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White paper
CNR UNESCO

1956 - 2021
65
de ani - România în UNESCO

Romania, 100 years
after joining UNESCO

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Foreword

"Romania 100 years after its accession to UNESCO" is the proposal that the National Commission of Romania for UNESCO (CNR UNESCO) addressed as a theme for reflection to those who expressed interest in UNESCO's major fields: education, science, culture, communication and information.

The approach is neither simple nor obvious, given the different attitudes we observe towards exploring the future. There are, on the one hand, reserved positions with regard to distant perspectives, justified by the need to solve emergencies as a priority. In other words, short-term approaches are favored, and not those with a more distant horizon - in the present case, 35 years. On the other hand, reservations are expressed that derive from the inherent limits of exploring the future. Skeptics give as examples, *inter alia*, the inability to anticipate the fall of the Berlin Wall or the SARS CoV 2 pandemic.

In our opinion, a long-term vision, shared by those who participate in its elaboration, has the necessary weight to order efforts, of whatever nature they may be, that aim at desirable horizons.

The balance between reactive and anticipatory becomes, in this perspective, essential. To remain captive to the role of "fireman", ("fires" being the problems we also consider legitimate emergencies), is to look at some of the branches of a tree, without seeing it in its entirety, with its full growth potential or as part of an orchard.

In addition, a vision shared between different fields, by actors who have various roles, from producer to consumer, has the advantage of integrating specific interests, sometimes perhaps conflicting. Both professional and civic interests are included here.

Cuvânt inainte

A vision that includes negotiated interests is more likely to be realistic and supported. Thus, CNR UNESCO invited the expression of the options that would portray Romania in 2056, in two different ways.

By the way, in establishing the time horizon, we also took into account the temporal milestones of some strategic documents assumed at the global or European level. We consider "Reimagining futures together: a new social contract for education", a strategic document proposed by UNESCO on November 10, 2022, in the margins of the 41st UNESCO General Conference, the elaboration of which is based on a wide consultation that lasted about two years.

Combating climate change, the theme of COP 26, had targets under debate for the year 2050. Likewise, the package assumed at the level of the European Union, namely "Fit for 55", which envisages climate neutrality by the year 2050. As an intermediate step towards climate neutrality, the EU has increased its level of climate ambition for 2030, pledging to reduce emissions by at least 55% by 2030.

The messages imagined to change the world and Romania were expressed through comics by high school students, Romanian citizens from the country and everywhere. To these were added the proposals negotiated on the occasion of two meetings by people active in UNESCO's major fields as well as high school students who in the year 2056 will most likely be active in these fields, some of them having the role of decision-makers.

This publication illustrates the anticipated transformations within participatory co-creation actions, respectively the representations of megatrends in the minds of those who got involved. Thanks to Future Station, especially to Diana Stafie for her outstanding contribution.

What we present as a result is neither predictive nor exhaustive. It is not a country vision. It is a vivid perspective on the evolution of UNESCO's major fields in Romanian geography, which we will resume in the years to come.

MADLEN SERBAN
Secretary General CNR UNESCO

01/06

Introduction

Romania joined UNESCO in 1956 and is a stable partner in achieving its strategic objectives.

This material aims to create a vision of Romania 100 years after its accession to UNESCO, through the prism of analyzing the evolution of the organization's three main areas of interest (education, science and culture) on the 2056 horizon.

The analysis was carried out using specific foresight methods and tools in participatory contexts - with relevant experts from the three areas of interest.

This material covers three temporal dimensions:

Past - by mapping the factors that generated changes in education, science and culture in the last decades;

Present - by identifying major trends and signals of change in the present, which can significantly influence education, science and culture on the horizon 2056;

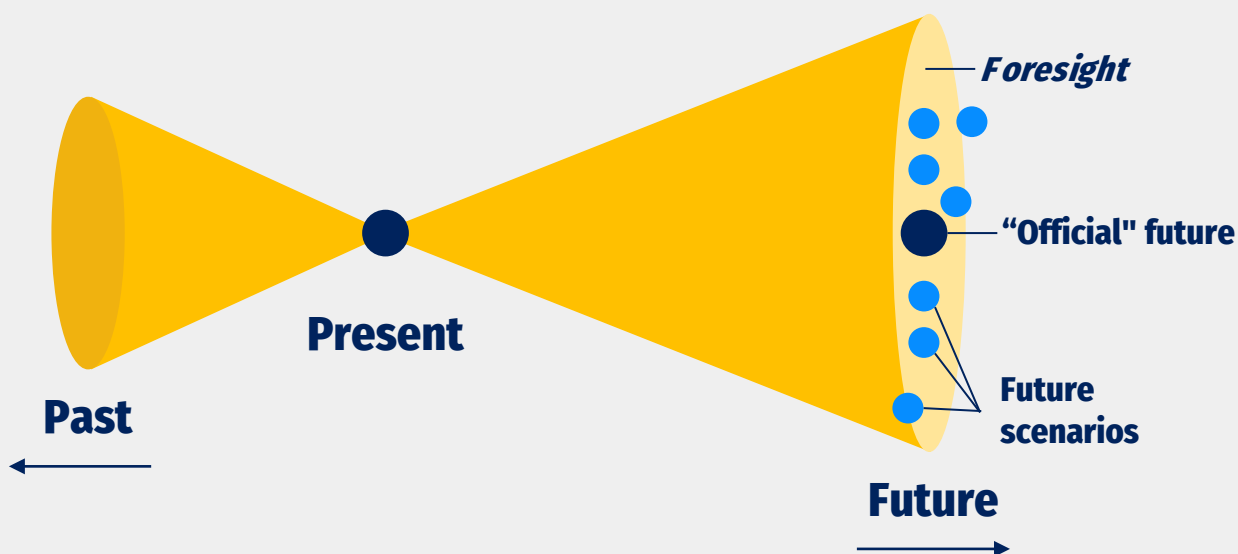**Future** - by sketching possible future developments and alternatives for each of the three areas.

Figure 1: Interpretation after Kononiuk, 2014 and Voros, 2003 - Futures Cone

Foresight

02/06

Foresight is a participatory approach used by actors concerned with sustainable development.

The affinity between the forward-looking approach and sustainable development is natural, given that both approaches involve the future and long-term developments.

"*Foresight* is the art and science of anticipating the future."

Denis Loveridge, 2009
One of the founders of foresight as a research field.

According to the UEFISCDI material *"Using Foresight in the process of formulating public policies"*, orientation towards the future is one of the relevant principles of a foresight exercise.

The principle of future orientation is defined by the condition of foresight to perceive the future in a manner that is not predetermined and that can evolve in different specific forms, dependent on the decisions of the present and the actions of institutional actors.

Foresight builds an environment suitable for thinking about and debating future options, as well as for identifying possible and desirable futures.

Forward-looking does not imply accuracy or predictions. Rather, it recognizes and takes into account the existence of uncertainties, allowing for strategic alternatives and planning for multiple ways the future could look.

The development process of this material involved, among others, certain tools specific to Foresight, which are also described in Figure 1:

• *Looking back to look forward* or looking to the future with a stopover in the past;
• *Horizon Scanning* or the identification of current changes and the megatrends that generate them;
• *Visioning* or the development of future hypotheses and scenarios.

Looking back
Retrospection

Horizon scanning
The changes of the present – 5 megatrends

Demographic and social factors

Regulations and political factors

Globalization and economic factors

Technological developments

Sustainability and climate change
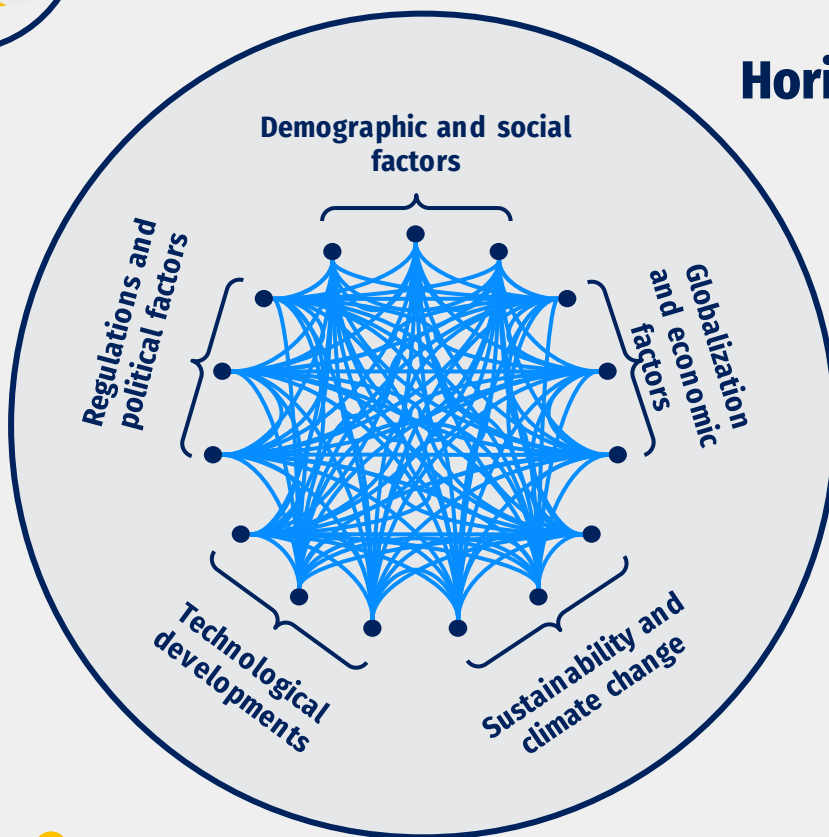
Dissemination

