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Structural Funds

VISION

Romanian Higher Education in 2025

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Seeds for the future

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Invitation

The future will be different from the present we know. Looking back, we see how many things have happened over the past of fifteen years. Looking forward we can only imagine how many things will change in next fifteen years. We dont know for sure what the next discovery or paradigm change will look like. But we do know that the future is there before us.

That the future is difficult or even impossible to foresee does not mean that it cannot be shaped by us. We know a few sure things about the near future. if we add to that some foresight and some courage to act, the distant future becomes more reachable.

This document is our invitation to you **to look forward together into the future**. An invitation **to take action together**. The future starts now and it is build with our individual actions. We need to trust the creativity and adaptability resources of Romanian higher education **to change together** while looking forward.



This Vision is the result of a broad **foresight** exercise. it is the product of the strategic project **Quality and Leadership in Romanian Higher Education**, implemented between 2009-2011 by the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) and its partners.

"If one does not know to which port one is sailing, no wind is favorable"

Seneca

The foresight exercise was a thorough one that included hundreds of keys representatives of stakeholder areas: academics, students, public institutions, businesses and non-governamental structures. Specific methods and tehniques were used such as identification of change, scenario building, generating participant consensus. The proper framework was thus created to encorage the production of a long-term vision meant to draw a picture of a desirable future and to genereate and stimulate forward-looking thinking as to future challenges, provide the basis for decision making in the present and to mobilize individual and collective action to prepare plans of actions.

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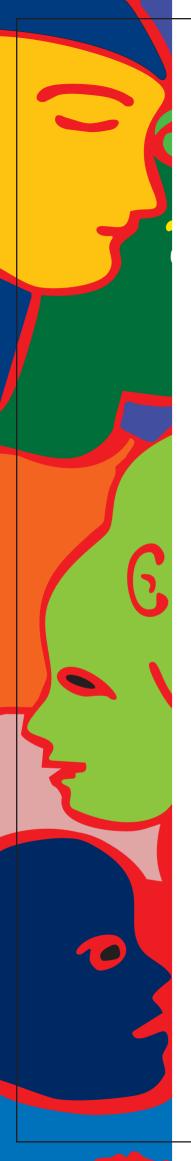


"We should all be concerned about the future because we will have to spend the rest of our lives there."

Woody Allen

I. THE FUTURE as we "know" it

6



Regardless of whether we are enthusiastic or worried about the future, it is rich in opportunities and risks and, by way of consequence, in decisions. We cannot anticipate them all but we can gain inisght about a number of tendencies that will shape our not so distant future. Our decisions must take into account these tendencies.

We know, for instance, that society will focus more and more on the individual and his/her needs wich will become increasingly complex and diverse. Diversity, equal opportunies, creativity, flexibility, environmental concerns and transparancy will remain core values of the foreseeable future society.

Medicine advancements will increase our life expectancy and improve quality of our life and, as result, health costs or the pressure to have longer active lives will increase too. Along with an increase in the world population we will witness the aging of some societies while migration and geopolitical changes will modify social dynamics and will enhance diversity and, consequently, the importance of social cohesion.

Services and products will try to answer the multitude of whishes and needs mentioned above. Economic globalisation will increase the need for customisation of personal experience encouraging the development of local and regional offers. The expansion of generic products will be accompanied by the salience of local products, wich capitalize on specificity.

We also know that *increasingly complex interconnected societies, dominated by uncertainty will become more difficult to govern.* Their success will depend largely on their capacity to encourage and mantain dialogues and the freedom stakeholders have to take concerted action. In 2025 world well-beign will depend increasingly on knowledge capital. Progress is also about what escapes our current knowledge. As a result, the challenge to understand the world around us is immense. We know that 2025 goverments will support permanent innovation and will rely on their investments in knowledge and competence development. Higher education systems providing top research, professional training and cultural and civic experiences will be perceived as important geopolitical players.

In 2025 increased concern about environment and, more generally, about the quality of life bring about nes consumption pattern challenges. Well-beign will be defined by the degree of integration of sustainability and individual needs. As a result, the appetite for technological progress will be coupled with a concern about humanizing technology.

"The Top 10 in demand jobs in 2010 may not have existed in 2004. We are currently prepairing students for jobs that don't yet exist, usind technologies that haven't been invented yet, in order to solve problems we don't even know are problems yet."

> Richard Riley, Former US Secretary of Education

In 2025 more and more pople will have a creative approach to their *lives* and they will feel less constrained to follow preset paths for full fillment. We know that, as a result, people will move more often and they will change their jobs and professions more. At the same time, individual freedom and career flexibility will increase the interest in deucation.

