FUEL4DESIGN

Co-funded by the
Erasmus+ Programme
of the European Union

FUTURES LITERACY METHODS

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

FUEL4DESIGN

Co-funded by the
Erasmus+ Programme
of the European Union

FUTURES LITERACY METHODS

Co-funded by the
Erasmus+ Programme
of the European Union

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

Co-funded by the
Erasmus+ Programme
of the European Union

FUTURES LITERACY METHODS

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

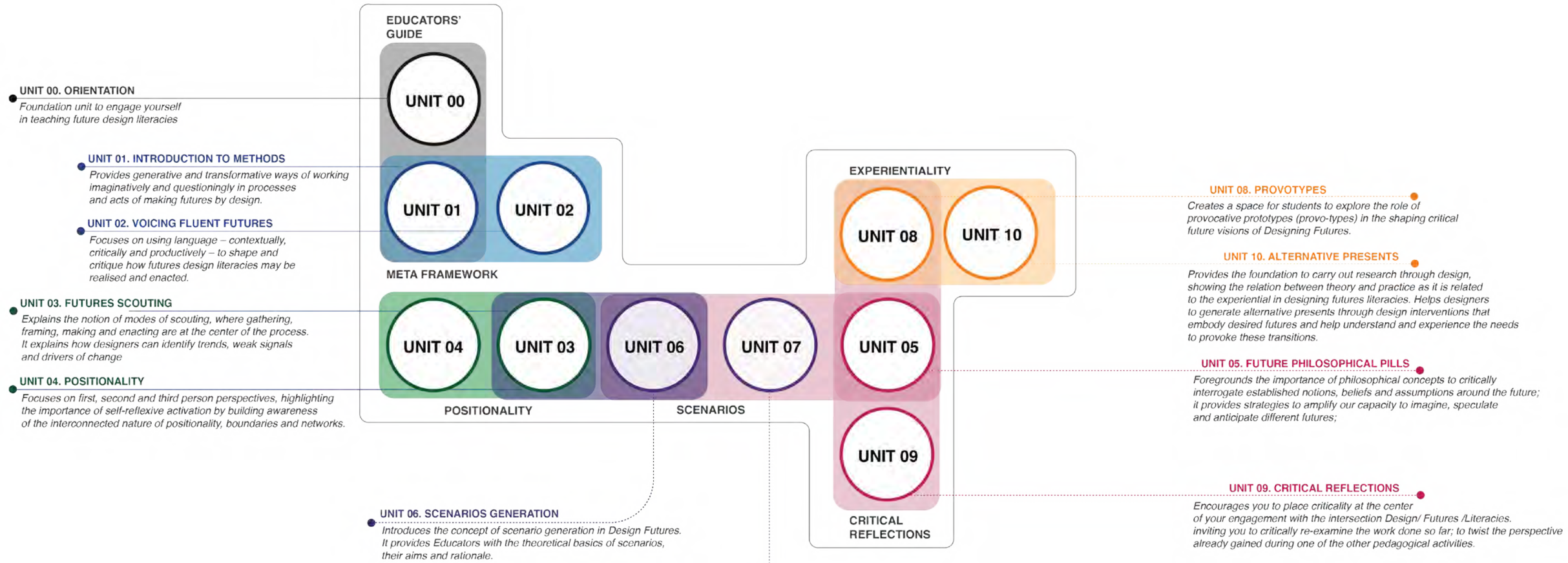
Learning Future Literacies Methods concerns both the preparation of a complete Futurist Designer training course and the design of small Independent Learning Units to cross breed design studios or speculative/ theoretical courses. The Units are specifically created to cater to the needs of future literacy 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.

