Contact

Key contact points
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CSAW will take place in the two following rooms:
• CM 1 120
• CM 1 121

Important links

Telegram
Google Drive
Living Document
**Vision**

**Problem**
Mobilization around climate issues is insufficient, and even for the people who are already mobilised, this doesn’t translate sufficiently into concrete projects within EPFL.

**Vision**
CSAW aims to transfer knowledge about climate and sustainability in a good atmosphere, in order to inspire the emergence of concrete projects and to have a radiant impact on the EPFL community.

**Mission**
1. To transfer knowledge related to CSAW’s theme in a rigorous, participative and holistic manner.
2. To create an atmosphere conducive to meetings, to form motivated teams and to share opinions
3. To facilitate the development of concrete projects in connection with EPFL institutions
4. To engage the EPFL community to redefine the role of the engineer, scientist and architect and to mobilise around climate issues.

**Impact**

**Short Term**
- Theoretical Knowledge
  - Sustainability
  - Wicked Problem
- Ambitious and Motivated Network
- Practical Skills
  - Creativity
  - Interdisciplinary
  - Teamwork
  - Design Process

**Long Term**
- BA / MA / Masterthesis Project
- Association Project
- Entrepreneurial activity
- Personal Evolution
CSAW Mindset

Defer judgement
CSAW is judgement-free so you can freely share your ideas!

Go for quantity
More ideas lead to more potential for innovative interventions

Fail early and often
Failure and feedback lead to improvement

Be visual
So you can quickly communicate your ideas

Ask questions
Dig deeper and uncover meaningful interventions.

Encourage wild ideas
Be creative! You never know where an idea might lead you

Build on the ideas of others
This helps to create new perspectives and insights

Stay on topic
Don’t diverge too much from the task at hand.

Participate actively
This will increase the richness of your CSAW experience.

Be an awesome teammate
Be encouraging, constructive and adaptable.

Hacking the hackathon

Coming up with project ideas in 5 days, might sound familiar to those of you who have heard of, or participated in, hackathons. CSAW is however different from a traditional hackathon in several ways.

Care about the problem, not the solution

We understand that the sustainability-related problems we are tackling are complex, if not wicked. We therefore want to dedicate a strong share of our time during CSAW to understanding these problems from multiple perspectives. We are convinced that a better understanding of the problem will give rise to more relevant action.

There are no solutions, just interventions

Wicked problems cannot be solved. They evolve into different problems when we act upon them. We can only aim at intervening in the system in the best possible way. Also, it is virtually impossible for one project to solve a sustainability issue on its own.

We are working together, not competing

The goal of CSAW is not to have teams compete against each other for the first prize. During the whole week, we will investigate how the different projects interconnect together and to the existing initiatives and stakeholders to act upon the problem. As we can be smarter together, CSAW also aims to offer collective experiences exploring better ways to work together.

As no single project will solve a complex sustainability issue, it is important to see how to connect to a growing web of projects, and to be aware of other running initiatives to address these issues more effectively together.

To go further: What is a wicked problem.
Programme & Intentions

Monday

- Round of presentations
  - Climate collage
  - Biodiversity collage (Ludovic Kasperký)
  - Digital collage (Céline Carle Faye)
- Wrap up; Key discovery
  - Share burning questions that have come up so far
- Lunch
- Speed friending
  - Have fun meeting other CSAW participants
- Introduction to CSAW
  - Clarify the broader intention of the week
- Scale and numbers workshop by Nicolas Têteault (Climact)
  - Develop a critical mindset around data and ways to handle them
- Individual powerful questions
  - Define your personal red thread for the week
- Check-out (Alexandre Mayor, Aumônerie)
  - Share feedback and impressions from the day
- Games & Sport by the lake (to be confirmed)

Tuesday

- Check-in
  - Get warmed up for the day and share personal learning goals
- Imaginaries workshop by Isabelle Vuong (UNIL-CID)
  - Understand the role of underlying myths and imaginaries in sustainability issues
- Lunch
- Yoga / Meditation
- Sustainable teams workshop by Frédéric Meuwly (Actitudes)
  - Increase understanding of team dynamics to work effectively on projects
- Check-out
  - Share impressions and reflect on the day
- Game night at Satellite (to be confirmed)
**Wednesday**

- **Check-in**
- **Large-scale organizational changes workshop by Julien Crozier & Thierry Bobst (Canopée Project)**
  - Understand what it takes to switch to sustainable behaviors at different scales

- **Lunch**

- **Workout (to be confirmed) (Julien Delisle)**
  - Create teams around a specific sustainability-related problem