Dissemination @TNB

Online dissemination

Visioning
Education, Science and Culture futures

Education

Science

Culture

Romania 2050

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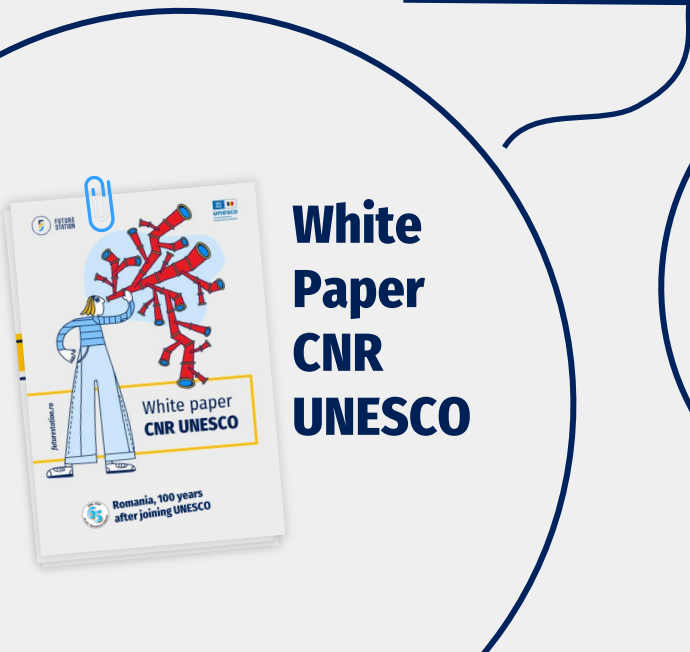
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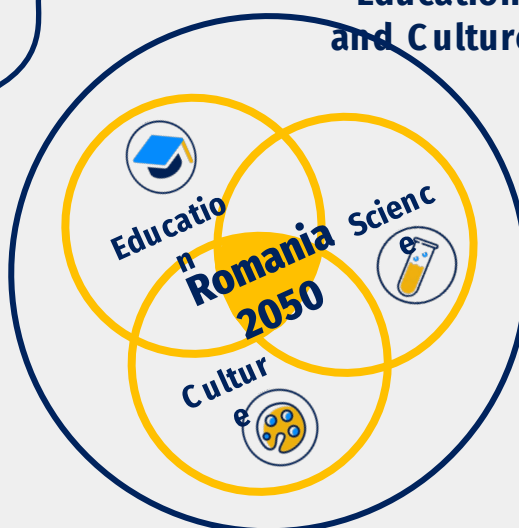
Looking back

03/06

Let's begin with a retrospective exercise. It is essential, in order to look into the future, to understand the changes in the past that are relevant for education, science and culture.

In 1990, Tim Berners-Lee, British engineer and computer scientist, creates the web - "World Wide Web" or "www". The first website in the world is launched on August 6, 1991.

From this point, the history of scientific and technological discoveries shows how the world gained access to information through computer networks.

With the creation of the Internet, all areas of life have developed and transformed: from medicine and sports, to the interaction between people, to the way we work or to cultural consumption.

In recent years, schools have increased their use of computers for administration, teaching and learning. However, the *Bring Your Own Device* (BYOD) way of working only became possible in the mid-2010s, when the prices of portable devices dropped significantly.

The laptop has already moved from the status of specialized equipment to something ubiquitous, taking over the role of pen and exercise book.

The use of reference texts was replaced by *googling*, which gave learners access to more information than would have been possible in a library. Google was launched in 1998 and Wikipedia only in 2001.

After 1990, human capital had sinusoidal evolutions on the edge of the *brain drain* phenomenon. In the same period, the structural reforms in education began, which facilitated both access to sources and cooperation between people.

Another important event to mention, which took place after 1990, and which marked the process of changing the cultural paradigm, is the registration of Romanian objectives in the UNESCO heritage (although Romania had already entered UNESCO in 1956).

In the following pages we describe other changes relevant to our areas of analysis. We emphasize that the list is not intended to be exhaustive. The analysis reflects the fact that the changes of the last decades are truly impressive and gives us indications that the future of education, science and culture will bring, in turn, many innovations.

With this summary of the past in front of you, **what events did you not expect to happen?**

(1990)
Set of structural reforms in education

(1991)
Inclusion of the Danube Delta in the UNESCO World Heritage

(1992)
Romania becomes part of the UNITWIN world program of UNESCO university chairs

(1994)
UNESCO launches the Global Strategy for a Balanced, Representative and Credible World Heritage List

(1995)
The education system becomes a national priority through the education law 84/1995

(1995)
Privatization of state-owned companies through the MEBO (Management Employee Buyouts) method

(1999)
The Bologna Declaration - A common European policy on education

(2000)
Making the switch between Generation Y and Z.

(2001)
Romania also becomes a member of the European Federation of Associations, Clubs and Centers for UNESCO

(2003)
Adoption by UNESCO of the convention for the safeguarding of the intangible cultural heritage

(2002)
The Transylvania International Film Festival (TIFF), the first dedicated to Romanian feature films, is launched in Cluj

(2001)
The UNESCO heritage in Romania includes seven objectives

(2005)
Adoption by UNESCO of the Convention on the Protection and Promotion of the Diversity of Cultural Expression

(2007)
Romania joins the EU

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(2007)
Sibiu - European
Cultural Capital

(2007)
Massive wave of
emigration with the
entry into the
European Union:
560,000 people

(2009)
The economic crisis is
also felt in Romania

(2010)
Adoption of 4G
technology in
Romania

(2013)
The launch of the application
"Museums and collections from
Romania" - the first and only
application that provides information
about all 943 museum collections in
Romania

(2012)
The bilateral agreement between
the Government of Romania and
UNESCO, regarding the
establishment of the Institute for
Fundamental Research in the field
of Physics, in Magurele.

(2014)
Launch of Creative Europe - the
most important funding
program of the European Union
dedicated to supporting the
creative fields, culture and
audiovisual.

(2015)
Europe 2020
Agenda

(2015)
Adoption of the 17
sustainable
development goals
contained in the
UN 2030 Agenda

(2017)
The heritage element,
Mărțișorul, was
included in the UNESCO
Heritage

(2016)
The Romanian
Academy launched the
Manifesto for Digital
Romania

(2015)
The inclusion of the
UNESCO International
Geopark Sara Hategului
in the global network of
UNESCO geoparks

(2020)
The pandemic
context accelerates
the digitization
process

(2020)
Gig economy /
freelancing and remote
working are growing in
popularity.

(2021)
The inclusion of the heritage
element - Rosia Montana
Mining Cultural Landscape in
the UNESCO heritage

Today's changes: megatrends

Our world is changing. More people are born than ever before and we live longer. The unprecedented digital transformation of the global economy and society has increased globalization, the connectivity of economic markets, and the ethnic, linguistic, and cultural diversity of our world.

The future of education, science and culture is strongly influenced by developments in society, technology, economy, environment and geopolitics, as well as by changes in values and lifestyles. These developments can be defined as major trends or megatrends.

Megatrends are transformative global forces observed today that define how the world might look in the future.

Through a *Horizon Scanning* exercise we identified the following five megatrends relevant to our discussion areas.

Demographic and social factors

Evolution of the global population.
Population aging.
Urbanization and migration.

Regulations and political factors

Public policies.
Trust in institutions.
WIP regulations.

Globalization and economic factors

International cooperation.
Global brain.
Changes in the way of working and collaboration in professional activity.

Technological developments

Digitization and technological innovation.
Ethics in technology.
Social media.

Sustainability and climate change

Climate resilience.
Responsible consumption.
Sustainable art and culture.

Present

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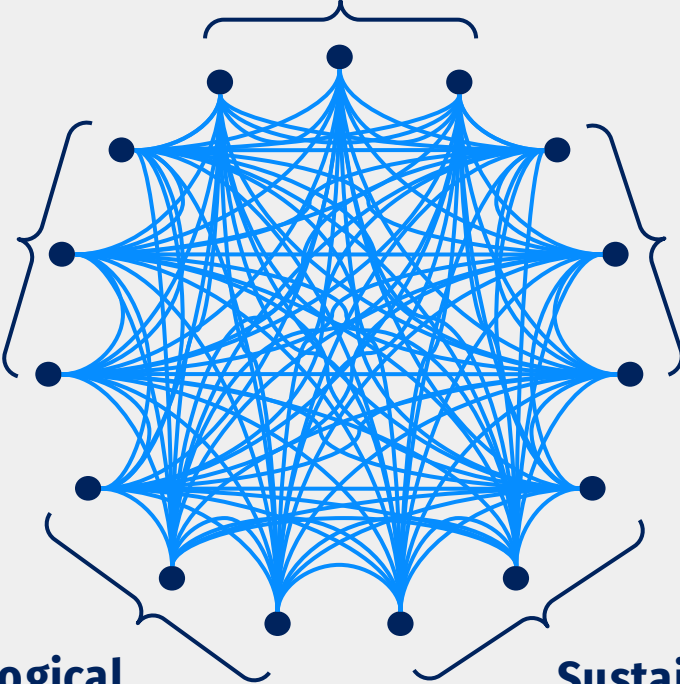
Globalization is one of the dominant megatrends of our age.

