.** ◀▶ ◀▶
15.00 45'	◆	**NETWORKING EVENT** Informal exchange with Knowledge Fair Experts.
15.45 2h45'	↘	**Unpack.**
	↘	**Problem statement 1.0.**
	↘	**Template.**
5'	- - - - -	Transit to Process walls.
18.35 5'	↘	**Check out.** ♨
18.40	———	Dinner with the Facilitators.
19.45 1h30'	▲	**PANEL DISCUSSION** With Ulrich Weidmann, Tom Marty and Dirk Boedeker.
		Hall closes at 23.00.

↘ Prepare for fair.

Students prepare for the knowledge fair in the afternoon. They work in pairs, choose one of the six areas and decide what they are going to ask the actors and stakeholders. They prepare for all experts in the chosen area with at least 5 questions per expert.

They brainstorm questions, identify and group themes, then establish an order to allow for the discussion to flow naturally and so that they get answers to the following questions: What is the expert trying to solve? How are they solving it? Why are they doing it in this way?

GOALS

— Build on the knowledge from the excursions.

— Identify links between the topic talks, the actors, and stakeholders of the fair.

— Learn how to prepare an interview.

MATERIALS

Workbooks.

TUTOR ROLE

Oversee progress. Moderate the discussion about the strategy. Explain the procedure of the knowledge fair in the afternoon.

PROCEDURE

1.1 ✿
Split team up into pairs (or one group of 3 if necessary). One pair per area. If you only manage to cover 4 areas, let us know.

1.2 ⁝
Oversee how the teams prepare questions. You may call a short team discussion midway.

1.3 ✿
Discuss the strategy and expectation of what to bring back from the fair. Wrap up on the way to Knowledge Fair.

12.30		12.35		13.20	
	5'		45'		5'
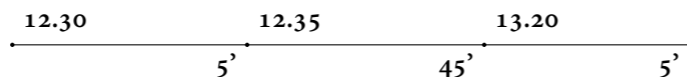
TIMING

Strict, allow for 55'. Use timeline as a guide.

↘ Knowledge Fair.

During the knowledge fair, we have invited over 30 representatives from business, research, administration and non-governmental organisations. By getting access to this network, students get a multiplexed understanding and benchmark of the current best practice examples in the field.

The knowledge fair is organised in 6 areas. Each area has 5 (or more) booths. Students rotate in pairs, visiting 4 of the booths, one at each of the 4 rounds. Each pair remains in the selected area.

After a short elevator pitch, the students are required to engage in a discussion and lead the conversation, getting answers to the interview questions prepared in the morning.

Students record information in three categories (buckets): actors, needs, insights. They form the ingredients of a problem statement.

The students are also encouraged to take contact details for follow-up questions on Wednesday afternoon.

GOALS

— Connect the challenges of the morning session to specific solutions.

— Close the knowing-doing gap to find solutions for manufacturing related problems.

— Identify and cross-check ideas for solving problems.

MATERIALS

Students use workbooks to document discussions. Business cards.

TUTOR ROLE

During the knowledge fair, you don't have an active role. You may take a break or stick around to monitor the progress of your students.

PROCEDURE

2.1 ⁝
Each pair goes to their topic and picks a first expert booth, 3 pairs max per booth.

2.2 ◖))
The invited actor or stakeholder of one booth gives a short elevator pitch.

2.3 ✿
Together with the students from the other teams at the booth, students lead the discussion.

2.4 ⁝
The acoustic signal marks the end of the round. Students switch to the next booth. A free market approach if facilitated.

2.5 ↻
The steps **2.2–2.4** are repeated 3 times.

2.6 ⁝
We thank the external partners of the fair. Students take a break and stick around for the informal Networking Event.

13.30		13.40			13.57		14.00 14.20 14.40	15.00
	10'		3'	14'		3'		

TIMING

Strict. Switching occurs on acoustic signal.

Next task starts at **15.45.**

☐ Leave the team space in time for check out at 18.40.

☐ Remind students to register for sports.

☐ Remind students to bring cups, plates and cutlery to Community Night tomorrow!

☐ Make sure everyone used the same color coding: actors (yellow), needs (green), insights (pink).

Time	Event
7.00	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 / 10'	**Check in.**
5'	Transit to Stage.
8.50 / 10'	**KICK OFF** Tuesday, explained on Stage.
9.00 / 1h	**TUTOR MEETING** at info desk.
11.30	Lunch break.
12.30 / 55'	**Prepare for fair.**
5'	Transit from Team spaces to Tent.
13.30 / 1h30'	**Knowledge fair.**
15.00 / 45'	**NETWORKING EVENT** Informal exchange with Knowledge Fair Experts.
15.45 / 2h45'	**Unpack.**
	Problem statement 1.0.
	Template.
5'	Transit to Process walls.
18.35 / 5'	**Check out.**
18.40	Dinner with the Facilitators.
19.45 / 1h30'	**PANEL DISCUSSION** With Ulrich Weidmann, Tom Marty and Dirk Boedeker.
	Hall closes at 23.00.

↘ Unpack.

This time slot brings the team members up to speed about the experiences of the knowledge fair. Similar to the unpacking process after the excursions, we work again with post-it notes to categorise the gathered knowledge from the interviews into three 'buckets': actors, needs, insights.

GOALS

— Cluster information into categories (actors, needs and insights) and convey it efficiently.

— Identify how the different problems relate to each other, add structure help define what to focus on later.

MATERIALS

Color-coded post-it notes, one color per bucket: actors (yellow), needs (green), insights (pink).

TUTOR ROLE

Time keeping. Moderation. Make sure everybody gets to speak equally.

PROCEDURE

1.1 :
For each booth, synthesise the knowledge gathered onto the color coded post-its.

1.2 ⁙
Each pair shares their new knowledge and fills the wall with post-it notes.

1.3 ✿
Moderate a discussion to cluster the post-its. Team takes first decisions what to focus on. Identify interesting links.

15.45   16.00   16.30
   15'   30'   45'
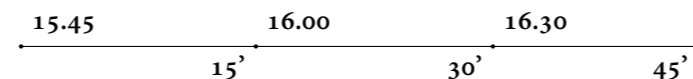
TIMING

Allow for 1h30 in total. Use timeline as a guide.

↘ Problem statement 1.0.

The buckets are the ingredients of a problem statement. Actor – need – insight. From all the knowledge unpacked over the last two days, we produce a first set of problem statements in pairs and then decide as a team which one has the most potential and inspires all members of the team. It will be a very first draft that will be improved continuously. The first version can be simple. Follow the criteria to define scope and make sure all ingredients properly relate to each other.

