



O5.4 Training Course for Innovation Trainers (Training Package)

ENI CBC MED Programme Strategic Project

TECHLOG Technological Transfer for Logistics Innovation in Mediterranean Area

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1. The TECHLOG Training of Innovation Trainers – Context and Objectives

In the context of the TECHLOG (Technological Transfer for Logistics Innovation in the Mediterranean Area) project, a Training for Innovation Trainers (ToIT) has been designed and carried out in the Eastern (Livorno, Italy) and Western (Alexandria, Egypt) Mediterranean.

The objective of the actions was to provide representatives of EU-Mediterranean transport and port institutions or organizations with the tools necessary to become innovation trainers in the field of advanced simulation for port and transport activities. That is, to train representatives of such institutions to be capable of promoting, leading, and accompanying innovation processes in their own local contexts; to be able to recognize the benefits of academia-industry cooperation for innovation in the sector; and to understand and explore the benefits and potential of simulation for training and innovation in the logistics and transport sector.

As such, it is not the objective of the TECHLOG Training of Innovation Trainers to present a comprehensive overview of new technologies or developments in the field in question, but rather to provide the tools and guidance for the exploration, design, development, and implementation of new, innovative solutions. Therefore, the TECHLOG ToIT package places the focus on *how* to think about problems and their potential solutions rather than *what* to think and how specifically to solve them. This makes it a timeless and highly adaptable approach.

The proposal of the TECHLOG ToIT package is that the workshops be structured to provide simultaneously theoretical training, necessary to understand key concepts in innovation and to ensure that all participants are building on the same language and basic ideas, and a practical experience of building and operating a Living Lab, the essential framework for innovation that the TECHLOG project has adopted.

This means that the participants of a TECHLOG ToIT are “building the plane while flying it”. They are learning by doing, meaning that they are trained on new concepts like open innovation (theory) and living labs (praxis) while at the same time building and actively participating in a living lab, sharing ideas, and coming up with innovations to test in the future.

In this sense, and without abandoning the principle of teaching how rather than what to think, the generic ToIT package gains concretion by establishing more specific objectives



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and questions, in the same way that a Living Lab would. During the sessions held in Livorno and Alexandria, the training revolved around the main question of “*how might we design and build an enabling environment (favorable context) to do technology transfer for logistics innovation in Mediterranean (East / West) port areas?*”. And, as a more specific sub-question, “*how to design logistics and transport strategies and innovations using virtual simulation?*”.



2. TECHLOG Innovation Training Theory and Practice

The current chapter provides a guide on the theory and practice behind the organization and development of a Training of Innovation Trainers and should be used together with the TECHLOG ToIT presentations (Annex 1). It explores training structure, scheduling, and other practical aspects before moving on to the training curriculum for an overview of the concepts and proposed activities that the ToIT package comprises.

2.1 Training Structure and Scheduling

The TECHLOG ToIT package has been designed for a 2-day training preceded by a suggested 2 hour-long online preparatory session. The timings of the workshop may be adapted to better suit the needs and specificities of each specific training. This section presents a suggested structure and schedule and some important notes on the matter.

Online preparatory session

The ToIT package highly encourages holding an initial session with all training participants to better understand the needs, expectations, and objectives of the training and to help build a trusting relationship between participants and with the training facilitator before the workshop.

To this end, Presentation 0 provides a full set of questions to guide an ICBD (intentions, concerns, boundaries, and dreams) conversation. For a group of 20 people, it is suggested for the facilitator to foresee a two-hour timespan, to give all participants the chance to share ideas and insights. The facilitator should not aim at going through every question, but rather use them as a tool to get a better understanding of his trainees. Not all questions will receive the same reaction and different groups may be motivated by different kinds of questions. The facilitator should be ready to adapt and reconduct the conversation accordingly.

Where time or scheduling constraints are present or if a previous analysis of needs and expectations has been carried out in another way, this initial dynamic may be incorporated to the main corpus of the workshop or even skipped altogether. However, holding it at least one week prior to the workshop is advisable, as this will allow the facilitator to adapt and to better align the workshop program with the inputs received from the participants.



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Training of Innovation Trainers

The TECHLOG ToIT is divided into 10 blocks of contents, corresponding to 10 presentations. In the two workshops carried out in Livorno and Alexandria within the TECHLOG project, these blocks were spread among 2 days of full-time training, from 9am to 5pm. The duration of the training shall depend on the nature of the audience – a local group of professionals may prefer to meet for shorter periods of time spread over more days, whereas working professionals coming from different countries may not be able to take more than a couple of days out of the office to attend.

In any case, it is worth noting that a 9 to 5 schedule for 2 days is an intensive schedule. The group energy levels will fluctuate throughout the two days and the training facilitator should be prepared to encourage active participation through these fluctuations. Where possible, it would be advisable to spread the training among 3-4 days and complement it with related visits or other external activities which can encourage group bonding and allow participants to recharge.

