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FUTURES LITERACY METHODS

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Arkitektur- og designhøgskolen i Oslo
The Oslo School of Architecture and Design

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DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
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FUTURES LITERACY METHODS

The main aim of Futures Literacy Methods is to transform and convey FUEL4Design outcomes into learning processes.

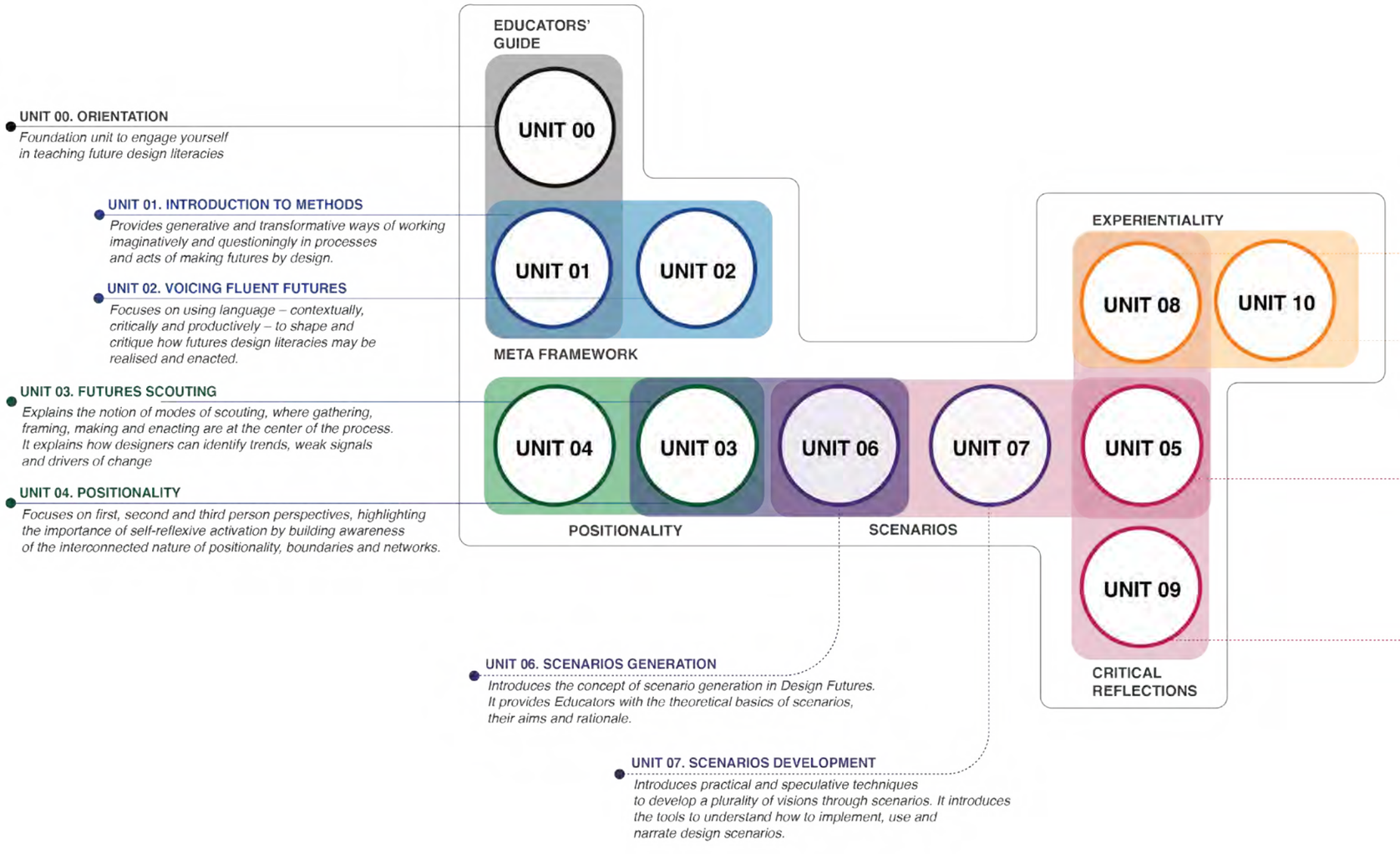
Learning Future Literacies Methods concerns both the preparation of a complete Futurist Designer training course and the design of small Independent Learning Units to cross breed design studios or speculative/ theoretical courses. The Units are specifically created to cater to the needs of future literacy and geared to acquire knowledge on anticipatory practice, critical future design and future making through the dedicated tools.

This booklet presents one orientation unit (Unit 00) and ten educational content Units (Unit 01 to 11). In the first section of this booklet, there are a set of “Maps” and paths to help educators in navigating through the eleven Units. These maps are meant to be used as suggestive paths rather than prescriptive ones. The basic concept behind these units is to be independent (yet connected). Educators are free to select the suitable units to their courses, put them together and structure their pedagogical paths based on their needs as well as the context of use .

In each Unit, there is a section for the tools and devices. These are tools and devices developed or assembled during the FUEL4Design project. They play an important role in supporting and facilitating the pedagogical process. Each of these tools or devices is linked to the FUEL4Design website, where you can further read about them.

INDEX

EDUCATORS' GUIDE
TO FUTURES LITERACIES METHODS AND METHODOLOGIES
THE ROAD-MAP
Connections and overlaps between the units



UNIT 00. ORIENTATION
Foundation unit to engage yourself in teaching future design literacies

UNIT 01. INTRODUCTION TO METHODS
Provides generative and transformative ways of working imaginatively and questioningly in processes and acts of making futures by design.

UNIT 02. VOICING FLUENT FUTURES
Focuses on using language – contextually, critically and productively – to shape and critique how futures design literacies may be realised and enacted.

