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# “The future should be digital, democratic and zero emissions”

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**Inaugural lecture  
2021/2022**

**The UOC’s 26th  
academic year**

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“A digital green deal for Europe’s technological sovereignty”, lecture by **Francesca Bria**, expert and consultant on digitization policies and information technologies.

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**Thursday 28 October 2021,  
7 p.m. CEST**

[w.uoc.edu/inaugural21](https://w.uoc.edu/inaugural21)  
#inauguralUOC

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# Contents

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<b>U1</b>	<b>Inauguration of the academic year 2021/2022</b>	<b>03</b>
<b>U2</b>	<b>Introduction by the UOC's President, Josep A. Planell</b>	<b>04</b>
<b>U3</b>	<b>Speech by the President of the UOC Board of Trustees, Pere Vallès</b>	<b>11</b>
<b>U4</b>	<b>Summary: "The future must be digital, democratic and with zero emissions"</b>	<b>13</b>
<b>U5</b>	<b>Inaugural lesson: "A digital green deal for Europe's technological sovereignty", by Francesca Bria</b>	<b>18</b>
<b>U6</b>	<b>In short</b>	<b>34</b>
<b>U7</b>	<b>Questions from the UOC community</b>	<b>36</b>
	1. Ethical algorithms to combat misinformation	36
	2. Digital transformation, an issue beyond technology	39
	3. Feminism, a key pillar in the digital revolution	42
	4. E-learning in a constantly changing digital landscape	45
<b>U8</b>	<b>Closing speech by Gemma Geis, Government of Catalonia Minister for Research and Universities</b>	<b>47</b>
<b>U9</b>	<b>Biography of Francesca Bria</b>	<b>52</b>

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# Inauguration of UOC's 2021/2022 academic year



- Welcome given by the UOC President, Josep A. Planell.
- Speech by the President of the UOC Board of Trustees, Pere Vallès.
-  [Video report on the past academic year, 2020/2021.](#)
- Lecture by Francesca Bria “A digital green deal for Europe’s technological sovereignty”.
- Questions from the UOC community.
- Closing speech by Gemma Geis, Government of Catalonia Minister for Research and Universities.



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# Introduction by the UOC President, Josep A. Planell



*Welcome to the 2021/2022 inaugural lecture, which marks the official start of the new academic year.*

*We are particularly pleased to begin this year now, after months of restrictions, as we return to a new normal.*

*Today is a great day for me and for the University, a day that seems to point towards seeing you all in person more often, both for our upcoming graduation ceremonies, and for the activities we have planned to complete the celebrations for the UOC's 25th anniversary.*

*In 25 years, we have taken a project from Barcelona and used technology to make it global. Today, technology means we are able to employ this hybrid format to reach out to the UOC community that is spread across 142 countries worldwide.*

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*As the world's first online university, technology has been our ally for the last 25 years; an ally that will help us forge our path into the future; and, above all, an ally throughout the pandemic that allowed us to rise to the challenge of maintaining our teaching, research and administrative activities without sacrificing our levels of excellence.*

*However, despite all this good work and the current positive trends with COVID-19, we mustn't forget the personal and economic losses caused by the pandemic, and we should acknowledge the good conduct and sacrifices of the vast majority of people. I want to express my appreciation and gratitude to all of them.*

*Likewise, today's venue – the auditorium at Can Jaumandreu – shows us the central role for the UOC's future of the Poblenou campus, in such an iconic neighbourhood as Barcelona's 22@ district.*

*We've occupied Can Jaumandreu since 2005, thanks to a combination of our own economic and logistical efforts, and cooperation with the city council. This campus brings together all of the University's research and teaching. We'll be able to foster interdisciplinary work internally, and creativity, connectivity and communication beyond the scope of the UOC.*

*The strength of all this potential for the future is based on the experience we have gained over the years. That's why it's important we take stock of what we've done, before we look to new horizons.*

*The inaugural lecture is an academic ceremony, but it also sets out our programme. Through the person chosen*

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*to speak the University shows its ties to their career and shares in their genealogy and way of seeing the world.*

*Today we have the honour and privilege to hear the thoughts of Dr Francesca Bria, to gain insights from someone who, from leading positions in different institutions and countries, has defended digital policies that benefit citizens, and information technologies that are aligned with the common good and a European new humanism.*

*I can't think of a better way to launch off as we look to guide our actions as a university that wants to contribute to reflecting on digital change, and wants to play a role in making this change happen. So, before I hand over to our guest speaker, I would like to use three pairs of concepts to briefly outline the role the UOC – as a university with a public mandate – can and must play in this context of digital transformation.*

*The first pair is ignorance versus education. And my use of 'versus' is deliberate. Because, as Derek Bok, former president of Harvard University, said: "If you think education is expensive, try ignorance."*

*In other words, funding for education isn't an expense, it's an investment... one of the best investments we can make, especially if we understand that the amount and constancy are just as important as the scope and diversity of educational efforts. Because talent – our ultimate aim – is one of the riches that is most fairly distributed.*

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*Obviously, this is no guarantee of anything. As the historian Carlo Maria Cipolla (another famous Italian) once said, human stupidity is also a constant: a feature fairly distributed throughout all sectors and social groups.*

*But while stupidity doesn't require any effort, talent does need an environment where it can be spotted, encouraged and multiplied. And we cannot afford to waste it...*

*Thus, online learning can act as the perfect lever to mobilize talent wherever it is to be found.*

*Technology changes the paradigm, moving from distance education to education without distances.*

*At a time of intense debate about unequal resources in Spain – the so-called “España vacía o vaciada” –, the UOC brings high quality higher education within reach, adapting it to the needs of individual students and providing lifelong learning opportunities; we are bringing to life the European motto of: “leaving no one and no place behind”.*

*The digital transformation of the education system, in its entirety and in all respects, forms part of the response needed to ensure equal distribution of resources everywhere, now and in the future.*

*By reaching everywhere, we can incorporate all the talent present in rural areas or to be found away from the major economic centres; we can develop alliances to train and transform the people living there; we can*

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*support and respect the many different realities, and we can create and seize new opportunities to enrich the economy and culture in these places.*

*The second conceptual pair is voluntarism versus realism. Because, beyond the emotional and understandable response of “everything’ll be ok” and rainbows, we need to treat citizens as adults.*

*Without falling into a paralyzing fatalism, as women and men of science, we have a vital role to play when it comes to helping people understand the complexity of the world, fighting fake news, providing relevant contributions for future solutions, and bringing consistency and coherency to the actions we undertake as a society.*

*As science journalist Elizabeth Kolbert so strongly expressed recently, it’s just as suicidal to deny climate change as it is to close our eyes to the inevitability of some of its effects.*

