

# **The New European Bauhaus to boost sustainability and inclusion: culture and digitalization for youth employability**

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## ***Digitalization and sustainable development***

According to the International Institute for Applied System Analysis (2018, 22), the digital revolution is the pivotal element in the Fourth Industrial Revolution, as important as the invention of the steam engine during the First Industrial Revolution; more specifically for the sustainable development, the digital revolution is a matter of priority, since it is related to many elements of progress and development, such as artificial intelligence, connectivity, information, the internet of things, Big Data usage, virtual reality, machine learning, blockchain, robotics, and quantum computing (IIASA, 2018, 22).

An illustrative model is provided by the impact of new technologies on the management and sustainable development of urban aggregates and living contexts. When managing a city or a human aggregate, the use of geo-localization processes and decentralized technologies, the use of big data and artificial intelligence, and the construction of virtual models and simulation, may enable an in-depth knowledge of the territory as well as any eventual prediction or intervention on exceptional situations of natural and social order; they may equally facilitate the realization of sustainable and circular living contexts based on the efficient use of resources, intelligent management system of water, public lighting, waste and transport. We point out in this regard the role and importance of the *Urban Digital Twin* (Farruggia, 2021), the digital twins of the cities that can smartly manage the urban complexity thanks to geo-spatial, digital and circular economy skills. From the waste problem to public lighting control system for energy saving, from water consumption to security management.

Sustainability is not only an environmental issue, but also and above all an economic, social and institutional topic. On this subject, Enrico Giovannini (2020a, 23) notes that it is necessary to be aware of the fact that governments are likely to fall not because of global warming problems, which are of extreme gravity, but because of social unsustainability. Today people are afraid of no longer having a future. And this generates a radical change in the politic and economic systems. It is from this perspective that "... sustainable development is necessary to enable the current generation to meet their needs without precluding subsequent generations from doing the same". In this sense, sustainability has to do with intergenerational justice and with the awareness that young people will have less chance than those who preceded them (Giovannini, 2020b).

Since 2015, the Italian Alliance for Sustainable Development (ASviS) has been committing about 230 organizations and institutions in Italy to the achievement of the 17 SDGs - Sustainable Development Goals – covered by the UN 2030 Agenda. It assumes that in socio-natural systems no factor should be considered more important than another,

since they all are indispensable and interconnected. The idea that economy or environment may come first is meaningless, as noted by Enrico Giovannini (2020a, 25). Achieving a more equitable and sustainable society will only be possible starting from a systemic and integrated world approach.

"We live in an era of global challenges and change, from the climate emergency to the pandemic crisis, from the geopolitical tensions triggered by the Russian invasion of Ukraine to security issues and energy and food supply, from technological and digital innovation to the increasing social and territorial inequalities." It is important to point out the dramatic paradox of the year 2022, that was intended and supposed to accompany the post-pandemic recovery and support in particular the European younger generations in their personal, social and professional development and greater participation in the democratic life of Europe. Actually, the year 2022, due to a conflict that is affecting the European countries and the world, can really cause the younger generations to cope with strongest social and geographical inequalities, offering them discouraging and uncertain prospects for their future. Within the same perspective, it is also noted how the current year that should have witnessed the green turning point alongside the digital one, requested by the Next Generation EU Plan, actually sees the involution of environmental policies and the increase in pollution risks due to the shortage of natural gas, caused by international tensions, the widespread use of liquid gas as well as the reopening, in many European countries, of coal-fired power plants.

### ***The new European Bauhaus for innovation, sustainability and inclusion***

In September 2021, during a European Parliament plenary session, Ursula von der Leyen delivers a "State of the Union Address", proposing a European environmental, economic, and cultural project aimed at creating new living spaces and new production models marked by innovation and sustainability. Specifically, it aims at creating a New European Bauhaus - NEB -, a universe in which "...the economy reduces emissions, promotes competitiveness, alleviates energy poverty, creates rewarding job opportunities and the best quality of life." A world where digital technologies, culture and creativity make it possible to build a healthier, greener society for the future of Europe.

The New European Bauhaus aims at creating a lifestyle based on excellence and sustainability. In this sense, the NEB intends to build a bridge between science and innovation on the one hand, and art and culture on the other. It also aims at strengthening the role of cohesion policies of local and regional communities, industries, innovators and creative minds working together to improve the quality of life. The New Bauhaus strives to make young people aware of the importance of their role in the project of a sustainable Europe, through a process that wants them to be protagonists in active European citizenship.