UNIT 03. FUTURES SCOUTING
Explains the notion of modes of scouting, where gathering, framing, making and enacting are at the center of the process. It explains how designers can identify trends, weak signals and drivers of change

UNIT 04. POSITIONALITY
Focuses on first, second and third person perspectives, highlighting the importance of self-reflexive activation by building awareness of the interconnected nature of positionality, boundaries and networks.

UNIT 06. SCENARIOS GENERATION
Introduces the concept of scenario generation in Design Futures. It provides Educators with the theoretical basics of scenarios, their aims and rationale.

UNIT 07. SCENARIOS DEVELOPMENT
Introduces practical and speculative techniques to develop a plurality of visions through scenarios. It introduces the tools to understand how to implement, use and narrate design scenarios.

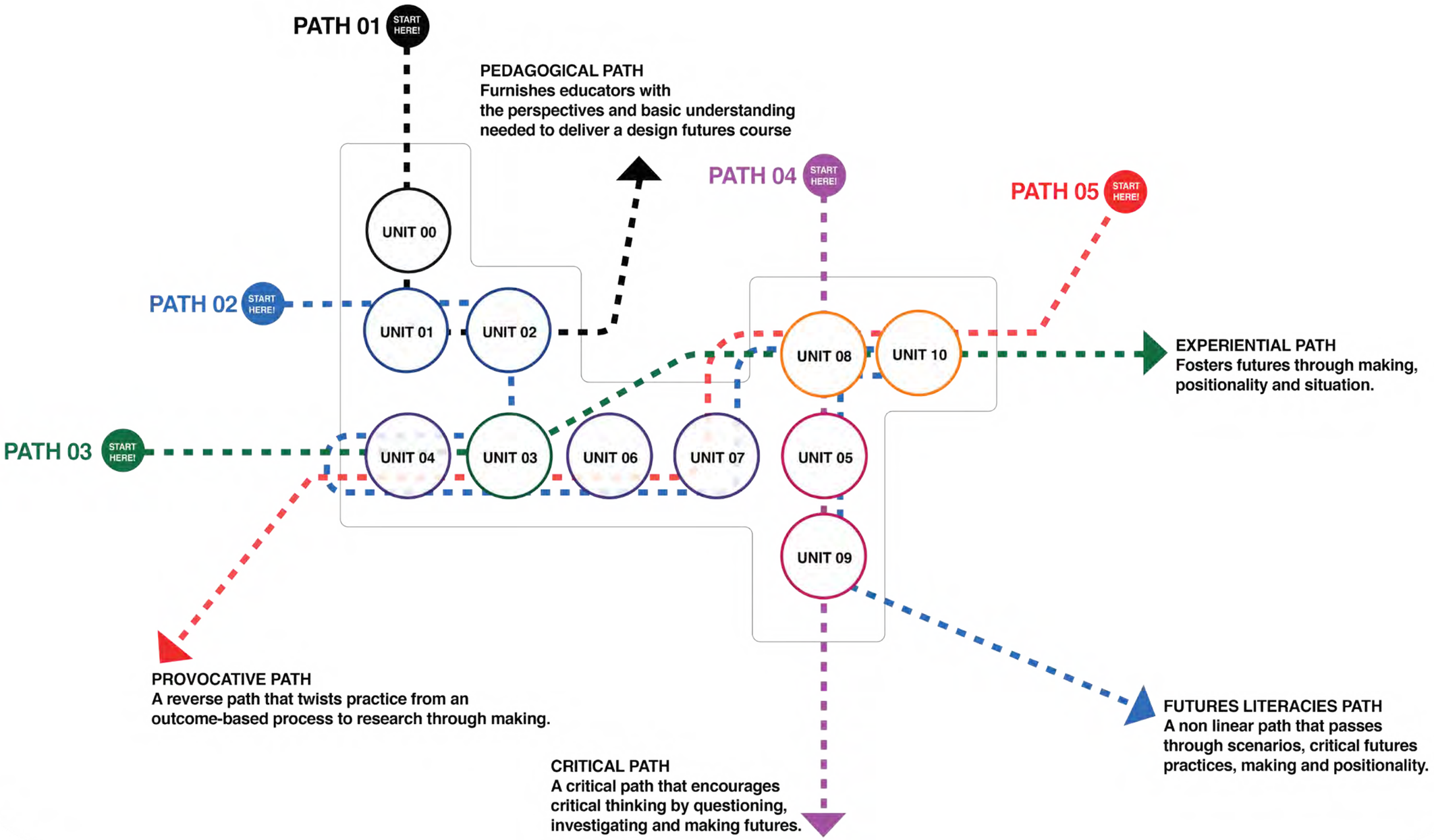
UNIT 08. PROVOTYPES
Creates a space for students to explore the role of provocative prototypes (provo-types) in the shaping critical future visions of Designing Futures.

UNIT 10. ALTERNATIVE PRESENTS
Provides the foundation to carry out research through design, showing the relation between theory and practice as it is related to the experiential in designing futures literacies. Helps designers to generate alternative presents through design interventions that embody desired futures and help understand and experience the needs to provoke these transitions.

