

PRESS RELEASE

SUBMISSION OF THE REPORT OF THE FRENCH INTER-MINISTERIAL MISSION ON THE DEVELOPMENT OF METAVERSE(S)

Today, Camille François, Adrien Basdevant and Rémi Ronfard submitted the exploratory report on the development of metaverses to Rima Abdul Malak, French Minister of Culture, Bruno Le Maire, French Minister of Economy, Finance and Industrial and Digital Sovereignty, and Jean-Noël Barrot, Delegate French Minister in charge of the Digital Transition and Electronic Communications.

- An exploration of the major economic, societal and cultural issues related to metaverses, the mission aims to contribute to public debate and government reflection on the subject;
- 10 proposals for a French and European strategy for metaverses;
- A focus on creation and influence, highlighting numerous cultural and industrial opportunities.

Paris, October 24, 2022 - On the occasion of the first anniversary of the France 2030 committee, Rima Abdul Malak, Minister of Culture, and Jean-Noël Barrot, Delegate Minister in charge of the Digital Transition and Telecommunications, received the exploratory report on metaverses today. This document is the result of an official mission launched at the beginning of the year at the initiative of the President of the Republic Emmanuel Macron and conducted by Camille François, Lecturer at Columbia University and executive at a company specializing in augmented reality technology; Adrien Basdevant, lawyer specializing in new technology law and member of the National Digital Council (CNNum); and Rémi Ronfard, research director at Inria and associate researcher at the Ecole des Arts Décoratifs.

AN EXPLORATORY REPORT TO INITIATE THE DEBATE

From avatars to digital twins, crypto-currencies and virtual reality headsets, the development of metaverses raises as many wild and colorful dreams as valid and worrisome concerns. While virtual world projects have proliferated in recent years, enabled by recent technological developments, the terminology alludes to a variety of uses, technologies, stakeholders, and issues. **Thus, the interministerial mission on metaverses endeavored to provide keys to understanding metaverses, sought to help clarify the terms of this debate, mapped how France could seize emerging opportunities, and advised on how to better grasp risks posed by metaverses, all while attempting to gather French metaverse players around a shared vision.**

To this end, more than eighty leaders from metaverse-related communities were consulted, demonstrating the diversity of this sector in France: virtual reality and blockchain entrepreneurs, leading institutions in the cultural sector, artists, video game professionals, researchers in social sciences, artificial intelligence, and computer science.

Through this first report on the subject, the commissioners formulate a series of proposals and call for an open approach to the issue, bringing together experts, private and public players, researchers, and citizens to engage in a public debate about a French strategy for social immersive technologies. This exploratory mission thus constitutes an initial basis for reflection aimed at envisioning different time horizons. The commissioners highlighted the critical need to undertake additional, more granular, and in-depth studies on the multiple themes addressed, be it the analysis of the value chain to direct investments or the study of ethical issues to identify safeguards.

In particular, the commissioners emphasize the tremendous opportunities offered by the development of metaverses, which could “reshuffle the deck” in terms of global technological leadership. For France and for Europe, there is an opportunity to support the creation of new global leaders in digital uses, based in France and throughout the European Union. The government is encouraged to send a message of confidence to entrepreneurs and investors by developing a public policy to support this sector, of which France 2030 and the organization of public procurement could be central elements.

10 PROPOSALS FOR A FRENCH AND EUROPEAN VISION OF METAVERSES

Metaverses are expected to open major opportunities in fields ranging from health, education and industrial applications. Since they can contribute to the spread of new forms of cultural expression and online creation tools, they represent a meaningful cultural opportunity for France, including for the continuous promotion of its territory and its cultural heritage.

From the “attention economy” to the protection of personal data, metaverses often echo deeper issues apparent with our current digital tools landscape—notably in terms of dominant positions, sovereignty, foreign influence and disinformation—while also posing new and novel challenges. The ethical and social risks and their remedies may be significantly different. Lastly, the development of both technologies and uses must be measured and considered in terms of their energy and environmental impacts.

The French presidency of the European Union marked a major step forward in the regulation of platforms through the *Digital Services Act* and the *Digital Markets Act*, and France is strengthening its strategy and investments through *France 2030*. In this light, **the report calls for the definition of a genuine French and European policy on metaverses. To this end, it proposes ten action levers aimed at organizing infrastructure, supporting innovation, focusing on cultural uses, orchestrating regulation, and taking societal and environmental issues into account.**

Among these proposals are the following:

