

# FUTURES\* DESTGN TOOLKIT

TOOLS, METHODS AND TACTICS TO TACKLE FUTURE DESIGN CHALLENGES









### FUEL4 DESIGN



Fuel4Design is a 3-year project jointly delivered by a consortium of leading design-educator-researchers from the Oslo School of Architecture and Design, Politecnico di Milano, University of the Arts London, and ELISAVA.

21st-century design pedagogy needs to be urgently reframed in an approach that we call 'Design Futures Literacy'. This is a literacy that connects teaching and learning to provide an education for young designers for designing for complex tomorrows. This is a matter of Design taking on a far more proactive role in working to anticipate these tomorrows through acts of situated making that understands use and users and Design as working prospectively to look ahead of the immediate or short term (Celi & Morrison, 2018). FUEL4Design supports the discipline of Design and its MA/PhD students and teachers in Higher Education Institutions (HEIs) to productively anticipate critical futures learning needs and change processes through sustained future making.

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.

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# THE TOOLKIT

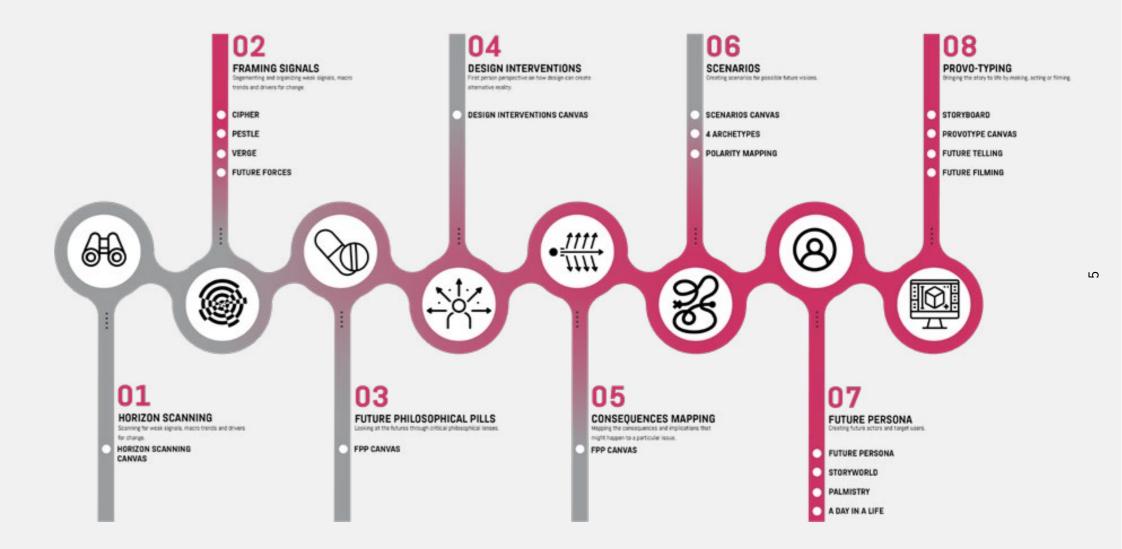
TOOLS, METHODS AND TACTICS TO TACKLE FUTURES DESIGN CHALLENGES

The toolkit is a collection of methods, tools and tactics that can be used during the process of "Futures Design". These tools and methods might be used as a catalyst agent in the design futures educational and research process. Considering the fact that many researchers and practitioners have proposed numerous ways of tackling design challenges in a "toolkit" format; the concept of a design toolkit or methods collection is very relevant to the design practice. The idea behind a design toolkit is to create a repository of "various ways of performing particular design activities". These ways vary greatly depending on the context concerned, resources available and time constraints.

In this "Futures Design Toolkit" the tools, methods and devices are represented in a form of:

- i) Template or canvas that designers can use to identify specific aspects of their design inquiry
- ii) Can be a diagramming device that helps users of the toolkit to breakdown or analyze an issue or topic
- iii) A tool that helps them build and generate ideas and concepts.

It also includes suggested activities, examples and some principles that can be followed.

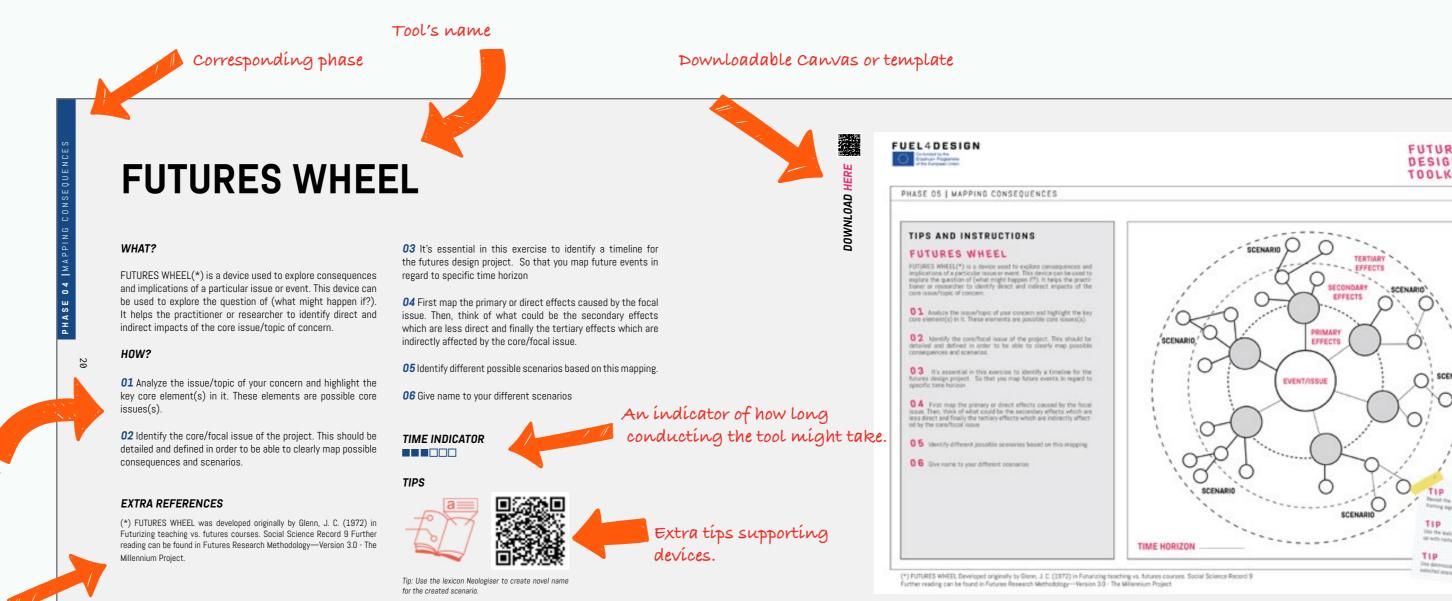


### **TOOLKIT** ELEMENTS

# HOW TO READ THIS BOOKLET?

Explanation of the tool or device as well as suggested steps of how to conduct it.