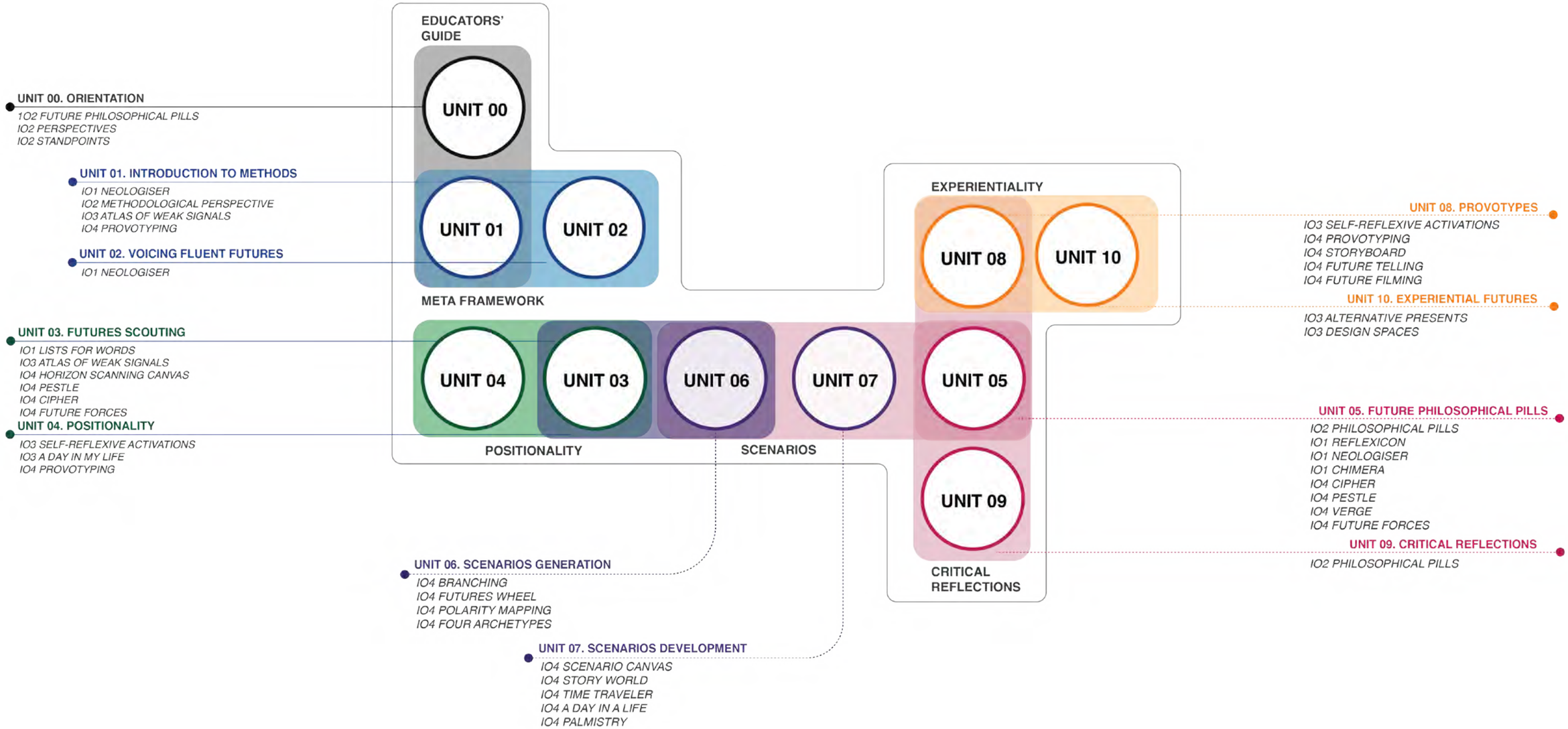
UNIT 05. FUTURE PHILOSOPHICAL PILLS
Foregrounds the importance of philosophical concepts to critically interrogate established notions, beliefs and assumptions around the future; it provides strategies to amplify our capacity to imagine, speculate and anticipate different futures;

UNIT 09. CRITICAL REFLECTIONS
Encourages you to place criticality at the center of your engagement with the intersection Design/ Futures /Literacies. inviting you to critically re-examine the work done so far; to twist the perspective already gained during one of the other pedagogical activities.

EDUCATORS' GUIDE
TO FUTURES LITERACIES METHODS AND METHODOLOGIES
THE PATHS
Suggested pedagogical paths through the units



EDUCATORS' GUIDE
TO FUTURES LITERACIES METHODS AND METHODOLOGIES
TOOLS AND DEVICES



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FUTURES LITERACY METHODS

UNIT 00
ORIENTATION

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DESCRIPTION

This unit provides the foundation for educators to engage in teaching future design literacies. It enables you to deconstruct your prior learning. It challenges you to re-evaluate your teaching practice with a view to reframe the intersection future - design - literacies.

The subject of this Unit is Teaching- This is about understanding how to create a learning environment where to teach future literacies by actively re-imagining the practices of teaching. What is crucial, therefore, is how to unlearn.
The content is centred on facilitating 'change makers' (i.e., your students) to develop the ability to navigate their way through uncertainty and complexity in their future-building practice. Through reflecting on your positionality and its influence on your actions, you will be invited to identify spaces for inclusive interventions with the potential to transform peer / student experience.

The Unit is underpinned by the principles of collegiality and active participation. You will share your own knowledge and experience with the group, and give and receive feedback through presentations, discussion, micro-teaching and peer observation in an atmosphere of mutual support and solidarity. This is a space to foster self-criticality in relation to your teaching practice.
This Unit suggests a series of teaching tools and learning activities which are framed through a collaborative, participatory, reflective, hybrid and transdisciplinary ethos.

AIMS

The Unit will enable you:

• To support you to critically relate educational theory and practice (pedagogical knowledge) to your own disciplinary knowledge (e.g., design studies, future studies, engineering, art, and any other domain you are working with). The aim is to foster an ongoing reflection on how your field of expertise is taught and learned, and to view this process as dynamic and situated. For instance, by learning strategies on how to work with, and facilitate, learners' journey, group work and community building.

• To continually enhance your teaching practice in a way that responds to the complex and evolving contexts of institution, policy, and society. For instance, by examining the drive around decolonization, and other urgent matters emerging in society, by affirming education as a social purpose, which means reflecting on the future of design education, not on the future of educators only.

• To interrogate and demystify your current academic research language and practice so to be aware of gatekeeping mechanisms, and how they impinge on inclusivity and diversity. For instance, by looking at different modes of knowledge-production, hierarchies, and communication; challenging the status quo and developing awareness of alternatives (e.g., journals vs. zines).