- Seizing the opportunity of metaverses to regain leadership positions in global digital services, in France and on the European continent
- Initiating work on adapting European texts (GDPR, Digital Services Act, Digital Markets Act) to meet the challenges of metaverses as of now
- Seizing the opportunity offered by the organization of the 2024 Olympic Games to gather French metaverse stakeholders around concrete projects, notably in the areas of culture, as well as territory and heritage promotion
- Encouraging public authorities to develop common and essential services that will allow the advent of a plurality of interoperable metaverses
- Implementing public procurement orders that meet the objectives of cultural and technological sovereignty in order to support hybrid couplings between French technological structures and cultural institutions
- Developing a rigorous analysis of the various metaverse value chains and “tech stacks” in order to best inform strategic investment areas on the one hand, and the risks of loss of sovereignty or value leakage on the other
- Rejoining the technical standards negotiation bodies, to ensure that France and the main French stakeholders actively participate in discussions on the interoperability of immersion technologies
- Investing in interdisciplinary research initiatives to simultaneously develop experimental metaverses driven by societal needs (culture, health, education, environment) and the means to assess their socio-technical risks through empirical studies
- Creating a research and coordination institute, based on the French Ircam model, which would simultaneously serve as a computer research laboratory dedicated to immersive arts, a place of coordination between researchers and artists for the creation of innovative immersive works in metaverses as well as an expertise desk for all the relevant cultural institutions
- Exploring environmentally responsible solutions and developing a measurement system for the environmental impact of Metaverse infrastructures

DIVERSITY, CREATION AND INFLUENCE, NUMEROUS CULTURAL AND INDUSTRIAL OPPORTUNITIES

Every technology gives rise to new forms of creation. Being at the crossroads between immersive video games and mixed reality social spaces, metaverses potentially open a new chapter for cultural creation, ranging from immersive live shows to interactive museums or hybrid video games. While it is impossible to predetermine the impacts metaverses will have on our content and our uses at this point in time, many opportunities lie ahead for cultural and regional actors, extending from creation to outreach. Public authorities ought to support and accompany French and European cultural and creative industries in this new field of technological innovation, while investing in the key technological bricks, and strengthening the bridges between research and culture.

Rima Abdul Malak, French Minister of Culture: “It is necessary to overcome the dichotomy between technologies and uses. It can rapidly become counterproductive: the cultural sector is not just a source of content and can actually be a laboratory for innovation. Metaverses offer real opportunities to make our creativity as well as our territories shine.”

Jean-Noël Barrot, French Delegate Minister for Digital Transition and Telecommunications: “This report marks an important milestone in the development of metaverses and provides action levers that are both practical and actionable to enable French technological, cultural and industrial players to continue innovating. From content moderation to algorithmic biases, metaverses are no strangers to social, ethical, and environmental risks. The legal grounds we are building are an important reference, which we will strive to keep evolving.”

Camille François, Commissioner: “If the general public has recently become aware of the word 'metaverse', the term refers to a variety of technologies and uses that precede it, and many French stakeholders have been working on social and immersive technologies for years: researchers, entrepreneurs, cultural institutions... Our mission has focused on highlighting this ecosystem, and calls to seize the development opportunities provided by the metaverse to build new global leaders in digital technology, both in France and throughout Europe.”

Adrien Basdevant, Commissioner: “Metaverses are tremendous spaces of innovation where creativity must be able to fully express itself while protecting the rights and freedoms of everyone. This report highlights the need to develop a strategy that reaffirms our model of society, by supporting metaverses aligned with our French and European values, while upholding requirements regarding climate, public health, and social acceptability.”

Rémi Ronfard, Commissioner: “The development of immersive technologies on the web can be a formidable instrument for the democratization of culture and the promotion of online creation. In this respect, metaverses represent an opportunity for France, whose public authorities and in particular public research must seize.”

About the co-missioners



Camille François teaches at Columbia University, New York, and is a researcher at the French Institute of Geopolitics (GEODE Center) at the University of Paris-8 as well as a research associate at the Berkman Klein Center for Internet & Society at Harvard University. Camille leads the Trust & Safety team at Niantic. Based in the US, she previously held executive positions at Google and Graphika, where she was tasked by the US Senate with an investigative report on Russian interference in the 2016 US presidential election. Her research and publications focus on issues related to cybersecurity, algorithmic bias and unfairness, and content moderation.



Adrien Basdevant is a member of the Paris Bar and founder of a law firm dedicated to new technologies (intellectual property, data, algorithms, blockchain). He is a graduate of ESSEC and Panthéon-Assas University, and advises on issues relating to disruptive technologies, innovative uses, platform liability, cybercrime, and the defence of digital rights and civil liberties. Adrien is a member of the French National Digital Council (CNNum), he has written several books on the impact of technologies on society and is the creator of the online media *Coup Data*.



Rémi Ronfard is an Inria research director and an associate researcher at the Ecole des Arts Décoratifs. He received a dual training as an engineer and doctor in computer science at the Ecole des Mines de Paris and has divided his career between private research (Dassault Systèmes, IBM TJ Watson Research Center, Xtranormal) and public research (INA, Inria). Since 2020, he has been leading the ANIMA team at Grenoble Alpes University on the creation and staging of virtual worlds.

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