Table 1 shows a suggested schedule for a 2-day training.

<i>Day 1</i>		<i>Day 2</i>	
09.00 – 10.00	<i>Welcome, initial presentations, participants check-in, expectations</i>	09.00 – 09.30	<i>Introduction, participants check-in, warm-up exercise: Pre-Mortem.</i>
10.00 – 11.00	<i>Basic concepts: innovation, open innovation, living labs (I). Examples, best practices, videos, Chat GPT4. Q&A.</i>	09.30 – 11.00	<i>Living Lab methodology: Step 3: Prototype Design Step 4: Innovation Design</i>
11.00 – 11.30	<i>BREAK</i>	11.00 – 11.30	<i>BREAK</i>
11.30 – 13.00	<i>Basic concepts: innovation, open innovation, living labs (II). Examples, best practices, videos, Chat GPT4. Q&A.</i>	11.30 – 13.00	<i>Living Lab methodology: Step 5: Commercialization</i>
13.00 – 14.00	<i>LUNCH</i>	13.00 – 14.00	<i>LUNCH</i>
14.00 – 15.30	<i>Living Lab methodology: Step 1: Planning Step 2: Concept Design</i>	14.00 – 15.00	<i>SCAMPER & MakeIt Toolkit methodologies applied to simulators</i>
15.30 – 16.00	<i>BREAK</i>	15.00 – 15.30	<i>BREAK</i>

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16.00 – 17.00	<i>Strategy Toolkit. Debate.</i>	15.30 – 17.00	<i>Living Lab roadmap, next steps, and conclusions</i>
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Table 1: Suggested 2-day workshop schedule.

The 10 content blocks correspond to the items shown on the schedule above and are structured around the *TECHLOG Operating and Management Plan of the Cross-Border Open Lab*, to ensure that the methodologies of innovation within living labs promoted through the different project activities are consistent with each other. They are as follows:

- ✓ Block 1: Introduction Day 1
- ✓ Block 2: Basic Concepts I
- ✓ Block 3: Basic Concepts II
- ✓ Block 4: Planning and Concept Design
- ✓ Block 5: Strategy – Play to Win
- ✓ Block 6: Introduction Day 2 – Pre-Mortem
- ✓ Block 7: Prototype Design and Innovation Design
- ✓ Block 8: Commercialization
- ✓ Block 9: SCAMPER and MakeIt Toolkit applied to simulators
- ✓ Block 10: Roadmap

Each of these blocks is supported by one presentation containing an array of visual materials to illustrate and exemplify the concepts and to foster discussion. Like the presentation for the Online Preparatory Session, the goal of these presentations is not to go through each slide following a strict path – they should rather be used as tools that must be adapted to the particular circumstances, interests, and dynamics of the group.

It is vital for the workshop facilitator to understand that no two living labs are the same, and as the workshop is structured to mimic the dynamics of a living lab, no two workshops will be the same. The human factor will shape each training and, while planning is important, a good facilitator should be prepared to recalculate the route, open up space to topics, methodologies, and concepts that garner more interest, and favor the methods and activities to which the participants are more receptive.

2.2 Setting the scene: physical and theoretical framework

As Chapter 1 of this guide mentioned, the TECHLOG ToIT is meant to provide a framework for training that can be adapted to different topics, contexts, and interests, as it is focused on practical abilities: needs identification, problem solving, issue framing,



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solution testing, etc. However, this adaptable nature makes it all the more important to properly define the theoretical boundaries of each workshop and to properly set the scene, making the physical space conducive to effective collaborative dynamics.

Theoretical framework – defining the key questions

Chapter 1 introduced the key questions around which the TECHLOG ToIT sessions held in Livorno and Alexandria were focused: *“how might we design and build an enabling environment (favorable context) to do technology transfer for logistics innovation in Mediterranean (East / West) port areas?”* and *“how to design logistics and transport strategies and innovations using virtual simulation?”*.

These questions may differ in different workshops, but properly identifying them is key, just like it is key in the management of any living lab. This will help participants stay focused on the subject matter and provide a good reference point for all workshop activities.

A good question, helpful in setting the theoretical framework of the training, must include 5 key elements, as exemplified by the questions above:

- ✓ HOW: to design and build.
- ✓ WHAT: enabling environment.
- ✓ WHY: to do technology transfer for logistics innovation.
- ✓ WHERE: East and West Mediterranean.
- ✓ WHO: port areas (stakeholders).

Physical framework – technical requirements

The physical space in which the training is carried out is as important as the theoretical framework described above. The technical conditions of the workshop can make or break an initiative of this kind. While, like Living Labs themselves, these types of dynamics can be held almost anywhere, some circumstances can hinder dialogue, effective collaboration, and active participation, thus harming the innovation training process.