COMPETENCIES

The core competence of the Unit is to refine ways of working together to engage with uncertainty in a creative, critical and open manner. Specifically, by engaging with this unit you will acquire and demonstrate the following competencies:

• Reflecting on your attitudes to, and experiences of, learning and teaching to develop ethical awareness of your current position, practices, and contexts.
• Learning how to be empathic, to be an active listener and enabling others.

• Demystifying academic research, its purpose, and philosophical underpinnings, and how to decentering research canons, questioning histories and disciplinary silos

• Developing meaningful relationships with the community of educators, professionals, researchers with each other, and with other species (paying attention to the role of the nonhuman)

• Responding responsibly and ethically to complex situations arising within teaching and learning situations

• Understanding, embracing, and modelling the ethos of the unit. In other words, being prepared to embody the collegial, participatory and hybrid spirit of the unit, which intends to nurture self- reflection, openness, and practices of care tailored to whichever situation you find yourself in.

DEPTH OF DETAIL

This Unit is a pre-requisite for educators before engaging with the rest of the material provided in Units 1-10. The purpose is twofold and concerns these two levels:

• **Level 1:** To provide a solid pedagogical platform ahead of engaging with the units 1-10. This unit will highlight and suggest practices in relation to ways of teaching with particular attention to groups dynamics, inclusivity, diversity, fairness and representation. It will also assist with making an informed choice among the units 1-10 through a selection of the pathways that best respond to your requirements, interests, and needs. It will introduce key terms (glossary) that you will encounter throughout.

• **Level 2 (meta-level):** To inspire educators to apply the learning gained through this unit to your own practice. The meta-level concerns how your way of teaching will change as you keep on engaging with the material and will impact on how your way of using the FUEL4Design material with your students. It fosters self-reflection and self-evaluation and is predicated on an ethos of education as transformative experience for educators and students alike. You, me, everyone: we are learning all the time.

EXPECTED LEARNING OUTCOMES

A. Knowledge and understanding	Articulate your positionality as educator and researcher, in relation to disciplinary practices, research philosophy and ethics.
B. Cognitive Skills	Explore new ways of knowing and sharing knowledge made possible through decentring research and design practice
C. Practical Skills	Identify a focused design topic/exercise/activity that has value for you as an educator/designer, demonstrating how this connects to relevant fields of future study
D. Generic Skills	Critically evaluate institutional, national, and global perspectives of equality and diversity, and their relevance to your academic practice context.
E. Collaborative Skills	Develop and enact hightened ways of working and being together through lived experience so to produce new knowledge

ACTIVITY

Individual task

To assist educators in the process of engaging with the levels indicated above, these tasks are recommended:
• a 'positionality' statement to reflect on who you are as an educator/designer, not only in relation to your disciplinary practices but also in considering research avenues that address the contexts in which you work and the individuals you work with.
• a 30-minute learning activity that activates discussion around a theme or issue emerging from your own research (e.g. workshop, seminar, other activity etc.) directed toward a mixed group of 5-8 students.

Group task

Working in collaboration with a small peer group (2-5 or more) to develop a document inclusive of code of conduct / set of principles/ core values informing your teaching practice within a diverse environment. This could be a manifesto-type document, a flow-chart, a diagram etc. and the outcome of a mutually enriching process of discussion, negotiation and collaborative engagement (co-design).

Self and Peer-to-Peer evaluation

It is recommended that educators do self-evaluation throughout this unit. Self-evaluation can be a reflection journal, a series of blog entries or a mini-portfolio of notes and insights. Its purpose is to document your response to teaching practice as it evolves, and your responses to literature and other sources on teaching and learning.
Whenever possible, include Peer-to-Peer evaluation where colleagues come together to share experiences and reflection in a supportive and critically constructive environment.
Ongoing evaluation whether self or peer-to-peer will encourage skills such as risk-taking, independent enquiry, effective negotiation skills, as well as critical and civic engagement.

TOOLS AND DEVICES

Tools and devices appropriate to this Unit are those that encourage educators to reflect on their positionality, to critical appraise their learning and to experiment with ways of exercising agency, even in a 'risky' or disruptive mode. For instance, the Perspectives and Standpoints (from the Prompts cards in IO2) assist with questioning the nature of the future you envision, the knowledge it produces, the values and politics attached to it etc. (Perspectives). Also, they assist with reflecting on what can (or cannot) be achieved through the position you express (Standpoints).

Equally relevant here are tools that enable you to question your own learning and experiment with unlearning activities, for instance the Neologiser prompts you to work with imaginative words, each envisioning a different futurescape, with potentially

innovative and alternative roles to cast a new light on the space of future-making

Perspectives

- Ontological Perspective
- Epistemological Perspective
- Methodological Perspective
- Axiological Perspective
- Political Perspective
- Technological Perspective

Standpoints

- Declarative
- Disruptive/ Re-framing
- Reformative
- Rejective

CASES AND EXPERIENCES

In this unit you might want to use the following methods, test them out and embed them in your teaching practice. Feel free to adapt them to your own teaching style. They can be used online and IRL.

• Silent brainstorming: working in silence is a powerful pedagogical technique that affords sustained reflection. It is ideal for intense idea-generation and pattern and vision-building; by diluting the clamour of dominant voices in a group dynamic, it empowers all participants equally

• Vision-building: using image research to collectively populate a board (or a wall if IRL) illustrating a specific future vision (e.g. around a year/theme), usually best initiated in silence. Participants add keywords and comments on each other's images.

• I DO ARRT (adapted from KaosPilot*): a guided way of setting the scene when facilitating a group. The acronym stands for Intention, Desired Outcome, Agenda, Rules & Roles and Time. Participants co-design the items, making assumptions explicit and building a common culture where everyone feels represented.

**a creative leadership and educational accreditation HERE*
In more detail: how to apply IDOARRT and Micro-teaching

1.IDOARRT
The purpose of IDOARRT is to aid you in co-designing your roadmap across the 1-10 Units in IO5.