GOALS

— Take decisions during a first define round quickly.

— Practice how to formulate a problem statement.

MATERIALS

Workbooks.

TUTOR ROLE

Time keeping. Moderate the decision process.

PROCEDURE

2.1 :
Have students work in pairs to formulate a problem statement using the workbook.

2.2 ⁙
Each pair shares their problem statement with the others.

2.3 ✿
Moderate a discussion so they choose one problem statement (can also be a combination).

17.15   17.35   17.45
   20'   10'   30'
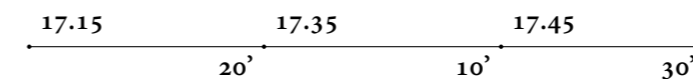
TIMING

Allow for 1h in total. Use timeline as a guide.

↘ Template.

The result of the day is a first problem statement that will guide the ideation process on Wednesday. For each bucket (actors, needs, insights), copy 5 to the template. All other discussions and problem statements are documented on the walls in the team space. In this way, they remain part of the process to refer back to them later or integrate them into novel ideas. Hang up the template in the ETH Week Hall where they will be ready for tomorrow's Check in.

GOALS

— Archive the results of the day onto the template.

— Capture wider results of the discussions on team space walls.

MATERIALS

Tuesday template.

TUTOR ROLE

Moderate the discussion. Keep time. Guide the template completion process.

PROCEDURE

3.1 ✿
They finalise the language and write the problem statement onto the Wednesday template.

3.2 ✿
Add other problem statements as separated elements: actors, needs, insights.

3.3 ✿
Wrap up the day and walk back to the ETH Week Hall to hang the template back onto the Process wall.

18.15   18.30
          15'   5'

TIMING

Allow for 15'.   Walk to Process walls at **18.30.**

Wednesday.
Define.

7.00	—	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 10'	↘	**Check in.**
5'	·····	Transit to Stage.
8.50 10'	▼	**KICK OFF** Wednesday, explained on Stage.
9.00 45'	●	**TUTOR & FACILITATOR MEETING** at info desk.
15'	·····	Coffee & transit to Team spaces.
10.15 1h45'	↘	**Ideate.** ◀▶◀▶
12.00	—	Lunch break.
13.00 5h05'	↘	**Research and test.**
	↘	**Problem statement 2.0.**
	↘	**Template.**
5'	·····	Transit to Hall.
18.10 5'	↘	**Check out.**
18.15 4h	▲	**COMMUNITY NIGHT** Table conversations, activities, informal exchange and street food.
18.30 1h	●	**TUTOR & FACILITATOR MEETING** at team space 9.
		Hall closes at 23.00.

☐ Reach out to experts before noon.

☐ Remind students to be back in team spaces by 13.00.

☐ Prepare paper and markers for upcoming brainstorming.

↘ Ideate.

After establishing a first draft of the problem statement, it is time to explore if it holds and is productive. We therefore ideate in two steps. First we brainstorm, exploring solutions that answer to the problem statement. The goal is not yet to develop good solutions but to get the obvious solutions out of the heads to go beyond them. Ideas are generated, selected, and clustered, then they reflect on the problem statement. This is repeated twice. The result of the first step is an improved problem statement and clusters of ideas.

GOALS

— Rephrase your first problem statement.

— Generate ideas instead of evaluating them.

— Probe and clarify different aspects of a solution.

— Bring abstract ideas onto paper so they become shareable.

MATERIALS

Plain A3 paper. Use the standing tables. Place a problem statement in the center. 15 paper sheets per student (size: 1/3 of A4).

TUTOR ROLE

Keep time, moderate the feedback round, ensure that everyone can share his/her opinion on the clusters.

INTRODUCTION · BRAINSTORMING I · FILTER/IDEA SELECTION · CLUSTERING OF IDEAS · REFLECT ON PS · BRAINSTORMING II · FILTER/IDEA SELECTION · CLUSTERING OF IDEAS · REFLECT ON PS · FINAL CLUSTERING

10.15 — 1H45'
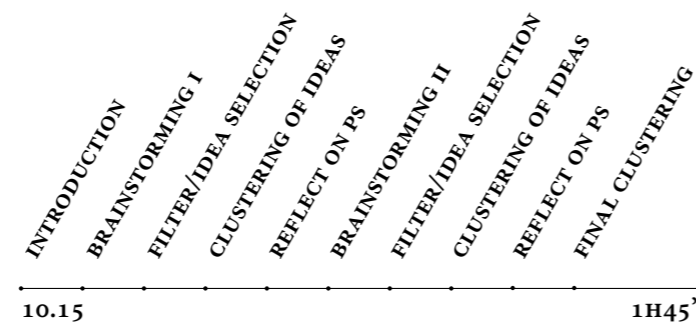
TIMING

Use facilitator instructions as a guide.

ALICE REPETTI is a Social Scientist with a background in Economics. She has experience in designing research projects and facilitating training programs using collaborative and agile techniques. Her ambition is to explore new ways to integrate Technology, Innovation and Design into effective strategies to create social change and shape new educational approaches.

BARBARA SCHNYDER holds a Master's degree in World Society and Global Governance. She worked as journalist and researcher in an interdisciplinary think tank engaged with global trends in business, science and society before she joined Spark Works as an Innovation Consultant.

LINDA ARMBRUSTER holds a Master's degree in Strategic Design from the design akademie berlin. As Project Manager at Spark Works, a strategic human-centered innovation firm, she builds and leads inspiring research and advisory programs with interdisciplinary teams to tackle complex challenges in the private and public sector.

AXEL ZEIJEN is a doctoral student in the Technology & Innovation Management group at ETH Zürich. He studies how new technologies, such as 3D Printing, can shape the future – and how organisations and we as a society can get there.

HELEN MEYER is focusing on product development in her Master's in Mechanical engineering at ETH Zürich. She tutored ETH Week last year and did some workshop facilitation with students and companies next to her studies. Besides ETH, you will find her somewhere in the mountains or climbing the closest wall.

MICHAEL AUGSBURGER is finishing his Master's degree in Environmental Systems and Policy at ETH Zürich. His research focuses on the use of human-centered innovation processes for policy design. An advocate of interdisciplinary team work, he has experience in designing and facilitating Design Thinking Workshops for companies, NGO's and student teams as part of Spark Works, an innovation consulting company.