According to the philosopher Luciano Floridi (2020), today innovation should be understood as design or better as a project. It is necessary to develop and refine a constructive approach in order to respond to old and new philosophical problems and to try to make the world a better place; in this regard, Floridi himself (2020) suggests the combination of two projects, metaphorically linked to two colors: green and blue. The

green color symbolizes the importance of protecting the environment in all its facets, therefore, with a view to safeguarding natural environments, man-made environments, urban environments; on the other hand, the blue color, more precisely the electric blue, indicates instead the new technologies, the Internet, artificial intelligence, all those tools related to innovation and digitalization, that could represent and offer valid alternatives for a real and sustainable development, allowing us to live and interpret this world.

As evidence of interest in issues related to youth policies, in 2021 the Italian Government set up COVIGE: Committee for Evaluating the Generational Impact of public policies. In addition to dealing with the impact assessment of measures supporting young people in the National Recovery and Resilience Plan, COVIGE also compares the experiences of other European countries and monitors the sustainable development goals imposed by 2030 Agenda. According to Domenico Marino (2021), in order to be able to achieve the goals of the NRRP, it is necessary to propose a model of harmonious innovation, capable of supporting companies and territories during all the transition challenges: digital and technological, green and circular, social and economic, pursuing a balance between tech and social innovation, in the perspective of an Industry 4.0 model.

On September 25, 2015, the member states of the UN approved the 2030 Agenda for Sustainable Development. This year marks the 7<sup>th</sup> anniversary since the Agenda was adopted, as well as the 50<sup>th</sup> anniversary of the first UN World Conference in Stockholm. This conference had passed a historic resolution regarding the human right to a clean, healthy and sustainable environment. In 2018, ASviS proposes to all Italian political forces a handbook of actions, many of which have actually been implemented, for example, including in the Constitution the environmental protection and the principle of intergenerational justice, placed at the basis of the very concept of sustainable development; the transformation of the Inter-ministerial Committee for Economic Planning (CIPE, in Italian) into the Inter-ministerial Committee for Economic Planning and Sustainable Development (CIPESS, in Italian); the adoption of the 2030 Agenda as a pillar of the European Union policies.

In 2022, ASviS is once again calling on Italian political parties and movements to commit themselves to achieving the 2030 Agenda goals through ten actions, including: ensuring the effective application of constitutional principles related to sustainable development and young and future generations; directing public investments consistently with the achievement of the Sustainable Development Goals; creating a public Institute for Futures Studies; making territories more sustainable and equitable; committing to the just ecological transition in order to meet the European goal of reducing greenhouse gas emissions by at least 55% by 2030; updating the Integrated National Energy and Climate Plan – PNIEC, in Italian -; implementing the National Climate Change Adaptation Plan – PNACC, in Italian -; implementing a plan for restoring terrestrial and marine ecosystems and fighting against hydrogeological instability; promoting the adoption of circular production and consumption models; reducing inequalities; assessing the generational impact of public policies and enhancing training offer to adapt it to new labor market demands such as green jobs and ICT; promoting an integrated approach to health, capable of considering all those factors that have a direct or indirect impact on human, environmental and animal health and well-being; guaranteeing rights and peace, strengthening cooperation and democracy, consistently with the Charter of Fundamental

Rights of the European Union; facing problems related to the growing denatality and the role of immigration in the demographic future.

### ***Professions and “constellations” of professions for the innovation***

Sustainable development, understood in its various facets, will radically change the world of work. One of the most relevant transformations will concern not so much the emergence of new professions and skills, as the emergence of "constellations" of new professions and skills. To the extent that sustainability is said to be a multidimensional process, it follows that jobs, activities, and skills related to sustainable development dynamics do not evolve distinctly but co-evolve in a single process. Constellations of professions and skills may thus find themselves acting in the same field: as an example, geologists, agronomists, computer scientists, engineers, and innovators may work together for soil conservation. Knowledge, skills and jobs tend to broaden their scope, contaminating each other and building bridges and connections between them. From these connections, disciplines such as bioinformatics, behavioral economics, computational neuroscience, and neuro marketing arise.

This contamination occurs most of the time between traditional professions and digital skills, since right the digital may offer knowledge, solutions, and new possibilities; it may open doors to new and countless possibilities for the economy, the environment, and the society. In the textile industry, which is known to be one of the industries that wastes the most resources, attention to sustainability may help to focus not only on the product but also on the use of resources such as water, air, materials, as well as on living conditions of workers; specifically, the use of smart technologies, nanotechnology, 3D printers, and fabrics derived from biological organisms such as bacterial nanocellulose, may enable the production of eco-sustainable fabrics and colors, saving precious resources such as water, also increasing safety at work or in hazardous conditions.