It is a tool you can use to set and define your boundaries and scope in relation to IO5. It is predicated on a group working together, thus it requires negotiation and communication skills, and teamworking.

CASES AND EXPERIENCES

As said above, IDOARRT is a way of setting the scene. The acronym stands for Intention, Desired Outcome, Agenda, Rules & Roles and Time. Participants are invited to co-design each item, making their own assumptions explicit and striving to build a common culture where everyone feels represented and heard. Principles:

- Intention: why are we here?

- Desired Outcome: what will we leave with?

-Agenda: Build your own roadmap according to your own trajectory, needs, and requirements, goals, the gaps you are identifying (but you may not be certain of as yet)

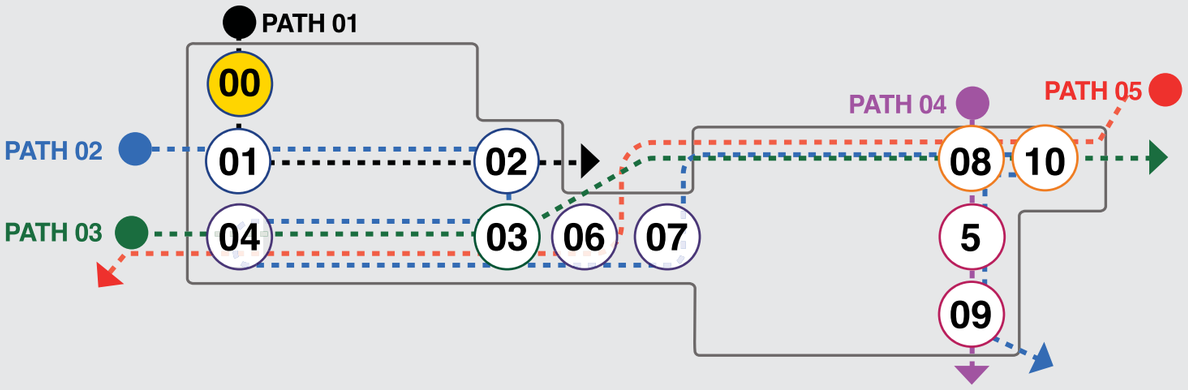
- Roles and Rules: who are we? Who are you?

- Time: what is the timeframe you want/can allocate to their learning to ? Eg 2 hours? 2 days?

2. Micro-teaching
Prepare a 30-min learning activity of your choice (i.e. workshop, seminar or intervention) directed towards a mixed-student cohort that

activates discussion around an emerging themes or issue in relation to design and futures. The purpose of this session is both to highlight your existing practice in relation to design futures and to foster reflection on your teaching. Draw on your existing knowledge and your specialism. What are the aims of the session? How are you engaging your students? What do you want them to achieve? How are you going to self-evaluate?

ROADMAP AND CONNECTIONS



The yellow color indicates the position of the current Unit.

UNIT CONTENT

This unit is called Orientation because it intends to assist you with navigating the complex terrains of future-making throughout the IO5 set of units, by enabling you to find your own mode (of teaching, working, learning, unlearning) . What this Unit does not wish to do is to provide you with a map: in this sense orientation is about you developing your own compass, rather than following a given blueprint. It is your journey of discovery, and is about developing agency, rather than been given all the answers. This also is in line with the meta-level of this project which asks what are futures made of?

Key features of the orientation process:

Building Community: The unit could start with a 3-day induction workshop to build an online cohort dynamic; to share and exchange cultural values; to communicate design tales and backgrounds; to introduce the unit/course ethos and provide key induction sessions. Peer learning is embedded into the course, allowing for the creating of a multidisciplinary community of practice that capitalises on diverse disciplinary, professional, and practice-based ways of knowing.

Testing Tools: Tutors are encouraged to run a pilot of the tools that they will be applying in the different units. A way of doing this is to engage in a Micro-teaching workshop. (Micro-teaching concerns leading a short activity with a peer group as if they were your students). The workshop takes place with tutors working with each other in order to become familiar with the chosen material, adapting it to their own situations and getting ready to implement it (for instance a micro-teaching capsule using the Pills or the Lexicon for a short session). This is a way to enhance your pedagogic ideas, experience, and expertise in collaboration with other members of the programme/course community; moreover, it actively encourages participants to evolve traditional design research and practice approaches by surfacing deep knowledge of creative and professional practice and amalgamating it into their research.

Positioning Yourself: Opening with an introduction to varied ontological and epistemological approaches to constructing knowledge, we will explore together how as researchers and practitioners we situate ourselves in the pursuit and communication of knowledge. By reflecting on your positionality, mapping your positionality, and sharing it with others you create conditions to develop sensitivity and evaluate the impact of your teaching.

Transdisciplinary practices: Educators are encouraged to think and act transversally to unsettle both verticality and horizontality, and the hierarchies these might conceal. They are encouraged to explore the value of transdisciplinary in breaking boundaries and questioning existing disciplinary silos. Investigating and playing with a range of methodologies drawn from diverse disciplinary fields will enable you to develop an experiential understanding of your own knowledge production. Acknowledging expertise in the classroom and voicing the voiceless surfaces issues of how to stay with divergence and engage in bridge-building rather than pushing for consensus.

Educators will be invited to critique research traditions and practices, considering decolonial imperatives and consider what it means to decentre academic research and practice traditions in the 21st century.

UNIT 00 - ORIENTATION

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FUTURES LITERACY METHODS

UNIT 06
SCENARIOS GENERATION

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DESCRIPTION

This unit introduces the concept of scenario generation in Design Futures. It provides Educators with the theoretical basics of scenarios, their aims and rationale. The unit explains the basic pillars of scenarios reflecting on their impact and readiness for development.

The unit is divided into four sections. The first one is defining scenarios as terminology in design futures, the second is the relevance of scenarios to design futures, and the third is the typology of design futures. The last part is the positioning of scenarios within the design process.

