



FUTURES LITERACY METHODS



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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.

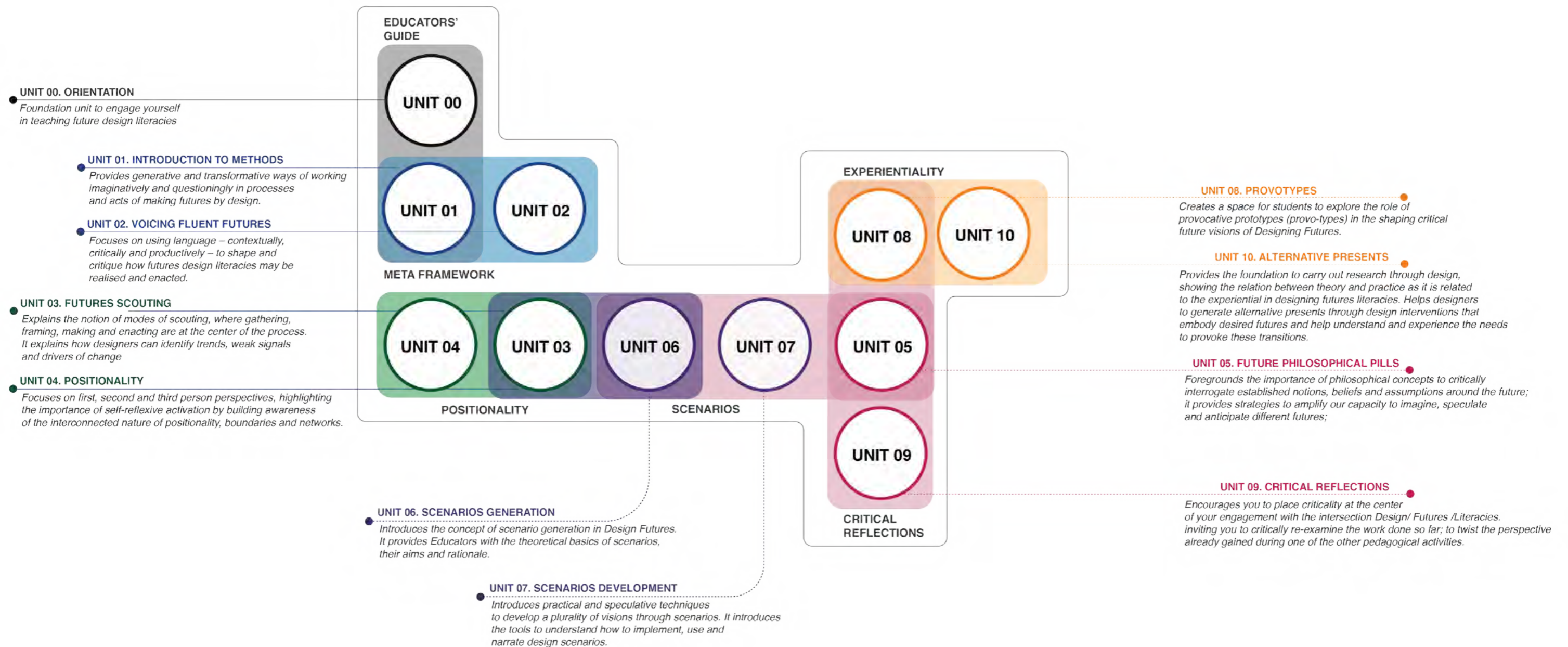
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EDUCATORS' GUIDE TO FUTURES LITERACIES METHODS AND METHODOLOGIES

