

## Module description

# FORESIGHT Prototyping for a Sustainable Europe

Module code	FORESIGHT1
Module responsible	Each university own name
Date of publication	June 2019
Study year	3-4
Study load	5 ECTS
Language	English

Erasmus +

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## Context

The rapidly changing society has presented us with several robust challenges to ensure that future generations can also live in a sustainable world. Various challenges have been formulated within Europe and the world that require attention to ensure that they can also be made liveable in 2050. Within Prototyping for a Sustainable Europe, we work to anticipate and find solutions to "tackle" these challenges. Europe formulated related to these challenges, Social development goals (SDG). The challenges are the starting point to define our preferable future of Europe together. Based on different Futures methods, the student determines a desired, preferable future. The student visualizes in words and images a vision for the future for 2050, showing the new generations living together in a sustainable way. With the help of storytelling and other visualizations, the student visualizes their future vision. It is not just about imagining a desired future. The student also makes a connection from futures studies to concept development and innovation. Based on the desired future visions, they develop a product or service in the now (2020) and make an innovative business plan as the first step to reach the desired preferable future in 2050.

## 2. Competences and learning objectives

### 2.1. Competences

<i>Dublin descriptors</i>	<i>Sustainable education competences</i>
<p><b>Knowledge and understanding:</b> have demonstrated knowledge and understanding in a field of study that builds upon and supersedes their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;</p>	<p><b>Values thinking:</b> Ability to collectively map, specify, apply, reconcile, and negotiate sustainability values, principles, goals, and targets.</p> <p>Critical thinking is an important part of this competence: the objective analysis and evaluation of an issue in order to form a judgement.</p>

<p><b><i>Applying knowledge and understanding:</i></b>  can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated through devising and sustaining arguments and solving problems within their field of study;</p>	<p><b><i>Interpersonal:</i></b>  Ability to work in teams, and understand, embrace, and facilitate diversity among cultures and social groups. Interpersonal competence is a basic ingredient in each of the other competencies.</p>
<p><b><i>Making judgements:</i></b>  Ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues;</p> <p>Critical thinking is an important part of this competence: the objective analysis and evaluation of an issue in order to form a judgement.</p>	<p><b><i>Future thinking:</i></b>  Ability to anticipate how sustainability problems and solutions might evolve over time, considering alternative development pathways for current systems and crafting coherent and plausible pictures of the future.</p>
<p><b><i>Communication:</i></b>  Can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences;</p>	<p><b><i>System thinking:</i></b>  Ability to analyse sustainability problems and solutions cutting across different domains and scales; considering agents, cause-effect structures, cascading</p>
<p><b><i>Learning skills:</i></b>  Have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.</p>	<p><b><i>Strategic thinking:</i></b>  Ability to design and implement transformational (systemic) intervention and transition strategies toward sustainability.</p>

## 2.2. Learning Objectives

*The student is able to*

*In relation to the method:*

- describe what the SDG are and understand why they are formulated,
- define the problem definition and analyse the actors related to the context of the assignment and SDG,
- recognize what 'Signals for Change' are and understand the difference between trend and uncertainty,
- judge and prioritize the 'Signals for Change' related to the problem definition,
- evaluate and justify the cause and effect of the norm for the preferable future,
- illustrate a nuanced human centred and holistic vision of the future by using the chosen signals and norm,
- distil the transition path around the preferable future,
- back cast on the chosen transition path from the preferable future end-point to the present,
- design a business model for the first stepping stone to the preferable future with value for all stakeholders.

*In relation to the process/skills:*

- present and debate the preferable futures in an international setting,
- present and discuss the business concept as first stepping stone to the preferable future,
- evaluate how to apply the method 'prototyping the future' with sustainable value on all levels,
- collaborate and to be curious and creative to explore and define the preferable futures,
- develop a more future consciousness and conclude what your role can be related to the future,
- identify intercultural differences and is able to act on these differences in a constructive way.

