



SHAPING THE FUTURE model for supporting visual artists

Shaping the Future - 101055789

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Abstract (for public dissemination only)	This document introduces the modular support			
	path of the Shaping the Future project. The			
	training path contains the following modules.			
	The training of visual artists, the ilncubation of			
	visual artists, and the market support of visual			
	artists. The document also covers a brief outlook			
	to the market trends of digital arts and digital			
	artworks marketed in innovative ways.			
Keywords	Market trends, digital artists, network, support,			
	incubation, tools, digital skills, training.			

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ACRONYMS AND ABBREVIATION

ACRONYM	DESCRIPTION
СА	Consortium Agreement
STF	Shaping the Future
SG	Steering Group
EC	European Commission
DT	Dissemination Team
GA	Grant Agreement
РС	Project Coordinator
WP	Work Package
AI	Artificial intelligence

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2. Introduction

Shaping The Future is an international project, co-financed by the Creative Europe Programme of the European Union, aimed to foster the capacity of artists to imagine and shape the future through visual arts, design and critical thinking. The project's core goal is to provide a modular support path for empowering artists to produce, disseminate and market their creations internationally. By educating them on the most recent technologies and digital methodologies and supporting them in the development process of an artistic project, we aim to improve visual artists' skills and competencies spanning through analogue and digital areas.

The consortium brings together four partners from Italy, Slovenia, Hungary and Belgium, each active in the field of training, promoting and supporting visual artists under complementary aspects. Accademia di Belle Arti Aldo Galli is a Fine Arts Academy, offering a transversal and interdisciplinary education focused on synergies between visual arts, restoration, design and fashion textiles. Ljudmila is a laboratory for developing art, science and technology based on community and open-source approaches. Moholy-Nagy University of Art and Design is a community of designers, artists & innovators working together to tackle global challenges. Cityfab 1 is a fabrication laboratory that gives anyone, regardless of their level of knowledge,

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access to the tools and knowledge needed to carry out projects using computer-controlled machines.

2.1. Scope of this Document

This document intends to summarise and introduce the contents of the modular support path of the Shaping the Future project. Shaping The Future is an international project, co-financed by the Creative Europe Programme of the European Union, conceived during the Covid19 Pandemic, aimed to foster the capacity of young visual artists and designers to imagine and shape the future through visual arts, design and critical thinking by using the most recent technologies and digital methodologies. The core concept behind the project is that if we can't shape multiple images of the future we won't be able to change it.

The main objective is to create and validate a model to support designers and visual artists in the production of futuristic projects while enriching their competencies related to digital technologies and methodologies.

In this document, we introduce the modules of the transnational training that will take place in Como in the summer of 2023, and the modules available for selected artists within the program after the transnational training. We also provide a high-level overview of the digital tools supported by the mentors of the modular training path – with a detailed overview of the digital

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tools listed in the D3.3 Digital Tools List.

2.2. Intended Audiences for this Document

This document is public to serve as a supporting document for understanding the Shaping the Future project training and methodologies.

2.3. Tools and Methodologies used

The document summarises a joint research and support path development process of the 4 consortium partners involved with the Shaping the Future project. Each partner has developed their training module, the development led by the experts working at the respective partners. These modules were then reviewed by the partners during expert workshops and an on-site capacity training held at MOME. During these review meetings, training and support contents were defined to bridge the competency gaps between the training modules. We have also collected the resources available at each partner and adjusted the training and support requirements accordingly.

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3. Modular Support Path for Training Visual Artists

Our aim as a consortium is to support artists in developing their impactful projects by sharing our most popular and useful digital competency development modules and supporting the artists in successfully implementing the knowledge they have learnt.

In the open call, we aimed at artists who are yet to discover the possibilities in some specific digital tools of art, yet eager to learn such new technologies to communicate their artistic perspective.

Artists will have to submit a proposal for an artistic project and highlight how the digital competencies we provide – shared within the call for artists – would help them in reaching their artistic goals.

The best 16 artists will then be selected (4 from each partner country) who will attend the transnational training and will then be incubated for a year at the partners. Mentors will be assigned to each artist, regardless of their country of residence, but based on which digital competencies they would best use based on the project proposal. Mentor assignments might be refined during the transnational training.