The technical requirements for the training are minimal. The space must have the following resources available:

- ✓ A computer for the presentation of content.
- ✓ A projector.
- ✓ A front table to be used by the facilitator.



- ✓ A flipchart and markers.
- ✓ Wi-Fi connection.
- ✓ Chairs and tables.
- ✓ Sticky notes and pens/markers.

However, to ensure the best possible results, the ideal space should be set up in an informal way, with chairs preferably in a circle and close to each other; it should allow for the re-arrangement of chairs and tables for different activities; and it should be a quiet and calm space where participants can exchange, interact, collaborate, and listen to each other at ease. A conference-style set up is not recommended, as an excessively formal space is less conducive to the creation of strong collaborative ties.

2.3 The TECHLOG Training of Innovation Trainers in Practice: Curriculum and Suggested Activities

Block 1: Introduction Day 1

The first block of the TECHLOG ToIT, as contained in Presentation 1, is crucial to creating the right atmosphere and environment for cooperation and active learning. The presentation and contents of this opening session need to be adapted to the specificities of the training in question, but should include the following elements and ideas:

- ✓ An introduction of the trainer / facilitator.
- ✓ An introduction of the methodologies and the topics that the training will explore, the “open questions”, the “uncertain points”: open innovation, living labs, academia/industry cooperation, needs and results, technology transfer.
- ✓ The key question around which the workshop will be centered as developed in section 2.2.
- ✓ The training schedule.
- ✓ Introductions of all the participants and the opportunity to share their intentions, concerns, boundaries, and dreams for the training.
- ✓ Some basic ground rules:
 - Conversations for relationship-building, for mutual understanding, for possibilities, and for action.
 - The role of the facilitator is to be a neutral listener, asking good questions and giving clear instructions.
 - The best talker does not always have the best ideas.
 - Interventions should be kept short.
 - Brainstorming without judgement.



- ✓ Understanding how finding clarity, understanding and solutions is a process that requires opening the space up to uncertainty and various patterns and ideas before defining, ideating, prototyping, and testing.

A warm-up activity is proposed which can be used either at this point, as an ice-breaker activity, or later on when the energy levels of the group are lower and an “energizer” activity is needed: the Istvan Banyai Zoom activity (not included in the ToIT package). The goal of this activity, explained in Presentation 1, is to help develop communication, perspective, and problem-solving skills, and to build an understanding of the importance of the role of each different point of view and involved stakeholder in an open innovation process.

Block 2: Basic Concepts I

The second content block introduces the TECHLOG approach to a key tool for innovation: living labs. This approach is set out in TECHLOG’s Operating and Management Plan for the Cross Border Open Lab, which performs a literature review on open innovation and successful living labs and sets the focus on SMEs, as they are, on average, less innovative than large companies.

SMEs can be more reactive and flexible than large corporations, but they generally face more financial and technical constraints for innovation. However, business as usual is not expected to keep working, so innovation is necessary. Collaborations with external partners can compensate for the lack of internal resources, making open innovation (concept) and Living Labs (tool) an ideal approach for SME innovation.

It is important to keep in mind that, within SMEs, innovation is not necessarily about inventing new technologies, but rather about finding relevant and novel applications of existing technologies. And Living Labs can be the drivers of these processes. Living Labs are, first and foremost, learning environments, where users can explore, co-create, experiment, evaluate innovation ideas, scenarios, concepts, tech artefacts, in real life contexts.

There are diverse ways of framing the innovation process and different ways of structuring its phases: design thinking, lean startup... but they all revolve around the same concepts of ideation, co-creation, and venturing. The TECHLOG-backed methodology is the FormIT methodology, which illustrates this process in five cycles: planning, concept design, prototype design, innovation design, and commercialization.

In carrying out this process, a Living Lab will bring together a variety of stakeholders, thus generating the challenges of inclusion, equal participation, and continuous learning.



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A defined governance model is key to address these challenges, with clear roles and responsibilities.

With a governance structure in place, an open innovation process will need to consider three key aspects in the development of novel solutions: in order of precedence, use (is it desirable?), business (is it viable?), and technology (is it feasible?). Asking these three questions in order is key – no matter how technologically feasible an innovation may be, the time and money invested on it will go to waste if it is not desirable and if there is no viable business model to sustain it in the first place.

To illustrate these key points, it is suggested that some Living Lab examples be used. Presentation 2 introduces the Botnia Living Lab and the very helpful resource that is the European Network of Living Labs (ENoLL), which contains abundant information on different Living Labs from across the world, good practices, toolkits, webinars, and other materials.

Block 3: Basic Concepts II

Blocks 2 and 3 are very theoretical and require limited participant input. Still, asking for feedback, questioning the attendees, and allowing them to react to the materials and the concepts shared is encouraged. A short break is recommended between the two blocks, to keep the participants engaged and interested.

