



METaverse WORLD

Experts bring us closer
to the virtual phenomenon

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to the virtual phenomenon



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The metaverse is no longer a game

If experts agree on something, it is that the metaverse is the new evolutionary phase of browsing on the Internet. A leap from the two-dimensionality of webpages Web viewed on square screens towards the three-dimensionality of space and towards the conquest of the senses and of being able to “feel” in the virtual world (the sense of touch seems to be conquered).

The pandemic and lockdown, with their forced digital transformation, ended up promoting this universe under construction and made us internalize a social and professional life through screens and the possibility of taking one more step in our relationship with Cyberspace, through new experiences.

The technologies that make this possible, such as virtual and augmented reality, blockchain (on which cryptocurrencies and NFTs are based) or 5G (soon to be 6G), have joined up with intelligence artificial and the Internet of Things (IoT) for creating unimaginable immersive experiences, including in the art of digital design, where humans now find new forms of innovative and artistic expression in new worlds in which they can create.

Meta-economics will also be a protagonist, changing the concept of traditional money and including a multitude of different types of transactions and consumer and investment operations, even more so than in the real universe, since tokenization and the creation of digital assets of all kinds (artistic works, real estate properties, music, fashion, etc.) and their multiple digital manifestations will make this possible.

The metaverse will also bring new ways of relating to each other and there are many social and ethical issues that enter into the debate about this new world, although controversy is also brought about by economic interactions or legal issues.

Human beings now seem to act as “the great builders”, creating new worlds inhabited by configurable avatars representing people and making life choices; however, they are necessarily forced to take responsibility for the development of their creations, which still needs codes of conduct and regulations.

The truth is that the cogs of the business of this future (although already present) environment have not stopped spinning. Companies like Nike, Reebok, Inditex, Disney, Balenciaga and Vodafone have created internal departments dedicated entirely to creating content for the metaverse. Large corporations are already present in this new environment, with a market for goods and services that moves multimillion-dollar figures. Spaces already exist born for the metaverse, and the race to arrive sooner and better is under way. Data that shows that what seemed like a distant reality has taken a giant leap towards becoming a real present that generates billions of dollars.

A world in which to explore, interact, buy, sell, and so on. As the protagonist says in Ready Player One, the Steven Spielberg movie, an experiential world where one does “everything, except eat, sleep and go to the bathroom”.

Innovation, fascination with what is to come, and disbelief and distrust come together here as in any good expedition to an unknown land.

We are laying the technological foundations of the metaverse. We are in the stone age of what is to come. As a society, inertia naturally leads us to repeat what we consider to be good, but it also leads us to the risk of once again committing our old mistakes. The idea of the conscious metaverse is to avoid the latter as much as possible: as we have the opportunity to create a world from scratch, let’s try to do it better. It should be a safe, inclusive and equal metaverse, environmentally sustainable and with people at the center.

There are many technical challenges and even greater ethical challenges, but the door to this new universe is now open. A metaverse that we do not yet see, but that we feel is arriving little by little.



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BUILDERS

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The metaverse made (virtual) reality

The builders of the metaverse are the vital pillar for this virtual universe to work. They are the key and make it happen. They take care of developing the software needed, creating, “playing” and experimenting with the technology that makes it possible, and “giving life” to the different places or objects that can be enjoyed and used there.

We are talking about entire development teams that represent the union of many disciplines, such as engineering, architecture, communication and marketing or the economy, at the service of the creation of this new environment, that still requires interoperability to make it more real.

Brands and companies, aware of the magic that these builders work, demand them in order to be the first to arrive at the goal of possessing a virtual universe, which offers infinite possibilities.

You don't have to go far, or even be in Silicon Valley, to meet pioneers of the metaverse. Those who make it possible are also in our country and provide services to the main companies of the world: from the creation of cutting-edge technology to bringing the virtual to completely real, to creating new forms of economy and services in this new environment. Ladies and gentlemen, the builders of the metaverse, made in Spain.

Edgar

Martín-Blas



Edgar Martín-Blas is CEO and co-founder of Virtual Voyagers, the Spanish company pioneer in the development and construction of metaverses and one of the most important of the world. They have collaborated with META, belonging to Zuckerberg, in the creation of its platform for virtual concerts, and are responsible for more than 200 projects for large companies such as Vodafone, Telefónica, Disney and Ikea, for which they have designed the environments of their future metaverses. With the purpose of rectifying the lack of specialized professionals, they created their own training program: 'The Academy of explorers of the Metaverse', allying with the Complutense University of Madrid, to offer the first specialized Master's degree in our country. Martín-Blas is also the author of the book *Metaverso* (publ. Almuzara).