*Reality is complex... But it is precisely in this complexity where universities – if they can free themselves from the abysses of fatalism and voluntarism – can be socially useful. So, we need to see information and communication technologies as useful channels for opening a dialogue with the society we form part of, as nodes to generate, share, disseminate and multiply knowledge... good knowledge.*

*And the third and last pair is: equality versus inequality. Digitalization can give us a false sense of equality; it can, in fact, create or worsen existing social, economic and technological divides.*



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*This is why it is so important to train citizens in digital skills, to incorporate this training as universal learning.*

*Only with the proper education will people be able to make the most of the opportunities arising from the digital transformation. They will be able to take part in the social, political and cultural life that surrounds them; and they will be able to gain the vital skills required to defend their rights and carry out their responsibilities. And again here, the education system in general – and a university like ours, in particular – has plenty to say and do.*

*We need to see the internet as a basic civil right, one that's as vital as having reliable and affordable access to the web, net neutrality and equal conditions for all.*

*The pandemic has highlighted the key role technology plays in our lives, to the point where nothing is beyond its reach... and wait and see what's to come.*

*Because digitalization doesn't mean just randomly adding the adjective 'smart', or doing what we used to do, but now 'streaming' it, or surrounding ourselves with gadgets... It means doing what we've never done before: new languages and new approaches, new processes and new creations, with unstoppable consequences both in terms of production and in our simplest day-to-day activities.*

*These three pairs we've just addressed – ignorance versus education; voluntarism versus realism, and equality versus inequality – show us possible ways to act. But, if they're not given the institutional support they need, their effectiveness will always be lessened and limited.*

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## Introduction by the UOC President, Josep A. Planell



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*As Dr Bria has said: we need to “re-politicize” technology, because “technology is not a process that develops in a straight line. That’s why it’s vital that it be shaped by society.”*

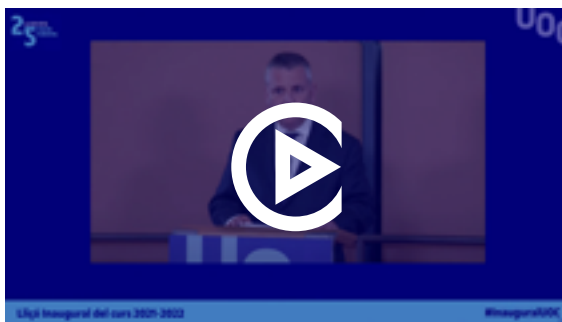
*Promoting talent, realism and equality, over ignorance, voluntarism and inequality, depends – greatly – on public policy. Policy that isn’t based on the political situation, but on consolidated strategy, and on national projects committed to dependable maps.*

*And to guide us with these maps of tomorrow, who better than Dr Francesca Bria?*

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**Josep A. Planell**  
Dean of UOC

# Speech by the President of the UOC Board of Trustees, Pere Vallès



*The challenges of tomorrow, whether institutional or collective, are starting to become clear in our day-to-day lives. That is why it is important to take stock of what we have done. It's not just our obligation as a university with a public mandate and a commitment to social responsibility, but also by doing so we can clearly set out where we're starting from, we can detect weaknesses and strengths and, in short, we can record what we've achieved.*

*It may be because we can see the Spanish navy's old Tiburón submarine by the UOC's Tibidabo building, or because Barcelona is home to two replicas of the Ictíneo submarine produced by the pioneering Narcís Monturiol, but when I try to define how the UOC works I'm reminded of the line made famous by Jules Verne and Captain Nemo of the Nautilus: "Mobilis in mobile".*

# Speech by the President of the UOC Board of Trustees, Pere Vallès



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*In other words: ‘moving in a moving thing’. This is, essentially, the red line that links the events shown in the video report.*

*Because... How else can we define the versatility of the research into the interaction between digital technologies and human activity carried out over twenty years at the IN3? How else can describe the adaptability of an institution that is able to move all its final tests online in just a few weeks? How else can we measure the ambitiousness of initiatives such as the Barcelona Art, Science and Technolohiggy Hub, where citizens, research and creativity come together? How else can we rate the quality that sees nine out of every ten UOC graduates being in highly qualified jobs? And I could go on...*

*“Mobilis in mobile”.  
‘Moving in a moving thing’.  
Or in terms of the UOC: learning and transforming.*

*Thank you very much.*

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**Pere Vallès**

President of the UOC Board of Trustees

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# Summary: “The future should be digital, democratic and zero emissions”

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Francesca Bria, an expert and advisor in innovation and digital policy, led the ceremony to open the UOC's academic year 2021/22 with an inaugural lecture titled “A digital green deal for Europe's technological sovereignty”. Held at the 22@ campus's Can Jaumandreu auditorium and live-streamed to an audience online, the event was chaired by Josep A. Planell, the UOC President, and speeches were given by Pere Vallès, President of the FUOC Board of Trustees, and Gemma Geis, the Catalan Government's Minister for Research and Universities.

Bria based her presentation on the opportunities arising following the pandemic to rethink digital technology and innovation, and to steer towards a more democratic and sustainable future. Her proposal for this is a new model of digital sovereignty, a “digital green new deal”.

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## Summary: “The future should be digital, democratic and zero emissions”

04

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She explained that, considering the excessive levels of government surveillance – denounced by figures from across society and academia – and the uses and abuses of technological breakthroughs, the kind of power that platforms exercise “is not well understood yet by our system. We don’t have the right tools to curb this power, to regulate it and to put technology at the service of people and human development.”

### **A European green new deal**

How is Europe responding to this situation? For Europe today, “to be the regulatory superpower is no longer enough”, because despite it being very important to address the need for regulations, “the EU also needs to remain relevant as a global economic power through its scientific and technological innovation, grounded in democratic values”. Bria also stressed that “digital regulation should come from the sovereign people, from accountable government, and cannot be done by a digital oligarchy”.

The ambitious green new deal for Europe project is based on a growth strategy that seeks to decarbonize our economy and achieve climate neutrality by 2050. Bria explained how one of the transitions that is happening relates to digitalization, how in Europe “we see, at the regulatory level, very important aims [...] I think Europe is probably the only continent that is putting forward a new constitution for the digital times.” She underlined how important it is that the new European regulations aim to put “an emphasis on citizen welfare, and not only consumer welfare”.

In this context of European efforts to launch a more competitive regulatory framework for the digital

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## Summary: “The future should be digital, democratic and zero emissions”

04

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economy, Bria talked about the [Gaia-X](#) project, the goal of which is to build a European cloud system and establish a grade A standard for data security, data sovereignty and interoperability. She said that “with Gaia X [...], we can get to a model of a European data trust that represents a fair and more equal data economy for all of us so that we can increase access to data while keeping trust to citizens and keeping privacy and security ethics and preserving the fundamental rights of citizens.”

