A Regional Tech Hub For Emerging Technologies

An Interview with His Excellency Bogdan-Gruia Ivan, Minister of Research, Innovation and Digitalization, Romania

EDITORS' NOTE *Bogdan-Gruia Ivan is the Minister of Research, Innovation and Digitalization and the youngest minister in the Romanian Government. He was elected to the Romanian Chamber of Deputies in 2020, where he was Vice-President of the Committee for Information and Communications Technology. He was also a member of the parliamentary committees for Public Administration and for Automation and the Future of Work. He was a co-initiator of the laws that laid the foundation for Romania's digital transformation, the most important being the law on the interoperability of public sector databases.*

H.E. Bogdan-Gruia Ivan

What are the latest developments regarding the development of Romania's Governmental Cloud project?

Romania's Governmental Cloud project is the most important result of Component 7 – Digital Transformation from Romania's National Recovery and Resilience Plan. This investment, financed through European funding, is worth over €560 million and will be completed in 2026. However, we're working hard to ensure that all deadlines are met until then. I've recently managed to bring together all the institutional partners in this project and to clear up the necessary steps we need to take in order to effectively and swiftly implement this project.

In short, Romania's Governmental Cloud is an IT infrastructure that will bring the administration's databases to one place. This investment will shape the way the Romanian Government will function over generations to come. We will use state-of-the-art technology to make sure that citizens will be able to access and benefit from digital public services. Interacting with the administration has rarely been a pleasant motivation – that is why we want to make things easier for people.

The project's status is on schedule. Along with World Bank experts, we are working on the analysis and prioritization of the first batch of 30 administration IT systems in the central administration that will migrate to the Governmental Cloud. Furthermore, the Special Telecommunications Service (STS), which is one of the institutional partners in this project along with the Cyberint Center of the Romanian Intelligence Service (SRI), just launched a public tender for IT products and solutions for the four data centers that will effectively make up the cloud and ensure the hosting of the IT systems of the public authorities. The framework agreement tendered by STS has an estimated value of over €100 million.

We are working on the specific legislation governing this essential project and its placement in the central public administration ecosystem. The cloud is only part of what we are building now. We are working on the National Interoperability Platform which will connect the public institutions' databases at the local and central level, facilitating the automated exchange of information they now manage. This will vastly contribute to the unification and simplification of the way the Romanian administration works. But first and foremost, we're focused on the user experience: we want to bring the government's digital public services closer to all Romanians around the world. The Governmental Cloud and the Interoperability Platform will replace unnecessary trips to institutions as well as copied documents and heavy folders that Romanians needed to present when interacting with authorities.

Because we live in a world where asymmetric threats are more present than ever, what are the main government/ministerial initiatives related to cybersecurity, and how is Romania playing a role nationally and at the EU level in the cybersecurity area?

Our digital world is more interconnected than ever, but cyber threats are more sophisticated than ever. The global nature of cybercrime demands shared efforts. Cooperation is the foundation of any strong cybersecurity strategy. As we continue to navigate the complexities of our digital world, cooperation remains our most important tool in the battle against cyber threats.

Romania views cybersecurity as a shared responsibility, together with our partners and allies in NATO. North of our borders, the most technologically advanced war in human history is taking place. In this context, we are currently consolidating a cybersecurity culture at a national level. We have a national strategy on cyber. We have new scholar disciplines at universities with cybersecurity studies. We have strong institutions that protect our critical infrastructure. We have dedicated experts working around the clock to counter cyber threats. This is why Romania can become a promotor of regional security.

By becoming a regional hub for innovative technologies and cybersecurity, Romania can assist its neighbors in their cyber efforts.

The IT sector in Romania is about 7 percent of the GDP and this is mainly due to the quality of the young people working in this sector. What are the main initiatives at the level of your ministry to attract highly specialized human resources from abroad in activities such as research, development, and innovation?

We have amazing opportunities for our IT and R&I ecosystems. We now have the necessary funds, EU funds, for the Romanian digitalization, research, and innovation to make its mark at the European and global level.

We started consultations with the most important developers of advanced technologies from the private and academic environment for AI technologies, quantum and blockchain. My vision is to make Romania a regional hub for emerging technologies, and we are currently laying the groundwork for this objective to become a reality.

Romania is the third largest digital economy and the second largest e-commerce market in Central and Eastern Europe. The Romanian technology sector is developing tools and solutions that significantly enhance productivity in various industries. As Romania went through a process of accelerated digital transformation during the pandemic, businesses began to automate processes, streamline operations, and make data-driven decisions, leading to increased efficiency and reduced costs. As we all know, digital transformation is a process that, once started, can't be stopped. The Romanian Government is now part of this process, and things will evolve with greater speed in the years to come, leading to further GDP growth, new jobs, and a consolidated digital economy.

Romania has great results and a fantastic outlook:

• An increase of 2.5 times in IT exports of products and services in the last 5 years from €2.5 billion to €6 billion

• A 3-fold increase in exports of R&D (research and development) services from €200 million to €600 million

• Potential 4-fold growth for Romania's digital economy to €50 billion in 2030, thanks to investments in ICT sector, which also includes European funds for the digital transformation of the public administration

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By 2026, Romania's digital economy will grow through the implementation of the Governmental Cloud project that will facilitate Romania's transition to a reliable and dynamic data-based economy.