When I started to think of the idea of the project of this book and I investigated a bit into the people who are most relevant in this new sector, I realized that Edgar Martín-Blas had that be in these pages. This was essential for me. Virtual Voyagers was among the top pioneering companies in everything related to virtual reality and metaverse in our country and has earned worldwide fame. I was sure that talking to him would be like talking to someone that could tell me what was “cooking” from within the kitchen itself, from the bowels of a company and a team of people who work every day with innovation, creating technology and giving life to amazing projects. I wasn’t wrong. It’s like talking to a Ferrán Adrià about cooking or an Einstein about mathematics. And Martín-Blas has the makings of a genius: in addition to a lot of passion for what he does (this can be seen in every word he says) he is very inquisitive and a researcher and has the ability to guess in advance where things in his area will go and bet one it, like all good visionaries.

Although he considers himself to be an explorer, rather than an expert (this is confirmed by Martín-Blas himself), the truth is that this person from Madrid passionate about technology was able to see and understand in the early 2000s that a great wave of technological change was coming.

His relationship with virtual reality and the metaverse began in 2013, when he invested \$300 in a micro-sponsorship project, which resulted in a prototype of the famous Oculus virtual glasses. There he began to investigate technology with some friends with whom he formed a team “thinking this would be something way in the future,” he says. Shortly later, the Oculus VR company was acquired by Facebook for over 2 billion dollars. “It was in that moment that I realized that things

were getting serious”. At the time, Edgar was creative director of Tuenti and left his job to create Virtual Voyagers. He tested technology, such as digitizing people for video games and advertising, in projects for brands as famous as PlayStation.

“We were a group of freaky friends. Nobody managed to understand the impact that these technologies could cause and very few professionals were trained for creating contents of interest in virtual reality”.

They went from being six friends at the start of the adventure to now being a team made up of more than 50 multidisciplinary collaborators spread around the world.

“We moved to a large scale. It’s another level,” he says, enthusiastically. “I am happy because now we are going to make the whole theory we were working on a reality. Everything is aimed at building a very real metaverse.”

Now they intend to help to big corporations, brands, agencies, artists and personalities, on the path to the new virtual universe, so they can deploy their strategies and content in the metaverse, in addition to building their own platforms.

“We are at 20% of what the metaverse can become”



What is the metaverse for you?

It is a logical consequence of how human beings move throughout history. We are builders. We like to replicate worlds. As a good revolutionary invention under development, its exact definition does not yet exist, but for me it is the evolution of the Internet. It will be the Internet of experience and a space for creating new synergies and experiences. And, of course, it is something very real.

This is said by someone who is creating it, which is no small thing...

There is a lot of skepticism, ignorance and doubt, but this is normal, it happens and has always happened with great inventions. Those of us who are building it see it as something realistic, which is already happening and which customers are actually funding. We are at 20% of what it might eventually comprise and be.

At what point are we?

There is a moment of explosion, everyone wants to be in on it. We have to see what works, what doesn't, where the users are... When all that is controlled, the next thing will be a question of quality. We will have to see who is producing things that are well made and who is not. Users will notice the differences. This will come in the next few months.

What can we do today in the metaverse and what can we not?

Today we can create worlds with a high level of credibility. You can socialize with people within that environment, you can access different content, such as shows, games, talks or events and also buy stuff. What cannot be done today is achieving a graphic quality as expected, because right now, the metaverse is being processed by the actual virtual reality glasses. This means that you need a good battery and a large graphics card, so it is not very practical... What is being worked on, and which will arrive soon, is a metaverse rendered on the cloud.

And what will that be like?

We are working on the glasses not calculating anything, on the 3D calculation of space, that makes the metaverse possible, being made by the cloud itself, and it will serve it to you as a user. In this way, the glasses will no longer be so heavy, they will be light and you can connect with 5G technology. With this we will reach the metaverse that we have in mind, like in the movie *Ready Player One*. A world so real, you believe it.

What is missing in order to reach that metaverse ?