The third block of content starts by introducing the idea of innovation spaces. It is often the case that SMEs do not have dedicated innovation departments, rooms, teams, chief innovation officers... But this does not need to represent an obstacle. In fact, such spaces can be counterproductive. Instead, the innovation spaces should not be understood as physical spaces, but as:

- ✓ Strategic space: the possibility to foment innovation among leaders.
- ✓ Portfolio space: the possibility of introducing new products and services.
- ✓ Finance space: the minimum resources needed.
- ✓ Management space: the possibility to experiment with new ways of doing things.
- ✓ Time space: the possibility of making time for innovation.
- ✓ Learning space: the possibility to learn new skills and know-how.
- ✓ Space to fail: creating safe spaces to fail.
- ✓ Space to scale: the capability to scale what works.

These spaces are open to a lot of ideas, some of which are taken into discovery phase, some further into validation, and a limited selection, into acceleration. What they enable,



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therefore, is out of the box thinking, the development of new possibilities. In Presentation 3, a short exercise is proposed, to actively engage participants in this mentality: the nine dots puzzle.

Further, block 3 introduces the following ideas:

- ✓ A quick recap of the preferred frameworks for innovation already introduced in previous presentations and of the desirability-viability-feasibility innovation trinity introduces the idea of innovation killers. There are four good reasons to kill an idea: lack of desirability, lack of viability, lack of feasibility, and lack of adaptability.
- ✓ There are different types of innovation: to transform processes (exploring phase), to sustain processes, and to make them more efficient (exploitation phase). An organization should combine an exploration and an exploitation culture, be ambidextrous.
- ✓ The difference between closed and open innovation. Open innovation is based on interactions with actors and ideas outside the boundaries of the organization. These interactions can be understood through the triple, quadruple, and quintuple helices models, that illustrate the relationship between the different stakeholders and parties that should be involved in innovation processes. The effective involvement of all of them is key for success.
- ✓ This human involvement, however, makes innovation processes *complex* problems. Complex problems, as opposed to complicated problems, have too many unknowns and too many interrelated factors to be solved. Rather than solved, they are managed. It is important to understand that, as such, innovation processes and all their involved actors must be managed, not solved.
- ✓ In managing such complex processes, gate checks are a useful tool, setting clear and visible “must meet” and “should meet” criteria to evaluate the progress and completion of a project.

Some videos are provided to show Living Lab examples and illustrate some of the concepts explored. One or two may be selected and shown if desired and if time allows.

Block 4: Planning and Concept Design

Having gone through the previous theoretical aspects ensures that all participants are “speaking the same language”. The TECHLOG ToIT package then moves on to the practical co-creation exercises that take participants through a Living Lab process and each of its phases.



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From this point onwards, the Presentations should serve to provide inspiration, guide the discussion, and clarify some of the key concepts, but the dynamics should be participant-centric, based on active involvement. Depending on the schedule that the training is following and the focus that the FormIT methodology and the TECHLOG Living Labs approach have received in previous blocks, a recap of some of the previous ideas may be done as per Presentation 4: cycles of the FormIT process (phases and cycles), key principles and actors of Living Labs, types of Living Lab stakeholders, and the use-business-technology questions.

However, the bulk of this block is on the exploration of the planning and concept design cycles. The planning process can be complex, as project participants usually want to make contributions to many diverse areas, which makes it hard to decide what to include and what to exclude. Presentation 4 offers a series of planning questions that should be used to guide participants through the planning process in the context chosen for the training. While developing that process, a couple of key concepts are introduced:

- ✓ **Scoping:** it is the process of defining the boundaries of the project, what the project will do (in scope) and what it will not do (out of scope). This is vital to keep stakeholders informed, keep the team focused, provide a roadmap, help manage resources, and deliver the expected outcomes.
- ✓ **Team charter:** the process of defining the intentions, concerns, boundaries, and dreams of an innovation project and team.
- ✓ **Living Lab key principles:** the principles of value, influence, sustainability, openness, and realism should permeate all Living Lab operations and should also be considered in the planning phase.

Participants can work in pairs or small groups to define the scope and the team charter. They should have pen and paper and be given some time to discuss. Each group's inputs can then be presented and discussed. Writing them in big sticky notes and displaying them on a wall in the training group helps paint the full picture of the exercise.