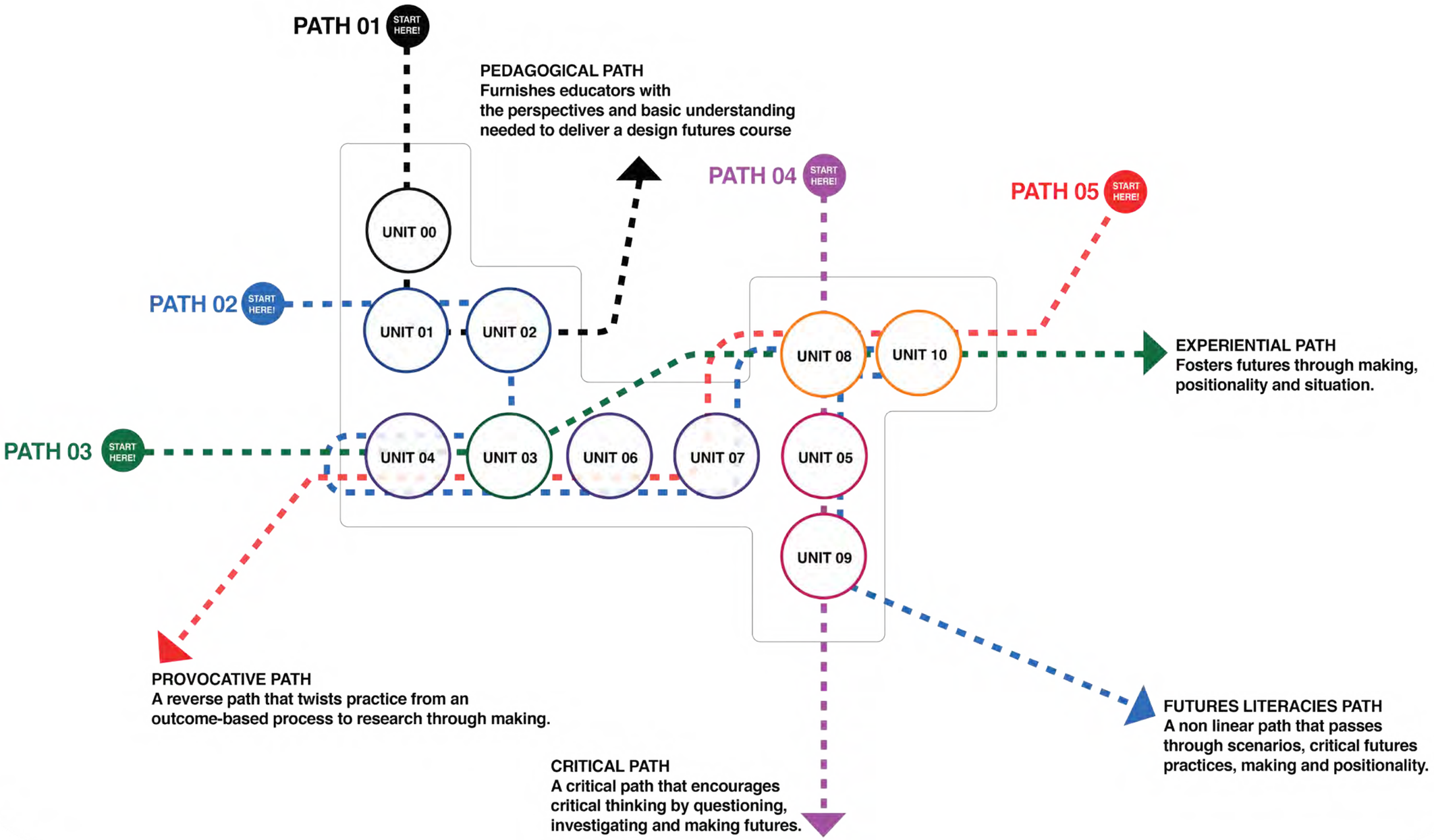
UNIT 08. PROVOTYPES
Creates a space for students to explore the role of provocative prototypes (provo-types) in the shaping critical future visions of Designing Futures.

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.