In 2025 people will need education more than they do now. We belive that the number of 'college-age' students will decrease but the number of learners will increase. Society will encourage its citizens to learn more, to be better trained, better adapted to a constantly changing world. Learning will become more dynamic and mobile but people will learn at their own pace.

In 2025 work becomes challengingly pleasurable. The borders between career, personal development and leisure will fade. Communication abilities, flexibility creativity and mobility will become more important.

In 2025 people will find their place in society easier but they will feel tempted to change it regularly. We know that the society will be more diverse and tolerant, creating opportunities for personal and professional full fillment for each of us. Knowledge social networks will pay a determining role in a flexible social context where private life and work go together complementing each other.

Mind is not a vessel to be filled but a fire to be kindled."

Plutarh



In 2025 organizations will look differently.

We know that employers will appreciate increasingly their employees' ability to be autonomous, creative and mobile, to approach the problems they are facing creatively. Practices such as employee personal development will become widespread.

In 2025 the role of higher education institutions will grow.

We know that both physical and virtual mobility will come natural and, as result, they will become part of education too. Higher education will no longer be a passive beneficiary of investments by the state and the society in and for wich it operates. Education institutions will have to take up role of complex and diverse cultivators in a world where individuals become more and more individualized as they participate in both real and virtual social and epistemic networks.

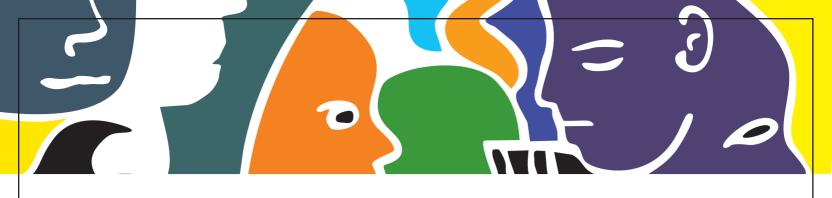
> "Education does not end on graduation day or with PhD defenfense but it remains open."

Orio Giarini & Mircea Maliţa, The Double Helix of Learning and Work

Time is changing. "We have to change with it too"

Eugen Lovinescu

II. THE FUTURE Higher Education, the way we can build it



Personalization

Personalized learning is a consequence of the modern people's need for individuality; they no longer learn to occupy a preset place but to define freely and dynamically their own roles.

" 'Student life' as I know it takes place outdoors in what we lovingly call "the Backyard", an empty plot on the edgeof the campus, owned by the Biology Community. This is where I work 4 to 5 hours every day. I am preparing to become an entomologist, I study ants that is. "The Backyard" is a miniature ecosystem for the study of insect colonies that the Community has created and the we, the students, are taking care of. They also provide anthropology and communication courses: they say you cannot understand ants – or colonies – if you don't understand how complex societies are organized. I am aware that my passion for ants might prove a temporary one so I want to make sure that if tomorrow I decide to study something else, I have enough options. With the competences I acquire this year I can easily transfer to an environmental landscaping or political science program. Next year I will take genetics, biochemistry, ecology and agriculture courses to make sure I have even more options should I decide to drop entomology. I believe that this is where the differences between people and ants become most visible: we, humans, are born into a particular social class and territory but most probably we will change both of them a couple of times throughout our lives."

Andrei, Student, 2025

"I started my university studies convinced that the future must be a mix of 'hi tech' and 'eco'. I wanted to study nanotechnology but I started with several introductory courses which raised many question marks as to what the future looked like. I extended my education portfolio to biology and ethics. I felt overwhelmed so I dropped formal education. A few years later I met by chance an investor who offered me financing for an assessment of nanotechnology risks. I went back to school on the spot, I was given mobility grants in two international excellence centers — I am still struggling with the borders of my discipline. On the one hand, my colleagues and I are monitoring the new scientific evolutions and on the other hand we are trying to understand the dynamics of ethical issues and social perception of nanotechnology."

Tudor, Student, 2025

Îln 2025 we are less the same than ever, and each of us can and wants to be him/herself, to be accepted as such by the people around. Personalizing higher education means precisely to recognize the right to uniqueness, to choose what you want to be and to study to better define yourself and become integrated.