As noted by Enrico Giovannini (2020b), "transition to sustainability is a choice to be made not for oneself, but for the future generations. Sustainable development is what allows the current generation to meet their needs without precluding subsequent generations from doing the same. In that way, sustainability has to do with justice between generations and with the now imperative commitment to offer young people the same opportunities as those who preceded them." Even the Encyclical letter *Laudato si'*, written by Pope Francis in 2015, affirms that sustainability is linked to the intergenerational issue, representing a model of integral ecology precisely when it states that everything is connected: the protection of the creation as well as human ecology."

### ***Digitalization and cultural dissemination***

In the perspective of a sustainable development, we need to set up a strategy aimed at supporting both labor productivity and local territorial development. The culture industry, in particular, can make a crucial contribution to Italy's economic balance: in fact, although our country occupies 0.2% of the entire earth's surface, it is home to nearly 70% of the world's cultural heritage, with the highest number of UNESCO sites, equal to 57.

Sustainable and circular economy, innovation, digitalization, protection and enhancement of natural and cultural environments are highly interrelated, to the point that their application is particularly noteworthy, especially for younger generations, insofar as they respond to sensitivity and digital-based education.

The European Council held in May 21, 2014, declared that cultural heritage "...consists of the resources inherited from the past, in all forms and aspects - tangible, intangible and digital, including monuments, sites, landscapes, skills, practices, knowledge and expressions of human creativity, as well as collections preserved and managed by public and private bodies such as museums, libraries and archives" (Council of Europe, 2014). With these words, the Council of Europe thus recognizes the digital system as an integral, if not fundamental, part of the enjoyment of cultural heritage. In September 2020, the Italian Parliament ratified the Faro Convention, signed in the Portuguese city in 2005, with the intention of affirming the value of cultural heritage in our society. The European Council had approved the Faro Convention in March 2018, identifying cultural heritage as a genuine human right, a tool for mutual knowledge which may also ensure greater integration among European countries.

As noted by Maurizio Vanni (2021), with the ratification of the Faro Convention, culture is being asked to invest in human growth and in improving the quality of life. Sustainable growth brings to other fundamental goals: intangible goods, common goods, and relational goods. This results in projects capable of relating culture to economy in different fields, through new sustainability plans and business models. In the social sector, through the elimination of social barriers, personalization of cultural offerings, and the creation of partnerships with voluntary associations and schools of all levels; in the environment sector, through a renewed definition of environmental impact and education for environmental awareness; finally, by favoring the growth and promotion of the territorial heritage.

The project on the relevance of cultural heritage was born and developed in many contexts, including all those digitization models that allows its expression, conservation and dissemination. In 2017, the DiCultHer Association - *Digital Cultural Heritage: Arts and Humanities Schools* - proposed the "Digital Ventotene" Manifesto for the promotion of digital cultural heritage, aiming at building a culture of digital innovation regarding the needs of preservation, enhancement and promotion of cultural heritage. The association proposes this innovation culture especially to young people who are asked to take charge of the cultural heritage of which they themselves will be custodians and promoters, also and especially thanks to digitalization tools. In the perspective of DiCultHer, culture constitutes a common good and a prerequisite for social cohesion, precisely for this reason, it is an essential aspect of projects aimed at the European growth (DiCultHer, 2017).

In July 2019, *DiCultHer* presented *The Charter of Pietrelcina* regarding Digital Cultural Heritage Education. This document highlights how "cultural heritage is always strongly linked to the territory to which it belongs and it is an expression and representation of tangible, intangible and ... digital creations of their communities" (DiCultHer, 2019). *The Charter of Pietrelcina* notes how social inclusion arises when the cultural place becomes an educational place, and this happens when social categories of different age, cultural

level, social and economic status interact proactively, giving rise to diversified knowledge and skills. In this sense, it aims at strengthening the value of digital cultural heritage as a strategic resource for a sustainable Europe, as stated by the EU through the Faro Convention.

From the perspective of the *Pietrelcina Charter*, digital culture achieves the elaboration of training models, in turn capable of "guaranteeing to all female and male students the key skills to face the changes and challenges of their present, to better project themselves into the future, to become aware and active citizens, capable of sharing common values and positively confronting each other" together with the evolution of their reference contexts (DiCultHer, 2019).

DiCultHer aims at promoting digital culture especially among high school youth. The school network includes more than sixty organizations such as universities, research institutions, schools, technical institutes, cultural institutes, associations, public and private companies, with the common goal of growing skills that are indispensable in a smart society. DiCultHer, together with partner institutions and associations, periodically organizes hackathons in Italian schools thanks to which young people, through digitalization, promote the enhancement of their cultural heritages, cities or communities.