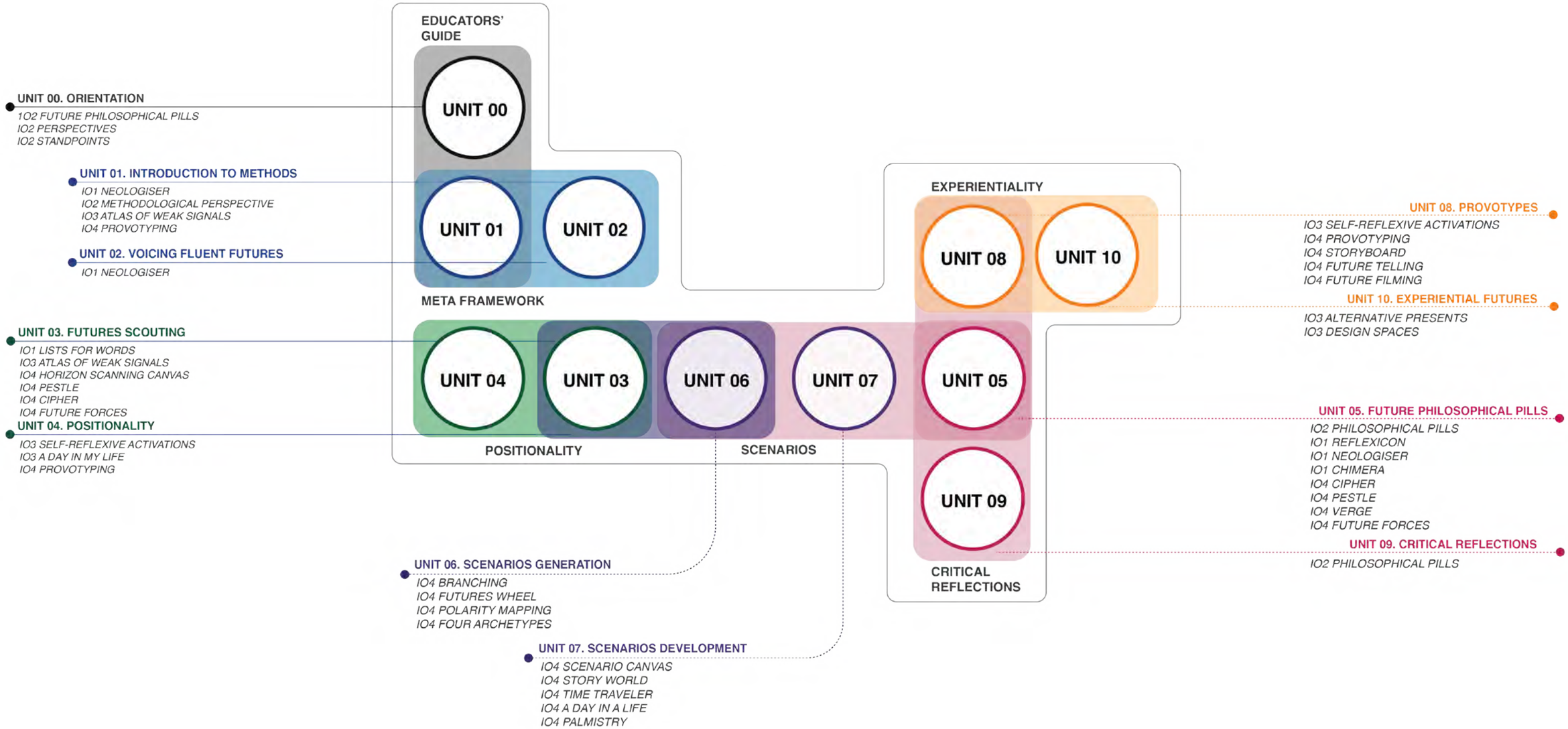
UNIT 05. FUTURE PHILOSOPHICAL PILLS
Foregrounds the importance of philosophical concepts to critically interrogate established notions, beliefs and assumptions around the future; it provides strategies to amplify our capacity to imagine, speculate and anticipate different futures;

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



FUEL4DESIGN

FUEL4DESIGN

Co-funded by the
Erasmus+ Programme
of the European Union

FUTURES LITERACY METHODS

UNIT 00
ORIENTATION

Co-funded by the
Erasmus+ Programme
of the European Union

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

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)

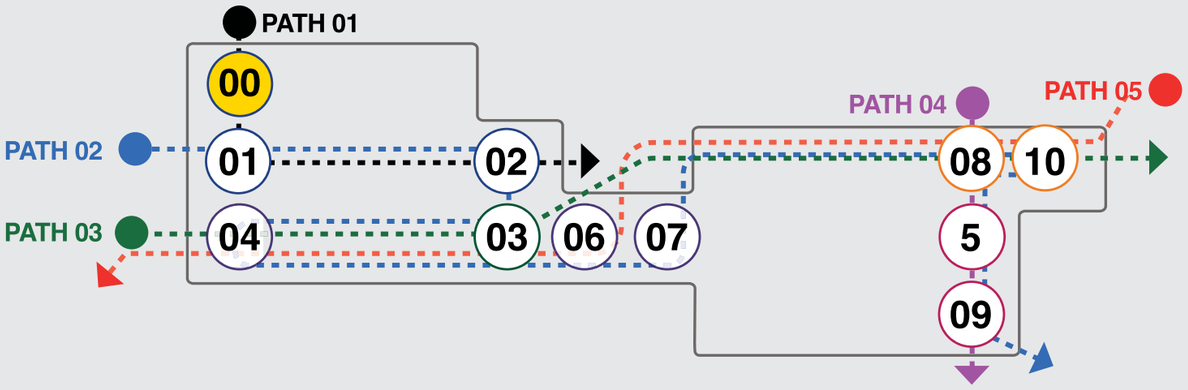
- Roles and Rules: who are we? Who are you?

- 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

INDICATIVE BIBLIOGRAPHY

British Educational Research Association (2018) Ethical Guidelines for Educational Research.4thed. Available at: https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018

Chalmers, J. (2017) 'The Transformation of Academic Knowledges: Understanding the Relationship between Decolonising and Indigenous Research Methodologies', Journal of the Society for Socialist Studies, 12(1), pp. 97-116.https://doi.org/10.18740/S4GH0C

Cousin, G. (2009) Researching learning in higher education: an introduction to contemporary methods and approaches. London: Routledge.