ENRICO SCOCCIMARRO is a Materials Science Master student and cofounder of ETH spin-off FenX. He is intrigued by product development and seeks an interdisciplinary approach to innovation. In his free time, he is split between skiing in the mountains, sailing at sea, and enjoying home-made drinks from his 'gin & tonic lab' with friends.

JEREMIA GEIGER is passionate about developing and realising ideas and believes that trust and commitment are major keys to success. He joined ETH for his Mechanical Engineering Master's studies in 2017. Earlier, he had worked in industrial R&D, initiating and leading innovative projects in Germany and Turkey.

SONJA FÖRSTER is a trained mechanical engineer and business school graduate. Not being able to side with one or the other community, she has been working at the intersection ever since, trying to reveal the constructive forces of interdisciplinary team work. She is also very passionate about applying methods (to herself and others) that shake routine behaviour to expand the creative potential of individuals.

LILIAN HÖRLER is an accomplished designer with a Bachelor's degree in Graphic Design from the Hochschule Luzern, Art & Design. Lilian develops the internal visual communication at Spark Works. Additionally, she is a trained Design Thinker at ETH Zürich. She enjoys working and experimenting with different design methods to find new, effective ways to communicate.

XENIA MEIER is able to navigate and embrace ambiguity by embodying curiosity and analytical thinking. With a background in Business Studies and Political Science, she is driven to bring creative thinking and a human-centred approach to innovation for the greater good of society.

Break for lunch at **12.00.**

Time		Event
7.00	——	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 / 10'	↘	**Check in.**
5'	-----	Transit to Stage.
8.50 / 10'	▼	**KICK OFF** Wednesday, explained on Stage.
9.00 / 45'	●	**TUTOR & FACILITATOR MEETING** at info desk.
15'	-----	Coffee & transit to Team spaces.
10.15 / 1h45'	↘	**Ideate.** ◁▷◁▷
12.00	——	Lunch break.
13.00 / 5h00'	↘	**Research and test.**
	↘	**Problem statement 2.0.**
	↘	**Template.**
5'	-----	Transit to Hall.
18.05 / 5'	↘	**Check out.**
18.15 / 4h	▲	**COMMUNITY NIGHT** Table conversations, activities, informal exchange and street food.
18.30 / 1h	●	**TUTOR & FACILITATOR MEETING** at team space 9.
		Hall closes at 23.00.

↘ Research and test.

Students will deepen their understanding. For this, they split up to work in parallel. Some do literature and online research to back their assumptions with facts and figures answering to the scientific rigor part of the brief. Others test the problem statement and the idea sketches with the experts they contacted in the morning. Others test with non-experts on campus or on the street, answering the feasibility part of the brief. All then come back and share the feedback with the team.

GOALS

— Understand how to build on other people's knowledge.

— Open up to feedback and be critical about it to evaluate your own ideas.
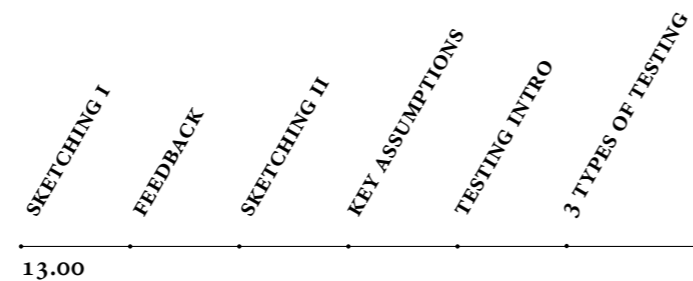
MATERIALS

Workbooks. Post-its and team space walls.

TUTOR ROLE

Separation into subteams, time keeping. Moderate unpacking, assist with research, ensure a smooth process.

FACILITATOR ROLE

Clarifications, help unpacking.

SKETCHING I · FEEDBACK · SKETCHING II · KEY ASSUMPTIONS · TESTING INTRO · 3 TYPES OF TESTING

13.00

TIMING

Use facilitator instructions as a guide.

↘ Problem statement 2.0.

Students continue working in parallel subteams and simultaneously refine the problem statement and the idea sketches. Combine or discard sketches based on the feedback so that only one sketch per subteam remains. They then rephrase and refine their problem statement. Make sure they become more precise, the link between insight and need are clear and they continue to fulfill the criteria.

GOALS

— Fall in love with the problem, not with the solutions.

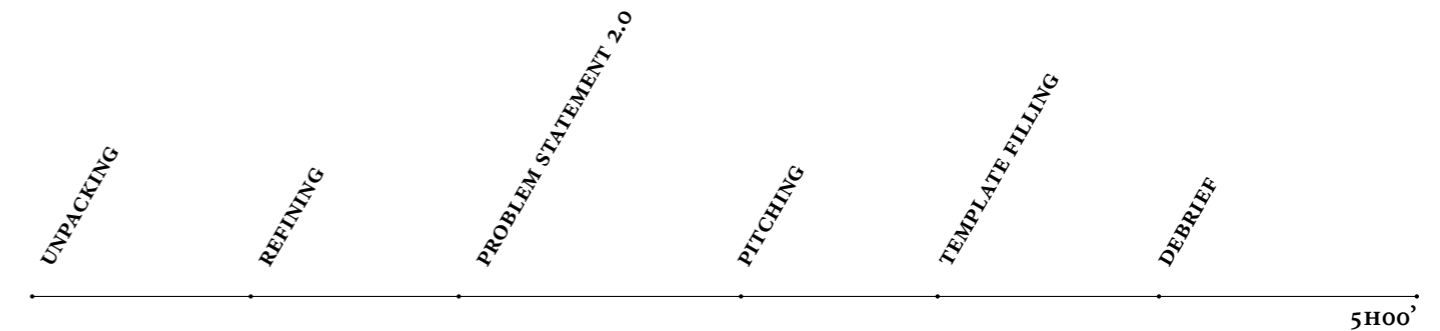— Clarify and deepen problem statement and idea sketches.

MATERIALS

Paper.

TUTOR ROLE

Time keeping. Clarify process.

