



**Re-FREAM**

Re-Thinking of Fashion in  
Research and Artist collaborating  
development for Urban Manufacturing

Hub “Sustainable Finishing”

## Deliverable 2.1 Tech / Art Transfer Toolbox

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[www.re-fream.eu](http://www.re-fream.eu)



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**S · T · ARTS**  
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Re-FREAM



# Re-FREAM

Re-Thinking of Fashion in Research and Artist collaborating development for Urban Manufacturing

Working Package WP 2

Art&Tech Transfer

**Deliverable 2.1**

**Tech / Art Transfer Toolbox**

**Due date of deliverable:** 28.02.2019

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**Lead Beneficiary for this deliverable:** Consorzio ARCA

**Contributions by:** IED

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Dissemination Level		
PU	Public	X
CO	Confidential, only for members of the consortium (including the Commission Services)	
Type		
R	Document, report (excluding the periodic and final reports)	X
DEM	Demonstrator, pilot, prototype, plan designs	
DEC	Websites, patents filing, press & media actions, videos, etc.	

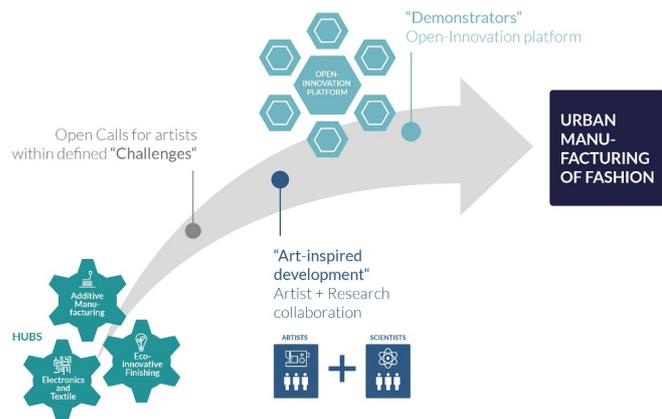
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## 0 Context Information

### 0.1 The Re-FREAM Project

Re-FREAM will support **art-driven innovation** in European R&I projects by inclusion of artists in research consortia via linked third-parties. The artistic community receives a strong support from art-related partners like the Art University of Linz (UFG) and the European Institute of Design (IED), creative hubs and facilitators like Wear-IT Berlin (FashionTech), AITEX, ARCA and Creative Region combined with remarkable technology from IZM Fraunhofer (E-textiles), Stratasys, Haratech (3D-printing), EMPA (3D body simulation), Care applications (Garement nebulization) and Profactor (Additive manufacturing).



Re-FREAM boosts **art-inspired urban manufacturing**, where the city becomes a new production space. Especially for **creative fashion**, urban manufacturing offers a great opportunity to create an alternative to the much criticized production in low-wage countries.

**Three technologies** (additive manufacturing, electronics on textiles and eco-innovative finishing of fashion) will be explored together. **In co-creation** 20 awarded Artist/ Researcher teams, digitalized manufacturing of fashion will be developed up to TRL 5 to enable small-scale production of fashion in urban environment. An **Open-Innovation Platform** will finally link the know-how and the communities of the hubs, will offer access to relevant facilities and make the Re-FREAM art-inspired urban manufacturing working model sustainable.

### 0.2 Document history

Version	Date	Who	Change/Reason for change
V1	28.02.2019	ARC	Initial deliverable version on initial Toolbox
V2	30.11.2020	ARC	Updated toolbox; incorporating formal change request by EC

### 0.3 Purpose and Scope of Deliverable Report D2.1

The first deliverable Tech / Art on Tech/ Art transfer tools, methods and formats reports about the Desktop research and the content of the published documents where the main findings have been summarized for the purpose to define the framework for establishing the Art & Tech process in the project hubs.

## 1 Introduction

A revolution is envisaged in the fashion industry, as Li Edelkoort has claimed, in her *Anti\_Fashion Manifesto*. Fashion industry is becoming obsolete and the renaissance of clothing is envisaged. This new era needs new ways of thinking, new ideas, new alliances, a radical transformation of consolidated processes. The traditional, linear relationship between designers and technologists will not be enough.

In the **desktop research**, we have been exploring the conceptual and practical issues and methods for changing the relationship between artists and technologists, who can be, together, the engine of change in the fashion domain.

We found a number of inspiring examples about the way fashion is operating as a bridge between design and different disciplines, such as neuroscience or biology that, in a not so distant past, were considered not to be associated with fashion at all. Pioneering artists and designers are already working together with technologists, scientist, neuroscientists, biologists, and multimedia and software engineers to create a new set of skills and methodologies.

Accordingly with the design scholar Marinella Ferrara: *“the cross-disciplinarily promises innovation that shifts focus beyond the traditional use of dresses to embrace uncertainty, interpretation, and new meanings”*. Some of the pioneers are pursuing new aesthetics, searching the ‘magic’ of smart garments, either they wish to democratize the access to technologies or to drive fashion design towards sustainability.

We collected a broad list of methodological references, inspiring case studies, places and projects to look at.

Therefore, we outlined a co-creation methodology, explicitly inspired by the gold age of Renaissance workshops, whose iterative cycle starts from establishing an empathic mindset among real people with real challenges in real spaces, enabling new and unconventional creative paths towards art and technology inspired interventions. We have suggested the application of open knowledge generation methodologies, including “unlearning” phases, which should reset the separated knowledge silos. Co-design techniques, as well as early prototyping approaches are also reported as useful in the envisaged co-creation framework. In order to leave the reader the opportunity to go deeper and expand the framework, a list of references and resources is reported.

## 2 Tech / Art Transfer Toolbox

The second edition of Tech / Art Transfer Toolbox is attached as separate document.

## 3 Summary and Outlook

The Tech / Art Transfer Toolbox has been designed as a reference document, which could be of interest both for artists and sci/tech experts. It should be used by the hub facilitators as a possible source of inspiration, as well as a practical handbook for the selection of practical approaches.

With this aim, the Toolbox is divided in three main sections:

1. The first is suggesting both general reflections on hybridization of arts and scientific research, promoting the concept of “conversation” and evidencing the possible “revolutionary” role of arts in the sci/tech processes.
2. The second section is reporting a set of tools, to be applied in the tech /art transfer process.
3. Finally a selection of inspiring stories, interesting places and legacy projects will help the reader to find best practices and front-running approaches.

The Tech / Art Transfer Toolbox will be considered a “living document” and therefore it will be updated and integrated by the contribution of partners along the project. It will inform the design of the training activities, due for the month 6 (D.2.2) and will represent the background for drafting the extensive Co-Research Guidelines, due at month 34 (D.2.3).

Structure and content of the Art-Tech training are under discussion within the framework of WP2.