

# INEDIT

open INnovation Ecosystems  
for Do It Together process

## D2.5 DIT APPROACH TRAINING TOOLBOX

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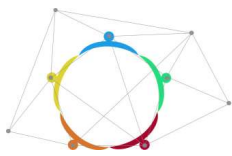
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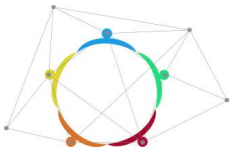
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# 1. INTRODUCTION

The present deliverable aims at presenting a toolbox, specifically dedicated to learning and implementing the “Do-It-Together” approach, developed in the INEDIT project framework and to be tested within the INEDIT training activities, foreseen in the task 7.6.

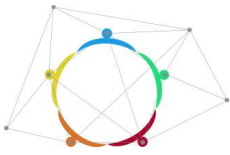
The first chapter of this document reports the definition of the Do-It-Together Approach and its link with the co-creation and the co-manufacturing processes, as studied in previous activities of work package 2, and then introducing the approach in structuring and designing the INEDIT Toolbox.

Chapters 2, 3 and 4 are dedicated to the detailed description of the main elements of the toolbox:

- INEDIT Role Playing Game
- INEDIT Makeathon
- INEDIT Creativity Tools

The toolbox is a set of exercises, tests, games and group interactions that has been created and adapted to different kinds of target groups. From students, to young professionals and more experience managers, the same activities could be used in different contexts with a slight modification of the challenges proposed, depending on the number, age and competences of the participants.

This box can be implemented in the future with more tools that each INEDIT partner may develop and test in their own activities. Therefore this deliverable is intended to report an on-going activity that may be updated in the future during the project development.



## 2. The INEDIT Toolbox approach

### 2.1. The DIT approach

The "Do-It-Together" can be defined as a social manufacturing process based on a democratic co-design and co-manufacturing of customized products assisted by a community of professionals and experts. The DIT is carried out more closely with the user and the final consumer of the products created in a dynamic of collective intelligence bringing new value and fully integrated into the processes of open innovation and innovation by use. Specific innovation space, ecosystem, logistic and business model need to be designed and implemented allowing a spread to private sector, in particular SMEs. Furthermore, the novel approach must consider societal and environmental challenges nowadays conceptualized through the circular economy paradigm.

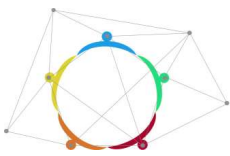
The INEDIT project focuses on the furniture sector. Customers can choose their preferred local renewable material (e.g. wood), refine existing open designs or co-create innovative designs and produce them collaboratively near their homes in a space of neighbouring manufacturers linked to local manufacturing SMEs. INEDIT project will explore these two main processes of co-creation and co-manufacturing.

The co-creation can take place either from a physical co-creation platform (to be designed or improving existing DIY innovation spaces) or from the virtual open innovation platform (INEDIT platform). Physical co-creation platforms are DIT spaces where users can meet and be trained to co-create furniture. The virtual co-creation platform mobilizes immersive technologies and artificial intelligence to support collective creativity.

Then, the co-manufacturing process will be organized in a local network and have to fit in with the practices of the circular economy within the framework of the INEDIT project.

The Do-It-Together approach can be divided into two main processes: 1) a co-creation process and 2) a co-manufacturing process (Figure 1).

- 1) The co-creation process aims to develop products in active and sustainable collaboration with users. The objective of this process is to detect user needs advice and support users on their needs, collect information on future products and guide prototyping thanks to an experts' community. It is a question of putting a design office at the service of the user. A digital platform facilitates product design. Based on user needs, a functional specification of the product is proposed and then translated into technical specifications. The community of experts comes to advise users so that the technical characteristics of the product are viable from a production point of view. These technical characteristics include the choice of materials, dimensions or the integration of sensors. 3D models are then proposed and prototypes can be designed. This platform can offer solutions based on other projects to users. Thanks to these prototypes and 3D models, it is possible to make the necessary adjustments and modifications and to validate that they meet the technical specifications and functional specifications. The information (code and technical information) resulting from the designs are then transformed into production instructions and mobilized local actors in charge of producing them. Co-creation can therefore be divided into two sub-sections: co-design, which encompasses problem understanding and idea generation, and a "test through use" section, which includes modelling and prototyping.
- 2) The co-manufacturing process is based on the involvement of users in the manufacture and production of the product. Following the validation of the prototypes obtained through the co-creation phase, users determine the characteristics of their product (size, materials, colour, etc.) or their packaging. This validation serves as a production order. Thus, the user influences the production of his product and his industrial system. Indeed, the user's choices will decide on the participation of the companies in charge of product development. The co-manufacturing part will refine the main steps of the product production process, i.e. refine the functions of procurement,



production, storage, transport, delivery and recycling in order to obtain a more accurate picture of the exchanges between the stakeholders.

Figure 1 is a synthetic representation of the DIT approach, including the co-creation part and a simplified view of the co-manufacturing part where only the important functions are presented. Note that in reality, the co-manufacturing part is more complex with many interactions between the stakeholders involved.



Figure 1: Simplified representation of the two main processes of DIT approach

Source:

- INEDIT Deliverable D2.2 Presentation of the DIT approach and XD framework - Intermediate Report (April 2020)

## 2.2. The Co-Creation Process

The CO-CREATION step is divided into two parts:

- Co-design
- Testing by use.