This unit is concerned with the theoretical framework of scenarios. While unit 7 “Scenarios’ development” is concerned with Scenarios as a process. This unit answers What and Why Scenarios while unit 7 tackles How scenarios

AIMS

The aim of the Scenarios units (unit 06 and unit 07) is to help students build the necessary knowledge needed to develop design scenarios. That aims of this particular unit as a theoretical foundation to scenarios is to

1. Supports you in identifying scenarios’ structure and foundational pillars. The purpose is to gear students with the basic elements of scenarios as a structure so that they reflect on their design researches or projects.

2. Identify the different types of design futures scenarios.
The aim is to provide a pool of possibilities and different typologies of design scenarios. What type is relevant to what purpose? When should a specific type be used instead of the others?

3. Learn how to generate design futures scenarios. Synthesizing the gathered future intelligence and putting them into

COMPETENCIES

Anticipatory Competency
The unit develops competency and skills for students in anticipating futures. It develops skills in understanding possibilities and projected timelines through scenarios generation.

Strategic Competency
Scenarios generation and futures trajectories help students to build strategic thinking skills and understanding of complex future situations.

Critical- thinking Competency
The unit develops critical thinking skills by unpacking and reflecting upon future possibilities. Scenarios encourage students to break down the elements of the present, identify patterns and project possibilities.

DEPTH OF DETAIL

LEVEL 01 – BACHELOR

Scenarios can be implemented in Design futures bachelor courses in order as contextual platform to position design projects within.

LEVEL 02 – MASTERS

In master’s level, scenarios can be used to tackle complexities of future issues in order to develop students’ awareness about global challenges.

LEVEL 03 – PhD

In PhD activities, scenarios can be used as a tool to envision possibilities, test it with experts or target users as a way to build knowledge through reflection on possible futures scenarios.

EXPECTED LEARNING OUTCOMES

A. Knowledge and understanding	-Understand the notion of design scenarios -Identify the different types of scenarios and use them adequately within the needed design process -Understand the concept of futures plurality and alternative futures.
B. Cognitive Skills	Develop the intellectual skills of anticipation and speculation for alternative futures scenarios.
C. Practical Skills	Learn how to generate scenario in a design project.
D. Generic Skills	-Understand speculative scenarios and design fiction proposals
E. Collaborative Skills	-Develop co-design and collective thinking skills about the futures

ACTIVITY

Activity A | Future Metaphors

Description: An activity developed by Draper Kauffman (1976) to orient students to futures thinking.
The basic concept of understanding futures is very ambiguous; and in many cases unclear to students. This exercise helps students to seeing the different and conflicting meanings of Futures as a concept.

Aim: Reflection and identification what does the word “future” mean to each one
Generating a discussion about the futures and how do we tackle future challenges
Understanding the plurality of futures

Method: Give students 4 metaphors of the future and let them try to interpret and reflect upon them the 4 metaphors are:

01- Future as a Roller Coaster on a moonless night: It moves in the dark, we can see each part as we come to it, we can see some parts of where we are heading to, but it doesn’t help as the future is predetermined an fixed over the path.

02- The Future is a mighty river: the force of the history flows without stop, carrying us with it, we attempt to change, but our attempts are just pebbles thrown in this river, they cause momentary splash and few ripples. But no difference. The river can change the path but only by natural disasters or massive concerted human efforts. By looking ahead, we can see sandbars and whirlpools and we can push the best path through any rapids.

03-The future is a Great Ocean: There are many possible destination and different paths for each destination. a good navigator takes the advantage of current changes, moves carefully in frog or uncharted waters. Adapts his course to the winds of chance. This ensure getting safely to your destination.

04-The future is entirely random: Every second, millions of things happen which could have happened in other ways and changed the future. Since everything is random, all we can do is to play the game, pray to the gods of fortune and enjoy what good luck comes our way.

Ask questions about:

Which metaphors best describes your idea pf futures? Which one is the most valid or realistic? What would be the consequences of one of the metaphors? What are the implications of on society assuming that truth of one metaphor instead of the others? Can one of them be right or wrong?

Activity B | Identifying polarities

Description: Use the gathered trends, signals and gathered insights about the futures in creating futures
Starting from the horizon scanning to identify issues and polarities of the polarity mapping. The polarity mapping is a way to generate scenarios by understanding the main drivers of change in around the issue under investigation. The polarity mapping tool is used to identify scenarios by creating four contrasting scenarios in regard to the high uncertain/high impact drivers.
Aim: Recognize and describe the future directions and polarities of particular issue under investigation.
Duration: 3-5 hrs.
Method: Please refer to IO4 Futures Design toolkit Polarities mapping

TOOLS AND DEVICES

Activity C | Four Archetypes

Description: Developed by Jim Dator, The 4 Archetypes is a method used to identify the uncertainties of the futures. It helps to investigate the assumptions about the direction of the future in regard to particular drivers of change. The 4 Archetypes are:
Grow, Collapse, Discipline and Transform.

Each one of them resembles a particular path the scenarios might be go.

Aims: Understand the plurality of futures
Generate different scenarios
Duration: 5-7 hrs
Method: Please refer to 4 Archetypes IO4-

TOOLS AND DEVICES

- **BRANCHING**
- **FUTURES WHEEL**
- **POLARITY MAPPING**
- **FOUR ARCHETYPES**

CASES AND EXPERIENCES

POFF: PoliMi Futures Fictions.