Today we have “proto-metaverses”, which is what we can now see browsing the web and which looks like a video game. This is the transition. Two important things have to happen: on the one hand, a standardization of the metaverses, so that we can go from one world to another in a fluid step, just like when we browse the Internet from one website to another. A unification of worlds. There has to be a moment when you are at Disney, you jump to META and then to Vodafone, and that step has to be open and fluid and be something as simple as browsing the web. And, on the other hand, making it possible for us to move from one metaverse to another while maintaining our same avatar and the belongings we acquire there.

And how much is left to do for that?

It's already here! We are working on it. There is already technology that allows standardizing as to how you create your metaverse so you can visualize it wherever you come you. A kind of format or template so you can create metaverses that are compatible. We are working with a technology called Open XR, which makes everything you create compatible with all virtual reality glasses. And in order to jump from one metaverse to another being able take your same avatar, your digital wallet and keeping your belongings in the metaverse, we use blockchain

technology, because this is the only way. This technology is decentralized, which will allow us to check who a certain avatar is or what properties it has. It will allow us to identify users and be like their identity card. The latter is the most urgent and almost the most complicated aspect, because it will require all users to be connected through this technology. Identity will be very important in the metaverse...

What does that mean?

Virtual identity, just like in the real world, is our self, but within that technological environment. Our avatar in the metaverse. It is who we are, what we possess, that defines us, that interests us. Right now, everything related to identity is what has greatest returns in the sector. In some proto-metaverses that we can already see, the money is coming from the customization of identity, clothing, accessories...

I think there will come a time when we will have a type of public profile, like your avatar on social networks, but then we will have several avatars in the metaverse that we will choose according to the occasion. For example, one more geared to fantasy, another for concerts, another more professional...



Space in the metaverse of Vodafone created by Virtual Voyagers

I imagine that you have an avatar...

I have a bit of a mess because I try everything. I have land on one platform, then in META I have my avatar... everything still to investigate. Right now they are not unified and you have to log in to each one. There will come a time when it is unified and you will have a single user for everything. If not, the metaverse will not work.

How is the international race to launch metaverses going?

Although there are still 5 or 6 years to go to establish an ecosystem and for this to become something industrial, those that are most advanced are META and then Apple. Most are building *ad hoc*

metaverses for each brand. Some focus more on leisure and user connection (as in the case of META), and others focus more on work, such as Microsoft. Work is also being done on social metaverses more oriented to minigames, and Disney will soon arrive with its own metaverses, such as one for Star Wars or Marvel. The focus of each metaverse will be the key and it is what each brand has to investigate: what can it build in that place and what activities will it offer to users.



Surfing virtually by Virtual Voyagers

What would you say to Spanish companies?

Let them ride the wave so as not to miss it. You can start out as a beginner or as a professional, but at least you have to get on and surf to “understand” the wave. There is a huge investment in the metaverse because the fight is going to be there. The web and apps are already burned out, and the world of video is limited. Artificial intelligence and the metaverse are the technologies that are going to revolutionize everything and companies that have been there from beginning will have the experience to make better decisions.

What has differentiated you from the rest to be at the forefront?

I would say that our organizational capacity and having done so many projects in so few years and with so few people. Our success has been surfing the waves that have been arriving and getting ahead of many things.

How can someone get ahead and be a visionary in this field?

The first thing is to have privileged information, through contacts with whom you can foresee where things are going to go. Then you have to be permanently in discussion forums and, most importantly, a lot of investigation. We investigate all the while. We test technologies and see if they can work on the market or if we can incorporate them into the projects we conduct.

“There is an anomaly: there is a billion-dollar investment, but there is a lack of talent and capacity to build metaverses”

I heard that you are worried about the lack of talent...

We have found an anomaly. There is a new Internet that is arriving and that has billions of dollars of investment from brands and technological giants, but there is little ecosystem that works on its development. We are still the same players and there are hardly any competitors on the market. There is an *overbooking* of brands calling and demanding projects related to the metaverse and we cannot cope.

That you places at a clear advantage...

We are talking of something that is being invented and for which many disciplines need to be controlled, such as spatial computing, architecture, blockchain or 3D optimization; therefore, those who are starting now to learn from this and studying it are going to take a while to implement it. Here the treasure is our mind, our knowledge. We have the ability to manage projects, make them and launch them. That is our real value.

To alleviate the problem of lack of talent, you opened an academy.

We wanted to offer training courses, when nobody was talking about this yet. We feel that it got a little out of hand, because we only put one post on LinkedIn and 600 people signed up with us. Now these courses are the

ones most in demand in the sector and not only by technology enthusiasts. Managers from large companies sign up to start leading the metaverse in their companies. Every time that we open an announcement, there are fights to sign up.