Extra References and readings.





# 01 HORIZON SCANNING

Scanning for weak signals, macro trends and drivers of change.

#### WHAT?

Horizon Scanning refers to gathering intelligence about the The outcome of this stage can be developed through 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.

#### WHY?

- **01** To have clear and wide view about the general topic or
- **02** To understand the complexity of the issue and to identify the different factors behind it.
- **03** 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.

#### FORMAT

brainstroming sessions along with desk research.

#### OUTPUT

There's no particular formula for the output of this stage.

# HORIZON SCANNING

#### WHAT?

Horizon Scanning is the action of exploring the external context to better understand the nature and pace of change in that context. It's aim is to identify potential opportunities, challenges, and likely future developments relevant to your topic of investigation.

Horizon Scanning is not about making predictions, it's about exploring new, interesting, emerging futures, as well as persistent challenges and trends today. There's no "right" at this stage, you just need to map what's going on.

#### EXTRA REFERENCES





Tip: use the lexicon to achieve common understanding about future terms and notions between your team members.

#### HOW?

**01** Define your topic clearly with your team and make sure you are all having the same understanding of the included terminology.

**02** Start by breaking down the elements and concepts included in the definition.

**03** Look openly and divergently for weak signals, macro trends and drivers for change. You can do on-line research, check articles & journals, you-tube videos, twitter debates, scientific papers as well as trends' forecasting reports.

#### TIME INDICATOR







TOPIC STATEMENT EDEFINE YOUR TOPIC STATEMENT AND AREA OF FOCUS	TRENDS, CONCEPTS, DRIVERS GATHER YOUR IDEAS HERE	
TIPS AND INSTRUCTIONS		
HORIZON SCANNING  Iorizon Scanning is the action of exploring the external context to etter understand the nature and pace of change in that context. It's im is to identify potential opportunities, challenges, and likely uture developments relevant to your topic of investigation.		
forizon Scanning is not about making predictions, it's about exploring new, interesting, emerging futures, as well as persistent challenges and trends today. There's no "right" at this stage, you just ead to map what's going on.  1 Define your topic clearly with your team and make sure you are ill having the same understanding of the included terminology.		TIP Spir-up search keywords/elements among all the team members and mal rounds of (individual research then gridiscussion)
2 Start by breaking down the elements and concepts included the definition.		TIP Use design elements when possible, making is never too early. It colleges, videos and paper prototyple any other design activity you feel relevant to explore/understand trend
3 Look openly and divergently for weak signals, macro trends and drivers for change. You can do on-line research, check articles of ournals, you-tube videos, twitter debates, scientific papers & rends forecasting reports.		TIP Give yourself sometime at end of the exercise to cluster the concepts, drivers, or trends gathers





# 02 FRAMING SIGNALS

Segementing and organizing weak signals, macro trends and drivers of change.

#### WHAT?

Framing Signals is the stage at which intelligence gathered can be organized and mapped according to several layers, factors or forces shaping the futures.

#### WHY?

- **01** Clearly segment and organize the gathered trends and weak signals according to their nature.
- **02** Make sense of the gathered insights and identify the leading patterns.
- **03** Break down clearly the different types of layers driving the futures.

#### **FORMAT**

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.

#### OUTPUT

The output should be clusters of macro trends, weak signals or drivers of change according to their nature or typology.

## **PESTLE**

#### WHAT?

PESTLE\* analysis is used to identify the political, economic, social, technological, environmental and legal drivers shaping the future around a particular topic.

Use this method to organize and map the gathered information in the Horizon Scanning phase.

#### HOW?

- **01** Give yourself sometime to read and interpret the clusters made in the Horizon Scanning exercise.
- **02** From the clusters you've created, segment the gathered trends, concepts, drivers in the PESTLE template.
- **03** Focus on events and drivers that are impacting the future of the investigated topic in each category.

**04** Give yourself sometime for discussion to share concepts and ideas with each other.

**05** In each section of PESTLE, have another layer of order in terms of urgency, priority or relevance. This would make it easier to narrow down your focus in the next stages.

#### TIME INDICATOR

#### **EXTRA REFERENCES**

(\*) PESTLE is a deviation from the PEST Analysis created by Francis Aguilar (1967) in Scanning the Business Environment, Macmillan; 1st THUS edition



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						PESTLE ANALY	SIS				
						POLITICAL	ECONOMIC	SOCIAL	TECHNOLOGICAL	LEGAL	ENVIRONMENTAL

(\*)PESTLE is a deviation from the PEST Analysis created by Francis Aguilar (1967) in Scanning the Business Environment, Macmillan, 1st THUS edition



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Always use one post-it note for each idea, so that you can manage and

## CIPHER

#### WHAT?

The CIPHER\* acronym describes six indicators for trends, the aim of using them is to uncover hidden patterns and to understand what does a trend or a driver really mean, does it have any connection with other trends? Or does it indicate a radical change that might happen? Each of the categories is described in the template.

#### HOW?

- **01** Give yourself sometime to read and interpret the clusters made in the Horizon Scanning exercise.
- 02 Read the description in the template clearly and make sure you and your team members are standing on the same ground.
- 03 From the clusters you've created, segment the gathered trends, concepts, drivers in the CIPHER template.

**04** Focus on events and drivers that are impacting the future of the investigated topic in each category.

**05** Give yourself sometime to discuss and share concepts and ideas in the brainstorming sessions.

#### TIME INDICATOR

#### **EXTRA REFERENCES**

(\*) CIPHER is developed by FTI "Futures Today Institute"- Open-source Foresight Tools

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#### 02 | FRAMING SIGNALS

#### TIPS AND INSTRUCTIONS

#### CIPHER

The CIPHER\* acronym describes six indicators for trends, the aim of using them is to uncover hidden patterns and to understand what does a trend or a driver really mean, does it have any connection with other trends? Or does it indicate a radical change that might happen? Each of the categories is described in the template.

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- 0.4 Focus on events and drivers that are impacting the future of the investigated topic in each category.
- 0 5 Give yourself sometime to discuss and share concepts and ideas in the brainstorming sessions.



(\*) CIPHER is developed by FTI "Futures Today Institute"- Open-source Foresight Tools



# **FUTURES FORCES**

#### WHAT?

FUTURE FORCES\* represents external uncertainties & factors that broadly affect, business, government and society. The Inner layer of the circle represents 10 sources of macro change that are typically driving the futures. While the outer shell represents 10 aspects focusing on design factors.