### The future of digital

Before her current roles as chair of the Italian National Innovation Fund and advisor to the New European Bauhaus, Bria was Barcelona’s Chief Digital Technology and Innovation Officer from 2016 to 2019. She mentioned two successful projects from that time, projects that are now providing models for data sovereignty in the European context.

One was the [Decidim Barcelona](#) participative platform, conceptualized by the Internet Interdisciplinary Institute (IN3). Developed locally, this tool has now become a leading example of how to use data for purposes that benefit society, improving cities and making them greener, fighting climate change, and moving towards sustainable mobility, affordable housing and better democracies. The other was the [Decode platform](#), which helps individuals control their personal data, with options to keep it private or share it for publicly beneficial uses.

Bria concluded her presentation by highlighting Europe’s opportunity to plot a path based on “big

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## Summary: “The future should be digital, democratic and zero emissions”

04

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democracy”, with neither big tech nor big state having full control over our data. Europe “can show how this European digital humanism, with a unique European touch to innovation can work”, she said; “We do need a new social contract. [...] In this context, digital sovereignty means that as a society we should be able to set the direction of technological progress and put technology and data at the service of people, society and the ecological transition,” and making this a reality requires a political programme and a wide range of alliances.

### **The UOC, learning and transforming**

The venue chosen for the inaugural lecture was the Can Jaumandreu auditorium at the 22@ campus, where the UOC is now concentrating all of its research and teaching activities, thus enhancing interdisciplinarity, creativity, connectivity and dissemination. The UOC president, Josep A. Planell, used his speech to call attention to the role the University can and must play in the current context of digital transformation, reiterating that the UOC “brings high quality higher education within reach, adapting it to the needs of individual students and providing lifelong learning opportunities; we are bringing to life the European motto of: ‘leaving no one and no place behind’”

The President of the FUOC Board of Trustees also made a speech, in which he cited a famous line from Jules Verne, “mobilis in mobili – moving in a moving thing, or in terms of the UOC, learning and transforming.” He eulogized the versatility of the research into interactions between digital technologies and human activity, the institution’s adaptability in the face of major challenges,



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## Summary: “The future should be digital, democratic and zero emissions”

04

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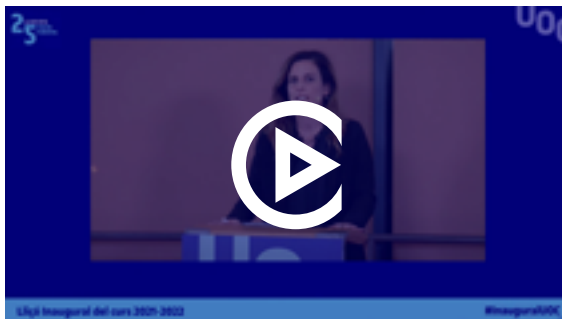
the ambitiousness of initiatives such as the [Hac Te](#) Barcelona Art, Science and Technology Hub, and the quality that sees nine out of every ten UOC graduates being in highly qualified jobs.

The final speech was given by the Minister for Research and Universities, Gemma Geis, who talked about the importance of the Government of Catalonia having reinstated this ministry. “But more than the office”, she said, the emphasis must be on “our duty as a country to put knowledge and learning at the centre of our policies for economic and social recovery.” To make this a reality she promised increased funding for research, an area she described as fundamental to societies’ progress and development.

The ceremony was also used to present a video report of the academic year 2020/2021, covering highlights from the past year. These included the celebrations of the UOC’s 25th anniversary, contributions to the digital transformation of education, and efforts invested in promoting R&I.

# “A digital green deal for Europe’s technological sovereignty”

05



*Barcelona is for me a bit of my second home, besides Italy and Rome. So, I'm very, very happy to be here and very happy to be here physically present.*

*Because as we are saying that digitization, if it's democratic and sustainable, can help us to plan and co-design our future. Obviously, to be together in physical spaces and make sure that education also is physical in places like this is very important. I need to have this one.*

*OK, so I think, in this pandemic phase, it is very important that we need a new thinking on digital technology and innovation to give a direction for the future and to the future. And in this pandemic, we are experiencing the first economic crisis of the Anthropocene. And we are dealing at least with three serious emergencies: a health crisis, which is caused by the pandemic, and that is turning into an economic*

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*crisis whose consequences on financial stability are very strong and dramatic, and still not entirely clear, and against all the backdrop of a climate crisis.*

*So, we cannot solve things, leaving things the way they are. Crises being worse or pandemic can sometimes feed social imagination. And I believe today we have an historic opportunity to redesign better societies and economies, and to lay the foundation for a renewal of our societies, promoting solidarity and sustainability.*

*But also, we need forward-looking ideas that project us into a future that can really transform our society. A future that should be digital, democratic and zero-emission.*

*The technological trends that we're seeing today, digitization, the robotization of production, the advent of 5G, the Internet of Things, and mass computation, artificial intelligence, are changing the industry, the economy and society.*

*But accelerating digitization is not enough. We must also give it a direction. And today this means, above all, facing the double challenges of environmental protection and sustainable digitization. From my point of view, we should use this post-pandemic phase to push forward a new model for digital sovereignty, which we should call a Digital Green New Deal because it is about using digital technologies to achieve both social and environmental sustainability.*

*When we think about what digital is today, we are also facing a new question about power. Who holds it, what legitimacy and for what purposes has acquired*

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*an additional level of meaning in the digital age. This is because of the excessive government and business surveillance denounced by personalities like Snowden or Assange, but also by academics like Shoshana Zuboff. The potential uses and abuses of artificial intelligence and automated decision systems, or even the new possibilities of biotech and genetic manipulation, and other transhumanist initiatives pursued today by the likes of Elon Musk or Jeff Bezos. Underlying this transformation, this transhumanist ideology, is another ideology which has been named 'technological solutionism', analysed by critics and historians like Evgeny Morozov. He defines technological solutionism as a post-ideological doctrine of Silicon Valley, which believes that any complex social situation can be solved by an app or by the right algorithm.*

*I believe it is important to abandon technological solutionism and to open up different futures, to see numerous possibilities, and therefore challenging technological solutionism to develop alternative paths. So, when they tell us that we can solve poverty or we can solve inequality with technology or with an app, this is of course not true because we need to couple technology with the right social, economic and political framework.*

*Today, we are seeing very big trends happening in the digital economy, and the biggest trend is the platform power. So, we are shifting towards a platform economy where we are facing new algorithmic institutions, which are platforms. They are new intermediaries that are defining our political landscape, Our economy. Changing media, changing education, changing governments, changing cities and changing businesses. The kind of*