Globalization is a multidimensional phenomenon that encompasses not only economic components but also cultural, ideological, political and other similar facets (Prasad and Prasad, 2006).

Transnational flows of people, financial resources, goods, information and culture have increased dramatically recently and profoundly transformed the world. The planet will continue to feel smaller and smaller in 2050: not only will more people be able to communicate via the Internet, but they will also move more. Therefore, connectivity as a premise of globalization is not only virtual and digital but also physical.

Amid the pandemic, a revival of national interests may currently be observable in some highly industrialized countries and this may weaken this trend, but the need for strong long-term international cooperation remains in question. Globalization and the emergence of new markets have the ability to impact countries, societies and economies. The main drivers of globalization in the past were trade in goods and capital flows. Nowadays, under the effect of rapid technological developments, this phenomenon is increasingly knowledge-based.

Globalization also significantly affects professional activity, the way of working and collaboration. The fact that the knowledge and services of an expert from another corner of the world can now be accessed through technology platforms such as Upwork, or that we can be part of a cohort with a global footprint when enrolling in an online course are just some of the concrete aspects of globalization.

Globalization and economic factors

Starting from 1990, **Romania** was part of the globalization process in which geographical distance lost its relevance in the establishment and development of cross-border relations of an economic, political and socio-cultural nature. Romania has integrated all the objectives for sustainable development in an inclusive and sustainable program - the National Strategy for the Sustainable Development of Romania 2030.

Demographic and social factors

Demographic and social factors are the foundations of many economic, political or cultural decisions. These factors can significantly influence how the world evolves.

By 2050, it is estimated that 2.5 billion people will be added to the world's urban population as a result of the steady growth of the general population and urbanization. However, **Romania's population is decreasing**. According to the INS, the resident population of Romania was, on January 1, 2021, 19,186,000 people, down by 142,600 people compared to January 1, 2020, the main cause of this decrease being the negative natural increase, and the second reason being the phenomenon of emigration .

The migration of "brains" is a worrying phenomenon for Romania, a World Bank report estimating that 40% of people who emigrate from Romania have higher education.

Romania's population is decreasing, many Romanians are emigrating, fertility rates are decreasing, **and the number of people over 65 is increasing**. According to INS data, the phenomenon of demographic aging continues to intensify, reaching a ratio of 123.9 elderly people to 100 young people under 15 years of age.

An interesting initiative developed with seniors in mind is the Senior Citizens University (SCU) concept in China. Here, students have an average age of over 60, are not subject to academic pressure and do not worry about getting a job. They have the opportunity to complete an extensive but easy curriculum: foreign languages, computer skills, music, dance, photography, painting, sports, cooking and other activities.

The degree of **urbanization** is another important factor in this context. About 1.5 million people move to cities every week, and by 2050 more than two-thirds of the world's population will live in urban environments. Romania currently has a proportion of the urban population of around 54%, and thus attention is needed for the rural environment, especially from the perspective of poverty and gaps. The greater the migration of the population to urban areas, the greater the risk of an increase in rural poverty - an aspect that can implicitly lead to the appearance of gaps, whether we are talking about access to education, health or technology. Thus, it is desirable to maintain a balance between the two environments in order to reduce the phenomenon of social inequality.

Massive urbanization globally comes with many challenges for people's health and overall well-being, safety and quality of life. Creative Cities Network - Urban Regeneration is among the many initiatives launched with the aim of harmonizing urbanization. This is a UNESCO project initiated in 2004 to promote cooperation between cities starting from creativity as the main factor in their urban development. It is worth mentioning that, in August 2021, Sibiu and Cluj-Napoca submitted their candidacy files to join the project.

Present

Regulations and political factors

Regulations and political factors are the pillars of development of any nation. The future of education, science and culture is strongly influenced by public policies, shaped in turn by the evolution of political power. However, it is desirable that this dependency relationship between policies and politics be changed. This is because it would be preferable for public policies to be designed on the basis of data collected following scientific research and analysis that truly reflect the needs of the area of interest.

It is expected that economic inequalities will increase for reasons related to the emergence of new technologies. The extent of the digitization phenomenon will lead to the emergence of support programs for retraining, programs that are meant to help people who are part of the education system, and not only, to adapt to the conditions of the present. And, in the long term, public policies in the field of education will take into account the acquisition of digital skills from an early age.

In this context, funds are distributed through various institutions (e.g. ministries, cultural institutes) in the form of contests, subsidies, scholarships.

Economic disparities are expected to grow as the digital economy expands. In primary and secondary education, future governments will need to contribute both to ensuring the quality of education, whether it is online or face-to-face, and to transforming schools from a place for acquiring knowledge to a place for learning attitudes and values.

In higher education, decision-makers could ensure the improvement of the quality of educational services, including those provided by private organizations.

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Technological developments

Today, as technology develops rapidly, it is also rapidly integrated into our lives and society. Sometimes, without realizing the change that is happening.

For example, smartphones have become commonplace and the norm, whereas a few years ago the idea of a pocket-sized device that connects to satellites and retrieves information from other continents to help you find the nearest bookstore would have been a *science fiction* scenario.

We are in the expansion phase of the transformation process where digitization, robotics, artificial intelligence, the Internet of Things (IoT) and 3D printing will revolutionize the way we consume culture, work or educate. Details regarding this route and the impact that the technological transformation can have in Romania can also be found in the McKinsey report - The rise of Digital Challengers.

A useful tool here is the Gartner Hype Cycle, which provides estimates of emerging technologies with the potential for widespread adoption in the coming decades. From this perspective, it is fascinating to examine emerging technologies and consider their potential impact on our areas of discussion.

An example is the emergence and influence of social networks (*social media*), phenomena driven by technological developments. It is crucial to analyze the impact of social media on education or culture.

Social media has enhanced creativity and the exchange of new ideas and opinions. On the other hand, there are voices that claim that social media has influenced our culture in negative ways. The most affected in this case would be representatives of the new generations, born in the digital age and social networks.

Present

Sustainability and climate change

Climate change is already a real part of the life of our planet, its negative effects being felt both economically and socially.

The European Green Deal aims to make Europe climate neutral by 2050. The European Commission has also set a new, more ambitious target of reducing net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels.

Involvement in the sustainable management of risks caused by climate change and natural disasters by implementing preventive measures in the most vulnerable areas is one of the UN objectives in the National Strategy for the Sustainable Development of Romania 2030.

The future of education, but especially of culture, can be strongly influenced by sustainability and climate change. There are numerous initiatives carried out at the central and institutional level to increase resilience in this direction, such as:

The Heracles project of the European Commission aimed to design, validate and promote solutions for the resilience of cultural heritage against the effects of climate change through a holistic and multidisciplinary approach.

The Shelter Project bringing together the scientific community and heritage managers to build resilience, reduce vulnerability and promote reconstruction in historic areas affected by climate hazards.

Initiatives and changes can also be observed at the individual level. Yayzy is an application that calculates the carbon footprint of every purchase made online, coming up with solutions to help each user maintain a level of monthly carbon emissions in line with UN goals.

Other innovative examples are from artists around the world who support the idea of sustainable art in different ways - such as John Sabraw's paintings (Toxic Sludge) in which pieces of polluted soil are used as a support. Others use traditional materials to draw attention to a particular issue, such as Paulo Grangeon's 1,600 paper pandas. The paper sculpture installation was displayed in very crowded spaces to highlight the impact humanity has had on this endangered species.

Present

The manifestation of the presented megatrends will influence the way education, science and culture will look like in 2056.

We take each of these three areas into the future, illustrating some possible developments for each of them.

Moreover, for each field we illustrate three future scenarios (penciled based on the presented megatrends). These should not be viewed as predictions or strategies. They are meant to invite us to reflect, as well as to open the conversation about how we can prepare for such a future, both institutionally and personally.

The future is already here!

Future

- Lifelong learning (*LLL*)
- Digital vs paper
- Decentralization and diversification
- Personalization
- Gamification
- Paying attention to well-being

- Decoding the secrets of the human brain
- Ethics and technological security
- Decarbonisation and green energy
- Space exploration
- Capitalizing on oceanic resources
- New materials
- New treatments and medical approaches

MEGATRENDS

Globalization and economic factors

Demographic and social factors

Regulations and political factors

Technological developments

Sustainability and climate change

Education

Romania 2056

Science

Culture

- Resilience through culture
- "Artificial" and digital content
- *Crowdsourcing* and the power of communities
- Sustainability through culture
- Diversity and social inclusion

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Future

Education futures

Digital technologies have revolutionized society, and children live in a world populated with devices permanently connected to the Internet. Education, for its part, is strongly influenced by this fourth industrial revolution (Schwab, 2016) both from the perspective of the impact on the teaching-learning-assessment processes, as well as the role it has to play in preparing society for an interconnected world, based on technology. In 2056, those who learn will demonstrate that they have learned, through education, resilience mechanisms to support adaptation to uncertainties, but also in crisis situations.