## 3. Teaching methods

The elaboration of the module is that all students will work together to define a preferable future related to one of the SDG and to realize the first steppingstone in a business model to reach that future. The students have to work together in groups in a very complex context. Not only in an international context, but also on a topic (SDG) and Future oriented. Besides the learning effect by diving in the assignment and process of future thinking and coming up with a group output, the individual learning outcome of this process will be large. Each individual student has to reflect on this during and after the module.

The start of the module will be at everyone's own universities to prepare step 1 and 2. There will be a focus on 4 SDG's. Students will get a sort of scope but not too much to give them enough freedom. Each university will have groups of 5 persons (= 4 SDG's). They will work together on the SDG but at the start of the intensive program the national groups will be divided into international groups of 5 students.

**Phase 1:**

	Belgium	Hungary	Netherlands	Spain	Turkey
SDG 3 <a href="#">Good Health and Well-being'</a>	5 students	5 students	5 students	5 students	5 students
SDG 8 <a href="#">Decent Work and Economic Growth</a>	5 students	5 students	5 students	5 students	5 students
SDG 10 <a href="#">Reduced Inequality</a>	5 students	5 students	5 students	5 students	5 students
SDG 11 <a href="#">Sustainable Cities and Communities</a>	5 students	5 students	5 students	5 students	5 students

**Phase 2**

SDG 3 <a href="#">Good Health and Well-being</a>	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)
SDG 8 <a href="#">Decent Work and Economic Growth</a>	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)
SDG 10 <a href="#">Reduced Inequality</a>	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)
SDG 11 <a href="#">Sustainable Cities and Communities</a>	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)	5 students (1 Belgium, 1 Hungary, 1 Netherland, 1 Spain, 1 Turkey)

**Groups**

The group will be formed in meetings supported by the platform. Each university will get the same 4 SDG's. After the four meetings students will start with the intensive programme. They will be divided in international groups (5 students per group). During the module a lot of different teaching methods will be used. lectures, web lecturers, brainstorming, discussion, individual work, group work, debate, peer instruction, intervision etcetera

Week	Content	Preparation for students	hours
<b>Meeting 1</b> (own university)	Start, assignment and context (missions) and method  First measurement Future consciousness	Read module description  Read chapter 1 of <del>the</del> <u>readerthe syllabus</u>  Choose 2 SDG out of the four SDG and dive into it SDG 3: <a href="#">Good Health and Well-being</a> SDG 8: <a href="#">Decent Work and Economic Growth</a> SDG 10: <a href="#">Reduced Inequality</a> SDG 11: <a href="#">Sustainable Cities and Communities</a>  Take 3 examples of those chosen SDG's with you for the first lesson in which you address these SDG's  Formulate your personal learning goals for this module related to your study  Fill in the questionnaire future consciousness (you will receive the link)	5
<b>Meeting 2</b> (own university)	Status quo/stakeholders, problem definition	Read chapter 2  Do research of the current situation of your challenge. Use the Absence/pain and Capacity/gain grid. Process at least 3 (English) sources ( <b>APA acknowledgmentreference s obligatory!</b> ) Research the stakeholders involved in your "urgency". Make a mind map of the current situation (1 slide) so that you can easily process your information	15

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		for the video clip (3 minutes) of the Context and problem around the SDG in your country. (don't forget to mention sources!)	
<b>Meeting 3</b>  (own university)	Discussion of videos of each university and SDG Analyse differences	Digital introduction to the group (individual)  mindmap status quo including stakeholders map  Make a video of 3 minutes in which you explain your SDG related to your country and Europe. Upload this <del>on the portal</del> <u>Maxwhere</u> <del>has</del> the SDG file. Give a clear problem definition. Use terms as capacity, absence, pains and gains. Give insight in the actors	20