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*power they exercise is not well understood yet by our system. We don't have the right tools to curb this power, to regulate it, and to put technology at the service of people and human development. And we saw with the pandemic an increased use of digitization in health care, in education, in our society. The use of digital technology has become part of our daily life, and today we must understand this power in order to tackle our basic social and environmental challenges. If we look at the economic power, we're seeing an increasing corporate monopoly power, and an industrial concentration that we haven't seen before. The Platform Economy is increasingly based on intangible assets, and for the Big Tech, unlike the rest of the economy, the pandemic was a shock, but it was a positive shock. Major digital players, the GAFAM companies – Google, Amazon, Facebook, Apple and Microsoft – and the Chinese equivalent – Baidu, Alibaba and Tencent – have achieved today a market value of over 8 to 9 trillion US dollars. And today, the US technology shares are worth more than the entire European stock market for the first time in history. So, the Big Tech are not just driving the market, they are the market. And if five companies own the digital economy, can it really work for all of us? The Platform Economy is increasingly based, as I said, on intangible assets, mainly data and intellectual property rather than physical infrastructures. And by taking advantage of a distributed supply and value chains, platforms are able to move from one sector to the other. For instance, Google is able to move from search engine optimization to robotics to autonomous cars, and Amazon can move from e-commerce to cloud computing to health care.*

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*It is clear that wealth in this changed economic landscape will need to be captured and shared in new ways. There are very relevant trends as well, such as digital money, and we are going to see soon also – probably also in Europe – Digital Europe becoming part of our economy. The payment sector is populated by new players and the FinTech world is booming with new solutions, from Google Wallet to Ali Baba with Alipay, to Apple Pay, Facebook Libra, cryptocurrency and so on. Recently, Bitcoin rose more than 75% in 2021. And cryptocurrencies and digital payment systems have strategic value because they're entering in people's everyday life by building a link between people's digital identity, their personal data and the payment system.*

*This means that, also, if we look at the fights that we are having between Ant Group and the Chinese government which blocked their IPO, we can see how strategic these digital payment. and digital mining sectors will be in the future. And also, central banks are now starting to develop their digital currencies and have started to strongly regulate this sector.*

*We also look at the transformation of work as a clear example of the change that platform-driven digitization is bringing to all of us. Today, there are two big debates about the future of work. Some economists say that this is the first industrial revolution that will destroy more jobs than it will create. And some speak of about 100 million workers in the world that will be replaced by machines in critical sectors of the economy: logistics, manufacturing and transports. Clearly, this will also create new professions and new managerial models.*

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*But as David Graeber wrote in his book about the gig economy, are we facing also bullshit jobs? What is the quality of the jobs that the digital economy is creating? Is the digital economy going in parallel with the creation of new safety nets? And new rights for workers? This is a very important challenge.*

*We must be bold to anticipate the profound change in the labour market and make clear and strong enforcement of labour laws in the gig economy to stop growing insecurity and precarization and the displacement of high-paying jobs due to industrial automation and artificial intelligence that will bring greater efficiency and higher returns. So, what is the business model of digital platforms? What the tech companies are extracting and monetizing is our data, the data we produce every day. And Tim Cook, the Apple CEO, defines this economy as a data industrial complex. Data has become the most precious commodity in the world. It is the raw material of the digital economy, and it feeds artificial intelligence systems. So, every company is counting on data and DAI to drive growth in the coming years. Machine learning will increase return on investment by 10% to 30%. Many economists talk about data extractivism. And the parallel, of course, is with oil: a few companies able to extract data, use artificial intelligence, monetize and manipulate our personal data. Shoshana Zuboff, the Harvard Business School professor, calls it 'surveillance capitalism', in which she sees the manipulation and monetization of data, the profiling of social behaviours enhanced through advertising, at the heart of the economic model of digital platforms.*

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*So, are we living in a black box society? Or do we need more rules for digital platforms? I think on this topic, Europe is very clear today. Digital regulation should come from the sovereign people, from accountable governments, and cannot be done by a digital oligarchy. It is a matter of sovereignty for us and for Europe. There are profound implications on how citizens relate to each other and to the State, and including the existential fear of manipulation, information overload, fake news, conspiracy theory, inauthenticity, created by the externalities of digital giants. Clearly, we see that we need a new regulation in this space, and the EU is now putting forward a new framework to regulate the digital economy: the Digital Service Act and the Digital Market Act.*

*We also see it is very important to have access to the data and the metadata, to have accountability and transparency in the algorithm, for instance, to regulate the sharing economy. Today, the algorithm is your boss. If you work for a platform and you cannot control how the algorithm and information work, you also have no access to the information that regulates your labour standards and collective bargaining. So, it is a very important issue. And it is important for cities, for example, facing big digital platforms such as Uber or Airbnb.*

*What is the European response to this situation? I think it's very clear today that for Europe to be seen only as a regulatory superpower is no longer enough. Although it is very important to put forward bold regulation, the EU needs also to remain relevant as a global economic power through its scientific and technological*



## “A digital green deal for Europe’s technological sovereignty”

05

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*innovation, grounded in democratic values. I think we have a historic opportunity today.*

*In the post-pandemic phase, the EU is putting forward a new growth strategy, the Green Deal, which aims to decarbonize our economy and become climate neutral by 2050, with an investment plan of over 3 trillion euros. And we have two main transitions that are happening at the same time. 40% of the recovery and resilient facilities that member states are spending in the next years will go to the green transition and 20% in digital. Europe is going to spend around 400 billion in investments in digitization in the next years. Here we see at the regulatory level, very important political aims that Europe is having. I think Europe is probably the only continent that is putting forward a new constitution for the digital times. A new comprehensive regulatory framework.*

*Let’s look at antitrust. Today, we are seeing really a big turn in antitrust. We have debates first that are happening about break-ups, or mergers and acquisitions that are happening on digital platforms that are anti-competitive, new regulation and emphasis on citizen welfare, and not only consumer welfare. For example, we start linking ownership and access to data with privacy and competition policy. This is very important. We start bringing ethics, privacy and security experts together with competition lawyers in antitrust cases. And the Digital Service Act that the European Union is proposing will require companies to share data with rivals and to share data that are in the public interest. So, I think we are moving forward to have a much more competitive framework for the digital economy. Another*

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## “A digital green deal for Europe’s technological sovereignty”