Education in the future is about lifelong learning (*Lifelong Learning*), about "figital" media (paper and digital), about decentralization, diversification and personalization, but also about the use of game elements and maintaining attention on individual well-being.

From early life education to lifelong education.

The World Economic Forum estimates that "up to 65% of children entering primary school today are likely to have occupations that do not yet exist. *Lifelong learning* is part of the solutions addressed. Learning to learn is a core competency, as is managing your own learning journey and creating your own biography.

We are already talking about professional counseling applied from much earlier ages. A concrete signal of change in this direction is, for example, TomorrowMe - an artificial intelligence system that, based on a detailed test, can provide indications regarding compatibility with a certain career or profession.

From paper to digital

As technology evolves, the shift from blackboard, chalk and paper to digital media and tools will accelerate in turn. And today and in 2056, tablets, online courses and live broadcasts from classrooms are and will remain standard practice. Mixed reality, artificial intelligence and 3D printers can be used as course support.

The Plantale learning app follows the life cycle of a plant and explores morphology and anatomy with the help of augmented reality.

Future

Decentralization and diversity

In order to support learners in effectively building their learning biographies, legal bases and mechanisms are established for the recognition, validation and certification of learning outcomes acquired in different contexts. This leads to the democratization and decentralization of education.

We are seeing changing signals of a transition from a limited number of state educational institutions to the diversification of education providers and training partnerships.

Concrete signs of change in this direction: the virtual university based on blockchain technology created by academics from Oxford, the Entrepreneurship Academy in Bucharest or the Tutellus platform.

Personalization

Looking to the future, we see an evolution of teaching and learning methods, much more personalized for each individual learner.

For example, Beetools is a language learning tool launched in Brazil that started from the question: if we are all different, why do we all learn English the same way? Learners do exercises before class, and teachers use the app to collect data about their level and abilities to customize lessons. Big Data will play an important role in personalizing education.

Gamification

Gamification, or the use of game elements in learning situations, can bring a lot of value to education – it can make activities more engaging through technology. It can even be a way to combine learning with promoting positive health and lifestyle behavior. "Actionbound" and "Kahoot" are concrete applications that use game elements - gamification in the learning process.

Focus on well-being

On the way to 2050, education would focus on the health and well-being of all people studying in educational institutions. The educational system should involve various ways of promoting healthy habits.

A few examples I've noticed in this direction of change:

- In Great Britain, courses aimed at promoting healthy sleep habits among schoolchildren have been introduced into the school curriculum.

- The Riverbend School in India is a concept built around the idea of happiness. Well-being and emotional intelligence take precedence over grades. The school aims to create generations that will later contribute in a positive way to the sustainable development of society.

Future

Exploring possible future scenarios

Imagine a future characterized by:

Education beyond bells and classrooms

Assisted or self-directed lifelong learning

Active participation in education of senior citizens

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Education beyond bells and classrooms ("Beyond cells and bells")
~~Virtual schools~~ / Mobile schools

**This is a future where schooling is no longer about a physical location**

What might this future look like?

Campuses dedicated to education no longer exist as we knew them in past decades, but have undergone a major transformation. Calling the roll? Not.

Learning is no longer limited to physical schools - they have been replaced by mobile and virtual education. Learners will be able to study and learn what they want, when they want and for as long as they want – using physical interactions, real-life examples, and digital tools. Education will also provide more physical, emotional and religious freedom, as well as the opportunity to spend more time with family. Libraries and laboratories in cities have taken over some of the tasks of schools, learners going here to complete projects.

A teacher's role will not only be to impart knowledge, but also to identify the learner's strengths, interests and aspirations. Using mixed reality, teachers can appear in the classroom anywhere in the world and can even teach simultaneously to thousands of people taking classes at an educational institution.
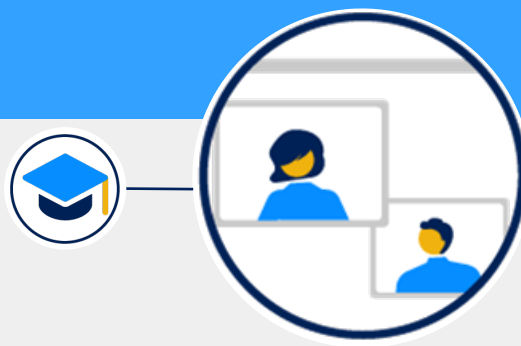
We are already noticing...

- Beyond school walls: inspiration from disruption – a collection of 11 case studies on organisations, innovation and alternative education systems, particularly relevant to those from vulnerable groups and marginalized communities
- American Business and Technology University - an applied online teaching institution - considers real-life contexts and case studies
- Education in the Metaverse (virtual space).

How might we strengthen the personalization and individualization of hybrid learning?

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Assisted or self-directed lifelong learning

LifeLong Learning | Self-taught style / Digital support

This is a future in which you are your own teacher

What might this future look like?

Technological progress and rapid automation have changed the needs of the labor market. To remain relevant and gain ever greater value, workers must engage in their own continuing education. Fortunately, many platforms support this - offline, online and in mixed reality.

Most workers in today's economy have some form of virtual assistant that scans emerging trends in their sector and dynamically generates gamification-based curriculum to help them keep up with the information. Lifelong learning means lifelong investment of time. For these to be possible, employers may have to impose "educational holidays", in addition to holiday allowances, to ensure that employees can update their skills.

In some places there are still problems with regulation and so lifelong learning is a highly uneven experience.

Wealthier citizens can benefit from premium educational content and access prestigious alumni networks associated with the most exclusive courses. On the other hand, *gig workers* struggle to keep up with the latest skills needed to compete for jobs (gigs), often studying late into the night using combinations of free or pirated content.

We are already noticing...

- The Astra Nova project, founded by Elon Musk, proposes learning through live games in a team with students from around the world.

How can we make lifelong learning more accessible to those without advanced digital skills?

Future

Active participation in education of senior citizens
Universities for 60+ / Active participation programs

This is a future in which education is inter-generational

What might this future look like?

The aging of the population and the increase in life expectancy are two phenomena that are becoming aware at the level of society. At the same time, authorities are beginning to talk about the costs of ailments associated with these phenomena. Thus an understanding is reached that the elderly need to be more actively involved in all that means educational and cultural activities, both for individual and collective well-being. All these elements want to change the relationship that society has with the elderly. The wisdom and experience that comes with age is positioned as a valuable national asset; education being the best protection and use of this precious resource. As they approach retirement, senior citizens are given free access to tertiary education to maintain mental activity and prevent isolation.

To fund this program and pass on valuable life lessons, seniors are invited to local schools, where they support teachers and participate in history lessons, civics or pastoral activities.

We are already noticing...

- Third-Age University (U3A) is an international movement whose goals are to educate and stimulate community members
- Universities in China that have students with an average age of 60. The curriculum is extensive but light, offering language courses, computer skills development, music, dance, photography, painting and other crafts, sports and cooking.

What can we do to ensure that older citizens can continue to play an active role in our society?

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Future

Science futures

The current trend of technology adoption will continue into 2056. Technologies such as artificial intelligence, virtual reality, the Internet of Things and automation of work processes, which became the "new normal" in 2021, will become dominant in 2056.

Future science will be about deciphering the secrets of the human brain, about ethics and security, about decarbonization and green energy, about space exploration and capitalizing on ocean resources, about new materials and new medical treatments.

Decoding the secrets of the human brain

Imagine a future where we can alter our memories to fix depression and anxiety, or download an entire year of schooling directly into our brains, experience different emotions, or even transmit our thoughts to other people using our just the mind. Brain-Computer Interface (BCI), a technology that may become much more widespread in 2056, allows computers to record brain signals and generate responses that translate into actions, such as controlling a robotic prosthetic arm or playing video games with your mind . Neuralink is a good example of this.

Digital ethics and security

People are increasingly concerned about how their personal information is used by organisations, both in the private and public sectors, and the pressure will increase for organizations that do not proactively address these concerns.

A tool to explore in this regard is the "Playbook for ethical tech governance" developed by the Institute for the Future USA and intended to help governments and organizations prepare for the unintended consequences of new technologies.

Space exploration

In the coming decades, humans will access space more and more. This is due in part to the way public interest in space exploration has been revitalized (thanks to a series of exciting missions that have been organized since the turn of the century and increasing public involvement through social media).

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The growing commercialization of the space sector also contributes to this. More nations are expected to join the "space club" in the future, with more astronauts in space, including on the Moon and manned missions to Mars. Commercial entities will establish a permanent presence in space and run various space-related projects.

Capitalizing on ocean resources

Oceans cover more than 70% of the Earth's surface, provide oxygen and harbor more than half of the life on the planet. In the future, explorers will use tools with interdisciplinary approaches and thus the oceans will become a leading indicator of climate change and a source of renewable energy. Existing initiatives in this sense are: Ocean Observatories Initiative - global network of sensors that generate relevant data for studying the oceans, or the BlueMind conference - oceans are discussed through the prism of neuroscience.

New materials

To build today's smartphone in the 1980s, it would have cost about $110 million, required nearly 200 kilowatts of energy (2kW/year today), and the device would have been 14 meters tall, according to Omkaram Nalamasu, Applied Materials CTO. In the future, personalized materials will become commonplace. Future knee implants will be customized to meet the exact needs of each body, both in terms of structure and composition.