THE ROAD-MAP

Connections and overlaps between the units

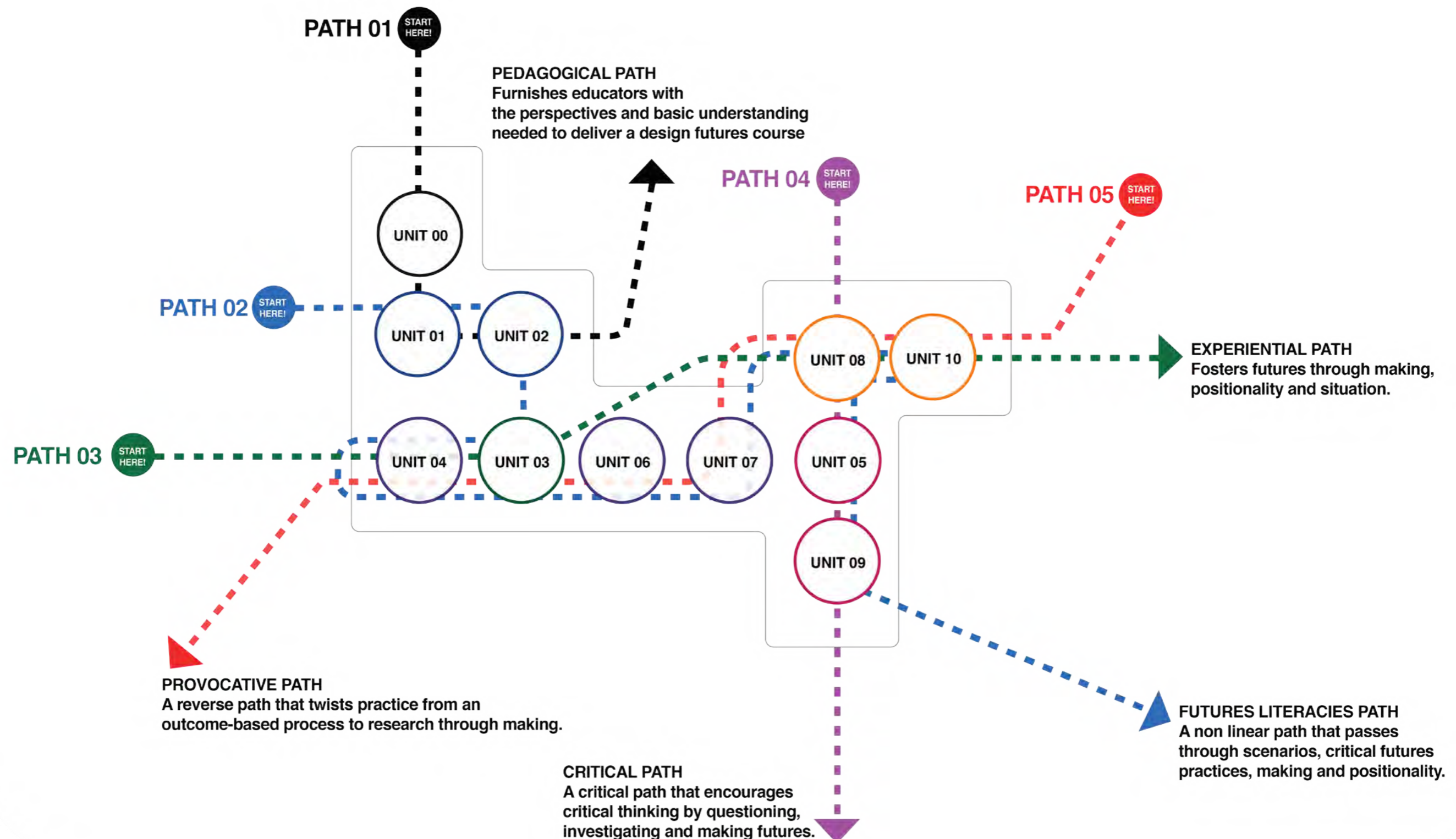


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TO FUTURES LITERACIES METHODS AND METHODOLOGIES

THE PATHS

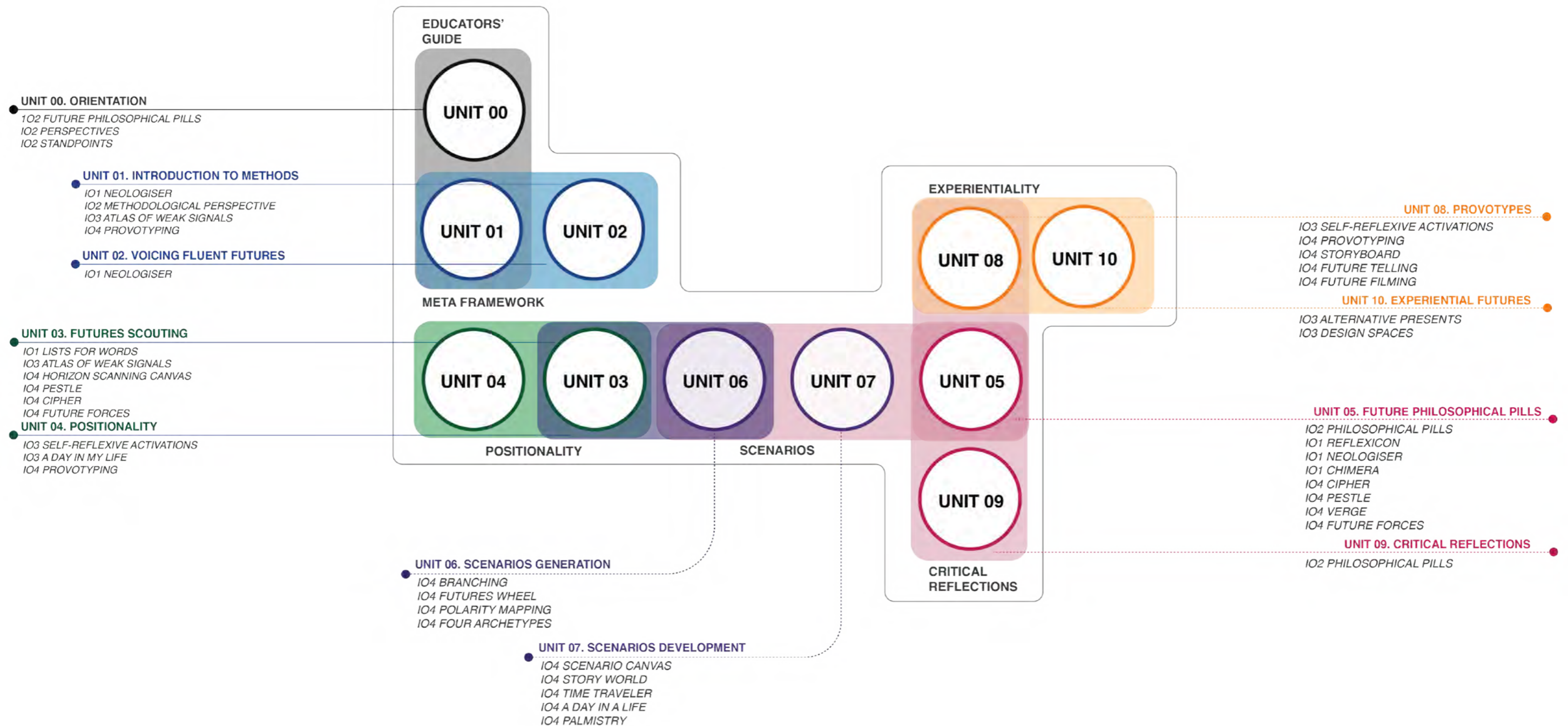
Suggested pedagogical paths through the units



EDUCATORS' GUIDE

TO FUTURES LITERACIES METHODS AND METHODOLOGIES

TOOLS AND DEVICES





FUTURES LITERACY METHODS

UNIT 00 ORIENTATION