- **Open forum - find your project and team (Eric Domon & Mélanie Studer)**

- **Check-out (Xavier Gravend-Tirole, Aumônerie)**
  - Get tools for self-care

- **World Café at Satellite (to be confirmed)**

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**Thursday**

- **Check-in**
- **Get warmed up to start Day 4**
  - Explore how to act upon the problem you decided to focus on as a team

- **Lunch**

- **Program presentations**
  - Learn more about opportunities for student projects at EPFL

- **Define your intervention by Marc Laperrouza & Marius Aeberli (CDH)**
  - Explore how to act upon the problem you decided to focus on as a team

- **Mix & Match by Marc Laperrouza & Marius Aeberli (CDH)**
  - Share intervention ideas and discoveries between teams to get inspired by others

- **Check-out**
  - Share impressions from the day and reflect on learnings
**Friday**

- **Investigation**: Confront your intervention idea with reality through further investigation.

**Saturday**

- **Investigation**: Confront your intervention idea with reality through further investigation.
- **Hike (to be confirmed)**
- **Movie night (to be confirmed)**

**Sunday**

- **Check-in**: Get energized to start the last day of CSAW!
- **Draw the CSAW map**: Link your intervention to other internal and external ones.
- **Finalize your project brief**: Collectively agree on the core of your intervention, and define your next steps as a team.
- **Shoot your video**: Create an external communication element for your intervention.
- **Lunch**
- **Shoot your video**: Create an external communication element for your intervention.
- **Video screening**: Showcase your ideas to the CSAW cohort.
- **Closing**: Reflect on learnings and share impressions from the week.
**Imaginaries**

**Myths of the future**

*by Fabio Boschetti, Jennifer Price & Iain Walker (2016) “Myths of the future and scenario archetypes” Technological Forecasting & Social Change 111: 76–85*

The research on “Myths of the future” stems from findings in social cognition and cultural theory concerning patterns of shared values and beliefs about society and the environment and how they relate to each other (Myths of physical and human nature). Analysing approximately 600 foresight processes, Boschetti et al. demonstrate that this body of theory is relevant to the future: visions of the future fall into six main overarching Myths. Therefore the future is also a story of the relationships between the natural, the social, and the technical worlds.

A survey (taken over and adapted from Boschetti’s original survey) helps the workshop participants uncover the “Myths of the future” that they follow. Its aim is not so much to categorize the participants in one or the other “myth” (who generally respond to various “myths”) but to provide them with a way to take a step back from their attitudes and beliefs about the future and open up alternative images and ideas about the future.

**What is Futures Literacy?**

“Futures Literacy” (in French “littératie des futurs”) is the UNESCO method conceived by its Director of Foresight Riel Miller as a tool for (re)thinking about the future. The method aims to develop our imaginative and reflective potential concerning the future into a skill that enables us to cope with the uncertainty of the future.

Futures Literacy follows an experiential approach that harnesses the creativity and collective intelligence of the group. It fosters imagination by inviting us to consider the future from different angles, thereby challenging assumptions and conventional views of the future. During this process, our understanding of the future deepens and new questions arise. It then becomes possible to perceive new opportunities in the environment and to consider a wider range of actions in the here and now. Expanding our horizon of future possibilities means expanding our scope of action today.
Unlike conventional foresight, whose approach is limited both in time (one-time exercise) and scope (generally 3 to 6 different future scenarios), Futures Literacy, as its name suggests, aims to develop a literacy, i.e. a “future competence”, which can then be put to use in any circumstance.

The approach proposed by Futures Literacy is part of a relatively recent paradigm shift in the field of foresight (in French "prospective," i.e. modern futures studies). It replaces the desire to know the future with an ability to act spontaneously, creatively and opportunistically, without limitations due to predefined visions, expectations or imperatives. It is about encouraging a capacity to navigate the uncertainty of the future, or a “capacity to dance with the unknown” as Riel Miller puts it.

Ressources:
- What Is ‘Futures Literacy’ and Why Is It Important?
- Official introduction to the method on the website of UNESCO: English | French
- Transforming the future: anticipation in the 21st century: English | French

A new way of thinking about the future

Teamwork Tools

Working collectively brings together a diverse range of experiences and skills. It has great benefits for tackling complex problems as diversity is well known to lead to a wider range of interventions.

During CSAW you will see that each of your teammates brings their own experience, skills and ideas. This will be valuable when brainstorming possible interventions and developing your chosen option.