For the concept design cycle, the structure that Block 4 follows is very similar, a series of concept design questions help guide participants while they are also introduced to the following concepts:

- ✓ **Empathy map:** in concept design, it is key to develop an understanding of what the user says, thinks, does, and feels. The empathy map offers a series of questions that help understand the user for which we are innovating.
- ✓ **Stakeholder mapping:** stakeholders are another key issue. Their influence and interest can greatly impact any innovation project. Depending on these two



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- aspects, stakeholders should be managed differently. A very interested and very influential stakeholder should be managed very closely and be given a central role, but a less influential, less interested stakeholder is still worth keeping regular, even if minimal, contact with.
- ✓ **Voice of the customer:** the voice of the customer should be gathered, analyzed, and acted on. Customers or users share their voice in the form of feedback, reviews, opinions, sentiments, behaviors, expectations, needs, wants... which can be gathered in different ways, from social media listening to focus groups and interviews, surveys, customer reviews, etc.
 - ✓ **Needs, wants, and pains:** users have needs, wants, and pains. Identifying them effectively is important to develop successful solutions. Needs are urgent desires, wants are aspirational, and pains are problems that need solving, and all three can be important to users.
 - ✓ **Jobs to be done:** properly identifying the job to be done is useful to conceptualize a less defined/concrete need, providing an actionable item to go from current reality to better future reality. Users and customers know their needs, the future better reality they aspire to, innovation should tackle the jobs to be done to reach them better and/or more cheaply than other alternatives. However, four positive and negative forces can influence the customer to choose an innovative way of handling the jobs to be done or keep the existing solutions: push (struggles or pains), pull (attraction and desired outcome of the new), habit (holding people back), and anxiety (uncertainty of the new).
 - ✓ **Collaboration, alignment, engagement:** collaboration and engagement are essential at the concept design phase. High alignment and high engagement are at the basis of high performance. A great project is one where all its actors are aligned, but stakeholders that are not involved at initial stages are generally harder to involve later on in the process. The levels of engagement vary and players can take on different roles: decision-makers, accountable, responsible, consulted, or informed.

The collaboration spectrum tool can help groups assess where they are as a partnership and where they would like to go. Participants in the workshop can be asked to place themselves in the spectrum individually and then discuss their collaboration goals and how they may reach them.

Block 5: Strategy – Play to Win

Presentation 5 contains the brief fifth block on the basics of strategy, based on the book *Playing to Win – How Strategy Really Works* by A.G. Lafley and Roger L. Martin.



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The strategy choice cascade requires the consideration of several successive questions to define our winning strategy:

- ✓ What's our winning aspiration? (why?)
- ✓ Where will we play? (geographically, channels, stages of production, offer, and customers)
- ✓ How to win? (low cost or value differentiated)
- ✓ What capabilities do we need? (what?)
- ✓ What management systems do we have?

It can also be helpful to create an assumption canvas which reflects the big unknowns in an idea, the riskiest assumptions, and the first steps to reduce those risks, which involve testing the assumptions for which you have no evidence, but which are critical. What we need is not simply to know what *is* true, but what would have to be true for our idea to work.

That is strategy's magic question: what *must* be true? The process of asking this question can be repeated for the segments, channels, customers, capabilities, costs, and competition which are relevant to our idea.

Strategies may be emergent or deliberate:

- ✓ Emergent strategies are shorter term strategies. They should be considered if the future of the company is uncertain, if it is unclear what the right long-term strategy is, if the company is in its early stages, or if the industry's competitive landscape is undergoing significant change.
- ✓ Deliberate strategies are long-term strategies. They should be considered if the path to strategic goals is clearly defined, if the company is relatively mature and stable, and if the organizational leaders are ready to shift away from survival mode toward growth.

In the current landscape, emergent strategies and a Strategy to Execution approach (S2E) may be more effective in obtaining consistent advantage and sustaining a competitive position.

Block 6: Introduction Day 2 – Pre-mortem

Block 6 offers some key questions that could be asked at the beginning of Day 2 of training and any other subsequent days. It is important to take the time to check in with



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participants to build trust and be able to adapt and re-calculate according to their experiences, needs, concerns, and interests.

Having given participants the time and opportunity to share some impressions, Presentation 6 introduces participants to an important exercise that must be carried out during any innovation project: the pre-mortem.

In contrast with a postmortem, performed in medical settings to determine the causes of death, the pre-mortem tries to identify the potential causes of death of a project before they take place. That way, they can be addressed and everyone, including the patient (the project) can benefit.

A pre-mortem exercise therefore asks a crucial question: imagine this plan failed. Why did it fail? An open and honest discussion about this should lead to the identification of the top threats and of the potential mitigation strategies to address them.

Participants of the training should be invited to perform this exercise with regards to the guiding question as defined in the initial sections of this guide. As with previous activities, writing ideas down in big sticky notes and making them visible to all involved helps to better understand the big picture, find commonalities, keep the focus, and prioritize.

Block 7: Prototype Design (Cycle 2) and Innovation Design (Cycle 3)

Following planning and concept design, cycles 2 and 3 of the FormIT methodology take us through prototype design and innovation design.