FACILITATOR ROLE
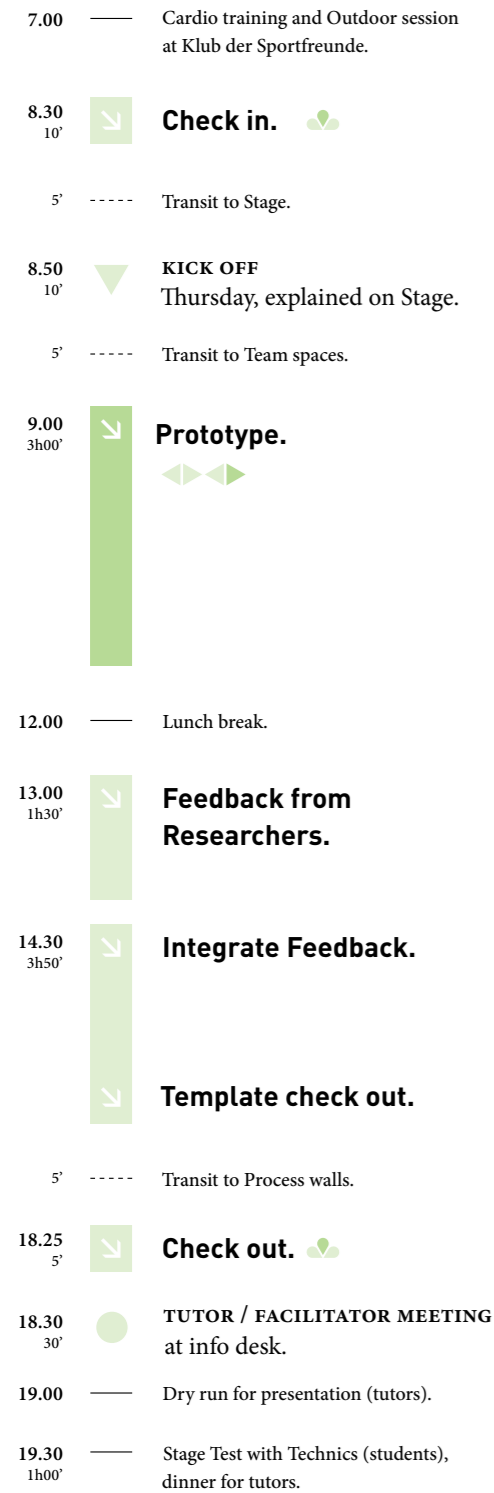
Clarifications, help framing the problem.

UNPACKING · REFINING · PROBLEM STATEMENT 2.0 · PITCHING · TEMPLATE FILLING · DEBRIEF

5H00'

TIMING

Use facilitator instructions as a guide.

↘ Template.

The Wednesday template contains the problem statement 2.0 as well as 2 selected ideas and the building blocks to answer the questions in the brief for scientific rigour and feasibility. Hang up the template in the ETH Week Hall where they will be ready for tomorrow's Check in.

GOALS

— Visualise the results of the day onto the template.

— Capture wider results of the discussions on team space walls.

MATERIALS

Wednesday template.

TUTOR ROLE

Moderate the discussion. Keep time. Guide the template completion process.

Walk to Process walls at **18.00**

Thursday.
Test.

Time		
7.00	—	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 10'		**Check in.**
5'	----	Transit to Stage.
8.50 10'	▼	**KICK OFF** Thursday, explained on Stage.
5'	----	Transit to Team spaces.
9.00 3h00'		**Prototype.** ◄►◄►
12.00	—	Lunch break.
13.00 1h30'		**Feedback from Researchers.**
14.30 3h50'		**Integrate Feedback.**
		Template check out.
5'	----	Transit to Process walls.
18.25 5'		**Check out.**
18.30 30'	●	**TUTOR / FACILITATOR MEETING** at info desk.
19.00	—	Dry run for presentation (tutors).
19.30 1h00'	—	Stage Test with Technics (students), dinner for tutors.

Info Bar closes at 22.30. Hall at 23.00.

☐ Send 1-2 students to OFFCUT, if you need additional prototyping material.
Allowance per team: max. 30 CHF
Sift through materials: all day. Purchase:
Teams 1-7: 9.00 - 9.30
Teams 8-14: 9.30 - 10.00
Teams 15-21: 10.00 - 10.30

☐ Remind students to be back and ready for feedback before 13.00 in team spaces.

↘ Prototype.

Prototyping is a chance to make ideas tangible. While they can be very different in format, ranging from a wall of post-it notes, to 3D models, to role-play, the general idea is the same: to gain an understanding of how your solution will function in reality and how it will be experienced from the actor's perspective.

It is an iterative process, they learn to move from intangible ideas to a concrete model. What was unknown when they started off, becomes precise. By making ideas concrete, they also become shareable. The more you go into detail, the less there is a chance for misunderstanding. Therefore, prototypes are valuable conversation pieces and can have their very own rhetorical value.

GOALS

— Use prototyping as a way to refine an idea and take design decisions.

— Use the prototypes to learn how to tell a convincing story.

— Learn the benefits of working concurrently and take decisions to integrate both ideas into a final one.

MATERIALS

Prototyping materials are available in prototyping boxes and in the workshed. The material is shared between all teams. Try to return material to the boxes that you don't need so that others can use it.

TUTOR ROLE

Keep time and moderate the feedback rounds.

INPUT PROTOTYPING · PROTOTYPING I · FEEDBACK · INPUT PITCHING · PROTOTYPING II · WRAP UP

9.00 — 3H00'
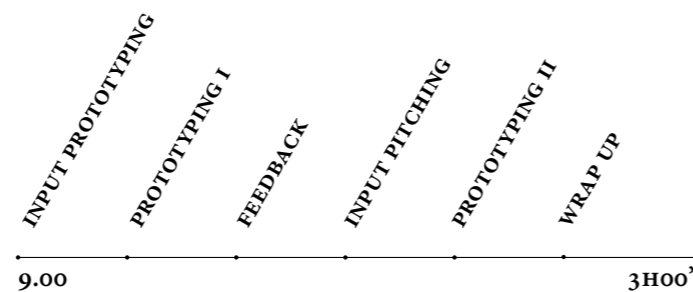
TIMING

Use facilitator instructions as a guide.

MEET THE RESEARCHERS

GROUP 1

CHRIS ONDER is Professor at the Institute for Dynamic Systems and Control at D-MAVT.

SHELLY ARREGUIN is a postdoc at the Composite Materials and Processing group, D-MAVT.

OMAR KASSAB a project manager at the sustainability office of ETH Zürich.

GROUP 2

ELENI CHATZI is Associate Professor of Structural Mechanics and Monitoring, D-BAUG.

BRATISLAV SVETOZAREVIC is a postdoc at the Urban Energy Systems laboratory at Empa.

MADDALENA AGNESE VELONÀ is the Study Coordinator of D-MAVT.

GROUP 3

DAVID HAVELICK is Sustainability Manager at the Office for Sustainability of Harvard University.

KIRSTEN OSWALD holds a doctoral degree in Environmental Systems Science and works at SCCER Mobility.