05

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*very important part is, of course, digital taxation. These companies that you saw before, 9 trillion US dollar market capitalization, they have to be able to pay taxes where they have the users and where they create value, for example, here in Europe, so that we can reinvest that money in green infrastructure, in schools, in education and in our local economy. And now the G7, and the G20 that is meeting now, has managed to have a deal on digital taxation and on a corporate minimum tax, about 15%, that will enable us to have at OECD level, a much more comprehensive and fair deal to avoid that the profit of Big Tech companies is going to tax havens only.*

*We are facing also a new geopolitical dimension where we see that 5G semiconductors, quantum computing and artificial intelligence, but also biotech, as a kind of strategic technologies, are at the core of a new struggle, or a new Cold War, which also has been defined on technological supremacy between the US on one side and China on the other side. This risks creating a fragmentation in the supply chain and in the value chain. We are seeing now the shortages, for example, in the supply chain of microchips that is affecting the car industry, logistics, manufacturing also, and many other companies also here in Europe. And this fragmentation of the global value chain will extend to a wider range of economic activities more and more. So, it’s not only a question of technology, but it will affect all sectors. So, it is important also to have global regulation when it comes to who is controlling 5G and artificial intelligence and chips.*

*And this is also a reason why the European Commission has put forward now the EU Chip Acts, with the idea and with the aim of producing, designing and*

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## “A digital green deal for Europe’s technological sovereignty”

05

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*manufacturing 20% of the chips we need here in Europe. So, this situation shows us that we need a new industrial digital policy. And at the core of this new industrial digital policy, we need the purpose of reclaiming data sovereignty for Europe and data sovereignty for the citizens. You probably know that at the moment, Europe is not controlling the cloud infrastructure and cloud computing. We’re not controlling the hardware and the microchips. We’re also not controlling artificial intelligence and data. So, we’re losing control over the critical infrastructures of the present and of the future. There is one project that I think is very important, and we should monitor and make sure it can actually succeed, which is Gaia X.*

*And Gaia X has the objective, as Europe, to build a European cloud system and set the gold standard for data security, data sovereignty and interoperability. And this can become a standard that can apply to all Europe. With Gaia X and with reclaiming also sovereignty over the cloud infrastructure, we can get to a model of a European data trust. A European data trust can represent a fair and a more equal data economy for all of us so that we can increase access to data, while keeping trust to citizens and while keeping privacy, security, ethics, and preserving the fundamental rights of citizens. So, the data trust will be experimented now in Europe, in European data spaces, in sectors like health care, manufacturing and mobility. And if people have more transparency and protection of their data, they can share more data. And this data can be unleashed to create public value. So, the European Data Act that will be enforced in 2021 and then will become operational*

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## “A digital green deal for Europe’s technological sovereignty”

05

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*next year, can foster new models for data sharing and data in the public interest.*

*As I said before, data is the raw material of the digital economy. And the question is, will data in the future be controlled by platforms and by the Big Tech? Will it be controlled by the state? Or can it be controlled by society at large, by citizens themselves? When I was the CTO of Barcelona, I bet on a model that put people first and that democratizes access and sharing of data. This model starts from collective intelligence for democracy. It starts with people’s participation, with citizens’ participation, because if people don’t understand what is the value of data, what is the value of data to improve our city, to make it greener, to fight climate change, to move towards a more sustainable mobility for affordable housing, for a better democracy, if we do not put technology and data at the service of people and involve them in decision making, we are never going to get there to accomplish our objectives.*

*And I want to say that the platform that we created here in Barcelona some time ago when I was the CTO, that is called D-Cent Barcelona, it is now a global platform made in Barcelona with privacy, security and ethics by design in mind. And it is now used by 80 cities, by 20 countries around the world. And it is the de-facto platform for digital economy, for digital participation, that the European Commission, the European Council and the European Parliament are using for the Conference on the Future of Europe at the moment, translated in all languages of the European Union and engaging thousands and thousands of citizens across Europe to*

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## “A digital green deal for Europe’s technological sovereignty”

05

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*decide the future of our continent. I think this is a really good success case, how you can scale civil technologies based on a city at a European and global level.*

*We also know during the pandemic that we need to use data for good. We need to use big data and artificial intelligence, for instance, to track the virus and to block the virus from spreading. And we have been using and we are using today a contact tracing application with some protocols that preserve our rights and our privacy. So, this can be done. We can combine, for instance, public health care imperatives with the protection of privacy, with the protection of ethics and citizens’ rights. So, when they say that there is a contradiction between public health care and privacy, we should not believe it.*

*It is possible to use those kinds of technologies in public health care to make us more healthy, to block the pandemic, but preserving our rights. We also more and more experimented with decentralized data infrastructures. And when I was again here in Barcelona, we created DECODE. DECODE is a privacy-enhancing data infrastructure based on blockchain, on distributed ledger technology, with advanced cryptography, which wants to give back the control of data to citizens so citizens can decide what data they want to keep private, what data they want to share, with whom and on what terms. We called it a new social pact on data because it is more democratic. It is less opaque. It’s more transparent, and we can share data to come to a model like this.*

*A new social pact on data sees data as a public infrastructure, as a city data commons. With data, we*

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## “A digital green deal for Europe’s technological sovereignty”

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*must be able to create public value and we must be able to leverage data and the talent of people in order to address and solve the main social and environmental issues of the future.*

*And as you probably know, and as you probably understood by now, I’m a big fan of cities that are coming together in coalition and in network. I think cities will be absolutely critical to achieve both the digital transition and the ecological transition in the future because they are closer to communities and closer to citizens. And when they come together, they can shape projects like this, a Cities Alliance on Digital Rights, which is becoming a model. And I have been working for the United Nations, UN-Habitat, to spread this model around the world, to put people first and their digital rights, and then put forward an agenda that looks at net-zero data and democracy. So, we can achieve net-zero policy, which means decarbonize our economy, go to carbon neutrality as soon as possible, because this is the main imperative for our world and our society.*

*And we can leverage the power of data, collective intelligence and connectivity in a democratic way, with democracy, with people first. And more and more cities are coming together, following this kind of model. And I think bottom-up, we can also reach a kind of government level and the European level in order to bring forward, to put forward the right experiments and policies to achieve the Green Deal.*

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*I have now the pleasure to be one of the advisers to the President of the European Commission, Ursula von der Leyen, for the new European Bauhaus project. And I think this is, for me, one of the most inspiring European projects that is happening at the moment. Why? Because the president has understood that we need to couple the Green Deal with a cultural movement, with a cultural revolution. We have to merge science, technology and the arts for the Green Deal,*

