



# Hes·so

## WS B7: Transforming Study Plans with a Prospective Approach



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**Former pour transformer**

Workshop Bern, 1 September 2023

# Stratégie durabilité de la HES-SO

## 5 axes et 10 engagements



A. GOUVERNANCE

B. ENSEIGNEMENT

C. RECHERCHE & INNOVATION

D. RESPONSABILITÉ SOCIÉTALE

E. GESTION DURABLE

# Former pour transformer: ambition

The HES-SO's ambition is that by 2030 all its students will be ready to meet the challenges of the ecological and societal transition.

Since 2021, it has been rolling out a program to transform its teaching through two complementary and essential approaches:

- > a global approach (at the level of the field studies, as a whole through its framework study plans and bachelor / master curricula)

- > an individual approach (at the level of teaching modules and courses).

# Former pour transformer: tools and services

- Guides for integrating sustainability into teaching (at curricula level, and module-course level)
- Collective trainings for teachers (1 day, 2 days)
- Flash Learn: What exactly is sustainability? Low tech, anthropocene, waste odyssey, circular economy, life cycle analysis
- Other teaching resources
- Trainings to familiarise people with the guides
- Counseling, definition of needs, co-creation of sustainability visions for the "filières"
- Group workshops (ambition, foresight, trajectories, help with prioritisation, etc.)
- Individual support/coaching
- Community of practice
- Working hours for teachers if necessary ( 50% project funding; 50% HE/PPI)

<https://www.hes-so.ch/la-hes-so/durabilite/former-pour-transformer/enseignants-et-responsables-de-filières>



Former pour transformer

## Guide pour l'intégration de la durabilité dans les enseignements

Juin 2022

Dicastère Qualité  
Plateforme de durabilité

[hes-so.ch/durabilite](https://hes-so.ch/durabilite)



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Office fédéral de l'environnement OFEV