MIRKO MEBOLDT is Professor of Product Development and Engineering Design at D-MAVT.

RAPHAEL ZAHN is a Senior Scientist in the Materials and Device Engineering Group, D-ITET.

GROUP 4

GIL GEORGES is a Senior Researcher in the Aerothermochemistry and Combustion Systems Laboratory.

CORINE THOMMEN is a project manager and mobility intrapreneur at SBB.

AHMAD RAFSANJANI is a postdoc at the Complex Materials group at D-MATL.

GROUP 5

MATTIS STOLZE is a mechanical engineer, and consultant at 'Radiate Engineering and Design'.

SIMONE SCHÜRLE is Professor of Responsive Biomedical Systems at D-HEST.

PAUL BAADE is a doctoral student in the MaDE group, D-ITET.

GIANFRANCO GUIDATI manages the SCCER-SoE (Supply of Electricity).

GROUP 6

FELIX BÜCHI is Head of the Electrochemistry Laboratory at PSI.

LAURA KELLER is a senior scientist and coordinates MELETE-group at D-MATH.

FANNY GUTSCHE-JONES is Community Manager at the Citizen Science Center Zurich.
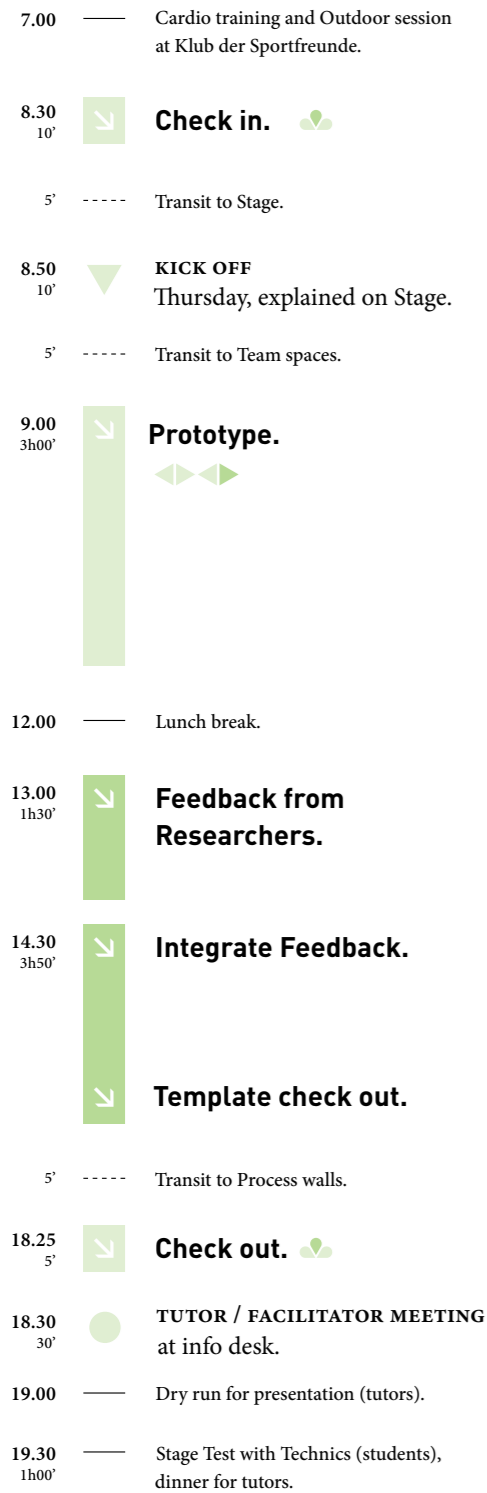
GROUP 7

MELANIE ZEILINGER is Assistant Professor for Intelligent Control Systems at the IDSC, D-MAVT.

DASUN PERERA is a postdoc researcher at the Urban Energy Systems laboratory at Empa.

GIUSEPPE TAMBURELLO is part of the staff at the Institute of Electromagnetic Fields, D-ITET.

□ Remind the students to register for sports.

□ Remind students of the technics test at 19.30.

□ Send 1-2 students to OFFCUT, if you need additional prototyping material. Sift through materials and purchase: all afternoon.

□ One or two students from each group meet with Lukas, Kirsten, Alan, Stefano, and one of the professors for the final meeting, in order to get final feedback (times will be communicated).

Time		Activity
7.00		Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 / 10'		**Check in.**
5'		Transit to Stage.
8.50 / 10'		**KICK OFF** Thursday, explained on Stage.
5'		Transit to Team spaces.
9.00 / 3h00'		**Prototype.**
12.00		Lunch break.
13.00 / 1h30'		**Feedback from Researchers.**
14.30 / 3h50'		**Integrate Feedback.**
		Template check out.
5'		Transit to Process walls.
18.25 / 5'		**Check out.**
18.30 / 30'		**TUTOR / FACILITATOR MEETING** at info desk.
19.00		Dry run for presentation (tutors).
19.30 / 1h00'		Stage Test with Technics (students), dinner for tutors.

Info Bar closes at 22.30. Hall at 23.00.

↘ Feedback from Researchers.

The feedback is organised in three rounds so that researchers can visit three teams, one after the other. Your team will get to present their prototype during one of the three rounds (1.A). Use the remaing time to continue working on your project (1.C). Also, make use of this time to think about the last part of the brief: systems thinking (1.B).

GOALS

— Practice how to present their ideas concisely in preparation for the final presentations.

— Learn how to make sense of feedback and draw conclusions for what this means in regard of improving the project.

MATERIALS

You may bring your templates from the hall for the feedback. Use a feedback capture grid: What was good, constructive criticism, questions for clarification, new ideas sparked.

TUTOR ROLE

Keep time. Help students document the feedback.

PROCEDURE

1.A 🔊
Explain both prototypes to the researchers. Link to the problem statement that you are trying to solve.

1.B ✿
Start thinking about the last part of the brief: systems thinking.

1.C ✿
Otherwise continue working on your projects.

13.00   13.30   14.00

25' 5'   25' 5'   25'
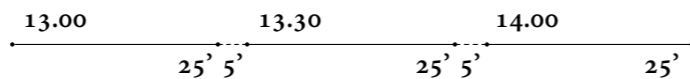
TIMING

Strict. 25' for each slot. 5' break in between.

↘ Integrate Feedback.