Romania is deeply involved in implementing the national resilience and recovery plan. What are the main investments related to the IT sector that your ministry is responsible for?

The main areas are public sector digital transformation, IT infrastructure, cybersecurity and increasing digital skills – both basic and advanced.

Aside from the Governmental Cloud, the projects we manage will generate tangible results for our citizens. As I mentioned earlier, digital transformation is a process that, once started, can never be stopped – and that's why we can't leave anyone behind. We are digitally transforming and modernizing over 1,000 rural libraries with €37 million from European funds for the benefit of hundreds of thousands of Romanians. We need to develop the digital skills of citizens, not only in the urban areas, but to bring the benefits of technology to the level of every village in Romania. The digital training communities we create through this project will bring technology closer to hundreds of thousands of Romanians in the years to come.

We also have €36 million that we invest in a project to develop advanced digital skills for the employees of over 2,000 SMEs. We need to finance high skilled work, so we allocated these funds for strategic digital areas, such as Internet of Things, cloud technologies, RPA, big data, machine learning, AI, blockchain and additive manufacturing.

Moreover, our innovation ecosystem now has unprecedented opportunities: we have over €250 million from European funds in Component 9 of the PNRR. Through these funds, Romanian research and innovation can make their mark at the European and global level.

Seven thousand five hundred companies that activate in R&D and innovation areas will be financed with over €600 million through the National Research, Development and Innovation Plan. Through effective research and innovation policies and through our partnership with the private and academic sector, we will transform Romania into a regional hub for innovative technologies.

Romania devised one of the most complex recovery and resilience mechanisms. We are grateful for the support we received from the European Union. We now have a mission to find the most effective public policies and projects to take Romania further and achieve great results. I think that this will be the most effective business card a country has in the digital age – working together to become stronger together.

Is there an inter-ministerial body/structure in charge of prioritizing and assessing the e-government projects and their impact on reducing bureaucracy?

Aside from the PNRR Task Force that operates within our ministry, Romania also has an inter-ministerial body, presided by the Prime Minister, that tackles bureaucracy. This committee – the Committee for E-government and Bureaucracy Reduction – is responsible for the public policies and the concrete projects that will bring public services closer to citizens and companies. In its most recent meeting, Prime Minister Marcel Ciolacu requested all ministries in the Romanian Government to submit projects and nominate public services that will be digitally transformed through the €524 million allocated in the European Multiannual Financial Framework for the digital public services.

How are EU funds supporting the Romanian public administration transformation and are there specific projects the funds are allocated to?

We have more than €6 billion in EU funds in the National Recovery and Resilience Plan for the digital transformation of the administration and the economy. These projects have a special Task Force in our ministry that oversees their implementation on a technical level. We also have over €524 million for the development of electronic public services for the benefit of citizens and companies in the European Multiannual Financial Framework. Once all these projects have been implemented, they will mark a paradigm shift in the way both the administration and the private sector work.

Despite the fact that Romania has one of the fastest Internet connections worldwide, there are still important areas where there is no Internet connection. What are the main initiatives in this area, considering the economic impact of the Internet on businesses?

High-speed Internet is a huge chance for a better future. Through a €94 million PNRR funding, we will connect 945 rural regions in "white areas" to high-speed Internet. "White areas" designate areas where there is no Internet or fixed networks are insufficiently developed. I want all children in rural schools to have Internet access as this is mandatory to ensure equal opportunities for all. The investment I mentioned does not only target schools, but also town halls and other public institutions that need this resource to carry out their activities.

Is your ministry working with private companies and international organizations in implementing this ambitious agenda?

We are working closely with the World Bank and the European Investment Bank. We consulted with key partners in the private sector because the administration can only be digitally transformed using the technologies that the private sector has developed.

Will you discuss Romania's efforts in the areas of AI and supercomputing?

AI is going to have huge implications for the economy and the society as a whole. Ensuring a trustworthy AI and using it to increase competitiveness are key objectives for Romania. We launched Romania's AI Strategy for public debate in September. By the end of the year, I'm confident we will have a final strategy that integrates both the European framework in the AI Act and Romania's custom approach to new technologies. We also started consultations with the most important developers of advanced technologies from the private and academic sectors for quantum technologies and blockchain.

What countries does Romania cooperate with to bring and develop new technologies and what role do you see for multinationals and for private capital in this area?

As I began my term in the Romanian Government, my focus was on the key projects that will take Romania to the next level. It is not enough to focus only on the present. Technology is continuously evolving. That is why we started consultations with the most important developers of advanced technologies from the private and academic environment for AI technologies, quantum, and blockchain. My vision is to make Romania a regional tech hub for emerging technologies. We are open to cooperating with all our Transatlantic and European partners. Furthermore, by working together with global players in the tech industry as well as SMEs and Romanian companies with great potential, we are currently laying the groundwork for Romania's establishment as a regional tech hub to become a reality. ●