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

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.

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.

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).

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 heightened 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?

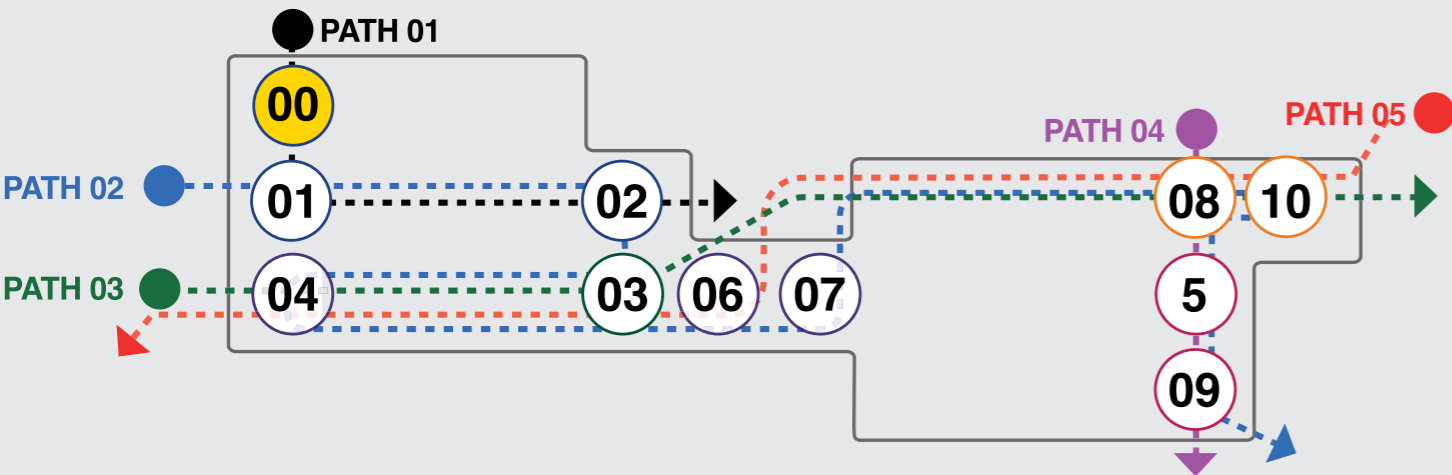
- Time: what is the timeframe you want/can allocate to their learning to ? Eg 2 hours? 2 days?