#### HOW?

#### 11011.

- **01** Give yourself sometime to read and interpret the clusters made in the Horizon Scanning exercise.
- **02** Read the description in the template clearly and make sure you and your team members are standing on the same ground.
- **03** From the clusters you've created, segment the gathered trends, concepts, drivers in the FUTURE FORCES template

- **04** Focus on events and drivers that are impacting the future of the investigated topic in each category.
- **05** Give yourself sometime for discussion to share concepts and ideas with each other.
- **06** In each section, have another layer of order in terms of urgency, priority or relevance. This would make it easier to narrow down your focus in the next stages

#### TIME INDICATOR

#### 

#### **EXTRA REFERENCES**

(\*) FUTURE FORCES is adapted from "The 11 Futures Forces" is developed by FTI "Futures Today Institute"-Open-source Foresight Tools







#### 02 | FRAMING SIGNALS

#### TIPS AND INSTRUCTIONS

#### **FUTURE FORCES**

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06 In each section, have another layer of order in terms of urgency, priority or relevance. This would make it easier to narrow down your focus in the next stages



#### MEDIA & TELECOMMUNICATIONS

All of the ways in which we send and receive information and learn about the world.

#### WEALTH DISTRIBUTION

The distribution of income across a population's households, the ability for individuals to move up from their existing financial circumstances and the gap between the top and bottom brackets within an economy.

#### DEMOGRAPHIES

Observing how birth and death rates, income, population density, human migration, disease and other dynamics are shifting communities.

#### ECONOMY

Shifts in standard macroeconomic and microeconomic factors.

#### ENVIRONMENT INFRASTRUCTURE

Changes to the natural Physical, organizational, and digital world or to specific structures needed for society to operate geographic areas, including extreme weather events 8 climate another's.

#### EDUCATION GOVERNMENT

Access and quality of education, workforce training, trade apprenticeships, the ways in which people are learning and the tools they're using and what people are interested

Changes in the health and

behavior of a community's

population in response to lifestyles, popular culture,

disease, government

conflict and religious

regulation, warfare or

fluctuations

PUBLIC

HEALTH

#### in studying.

The relationships between the leaders, military and governments of different countries and the risk faced by investors in response to regulatory, economic or military actions.

GEOPOLITICS

Local, state, national, and

international governing bodies, their

planning cycles, their elections and

the regulatory decisions they make.

(\*)PESTLE is a deviation from the PEST Analysis created by Francis Aguilar (1967) in Scanning the Business Environment, Macmillan; 1st THUS edition



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#### 7

# **VERGE**

#### WHAT?

VERGE\* is a systematic approach to explore drivers of change, concepts or trends through an ethnographic lens — by taking a human-focused or cultural perspective. The aim is to get an experiential notion of how the future 'feels and tastes'. It explores the social and human impact of drivers and scenarios through six human domains.

#### HOW?

- **01** Give yourself sometime to read and interpret the clusters made in the Horizon Scanning exercise.
- **02** Read the description in the template clearly and make sure you and your team members are standing on the same ground.
- 03 From the clusters you've created, segment the gathered trends, concepts, drivers in the VERGE template

- **04** Focus on events and drivers that are impacting the future of the investigated topic in each category.
- **05** Give yourself sometime for discussion to share concepts and ideas with each other.
- **06** In each section, have another layer of order in terms of urgency, priority or relevance. This would make it easier to narrow down your focus in the next stages.

#### TIME INDICATOR

#### **EXTRA REFERENCES**

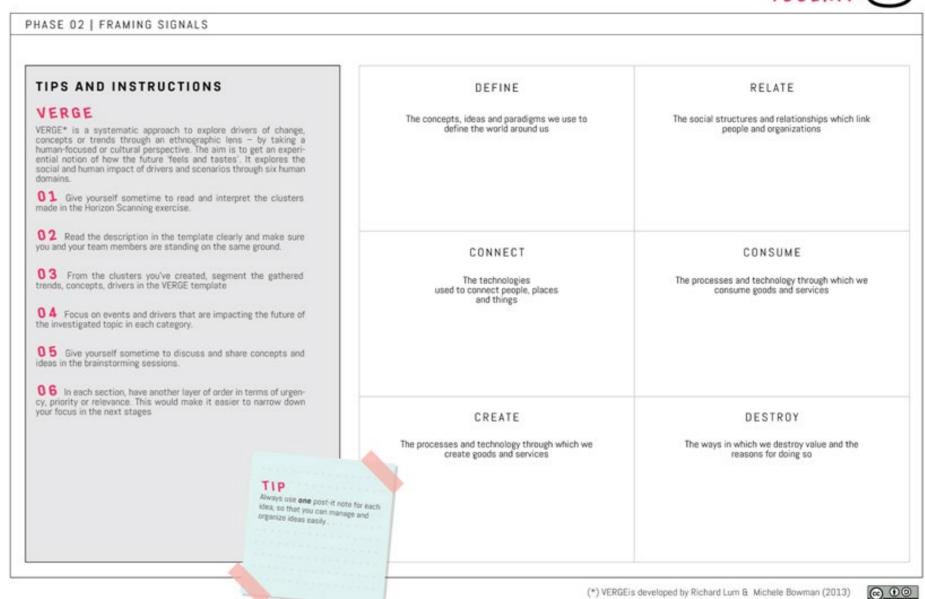
(\*) VERGE is developed by Richard Lum & Michele Bowman (2013)

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# 03 FUTURE PHILOSOPHICAL PILLS

Looking at the futures through philosophical lenses.

#### WHAT?

The Future Philosophical Pills (FPP) are a curated set of FPP are created in a form of two decks of cards, the Pills and philosophical insights, concepts, ideas to use to think about futures. They offer packaged critical lenses that interrogate, challenge and unsettle established assumptions around futures.

#### WHY?

**01** FPP can be used as an asset to stimulate new ways of and polished topic statement. thinking about futures.

**02** FPP can trigger a critical point of view on how you look at the futures.

03 You can use FPP to look at the gathered insights from a different perspective or position.

#### FORMAT

Prompts. Cards can be combined together according to the

#### OUTPUT

The output of using the FPP is a deeper understanding of the gathered intelligence about the futures and probably a clear

# FUTURE PHILOSOPHICAL PILLS

#### WHAT?

The Future Philosophical Pills (FPP) are a curated set of philosophical insights, concepts, ideas selected from a global history of thought - with a focus on the continental philosophy canon. They offer packaged critical lenses that interrogate, challenge and unsettle established assumptions around futures. They mobilize design practice and projects (existing or in the making) by disrupting, amplifying, and critiquing ideas around futures. The aim of this stage is to rethink your previous mapping from the lens of a philosophical & critical perspective.

There are three ways described in the canvas to apply the FPP in your process. FPP can be applied in both the research phase of the project and in the reflection phase.