<p><b>Meeting 4</b> (own university)</p>	<p>Signals of change and individual ranking Second measurement FC</p>	<p>Each member of the group contacts a student, who is dealing with the same SDG, from the different partner-universities. Make sure that all partner-countries are covered in your group.</p> <p>Ask for a reaction on your video. What difference/ similarities has she/he seen? make conversation notes and take them to meeting 4</p> <p><b>Mind map</b></p>	<p>20</p>
<p>Intensive programme <b>Monday</b></p>	<p>Formation of the international groups, each group one SDG. Forming group identity, mind-set discussing Norms. Introduction mind map, status quo definition ranking signals</p>		
<p>Intensive programme <b>Tuesday</b></p>	<p>Vision of the preferable future Presentation &amp; empathy debate Enriching the future (feedback based)</p>		<p>8</p>
<p>Intensive programme <b>Wednesday</b></p>	<p>Choice Transition path and first steppingstone. <u>Come with a creative and innovative first creation of the first stepping stone.</u></p>		<p>8</p>

Intensive programme <b>Thursday</b>	Value creation for all stakeholders and a Business model		8
Intensive Programme <b>Friday</b>	Extra time (preparing presentation)  Final presentation  Evaluation and peer to peer assessment		8
Individual Assessment		Pitch (group) Individual reflection	40

#### **4. Proposed Assessment (done in Belgium and the Netherlands)**

During the module there will be different forms of assessment namely diagnostic, formative and at the end summative;

The feedback of the formative assessments will be integrated in the individual reflection of the students at the end of the module.

1. Diagnostic assessment: (2x)

In the beginning and at the end the Future consciousness of the student will be measured. The student has to reflect on the outcome in the individual reflection

2. Formative assessment:

- At the end of the meeting 4 (before coming together in the intensive week): A mind map of step 1 till 3 (of the method) with explanatory essay Assessed *by the own teacher*
- A first presentation of the preferable future *assessed during intensive week*

3. Summative assessment:

- A pitch in where students visualize their preferable future related to the assignment and the students describe the first steppingstone to realize this in a business model (group)
- Reflection on the process and learning objectives (individual) The reflection will be a screencast in which the student reflects by using short videos of the process

For the rubric and detailed assignment see platform.

- A pitch in where students visualize their preferable future related to the assignment and the students describe the first steppingstone to realize this in a business model (group)
- Reflection on the process and learning objectives (individual) The reflection will be a screencast in which the student reflects by using short videos of the process

## Learning plan for each meeting

<b>Meeting</b>	
<b>Code</b>	<b>FS1.1</b>
<b>Title</b>	<b>Start, assignment and context (missions) and method</b>
<b>Contact hours</b>	<b>2,5</b>
<b>Form</b>	<b>Lecture workshop</b>
<b>Content</b>	<b>Introduction Sustainable Futures and Sustainable Development Goals and Missions for Europe</b>

### Description

*What does the world of the future look like? Do we want a world with a good quality of life for everyone? Then we need to act now and take complex problems such as aging, waste, food issues and the like seriously. In the module 'Prototyping for a Sustainable Europe', you will develop and evaluate alternative visions and scenarios for a sustainable future to be able to design innovative and sustainable concepts, based on the Sustainable Development Goals (SDG) formulated by the UN. From various European programs such as, for example Horizon 2020, the creative industry is seen as a contributor to these major societal challenges. The European Union has released millions of subsidies to stimulate innovation that can steer the grand societal challenges. Within this module we will work on an innovative solution for one of the challenges based on the SDG. Within the module the methodology 'Prototyping a Sustainable Future' is used.*

### Learning objectives, the student:

- Knows what the Sustainable Development Goals are and understand why they are formulated.
- Knows how the sustainable development goals are related to Europe and their own country.
- Knows how the module is organized and what is expected from the students.

### Preparation

- Read module description.
- Read chapter 1 of the manual.
- Choose 1 SDG .
- Take 3 examples with you in which you address this SDG.
- Formulate your personal learning goals for this module related to your study.

- Fill in the questionnaire around future thinkingconsciousness.