Decarbonization and renewable energy

Coal-fired electricity consumption fell dramatically in advanced countries in 2020 -25% in Europe, 24% in the US, 5% globally) - one of the reasons being the growing awareness of the effects of the climate crisis.

In 2056, this trend may become dominant, and most countries will adopt clean technologies. Hydrogen has the potential to provide the necessary future renewable energy as long as the development of the process of converting water into hydrogen using sunlight is possible.

New treatments and medicines

While we can say that more people will be able to live longer and healthier lives in the future, it is also likely that future generations will face health threats that are less common or even known today.

But by 2056, one of the biggest threats to global health is how climate change will affect society. Air quality, drinking water, food security and shelter: all are compromised to some degree by rising global temperatures, floods, extreme weather and drought.

Future

Exploring possible future scenarios

Imagine a future characterized by:

Total decentralization

Human body augmentation

Mobility redefined

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Total decentralization

Batteries & renewables / 3D printing / power of communities

This is a future of small, local and independent infrastructure

What might this future look like?

Technology has allowed cities, villages and even individual homes to become increasingly independent and able to support themselves without outside help. Disenchanted with reliance on centralized and fragile infrastructures and supply chains in the past, people are now creating smaller but sustainable gated communities.

Batteries and home renewable energy generation allow communities to operate closed power grids and sell surplus energy on an open market. 3D printers of various sizes and capabilities allow communities to operate local production of a large amount of consumer goods they need.

Hydroponics, floating farms and vertical farming mean that these small groups of people have taken a considerable step towards full food security.

We are already noticing...

- Neom 2025 - is a new model of urban sustainability where the residential energy grid will allow citizens to sell their energy back into the city.
- Mahle is developing a fully recyclable battery that can charge a moped in 90 seconds.

Can this future support the premises of a possible economic regeneration in the provincial cities and villages of Romania?

Future

Human body augmentation
Brain implants / bionic limbs / genetic editing

This is a future in which DNA modifications or brain implants are as normal as Botox and smartphones are today

What might this future look like?

Science has moved from using prosthetics and gene editing to solve bodily problems to using them as optimization strategies. Private clinics now offer comprehensive genetic therapies, from removing disease predispositions from DNA to increasing the likelihood of certain cosmetic outcomes.

A growing number of people, especially the elderly, undergo voluntary amputations solely to improve their limbs.

Vision and hearing implants have effectively eradicated blindness and hearing loss in developed countries. The Paralympics now dominate the global sporting calendar, with biotech and genetics companies using the games as a testing ground for their innovations.

We are already noticing...

- A ceramic ink that allows bones to be printed directly into the body
- Brain Gate – a research group focused on developing brain-computer interface (BCI) technologies to restore communication, mobility and independence to people with neurological disease, injury or limb loss
- Prime Medicine – a gene editing company working on a universal editor, meaning it could in the future read, write and fix more mutations in our bodies.

How are we preparing to regulate the private gene editing and prosthetic enhancement industries?

Future

Mobility redefined

Self-driving cars / Flying cars / Walking

This is a future in which you're not sure who's driving the car next to you, but we're enjoying more walking

What might this future look like?

After many years of testing and considerable loss of life, driverless road and air transportation systems are now the new normal in most major cities. The days of autonomous vehicles with non-compliant operating systems are long gone.

Vehicle manufacturers are currently tendering contracts for the entire city fleet. Traffic is managed centrally by a single AI device rather than having multiple competing devices. Citizens are given access to a limited number of km per year on the network, which is financed by taxes. They can supplement this allowance if they need to travel more.

To limit wasted energy and congestion, as well as to increase physical activity, cities are increasingly being designed as networks of neighborhoods with all amenities accessible within just a few minutes' walk.

We are already noticing...

- A prototype flying car completed a 35-minute flight between two airports in Slovakia on June 28, 2021
- Israeli startup AIR unveiled in October 2021 its first electric vertical take-off and landing (eVTOL) aircraft, which it aims to bring to market from 2024
- Scientist Carlos Moreno and his revolutionary concept of architecture and urban planning "The 15-minute city" won the 2021 Obel Prize
- Paris plans to adopt the 15-minute city concept.

What is needed to make the "15-minute city" a reality in Romania as well?

Future

Culture futures

How culture increases the resilience of communities and artists

In 2020, UNESCO launched ResiliArt, a global movement aimed at presenting the current state of the creative industries through debate sessions and virtual discussions. Culture industry professionals are encouraged to join the movement and organize ResiliArt debate sessions in their regions.

The Montreal Museum is partnering with doctors to offer free museum visits to patients. Launched in 2018, the initiative allows members of Doctors of Francophone Canada to prescribe up to 50 museum visits per year alongside traditional treatment options. At the initiative of the organization's general director, Nathalie Bondil, the museum already offers art therapy programs and participates in clinical studies on the impact of museum visits on people with mental and physical health problems.

Crowdsourcing

In the work "Crowdsourcing Culture: Challenges to Change", researcher Dora Constantinidis talks about updating the role of cultural institutions. Galleries, libraries, archives and museums have traditionally been regarded as the guardians of a nation's culture, taking on the role of 'protecting' heritage.

This traditional role can now be extended to include the curation of digital cultural heritage, including that obtained by citizens (crowdsourcing). By asking the public to get involved in preserving their heritage, even through digital means, two goals are achieved. One result is the creation and preservation of digital cultural heritage for future generations. Crowdsourcing then becomes a catalyst for increased public engagement and interaction with heritage.

By 2056, the individual author or artist may be joined by hybrid collective forms involving crowdsourcing and artificial intelligence. The sales and circulation of works of art will be done within platforms that allow profit sharing between artists. In the future, it is expected that crowdfunding activities will be more and more common in the financing of museum operations.

Future

"Artificial" and digital content

There are three types of emerging technologies that enable the digitization of culture and the creation of digital content.

As technology evolves, we will see more and more content generated by artificial intelligence. Innovations through data focus on patterns and subsequently generate content that is highly similar to the original - for example the Dali lives experience, Salvador Dali Museum Florida. These may become more and more popular in the coming years.

With the evolution of streaming technology, culture is no longer about what we consume, but the amount of content offered. Faced with an overwhelming offer, the need for a selection or the need to limit consumption becomes imperative.

With a new and decentralized infrastructure, blockchain technology is compatible with the open, situational and multidisciplinary nature of the cultural industry.
The application of blockchain in the cultural field can work in three directions: blockchain + content production; blockchain + content transmission; blockchain + copyright protection. It is worth mentioning here the plan recently launched by the Kansong Art and Culture Foundation in order to transform a written work

designated as a national treasure (and part of the UNESCO heritage) into a NFT (digital asset).

Sustainability through culture

In the coming decades we expect the growth of initiatives that, through art and culture, support responsible consumption and care for the planet.

The cultural events will host a variety of art installations that recreate the wild, speak to humanity's carnivorous past, and explore humans' relationships not only with animals and nature, but also with androids, who will be treated as viable replacements for partners, caregivers, and pets.

Diversity and social inclusion

The Google Arts & Culture app (launched by the Google Cultural Institute) faced a wave of criticism in 2018 on the grounds of social inclusion and diversity. More precisely, for certain social categories the search results were limited.

In the future, we expect the cultural phenomenon to be much more representative of the local demographic, constantly growing and changing, so more artists of color, more works signed by women, but also hybrid forms of art.

Future

Exploring possible future scenarios

Imagine a future characterized by:

- Maker Culture
- Ubiquitous activism
- Extreme ruralization

Maker culture

Decentralization of the act of culture / Personalized content

This is a future in which the creation of content and goods is highly decentralized

What might this future look like?

Fed up with cheap mass-produced, unsustainable goods, as well as the perpetual deja vu of algorithmically recommended content, people started creating alternative content themselves and sharing it directly with each other.

A huge disorganized system of online devices and platforms was already available, making it possible for people to quickly bring ideas to life and share them around the world.

The advent of NFTs (non-fungible tokens) can democratize the future of art, bringing art collecting within everyone's reach. Anyone with an internet connection has the ability to collect art that has been "tokenized" on the blockchain. Furthermore, the use of DAOs (decentralized autonomous organizations) allowed for fractional ownership of some of the most expensive NFT artworks.

The moviegoer can control the narrative thread from one end to the other. Netflix is investing in interactive specials—hybrid experiences of movies and games based on pre-existing franchises, allowing viewers to participate in the stories they watch.

We are already noticing...

- Artificial intelligence complements the work of artists
- Sotheby's, the largest global art company, launched Sotheby's Metaverse in 2021, an NFT art platform with the aim of exploring the crypto-art market. One of the artists involved in the project is Pak, an anonymous digital artist who is considered the highest grossing artist in the world of NFTs. Pak has sold over 65,000 NFTs, with the average price around $4,000. The NFT sold in collaboration with Sotheby's sold for approx. 1.5 million USD.

How can we equip more people with creative skills and increase their confidence to use them?

Future

Ubiquitous activism

Emphasized activism / Various forms of activism

This is a future where citizens no longer wait to vote and activism takes on new forms

What might this future look like?