#### **EXTRA REFERENCES**





Refer to the **FPP** webpage for the full description of the two decks of cards.

#### HOW?

- **01** Read the selected FPP description clearly and analyze the elements connected, make sure that all the team members are on the same level of understanding.
- **02** Rethink the outcome of the mapping exercises by applying the lenses of the FPP. Ask yourself what did it add? and what did it change?
- **03** Remap your gathered data/insights after discussing it with your team in the light of the FPP exercises conducted.
- **04** At the end of the exercises try to redefine the topic statement or focal issue. According to the changes that the FPP exercises have made.

TIME INDICATOR

#### TIPS





Tip: use the lexicon to create common understanding about future terms and notions.

#### FUEL4DESIGN



PHASE 03 | PHILOSOPHICAL PILLS

#### TIPS AND INSTRUCTIONS

#### FUTURE PHILOSOPHICAL PILLS

The Future Philosophical Pills (FPP) are a curated set of philosophical insights, concepts, ideas selected from a global history of thought - with a focus on the continental philosophy canon. They offer packaged critical lenses that interrogate, challenge and unsettle established assumptions around futures. They mobilize design practice and projects (existing or in the making) by disrupting, amplifying, and critiquing ideas around futures. The aim of this stage is to rethink your previous mapping from the lens of a philosophical & critical perspective.

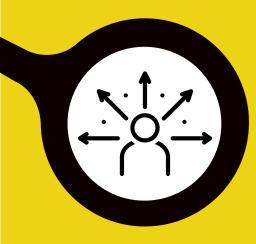
There are three ways described in the carwas to apply the FPP in your practice. FPP can be applied in research phases of the project but also in the reflection phase.

- 0 1 Read the selected FPP description clearly and analyze the elements connected, make sure that all the team members are on the same level of understanding.
- 0.2 Rethink the outcome of the mapping exercises by applying the lenses of the FPP Ask yourself what did it add? and what did it change?
- 0.3 Remap your gathered data/insights after discussing it with your team in the light of the FPP exercises conducted.
- 0 4 At the end of the exercises try to redefine the topic statement or focal issue. According to the changes that the FPP has made.

#### MODES OF APPLICATION 01 Select one FPP and place it against the mapping exercises you've conducted. The aim is PILL to identify the changes that the FPP has made to the mapping exercise or the research OR 02 Select one FPP and one card from the AFFECTIVE MODE and place it against the PILL AFFECTIVE mapping exercises you've conducted. The aim is to disrupt your mapping or research outcome. The AFFECTIVE MODE also helps you to look at your focal issue from different perspective. OR 03 Select one FPP and one card from the STANDPOINTS then place it against the PILL mapping exercises you've conducted. The aim is to disrupt your mapping or research outcome. The STANDPOINTS also helps you to take a position towards your focal issue. DOSAGES Random dosage Diagnostic dosage You are prescribed one pill card to Extract one Pill card only from the deck. respond two or work with by your Very high constraint.

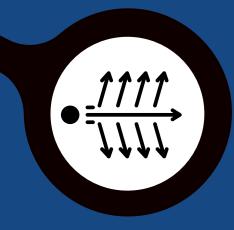
teacher or facilitator





# 04 DESIGN INTERVENTIONS

First person perspective on how design can create alternative reality.



# 05 MAPPING CONSEQUENCES

Mapping the consequences and implications that might happen to a particular issue.

#### WHAT?

This phase supports the users of the toolkit to think about In the mapping consequences phase there are different the implications and consequences of the focal issue of their concern. By these set of diagramming tools, the effects of implications and consequences. particular trends or signals can be mapped and identified.

#### WHY?

- **01** Map the effects and implications of particular issues, trends or drivers.
- **02** Identify a time horizon for the project and allocate possible events on this time horizon.
- **03** Identify direct (primary) effects and indirect (secondary and tertiary) effects of particular trends or signals.
- **04** Create several possible scenarios according to the consequences and implications mapping.

#### **FORMAT**

diagramming devices to map the possibilities of the

#### OUTPUT

The output of this phase is several scenarios highlighting different possibilities and possible alternative futures.

#### ,

## **FUTURES WHEEL**

#### WHAT?

FUTURES WHEEL(\*) is a device used to explore consequences and implications of a particular issue or event. This device can be used to explore the question of (what might happen if?). It helps the practitioner or researcher to identify direct and indirect impacts of the core issue/topic of concern.

#### HOW?

- **01** Analyze the issue/topic of your concern and highlight the key core element(s) in it. These elements are possible core issues(s).
- **02** Identify the core/focal issue of the project. This should be detailed and defined in order to be able to clearly map possible consequences and scenarios.

#### **EXTRA REFERENCES**

(\*) FUTURES WHEEL was developed originally by Glenn, J. C. (1972) in Futurizing teaching vs. futures courses. Social Science Record 9 Further reading can be found in Futures Research Methodology—Version 3.0 - The Millennium Project.

- **03** It's essential in this exercise to identify a timeline for the futures design project. So that you map future events in regard to specific time horizon
- **04** Firstly, map the primary or direct effects caused by the focal issue. Then, think of what could be the secondary effects which are less direct and finally the tertiary effects which are indirectly affected by the core/focal issue.
- **05** Identify different possible scenarios based on this mapping.
- **06** Name the different scenarios.

#### TIME INDICATOR



#### TIPS





Tip: Use the lexicon <u>Neologiser</u> to create novel name for the generated scenario.







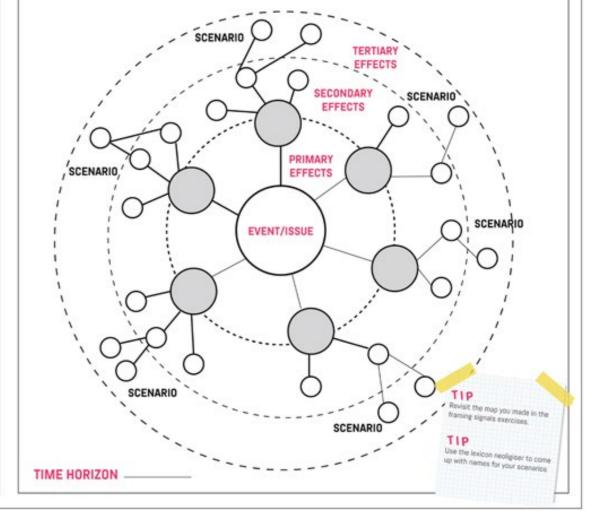
#### 05 | MAPPING CONSEQUENCES

#### TIPS AND INSTRUCTIONS

#### FUTURES WHEEL

FUTURES WHEEL\* is a method to explore direct and indirect impacts and implications of a particular issue or event.