Homework

- Research the current situation of your SDG. Use the absence/pain and capacity/gain grid. Process at least 3 English sources (APA acknowledgment!).
- Research the stakeholders involved in your "urgency".
- Make a mind map of the current situation, so that you can easily process your information for the video clip of 3 minutes of the context and problem around the SDG in your country.

Literature

Manual Chapter 1  
Module description

Lesson plan meeting 1

Moment	What	How
Phase 1: start of the module and expectation/learning goals of the students	Kick of meeting in which students get known with the overall goal of the module. There will be an expectation round to see what they expect of the course. They have to formulate their own learning goals before starting of meeting one	Dialogue session
Phase 1	Explanation of the method and background future thinking and design	Explanation
Phase 2: Explanation of the construct SDG's		Explanation,
Phase 2	Discussion of the three examples, see homework, and what this means related to Europe	Discussion, own work
Phase 3a	Group building	

Phase 3b	Draw a vision of the future around your chosen SDG. Upload it on the <del>portal</del> <u>chosen environment</u> .	
Phase 4	Working on own topic. Purge what they know about the SDG and make it small. Start with the mind map	Working time
Phase 4	Presentation the first outcome to each other	Presentation and feedback

<b>Meeting</b>	<b>2</b>
<b>Code</b>	<b>FS2.1.</b>
<b>Title</b>	<b>Status quo, problem definition</b>
<b>Contact hours</b>	<b>2,5</b>
<b>Form [SG1]</b>	<b>different</b>
<b>Content</b>	<b>Describe the problem, the status quo and indicate the different stakeholders and how they are involved in the status quo</b>

#### **Description**

A first step is made by mapping the Status Quo of a focal point within your SDG. Afterwards a map of the stakeholders and actors involved in a global context is made related to your country.

#### **Learning objectives the student:**

- Define the problem definition related to the SDG by analysing the absence, capacity, pain and gain related to the context.
- Identify the actors playing a role in the problem.
- Mapping the actors and factors that play a role in the problem.
- Knowing the term wicked problem.

#### **Preparation**

- Research of the current situation of your SDG. Use the absence/pain and capacity/gain grid. Process at least 3 English sources (APA acknowledgment!)
- Research the stakeholders involved in your "urgency".
- Make a mind map of the current situation to process the information for the video clip of 3 minutes of the context and problem around the SDG in your country. (don't forget to mention sources!)

#### **Homework for meeting 3**

Make a video of 3 minutes, with the team, explaining the SDG related to your country and Europe. Upload this on the portal in the SDG file. Give a clear problem definition. Use terms as capacity, absence, pains and gains. Give insight in the actors.

#### **Literature**

Manual FORESIGHT Chapter 2.

Salonen, A. O., & Konkka, J. (July -December 2015). An Eco social Approach to Well-Being: A Solution to the Wicked Problems in the Era of Anthropocene. *Foro de Educación*, v. 13, n. 19, pp. 19-34.

## Lesson plan meeting 2

Moment	What	How
Phase 1: Definition Status Quo	Explain wicked problems, socio-ecological systems	Lecture
step 1	Make a mind map of the SDG you are working on. Try to describe the problem from a worldwide point.	Working time
step 2	Map the actors on the mind map using post-its. Take a picture.	Working time
Phase 2: Explanation of wicked problems		Explanation,
Step 1	For each actor you go to look for other actors. The actor is affected by this problem, but this actor also impacts other.	Discussion, own work
Phase 3: Narrow down the problem		
Step 1	What does the SDG mean for your country? Mark it on your mind map or add new aspects to your mind map	Working time
Step 2	Presentation of your outcome to the other groups	Presentation and feedback
Phase 4: Preparing for homework		Explanation

<b>Step 1</b>	<b>Make a storyboard for a 3-minute movie that describes the problem in your country and the stakeholders</b>	<b>Working time</b>
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<b>Meeting</b>	<b>3</b>
<b>Code</b>	<b>FS3.1.</b>
<b>Title</b>	<b>Analyse status Quo and compare with the scope of our partner countries</b>
<b>Contact hours</b>	<b>2,5</b>
<b>Form</b>	<b>Working class</b>
<b>Content</b>	<b>Discussion Status Quo national and international related to your SDG</b>

#### **Description**

A first step in mapping the status quo, the stakeholders and actors in the current context is made. The 3-minute videos of the international partners are the input for this session. From their testimony an inventory of the common understanding and differences is made.