Curry, P. (2017) 'The Enchantment of Learning and 'The Fate of our Times'. In Voss, A. and Wilson, S. (Eds.) Re-Enchanting the Academy. Seattle: Rubedo Press, pp. 33-51. Available at:http://www.patrickcurry.co.uk/papers/The%20Enchantment%20of%20Learning%20(print%20version).pdf

D'Olimpio, L. (2019) Ethics Explainer: Ethics of Care. The Ethics Centre[. Online]. 16 May. Available at: https://ethics.org.au/ethics-explainer-ethics-of-care/

Farías, I. and Wilkie, A. (2015) (Eds.) Studio Studies: Operations, topologies and displacements. London: Routledge.

Frodeman, R. and Mitcham, C. (2007) 'New Directions in Interdisciplinarity: Broad, Deep and Critical', Bulletin of Science, Technology & Society, 27(6), pp. 506-514.
https://doi-org.arts.idm.oclc.org/10.1177/0270467607308284

Gurukkal, R. (2018) 'Interdisciplinary Approach', Higher Education for the Future, 5(2), pp. 119-121. https://doi.org/10.1177/2347631118769398

Hamdan, A.K. (2009) 'Narrative Inquiry as Decolonising Methodology', InterActions: UCLA Journal of Education and Information Studies, 5(2). Available at:https://escholarship.org/uc/item/6mt5893k

Holmwood, J. (2018) 'Race and the Neoliberal University.' In Bhambra, G. K., Gebrial, D. and Nişancıoğlu, K. (Eds.) Decolonising the University. London: Pluto Press, pp.37-52.

Kuby, C. R. and Christ, R. C. (2018) 'An Ethico-Onto-Epistemological Pedagogy of Qualitative Research: Knowing/Being/Doing in the Neoliberal Academy', in Bozalek, V., Braidotti, R., Shefer, T. and Zembylas, M. (Eds.) Socially Just Pedagogies. London: Bloomsbury, pp.131-147.

Lury, C. (2020) Problem Spaces: How and Why Methodology Matters. Cambridge: Polity Press.

Lutsky, K. and Burkholder, S. (2017) 'Curious Methods', Places Journal. Available at: https://placesjournal.org/article/curious-methods/ (Accessed: 8 December 2020).

Spatz, B. (2017) 'Embodied Research: A methodology', Liminalities: A Journal of Performance Studies, 13(2). Available at:http://liminalities.net/13-2/embodied.pdf (Accessed: 9 December 2020).

St. Pierre, E. A. (2019) 'Post Qualitative Inquiry: The Refusal of Method and the Risk of the New', in Qualitative Inquiry, July 2019, pp.1-7. https://doi.org/10.1177/1077800419863005

FUEL4DESIGN

Co-funded by the
Erasmus+ Programme
of the European Union

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

FUEL4DESIGN

FUTURES LITERACY METHODS

UNIT 07
SCENARIOS DEVELOPMENT

Co-funded by the
Erasmus+ Programme
of the European Union

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london

DESCRIPTION

This unit is concerned with scenario development in design futures. The unit furnishes educators with 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. This unit should be connected with Scenario Generation (Unit 06); In which Scenarios are explained in terms of theory and rationale. While in this unit, scenarios are introduced and explained in terms of the methodological framework.

AIMS

The aim of this unit is to introduce the methodological framework of developing design futures scenarios, it furnishes educators with tools, devices and directions that would support them in formulating developing their courses. Aims can be summarised as follows:

1. To explain how to develop design futures scenarios. Explaining to students how to frame scenarios and to connect them with the horizon scanning exercises (unit 03).

2. To provide educators with tools and devices to be used in developing scenarios. Furnish educators with the extra tools and devices to facilitate scenario generation in design future courses

3. To explain how to transform scenarios from verbal to visual
Focusing on the process of taking scenarios from its literal nature to visual and visceral design output. The purpose is to gear educators with the basic elements needed to facilitate scenarios development activities.

4. To introduce Speculative design and Design fiction scenarios as alternative futures practices. The purpose is to accentuate and highlight alternative scenarios typologies of critical nature such as “what if” scenarios the aim is to highlight implications and consequences of present actions and events.

UNIT 07 - SCENARIOS DEVELOPMENT

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 concept of futures plurality and alternative futures. -Learn how to transform scenarios into a design output.
B. Cognitive Skills	-Develop the intellectual skills of anticipation and speculation for alternative futures scenarios.
C. Practical Skills	-Learn how to develop and generate scenario in a design project. -Create fictional persons and position them in design futures projects
D. Generic Skills	-Understand speculative scenarios and design fiction proposals
E. Collaborative Skills	- Work cooperatively in generating futures vision building on shared knowledge and cultural differences.