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.

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GLOSSARY

TERM:

TERM:



FUTURES LITERACY METHODS

UNIT 03 FUTURES SCOUTING



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DESCRIPTION

This unit 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 - early indicators of change that have the potential to trigger major events in the future - and drivers of change by positioning themselves closer to the researched issues or topics.

It enables the relationship between design and scouting. It connects “immersive scouting” with possible design actions. It shows the connections and possibilities, methods, and tools as well as possible outcomes.

The subject of this unit allows the students to explore and be aware of their agency to shape futures possibilities and probabilities.

It provides some tools to gather insights about the present and futures and to identify, gather and categorize insights about the futures.

AIMS

The aim of this unit is to enable designers to comprehend the plurality and richness of futures and develop an awareness that futures are generative and performative. The goal is not to produce one future but a landscape of futures. This means that futures scouting has to consider the past, do field research in the present and actuate into the future.

Emergent futures, then, need to be explored from a design driven multi-disciplinarity. Understanding near future-oriented design projects may as a consequence enable the characterization of the next futures scenarios.

This too may allow the exploration of futures scenarios through gathering, framing and situating signals that are relevant for the topic or issue of interest the designer is exploring.

COMPETENCIES

This unit will provide competences on futures scouting:

- To gather intelligence about the future within the scope of the general topic or issue through a collection of signals that can be found in the present (trends, weak signals, drivers...).
- To frame these signals, organising and mapping them according to several layers, factors or forces shaping the futures.

-To situate signals taking an immersive approach.

- To identify and relate to trends, weak signals and drivers of change by positioning the students closer to the system they are working on.

- To use the processes above as relational approaches on the practice of futures scouting and be able to shift between the different modes to gain more insights and knowledge valuable for their future-oriented design projects.

DEPTH OF DETAIL

LEVEL 01 - BACHELORS

Futures scanning may be presented to bachelor students to make sense of the socio-technical systems they are entering with their projects and the implications of these. We suggest you use this unit to select signals, trends and drivers by the tutors that may be relevant to further develop their projects. Perhaps try to relate each other to make sense of the futures they are aiming to work on.

LEVEL 02 - MASTERS

Here students use the different modes of scouting according to their issues or topics of interest. They gather and select different weak signals they are going to focus on in their future-oriented design project. They also situate these weak signals in the socio-technical systems they are inscribed and develop futures scouting to detect new signals, trends and drivers that may be relevant for their project.

EXPECTED LEARNING OUTCOMES

A. Knowledge and understanding	Establish a starting point to navigate uncertainty, leveraging weak signals as vectors of possible areas of change.
B. Cognitive Skills	Identify present trends and signals that will have an impact on the future.
C. Practical Skills	Build a scaffolding to understand a systemic view on the area of study.
D. Generic Skills	Assemble a collection of experiments, reference objects, projects, products or materials.
E. Collaborative Skills	Communicate via discussing, identifying and situating weak signals in group activities.

ACTIVITY

Atlas of Weak Signals

AIM OF THE ACTIVITY: Collect and organise a representative group of weak signals that can describe possible vectors, discontinuities, and emerging casualties. These can serve as a keyword taxonomy that offers a starting ground from where to analyse current systems and build possible scenarios.