Once they've been given feedback, the team unpacks and selects its final idea. They make a plan and distribute the workload to best answer the brief. Adapt the problem statement if necessary, refine the prototype and the story. Carry out the remaining research and answer all critical reflection elements of the brief.
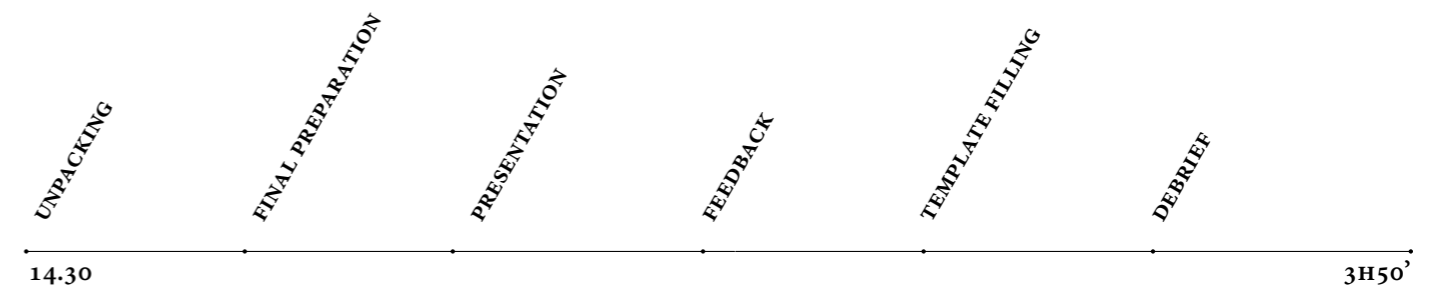
GOALS

— Learn how to delegate, organise and coordinate in order to complete all tasks before the final presentation.

MATERIALS

Whatever works for you.

TUTOR ROLE

Moderate the decision process if necessary, help divide tasks between the team members. Timekeeping.

UNPACKING   FINAL PREPARATION   PRESENTATION   FEEDBACK   TEMPLATE FILLING   DEBRIEF

14.30   3H50'

TIMING

Use facilitator instructions as a guide.

↘ Template.

The Thursday template contains the documented feedback from the experts, as well as both presented solutions. Also, add at least one aspect for social, economic, ecological and political aspect to the systems thinking questions of the brief. Repeat the problem statement. Hang up the template in the ETH Week Hall where they will be ready for tomorrow's Check in.

GOALS

— Visualise the results of the day onto the template.

— Capture wider results of the discussions on team space walls.

MATERIALS

Thursday template.

TUTOR ROLE

Moderate the discussion. Keep time. Guide the template completion process.

Head back to the Hall at **18.20.**

Friday.
Communicate.

☐ Pick up the voting objects for your students at Info desk. Distribute them just after the final presentations.

☐ Pick up the list that will define in what order teams will present this afternoon.

☐ Make sure your teams space is clean: no more paper on the floor or on walls, store your tools and materials

☐ We would like to store and then reuse the prototyping material next year, so please sort trash from usable stuff.

☐ HAND IN: All digital files: for the screens during the presentation and the 1-pager need to go to InfoBar. DEADLINE 13.30!

☐ Process templates and prototype (if you don't use it on stage) go to the process wall.

☐ Props for presentation to the backstage area.

Time		Event
7.00	—	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 / 10'	↘	**Check in.** ☘
5'	·····	Transit to Stage.
8.50 / 10'	▼	**KICK OFF** Friday, explained on Stage.
9.00 / 45'	●	**TUTOR MEETING** at info desk.
5'	·····	Transit to Team spaces.
10.00 / 3h30'	↘	**Polish your presentation.**
	↘	**Practice.** ◀▶◀▶
	↘	**Last template.**
13.30	—	Deadline for Hand in and Lunch break.
14.45 / 3h15'	↘	**Final presentations.**
15'	·····	Time to vote! Transit to from Hall to space of choice.
18.15 / 45'	↘	**Wrap up.**
15'	·····	Transit back to Hall.
19.15 / 45'	◆	**CLOSING CEREMONY** with Sarah M. Springman (Rector).
20.00 / ···	▲	**CELEBRATIONS** Dinner and Party.

Info Bar closes at 23.45. Hall at 24.00.

↘ Polish your presentation.

Before finishing up, the team checks the brief one last time and makes sure that all questions are answered and the focus is clear. Students stick to their problem statement, finish working on their prototypes, continue preparing their presentations and answer all questions of the brief.

GOALS

— Students learn how to rely on each other and wrap up a project in time.
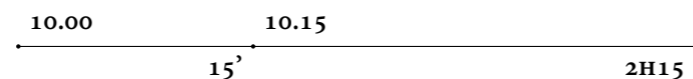
MATERIALS

Whatever works for you.

TUTOR ROLE

You continue without the faciliators. Moderate the discussion about the brief. Then keep time and help coordinate.

PROCEDURE

1.1 ✿
Discuss how to organise during the last 3 hours. Make a plan for the day. Double-check the brief.

1.2A ◁
Work in sub-teams to to finish the prototype, polishing specific arguments, and writing the overall narrative.

1.2B ▷
Have other sub-teams work on answering the questions of the brief. Or organise in a better way.

10.00 — 10.15
15' — 2H15

TIMING

Flexible. Allow for 2h30' in total.

↘ Practice.

We rely on you to make the final event possible. Simulate the procedure as described under the Final Presentations slot so that we can get 180 people on and off stage in less than 3 hours. Include the logistics of the event, when you need to prepare, how much time you have to get on stage, and when you receive the '1 minute left' notice. Also clap when the time is up to find an elegant way to wrap up in case you should run over time.

GOALS

— Become comfortable with the final presentation

— Practice not only what you say but also how you say it.

— Understand the logistics of your presentations to best use the time you have available.
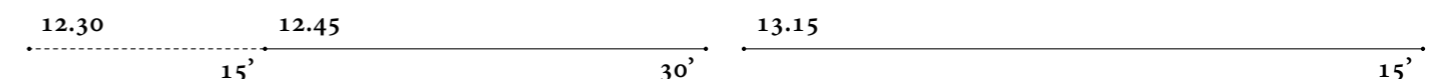
MATERIALS

A timer, your prototype.

TUTOR ROLE

Keep time, make sure team understands logistics.

PROCEDURE

2.1 ✿
Make sure they are done with the prototype, the ingredients for the final poster and the presentation.

2.2 ✿
Document and clean up the workspace, sort leftover materials into the labeled boxes in the workshed.

2.3 🔊
Students rehearse their story. Stay under 5' and clap when the time is over to simulate the real thing. Wrap up.

12.30 — 12.45
15' — 30'

TIMING

Flexible. Allow for 1h in total.

↘ Last Template.