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3.1. Training of Visual Artists

The transnational training will take place in Como, Italy, in the Summer of 2023 from 3rd to 7 July. All 16 artists and 4 mentors will attend and share their knowledge with the artists according to the strategic framework.

3.1.1. Strategic Framework

The support path is designed to provide a mixture of procedural and factual knowledge in the beginning, in the form of workshops, during the transnational training.

There are digital competency areas covered within the Shaping the Future Modular Training Path: From virtual to real (and vice versa); An Introduction to Procedural 3D Computer Graphics; Co-Creation with Artificial Intelligence; Fab labs – mediating between the digital and the real world.

The training aims to transfer the theoretical basics of each sub-topic, show hands-on examples of implementing this knowledge into artworks or preliminary works, and exploit the opportunities of the learnings in each artist's project. The theoretical basics and hands-on examples are covered with 4 workshop modules, each covering one digital competency area, consisting of two 3-hour-long workshops – these are called **Competency Development Workshops**. Each Competency Development Workshop is provided by one mentor, each

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mentor from a different consortium partner. Between the Competency Development Workshops, there are **Project Development Sessions**, each 2 hours long, where artists are consulting with their assigned mentors. These workshops aim to provide a thorough understanding of the relevance of the digital competencies learnt and support artists in defining the directions for developing their artistic projects through their new learnings.

3.1.2. Profile of Skills and Competences

The consortium partners selected the competency areas to cover in cooperation with the expert mentors. Selection criteria of competency areas are described in section *3.4 Criteria for modular support path and call for artists* in deliverable *D3.1 Repertoire of Best Practices*.

The profile of the digital competencies spans tools for generative and artificial intelligence tools, interactive experiences (digital manufacturing and physical computing) and transition between digital and physical spaces (reality capture, digital manufacturing, and virtual spaces). These competency areas are often intertwined.

Creation with Generative Algorithms and Al

This competency area, as defined in deliverable D3.1 Repertoire of Best Practices includes two main topics: Co-creation with AI and Generative 3D Modelling.







Co-Creation with AI refers to the use of artificial intelligence and machine learning algorithms to generate new content such as images, music, or text. Generative algorithms use complex mathematical models to create new data based on a set of inputs and rules. AI-based generative models, such as Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs), can be trained on large datasets of existing content to create new, unique, similar content in style and structure to the original dataset. Our goal is to show how this technology is being used to generate works that can inspire creativity and advance the creative process. We'd focus on textual and image-based generative tools.

Skills and tools: ChatGPT, MidJourney, Dall-e, Disco.Diffusion, Stable Diffusion scripting for AI, critical thinking, reasoning, design research

Generative 3D modelling

Generative 3D modelling refers to the use of algorithms and computational processes to generate 3D models of objects, structures, and environments. Unlike traditional 3D modelling techniques, which require the user to manually create each element of the model, generative 3D modelling relies on a set of rules and parameters that govern the creation of the model. These rules can be based on physical laws, mathematical formulas, or other constraints, and can be modified to produce a wide variety of shapes and forms. Generative 3D modelling is used in a variety of fields, including architecture, engineering, and industrial design, to quickly

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and efficiently generate complex models that can be easily modified and adapted to meet changing needs. Our goal is to show the participating artists the potential of generative modelling by guiding them through a simple series of tasks and helping them implement the tool in a feasible way for the artistic project.

Skills and tools: Blender (software), Python (software code)

Interactive experiences

Under Interactive Experience, we mean the process and tools of designing experiences that engage users on an emotional level and create a sense of immersion and interactivity. Ultimately, it aims to create an emotional connection between the user and the digital experience, leading to a deeper engagement with the product or service. During the training, we aim to show some of the most important digital tools that are useful to achieve such experiences: physical computing and digital manufacturing.

Physical computing is a field that combines hardware and software to create interactive systems that can sense and respond to the physical world. It involves using electronic components like sensors, microcontrollers, and actuators to build devices that can detect and manipulate physical inputs, such as light, sound, or motion. Using physical computing can create interactive devices and systems that can react to changes in their environment and provide new ways for users to interact with technology.