#### **Learning objectives**

- A broader understanding of the SDG in a wider European scope
- A discovery of what is typical for the SDG context in your country

#### **Preparation**

- Take the mind map to the lesson.
- Make a video of 3 minutes of an explanation of the SDG related to your country and Europe. Upload this on the platform in the SDG file. Give a clear problem definition. Use terms as capacity, absence, pains and gains. Give insight in the actors. Upload the mind map as well.

#### **Homework for meeting 4**

- Each one of the group contacts a student, who is dealing with the same SDG, from the different partner-universities. Make sure that all partner-countries are covered in your group.
- Ask for reply/comment on your movie. What difference/ similarities has she/he seen? Make conversation notes and take them with you to meeting 4 (take a picture for your process report of the notes)

Lesson plan meeting 3

Moment	What	How
Phase 1: Start, homework and learning goals for today	Recapitulation last week and homework (problem definition/ mind map discussion)	Discussion/dialogue
Phase 2:	Videos of the partners	This phase iterates 4 times, one time for each partner with same SDG
Step 1	Watch the partner videos that deals with your SDG	
Step 2	Look for similarities Look for differences	Gather them on post-its Gather them on post-its
	Try to explain the differences, what are the differentiating factors and/or actors	
Phase 3:	Conclusions	
Step 1	Look at the post-it's for all countries. Can you find clusters in the reactions? Look for an explanation.	

<b>Step 2</b>	<b>Make a new storyboard in which you incorporate the remarks of the partners.</b>	
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<b>Meeting</b>	<b>4</b>
<b>Code</b>	<b>FS4.1</b>
<b>Title</b>	<b>Future Consciousness and 'Signals of change'</b>
<b>Contact hours</b>	<b>4</b>
<b>Form</b>	<b>Working class</b>
<b>Content</b>	<b>Signals of change</b>

**Description:**

A discussion is done with your country-partners of their analysis of the status quo related to the SDG. What are the differences? What are the similarities? At the beginning of the intensive program the definitive scope will be defined.

During this meeting in depth insights is gained of the concept of future consciousness and prototyping the future. Insights in the kind of current signals of change are obtained, which can be positive or inhibited factors of the preferable future. The signals of change (SoC) that have been mapped for the Horizon Scan 2050 (STT,2014) enriched with other SoC are used. Insights in these signals provides the tools for sketching a holistic, sustainable view of the future.

**Learning objectives**

- Familiar with the concept of prototyping the future
- Familiar with the concept of future consciousness and an insight into how this consciousness arises.
- Know the concept "Signals of Change" are.
- Made a first judgement around the 'SoC' related to the problem definition.

**Preparation**

- Each one of the group contacts a student, who is dealing with the same SDG, from the different partner-universities. Make sure that all partner-countries are covered in your group.
- Ask for a reaction on your movie. What difference/ similarities has she/he seen? make conversation notes and take them to meeting 4
- Take your mind map to the lesson

**Literature**

Chapter 3 manual FORESIGHT: Prototyping for a sustainable Future of Europe

Lesson Plan meeting 4

Moment	What	How	
Phase 1: Start, homework and learning goals for today	Recapitulation last week and homework (problem definition/mind map discussion)	Discussion/dialogue in SDG groups  What were the similarities,  What are the differences  Write them down on post-its	
Phase 2	Future Consciousness, why is it important		College
Phase 3	Signals of change, what are the signals of change.		College
Phase4 Signals of Change judgement around own country	Judgment of the Signals of change in groups around importance in own country related to SDG.	Discussion in groups. discussion is the learning aspect	
Phase 5	Draw a second future vision around the topic. Upload on the international group portal		