How do you see the next five years?

The giants of the metaverse are going to be created, giants of the metaverse for content and technology. We will be in the fight for content. At the level of clients and brands, there is nothing above what we do. We are working with the greats and the speed is very fast. A time will come when not only will we be with brands and big clients, but we will be generating our things own for our own brand. The fight will be based on this: who understands the metaverse, who offers their own things with that new language. Then the brands will do product placement or sponsoring.

This will no longer be a rumor...

There are too many people talking about the metaverse without having worked on it. You have to be careful with quackery. This is a step further, a logical and calm evolution that users will have to carry out. They are not going to implant a chip in our heads. This is something a lot more professional, not so science fiction.



Soraya Cadalso

Soraya Cadalso is CEO and co-founder of Utopion, the Spanish company that presents itself as the first metaverse of our country. It was born during the pandemic, as a platform to hold concerts virtually, and has become one of the companies that has grown fastest in the last year. Its “community” metaverse is intended especially for content creators, companies and brands that want to develop their projects in that environment, and the truth is that there are many who “fight” to have their own space in Utopion. And this metaverse with a Spanish seal resembles a city, but with virtual spaces or land that can be purchased. In barely two months it sold 1.5 million euros in virtual plots and, in its short life, it has already held more than 200 events with big brands like Mahou and its platform was the first in the world to broadcast a live opera in the metaverse. This company has become one of the most disruptive companies and immediately caught the attention of the president of Mercadona, Juan Roig, who has sponsored it with his launch of startups.

Being two years old and becoming the first Spanish metaverse is no easy task. Soraya Cadalso, CEO and co-founder of Utopion, is well aware of this, and she comes to our interview acknowledging that she works “many hours” and that her email is red-hot. “This is it what is happening now, it is a boom. This is the beginning, then it will be different and we will be able to relax more,” she says. The beginning was curious and visionary. She, along with her partner Miguel Ángel Fito, created under total lockdown a platform for holding virtual concerts, in response to the amount of on-line events that happened during those months. “We decided to create an experience that would allow those events to be held more dynamically, with interaction between users and which creators could monetize,” explains the CEO of Utopion. “We made a kind of two-dimensional virtual map, where we could customize spaces, which users could access and see different events. We provided an outlet for musicians who couldn’t do physical concerts, we could satisfy the advertising expenditure of hundreds of brands and we entertained people”, account Soraya. “At the start, they took us for crazy, but we were creating a metaverse without knowing it.”

With the arrival of brands, they began to hold different types of virtual events, such as festivals or book presentations. With this trial, they were able to validate their business model and begin developing the technology to create Utopion.

They decided that they wanted to bet on a “community” metaverse and created a virtual map, which resembles a city. In their business model, they sell land - virtual spaces within that city- where brands or individuals, for example, can build their office or store, and divided this

into two communities: one related to music, Musichood Spain (which obtained funding of 600,000 euros) which hosts musical events that have managed to gather together up to 8,000 users at a time, and a second space, where people can buy “Terras”, called Sportsvilla Spain, with a more sports-related theme. “This represents 60% of the plots, which are those dedicated to the content. Companies that have interesting projects in these sectors can buy land. Record companies, artists already have it...” The other remaining 40% is services, which can range from private businesses run by entrepreneurs to food stores.

In contrast to other projects related to the metaverses, Utopion’s is not completely decentralized, because those responsible maintain a certain control over what enters it. “Many times we say no. We study the proposals they make to us and we have to see that they have interesting projects and that they have consistent content. We don’t want this to be pure speculation. It must make sense and has to entertain the users. Things have to happen,” says Soraya. What is clear is that the business model is triumphing and that is a reality.

Much of Utopion’s business comes from the sale of this land in its metaverse, with another part from the actions or events they create with the brands. “Every day, we receive many emails with proposals from international companies interested in being in Utopion,” she acknowledges.

Its first year of operation, in 2020, served to test the technology and they invoiced 10,000 euros. “We started out with four people and the project was technologically developed for us by an external company. Now there are 24 of us and we do everything ourselves.” Two years later, they already had a turnover of more than one and a half million euros. In 2022, they invoiced more than 10 million.

Shortly before finishing this book, the company announced an alliance with the Chinese metaverse DaYou, which represents a historic agreement between the Asian giant and a European platform that will allow brands and creators to have their own spaces in the two metaverses simultaneously and impact globally, linking China with the rest of the world.