- 01 Analyze the issue/topic of your concern and highlight the key core element(s) in it. These elements are possible core issues(s).
- 0.2 Identify the core/focal issue of the project. This should be detailed and defined in order to be able to clearly map possible consequences and scenarios.
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- 0 5 Identify different possible scenarios based on this mapping.
- 06 Name the different scenarios.



(\*) FUTURES WHEEL Developed originally by Glenn, J. C. (1972) in Futurizing teaching vs. futures courses. Social Science Record 9 Further reading can be found in Futures Research Methodology—Version 3.0 - The Millennium Project



## **BRANCHING**

#### WHAT?

Branching is a method to explore long term implications of different events/issues. It helps the team to understand how events are affecting possible alternative futures and helps you think of different future scenarios. These would help you reflect on the design interventions made and to map the consequences that might result from them.

#### HOW?

- **01** Analyze the issue/topic of your concern and highlight the key core element(s) in it. These elements are possible core issues(s).
- **02** Identify the core/focal issue of the project. This should be detailed and defined in order to be able to clearly map possible consequences and scenarios.
- **03** It's essential in this exercise to identify a timeline for the futures design project. So that you map future events in regard to specific time horizon.

**04** Map what could be the consequences & implications caused by the focal issue.

- **05** Identify different scenarios based on this mapping.
- **06** Name the different scenarios.

#### TIME INDICATOR



#### TIPS





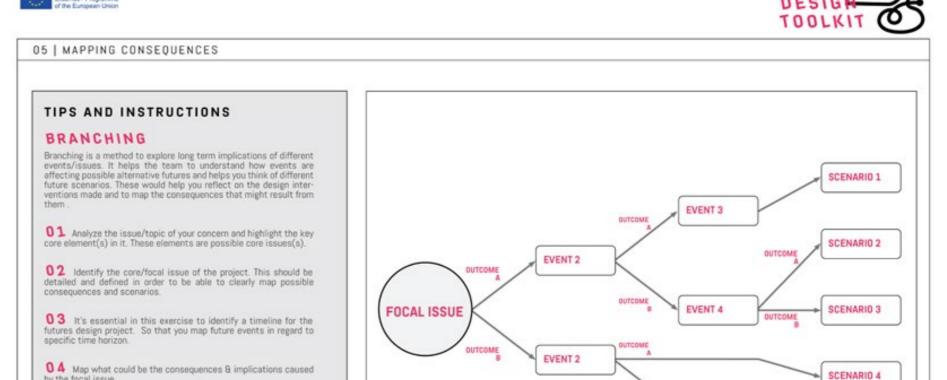
Tip: Use the lexicon <u>Neologiser</u> to create novel name for the generated scenario.



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0 5 Identify different scenarios based on this mapping.

Branching can be more effective when thinking for at least 10 years ahead. The tar distance can help creating a space for imagination and speculation.

TIP

Try to be critical and to look at the futures.

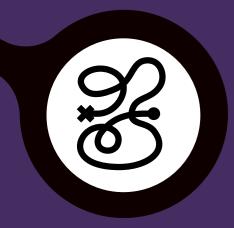
Try to be critical and to look at the futures from plural perspectives ( revert back to the framing signals to remember what senects to consider)

@ 00

SCENARIO 5

**EVENT 3** 

TIME HORIZON



# 06 SCENARIOS

Creating scenarios for possible future visions.

#### WHAT?

This phase is where the insights gathered can be all melted in one pot. In this phase, the team or individual can develop a possible scenario in order to create the context for the design project.

#### WHY?

- **01** Develop a coherent and consistent possible scenarios.
- 02 Create a contextual premises fro he design project.
- **03** Identify and shape the environmental factors of the possible scenario.

#### **FORMAT**

There are five factors identified to create a robust scenario.

These aspects can be addressed through using a canvas that highlights each one of them.

#### OUTPUT

A consistent and coherent scenario of possible alternative future.

#### 37

## **SCENARIOS CANVAS**

#### WHAT?

SCENARIO is a powerful tool to envision possible futures. In this stage you should select one of the scenarios developed in the previous phase then develop it into a comprehensive scenario.

#### HOW?

**01** Quickly analyze the main elements that emerged from the scenario you've developed

**02** Read the categories carefully in the scenario making template. Discuss them with your team and then situate your ideas in each category.

**03** Use visual aiding material including, images, videos and sketches to describe intangible meanings and directions.

**04** Consider social, cultural and technological contexts of the world you're building.

05 Write your scenario in the middle of the template

#### TIME INDICATOR



#### TIPS





Tip: Use the lexicon <u>Neologiser</u> to create novel name for the generated scenario.



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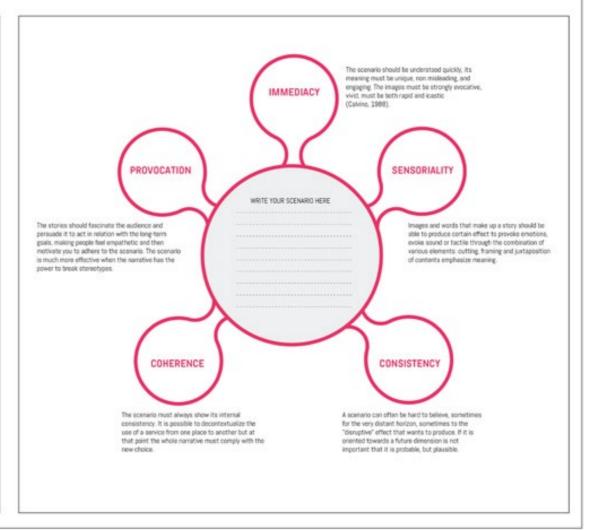
PHASE 05 | SCENARIO

#### TIPS AND INSTRUCTIONS

#### SCENARIO

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- 01 Quickly analyze the main elements that emerged from the scenario you've developed
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- 0.3 Use visual aiding material including, images, videos and sketches to describe intangible meanings and directions.
- O 4 Consider social, cultural and technological contexts of the world you're building.
- 05 Write your scenario in the middle of the template.





#### ω

# **POLARITY MAPPING**

#### WHAT?

The POLARITY MAPPING tool is used to identify scenarios by creating 4 contrasting scenarios in regard to the high uncertain/high impact drivers.

#### HOW?

**01** Analyze the issue/topic of your concern and highlight the key core element(s) in it. These elements are possible core issues(s).

**02** Identify the core/focal issue of the project. This should be detailed and defined in order to be able to clearly map possible consequences and scenarios.

**03** It's essential in this exercise to identify a timeline for the futures design project. So that you map future events in regard to specific time horizon.