### Checklist for working with your group

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</tr>
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Characteristics of strong teams

**Common goal** - There is agreement on the end goal and the process to get there.

**Organization** - Each team member is aware of their role and responsibilities in the team.

**Group awareness** - Each team member acts respectfully and supportively with the awareness that their words and actions impact other members.

**Connect and communicate** - Team members can share their ideas and navigate group challenges in a space of non-judgement.

**Cohesion** - The team works smoothly and effectively, team members are self-motivated and share the workload fairly.

Working with diversity

Diversity fosters creativity and innovation.

Tips for harnessing the diversity of your team:
- Get to know the strengths of your team members and find out what your teammates want to work out and skills they want to build.
- Create an inclusive and accepting atmosphere where everyone feels respected.
- Be flexible and adapt to the different needs of your teammates.

Team Roles

Being conscious of different perspectives can improve the functioning of your team. It can be helpful to adopt different perspectives and roles, and circulate the roles among your team.

**Try exploring the some of the following roles in your team:**

**Initiator** - Propose and explore possibilities, alternatives and new ideas.

**Challenger** - Constructively questions ideas and decisions by playing the ‘devil’s advocate’.

**Searcher** - Identifies what information is already known, and what is needed and seeks information to fill those gaps.

**Clarifier** - Asks questions to clarify ideas and establish a mutual understanding within the group.

**Supporter** - Supports recommendations and ideas of team members by looking for the value and benefit of their suggestions.

**Harmonizer** - Observes and reports on the dynamics of the group, and helps maintain a respectful and open-minded atmosphere.

Here are some other ways to define roles in your team.
Things to test for your meetings

- Clarify the objectives and what you want to achieve for each meeting.
- Assign a facilitator to make sure you reach your objectives. The role of a facilitator is to clarify the objectives, ensure each teammate has the chance to share their inputs, and make sure the meeting environment is respectful.
- Assign a timekeeper to keep track of progress and make sure you stay on time.
- Use the roundtable to make sure each team member can share their ideas.
- Divide the work and clarify what are the next steps and who is going to do what.
- Note down big decisions your team takes related to the objectives of the meeting.

Here are some guides to group work and improving your team’s communication.

Manage your time

Being in a team does not mean you have to work together 100% of the time. Splitting up tasks can reduce workload and efficiently use the time available.

<table>
<thead>
<tr>
<th>Task</th>
<th>Time</th>
<th>Who</th>
<th>Result</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researching circular economy</td>
<td>1 day</td>
<td>All team members (individually)</td>
<td>Collected resources &amp; shared via Google Drive</td>
<td>Tuesday at 15:00</td>
</tr>
</tbody>
</table>

From: ACiDE, Atelier Créatif Interdisciplinaire.

Book: Sustainable Teams

Sustainable Teams, 18 drivers to enable high performance teamwork
By: Frederic Meuwly, Ph.D.

(English version; French Version)
Managing conflict and differences

- Recognize that conflict and tension is a normal phase in forming a new team. You can find out more on the phases of team development here and how to navigate them here.
- Refocus on the objectives of the team and the purpose of a meeting or interaction.
- Use nonviolent communication to communicate your feelings and needs (see the next page).
- Brainstorm possible ways to navigate the problem.
- Be prepared to find a compromise in order to move forward for the good of your team.

Taking decisions in your team

The **Decider App** may help you define which decision making process you need at this stage through a few yes/no questions.

The **Sociocracy 3.0 decision making process** is most useful when you need to make big decisions that have an important impact on all members of your team. It allows all members of your team to contribute to the decision. Not all decisions need to be taken with a collective decision making process.

Need a tool to take decisions online? Try **Framavox**.

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**Consent Decision Making**

- **D** Consent to Driver
- **P** Present Proposal
- **C** Clarifying Q’s?
- **R** Brief Response
- **O** Any Objections?
- **R** Resolve Objections
- **C** Celebrate!
- **C** Consider Concerns

Sociocracy 3.0 Decision Making Process

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To go further: Videos (FR) from EPFL-CAPE on group work

- **Tuckman’s Model for Team Development**
- **Navigating interpersonal conflict**
- **Building a team that performs**
Communicating in your team

How we communicate impacts how a team functions. Embracing open, inclusive, non-judgemental and clear communication can really help your team flourish.

Keep in mind these points during your team meetings:

• Participate as much as you can, that way the whole group will benefit.
• Be mindful of differences in language and culture and help others to join in and understand.
• Don’t assume others know acronyms, jargon or slang, or that they will participate at the same speed you do.
• Listen to, and respect all points of view, even if they are very different to your own.
• Inquire rather than debate and seek to understand others rather than persuade.
• Question assumptions, especially your own.
• Try taking a different point of view than you are used to, or take a few risks with what you are contributing.
• Listen actively and with empathy.
• Remember to enjoy yourself!