During prototype design, a concept is tested, gathering data from users and iterating the process to incorporate new insights into the design. A prototype needs to be detailed enough that users can have an accurate enough experience of what the final product or service will be like. The aim should be to move from low-fidelity prototypes (concepts) to high-fidelity prototypes, all while keeping the user needs, values, and requirements at the centre.

When presented with a prototype, users should be guided through a series of evaluation questions, leading from opening questions, to introductory, intermediary, key, concluding, and closing questions. However, this process of prototyping, testing prototypes, and iterating is significantly time and money consuming.

There are some methods that can be used to go from “idea” to “learning” without having to incur on the high costs of building and launching.



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- ✓ Reframing. Generally, users are experts at needs, not solutions. While understanding their needs is crucial, it cannot be the sole guiding force for innovation development. Reframing makes the innovator take an identified need and look at it from a different lens, allowing him to uncover solutions which may not have been thought of under the initial frame and which may prevent high “building” costs and times.
- ✓ How might we (HMW) questions. HMW questions are another way of reframing problems. Building questions in this manner, with an action, subject, and ideal outcome, provides new lenses through which to analyze needs, thus opening the door to new, potential more cost and time effective solutions.
- ✓ Pretotyping. Pretotyping means pretending to prototype. Typically, solutions develop from a proof of concept, into prototypes, pilots, and, finally, minimum viable products (MVPs) as they acquire higher levels of fidelity and completion. Pretotyping adds a stage in between the proof of concept and the prototype and it helps ensure that you are “doing the right it before you build it right”. Pretotypes ask “should we build it?” while prototypes focus on “could we build it?”, thus helping to make sure that you are investing your efforts in something worthwhile.

There are different ways to prototype ideas and Presentation 7 offers an array of techniques and associated examples from different fields. Pretotyping is, essentially, the idea of “fake it till you make it”: build a solution close enough to the real deal until you can ensure that it is the right it. Participants in the training should be invited to come up with ideas they could use to prototype innovative solutions in their field of work.

Innovation design takes the results from prototype evaluations and generates the changes in the needs of the innovation and, as a result, in the innovation itself. The innovation design cycle takes place in three phases: appreciating opportunities (needs, utility and usability issues), innovation design (incorporating business model aspects and designing a fully functioning innovation based on previous feedback), and user experience evaluation (gather insight from users).

Innovation in a general sense is about generating ideas that can be turned into products, services, or processes that are a value to clients or society, providing them with results (economic and social) sustainable in time. That being said, innovation can be of different kinds and can focus more on the backstage of a company’s workings, on the products or services offered, or on user experience, the front stage.

Presentation 7 offers an explanation and examples of these different types of innovation:



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- ✓ Profit model: how you make money. The example of Netflix.
- ✓ Network: how you connect with others to create value. The example of Samsung.
- ✓ Structure: how you organize and align your talent and assets. The example of Google.
- ✓ Process: how you use signature or superior methods to do your work. The example of Zara.
- ✓ Product performance: how you develop distinguishing features and functionality. The example of Apple.
- ✓ Product system: how you create complementary products and services. The example of Nike.
- ✓ Service: how you support and amplify the value of your offerings. The example of Zappos.com.
- ✓ Channel: how you deliver your offerings to customers and users. The example of Amazon.
- ✓ Brand: how you represent your offerings and business. The example of Virgin.
- ✓ Customer engagement: how you foster compelling interactions. The example of Starbucks.

Block 8: Commercialisation (Cycle 4)

Commercialisation is the final phase of the innovation process and could even be seen as a separate project, where the product is introduced to a potential buyer and its market potential is evaluated. Adoption of innovation is a multidimensional issue where the human factor plays the lead role, making it a complex problem.

The idea behind commercialisation is that, out of the initially developed ideas, a few models undergo the product development, user validation and market positioning, and entrepreneurship processes to be taken to the growth process. Presentation 8 introduces some important notions related to the “a few models to market” idea:

- ✓ The Ansoff matrix. Depending on whether the product and the market are new or existing, the growth strategy can be of different kinds: market development, market penetration, diversification, or product development.
- ✓ Models taken to market need to find the right balance between production time, cost, and quality.
- ✓ Understanding the market. Innovators and visionaries access the market in its early stages. As it becomes mainstream, pragmatists, conservatives, and skeptics join in.



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- ✓ Incubators and accelerators as key spaces providing training, mentoring, and business support. Venture studios.
- ✓ Phases in commercialisation. Fitting the solution to the problem and the product, channel, and language, to the market.
- ✓ Defining the market. The difference between the Total Addressable Market, the Serviceable Addressable Market, and the Serviceable Obtainable Market.

An important part of understanding the market is understanding the buyer persona. The customer goes through a journey that starts with simple awareness of the product. Awareness can lead to consideration, and the decision to buy the product, and when that happens it is important to retain the customer so that he can become an advocate for the product, thus increasing awareness. The end goal of commercialization is not just purchase, but advocacy.