Îln 2025 there is nothing unusual about studying longer years than you had initially anticipated, to take breaks and to

come back later or to have coursemates of very different ages. The personalized university system takes into account this reality offering students the freedom they need to build their own educational path – both in terms of the competences they wish to acquire and the timing and form of education they choose. The university students' paths are only partially controlled by the curricula as they are free to choose most of the modules they are going to study based on their own projects and interests.

> "It is a pleasure to teach Public Relations to my students. It is completely different from what I usually do at work as an expert in a private communication agency. I try to challenge my students practically to develop their capacity for analysis and their practical communication skills. I try to stimulate them to come up with creative solutions, to see beyond recipes. In their turn, they challenge me every day to conceptualize and verbalize things that sometimes I do in practice without analyzing them. I like to think that I teach an interesting class which I manage to adapt to every generation of students be they present in person or virtually. Actually, it is the extensive use of technology in our interactions – a thing that seems now natural to everybody – that helps me show them how Public Relations have evolved to gain a brand new dimension in today's world."

Cristian, Assistant Professor, 2025

"We can shape our future the way we want it to be. Life is clay and the will is its sculptor." Liviu Rebreanu



Personalization and the labor market

The companies or institutions that hire have their own individualized requirements from their future employees.

Most employers need creative and mobile employees, who can use their general competences to reinterpret information in ever changing contexts. Other employers encourage universities to take into account the actual demand on the labor market, to offer practical training programs, and they become involved in curriculum design and the appropriateness of the forms of learning. The border between the university and these companies thus becomes almost invisible.

"Understanding the universe has always been the challenge of my life. I work in quantum physics and the step my team took in string theory brought humankind a little closer to knowing the universe. This is a niche domain, extremely dynamic and trendy but very few students actually get to see how knowledge boundaries move before their eyes. I am trying to get them involved in actual research, to challenge their thinking through dialog and informal approaches. I am very happy when I find a true discussion partner, a mind free of prejudices, with the courage to see reality otherwise than it's written in books and to ask themselves 'what if...?'."

Ioana, Researcher, 2025

As student you can choose among programs with different lengths and requirements, with diverse structures and educational philosophies – based on what you want to become and to do in the future but also based on the people you want to work with and the environments you want to belong to.

> "I am a final year undergraduate in Political Sciences and basically all my school interaction goes on online. But not any kind of online interaction: we have a virtual world patented around 10 years ago by professors from several departments – it is a mix of World of Warcraft and Second Life called World of Statecraft. It is basically an extremely complex virtual society where students and professors interact on a regular basis through their avatars although we spend all the time physically together in school or as holograms. Some of us are political leaders or state officials, others are trade unionists, members of the civil society, think thank experts, political journalists... (Some of us, both students and professors, play our extra-academic life roles, others just the opposite.) We interact constantly and our society evolves giving us and our personae real-time lessons. All in all, I will graduate this year and I have to admit that I have become addicted to my virtual world particularly now that it's been one year since we went international. So it's almost sure that I will stay here for an MA program and then maybe a PhD. And if I'm lucky, who knows, maybe I will stay here as an assistant and my avatar will get paid for the rest of my life... By the way, my MA research topic is Quality and Leadership in World of Statecraft 2050."

Beatrice, Student, 2025

Diversity

Diversity is the answer of the university system to the students' and employers' need for personalization. Diversity is determined by actual needs while institutional missions undertaken embody these needs.

In 2025 higher education institutions differ depending on who their target is, what they have on offer and how they offer it. Like people, each university has its own personality.

The Innovation Institute of Timisoara is a system made up of a micro-university, a research institute and an innovation center working directly with a large development and implementation periphery. The institution innovated the traditional organizational structure dropping the discipline-based departments and faculties and taking up a multidisciplinary organizational principle. In their graduate programs (IIT does not offer BA programs), research and teaching are integrated not only one with the other but also in the context of brokerage and other processes facilitating technological transfer. Graduate multidisciplinary programs are designed to include stages that allow you to leave the program and then come back for a further stage. The educational path is dynamic and strongly modular, it is organized around topics for long-term innovation projects, including theoretical and technical topics but also ethical, environmental, specific market monitoring, innovation management and intellectual property issues.

Innovation Institute of Timisoara, 2025

Diversity means acknowledging several types of excellence

Each university has defined its mission: what it offers the society and how it does that. Universities are therefore different in terms of their program offer, the teaching methods, length of studies or their content. Some universities choose to tend to local and regional needs, to 'grow' practical a bilities for the local labor market and economy. Others aim at developing creative thinking and training open and mobile professionals. There are higher education institutes that already have an international research reputation and therefore select their students carefully. Alternative models are also available: there are institutions that decided to forge new development directions and to regularly provide technological and innovation public policy consulting and assistance; others undertake educational experiments challenging the academic environment as a whole.