ACTIVITY

Activity A | Scenario Timeline

Description: Building a timeline for sequential possible events (ones are prospective, some are fictional and some are consequences of present events or occasions)

Aim: To understand how plural futures can be formed by consequences and implications of particular events.
To formulate a coherent scenario that is built over a time period

Method:
1. Define the timescale (how far in the future)
2.Segment and organize the outcome of the horizon scanning activities and place them on the timeline (Unit 03)
3.Develop the evolution of trends over time by highlighting, events, implications and consequences.
Duration: 6-8 Hrs.

Note: Educators can give some constraints and leave others

Activity B | Scenario Building Canvas (IO4-11) See Annex

Description: Scenario building canvas is a device that can be used to support writing design scenarios fluently and translate them into visuals. The structure of the canvases uses five pillars (Immediacy, Sensoriality, Provocation, Consistency, and Coherence) these pillars facilitate scenario development process.
Aims: Developing coherent and consistent design futures scenarios.
Breaking down the elements of scenario and turning them into visual elements.

Method: See Scenario section in the Futures Design toolkit here

Students should be encouraged to use visual material in describing the notions in the scenario canvas, this includes (Sketches, images, material boards, film, and rough prototypes)
Duration: 10 Hrs.

Activity C | Future Personas

Description: Time traveler helps the team to develop profiles of the future by relying on current evidence and historical facts. The resulted profile is deeply grounded in reality. This tool helps you to create a persona that evolved over time and helps you to mark important events in the persona's life.

Aims:
The aim of future persona is to further deepen the scenario through the creation of a fictional character that is situated in a specific point over the developed scenario timeline. The purpose is to contextualize this particular point of time and to imagine how the persona world would look like in detail.

Method:
See Future persona section in the futures design toolkit here
Duration: 6-8 Hrs.

UNIT 07 - SCENARIOS DEVELOPMENT

TOOLS AND DEVICES

• SCENARIO CANVAS

. STORY WORLD

• TIME TRAVELER

• A DAY IN A LIFE

• PALMISTRY

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

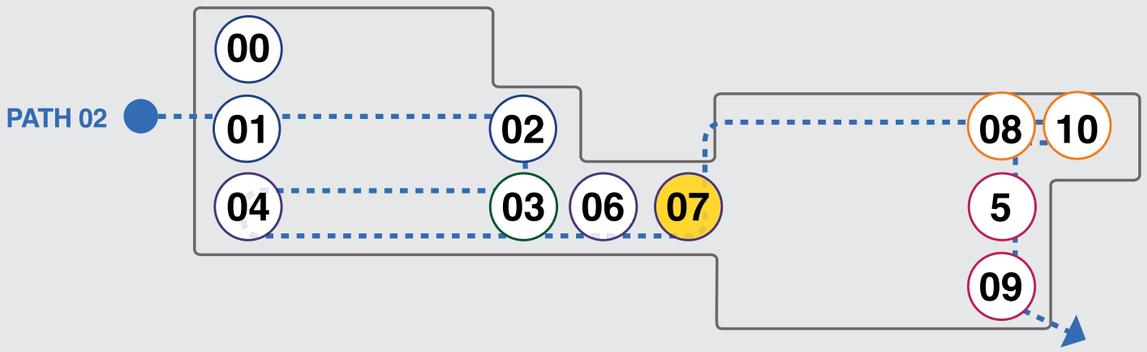
the aim of concept design studio is to stimulate the students for the definition of a product/service concept and scenario, valorize the experience and creative dimension.

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 artefacts (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. Scenario building process

Scenario generation & development structure and phases
This section is explaining how to build and develop design scenarios. Where to start and what to include. Besides this, it introduces the essential steps to formulate a scenario.
The different modes of building scenarios are varied and can be selected by the educator based on the design project or design brief.

Scenarios are originally created in the Futures and Foresight studies. There are numerous Scenario planning methods that are proposed in order to methodologically create a framework for scenarios' development. For instance, Rowe and Right (1999) developed a Delphi method that includes several expert interviews to take opinions and validate insights which can then be complied in a scenario. Another example is the TAIDA method which indicated five steps for building scenarios: Tracking, Analyzing, Imaging, Deciding, and Acting (Lindgren and Bandhold, 2009). A different example would be the method developed by (Wright and Cairns, 2011) which introduces scenarios as a co-operative work which can be carried out in a group. The steps to develop scenarios in this case is to focus on sequential process to define an issue of study, then to creating a scenario timescale. After this scoping and then the last phase is to develop the scenario.