The different elements of the commercialization phase can be reflected on the business model canvas, which should include the following dimensions:

- ✓ Key partners.
- ✓ Key activities.
- ✓ Key resources.
- ✓ Value proposition.
- ✓ Customer relationships.
- ✓ Customer segments.
- ✓ Channels.
- ✓ Cost structure.
- ✓ Revenue streams.

Following commercialization, some (few) models will go on to impact society and cause changes in it. Such models can contribute to creating capital:

- ✓ Human capital: new capacities, new skills.
- ✓ Social capital: new levels of trust, new relationships.
- ✓ Intellectual capital: new know-how, new projects.
- ✓ Physical capital: new structures, new organizations.

This can be achieved through different types of processes:

- ✓ Scaling out: impacting more individuals through program replication or adaptation.
- ✓ Scaling up: impacting laws and policy by changing institutional rules.
- ✓ Scaling deep: impacting cultural roots by changing relationships, cultural values, and beliefs.



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Block 9: SCAMPER and MAKE IT Toolkit

Presentation 9 introduces two tools to uncover new uses of existing technologies: SCAMPER and MAKE IT. It includes a brief introduction to the Escola Europea Intermodal Transport's Port Virtual Lab simulator – the aim of this is to provide participants with an existing technology that they can apply the two methodologies to. Other examples could be used depending on the group for which the training is intended: a driving simulator, a crane simulator, simulators of other kinds, or other types of technologies. The goal is that the trainees brainstorm and come up with ideas using the guidelines.

SCAMPER is a very simple methodology which stands for:

- ✓ Substitute: replace one part with another that works better.
- ✓ Combine: put different components together to improve.
- ✓ Adapt: update the product to new circumstances.
- ✓ Modify: change the appearance and presentation.
- ✓ Put to another use: use the product for a purpose that was not intended.
- ✓ Eliminate: eliminate the useless parts that are not valued.
- ✓ Reverse: de-construct or re-think some of the main pillars.

Perhaps another very obvious but still helpful way to improve your ideas is to collect ideas from other people: collect their thoughts - criticisms, doubts, positive opinions, and ideas for improvement - without responding or reacting, and then use them to iterate and improve your idea. The MAKE IT Toolkit offers a structured guide of behavioral design, that is, how to design innovations that respond to how people think and behave. What it proposes is to look at existing technologies through the MAKE IT lens:

- | | |
|-----------------------|-----------------------|
| ✓ Make it easy. | ✓ Make it meaningful. |
| ✓ Make it attractive. | ✓ Make it valued. |
| ✓ Make it obvious. | ✓ Make it aversive. |
| ✓ Make it rewarding. | ✓ Make it scarce. |
| ✓ Make it timely. | ✓ Make it intriguing. |
| ✓ Make it empowering. | ✓ Make it unexpected. |
| ✓ Make it attainable. | ✓ Make it immersive. |
| ✓ Make it social. | |



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Block 10: Roadmap

Block 10 does not introduce any new content but should only serve to solidify the idea that a roadmap is necessary to go from the contained environment of a Living Lab to the actual implementation of innovative actions. As should have been stressed throughout the training, innovation should be a collaborative process, and an innovator, a value creator, should be able to request often and help often, thus creating an open environment around him.

Training participants should be invited to identify the roadmap for their future collaborations. This entails defining steps or stages, like the infographics in Presentation 10, detailing the how, the what, and the why of their common work.

The activities carried out in the previous blocks should have led to a series of ideas or actionable items that should be included in this roadmap. In this way, the training can be concluded on a positive note, with a clear vision for the next steps to follow and what to aspire to.

Presentation 10 also includes the after-action review and evaluation. This is an important step to ensure that the training is carried out to the highest possible quality standard. Section 2.4. deals with training evaluation and the closing of the TECHLOG Training of Innovation Trainers.

2.4 Training Assessment – Closing Out the Training of Innovation Trainers

Having gone through all the training contents and activities, it is an important final step to carry out an evaluation. This should be an opportunity for the participants to voice and exchange their impressions and final comments as well as to write them down anonymously for action review and future improvements.

The role of the facilitator during the assessment should be a neutral one. He should not aim to respond to the comments or defend himself from criticisms, but rather to collect and absorb all inputs, good and bad.

An after-action review should cover four key points.

- ✓ What was supposed to happen?
- ✓ What actually happened?
- ✓ Why was there a difference?
- ✓ What can we learn from this?



The Kirkpatrick evaluation model goes from reaction to results to measure different aspects of the learner experience as follows:

- ✓ **Reaction:** measure if the learners have found the training to be relevant to their role, engaging, and useful.
- ✓ **Learning:** measure whether the learner has acquired the knowledge, skills, attitude, confidence, and commitment that the training program is focused on.
- ✓ **Behaviour:** measure behavioural changes after learning and see if the learners are taking what they learned in training and applying it as they do their job.
- ✓ **Results:** measure whether the targeted outcomes resulted from the training program, alongside the support and accountability of organizational members.