Active listening helps us to fully comprehend what someone is saying. Practice listening fully and respectfully. Defer your judgments, avoid interrupting and don’t assume that you already know the answer. Hold space for the speaker and allow yourself to be curious about what they are trying to communicate. Be open, honest and empathetic in how you respond.

Expressing how you feel in relation to what you have observed (e.g. I feel....). Here is a feelings & needs inventory that might help you point at what you are feeling.

Connect your feelings to your need or value that creates that feeling (e.g. ....because I need/value...). Here is a feelings & needs inventory that might help you point at what your needs are.

Request actions in a clear, positive and concrete way to improve your well-being (Would you be willing to...?).

More information here.
You are the owner of an office building, and your tenants are complaining about the elevator. It’s old and slow, and they have to wait a lot. Several tenants are threatening to break their leases if you don’t fix the problem.

First of all, notice how this problem isn’t presented to you neutrally. Like most of the problems we encounter in the real world, someone has already framed it for you: the problem is that the elevator is slow.

In our eagerness to find a solution, many of us don’t notice how the problem is framed; we take it for granted. As a result, we start coming up with ideas for how to make the elevator faster: Could we upgrade the motor? Could we improve the algorithm? Do we need to install a new elevator?

These ideas fall into a solution space, that is, a cluster of solutions that share assumptions about what the problem is:

These solutions might work. However, if you pose this problem to building managers, they suggest a much more elegant solution: put up mirrors next to the elevator. This simple measure has proved effective in reducing complaints, because people tend to lose track of time when given something utterly fascinating to look at—namely themselves.

The mirror solution doesn’t solve the stated problem: it doesn’t make the elevator faster. Instead it proposes a different understanding—that is, it reframes the problem:

This is what reframing is about. At the heart of the method is a counterintuitive insight: sometimes, to solve a hard problem, you have to stop looking for solutions to it. Instead, you must turn your attention to the problem itself—not just to analyze it, but to shift the way you frame it.
What is problem framing

“The way you frame a problem determines which solutions you come up with.”
From: HowtoReframe.com

“So many of us rush to solve complex problems with the same thinking that led to them in the first place.”
From: The Disruptive Design Method Handbook

Having a linear and reductionist mindset results in one-dimensional perspectives of complex problems. This can limit our ability to see opportunities, and lead to ineffective and shallow ‘band-aid solutions’.

Reframing the problem and examining it from multiple perspectives can help you see new opportunities for intervention. It is important to do this before falling in love with one idea and developing a prototype.

Analysing the causes, world-views, metaphors and myths underlying a given problem is also critical to approach it in a fundamental way. Treating the symptoms often does not cure the disease… In this regard, the causal layered analysis is a powerful method.

In general, keeping the variety of leverage points you can use in a system is important when framing the problem you are trying to tackle.

Keep in mind that most of the problems you will be tackling are complex, even wicked problems. They often cannot be solved by one single project - if they can be solved at all.

Spend as much time as you can understanding the roots of the problem, to avoid falling into a solutionist approach, which might just make the problem change form, and not even start to solve it.

To go further:
- FoAM - Framing what matters
- Wicked problem
- Wicked problems in design thinking
- Reframing Canvas
- Core problem map

Mapping

Throughout CSAW, we invited you to be visual. Here are a few tools and tips about mapping and graphic recording.

Affinity mapping is a method that allows you to visualize how things relate to each other.

Here are some tips about graphic recording, a practice allowing you to synthesize discussions in a visual way.

You might be familiar with mindmaps already. Although it is a powerful and accessible way to map things, there are many other ways you can build a map.

You can design flow diagrams, well known to engineers such as this one, this one or this one.

You can also design (eco)system or network maps, such as this one, this one, or this one. Here are some additional ideas for system mapping.

Circular relationship graphs (here and there) can also help you map how things relate to each other. Non circular ones are nice too.

Onion diagrams (here and here) and Venn(-like) diagrams (here) allow you to map things by categories.

Additional inspiration can come from indigenous mapping, such as this one, or this physical one used by inuits.

You can also take broader visual inspiration here and here. Prezi is a powerful mapping and presenting tool.