To conclude, Scenarios as a generic process can be summarized in the following generic structure according to Cornish (2004):
"(i) studying the facts of a situation,
(ii) selecting something that might happen, and (iii) imagining the various ways for that development to occur and the sequence of events that it might follow"

Scenarios do not attempt to reshape the present but rather they "provide distinctive turning points from which to study how particular events, situations or occasions are happening and what forces are shaping the evolution and development of such events. Why might they evolve one why this way rather than the other way? (Fahey, 2003)

Scenarios as Visioning

Scenarios as visioning exercise is used to identify set of future alternatives, rather than a univocal one. This is relevant to back-casting (Voros, 2003) where the trajectories can explain and reveal many insights about the creation date of scenarios rather than the target date (List, 2004).

In his book "A Noticer in Time" (2019), Jim Dator defines Scenarios as (Alternative futures). He puts these components as futures visioning process:

1. Appreciating the past
2. Understanding the present
3. Forecasting aspects of the futures
4. Experiencing Alternative Futures
5. Envisioning the Futures
6. Creating the futures
7. Institutionalizing Futures research

For Dator, Scenarios (or Alternative Futures) are usually developed to help a community or organization to plan forward and move towards a preferred future (Dator, 2019)

Scenarios as an ongoing process
Elenora Masini (2000) discuses that drawing scenarios is an ongoing process, it's a continued quest for data to compare "perceptions with reality". This process needs all the participants to thoroughly explore the existing knowledge, trends, and weak signals. Critical reflection is essential taking care not to reproduce the present or the status quo. The process of formulating scenarios needs imagination, with a balance between the factors and parameters to make sure that the analysis is rational, and the scenarios interests are validated collectively.

02. From verbal to visual

Turning written and verbal scenarios to digestible design output

This section presents the process of turning the developed scenario into a visual output. Turning scenarios into solid and visually understandable material is an essential skill for designers to communicate scenarios. This is a foundational element for creating discussions and conversations around the developed scenario.

Using visual elements or metaphors in Scenarios is central to make the scenario memorable and understandable. For some practitioners, the starting point can be the visual representation of the scenario which they use as a method to create the transition to the scenario world (Flowers, 2003)

Other ways to present ideas and to find inspiration through art, film, science fiction and some fiction works. This helps in hybridizing, exploring, and borrowing some other visual references from other adjacent arenas. In design, turning scenarios into a visual communication tool is fundamental. The elements of scenarios can be represented visually by

a- Illustration of specific events/occasions over the timeline of projected scenarios
b- Visual research of relevant references, keywords and concept of the scenarios being developed
c- Collages of materials and textures to tangibilize scenarios
d- Infographic representation of projected statistical data
e- Scenarios as clusters of images
f- Scenarios as storyboards

In FUEL4 Design, we developed a device to facilitate developing scenarios. This tool can be combined with visual metaphors along with the literal or verbal description of the scenario, it's divided into five sections as follows:

IMMEDICAY: The scenario should be understood quickly, its meaning must be unique, non misleading, and engaging. The images must be strongly evocative, vivid, must be both rapid and icastic (Calvino, 1988)

UNIT CONTENT

SENSORIALITY: Images and words that make up a story should be able to produce

certain effect to provoke emotions, evoke sound or tactile through the combination of various elements: cutting, framing and juxtaposition of contents emphasize meaning.

CONSISITENCY: A scenario can often be hard to believe, sometimes for the very distant horizon, sometimes to the “disruptive” effect that wants to produce. If it is oriented towards a future dimension is not important that it is probable, but plausible.

COHERENCE: The scenario must always show its internal consistency. It is possible to decontextualize the use of a service from one place to another but at that point the whole narrative must comply with the new choice.

PROVOCATION: The stories should fascinate the audience and persuade it to act in relation with the long-term goals, making people feel empathetic and then motivate you to adhere to the scenario. The scenario is much more effective when the narrative has the power to break stereotypes.

03. Speculative Design and Design Fiction scenarios

Speculation-led scenarios

This section explains the process of creating design scenarios by using speculation. It introduces the speculative-led futures scenarios that aim at activating the critical aspects in design futures. This section introduces speculative design and how and why criticality should play a role in designing futures.

The scenarios of Speculative design and Design fiction can be generally described by being “critical”: this doesn’t mean that it should be either negative or positive, utopian, or dystopian. They are characterized by being analytical, reflective, and comprehensive. (See unit 9 for further

explanation on critical reflections in design futures)

Scenarios lies the basis and the platform for creating speculative design or design fictions as they are the main building unit behind critical futures proposals.