After years of broken promises, missed deadlines and actions discussed but never taken, people are fed up. Voter turnout continues to decline, and while governments suffer a crisis of legitimacy, political activity takes a radically different form.

Streets and public spaces are routinely choked with protests for various causes.

Government bodies and corporations are constantly engaged in several legal battles with various protest groups. Activist investors regularly buy publicly traded companies to reinvent them.

Blockage of infrastructure due to politically motivated hacking is common. As they go about their daily lives, people are on the lookout for the next incident of domestic terrorism orchestrated by an outraged citizen.

We are already noticing...

- Activism in the Metaverse - Protesters take their causes to the gaming and digital/virtual worlds
- Wokeism becomes popular
- Cancel culture – the process of boycotting a person, brand or company on social media – has reached unprecedented heights in recent months and shows no signs of slowing down. 64% of consumers worldwide will buy or boycott a brand solely because of its stance on a social or political issue.

In a future where there are more ways to do politics, how can democracies keep people engaged?

Future

Extreme ruralization

Sustainable communities / Controlled development

This is a future in which many people leave the cities in search of an ecological alternative

What might this future look like?

Society has come to see urban density as the cause of various global problems; from pandemics to pollution, from inequality to isolation. Aided by technology (see 1. Total decentralization), people are starting to leave the cities in search of a greener and more sustainable, safer and simpler life.

Urban migrants breathe new life into forgotten towns and villages.

Remote labor and viable small-scale production bring these settlements back to prosperity.

Green spaces and existing buildings are legally protected, development within the community is very strictly regulated. Optimal family sizes are encouraged through incentives.

We are already noticing...

- Polar bears could disappear by the end of the century
- Saint Michael's Sustainable Community in Costa Rica - a working model community with a mission to prove that living sustainably is achievable and can be done with less money while proving greater benefits. Each property comes with spaces landscaped with utilitarian and medicinal plants
- Taobao Villages – China's strategy to transform rural areas and their economy.

How can ruralization revive local economies outside big cities?

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What would a desirable future for education, science and culture in Romania look like in 2056?

After the prospective analysis of the three areas of discussion, Education, Science and Culture, we built two extreme images for Romania on the horizon of 2056. We used the Mitsubishi Research Institute model in this sense. The summary can be continued and does not claim to state exact developments. The drawing of the two extremes is intended to invite the reader to position himself in relation to them and to create plans of action and preparation for the future.

Romania 2056
The premises of an undesirable future

- Lack of coherent policies in poverty eradication.
- Lack of funding in research, development and innovation.
- Fragmentation and social inequality.
- Abusive use of artificial intelligence and robotics.
- Monopolization and misuse of science and technology
- Weak fiscal support
- Irresponsible allocation of resources.
- ...

Romania 2056
The premises of a desirable future

- Promoting lifelong learning opportunities for all citizens.
- Strong public-private-citizen partnership
- Mature civil society.
- Examples of good practices in the circular economy.
- Models and systems of social values that allow development and stability.
- The democratization of energy.
- Personalized medical treatment according to the condition.
- ...

Future

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Based on the signals of change and megatrends presented, we created a vision of a possible future discussion. These kinds of visions are not predictions but rather narratives of things that could happen. The discussion invites for reflection on the assumptions described and opens the conversation about how we can prepare for such a future, both as an organization and as professionals.

A talk from and about the future 2056

Sonia Sadovan - General Secretary of RNC UNESCO

I: Welcome, Sonia! I understand this is your first VR interview?

SS: Hello, Ingrid. Yes, I must admit, it feels strange to be in such a green garden without being able to touch it.

I: It takes some getting used to, but I promise you'll forget you're in a metaverse. Just be careful not to hit objects around the house. I wreaked havoc the first time I wore the costume. For those just entering the room, we have Sonia Sadovan, Secretary General of the RNC UNESCO, as our Twitch VR guest. Don't worry, the interview is translated in real time. While we're on the subject, Sonia, tell me how you've gotten used to the internet culture since you took over as General Secretary?

SS: *(trying to hide a small trace of shame)* Ooof. I still have a hard time accepting AR and VR devices, but I can say that I'm not scared anymore. Since I came into office, admittedly, I had to catch up with a lot of technologies. Surprisingly, many of the active projects now use fairly new technologies.

I: I guess you grew up in a not-so-digitally-fluent family?

SS: Aaah, no. I was born in 2016 in Cluj. I don't think I can find excuses in family preferences. I always had a PC, a laptop or a phone. The problem was when I started the "Rural Romania: Endangered Species" project after college.
I traveled for almost 10 years through quite isolated places, without paying much attention to how AR and VR culture is exploding. That's my fault, of course.

I: Tell me how you can help the places you've visited, now that you're almost in a suitable position to do so.

SS: Indeed, the internet infrastructure created in the 2000s has helped Romania immensely in the last 10-15 years. Yes, we had among the best transfer speeds in the world, but until recently, this only applied in big cities, like Bucharest or Cluj. And this is clearly seen in education.

Future

Schools in the metropolis were light years ahead of those in disadvantaged backgrounds. We are now in the process of changing that. We have in progress several projects to modernize educational institutions in relatively isolated areas. Additionally, we have funds available to provide equipment for students who do not have any schools in the area to attend online classes. This would not be possible if there were no investments in digital infrastructure in recent years.

I: From what I've read there are plans to convert former abandoned factories and businesses into learning spaces?

SS: *(smiles subtly)* You've done your research. How cool! Yes, we are in discussions with the Minister of Culture to transform the unused spaces of the state heritage into cultural hubs, digital libraries and classrooms.

I remember visiting the Tabacalera in Madrid when I was little and

I was amazed to see what could be done with a space that, in the view of many people, should have been demolished and turned into an office building or who knows what else. Education is no longer only done in a classroom. This approach shows that the priority given to education has increased significantly in the last decade.

Traveling through Romania, I saw dozens and dozens of such locations, which would revitalize communes and villages on the verge of dying. You'd be surprised how many artists get lost on the road because they don't have access to a space where they can express themselves and develop. I would like to see a revival of Romanian art in the next 10 years with the "Culture Factory" project.

I: Speaking of which, I know it may still be confidential, but I heard that you are planning to lay the foundations of a student town, according to a unique concept in Romania...

SS: *(interrupts her)* Yes, I see it's not much of a secret anymore. Working on the project I was just talking about, the "Culture Factory", I discovered that many structures were located in the Ploiesti - Campina area. Together with the Ministry of Education, we managed to agree 2 years ago on an area of 50 hectares to transform in the next maximum 5 years into the "Prahova University Center". It will be an entire town focused on education and research in the digital and technological field that will sit on the grave of the oil infrastructure. I don't know if many people see the irony, especially since one of the research areas there will revolve around renewable energy, but I think it's brilliant

I: I'm going to change the subject a bit to something a little more upbeat. With the projects of the big tech companies to build more and more structures in space or towards space, do you think that Romania will also have a stable place at the table?

SS: Hmm. I think we have done quite a lot in the direction of the retention of young people in Romania in recent years, but when it comes to the space program, I think that talents are still slipping through our fingers.

Yes, we had a Romanian on the International Space Station (before its retirement), but considering the direction in which we are going, I would say that Romania's best chance in space is through a project or an initiative, not through a domestic space program.

I could even give you the example of a line of research that we also support through UNESCO. For almost 5 years we have perfected an air filtration system using algae from the Black Sea. I know that "Green Air" already has a contract with the European Space Agency for a prototype filtration system that encapsulates entire spacecraft with algae in the water. In this way the astronauts are also protected from radiation. I also know that the project to clean the low orbit of decommissioned satellites was started by a team of Romanians. I would have liked to be able to offer them a launch pad in Romania, but at least we started to 3D print garbage satellites on our territory.

I: And with such an airy response, it's time to come back to reality for a bit and thank Sonia for

her presence on the stream "Slightly augmented reality". I'm sure the chat is full of questions and thoughts, so I'll see you in writing in a few minutes after a short break. Sonia, thank you for your time. Any final thoughts?

SS: (Sonia tries to catch emojis thrown at her by the audience as a pianist starts playing the show's finale song in a corner) I really need to do this more often. The atmosphere is brilliant!

Future

Dissemination

06/06

Dissemination

In order to validate and improve this material, we carried out 3 dissemination initiatives:

1. Online dissemination with a group (Task Force) made up of experts and professionals from the 3 fields of interest. In this participatory session we discussed the first version of this white paper, its structure and content.

2. Offline dissemination at the National Theater Bucharest during the conference organized by RNC UNESCO "Learning without frontiers for sustainable development - Prospective reflections workshop "Romania 100 years after joining UNESCO". This session brought together more than 40 participants, and the way of working was as follows: the participants were divided into 8 teams, each 2 teams having the same work topic. The 4 themes: Education, Science and Culture, plus Human Capital, as well as a transversal field.

After the relevant megatrends were presented, as well as their concrete manifestations, the teams addressed the following 2 questions:

1. Which of the presented megatrends or signals of change do you think are most relevant on the 2056 horizon for your work topic and WHY?
2. Given these possible changes, what CONCRETE actions do you think we can take as a (i) public institution, (ii) civil society, and (iii) private environment to prepare for the future?

Afterwards, the teams that worked on the same theme proceeded to aggregate the discussions towards a common conclusion and plenary presentation.