DURATION: This can be done as a one-day workshop, or a 4-day course where, in addition to the workshop, groups of weak signals are presented and discussed in class.

DESCRIPTION: In designing for emergent futures, an Atlas of Weak Signals serves as a visible methodology and structure to situate students, designers and a wide range of professionals from different fields, enabling them to start identifying potential intervention opportunities. It offers immediate keywords for research and experimentation and provides a starter design space to gain confidence and direction on where to begin.

METHOD: For the development of the workshop, a physical toolkit is used. The toolkit consists of four decks of cards that can be combined. Deck 1 is the Atlas of Weak Signals itself, consisting of the actual 25 weak signals. Deck 2 compiles areas of opportunity (major areas of innovation that are affecting or offering new opportunities of research for almost every sociotechnical system and industry today). Deck 3 consists of wild cards or trigger cards (for random events that can affect their design process). Deck 4 presents five cards that describe specific challenges for innovation (institution, service, professional role, policy, and product).

Weak Signals in the Wild

AIM OF THE ACTIVITY: This activity will assist the designer on situating and identifying weak signals she/he is working with her/his design project.

DURATION: One day activity is recommended, but it can last more days if needed.

DESCRIPTION: Students will gain a different perspective on the surroundings and some of the topics that they are working with. The exercise will take place outdoors through (auto)ethnographic exploration. A reflection at the end is needed to analyse the gathered observations and visual material.

METHOD: One option is taking a walk in a group to discuss and identify weak signals that they detect during the activity and may be relevant for their projects. Another option is to focus on yourself and your immediate surroundings, and gradually scale up the area of analysis (home, neighbourhood, city, region... planet). It is important not to rush, the goal is to enjoy and reflect. The participants should take a small notebook and a pen to take notes, engage with the activity and enable future reflections.

TOOLS AND DEVICES

Tools and devices appropriate to this unit are those that allow designers to understand the futures they are actuating in with their design projects and also creating with those. The outcomes of this unit can be developed through brainstorming sessions along with desk research. The suggested format for framing signals is a canvas or template that should assist the team or individuals in organizing the gathered data about futures. Also, field research activities that will situate the designers and their projects in the system they are working with.

IO1-1 LISTS FOR WORDS

IO3-1 ATLAS OF WEAK SIGNALS

It is a visible methodology and structure that offers immediate keywords for research and experimentation and provides a starter design space to gain confidence and direction on where to begin identifying potential intervention opportunities.

IO4-1 HORIZON SCANNING CANVAS
IO4-2 PESTLE
IO4-3 CIPHER
IO4-5 FUTURE FORCES

CASES AND EXPERIENCES

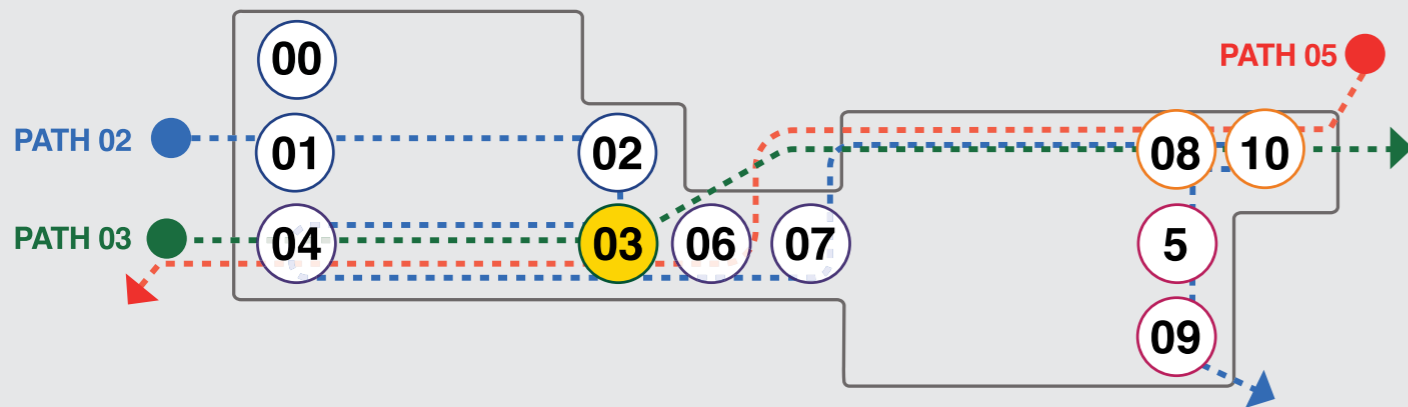
Finding Weak Signals to Design Emergent Futures.