Dunne & Raby the researchers who coined the term Speculative design define it as an activity where conjecture is as good as knowledge, where futuristic and alternative scenarios convey ideas, and where the goal is to emphasize implications of “mindless” decisions for mankind.”
The aim of speculative design is to explore the borders of the problem not to find a solution for the problem. It aims to explore the consequences and implications and to highlight them. Dunne & Raby accentuated that designers should “act as catalysts for public debate and discussion about the kinds of futures people really want” (Dunne & Raby, 2013).

Speculative design uses a “What if scenario” the purpose of a what if scenario is imagine possible alternative futures from a critical perspective. It aims to reshape the relationship with the future, it’s focus is to generate insights about future rather than materializing or visualizing products or service (Lukens & Disalvo, 2011) “It is not only to encourage contemplation on the technological future but can also provide a system for analysing, critiquing and re-thinking contemporary technology” (Auger, 2014)

Design Fiction
Design Fiction is an adjacent practice to Speculative Design. It is often defined as the “deliberate use of diegetic prototypes to suspend disbelief about change” (Sterling, 2012). In this, fiction plays the role of being a medium for enquiry, it is here “not

to show how things will be but to open up

a space for discussion” (Dunne & Raby 2013,). Besides using diegetic prototypes (which are prototypes that showcase the changed world not the fiction itself as it doesn’t tell a story), it uses media and video, to showcase and tangibilize the scenario, it forms a path between the today and the world that is create in the scenario. This makes the audience see the scenario as a believable possibility that might happen, thus provoking the debate and discussion about possibilities. Hales (2013) notes that Design Fiction uses “the power of media design to craft and deploy compelling visions of the future”

The relationship between Design and fiction evolved as an overlap between paths of (technology, art, science fiction (Celi and Formia, 2017), in order to find opportunities, for design, “to re-imagine how the world may be in the future”. Design fiction has the power to experiment with technology, science and situations that are yet to come, their aim is to “create a discursive space within which new forms of cultural artefact (futures) might emerge” (Lindley and Coulton, 2015)

Design fiction and its scenarios can be used in many cases in to showcase possible alternative futures. It can produce knowledge to by research through design approach (Coulton et al., 2016) it can also be included in the contextual research phases of some other design practices.

05. Personas
Creation of a scenarios-based personas

This section explains how to position personas in design scenarios. Educators might introduce the features of personas and how to create them. It also explains how to develop solid connections between the fictional personas and the scenario under development.

UNIT 07 - SCENARIOS DEVELOPMENT

The creation of a persona can be situated in the projected scenarios. This is very crucial to make sense of the scenarios

from the eyes or perspective of a particular character (either human or non-human) this helps in seeing the scenario from a specific perspective(s). The actor in a scenario also helps in the creation of situations to be used in further applications of the design process (Provo-types or experiential futures for example)

Personas are “Fictitious characters that represent the needs and requirements of larger groups of users in terms of their goals and personal characteristics (Cooper and Reimann 2003; Cooper 1999; Pruitt and Adlin 2006).

Please refer to Futures Design Toolkit 12-15 for further explanation and assisting devices.

UNIT 07 - SCENARIOS DEVELOPMENT

INDICATIVE BIBLIOGRAPHY

Auger, J. (2013). Speculative design: Crafting the speculation. Digital Creativity, 24(1), 11–35. https://doi.org/10.1080/14626268.2013.767276

Adlin, T., 2010. The Persona Lifecycle. Morgan Kaufmann.

Candy, S. (2010). Beyond Utopia and Dystopia. The Futures of Everyday Life : Politics and the Design of Experiential Scenarios, July, 22–60. https://doi.org/10.13140/RG.2.1.1840.0248

Candy, S., & Potter, C. (2019). Design and Futures (Issue December).

Calvino I. (1988), Six Memos for the Next Millennium. Harvard University Press, Cambridge

Coulton, P., Lindley, J., & Akmal, H. A. (2016). Design Fiction: Does the search for plausibility lead to deception? DRS2016: Future-Focused Thinking, 1(June). https://doi.org/10.21606/drs.2016.148

Cooper, A. and Reimann, R., (2003). About face 2.0. Indianapolis, Ind: Wiley.

Cornish, E (2004) Futurino: The Exploration of the Future. World Futurist Society, USA.

Dator, J., (2019). Jim Dator: A Noticer in Time. Cham: Springer International Publishing.

Dunne, A., & Raby, F. (2013). Speculative Eveything. In The MIT Press (Vol. 91).

Hales, D. (2013). Design fictions an introduction and provisional taxonomy. Digital Creativity, 24(1), 1–10. https://doi.org/10.1080/14626268.2013.769453

Hines, A., & Danila Zindato. (2016). “Designing Foresight and Foresighting Design.” World Futures Review.