The CO-DESIGN part can be divided into 3 processes:

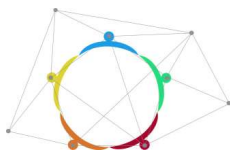
- the empathization process
- the project definition process
- the ideation process.

The TESTING BY USE part can be divided into 3 processes:

- a modelling process
- a prototyping process
- a validation process

Considering the detailed stakeholder analysis, conducted by the INEDIT consortium in previous tasks of workpackage 2, we can report the definition and involvement of stakeholders mainly involved in the co-creation process, as in the following table:

Type of Stakeholder	Description	Example of stakeholder (task 2.1)	Involved in process
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<b>User / consumer / customer</b>	The person who has a problem and disposes of and handles the product	Consumers: People with specific needs	Empathization process Project definition process Ideation process Modelling process Prototyping process Validation process
<b>Facilitator / animator</b>	The person who creates the necessary conditions to allow the project to progress	Knowledge providers (university, research centre...) Construction companies involved in projects Architects and designers who want to produce and commercialise products or inventions	Empathization process Project definition process Ideation process
<b>Designer</b>	The person who designs a product by harmonizing its aesthetic and functional criteria	Construction companies involved in projects Architects and designers who want to produce and commercialise products or inventions	Empathization process Project definition process Ideation process Modelling process Prototyping process
<b>Maker</b>	People who participate in project development by contributing their skills	Start-up communities FabLab organisation Markers	Empathization process Project definition process Ideation process
<b>Manufacturer</b>	Company responsible for transforming or modifying a raw material into a product using a technical process, sometimes very elaborate.	SME industrial partner Industrial partner furniture producer	Project definition process Validation process

Table 1 - Involvement of stakeholders mainly involved in the co-creation process

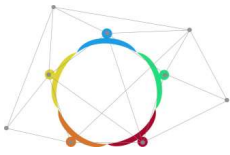
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## 2.3. How to structure the toolbox

The basic idea of the INEDIT Toolbox is the design of customized tools built on the main phases of the CO-CREATION process:

- Empathization
- Project Definition
- Ideation
- Modeling



- Prototyping
- Validation

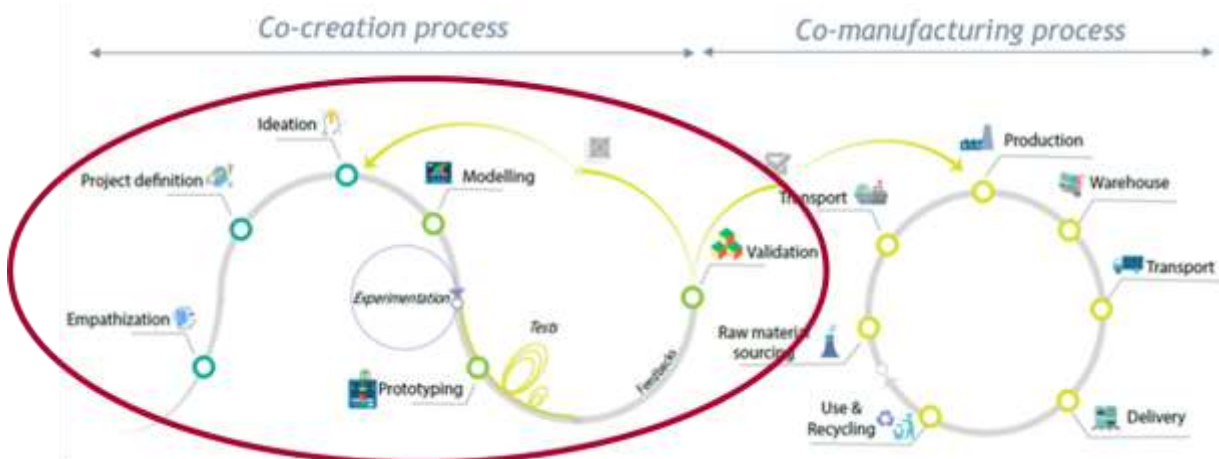


Figure 2 - Main phases of the CO-CREATION PROCESS

With different methodologies and approaches, the designed tools will be used addressing all the CO-CREATION process phases, from the Empathization phase up to the Validation phase.

The identified Target groups of the INEDIT Toolbox are:

- Students
- Young professionals
- Managers

The approach in building up the INEDIT Toolbox includes the following guidelines:

- All the tools will be focused on DIT approach
- All the tools will be adaptable to different target groups

The main elements (tools) included in the INEDIT toolbox will be the following ones:

- **INEDIT ROLE PLAYING GAME:** it is a collaborative game, in which different teams will play with the aim of producing “fictional” furniture, using dedicated boards and cards. Participants will act as stakeholders of the co-creation process and no action against other are foreseen.
- **INEDIT MAKEATHON:** it is a friendly and fair competition, where participants are asked to solve a specific challenge, launched by the INEDIT consortium. The challenge will be “Build your SMART furniture”. Teams will be provided with specific materials and instructions and collaboration among participants will produce a miniature furniture prototype.
- **INEDIT CREATIVITY TOOLS:** they are “ready to use” tools that can facilitate the co-creation process and the collaboration between people, specifically during the INEDIT Role Playing Game and the INEDIT Makeathon. Tools have been identified between the most used ones and specific guidelines, customised for INEDIT, have been produced.

The following chapters of this document include a detailed description of all the mentioned tools.