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Skills and tools: Arduino, actuators, sensors, C++ programming

Digital manufacturing is the use of digital technologies such as 3D printing, computer numerical control (CNC) machines, and robotics to produce physical objects and parts. It involves using computer-aided design (CAD) software to create 3D models of parts or products, which are then translated into instructions for machines to produce the physical object. Digital manufacturing enables greater flexibility and customization in the production process and the opportunity to create a highly customised, one-of-a-kind object that is very useful for artistic projects.

Skills and tools: 3D printing, vinyl cutting, laser cutting, CNC milling, CURA, Preform, Rapid prototyping

Design through virtual and material spaces

Design through digital and physical spaces refers to the practice of integrating digital and physical environments to create a cohesive and immersive user experience. It involves designing products, services, or experiences seamlessly transitioning between physical and digital spaces, utilising technology to enhance user engagement and interaction. This approach requires an understanding of both the physical and digital aspects of the user experience and how they can be combined to create a holistic design. Design through digital and physical spaces has applications in a range of fields, from retail and hospitality to education and healthcare, and is helping to create more dynamic and engaging experiences for users.

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Skills and tools: reality capture, virtual reality, digital design, digital twin, digital manufacturing.

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3.1.3. Workshops

From virtual to real (and vice versa)



Nowadays, the digital worlds have become parallel to the physical one. But how can artists work with information and objects between these two worlds? How can we move an object or a space from the physical world and place it inside a virtual environment, work on it, modify it, have other people join in locally or remotely to help us in the process and finally turn everything back into a physical object? The workshop will focus on this process by exploring reality capture through digital cameras and 3D scanners, creating and modifying a digital model, constructing

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virtual exhibitions and materialising physical objects through digital fabrication techniques like 3D printing and laser cutting or mixed reality tools (AR, VR, XR).

Fab labs – mediating between the digital and the real world

The workshop is an introduction through experimentation to the tools and knowledge available in digital manufacturing laboratories (fab labs), which have opened the fields of design and prototyping to a broad number of people and have given rise to a new form of creativity. It will introduce the fab lab philosophy, digital machines, and the best open-source software for digital creation. In the second part of the workshop,

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participants will learn the basic functioning of a microcontroller and coding with it. They will then use actuators and sensors to give life to their practical example.

An Introduction to Procedural 3D Computer Graphics



The workshop will leverage the procedural nature of Blender's geometry nodes toolset to create a detail of a marine landscape, complete with simple terrain, flora and potentially even some basic fauna (maybe some single-cell organisms or a school of fish). It aims to introduce the core concepts of generative modelling and simulation concepts that are more broadly applicable in the field of computer graphics. In addition

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to covering the fundamental principles of the use of noise (in simulation as well as modelling) and other procedural workflows, we are also going to touch upon the basics of the standard 3D workflow, such as setting up a scene, lighting, shading and rendering.

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AI Co-Creation



Generative AI holds a great opportunity to speed up creative work. However, it also holds the risk of biasing towards cultural clichés. This workshop module helps you navigate between tools and methods to use for working effectively with AI. Participants will learn about generative text-based and visual AI engines, and experiment with such engines using methods that reduce the time needed to succeed with AI-based projects. The module will also help reach results that fit the artist's intention better.

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3.1.4. Personal Project Development

Personal project development plays an important part in Transnational Training. These sessions are ought to provide time to bridge the knowledge gaps between the workshops, through a project-oriented approach focusing on the artistic projects of the participating artists.

Each artist has 30 minutes of dedicated time with their mentors during personal project development. 4 artists are assigned to each mentor. The artists are assigned to mentors based on the project proposal; however, these assignments can be changed if need be.

3.1.5. Peer Learning

Peer learning is a form of learning that involves students or individuals of similar knowledge and skill levels working together to achieve a common learning goal. In peer learning, learners become teachers and learners, sharing knowledge, skills, and experiences. Research has shown that peer learning can effectively enhance learning outcomes, as it encourages active engagement, deeper processing of information, and the development of critical thinking and problem-solving skills. Additionally, peer learning can improve learners' confidence, motivation, and social skills, as they interact with and learn from their peers.