“What will make the metaverse great will be the users”



What do you see when you enter Utopion?

The users enter directly into the Welcome Plaza, which is like a welcoming space and a meeting point. From there, you discover the spaces virtually, walking with your avatar. It's like a city you move around. You can access through the web or a mobile. It offers a world of infinite possibilities: from just exploring as a user, to creating events and billing.

And what type of users does it have?

There are three types of customer, as it were. Users who come to explore and investigate, who can create their own avatar, personalize their own virtual home free, attend music and sports events from any device, chat with friends or speak with their own voice. There are also content creators, who can create their own virtual space, invite fans, monetize subscribers or upload content and share their talent with community. Then, if you are a brand, you can create and sell digital or real items, hold marketing events or product presentations.

As in life itself!

That's our idea. We are all, in one way or another, part of a community and we are clear that this concept must be the most important thing. For me, the metaverse is a virtual world

in which people interact socially and economically through avatars, but a lot needs to be done to emphasize the social part. What makes a community and a project great are the users. For example, Instagram is very successful because there are many users creating content and, in the end, only a few monetize. This is similar...

How do you decide how much virtual land is worth?

These are business decisions like any other. We see how prices fluctuate. Our range goes from 2,000 to 40,000 euros. It may seem a bit crazy, but I assure you that they are affordable prices compared to some international companies, because our project advocates a democratization of the metaverse. We have a total of 1,000 finite plots of land. The largest ones are very exclusive and, today, those that are not sold are reserved for very important brand projects.

And what does one get when buying land in the metaverse? In real life, we have property deeds...

An exclusive NFT with a blockchain code that proves that you are the only owner, that is unique, that can't be replicated. This would be the closest thing to having a deed.



The Utopion team in the metaverse

“The value of our land ranges from 2,000 to 40,000 euros”

There are people who will find this crazy.

We are always being told to diversify. This is the same as if you go to a bank and you invest in a financial product to generate profitability over time, but extrapolated to an asset and to the metaverse.

Is it an investment?

It must be taken into account that, behind this whole trend of land worth millions of euros and which seems like nonsense, there is a technology that is worth a lot of money. You also have to take in account who participates in the community. If a giant brand enters the metaverse, everyone who has bought land gains in value. Deep down it is similar to the real world.

But without passing by the branch!

That's what's so funny! You can have your land and conduct the project you want on it, because the person who bills as the owner will be you. There will no longer be third parties becoming rich because they take your data or physical banks.



A tropical-style house in Utopia

“Buying land in the metaverse is like diversifying by products in a traditional bank”

You can always set up a virtual office.

Exactly. I believe that banks are realizing that they have to start updating at a technological level, because new users and new generations are not even going to go to a branch, because there probably won't be one in a few years, nor will they go to a website, because they are familiar with virtual environments and platforms. What they are going to want is to access a virtual office with their avatar, speak using their voice and interact with other users who are already customers, to give them a little feedback, for example.

What sort of profile buys land?

Most are brands or content creators that they have acquired a space for creating their community in this virtual environment. There are many

companies that want to have an office either campus in the metaverse and they see it as a huge opportunity to have an extension of themselves in our space and create many projects.

It's like virtual real estate.

It's identical! Land can be purchased or rented. Also, there are potential entrepreneurs who do not have sufficient capital to set up a business or physical store in real life, so they are testing the option of doing so through the metaverse. Traditional businesses, such as consultancy or restaurants, have also signed up.

How does the purchase work?

Once we have already held a first meeting with an interested company, we then send them the maps of our metaverse, so they might know what type of projects they have next to them, without knowing the name or their identity, and that they can clearly select where to position themselves for what they want to do. We also send them all the legal terms, and the last meeting is the sale of the land.

Can anyone buy if they have the money?

One of the things that differentiates us from other metaverses is that ours is not completely decentralized, because we do carefully choose which projects are interesting to have there. We do not want speculation or unwanted activities, so land cannot be purchased automatically. We sell it to people and companies that have an interesting project and that are going to create content and we group them by types of activity, such as the finance sector, commerce and stores, art, and so on. We had on sale 100 plots of land focused on investors, where no activity was required, but they were all sold.

There is indeed activity...