The Friday template complements the final prototype so that it is understandable without your performance on stage. Therefore write out the final problem statement, explain the solution and prototype in written form, and give final answers to the questions of the brief.

GOALS

— Document your ideas so that they can be archived after ETH week and work without your presentation.

MATERIALS

Friday template.

TUTOR ROLE

Moderate the discussion. Keep time. Guide the template completion process.

2.4 ⁝
In parallel, potentially in pairs, hand in the prototype at the stage in the ETH Week Hall.

2.5 ⁝
Finish the last template and hang it up to complete the Process wall. Document it.

2.6 ⁝
Hand in all digital files before 13.30 at the Info Desk and props in the backstage area.

13.15 — 15'

Presentations start at **14:45** sharp!

☐ Distribute voting objects just after the final presentations.
Students cast their vote for the peer to peer award before 18.15.

☐ If you used your prototype during the presentation, bring it back to your team wall.

Time		Event
7.00	—	Cardio training and Outdoor session at Klub der Sportfreunde.
8.30 / 10'	↘	**Check in.** ♣
5'	·····	Transit to Stage.
8.50 / 10'	▼	**KICK OFF** Friday, explained on Stage.
9.00 / 45'	●	**TUTOR MEETING** at info desk.
5'	·····	Transit to Team spaces.
10.00 / 3h30'	↘	**Polish your presentation.**
	↘	**Practice.** ◀▶◀▶
	↘	**Last template.**
13.30	—	Deadline for Hand in and Lunch break.
14.45 / 3h15'	↘	**Final presentations.**
15'	·····	Time to vote! Transit to from Hall to space of choice.
18.15 / 45'	↘	**Wrap up.**
15'	·····	Transit back to Hall.
19.15 / 45'	◆	**CLOSING CEREMONY** with Sarah M. Springman (Rector).
20.00 / ...	▲	**CELEBRATIONS** Dinner and Party.

↘ Final presentations.

All teams get to go on stage. Each team has 5' to present their project. After 4', someone in the first row will hold up a "1 minute left" sign. People will clap after exactly 5'!

GOALS

— Explain something complex in a simple way with a clear message using a compelling visualisation.

— On the other hand, show the foundation and the result of your research, proving your ability to think critically.

— Act as a team.

MATERIALS

The prototype (if you want), props, no powerpoint.

TUTOR ROLE

Assist your team and clap as loud as you can.

LOGISTICS

In order to avoid collisions, make sure that your team gets up right when team x-2 is done with the presentation and you hear the applause. Enter the backstage area, watch out not to get in the way of team x-1. Wait there with your props until team x-1 is finished.

Then follow the procedure below until you are seated again during the time that team x+1 presents.

During the dry-run on Thursday evening, we will explain this again live, so that you get a feeling for the space.

PHOTOS

After the closing ceremony, our photographer will be present to take pictures of all teams and tutors.

↘ Wrap up.

The last time slot of the week is dedicated time for students to reflect their team process and discuss the experiences of the week. The tutor will design this slot together with the trainers in the online phase of the tutor training.

GOALS

— Network and to informally exchange ideas about the group process.

— Reflect on our expectations pointed out on day 1.

MATERIALS

Depends on how the tutor designs the slot.

TUTOR ROLE

Design the slot in coordination with trainers.
Lead and keep time.

PROCEDURE

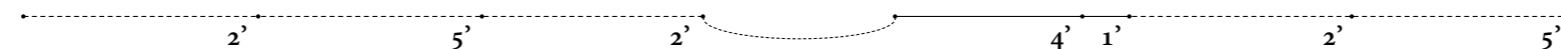**1.1** --- Team x-2 is done. Applause. Team x goes to the backstage area (left side).

1.2 ✿ Students (team x) organises props quietly in the background while team x-1 presents.

1.3 --- Team x-1 is done. Applause. Team x walks to the stage, gets mic's and gets ready.

1.4 ✿ Team x presents. Time keeper hints when 1' is left. The audience claps when the 5' are up.

1.5 --- Team x walks to the backstage area and leave their props in backstage area 2 (right side).

1.6 --- Team x leaves backstage, sits down quietly before the presentation of team x+1.

2' — 5' — 2' ⋯ 4' 1' — 2' — 5'

TIMING

Strict. 3h in total with two breaks.

PROCEDURE

1.1 --- Move to a place of your chosing (team spaces are closed). Make sure everyone has already cast their vote.

1.2 ✿ Wrap up according to what you have prepared during the online phase of the training.

1.3 --- Return to the hall for the panel discussion and the closing ceremony.

18.00 18.15 19.00
15' 45' 15'
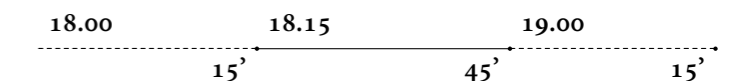
TIMING

Strict 1h15' in total. Closing ceremony starts at **19.15**.

YOUR TWO TUTOR TRAINERS:

KERRIN WEISS holds a Master's degree in Mechanical Engineering from ETH Zürich and currently pursues her doctoral degree at pd|z Product Development Group Zurich. She sees ETH Week as an opportunity to engage and help others, to learn and to be challenged. In her free time she is a Coach at teampact and ARIS and enjoys reading and yoga.

FABIO BARGARDI holds a Master's degree in Materials from ETH Zürich and is currently a doctoral student in the Complex Materials group studying Lithium ion batteries. Fabio is an experienced facilitator of design thinking workshops and is looking forward to this year's challenge of training and coaching the tutors. In his free time Fabio likes swimming and paddling.

ADAM BUFACCHI grew up in Holland, studied Architecture in the UK and is currently a Master's student in Integrated Building Systems. There he works to make construction more sustainable by promoting low carbon timber housing as well as researching 3D printing with waste products. Adam is looking forward to engage in creative and cooperative work to take on the challenges of society.

CHRISTOS GOUNTIS grew up in Greece, went to Germany for his Bachelor's degree in Mechanical Engineering and now studies for his Master's degree from D-MTEC at ETH Zürich, while still carrying the Robotics flame inside him. He loves Zurich and Switzerland and wants to travel the world before he turns 35!

DANIEL REICHMUTH is a Master student in Mechanical Engineering. He likes to help people, which is one reason he is keen to use his expertise gained throughout his studies in the biomedical side of engineering. Besides his studies, football, which consumes a large part of his free time, is probably his biggest passion.

ALEKSANDRA KIM is a doctoral student in Environmental Engineering at ETH and Paul Scherrer Institute with a background in robotics. Her current focus is on sensitivity and uncertainty analysis. She dedicates her free time to learning how to play piano and planning when to learn German. She enjoys reading science fiction, classical literature and math books.