During the mentorship period, there is time provided for the participating artists to share their ideas and interpretations of the learnings with each other, and work on their respective



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projects. During these group work sessions, peer learning is planned to come to action and take an important role in the early stages of project development.

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3.1.6. Training agenda

	July 2nd	July 3rd	July 4th	July 5th	July 6th	July 7th	July 8th
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9:00 10:00 11:00	Arrival	Introduction	Workshop 3.1	Workshop 1.2	Workshop 3.2	Individual project development	
12:00		Lunch	Lunch	Lunch	Lunch	Lunch	Travel home
13:00 14:00 15:00		Workhop 1.1	Workshop 4.1	Workshop 2.2	Workshop 4.2	Presentation	
16:00		Break	Project	Individual	Project	-	
17:00			development	project development	development	Closing ceremony	
18:00		Workshop 2.1					
19:00							

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3.2. Incubation of Visual Artists

After the training starts the incubation phase: the partners provide mentorship, resources, and infrastructural support for the artists to develop and implement their artistic projects. The incubation includes three supporting modules: mentorship, where mentors help artists in discursive one-on-one mentor sessions; meetups, where mentors organise meetups for their mentee artists to facilitate peer learning; and finally, implementation support where partners provide access to workshop facilities and software access. Artists also receive financial support for realising their artistic projects.

3.2.1. Mentorship

Mentorship is provided over a eight month-long period after the Transnational Training. It provides guidance and inspiration to artists from their respective mentors. Each artist should have the opportunity to consult with their mentors once a month for an hour. Mentor sessions



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should mainly be held by the assigned mentors, but reaching out to other mentors from within the consortium is also allowed.

3.2.2. Meetups

The purpose of meetups during the mentorship period is to drive and induce peer learning. During the meetups, the artists in the area meet in person and share their progress in the form of discursive sessions facilitated by their mentors. Meetups are online.

Meetups take up 2 hours and are organised by the local consortium members, one in each partner country. Meetups are organised every quarter year during the mentorship period starting in October 2023. There will be one online meetup in January 2024 for all participants.

3.2.3. Technical meetings

Technical meetings are held every 3 months, starting in September 2023. They are held inperson and they are organised by the local consortium members, one in each partner country.

3.2.4. Implementation Support

Participating artists receive implementation support in three forms: access to local infrastructure and software licences; support of technical experts from within the consortium;







fixed amount stipend for covering realisation costs related to their artistic projects. Implementation support is provided on demand.

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4. Market support

4.1. Market support framework

Market support will be provided through referrals to active marketplace actors (galleries, curators etc.) by consortium partners. This activity will be crucial to create an international network of supporting organisations (Art Schools, Art galleries and merchants, Digital arts market places, etc.) which will also last after project implementation. This Network will have to be defined and formalised when visual artists will have completed their incubation phase and delivered their artworks.

4.2. Market trends for digital arts

In recent years, the art world has seen a significant shift towards digital art, which has been fueled by advances in technology and changes in consumer behaviour. As a result, digital art has become increasingly popular, with market trends indicating a growing demand for this genre.

One significant market trend is the digital art market's rise in non-fungible tokens (NFTs) that showed significant growth before 2022. NFTs are unique digital assets that represent ownership of a piece of digital art or other digital content. NFTs have gained popularity due to

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their ability to provide proof of ownership and scarcity for digital assets, making them attractive to collectors and investors. This trend is currently stagnating.

Another market trend is the increasing use of blockchain technology to authenticate and verify the ownership of digital art. Blockchain technology is a distributed ledger system that allows for secure and transparent transactions, making it a useful tool for the digital art market. The use of blockchain technology has the potential to create a more trustworthy and efficient digital art market, which could further increase demand for digital art.

Additionally, the COVID-19 pandemic has accelerated the adoption of digital technologies in the art world, including creating and consuming digital art. Many artists and galleries have turned to digital platforms to showcase and sell their work with the closure of physical art spaces. This trend is likely to continue even after the pandemic subsides, as digital technologies have the potential to increase accessibility and reach for artists and collectors alike.

In conclusion, the market trends for digital art suggest a growing demand for this genre, driven by the rise of NFTs, the increasing use of blockchain technology, and the adoption of digital technologies in the art world. These trends have the potential to transform the digital art market and provide new opportunities for artists and collectors alike.