On the next page you can find the 4 resulting cartograms, and at this link you can follow the plenary presentation from the conference.

3. Inter-generational online dissemination – more than 20 participants were part of this last dissemination, most of them high school students and student council members. This dissemination was intended to understand the perception of the participants towards certain possible future scenarios.

In a first phase, the participants prioritized the 9 possible future hypotheses according to their probability and Romania's level of preparation in this regard. Afterwards, the group was divided into teams and we discussed in more detail one hypothesis from each area. The conclusions of the discussions are summarized in the following pages.
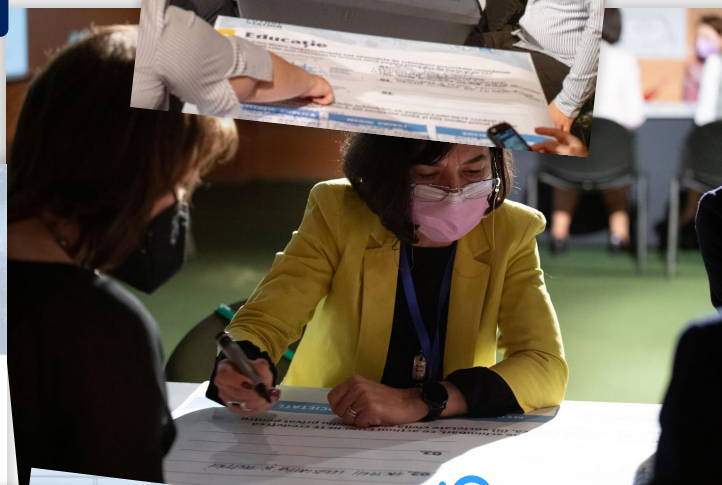
FUTURE STATION

Știință

1. Care dintre megatendințele sau semnalele de schimbare prezentate considerați că sunt cele mai relevante la orizont 2056 pentru tema dvs de lucru și DE CE?

Factori demografici și sociali
Evoluția populației globale, Îmbătrânirea populației, Urbanizare și migrația.

Factori legislativi și politici
Politici publice, Încrederea în instituții, Nevoia de reglementări și actualizări.

Globalizare și factori economici
Cooperare internațională, Global brain, Schimbări în modul de lucru și colaborare în activitatea profesională.

Dezvoltări tehnologice
Digitalizare și inovație tehnologică, Etică în tehnologie, Social media.

Sustenabilitate și schimbări climatice
Reziliența climatică, Consum responsabil, Artă și cultură sustenabilă.

01. Globalizare și factori economici
- Accelerarea inovației
- Conectarea zonelor dezvoltate diferit

02. Dezvoltări tehnologice
- Democratizarea științei
- Factori normativi (etică)

03. Sustenabilitate și schimbări climatice
- Resurse alternative
- Explorarea de noi teritorii

2. Având în vedere aceste posibile schimbări, ce acțiuni CONCRETE credeți că putem lua ca (i) instituție publică, (ii) societate civilă și (iii) mediu privat pentru a ne pregăti pentru viitor?

INSTITUȚIE PUBLICĂ	MEDIU PRIVAT	SOCIETATE
1.Includerea cercetării în educație	1.Parteneriate (investiții în știință)	1.Deschisă, care să învețe permanent
2.Finanțarea CDI și instituționalizarea eticii în CDI	2.Implementarea inovațiilor	2.Educație (citizen science)
3.Întărirea instituțiilor democratice pentru apărarea cetățenilor	3.Awareness referitor la etică și sustenabilitate	3.Watchdog – responsible tech

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FUTURE STATION

Educație

1. Care dintre megatendințele sau semnalele de schimbare prezentate considerați că sunt cele mai relevante la orizont 2056 pentru tema dvs de lucru și DE CE?
1.Dezvoltări tehnologice

Factori demografici și sociali
Evoluția populației globale, Îmbătrânirea populației, Urbanizare și migrația.

Factori legislativi și politici
Politici publice, Încrederea în instituții, Nevoia de reglementări și actualizări.

Globalizare și factori economici
Cooperare internațională, Global brain, Schimbări în modul de lucru și colaborare în activitatea profesională.

Dezvoltări tehnologice
Digitalizare și inovație tehnologică, Etică în tehnologie, Social media.

Sustenabilitate și schimbări climatice
Reziliența climatică, Consum responsabil, Artă și cultură sustenabilă.

01. 1.1.Factori demografici și sociali
1.->element nivelator + integrator
->accelerarea globalizării și a cunoașterii
1.1.->dezvoltare bazată pe fluiditate, mobilitate și multiculturalitate

02. Globalizare și factori economici
- Reducerea clivajelor economice și a inegalităților sociale

03. Sustenabilitate și schimbări climatice

2. Având în vedere aceste posibile schimbări, ce acțiuni CONCRETE credeți că putem lua ca (i) instituție publică, (ii) societate civilă și (iii) mediu privat pentru a ne pregăti pentru viitor?

INSTITUȚIE PUBLICĂ	MEDIU PRIVAT	SOCIETATE
1.Monitorizarea și interpretarea realității pentru schimbări legislative și politici publice	1.Implicarea în susținerea școlilor duale	1.Agilă, implicată prin petiții
2.Depolitizare și profesionalizare	2.Open doors pentru creșterea viitoarelor talente	2.Organizarea grupurilor civice
3.Noi reglementări adaptate la intervale de timp mici având în vedere viteza de evoluție	3.Susținerea educației prin campanii CSR autentice	3.Dogwatchers
4.Incurajarea inițiativei mediului privat + autonomiei locale la nivel de unitate pentru adaptare la nevoia comunității	4.Promovare valori + comportamente	4.Apărarea valorilor democrației

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FUTURE STATION

unesco

Cultură

1. Care dintre megatendințele sau semnalele de schimbare prezentate considerați că sunt cele mai relevante la orizont 2056 pentru tema dvs de lucru și DE CE?

Factori demografici și sociali
Evoluția populației globale, îmbătrânirea populației, urbanizare și migrația

Factori legislativi și politici
Politici publice, încrederea în instituții, Nivelele de reglementare și actualitate

Globalizare și factori economici
Cooperare internațională, Global brain, Schimbări de model de lucru și colaborare în și în afara profesională

Dezvoltări tehnologice
Digitalizare și inovație tehnologică, Etică în tehnologie, Social media.

Sustenabilitate și schimbări climatice
Reziliența climatică, Consum responsabil, Artă și cultură sustenabilă

01. Dezvoltări tehnologice
-etică în tehnologie și cultură
-inegalitățile de acces digital

02. Globalizare și factori economici
-mobilitate (digitală) și delocalizare culturală

03. Sustenabilitate și schimbări climatice
-artă și cultură sustenabilă
-influența economiei

2. Având în vedere aceste posibile schimbări, ce acțiuni CONCRETE credeți că putem lua ca (i) instituție publică, (ii) societate civilă și (iii) mediu privat pentru a ne pregăti pentru viitor?

INSTITUȚIE PUBLICĂ	MEDIU PRIVAT	SOCIETATE
1.Reformarea instituțională a ICR (regândirea modului în care e conectată cultura română cu alte culturi) 2.Oportunitatea regândirii activității și rolului Comisiei UNESCO 3.Noi forme de muncă și colaborare în ceea ce privește parteneriatul public-privat, public-civil 4.Asigurarea accesului liber și subvenționat	1.Tranziția de la o CSR la o formulă care să includă partea de cultură și sustenabilte	1.Rol educativ pentru consumator în ceea ce privește produsele/serviciile culturale

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FUTURE STATION

unesco

Capital uman

1. Care dintre megatendințele sau semnalele de schimbare prezentate considerați că sunt cele mai relevante la orizont 2056 pentru tema dvs de lucru și DE CE?

Factori demografici și sociali
Evoluția populației globale, îmbătrânirea populației, urbanizare și migrația

Factori legislativi și politici
Politici publice, încrederea în instituții, Nivelele de reglementare și actualitate

Globalizare și factori economici
Cooperare internațională, Global brain, Schimbări de model de lucru și colaborare în și în afara profesională

Dezvoltări tehnologice
Digitalizare și inovație tehnologică, Etică în tehnologie, Social media.

Sustenabilitate și schimbări climatice
Reziliența climatică, Consum responsabil, Artă și cultură sustenabilă

01. Factori demografici și sociali

02. Factori legislativi și politici

03. Dezvoltări tehnologice

2. Având în vedere aceste posibile schimbări, ce acțiuni CONCRETE credeți că putem lua ca (i) instituție publică, (ii) societate civilă și (iii) mediu privat pentru a ne pregăti pentru viitor?