Polimi futures fictions is part of the concept design studio for master’s students of integrated product design at Politecnico di Milano

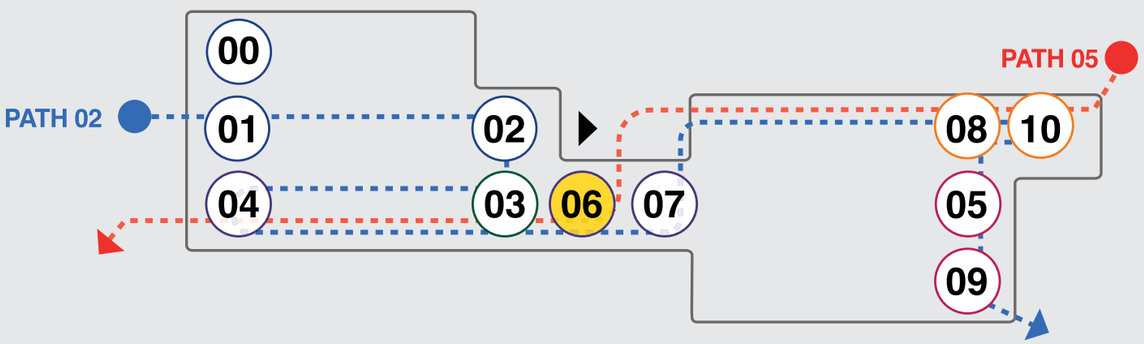
the aim of concept design studio is to stimulate the students for the definition of a product/service concept and scenario, valorize the experience and creative dimension.
The course – placed at the beginning of the Concept Design Studio – had the objective to open the envisioning capacity of the students. The course has adopted a Research through Design method in the conviction that the activity of designing artifacts (more or less consciously) is a way of learning and this – in a meta-knowledge system – is a way to uncover, or better let insights and new concepts emerge, the different steps of trend research and scenario building had initially triggered the student’s ability of exploring frontier topic and future perspectives through some specific tools and techniques. Rough prototypes have been developed and transformed into ‘performative artefacts’ or the so called ‘diegetic prototypes.’
The results are narrated through Design Fiction: a short movie’s narrative structure contextualizes new concept technologies with the futures’ social sphere.

Students worked in teams of 10 members over the course of 5 weeks that led to a future product concept for each team:

Challenge 01: Horizon Scanning; Challenge 2: Framing Signals; Challenge 03, Building Scenarios and Personas and Challenge 04: Design Fiction

Tools from the Futures Design Toolkit have been used and tested in PoliMi Futures’ Fictions course to test and evaluate the toolkit.

ROADMAP AND CONNECTIONS



The yellow color indicates the position of the current Unit.

UNIT CONTENT

01. What is a "Scenario" in Design Futures?
Definition, positioning and introduction to the unit

This section is concerned with what does the word "scenario" mean in design futures practice. The aim is to disambiguate the meaning for students and to facilitate the understanding of scenarios as a pillar in design futures practice.

Scenarios were originally developed to imagine possible visions of the future so that they be used as a tool for decision making and to map the possible implications and consequences of particular decisions (Wack, & Shell, 1970; RAND). Scenarios are built on constructed plots, at which the future can be imagined and experienced (Schwartz, 1991), they can be the representation of a future vision and they can answer the question of "what would be if?" (Manzini & Jegou, 2000). They are an elaboration of meta-projects in the form of storytelling.

Scenarios can call the attention in a persuasive and dramatic way to the wide probabilities and possibilities of the futures that can or might be considered. They accentuate and highlight the interaction between the psychological, social, economic, cultural, and political factors. Scenarios can be used as artificial "case histories and "historical anecdotes" to make some instances of situations that don't or didn't exist. (Kahn, 1967) Scenarios can be considered as a bridge between the analytically oriented foresight or planning and the creative visons of the future (Celaschi,2007). This is the intersection between design studies and futures studies where "design futures" as a practice lies.

02. Disambiguating the term

When it comes to scenarios, there are many interpretations that often gets confused with each other and sometimes used interchangeably. This section aims to showcase some of the different definitions for scenarios. The aim is to further the knowledge and understanding of the students about what does a scenario really mean.

UNIT CONTENT

A list of different definitions in a chronological order might be needed to distinguish the differences as follows

AUTHOR	DEFINITION
Howard et al., 2002	"Scenarios are 'sketches' of use that capture the context within which a system is used, the human actors involved and their objectives, the sequence of relevant actions and contingent outcomes. Though they can take many forms (e.g. storyboards, formal symbolic representations) typically they are encoded as textual 'vignettes', capturing a few moments in a user's life."
Ogilvy and Schwartz, 2004	"Scenarios are narratives of alternative environments in which today's decisions may be played out."
Kok, 2009	Scenario is "a story about the future that can be told in both words and numbers, offering an internally consistent and plausible explanation of how events unfold over time."
Goodier and Soetanto, 2013	"A scenario is a storyline comprising a range of interconnected and uncertain future events and their possible consequences.
Lelah et al., 2014	Scenarios are descriptions of possible futures that reflect different perspectives on the past, present and the future in order to improve the quality of decision making.
Celaschi, 2007	Scenarios are the elaboration of meta-projects in the form of storytelling, of one or more possible futures, aimed at defning the trajectories of innovation to conceptualize at the stage of product development. In the design world, scenarios are generally elaborated by maps, in a graphic format, which create a sort of topographical representation of innovation allowing, through the interpretation of strong and weak signals, to trace the trajectories of the project

03. Introduction to scenarios as a tool for explore futures plurality
The relevance of Scenarios as a tool for design futures

This section aims to position scenarios as a practical tool to be used in generating alternative futures. The plurality of futures and developing possible alternatives is an essential skill in design futures. In this section, students will learn how scenarios can support in the understanding of plural futures.

According to Manzini and Jégou (2000), Design oriented scenarios as a framework for "design and realization of new products and product-service systems" . In this framework scenarios can be developed on either an inductive or deductive approach, whether students can start from
a) Inductive: By developing scenarios from the gathered intelligence, signals, and trends of the future. Then, these collected knowledge can be segmented and clusters on the polarities map for example (see IO4- in Annex 01)
or b) Deductive: Students can start from the polarities created to develop scenarios on a selected polarization based on the project.