Former pour transformer

## Guide pour l'intégration de la durabilité dans les programmes de formation

2022

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Avec le soutien de



suisseénergie



# Sustainability competencies

Systems

Complexity

**Futures**

Participation

Attentiveness

Empathy

Values

Transdisciplinarity

Creativity

Action

Criticality

Responsability

Decisiveness

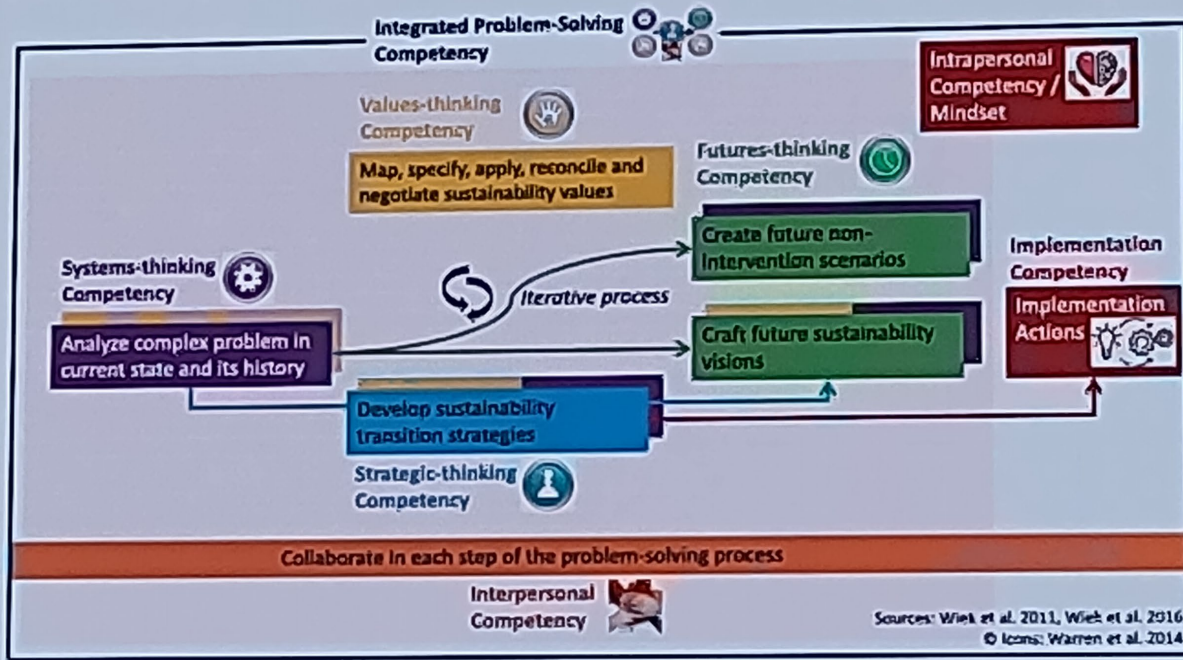
Interpersonal

Intrapersonal

<https://aroundsenseofpurpose.eu/framework/table/>

Etc.