During CSAW, we will use Mural.
## Mix & Match

**Intention:**
Share intervention ideas and discoveries between teams to get inspired by others.

**Instructions:**

**Phase 1 (40 minutes on the basis of 4 people per breakout room)**

1. Start from your intervention idea formulated as problem/intervention
2. Individually present to members of other teams your problem/intervention (2 minutes)
3. Gather feedback from the audience using the mix&match template (8 minutes, see next page for template)
4. Move to the next presenter

**Phase 2 (15 minutes)**

1. Debrief with your team on the basis of what each team member gathered from the different mix&match sessions

<table>
<thead>
<tr>
<th>What might be improved and how?</th>
<th>Do you have another way of solving it? If so, how?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was convincing and could be saved?</td>
<td>As a user, would you adopt it? If not, what would make you change your mind?</td>
</tr>
</tbody>
</table>
Pretotyping can help you to develop your ideas further after the end of CSAW, check out some of the tools below.

“Pretotyping is a way to test an idea quickly and inexpensively by creating extremely simplified, mocked or virtual versions of that product to help validate the premise that ‘If we build it, they will use it’.”

Savoia, A (2011). Pretotype It - Make sure you are building the right it before you build it right.

**Pretotyping**
- Would people be interested in it?
- Will people use it as expected?
- Will people continue to use it?

**Prototyping**
- Can we build it?
- Will it work as expected?
- How quickly and cheaply can we build it?

Source: pretotyping.org

**Why prototype**

“Pretotyping is the best way to make sure that the idea you want to build is The Right It before you invest what it takes to build It right.”

Source: pretotyping.org

Here is a video introduction on why and how to prototype.

**Elements of pretotyping**

1. **Key Assumptions** - What are the assumptions about your idea that, if false, means it’s definitely not the right it?

2. **Type of pretotypes** - What type of prototype will let you to isolate and test your key assumption(s)?

3. **Use case** - How many (and what kind of) users will do what with your prototype? A solid hypothesis takes the guesswork and opinion out of testing

4. **Tests** - Put your prototype into the real world, and see how people interact with it

5. **Lean approach** - Build, measure and learn. Refine your prototype with your new data. If your hypotheses hold, decide what other situations you should test your prototype in to get a complete picture.

Adapted from: pretotyping.org/methodology

Have some fun with pretotyping with this easy recipe for pâte à sel and short video (FR).
**Pretotyping Exercise**

**Intention:**
Bring your ideas into reality through pretotyping.

**Instructions:**
There are two models on the next pages, they are meant to be filled out in the following way:

2. Identify at least 3 key touchpoints in the day that need to work to make your intervention a success
3. For each touchpoint, list the most critical assumptions* you are making
4. Imagine different ways to test these assumptions
5. Do it! ;)

*An assumption is a thing that is accepted as true or as certain to happen, without proof
Stay engaged

Sustainability

Engage in sustainability action and dialogues on campus with Uni-poly, Zero Emission Group, Global Earth Horizon Talk, Agepoly and TREE. Explore opportunities for internships and projects in sustainable development in the Global South supported by Ingénieurs du Monde and EtuRESCIF.

Prototyping

Realize your electronics, mechanics or robotics projects and build your hands-on practical experience with Robopoly and Octanis.
Innovation

Get connected to innovators and industry to share ideas and build collaborations (STIL - Salon des Technologies et de l’Innovation de Lausanne, Innovation Forum, AESV - Association des Etudiants en Sciences de la Vie) and find internship and job opportunities (ForumEPFL).

Entrepreneurship

Develop your skills, experience and network to succeed as an entrepreneur (START Lausanne, Society of Managerial Engineering). Get inspired and find the support you need to develop your business ideas with the Entrepreneur Club or gain experience offering services to various clients with Junior Entreprise.

To go further after CSAW

Pathways for projects

- Semester and Master Projects
- Engage in a holistic design process with the FIELD Initiative
- Prototype your product at Student Kreativity and Innovation Lab (SKIL)
- Create and fund your interdisciplinary student-led project through MAKE
- Turn your project into an innovative company through EPFL Changemakers
- Fund an on-campus demonstrator of your sustainable product or service through Act for Change LAB

Interdisciplinary & Sustainability-related Academic Programs

- Minor in Engineering for Sustainability
- Master in Energy Science and Technology
- Master in Sustainable Management and Technology (P4S)
- Minor in Energy
- Minor in Integrated Design, Architecture and Sustainability (IDEAS)

If you are looking for sustainable entrepreneurship, check out the opportunities at Tech4Impact.
Climate and Sustainability Action Week

go.epfl.ch/csaw

csaw_epfl

csaw.epfl

Climate and Sustainability Action Week