*This is what the Bauhaus has done in the 1930s, laying the foundation, bringing together design with sustainability, with the same concept of sustainability, and laying the foundation of modernist architecture, bringing together writers, architects, designers, artists, scientists and technologies to formulate the new projects of the future. We need a new Bauhaus that is targeted to the Green Deal and to achieve the Green Deal objectives and to make the Green Deal concrete. The Green Deal is not only a series of policies. It is not only financial regulation. It is not only law, legislation and standards. It is about changing the way we live, changing people's behaviour together with people, and make this Green Deal concrete and real. And I think we can do it through projects like the new European Bauhaus.*

*I'm almost at the end of my presentation, and I want to emphasize the need, of course, of transforming education. We cannot get to this transition, to changing our economies and society for the better if we do not invest in changing the educational model, creating digital skills, and doing that, empowering women in STEM, empowering women in technology, empowering women in general. And really, we have to bridge the gender pay gap. We have to bridge the gender divide.*

*It is below 20%, the participation of women in STEM, and this is, really, we have to stop it. And we have to stop it starting from education. Education with kids in primary school, our universities and research centres, our companies, our industries. Making it mandatory, for example, to have women in boards and in direction roles, but also more in general to have a gender perspective in the development of our future technological world. And this is absolutely central and critical. So, what is the future of our digital world? Are we living only with a binary choice? Are we facing only the possibility of following the Big Tech Silicon Valley model? Where we're going to have, you know, it can seem convenient today. We can use a lot of applications, a lot of services, but in the long run, we risk being dominated by an oligopoly, by a data oligopoly of a few companies controlling critical infrastructures. Or are we moving to the other model, the Big State, which looks like digital authoritarianism from China? Where the State will control more and more our society and our data, and will make decisions that are effective, but on the long term, they risk really hurting our civil liberties and our fundamental rights. I think that this binary choice, it's not the only option. We don't only have the Big Tech versus the Big State. We also have a third way, which is Big Democracy. And I think that we must give central importance to issues like civil liberty, individual privacy, really at the centre of the functioning of our democracy. So, Europe can take this third path and can show how this European digital humanism, with the unique European touch to innovation, can work. It will be about democracy, putting people first, guaranteeing strategic autonomy, guaranteeing our competitiveness, but also*



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*putting at the core, at the centre of it, a democratic participation of citizens, preserving fundamental rights of workers and protecting the environment and data. And I think this can be the European way towards digital sovereignty and the European digital humanism that can make us think that, yes, technology can be a positive and a progressive force to shape our society and our future.*

*So finally, just to conclude my lecture, we do need a new social contract in the digital society that is about shaping a digital Green New Deal. In this context, digital sovereignty means that as a society, we should be able to set the direction of technological progress, and put technology and data at the service of people, society and the ecological transition. And in order to get there, because this is not just wishful thinking, this is a practical option and it requires a political programme. It requires alliances with unions, with political parties, with citizens, with universities, with society at large, in order to join forces and make this digital democratic future a reality.*

*Thank you.*

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**Francesca Bria**  
Expert and advisor in innovation  
and digital policy



*“Accelerating digitization is not enough. We must also give it a direction. And today this means, above all, facing the double challenges of environmental protection and sustainable digitization. From my point of view, we should use this post-pandemic phase to push forward a new model for digital sovereignty, which we should call a Digital Green New Deal because it is about using digital technologies to achieve both social and environmental sustainability.”*

*“Platforms are new intermediaries that are defining our political landscape, Our economy. Changing media, changing education, changing governments, changing cities and changing businesses. The kind of power they exercise is not well understood yet by our system. We don’t have the right tools to curb this power, to regulate it, and to put technology at the service of people and human development.”*

*“The Big Tech are not just driving the market, they are the market. And if five companies own the digital economy, can it really work for all of us?”*

*“Digital regulation should come from the sovereign people, from accountable governments, and cannot be done by a digital oligarchy. It is a matter of sovereignty*



*for us and for Europe. There are profound implications on how citizens relate to each other and to the State.”*

*“For Europe to be seen only as a regulatory superpower is no longer enough. Although it is very important to put forward bold regulation, the EU needs also to remain relevant as a global economic power through its scientific and technological innovation, grounded in democratic values.”*

*“We also know during the pandemic that we need to use data for good. We need to use big data and artificial intelligence, for instance, to track the virus and to block the virus from spreading. This can be done. We can combine, for instance, public health care imperatives with the protection of privacy, with the protection of ethics and citizens’ rights.”*

*“We cannot get to this transition, to changing our economies and society for the better if we do not invest in changing the educational model, creating digital skills, and doing that, empowering women in STEM, empowering women in technology, empowering women in general.”*

*“The European way towards digital sovereignty and the European digital humanism that can make us think that, yes, technology can be a positive and a progressive force to shape our society and our future”.*

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# Questions from the UOC community

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## 1. Ethical algorithms to combat misinformation

Salvador Macip, researcher and member of the Faculty of Health Sciences.

In a way, the pandemic has redefined the digital world's role in communication. It has greatly enabled the spread of information, but also the spread of disinformation. Is there any way to keep this in check? Can or should the digital world be managed so that it works in favour of information and against disinformation?

*Francesca Bria: This is another very important question. As I said during my lecture, I think that fake news, disinformation, conspiracy theories, the polarization of public opinion, and algorithms that polarize even more public opinion and create more disinformation are due to the fact that at the core of the business model of platforms there are algorithms that maximize one main thing (because they're commercial platforms) which is profit. So, if you have more polarization, if you have fake news and you click more, these companies are gaining more advertising market.*

*Now, we need ethical algorithms for the public interest and we need to reclaim back an electronic public sphere where we can communicate, we can decide, we can have our democracy, our full democracy in place... Now, as one of my jobs, I sit on the board of RAI, which is the Italian*

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*public TV. And public TVs are facing a very big transition into the digital era and we should be able to create a European alliance of public broadcasters and public media to basically do what you just said: to maximize information and to make it accessible, to make sure that people can monitor the way that information is spread and we can monitor this information and find this information, but that we have algorithms that maximize information and not disinformation and profit. So, we need to basically change that and reclaim the public sphere in the electronic time.*

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## Video



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## Key ideas

*“At the core of the business model of platforms there are algorithms that maximize one main thing (because they’re commercial platforms) which is profit”*

*“We need ethical algorithms for the public interest and we need to reclaim back an electronic public sphere where we can communicate, we can decide, we can have our full democracy in place”*

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## 2. Digital transformation, an issue beyond technology

Efraín Foglia, researcher and member of the Faculty of Information and Communication Sciences.

**My question is:** You have something that is very valuable for the city of Barcelona, which is your experience working here for a number of years, leading policies to bring democratic innovation to the city, innovation linked to the digital economy, to the macroeconomics of data. You've got a lot of experience in this area and you know what's possible and what isn't. What might be simply an illusion and what could be fact, what we could make materialize.