#### TIME INDICATOR



#### **EXTRA REFERENCES**

(\*) POLARITY MAPPING is originally popularized by Peter Schwartz (1991) as "double uncertainty method" in the book "The Art of the Long View". Doubleday

**04** Identify what are the highly uncertain/high impact drivers that are impacting your focal issue. Revisit the drivers mapping exercise.

**05** Discuss how could these drivers play extreme contrasting roles (e.g. in a topic like global security, the drivers that are highly uncertain could be described as either: nations are closed and protectionist vs. nations are open). Each axis should represent the two extremes (poles) of the two drivers.

**06** In each quadrant, map what could describe the scenario that is formulated by the combination of the axes. The four scenarios should focus on the focal issue under investigation.

**07** Name each quadrant as a possible scenario.

#### TIPS





Tip: Use the lexicon <u>Neologiser</u> to create novel name for the generated scenario.







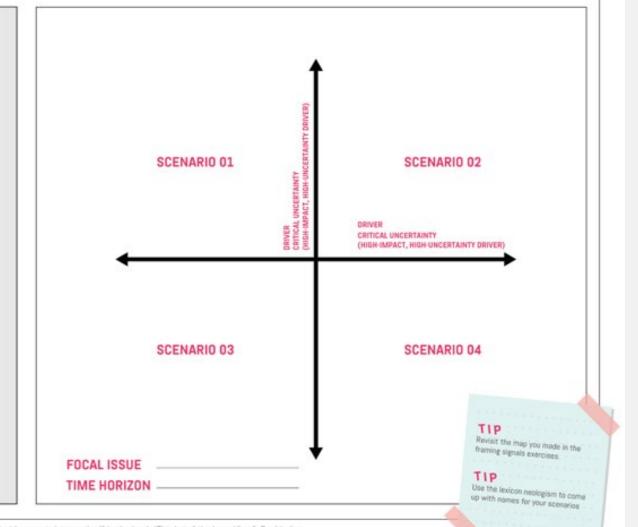
06 | SCENARIO

#### TIPS AND INSTRUCTIONS

#### POLARITY MAPPING

The POLARITY MAPPING\* tool is used to identify scenarios by creating 4 contrasting scenarios in regard to the high uncertain/high impact drivers.

- 01 Analyze the issue/topic of your concern and highlight the key core element(s) in it. These elements are possible core issues(s).
- 0.2 Identify the core/focal issue of the project. This should be detailed and defined in order to be able to clearly map possible consequences and scenarios.
- 03 It's essential in this exercise to identify a timeline for the futures design project. So that you map future events in regard to specific time horizon.
- 0.4 Identify what are the highly uncertain/high impact drivers that are impacting your focal issue. Revisit the drivers mapping exercise.
- 0 5 Discuss how could these drivers play extreme contrasting roles (e.g. in a topic like global security, the drivers that are highly uncertain could be described as either: nations are closed and protectionist vs. nations are open). Each axis should represent the two extremes (poles) of the two drivers.
- 0 6 In each quadrant, map what could describe the scenario that is formulated by the combination of the axes. The four scenarios should focus on the focal issue under investigation.
- 07 Name each quadrant as a possible scenario.



(\*) POLARITY MAPPING is originally popularized by Peter Schwartz (1991) as "double uncertainty method" in the book "The Art of the Long View". Doubleday

# 4 ARCHETYPES

#### WHAT?

The 4 ARCHETYPES is a method used to identify the uncertainties of the futures. It helps to investigate your assumptions about the direction of the future in regard to particular drivers of change.

#### HOW?

- **01** Analyze the issue/topic of your concern and highlight the key core element(s) in it. These elements are possible core issues(s).
- **02** Identify the core/focal issue of the project. This should be detailed and defined in order to be able to clearly map possible consequences and scenarios.
- **03** It's essential in this exercise to identify a timeline for the futures design project. So that you map future events in regard to specific time horizon.

#### **EXTRA REFERENCES**

(\*) FOUR ARCHETYPES model is inspired by Jim Dator (1979) & (2002). Further Reading: Dator, J. (2002) Advancing Futures - Futures Studies in Higher Education, Praeger Publishers

- **04** According to the focal issue, map the futures in four different types of futures the "growing, "collapsing", the one that had major "transform" and the world that is sustaining a "discipline".
- **05** Create scenarios according to these four different perspectives.

#### TIME INDICATOR

#### TIPS





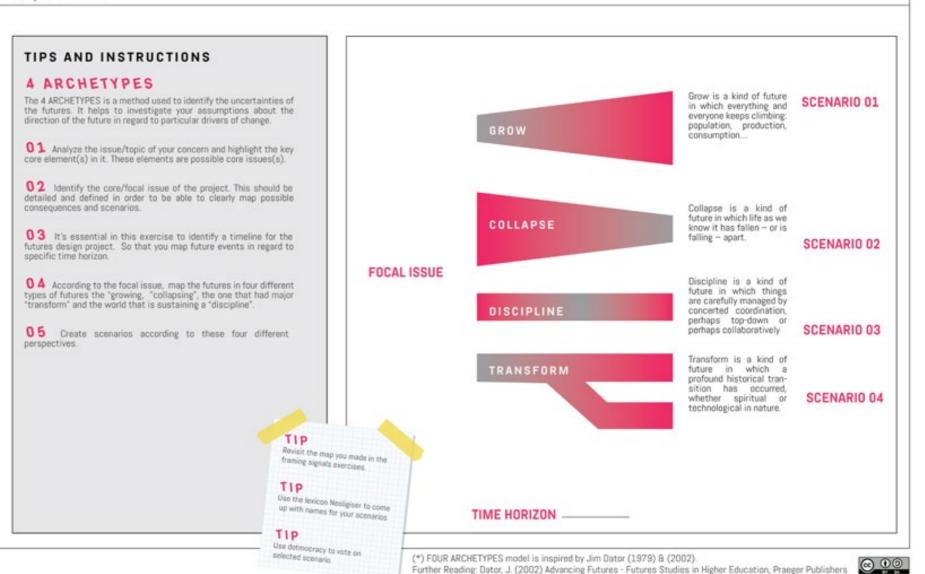
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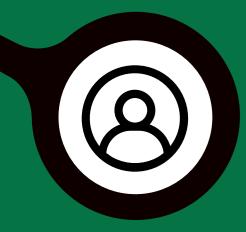






06 | SCENARIO





# 07 FUTURE PERSONA

Creating future actors and target users.

#### WHAT?

in one pot. In this phase, the team or individual can develop a possible scenario in order to create the context for the design project.

#### WHY?

- **01** Develop a coherent and consistent possible scenarios.
- **02** Create a contextual premises fro he design project.
- 03 Identify and shape the environmental factors of the possible scenario.

#### **FORMAT**

These aspects can be addressed through using a canvas that highlights each one of them.

#### OUTPUT

A consistent and coherent scenario of possible alternative future.