> Scientia University of Bucharest has recently become the second best Romanian university according to the Shanghai ranking. An even greater accomplishment is that Scientia has permanently improved its ranking. How did they get there? They halved the number of students, they increased the number of PhD students to 40% of the total number; they cut down the number of under-performing professors and they hired research and post-doctoral teaching staff from all over Europe; they sped up the recruiting process for foreign students; they took up the role of South-East European center of physics.

The Wine Institute of Focsani (WIF)

is a young education institution, 7 years old. The Institute was born out of the Vrancea authorities' understanding that of all the post-secondary education graduates born in the county, most of them go to study outside the region and never come back. To attract them in the local industry, the authorities created a vocational higher education institution directly connected to the wine industry. The institute launched, along with the first series of graduates, the Vrancea Wine Festival, an annual event that includes a European exhibition managed entirely by students, alumni and professors. The visitors, many of them coming back every year for the festival, are accommodated in the hospitality institute run by WIF. The locals have started calling the main building of the Institute "Chateau" while Focsani has become the "New Bordeaux." The pastoral charm of the event should not fool anyone; the Wine Institute of Focsani has already introduced a research program in wine and laser.

Wine Institute of Focsani, 2025

Scientia University of Bucharest, 2025

Diversity means working together

Diversity encourages communication among institutions whether research or education, private or public, small or large. Communication and understanding common concerns and values led to associativity and, consequently, the emergence of supra-institutional and even transnational forms of organization in 2025, which are able to explore in some depth a particular issue or field of interest.

These institutions conduct ample research projects, each member contributing to building knowledge. At the same time, they operate as university and post-university training centers preparing the future experts in a particular area of knowledge. Their students can attend courses at several partner institutions and have contact with diverse experts and approaches.

The Excellence Campus of Cluj-Napoca will soon celebrate its seventh anniversary; it was created through the joint efforts of a group of Transylvanian universities, private companies and NGOs in the field of new technologies and life sciences. The campus was born as a regional cluster benefiting fully from structural fund opportunities. The project for this institution was also one of the major Romanian initiatives between 2014 and 2020. The campus is today an academic-industrial conglomerate with a special organizational structure. Most actors involved in the project offer short-, medium- or long-term educational programs in exchange for credits that can later be turned into research, consulting or technical and legal assistance services. A similar credit system applies to MA and PhD students and to post-doctoral teaching staff involved in the Campus research projects: in exchange for the credits they gathered, they can get education and other professional training services or even social services.

Excellence Campus of Cluj-Napoca, 2025

"If you do not think about your future, you cannot have one." John Galsworthy The university that understands better the needs of its learners or partners and changes to meet these needs does not give up quality and value but standardization and homogenization. After all, *it is excellence itself that engenders diversification.*

> Magurele Cluster is not, as its name might suggest, just the engine of a technological agglomeration currently known as "the City of Extreme Light" but also the pivot for laser physics and nuclear applicationin Central and South-East Europe. CM brought together, in an interdisciplinary excellence cluster, more than 40 university worldwide, i.e. hundreds of professorsand post-doctoral staff. Its over 1,200 PhD candidates have supervisors from all six inhabited continents but they do their internships at Magurele and theyoften stay in the adjacent researcher community. Located in the middle of the Science City, Magurele Cluster works as an informational storage for the global academic society but mostly for high tech companies in Science City. Last but not least, CM is a conglomerate of Romanian universities whose international visibility has increased radically since the creation of the Hub.

Magurele Cluster, 2025

The Advanced Studies Center Danube – Danube Delta – Black Sea, aka D3MN, is an international joint project born a decade ago, out of the pioneering initiative of seven universities in countries of the Danube river basin that used structural funds to develop a continental research infrastructure. Today, the Institute includes no less than 16 partner universities and its research and development model was copied in other similar world ecosystems. The "Humans and the Danube River" program was launched as a study of the Delta using an Eco-Log sensor system but was later extended to natural and human-made phenomena upstream using an open interconnected sensor system. All of the national universities involved have developed local subprograms so that on December 31, 2024 the number of active sensors had reached 82,647,533, of which 87% focus on human activities. The "Humans and the Danube River" program is currently the largest European platform for the study of human-environment interaction, hosting a huge database on natural ecosystems and a model for fluid organization of knowledge spreading to the most diverse technological areas, from ship to organic house building. None of this would have been possible without the Center's impressive integrated infrastructure, with centers all over Europe.