**So, my question is related to this.** If we gave you a magic wand to go back in time, but with the same experience you have now: What policy would you introduce in the city regarding digital social innovation for the common good? What would you propose that would be feasible, rather than just wishful thinking?

**Francesca Bria:** *I want to say first one thing that for me is very important. So, the technological transformation or the digital transformation is not about technology, it is about an organizational change, a cultural change; it is about a change in mindset and it is about transforming institutions. So, when I was here doing my job, I understood that I had to start by empowering the public officials in the city, by empowering the workers, by creating new skills, by empowering them to be part of the transformation because otherwise we would have no change. We could not do any of the things I wanted to put forward.*

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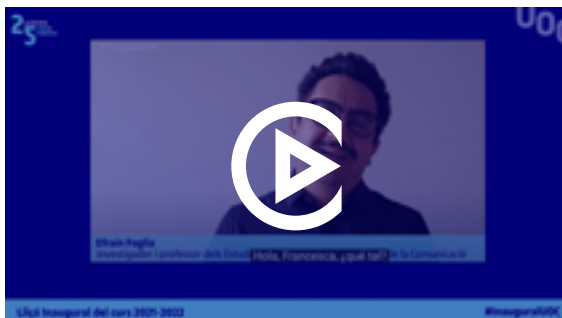
*So, I think focusing on education's new skills, giving power to the employees, to the workers, to the people working in an institution is the first thing we should do – and understand that it is not about technology, it is about everything else that will change when we introduce new kinds of tools, methods, new ways of decision-making and new technologies. If I could choose one thing that I would like to see happening in the future and that is based on the work I've done here, and I think it can be real, it can happen, is as you know we were developing on one side the Decidim Barcelona platform integrated with DECODE, which is this cryptographic protocol that enables people to control the data. We've just done experiments and the experiments worked well, but I would like this technology integrated with the democratic participation platform to be used everywhere, to become the way that citizens interact with the city council, with public institutions. So, today when you interact with digital services, you are using digital identities which are provided by companies and you don't control your data anymore. Through an application like DECODE, you control your digital identity, which has become a public identity, and you control your data and you can decide who can access the data, how to share it, your mobility data, the climate data, your personal data. And then you allow other institutions, startups, other companies to access this data if you want to share it.*

*So, I think this democratic control over data, yes, this is what I would like to see happening and scale. So that in our phones, it's not going to be Apple or Google who decides how we're going to implement these applications and protocols, but it's going to be democratic, decided by citizens themselves.*



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## Video



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## Key ideas

*“Technological transformation or the digital transformation is not about technology, it is about an organizational change, a cultural change”*

*“I would like to see democratic control over the data”*

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### 3. Feminism, a key pillar in the digital revolution

Mayo Fuster, researcher in the DIMMONS group.

My question today to Francesca is: why a green deal, and not a purple new deal? Or why not a green and purple new deal?

I know you, Francesca, for 25 years already, I can tell that you have a long and impressive trajectory of democratic commitment, but why is now not a moment to put feminists in the front line? Or I could put the question in other terms: Technological sovereignty for whom? The existing evidence suggests that democratization is reinforcing gender inequalities. Not only in the capitalist models, but also in the pro-commons alternative ones.

I would ask you, what would you suggest to make sure that the digital revolution does not reinforce gender inequality, and from the intersectional perspective, that it does not reinforce the collective that traditionally has been excluded or marginalized from a racist, sexual orientation, origin or class perspective.

*Francesca Bria: Thank you so much for this question, Mayo, and I think, well, who better than you can actually help us to put this purple-green deal together? I mean there is absolutely, as you said, no digital revolution without a feminist revolution and I'm absolutely convinced that this is the case. And I also know that even during the pandemic, and in this time, women are*

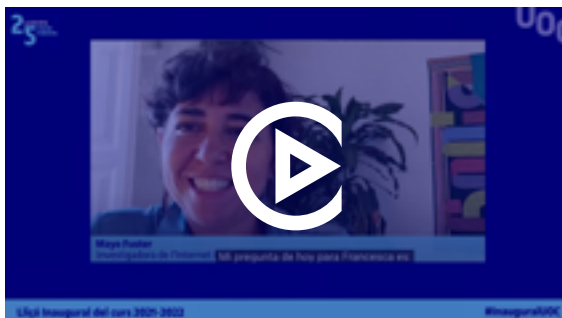
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*amongst the people and the communities that suffer the most from the pandemic and that digitization can bring many kinds of exclusion, which is exactly about race and social economic backgrounds, gender and many different kinds of discrimination.*

*So, I think it's about fighting that, but I think it's also about putting this as the main priority for our going forward. And I think, as I said in my speech, we should do it in the primary schools, we should do it in the universities, we should do it in industry, we should do it in the way we formulate policies and we create better jobs for women, we fight the gender pay gap and we also, you know, find a way to fight precarization of women in the labour market and then, yes, just make visible the talent of women in tech and make sure that this conversation happens. And I think you are some of the best groups here at UOC, with your work that is doing that. So, you probably have a better answer to this question than myself, but I'm absolutely convinced that this is our priority and this is, of course, my priority as well.*

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**Video**



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**Key ideas**

*“There is no digital revolution without a feminist revolution”*

*“Digitization can bring many kinds of exclusion, which is exactly about race and social economic backgrounds, gender and many different kinds of discrimination”*

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#### 4. E-learning in a constantly changing digital landscape

**Victòria Olaria Escuin, student on the Bachelor's Degree in Digital Design and Creation.**

**I wanted to ask you to what degree you think that studying online helps us face up to the constant change we experience in the digital world?**

**Francesca Bria:** *I think that you do it very well here at UOC, so I'm here to learn. I think it's never only digital, it's never only physical, it is a hybrid and it is about changing the educational model. It is about empowering the teachers, empowering the students. This is not about Zoom. This is not about yet another software, yet another program. This is not about being online all day. This is about learning how to exchange education and information in a different way and how we can basically make the most of this hybrid model of online and offline education, and how we make sure that we exploit both the use of digital tools and we do it in a way that preserves privacy, ethics, security – using open-source software, open-source technology to help us. It helps us to have access to science and technology. So, for us, the digital should be a way to increase the access to science and to technology, doing it through open science and open education and that's, I think, what we should strive for.*



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# Closing speech by Gemma Geis, Government of Catalonia Minister for Research and Universities

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*I am honoured to be also opening the 2021/2022 academic year here at the Universitat Oberta de Catalunya. Here, today I am concluding a series of events opening the academic years of all the public and private universities in Catalonia.*