CYPRIEN HÖLZL holds a Master's degree in Civil Engineering and is now doing his doctorate at SBB and ETH. Here he analyses the dynamic interaction of trains and tracks to monitor the condition of the infrastructure. For him, ETH Week is a good opportunity to work with students from different fields and with different ways of thinking.

EVA-MARIA MANZ is a Master student fascinated by Biology, specialising in Molecular Health Sciences. After participating in last year's event, she decided to come back as a tutor to ETH Week 2019. It's just difficult to say no to a good challenge. So grab some post-its, start walking and let the brainstorming begin!

ANN-CHRISTIN KERL studies for her Master's degree in Chemistry at ETH Zürich. She is a passionate swimmer and enjoys exploring the Swiss Alps while hiking. After beeing a participant of ETH Week 2017, she is now excited to return as a tutor this year.

DANIEL FLAVIÁN BLASCO is a Spanish Physics Master student at ETH Zürich, focused on experimental Condensed Matter research. For him, ETH Week is an ideal opportunity to combine scientific knowledge and Critical Thinking in a multidisciplinary way. He describes himself as an enthusiastic troubleshooter and enjoys travelling, cooking, skating or simply chilling by the lake.

IRENE HANKE holds a Bachelor's degree in pharmacy from ETH Zürich and is now starting her Master's studies. She is involved in local and international pharmaceutical student associations. She is looking forward to spending a week with students from different backgrounds. Dancing is her favourite activity to find a balance.

JOEL ZEDER obtained a Master's degree in Atmospheric and Climate Science and now continues as doctoral student with a focus on climate extremes. In his free time he teaches kids lifesaving and basic first-aid skills. Joel is eager to see diverse teams rethinking the concept of mobility in the 21st century, in itself a very interdisciplinary problem.

KLARA UHER is from Austria and started her Master's studies in Physics last year at ETH. She participated in ETH Week 2018 and enjoyed meeting people from different scientific backgrounds. She is friendly, open minded and (some say) funny. She is looking forward to sharing the ETH Week experience with other people and cannot wait to see your ideas thrive.

LINO CEREGHETTI grew up in Zurich and took a two-year break from academia after completing his Biology Bachelor's to gather various work experiences in Switzerland and abroad. Currently he is enrolled as a master student at the Institute of Agricultural Sciences and works at a start-up with his true passion, cannabis.

KEEGAN MCNAMARA is a Master student in Physics at ETH, with his main interests lying in Theoretical and Computational Condensed Matter. He moved from Australia to Switzerland for his studies, as well as for the gorgeous mountains. In his free time he likes to hike, ski, climb, or have a BBQ with friends by the lake.

LAURA GUERRINI is a Master student in the Department of Mechanical and Process Engineering at ETH Zürich, pursuing a Master in Robotics, Systems and Control. Laura enjoyed participating in three ETH Weeks and is now looking forward to being your tutor. In her free time, you can find her on the ice, synchronized skating with her teammates.

LOUISA BUTTSWORTH is a Master student in Process Engineering with a focus on renewable energy technologies. Besides this she is fascinated by topics in Medicine and Psychology. In her free time, she enjoys organising nature-themed events for children, swimming and baking.

LEONARD ZOUREK is an Austrian-Belgian Master student of Environmental Sciences with a focus on biogeochemistry and pollutant dynamics. He is particularly interested in problems at the interface between science and society, and enjoys working in diverse teams. In his spare time he passionately learns languages, plays music, discusses global politics, and cooks.
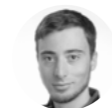
MICHAEL LIEM holds a Master's degree in Mechanical Engineering from ETH Zürich. He is a doctoral student at the Institute of Fluid Dynamics studying sub-surface flows. In his free time, Michael plays Volleyball at ASVZ and hikes through the Swiss mountains. He is a founding member of 'teampact', ETH's student network for team coaching and innovation processes.

NICOLE AEGERTER holds a Master's degree in Materials and is currently a doctoral student at CMASLab at ETH. Her doctoral project focuses on the manufacturing of thermoplastic composites for lightweight structural applications. In her free time, Nicole coaches an Unihockey team and enjoys outdoor activities like biking, running and mountaineering.

PATRICK ALTHAUS is a Swiss Master student at D-ITET, specialising on railway systems and power transmission. Prior to his Master's, he worked as an intern in the railway industry. He is convinced that ETH Week is a great opportunity to derive new ideas and tackle the problems of growing mobility.

SARA CERAR is from Slovenia, where she graduated in Conservation Biology. For a year, she studied Ecology in Portugal and now settled in Zurich to pursue a Master's degree in Environmental Sciences. Sara enjoys balancing the scientific nature of her studies with singing in a choir and jewelry making. In addition, she keeps a little beehive on her terrace.

NOËMI KAUFMANN is a material scientist at ETH. Enthusiastic about technology driven innovation and entrepreneurship, she believes that we can still shape our planet towards more sustainability. Her evening hours are filled with music and food. She is a passionate classical solo singer, plays the harp since the age of 6 and enjoys exotic flavours.

PRABHAT JOSHI comes from Nepal and is currently pursuing his Master's degree in Environmental Engineering at ETH Zürich. He previously worked as a Research Assistant in Bangkok and Kathmandu. He considers ETH Week as a great opportunity to work in a diverse group, and a good platform to promote systemic problem solving.

SIMONA MEILER is a Master student at D-USYS with a focus on Environmental Physics. For her thesis she uses modeling to determine the frequency, intensity and recurrence of ocean oxygen extremes in Eastern tropical Pacific. Prior to investigating marine extreme events, she was representing Switzerland in an "extreme" sport (Snowboardcross) at X Games and other top level competitions.

SAIJOSCHA HECK studied Physics in Frankfurt, Heidelberg and Berkeley and is now pursuing his doctorate in Physical Chemistry studying ultrafast electron processes in molecules. Outside the lab Saijoscha spends his time with various outside activities such as climbing, snowboarding and surfing, or enjoys reading a book in one of the many cafes in Zurich.

TANMAY SINHA is a doctoral student at ETH Zürich. He is interested in designing educational interventions to help students acquire soft skills like learning from failure and curiosity. Tanmay has investigated learning-related phenomena using online interaction and face-to-face data. Off work, he appreciates hiking and drinking good whiskey.

↘

**Thank you for your dedication to the tutor role.
We are looking forward to celebrate a successful
week with you on Friday.**