Lindley, J., & Coulton, P. (2015). Back to the future: 10 years of design fiction. ACM International Conference Proceeding Series, 210–211. https://doi.org/10.1145/2783446.2783592

Lindley, J. (2016). A Pragmatics Framework for Design Fiction. April. https://doi.org/10.7190/ead/2015/69

Lindgren, M. and Bandhold, H., (2010). Scenario planning. New York, NY: Palgrave Macmillan.

List, D (2004) Multiple pasts, converging presents, and alternative futures. Futures, Vol. 36, pp. 23-43.

Lukens, J., & DiSalvo, C.F. (2011). Speculative Design and Technological Fluency. International Journal of Learning and Media, 3, 23-40.

Masini E.B., Vasquez J.M. (2000), Scenarios as Seen from a Human and Social Perspective. In Technological Forecasting and Social Change 65, 49–66 (2000), Elsevier Science Inc., New York, pp. 49-66

Masini, E. B. (2001). Futures studies in Italy and the limits to growth. Futures, 33(1), 21–26.

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

EXTENDED REFERENCES LIST

Mark Blythe. 2014. Research through design fiction: narrative in real and imaginary abstracts. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14). Association for Computing Machinery, New York, NY, USA, 703–712.
DOI: https://doi.org/10.1145/2556288.2557098

Candy, S. (2010). The Futures of Everyday Life: Politics and the Design of Experiential Scenarios. University of Hawaii at Manoa.

Candy, S., & Dunagan, J. (2017). Designing an Experiential Scenario: The People Who Vanished. Futures, 86, 136-153.

Hook, K., Caramiaux, B., Erkut, C., Forlizzi, J., Hajinejad, N., Haller, M., Hummels, C., Isbister, K., Jonsson, M., Khut, G., Loke, L., Lottridge, D, Marti, P, Melcer, E., MuÌˆller, F., Petersen, M., Schiphorst, T., Segura, E, StalŠhl, A., SvanÃ¦s, D., Tholander, J., Tobiasson, H. Embracing First-Person Perspectives in Soma-Based Design. Informatics 5, 1 (Feb. 2018), 8.DOI: https://doi.org/10.3390/informatics5010008

Krogh, P. G., Markussen, T., & Bang, A. L. (2015). Ways of drifting—Five methods of experimentation in research through design. In ICoRD'15–Research into Design Across Boundaries Volume 1 (pp. 39-50). Springer, New Delhi.

Andrés Lucero, Audrey Desjardins, Carman Neustaedter, Kristina Höök, Marc Hassenzahl, and Marta E. Cecchinato. 2019. A Sample of One: First-Person Research Methods in HCI. In Companion Publication of the 2019 on Designing Interactive Systems Conference 2019 Companion (DIS '19 Companion). Association for Computing Machinery, New York, NY, USA, 385–388.
DOI: https://doi.org/10.1145/3301019.3319996

Angella Mackey, Ron Wakkary, Stephan Wensveen, Annika Hupfeld, and Oscar Tomico. 2020. Alternative Presents for Dynamic Fabric. Proceedings of the 2020 ACM Designing Interactive Systems Conference. Association for Computing Machinery, New York, NY, USA, 351–364.
DOI: https://doi.org/10.1145/3357236.3395447

Miller, R. (Ed.). (2018). Transforming the Future: Anticipation in the 21st Century (1st ed.). Routledge. https://doi.org/10.4324/9781351048002

Schadler, C. (2017). Enactments of a new materialist ethnography: Methodological framework and research processes. Qualitative Research, 19(2): 215-230.

Wakkary, R., Odom, W., Hauser, S., Hertz, G. & Lin, H. (2015). Material speculation: Actual artifacts for critical inquiry." In Proceedings of The Fifth Decennial Aarhus Conference on Critical Alternatives, (pp. 97-108). Aarhus: Aarhus University Press.

Brandt, E., Binder, T. & Sanders, E. (2013). 'Tools and techniques: Ways to engage telling, making and eEnacting'. In J, Simonsen & T. Robertson (eds.). International Handbook of Participatory Design. New York: Routledge. 145-181.

Buchenau, M. & Suri, J.F. (2000). Experience prototyping. In Proceedings of DIS'00. NY: ACM. pp. 424–433.

Co-funded by the
Erasmus+ Programme
of the European Union

FUEL4DESIGN

Future Education and Literacy for Designers (FUEL4Design) aims at developing knowledge, resources and methods to help young designers designing for complex tomorrows. FUEL4Design builds on an extensive research programme conducted by leading universities and experts in Europe.

www.fuel4design.org

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

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

ELISAVA
Escola Universitària de Barcelona
Disseny i Enginyeria

ual: university of the arts london