# A DAY IN A LIFE

#### WHAT?

This tool helps you to focus on one typical day in your future persona's life. It helps you imagine the context around the persona, what things does the persona encounter daily and how the future around the persona is shaped.

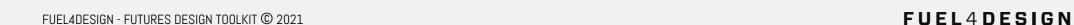
#### HOW?

- **01** Read the scenario generated carefully then think about how to situate your persona in it.
- **02** Think about the basic details of your future persona. Then sketch/find an image that best represents your persona.
- 03 Reflect on the scenario, and think about how & what would the persona encounter in a typical day of life.

- **04** Read the categories in the template and think of what are the related aspects from the day mapping exercise.
- **05** Revisit the "FRAMING SIGNALS" exercise to nurture A DAY IN A LIFE categories.

#### TIME INDICATOR







DOWNLOAD



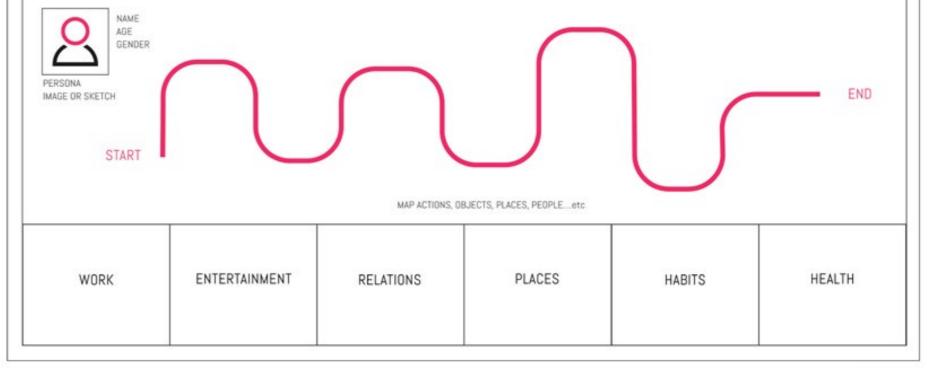
## 07 | FUTURE PERSONA

#### TIPS AND INSTRUCTIONS

#### A DAY IN A LIFE

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- 02 Think about the basic details of your future persona. Then sketch/find an image that best represents your persona.
- 03 Reflect on the scenario, and think about how & what would the persona encounter in a typical day of life.
- 0.4 Read the categories in the template and think of what are the related aspects from the day mapping exercise.
- 0 5 Revisit the "FRAMING SIGNALS" exercise to nurture the "A DAY IN A LIFE" categories.





# TIME TRAVELER

#### WHAT?

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 live.

#### HOW?

- **01** Think about the basic details of your persona. Then sketch/find an image that best represents your persona. Start from Today but do not get into the details of the persona.
- **02** Think of past events and context that shaped the persona in order to look like it does today.
- 03 Highlight how it looks like today.

**04** Read the scenario generated carefully then think about how to situate your future persona in it.

**05** Describe how the future persona looks like.

#### TIME INDICATOR

#### **EXTRA REFERENCES**

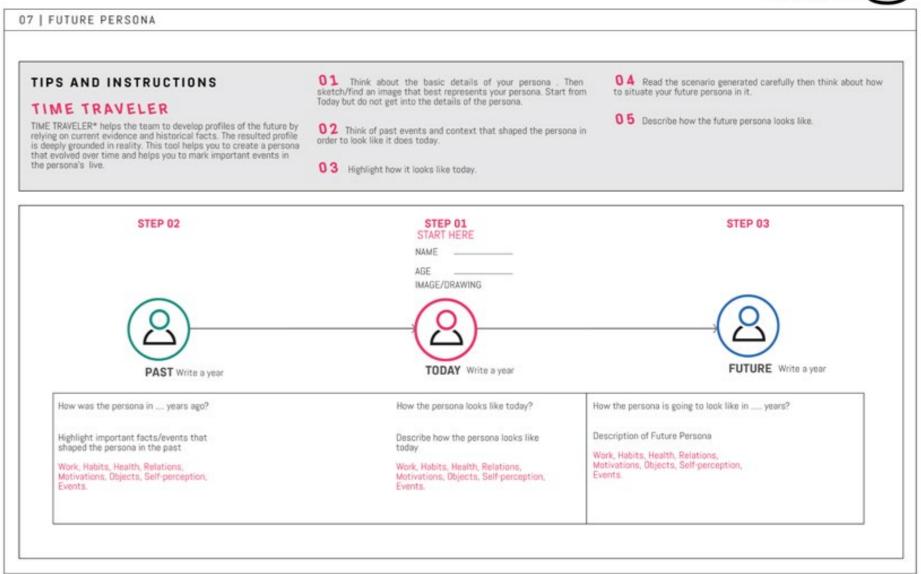
(\*) TIME TRAVELER adapted from Future User in Playbook for Strategic Foresight and Innovation (2013) by Tamara Carleton, William Cockayne & Antti-Jussi Tahvanainen



DOWNLOAD







(\*) TIME TRAVELER adapted from Future User in Playbook for Strategic Foresight and Innovation (2013) by Tamara Carleton, William Cockayne & Antti-Jussi Tahvanainen



#### ->

# STORY WORLD

#### WHAT?

STORY WORLD is a tool that helps you to bring a part of the world of an imaginary person. It helps you to think about hidden and unspoken aspects of his life. The tool helps you to relate to the complexity of the persona's life.

#### HOW?

- **01** Read the scenario generated carefully then think about how to situate your persona in it.
- **02** Think about the basic details of your future persona. Then sketch/find an image that best represents your persona.

**03** Read the categories of the STORY WORLD and reflect upon the scenario created.

**04** Revisit the "FRAMING SIGNALS" exercise to nurture the STORY WORLD categories.

#### TIME INDICATOR

#### 

#### **EXTRA REFERENCES**

(\*) STORY WORLD adapted from Social Design Methods Menu (2013) by Lucy Kimbell



DOWNLOAD





07 | FUTURE PERSONA 0.1 Read the scenario generated carefully then think about how to situate your persona in it. TIPS AND INSTRUCTIONS 0 4 Revisit the "FRAMING SIGNALS" exercise to nurture the STORY WORLD categories. STORY WORLD 0 2 Think about the basic details of your future persons. Then sketch/find an image that best represents your persons. STORY WORLD is a tool that helps you to bring a part of the world of an imaginary person. It helps you to think about hidden and unspoken aspects of his life. The tool helps you to relate to the complexity of the persona's life. 0 3 Read the categories of the STORY WORLD and reflect upon the PROFILE MEMORABLE QUOTES CONNECTIONS AND RELATIONS OBJECTS AND PLACES HABITS AND SKILLS Who is this person connected What physical and digital objects What activities are usual or to? People and Organisations is this person connected to? habitual for this person? How does Where and When? this person learn? What shapes this? What skills and knowledge does the person have? IMAGE OR SKETCH PERCEPTIONS ASPIRATIONS PLEASURE AND GRIEF & THOUGHTS How does this person think about How does this person NAME their involvement in change? enjoy themselves? and what What does this person think or AGE What shapes this? makes his persona sad? Think believe about themselves GENDER about everyday pleasures and and the world around them? frustrations FAMILY LIVING CONTEXT WORK PLAY

(\*) STORYWORLD adapted from Social Design Methods Menu (2013) by Lucy Kimbell



#### 7

# **PALMISTRY**

#### WHAT?

PALMISTRY is inspired from the ancient practice of palm reading as a way to predict the future. Imagine you're reading the palm of the future persona and think about how the factors shaping the future persona will be in the future.