04. Elements of scenarios
Foundational pillars and structure of scenarios

In this section, students will learn the foundational pillars and structural elements of a scenario, how scenarios are formed? What are the main elements connected and how they are connected? Students will also learn what elements consolidate a strong and consistent design scenario.

Scenarios consist of several key elements that exist in one form or another in the various methodologies adopted that can be adopted in an educational sense. The basic idea behind scenarios is to collect the relevant information from a vast and wide

UNIT CONTENT

range of resources, then to interpret segment and organize this gathered intelligence in a meaningful and understandable form which is inform a future proposition in design. (Fahey & Randall 1998)

Evans (2003) constructs the basic elements as follows:
Current world: based upon data gathered from scanning of information forum the sources
Plot or story: what must happen for the scenario end state to arise
End State: The conditions and circumstances that prevail at the end of the scenario period
Logics: the explanation or rationale for the content of the plot

05.Rationale and purpose in design futures
The aims of creating a scenario and rationale behind it.

This section explains the rationale behind design scenarios, and the purpose of developing scenarios within a design future educational module. In what cases to use and for which objectives.

Scenarios can be used in the design driven process to present alternative and plural scenarios as well as presenting disruptive vision of strategy, product, or services:

Zindato (2016) introduced the following aims and rational for design scenarios

• To present a set of alternative futures, with their implications, opportunities, and risks
• To support and orient the decision-making process
• To involve all the actors in the same process using a common language
• To obtain a convergence towards the same option
• To analyze different stage of the process, from a context to a product.

06.Different types of scenarios
Typology of scenarios in relevance to design purpose

This section explains the different types of scenarios, what type to be used in which context and for which purpose. The aim is to provide you with the essential understanding about the different typology of scenarios.

Exploratory Scenarios

Exploratory Scenarios aim to identify new areas of opportunity, explore alternative futures. They are often used in as an answer to the enquiry of “what is there?”

Strategic Scenarios
Strategic scenarios are the type that can be used at preliminary stages of the design process, at this preliminary phase, scenario developers can put context and direction to where a design project can be directed or where it should stand.

Opportunities Scenarios
Opportunities Scenarios are a type of scenarios that has double role, one role is to create a filter through which one can identify possible trajectories of innovation for products or services. The other role is to be developed as a tool to communicate design thinking process and to re-orient decision-making process

Concept Scenarios
Concept Scenarios are the most popular type of scenarios. In design, concept scenarios can be developed to showcase a product and service as well as showcasing the context around it. It makes it easier for target audience to understand the scenarios, it makes it digestible and understandable.

Focus Scenario
Focus scenarios can be used to define a particular path, agreed-on by the stakeholders and selected by the designer, it

UNIT 06 - SCENARIOS GENERATION

UNIT CONTENT

aims to define one path rather than focusing on alternatives. It aims to explore and define one context.

Testing Scenario
Testing Scenarios are the scenarios used to hypothesize and probe about a particular concept, solutions, usage, or function. It aims to test several alternatives or different scenarios so that th end users might be involved.

07. Scenarios within the design process
Positioning of design scenarios within the design futures practice.

In this section, you’ll understand how scenarios can be positioned at the different stages of the design process. You’ll also learn the different ways to use scenarios in a design project and how to situate it flexibly as per project objectives. Scenarios can be positioned within the design/research process at six different stages:

A. Before problem (enquiry) definition
B. During problem(enquiry) definition
C. During the definition of opportunities and trajectories of innovation
D. After concept generation
E. After electing possible solutions for product development
F. During the testing phase

While structuring the course, educators can suggest the positioning of scenarios in the overall process. Different types of scenarios can be placed as educational activities and exercises during the design process. (e.g in design fiction, students can use exploratory scenarios in the beginning of the process while they can create a concept scenario as the foundational basis of the design fiction video)

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UNIT 06 - SCENARIOS GENERATION

LIST OF TOOLS AND DEVICES

IO1 LISTS FOR WORDS
IO1 FRAMES FOR FUTURES
IO1 FUTURES DESIGN LITERACIES MATRIX
IO1 WORD-O MAP
IO1 NEXUS
IO1 SEMANTIC CATEGORIES
IO1 BALLUSION
IO1 REFLEXICON
IO1 FUTURES DESIGN DISCOURSE MOVES
IO1 CHIMERA
IO1 NEOLOGISER
IO1 UNMAKER

IO2 AFFECTIVE MODES
IO2 PERSPECTIVES
IO2 STANDPOINTS
IO2 PILLS (STEWARDSHIPS)
IO2 PILLS (CAPACITIES)
IO2 PILLS (BELIEFS)
IO2 PILLS (CHARTS)
IO2 PILLS (CRISES)
IO2 PILLS (STORIES)
IO2 PILLS (STRATEGIES)
IO2 PILLS (TRAJECTORIES)
IO2 PILLS (UNKOWNS)
IO2 PILLS (VISIONS)

IO3 ATLAS OF WEAK SIGNALS
IO3 ALTERNATIVE PRESENTS
IO3 SELF-REFLEXIVE ACTIVATIONS
IO3 1PP DESIGN INTERVENTIONS
IO3 DESIGN SPACES

IO4 HORIZON SCANNING CANVAS
IO4 CIPHER
IO4 PESTLE
IO4 VERGE
IO4 FUTURE FORCES
IO4 FPP CANVAS
IO4 BRANCHING
IO4 FUTURES WHEEL
IO4 POLARITY MAPPING
IO4 4 ARCHETYPES
IO4 SCENARIO CANVAS
IO4 A DAY IN A LIFE
IO4 STORYWORLD
IO4 TIME TRAVELER
IO4 PALMISTRY
IO4 PROVOTYPING
IO4 STORYBOARD
IO4 FUTURE TELLING
IO4 FUTURE FILMING

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