Binele comun = Democrație participatvă

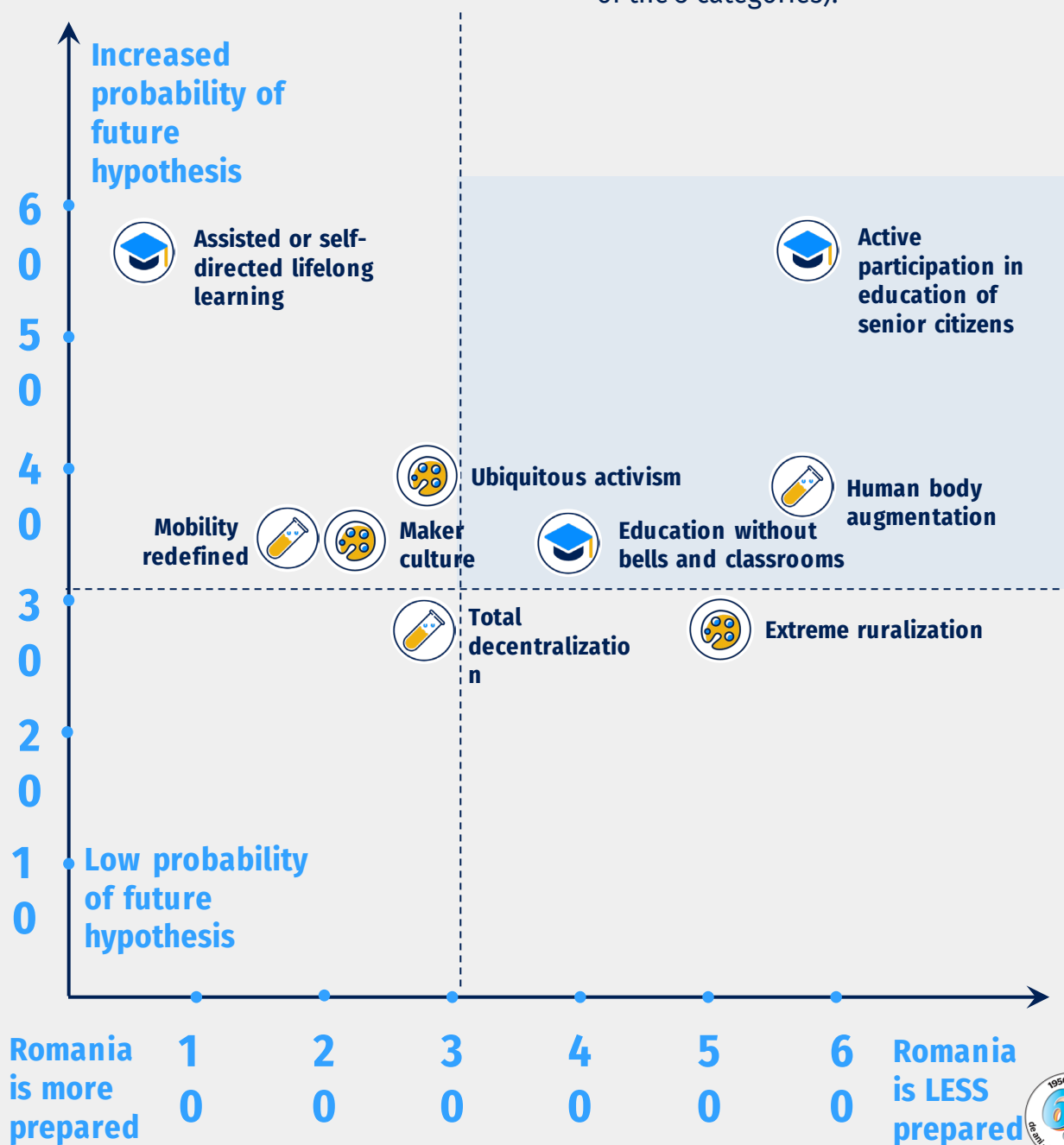| INSTITUȚIE PUBLICĂ	MEDIU PRIVAT	SOCIETATE
1.Politici publice care să sprijine actualizarea competențelor 2.Flexibilizarea relațiilor de muncă inclusiv forme noi de muncă 3.Finanțare corespunzătoare și adaptată nevoilor reale 4.Măsuri pentru estomparea diferenței între România rurală și România urbană	1.Implicarea în procesul de orientare în carieră timpurie 2.Profesionalizarea mediului privat 3.Comunități de economie circulară 4.Model VISCRI	1.Guvernanță prin societatea civilă 2.Promotorii și mobilizatorii locali => vecinătăți 3.Valorificarea patrimoniului cultural => inițiative antreprenoriale

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Intergenerational online dissemination

Participants were asked to prioritize the 9 possible future scenarios according to the following criteria:
• Choose the hypothesis you consider the most PROBABLE when referring to Romania in 2056 (one from each of the 3 categories)
• Choose the hypothesis for which you consider that Romania could be the LEAST PREPARED in 2056 (one from each of the 3 categories).

Increased probability of future hypothesis

60

Assisted or self-directed lifelong learning

Active participation in education of senior citizens

50

40

Ubiquitous activism

Human body augmentation

Mobility redefined

Maker culture

Education without bells and classrooms

30

Total decentralization

Extreme ruralization

20

10 **Low probability of future hypothesis**

Romania is more prepared   10   20   30   40   50   60   **Romania is LESS prepared**

Intergenerational online dissemination

In teams, the participants debated 3 possible future hypotheses and later presented their conclusions in plenary. These were around the same 3 questions:

1. What must happen for this hypothesis to become a reality in Romania in the next 35 years?
2. How will the future be different when this hypothesis becomes reality?
3. How can we prepare for such a future? (as society, private sector, public institutions).

SCIENCE

Total decentralization
Batteries & renewables / 3D printing / power of communities

This is a future where DNA modifications or brain implants are as normal as Botox and smartphones are today

1. What must happen for this hypothesis to become a reality in Romania in the next 35 years?

Investing in the development of the infrastructure of the medical ecosystem

Research in the country because Romanians could be more open to ideas from other Romanians

Collaboration with image vectors including but not limited to medical personnel to make the technology appear safe

Education on the scientific side is much more developed because this is an important premise in the acceptance of new technologies

2. How will the future be different when this hypothesis becomes reality?

a new type of discrimination will appear

In the absence of coherent regulations, this can be an unfair future.

This reality can be one in which humanity has escaped many hereditary or degenerative diseases

3. How can we prepare for such a future? (as society, private sector, public institutions, etc.).

Investing in the development of the infrastructure of the medical ecosystem

Training of the actors involved

The creation of clear procedures, a code of ethics regarding the use of these technologies and the formation of a legal framework to ensure user safety.

Education without bells and classrooms
Virtual schools / Mobile schools

This is a future where schooling is no longer about a physical location

1. What must happen for this hypothesis to become a reality in Romania in the next 35 years?

Keeping things online even after the pandemic

Changing the mindset of teachers.

A program more focused on current issues and needs

A gradual transition from face-to-face to online, the use of the hybrid system

Teacher training

Realization of the national platform that will give them the opportunity to access the materials more easily and at any time

2. How will the future be different when this hypothesis becomes reality?

More open-minded teachers and students

More possibilities to discover your passions

People more specialized in their areas of interest

It increases responsibility

A safer, more flexible and more enjoyable learning environment

A more competitive environment, eager for development

Eliminating barriers between localities, states

We don't want to eliminate the physical spaces, but rather they updated them to small groups, "living room" feeling, combined with digitization)

3. How can we prepare for such a future? (as society, private sector, public institutions, etc.).

The gradual responsibility of the students by reducing the control that the teachers have

A new education law to include relevant trends

The introduction of new textbooks once every 1-2 years (updated alternative textbooks - a must) or maybe eliminating them? It is important to have something regulated, maybe not necessarily in the form of a textbook (e.g. website, platform) - a good example is the national student platform

Eliminating the maximum number of students (faculties)

Introducing the hybrid format

Modified curriculum

Using online materials and platforms in the classroom

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Maker Culture

Decentralization of the act of culture / Personalized content

This is a future where the creation of content and goods is highly decentralized

1. What must happen for this hypothesis to become a reality in Romania in the next 35 years?

Platforms for the expression and exhibition of young people's art

NFTs & other forms of monetization

Development of the critical spirit. Having the ability to focus on quality.

Education of artistic receptivity

2. How will the future be different when this hypothesis becomes reality?

More qualitative and creative

More challenging in terms of content

Uniqueness in diversity and vice versa #forreal

More innovative

3. How can we prepare for such a future? (as society, private sector, public institutions, etc.).

Emphasizing and encouraging the expression of creativity through art in school

The culture of providing constructive feedback

Private sector and civil society + other relevant actors to work together (triple helix business model of innovation)

Appropriate digitization

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Contributors

BENEFICIARY
The mission of the National Commission of Romania for UNESCO is established according to art. 7 of the UNESCO Constitution, the provisions of the Charter of National Commissions for UNESCO and in accordance with the attributions mentioned in GD 624/1995, with subsequent amendments and additions.

The mandate of the National Commission of Romania for UNESCO (RNC UNESCO) aims at three levels of action, as established by the Constitution of UNESCO, the Charter of the National Commissions for UNESCO and in the normative framework for the establishment of the RNC UNESCO, respectively in relation to the national partners (structure intra-governmental), with UNESCO and the network of National Commissions for UNESCO.

The dual nature, of a national body with an international vocation, underlines the mission of the RNC UNESCO to strengthen Romania's profile at UNESCO and, at the same time, the UNESCO profile in Romania.

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Future Station is a consulting company that engages in activities such as strategic planning (researching trends and planning future scenarios) or building teams for future realities. Clients served range from industries such as retail to telecom, financial services to FMCG, energy and healthcare, plus NGOs and public institutions. More details here: www.futurestation.ro

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