# Sustainability Competencies



Brundiers et al. 2021

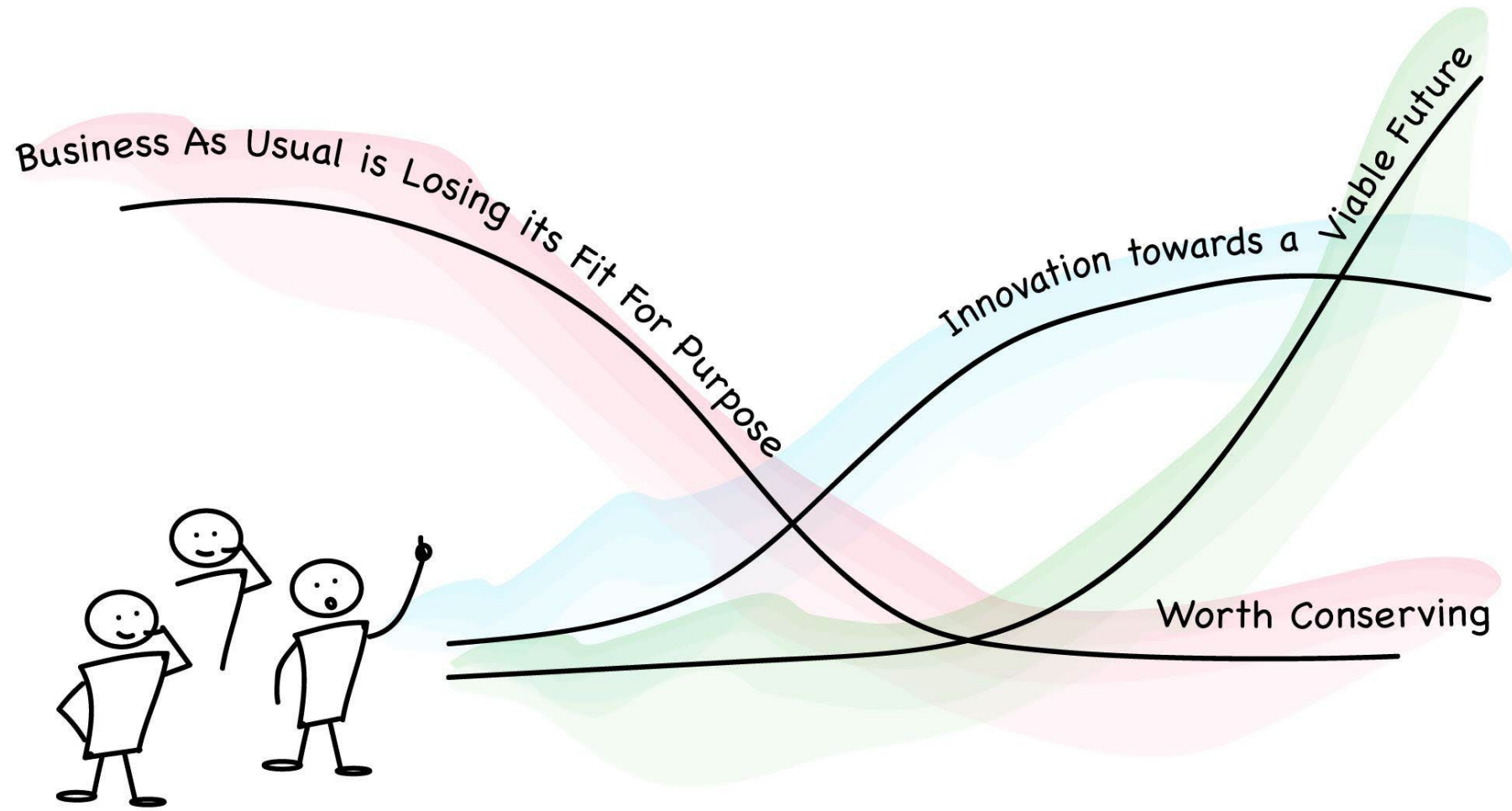
Bern, 1/09/2023

# Sustainability competencies

	<b>Oïkos</b>	<b>Understanding and living in a shared world.</b> Understand how natural systems and human societies function, and measure their limits and possibilities.
	<b>Ethos</b>	<b>Building new, fair and sustainable ways of living together.</b> Learn to discern and decide on our common organizations. Reflect on the ethical and political challenges of transition.
	<b>Nomos</b>	<b>Rethinking our societies and our ways of "making the world".</b> Re-learn and rethink our ways of measuring, regulating and governing a shared world.
	<b>Logos</b>	<b>Learn to interpret, criticize and imagine.</b> Analyze different rationales for interpreting and projecting possible futures.
	<b>Praxis</b>	<b>Acting collectively to meet the challenges facing our societies.</b> Giving substance and materiality to knowledge to transform the world. Taking action, using stakeholder networks and referencing ways of action.
	<b>Dynamis</b>	<b>Reconnect with yourself, with others and with nature.</b> Develop the individual and collective capacities to initiate a wide range of reconnection practices.



# Method 3 horizons: experimental workshop



Map what to let go of, what to conserve, & transformative innovation to reach a shared vision.



# Method 3 horizons: experimental workshop

**Où sommes-nous ? (Horizon 1)** *Ce sont les grands enjeux de durabilité et de respect des limites planétaires, basés sur les rapports scientifiques (ici: scénarios climatiques).*

Fenêtre d'opportunité pour la résilience climatique (GIEC)

Futurs climatiques possibles (GIEC)

Opportunités de mitigation (atténuation) et d'adaptation

Les 9 limites planétaires (ou Donut) (Stockholm Resilience Center)

ACTIVITE H1

Enjeux

Raison d'être

Thématiques abordées

Forme: atelier interactif

ESPACE DE RESTITUTION

responsabilité

conscience des méthodes d'évaluation d'impact

cycle de vie

responsabilité

impact

impact

impact

**Comment y parvenir ? (Horizon 2)** *C'est l'analyse de quelles sont les grandes dynamiques politiques, économiques, sociales, technologiques, culturelles en cours qui influencent un futur ou un autre, et surtout nous aider pour y arriver. Il s'agit de nous donner un aperçu de l'état plus souhaitable.*

Comment y parvenir ? (Horizon 2)

ACTIVITE 1: Reformuler la vision H0 de la filière

ACTIVITE 2: HORIZON 2: EXERCICE NIVEAU FILIERE

ACTIVITE 3: 3005 DIXIONS INSPIRANTES ET CRITERES- Tableau synthétique

ACTIVITE 4: FINALE DE ROUTE

Quelles seraient les 2 ou 3 actions impactantes à mettre en oeuvre pour réaliser la vision, et de quoi avez-vous besoin pour les mettre en oeuvre?

ACTIVITE H0: EXERCICE NIVEAU FILIERE

ACTIVITE H1

ACTIVITE H2

ACTIVITE H3

ACTIVITE H4

**Où allons-nous? (Horizon 3)** *C'est notre destination, les futurs possibles, les futurs souhaitables du système, les horizons à court terme, moyen terme, long terme (2025, 2030, 2050, 2100).*

Pas des prédictions, mais des chemins possibles! 4 scénarios pour 2050

FILERES ET SCENARIOS "A l'horizon 2050, ma filière aura contribué à l'émergence du scénario X..."