### ***Professions, skills and training for digital cultural heritage***

Maurizio Vanni (2021) notes that already in 1915, the Metropolitan Museum of Art in New York had carried out projects inspired by the models of the late 19th century department stores. In the 1930s, the entertainment industry emerged as a strategic tool to attract new audiences around arts and collections, in order to amaze, wonder, intrigue, engage and educate about culture through participation, entertainment and socialization. Since the early 2000s, experiences aimed at establishing original and diversified relationships between art venues, potential audiences and in general the outside world have multiplied, by attributing an increasingly important role to digital technologies as privileged tools of interaction and communication.

The digital process innovation related to cultural heritage enhancement has undergone a sudden acceleration as a result of two specific events: the ratification of the Faro Convention and even more the lockdown conditions imposed by the COVID-19 pandemic. In March 2020, the lockdown mandated the closure of cultural and art venues in Italy as in many other countries in Europe and around the world. With the doors barred, the world of culture tries alternative ways to stay in touch with the outside world by taking advantage of the possibilities offered especially by digital technologies. Cultural venues see themselves obliged to find new forms of dialogue with the public, to establish new ties with territories, to break down centuries-old social barriers in order to reach thousands of citizens. As stated by Andrea Pugliese (2020), art venues have reinvented themselves "...by defining new formats and contents: virtual tours, curators who become storytellers, live artists, auctions on Instagram, artistic crowdfunding for the fight against COVID-19, and the splendid tableaux vivants that imitate masterpieces of all time." On December 7, 2020, *La Scala* theater in Milan celebrated the premiere with a performance called *A riveder le stelle*, like the final verse of Dante's *Inferno*. Given the impossibility of

welcoming the public into the theater, *La Scala* broadcasted the performance on several television channels. The use of augmented reality also contributed to the success of this evening, which allowed the famous Italian ballet dancer Roberto Bolle to perform in a virtual scenario drawn by the computer.

These innovations are of pivotal importance in the creation of new jobs: activities, job profiles and skills related to the cultural and artistic heritage digitalization process appear to be extremely representative of the 4.0 model of society and work. Indeed, they concern dynamics of dematerialization and digitalization; they call into question innovative skills that arise from interactions between physical and virtual systems linked to a mix of managerial, technological and soft skills; they affect circular economy systems; and they are particularly responsive to youth employability models precisely because they relate both to sustainable development models and to innovative and transversal skills that are substantially part of the curriculum and training of young people.

Exemplifying in this regard is the experience created by Fabio Viola, a young scholar of archaeology with a passion for videogames, in collaboration with the Mann Archaeological Museum in Naples. In 2017, Fabio Viola created the video game "Father & Son" aimed at capturing visitors outside the Museum and then making them enter it thanks to a compelling story and an interactive game. The Video game "Father & Son" tells the story of a father who, after death, asks his son to learn more about him by entering his work place, the Mann Museum, searching through his papers, reading a letter dedicated to him. According to the rules of the video game, visitors can virtually enter the rooms of the museum and are able to take a look at the works, but only by physically entering the building they can unlock the final stages of the game. Fabio Viola's video game has been downloaded millions of times and has contributed, along with an innovative management, to the success achieved by the Museum in recent years.

In the cultural heritage sector, professions related to emerging technologies ultimately outline a circularity of skills and abilities among which it is possible to detect experts in different disciplines of humanistic or scientific nature; experts in storytelling, graphic design, virtualization and gaming rediscovery, recovery and enhancement of sites and museums. From a different point of view, the data deals with cultural places and helps us to know and visit them. Big data analysis makes it possible to acquire a huge amount of information, feedback, flow maps and relationships, allowing us to understand the needs, expectations and requirements of users, in order to better manage these same places. From this perspective, there are many professions assuming a great importance, such as those related to the use of artificial intelligence, the Internet of Things, or the use of big data for processing large amount of information or interpreting complex information systems such as, for example, the higher or lower attendance rates at art sites or even the different power of attraction of specific cultural domains.

There are many other equally important professions. Starting from those involving logical, statistical and mathematical processing skills to techniques and technologies such as 3D modeling for the conservation and restoration of artifacts; in addition, chemical-physical sciences and technologies, applied biology and biotechnology, and sciences of antiquity; cultural and artistic or legal and juridical fields; marketing, managerial and linguistic skills; professions essentially related to soft skills such as creative thinking and

the ability to work in a team; mediation, leadership and networking skills; the ability to use new technologies creatively and to work in interdisciplinary and cross-sectoral perspectives.

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