#### HOW?

- **01** Read the scenario generated carefully then think about how to situate your persona in it.
- **02** Think about the basic details of your persona. Then sketch/ find an image that best represents your persona.
- **03** Read the categories of the PALMISTRY and reflect upon the scenario created.

- **04** Describe how the future persona looks like.
- **05** Revisit the "FRAMING SIGNALS" exercise to nurture the PALMISTRY categories.

#### TIME INDICATOR







07 | FUTURE PERSONA

#### TIPS AND INSTRUCTIONS

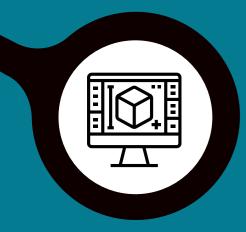
#### PALMISTRY

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- 0.3 Read the categories of the PALMISTRY and reflect upon the scenario created.
- 0 4 Describe how the future persona looks like.
- 0.5 Revisit the "FRAMING SIGNALS" exercise to nurture the PALMISTRY categories.







# 08 PROVOTYPING

Bringing the story to life by making, acting or filming.

#### WHAT?

Provo-typing is a word that mixes between the word 
There is no particular format for the provo-typing, however prototype and the word provoke. In other words, it means a provocative prototype. This stage is the creation of discursive and provocative prototype which has the aim of creating a discursive space around the focal issue that the team or the researcher is tackling.

#### WHY?

**01** Create a provo-type either physical or digital

**02** Open up the discussion about the future through designing an artifact, story or a video.

03 Develop a future design output.

#### FORMAT

suggestions are given on possible ways of creating it.

#### OUTPUT

A concrete design output representing the developed scenario and addressing the focal issue of the project.

# **PROVOTYPING**

#### WHAT?

A PROVOTYPE is a mixture of the two words Provoke & Prototype; which means creating a prototype that would trigger a discussion about the future.

#### HOW?

**01** Re-read the scenario and the description of the future persona. Then focus on a story you want to tell.

**02** Focus on what do you want to prototype (product, service or system? Digital? Physical?) how this can tell your story?

**03** Use any medium/material you might feel suitable to present the idea and to trigger/provoke debates.

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#### TIME INDICATOR



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08 | PROVO-TYPING

#### TIPS AND INSTRUCTIONS

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SKETCH AND PREPARE FOR THE PROVO-TYPE



#### 27

# **FUTURE TELLING**

#### WHAT?

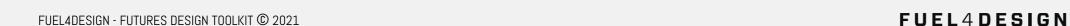
Future telling are short and dramatic performances that illustrate a particular scene from the future. This can be described as the role play of the future.

#### HOW?

- **01** Re-read the scenario and the description of the future persona. Then focus on a story you want to tell.
- **02** Identify the main situation you think is best to showcase the story of the future you're trying to show.
- **03** Think about what surrounds the situation (circumstances, who is involved and where?)

- **04** Try to find/create any props that might help you convey the story.
- **05** Present your performance to live audience.

#### TIME INDICATOR







08 | PROVO-TYPING

#### TIPS AND INSTRUCTIONS

#### FUTURE TELLING

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- 0 5 Present your performance to live audience.

SKETCH AND PREPARE FOR THE ROLE PLAY



# **STORYBOARD**

#### WHAT?

Tell your story about the future by using comics/storyboard style to narrate it. Tell your scenario in a visual narration.

#### HOW?

**01** Re-read the scenario and the description of the future persona.

**02** Break down the main elements of your story and what do you want to narrate ( what is your focus? what idea would you like to showcase?)

03 Create a template. Draw a series of rectangles similar to the comics magazines.

**04** Add the script under each rectangle, write the line of script or dialogue that corresponds to each scene.

**05** Sketch out the story.

#### TIME INDICATOR

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08 | PROVO-TYPING TIPS AND INSTRUCTIONS STORYBOARD Tell your story about the future by using comics/storyboard style to narrate it. Tell your scenario in a visual narration. SCENE SCENE SCENE 01 Re-read the scenario and the description of the future 02 Break down the main elements of your story and what do you want to narrate ( what is your focus? what idea would you like to showcase?) 03 Create a template. Draw a series of rectangles similar to the O 4 Add the script under each rectangle, write the line of script or dialogue that corresponds to each scene. 05 Sketch out the story. SCENE SCENE SCENE

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## **FUTURE FILMING**

#### WHAT?

Future Filming is a way to contextualize the provotype in a believable environment to suspend the disbelief about the future scenario. This can be achieved by making a video that would convince the audience of the future story you're telling.

The aim of this video is to create a discursive space about the generated scenario. The video should make the audience think of what if this future really happened?

#### HOW?

- **01** Re-read the scenario and the description of the future persona, then focus on a story you want to tell.
- **02** Identify the main situation/story/action(s) you think is best to showcase the narration of the future you're trying to present.
- **03** Think about what surrounds the situation (circumstances, who is involved and where?)

**04** Focus on interaction and affordances as well as the environment/context.

**05** Use your own footage, stock videos, images to create your video.

#### TIME INDICATOR

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08 | PROV-OTYPING

#### TIPS AND INSTRUCTIONS

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0.4 Focus on interaction and affordances as well as the environment/context.

0.5 Use your own footage, stock videos, images to create your video.

#### DIFFERENT TYPES OF FILMING

#### DOCUMENTARY



Creating a documentary style film about the provotype to highlight the focal issue of the project

#### FIRST PERSON PERSPECTIVE



Creating a video that is captured from a first person perspective about a particular use of the provotype to showcase the context of the future scenario.

#### ADVERT



Creating an advertisement about a future product (the provotype)

#### SITUATIONS



Creating a video that is showcasing a particular situation where the provotype is used and the context of the scenario is accentuated.





TOOLS, METHODS AND TACTICS TO TACKLE FUTURE DESIGN CHALLENGES

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.

#### FUEL4 DESIGN