ACTIVITE H0: EXERCICE NIVEAU FILIERE

OUTPUT: Equipes de vision

ACTIVITE H1

ACTIVITE H2

ACTIVITE H3

ACTIVITE H4

15 R-Fils of HES-SO Engineering (4 hours)  
 12 persons at a Haute école de Santé Lausanne (30 mn)

# Where do we stand? Horizon 1 «Business as usual» scenario

## **SOCIETY SCALE**

It is the current context, the business as usual

Major issues relating to sustainability and planetary boundaries, and its consequences if we keep the same trajectory

## **STUDY PLAN SCALE**

Our current study plan

## **GUIDING QUESTIONS**

- How and with which intensity are the major global issues addressed in my study plan?
- Does the DNA of my study plan reflects the importance of these issues?
- Does it contribute to maintain the actual system?
- What are the positive and negative impacts between my program and environmental limits / social foundations?

# Where are we going? Horizon 3

## “Possible futures” scenario

### **SOCIETY SCALE**

It is our destination, the possible futures, the desirable futures for the system, the short-term, medium-term and long-term horizons (2025, 2030, 2040, 2050, 2100).

### **STUDY PLAN SCALE**

The “Raison d’Etre” of our program

### **GUIDING QUESTIONS**

- What is our vision of possible futures for these different timescales?
- What is our vision of a desirable future within the Donut?
- What model of growth/decrease are we basing ourselves on?
- What model of society do we want to serve?
- What do we advocate, what do we believe in?
- By 2040, what scenario will our school / field of studies have contributed to?

# How do we get there? Horizon 2

## “Trajectories for sustainable future” scenario

### **SOCIETY SCALE**

It is our plan for getting to a desirable future, the possible transitions we want to participate to. The way in which we can move from the current system to a more desirable state.

### **GUIDING QUESTIONS**

- what are the major political, economic, social, technological and cultural dynamics underway that will influence one future or another?
- What would be the impactful actions that will foster the achievement of a desirable future / What do I need to do to contribute to a desirable future?
- What new courses, ways of doing things, changes and transformations have we decided to put in place to help bring about a desirable future?
- What competences and knowledge still need to be integrated so that the students who follow my course are equipped for tomorrow's world?