*And for me it's a privilege to have left for last what is not just Catalonia's only fully online university but also, as we can see, an ambassador to the world. The other day I also remarked at the Pompeu Fabra University on the fact that we had managed to return to on-site classes at our universities in Catalonia, and I think that it is vitally important to generate knowledge. And we have to use that knowledge, here, at the Universitat Oberta de Catalunya, for the transformation to a hybrid model that universities are seeking to adopt, combining face-to-face and digital classes. And, therefore, today I also want to highlight the Universitat Oberta de Catalunya's consolidated model, with great experience and high quality.*

*Dr Francesca Bria, thank you for your lecture. It's been really interesting. I have listened very carefully to the speaker, her conference. I believe that the main issue of her research challenges us all and even more so those who govern because it is one of the challenges we face as a society. Data and the concept of technological sovereignty is a main issue for research in Catalonia too. Thank you for your conference. I am sure that your point of reflection will be on our minds and in our future programmes of research in Catalonia.*

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*Today I am here, as President Planell said, in my capacity as the Minister of Research and Universities. We have recovered this ministry. I think this was also a result of the efforts of the university community. And a few days ago, I read an interview with President Planell in which he said he was very glad that the ministry had been brought back and that it made sense, for which I am appreciative, but I should also say that the most important thing is not the existence of the ministry, but what the ministry can do. In this regard, what we can do as a nation is ensure that knowledge is one of the key policies of the Government of Catalonia, with knowledge, research, universities and research centres, knowledge transfer and innovation at the centre of policies designed to secure the country's social and economic recovery. This week we have given out the National Research Awards, we have recognized the talent of numerous researchers, and they all asked us for the same thing: better funding. I think we can... I think we can achieve that.*

*In fact, Dr Carme Torres, the recipient of the National Research Award, along with Dr Clotet, said this week: "if we slightly increased funding for research, we could perform social miracles". I don't know if I believe in miracles, but I fully agree that research can help make people's lives much easier, contribute to social justice and be an engine of change and progress.*

*As Dr Bria said, this acceleration in digitization sets a number of challenges in terms of digital rights, the Green Deal, and also from the perspective of feminism and, therefore, women should not be left behind in this acceleration in digitization. Accordingly, I think it's*



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*very important to strengthen the country's research capabilities. Our public policies must impact society and this starts with research conducted at universities and with the innovations developed by research groups. In fact, there is also a connection with the pillars we should foster as a country in research in the field of artificial intelligence and the European chip initiative. Dr Bria also referred to this technological sovereignty and its uses; cybersecurity, we are digitizing and we have accelerated the country's digitization and, therefore, we must carry out research into cybersecurity, architecture and urbanism.*

*The pandemic has underlined how important this urbanism, social cohesion, transition, quality of life are to many, many people. I think we can achieve all of this by reinforcing the research system with these policies, which I think will soon be made available to everyone.*

*President Planell, the whole of the university community and the Universitat Oberta de Catalunya, I think that today's event, taking place in a digital format open to the world, with lots of people watching from different countries is synonymous with a university based on prestige, modernity and innovation, and also robustness, rigour and knowledge of where this digitization is heading; and doing so with good judgement. Also with a great capacity for leadership in educational innovation. And as I said: we have seen that the digitization of universities and of teaching is not a simple matter and requires great care. And here we have the very clear leadership of the Universitat Oberta de Catalunya.*

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## Closing speech by Gemma Geis, Government of Catalonia Minister for Research and Universities



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*And I want to remind you that today, the Universitat Oberta de Catalunya has more than 70,000 students. And numbers are continuing to grow. In fact, the Universitat Oberta de Catalunya is Catalonia's leader in terms of enrolment. It also features prominently in international rankings. The UOC is in the 600 to 800 bracket of the best universities in the Times Higher Education ranking. And it shares this position with the United Kingdom's Open University. So, we can say that it has achieved consolidation in this regard.*

*But with reference to the UOC, people are often unaware that it has 50 research groups, 42 of which belong to the Government of Catalonia's SGR support programme. In this regard, we are finalizing the call and we will increase the call for consolidated research groups to €10 million, because it is also of great importance in the scope of the humanities and the social sciences. The needs of the digitization process also extend to the scope of the humanities. I think this call can help all research groups in these fields.*

*Today I want to highlight, now that we have experienced the pandemic, how having a mobile phone was once a rarity, and this university was created in this context. But today it is a fully consolidated university thanks to its quality as an online, digital institution. Rooted in Catalonia and open to the world, as I said before.*

*And finally, I think we have an opportunity as a country, with university leaders and a university system with institutional responsibility supported by the ministry,*

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## Closing speech by Gemma Geis, Government of Catalonia Minister for Research and Universities



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*to achieve the knowledge society we want, in which we can create quality employment, help create a diversified economy and progress as a nation. The first engine of change is education, which is never an expense, but an investment. And one of the keys in this regard is Catalonia's university system. And also, obviously, the Universitat Oberta de Catalunya. Therefore, in the ministry you have an ally at your disposal to take on all the projects and global challenges mentioned by Dr Bria.*

*Thank you very much.*

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### **Gemma Geis**

Minister of Research and Universities  
of the Generalitat de Catalunya

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# Francesca Bria's biography



Francesca Bria is the President of the Italian innovation Fund. She is Honorary Professor in the Institute for Innovation and Public Purpose at UCL in London and she is Senior Adviser Senior Adviser to the United Nation on digital cities and digital rights. Francesca is the founder of the DECODE project on data sovereignty in Europe. She is an adviser for the European Commission on Research and Innovation Policy and Next Generation Internet, and she is the former Chief Digital Technology and Innovation Officer for the City of Barcelona in Spain.

Francesca has a PhD in Innovation and Entrepreneurship from Imperial College, London and MSc on Digital Economy from University of London, Birbeck. As Senior Programme Lead at Nesta, the UK Innovation Agency, she has led the EU D-CENT project, the biggest European Project on digital democracy and digital currencies. She also led the DSI project on Digital Social Innovation in Europe, advising the EU on digital social innovation policies. She has been teaching in several universities in the UK and Italy and she has advised Governments, public and private organizations and movements on Technology and Innovation policy, and its socio-economic impact.

Francesca's work focuses on one of the key issues of our time, working at the intersection between technology, geopolitics and the economy. In her work she explores how people can regain sovereignty over their data and how can societies regain control not only over digital technology, data, and infrastructure, but also over the services that are mediated by smart technologies—such as utilities, transportation, education, and health.

She has been listed in the Top 50 Women in Tech by the Forbes Magazine, and in the World's top 20 most influential people in digital government by Apolitical. She has also been featured in the Italian Magazine Repubblica "D", amongst the 100 Women Changing the World.

 Source [Francesca Bria's personal webpage](#)

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