Not all of these aspects can be evaluated immediately after the program, but the basis of the pyramid, reaction and learning, can. The TECHLOG ToIT package proposes the following questions to be distributed to participants in the form of an anonymous evaluation questionnaire:

1. What was the goal of the workshop according to you? (Outcomes).
2. Did the workshop meet your expectations? How? If not, why? (Expectations).
3. Did you learn any new ideas in this workshop? Which ones? (Ideas).
4. Did you like the methodologies used? Why? If not, why not? (Methodologies).
5. What did you like best about the workshop? (Preferences).
6. Which insights would you like to further develop after the workshop? (Follow-up).
7. What key messages are you taking home (Content).
8. Do you have any feedback for us? What should we do differently? (Feedback).
9. Workshop rating:
 - a. Rate the workshop (from 1 to 10).
 - b. Rate the facilitator (from 1 to 10).
 - c. Rate the organization, resources, setting (from 1 to 10).

Following the questionnaire, one last check out is carried out and participants can be invited to share any ideas, thoughts, or other comments before closing the training.

The takeaway message after everything has been said and done is the closing slide in the ToIT package: “Get curious, talk to people, try stuff, tell your story”. This is the philosophy behind Living Labs and open innovation that the entire training attempts to convey.



3. The TECHLOG Training of Innovation Trainers Experience – Figures and Lessons Learned

The TECHLOG project has carried out two editions of the Training of Innovation Trainers: in Livorno, Italy, May 11th-12th, 2023, and in Alexandria, Egypt, May 21st-22nd, 2023.

Prior to the two workshops, an introductory online session was carried out and attended by 24 participants. During this session, the attendees discussed their intentions, concerns, boundaries, and dreams for the training. Some of the most significant and recurring themes were the following:

- ✓ Desire to learn about needs, new tools, and new procedures.
- ✓ Need to understand how to engage stakeholders in innovation processes.
- ✓ Will to enhance training in innovative ways.
- ✓ Desire to exchange experiences about training and new competences and skills that they will have to focus on in the coming years.
- ✓ Need to address the skills needed for the green transition, digitalization, safety and security, etc.
- ✓ Belief that training can be used to facilitate the implementation of other innovations.
- ✓ Innovation is not only about developing fully new solutions, but rather about looking at what others are doing and exploiting the potential of partnerships.
- ✓ Different types of actors need to be involved in the living lab / innovation process, including not only private stakeholders, but also the public sector.

The participants then met in person, in Italy and in Egypt, for the TECHLOG Training of Innovation Trainers. Below are some key figures from the trainings:



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<i>Livorno Training of Innovation Trainers</i>	<i>Alexandria Training of Innovation Trainers</i>
12 participants	17 participants
33% female	41.2% female
3 countries – Italy, Spain, Tunisia.	2 countries – Egypt, Lebanon.
Average rating: 4.3/5	Average rating: 4.2/5



Figure 1: TECHLOG ToIT participants in Livorno, Italy.



Figure 1: TECHLOG ToIT participants in Alexandria, Egypt.

The ratings of the trainings indicate a successful experience. However, evaluating the workshops helps pinpoint possible areas of improvement that should serve as lessons to be applied in future initiatives. The following were some of the most outstanding points:

- **Designation of participants.** In many cases, the participants had limited decision-making capabilities in their own companies or institutions. While they still benefitted from the workshop, asking those who can take decisions to participate would help ensure that the learnings of the training are put into action at later stages. Either way, it is important for future training activities to define precisely and accurately what the target group is and what the participant profile should be. In this definition, it is also key to ensure that all participants are fluent in a common language to facilitate exchanges.
- **Setting expectations.** In relation to the previous point, future training actions should ensure that all participants share the same basic information on the training, its aims, and its methodologies. These communication efforts in the



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- participant recruitment phase are important to be able to provide a training that matches the expectations of its attendees.
- **Length of sessions.** This is perhaps the most complicated point. Participants reported feeling like the training should have been longer, but also that each day of training was excessively long. As previously mentioned, it would be advisable to plan a training lasting more days but fewer hours per day, and to include informal visits in the afternoons to allow participants to develop trusting relationships and good work dynamics. However, this can be hard to achieve when the target of the training is working professionals, often busy and unable to take several days off for such activities. Therefore, this aspect should be evaluated for each individual training, depending on its conditions and the profile of its participants.

Despite these opportunities for improvement, the participants appreciated the active, participatory, dynamic, and adaptable nature of the training, as well as the clarity of the materials and contents. The full anonymous feedback gathered from the evaluation questionnaires can be found on Annex 2.