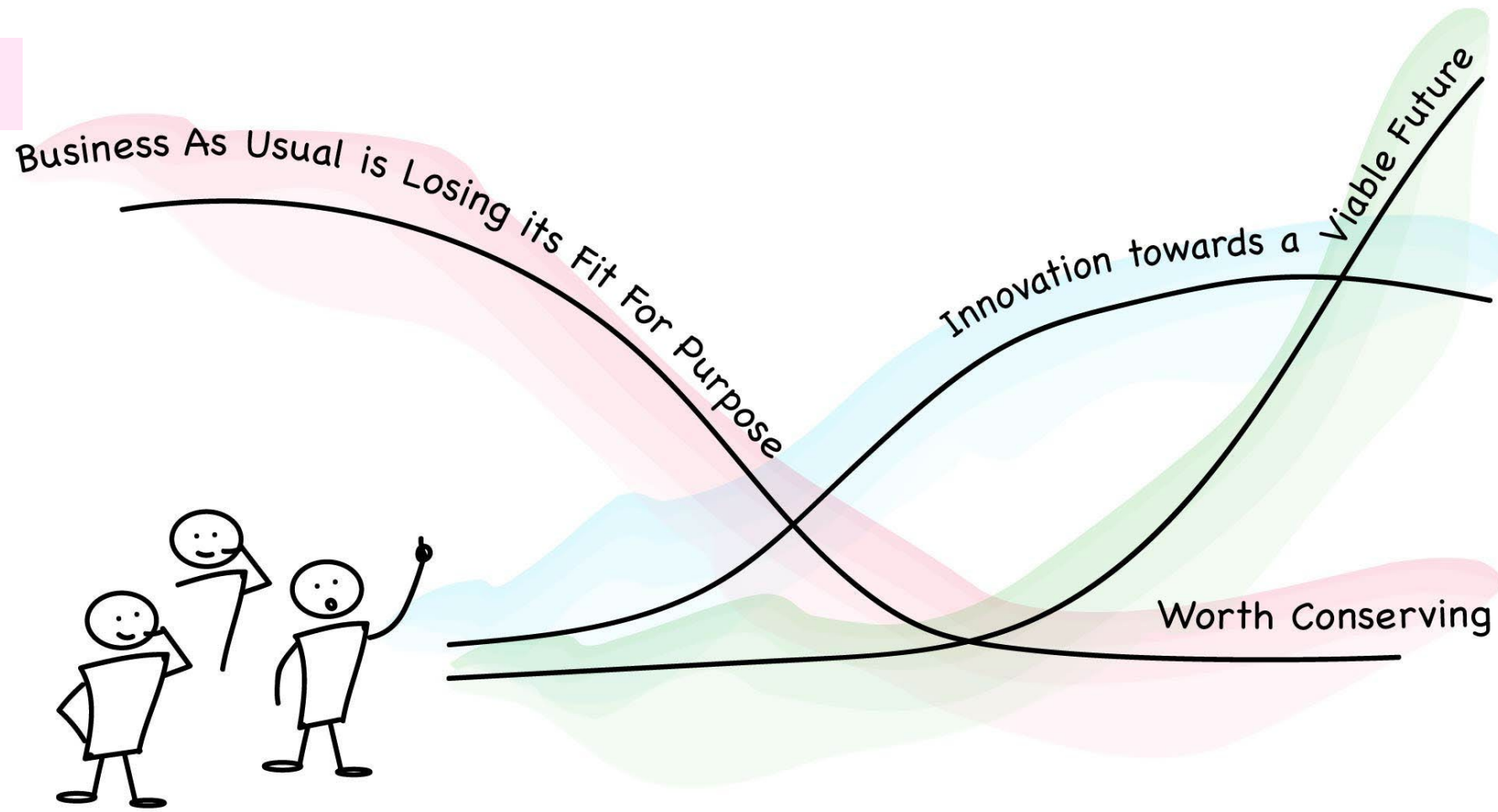
### **STUDY PLAN SCALE**

The changes and developments to be integrated in our program

The new competencies, knowledge and methodologies we plan to integrate within our trainings

# Method 3 horizons: experimental workshop

WHERE ARE WE? HORIZON 1



HOW DO WE GET THERE?  
HORIZON 2

WHERE ARE WE GOING?  
HORIZON 3

Map what to let go of, what to conserve, & transformative innovation to reach a shared vision.

# WHERE DO WE STAND? (HORIZON 1)



# WHERE DO WE WANT TO GO? (HORIZON 3)



**Persona.** Prospective and introspective exercise (5 mins): Imagine a student starting a Bachelor's degree in 2025. What elements of the course will help them to face the challenges of the world 15 years later, in 2040? How will they be grateful for their education, especially the knowledge and skills acquired thanks to their studies?  
Complete the student's letter: "THANK YOU FOR...".

*Try to be fairly specific about the elements of the course (knowledge, skills, teaching methods, projects, etc.) that the student will mention in his or her letter :)*

# HOW DO WE GET THERE? (HORIZON 2)

Sur des post-it: mentionner une thématique que vous aimeriez beaucoup pouvoir aborder ou être abordée → La mettre dans la colonne «quoi faire»? ...et remplir ensuite les critères F.A.I.T

**strong, middle, weak**

What to do?	Feasability	Acceptability	Impact	Temporality
	Assesses whether the topic can technically be integrated into the FP or the course	Assesses whether the theme is acceptable from a social, ethical, political and economic point of view.	Assess the extent to which the theme has a positive impact on the environment, society, the economy and the environment.	Evaluate the time needed to integrate this theme into the programme
	(strong, middle, weak)	(strong, middle, weak)	(strong, middle, weak)	(0-1 year) (2-5 years) (6-10 years)