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4.3. Innovative ways of marketing digital artwork

Digital tools offer new ways of marketing artwork, especially digital art. While traditional dealers still play a key role in selling artwork and they do open towards selling digital art, it is now easier for individual artists to sell their art on their own or through emerging platforms. We selected some tools that might help artists to market their work in an innovative manner.

- 1. Using virtual, augmented and mixed reality in exhibitions: Some galleries and artists have started creating virtual reality exhibitions that allow visitors to experience digital art in a fully immersive and interactive environment. Such exhibitions might have links, or gates to the physical space: a specific location where you put on a headset for either an augmented, a virtual or a mixed reality experience. In other cases, exhibitions might be only available in the virtual space, or movable to any space with specified peer devices. Altogether, this innovative approach to exhibiting digital art can help engage and captivate audiences and widen the opportunities in making exhibitions reach a wider or narrower audience and even supports customised exhibition experience.
- 2. According to the report The Art Market 2022, social media is one of the most helpful online tools even for traditional art dealerships¹. Platforms such as Instagram, Twitter,

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¹ Dr. Clare McAndrew: The Art Market 2022. Figure 2.30: Most Helpful Online Strategies for Dealers in 2021; p110; Art Basel, UBS, 2022.





and TikTok have become popular channels for promoting and selling art. One can easily reach a wide audience through these platforms; there are easy ways to conduct efficient advertising campaigns. Practised users can further widen their marketing repertoire with some innovative tools: collaborations with influencers, interactive posts and welldesigned hashtag strategies. Capitalising on the opportunities provided by social media, many artists and galleries have started using these platforms to showcase their work and build an audience.

- 3. Limited Edition Releases: releasing limited edition physical artwork (or physical pairs of digital artwork), create a sense of exclusivity and scarcity that can drive demand and increase the perceived value of the work. Digital artwork can also be created through online marketplaces like SuperRare, OpenSea and Nifty Gateway. These marketplaces can be used to sell digital art directly to collectors securely and transparently with integrated solutions for authenticating digital artwork. Such platforms also offer features like auctions and limited-edition releases to create excitement and demand.
- Through collaborations, artists can reach a wider audience with higher engagement. A well-known artist or brand can increase visibility and help artists to reach new audiences. Furthermore, a collaboration between two less-known brands or artists can also be



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beneficial, as the audiences of the two entities mix. Should the two artists or brands target people from similar social groups, then such collaborations can be highly effective.

4.4. Market share of digital arts

It would be relatively difficult to take into consideration all means of digital art when talking about the market share of digital art. However, narrowing down the examined market area to registered and certified artwork transactions provides useful and relevant results both in terms of overall trends and in terms of ratios. In terms of non-digital arts, we can consider registered and certified sales, the transactions conducted through official art dealers; while in terms of digital arts, we can consider NFT data as such. In 2021, sales of NFTs have grown significantly between 2019 and 2021: from \$4.6 million to \$11.1 billion². Yet the digital art market still holds great potential, demonstrated by the fact that the gross revenue in NFTs of the two top-tier houses of Sotheby's and Christie's was under 2% of their full gross revenue³.

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² McAndrew 2022, p41.

³ McAndrew 2022, p40.





4.5. Crypto art and crypto art marketplaces

Despite the current stagnation of the NFT market -the so-called Bear Market- the technological innovations introduced by the ability to record any information related to the digital works on blockchain are bound to shape future developments in the art market. NFT (Non-Fungible Token) is indeed a cryptographic system that provides proof of authenticity and ownership of digital art. The innovative reach of NFT technology encouraged the birth of a new digital art economy through platforms dedicated to the sale of unique works and collectible multiples. Today the marketplaces such as SuperRare, OpenSea, Foundation, and Nifty Gateway constitute the main channels for the sale of digital works and represent the evolution of the art gallery concept moved to the Web 3.0. Artists and designers who want to take advantage of the new opportunities offered by NFT and Blockchain technology must not only learn more about new software and hardware for digital creativity, but also recognize which communication and distribution channels have to be used to establish themselves in the crypto art context.

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