Advanced Studies Center Danube – Danube Delta – Black Sea (D³MN), 2025

Transparency

Transparency is a practical value. Without it, one cannot speak of diversity or personalization, or, just as well, of fairness, equal opportunities, honesty or the right to choose. Transparency is a tangible value: you feel it when, for instance, you manage to get fast a satisfying answer to a routine problem, whether administrative or even theoretical.

My name is Andreea. I got my final high-school grade two weeks ago and I have already decided what university I want to apply to. I used the OOID (Open Options Informed Decisions) system available on the Ministry of Education website. This is basically a huge database, in four languages, and you can use a "personal ranking" system to choose from education providers and programs. There are dozens of criteria and indicators that you can structure every way you want – this is indeed a very practical system: I'm interested in sociology and I wanted above all an institution in a big urban center (because I like a cosmopolitan life) but not too far from Hungarian traditional rural communities(because I want to do ethnography).

My second most important criteria were related to acceptance conditions, at least 50% funding for my first year and an offer of beginners to advanced Hungarian language courses. My third set of criteria were about the quality of the campus (a compounded indicator based on my preferences) and the weight of practical training in the number of credits (the bigger the better for me). Finally, my least important criteria were the employment rate during the first six months after graduation and average income of graduates in the first five years. Two institutions stood out from the rest so I will apply to both. Wish me luck!"

Andreea, Future Student, 2025

Transparency means access to information

In 2025 the university system is transparent: each of us – student, employer, funding provider, researcher or anyone else for that matter – has rapid access to information and, even more, has within reach the tools and technology necessary to process that information. For more information does not necessarily mean improved transparency, but more useful and structured information – surely does.

Transparency means to browse easily the information gathered in complex databases,

where you can use dozens of different criteria to sort it. Everything is designed to help you find what you are looking for, to ask questions and to get answers, to contact other people or institutions easily. This is a virtual meeting place for interests and opportunities, teachers and students, employers and future graduates, ideas and their practical applications.





Transparency means much more than that....

Transparency means communication.

People and institutions that have common values and ideals are closer to finding each other. Students have an easier time finding the right faculties. Employers – their desired employees, and the latter can choose more suitable jobs. Those willing to invest in education do it knowing that their investment reaches the institutions that deserve it and the latter know who to ask for the resources they need. A transparent environment helps everybody come closer, 'see' each other better and collaborate based on trust.

Transparency makes institutions honest.

You learn about the others and you communicate yourself at the same time. Transparency also builds reputations. You cannot say untrue things about yourself – the truth will be immediately told by those who know it.

Transparency also came with responsibility.

It made institutions accountable by tying their promises to actual results. It made individuals accountable; they no longer make uninformed decisions because information is so much more available now.

> "The future belongs to those who believe in the beauty of their dreams."

> > Eleanor Roosvelt

Last but not least, transparency came with more time for ourselves (as an individual or institution). Time that we used to waste looking for the information we needed. These time savings ca now be used the way we see fit.

For the student, transparency is an imaginary trip to possible futures; for the employer – the relevance of the road chosen.

> "I started my career more than twenty years ago – I always treasured my relationship to the students. I teach both at home and in a few universities abroad, which helped me see and understand how complex cultural diversity is. I find it important to offer my students ample space to develop their thinking and models to follow. They should not cheat at exams, they should understand. They should not be strictly guided but inspired. If you understand their personal projects, you can offer them guidance, help them become part of epistemic networks – and you can do this both face to face or using network learning and tutorship systems available (it's so easy nowadays!). Basically you can be all the time with your students and even shape their future."

Daniel, Assistant Professor, 2025

The Seeds for the Future are the Daring of the Present

The future is open. It is a projection, a possibility or a million possibilities just the same. However, we need projections and a vision to be able to bridge what we are and what we wish to become. The future exists because we exist. The future turns into something different from the present because we dream and we dare to follow these dreams.

Do we dare change our future? Do we dare change ourselves? A better future means that we must be open towards it and towards change.

We should answer affirmatively because the responsibility for the future does not belong to those deciding then but to us, who decide and act now. The change must start now if we want to accomplish our vision.

There are many things to be done and this vision comes with proposals of actual steps to be taken over the years to come. In order to make it true, we need a sustained dialog between the stakeholders of future Romanian education and the champions of change.



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"The future is the sum of the steps you take, including small ones, the kind they ignore or ridicule."

Henry Coanda