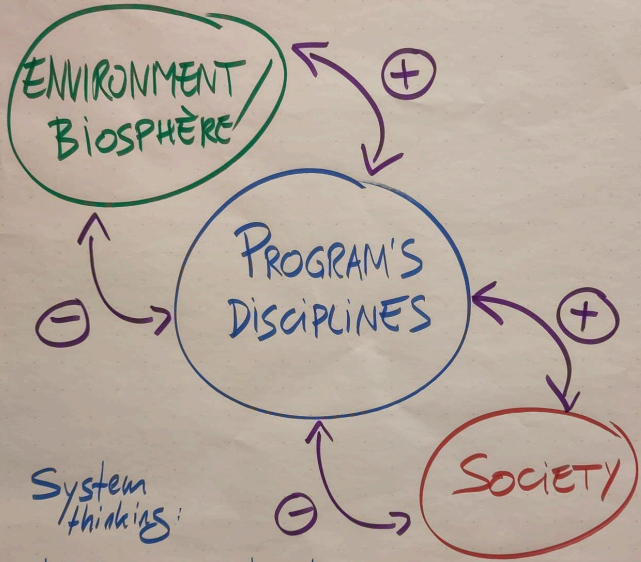
Ex: Integrate Low Tech approach into projects				
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# Workshop's outcomes

## HORIZON 1

Where do we stand?



System thinking!  
Identify +/- interactions

### HORIZON 2

How do we get there?

FAIT MATRIX

WHAT TO DO?	FEASIBILITY	ACCEPTABILITY	IMPACT	TEMPORALITY
Supervisory project based work - need to understand complexity and shared levels of responsibility - commercial - social - environmental - ethical - legal - political	●	●	●	0-1y / 2-5y
Disseminating the myth of technologicalism in an engineering school	●	●	●●●	6-10
Simple open discussion in lecture - what should small companies - stakeholders of a big project / an world economy?	●	●	●	0-1
Force the students to implement sustainability in their own institution - simple board	●	●	●	0-1
Articuler les modèles ED et rendre leurs liens explicites	●	●	?	0-1

### HORIZON 2

How do we get there?

FAIT MATRIX









WHAT TO DO?	FEASIBILITY	ACCEPTABILITY	IMPACT	TEMPORALITY
Cours de recherche appliquée avec des sous-groupes de recherche sur des cas pluridisciplinaires	●	●	●●	1-2 ans
Migrations and industrialization - historical examples	●	●	●	0-1
Class discussion critical thinking among students	●	●	●	2-5
Method-based case / case studies - share diff opinions and open - discussion - in which students are forced to make judgments	●	●	●	6-10
Integrate sustainability criteria in the health studies in order to improve the future health care system & patient professionals	●	●	●	

## HORIZON 3

Where do we want to go?

Imagine possible futures...  
and your contribution...  
...considering planetary boundaries  
and social foundation.

# Workshop's outcomes

WHAT TO DO?	FEASABI	WHAT TO DO?	FEASA
<p>Cours de recherche appliquée avec des sous-groupes de recherches sur des cas péri-disciplinaires complexes</p>		<p>SUSTAINABILITY PROJECT-BASED WORK - THAT IS INTERDISCIPLINARY - COMPULSORY AND GRADED - LINKED TO TRANSFERABLE COMPETENCIES as METHODOLOGICAL (PROJECT-MGMT), SOCIAL (DIVERSITY SENSITIVITY &amp; CULTURAL AWARENESS), PERSONAL (CREATIVE THINKING &amp; RESPONSIBILITY PARTICIPATION)</p>	
<p>- Integration eines nachhaltigen Praxisbeispiels</p>		<p>Deconstructing the myth of Technosolutionism in an Engineering school</p>	
<p>Aim: Stimulate critical thinking among students method: - show cases (case studies) where diff. opinions exist upon - exercises in which students are forced to make tradeoffs</p>		<p>Integrate open discussion in lectures about ethical, societal, environmental ... advtech/impacts of a given project / new world discovery ...</p>	
<p>Integrate sustainability classes in the health studies, in order to improve the future health care system &amp; future professionals</p>		<p>Motivate them particularly Force the students to implement sustainability in their own institution ↓ concepts learnt</p>	
		<p>Articuler les modules ED et rendre leurs liens explicites</p>	