Workshop at Space10, Copenhagen, 26.02.2020.
Fab Lab Barcelona –one of the collaborators in the Master in Design for Emerging Futures program – visited SPACE10 in Copenhagen to try out in a different environment the Atlas of the Weak Signals, hosting a series of inspiring talks on emergent futures and a workshop on the Weak Signals card game. This was a half-day program in which 60 participants – employees from SPACE10 amongst other attendees -were introduced to the Atlas of Weak Signals. This alternative educational experience provided an opportunity to question, disrupt and challenge methods of practice, offering a chance to learn alternative perspectives on contemporary issues.
[HERE](#)

Multiscalar-mapping

Participants are asked to take the issues they are concerned about or weak signals of possible futures they have detected and take them in an embodied exercise of reflection on how they might be present from the scale of their bodies, to the scale of the area where they live. Participants are asked to engage in a hike and/or a journey that takes them from their home to the outermost part of their city or region, documenting in a diagram infrastructure, issues, topics, people, situations and insights that reflect their chosen matters of concern. The activity can be done a group or they can complete it in smaller groups or on their own. Situating the Weak Signals at different scales in context supports students to reflect on the meaning their possible design actions can take in society.
[HERE](#)

ROADMAP AND CONNECTIONS



● The yellow color indicates the position of the current Unit.

UNIT CONTENT

Futures Scouting through Making.

How can we generate and frame possible futures in terms of alternative presents situated in the world?

1. Introduction to Futures Plurality and Richness

Design Futures Scouting innovates by introducing the contemplation of four approaches:

- **Generative and Performative.** Pushing to the extreme weak signals and crossing scenarios in order to generate multiple options. It is not the aim to produce one future but a landscape of futures.
- **Past-Present-Future.** Considering the past, evidence from past behavioural cycles and patterns, past trends and their sociocultural adoption, as well as previous design fictional scenarios. Doing field research in the present, in order to be able to observe and detect early futures signals. And actuating into the future, by detecting the current early signals and actuation into the near and next futures.

- Design driven Multi-disciplinarity.

Explore emergent futures integrating disciplines, points of view or information from different angles, where design and design projects become the driver of future changes or a tool to materialise futures.

- **Near and Next.** A collection of weak signals and future-oriented design projects (near futures) in order to map and deploy the characteristics and actuations of futures scenarios (next futures).

2. Gathering Signals

Gathering Signals refers to gathering intelligence about the future within the scope of the general topic or issue. This can be an unrestricted activity looking for macro trends, drivers of change and weak signals.

It allows one to have a clear and wide view about the general topic or issue. Understand the complexity of the issue and to identify the different factors behind it. Make sense of the growing patterns of particular trends or weak signals. See how these patterns are performing and how frequent they are over the different layers and factors.

UNIT CONTENT

3. Framing Signals

At this stage gathered intelligence is organised and mapped according to several layers, factors or forces shaping the futures.

Clearly segment and organize the gathered trends and weak signals according to their nature. Make sense of the gathered insights and identify the leading patterns, breaking down the different types of layers driving the futures.

4. Situating Signals

Situating Signals takes an immersive approach to futures scouting, where making and enacting are the center of the process. Designers can identify and relate to trends, weak signals and drivers of change by positioning themselves closer to the researched issues or topics.

This positioning helps make sense of the context designers are working in. It enables to gain different perspectives on the issues or topics of interest. And allows for a better understanding of the surroundings, resources, stakeholders, materials, etc. that can become related or help on our future-oriented design project.

5. Shifting Between Modes of Scouting

Gathering, framing and situating signals are processes that are relational and nourish each other towards the topic or issue of interest when future scouting. Those have to be seen as a set of tools that work together.

Through a combination of the three processes within an iterative process, designers gain knowledge and get closer to the topic or issue of interest. Also enabling a focus-expansion approach getting closer and also broadening the scope and gaining knowledge on the design project.

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