We are talking about a huge project, with a great deal of land, many owners, with spaces in which things happen simultaneously. In the metaverse, things have to happen. It must be interactive, users must communicate with each other and their actions, as in real life, must have effects.

There is a lot of movement around the metaverse and everyone jumps on the bandwagon, but it is necessary to stand out. What is clear to us is that this is the future of Internet.

Where is the metaverse going to take us?

We are sure that the metaverse will be a type of social network that creates content, publicizes projects and reaches a global audience, but the vision we have is that it will be a new way of creating and consuming content in general. Just like you go to a website and make purchases, you can enter a store and speak to an advisor in real time. The same things as in real life, but all done differently.

THE SENSES of the metaverse

Isaac Castro and how to hug each other from a distance
Co-CEO Emerge

José Fuertes and the pioneering vest for feeling
CEO OWO

» The metaverse, towards the conquest of the senses

The success of the metaverse will depend a lot on the feeling of presence that it is able to transmit. We must be able to believe and notice that we are there, together to other people, although we are separated by a physical distance. It will also depend on we are able feel everything that happens in that environment.

Therefore, one of the biggest challenges of the metaverse is to bring people as close to the most human experience as possible through technology. As interest in virtual reality increases, so does the search for digitization beyond sight and sound. This is how new devices emerge capable of stimulating all the senses, which are and will be essential allies for elevating the experience in these environments.

Companies like Emerge or OWO have developed their own tools that allow you to “touch” virtual reality. And the key to the success of the metaverse will not be sight, but touch.



Isaac

Castro

Isaac Castro is Co-CEO and co-founder of Emerge, the company created the first system to feel and touch at a distance and within the metaverse. Born in Silicon Valley, this startup already has 16 patents and is financed with the support of venture capital companies and influential leaders in the technological world, such as the co-founder of Twitch, Kevin Lin. It also has the support of Richard Branson and Arianna Huffington among its investors, as well as Vulcan Capital and the co-founder of Microsoft, Paul Allen. The World Economic Forum named them a pioneering technology company of the year. The device has been launched onto the market through an initial limited campaign and is already a revolution. In addition, they have just signed an alliance with Disney to integrate their virtual touch device into the company's audiovisual productions.

Can you imagine being able to touch our loved ones through the screen? Being able to caress them, hug them, feel them... This, which might seem to be science fiction, is already a reality. It all started with a dream. The dream of three entrepreneurs who met at the Singularity University of Google and NASA in Silicon Valley, the technological "city" par excellence in the United States. They are Isaac Castro, from Madrid, and his two colleagues and partners, Sly Lee and Mauricio Teran. In 2015, the three created the company Emerge and this project with the same name that has very powerful investors and that is already a technological revolution in the field of communication. Emerge is creating a family of products that make it possible for users to physically feel tactile experiences with their bare hands in a virtual space. Without any need for gloves, controls or portable devices.

The first time that I talked to Isaac was in May 2020, in the middle of a global pandemic and while we were locked down. At the time, he told me that they were developing an augmented reality system that was going to revolutionize the way we communicate. The promise was clear: to be able to feel and touch each other remotely. His idea and passion in telling it, plus the moment we were in, made me very excited.

Furthermore, his project, Emerge, is linked to his own personal history and to that of his two partners and founders. "We are immigrants and we need to stay in touch with our families and friends. We thought that it would be amazing to be able to hug each other or feel a caress of our loved ones thousands of kilometers away," he explains. Although

video calls helped us, it was clear to Isaac that it was time to add a new meaning to communications, and the coronavirus crisis definitely ended up promoting an idea that was already in his head.

Thus was Emerge Home created, consisting of a device the size of a small laptop (Emerge Wave-1), which uses ultrasound wave technology and generates a forcefield, so that we can feel the virtual content with our hands, which we can see by wearing the mobile application created by Emerge (through which you can video call, play games and enjoy other virtual experiences) for the Oculus virtual reality glasses. Up to eight users can connect in the same environment to communicate and "feel" at the same time. "We are creating applications that help us spend time together, and that sense of touch unites us with the physical space and makes us feel like those kilometers have disappeared for a second," he says.

This Madrid native living in Los Angeles, where the startup 's headquarters is, has his family in Spain; therefore, it was clear to him who would test the system with in order to give a longed-for hug. "The first time that I used Emerge to talk with my mother, we cried a lot. "We were very excited," he says.

After more than six years working on and developing the project, in the middle of 2022, they made shipments of the product to the first users who had asked to test it.

"Now we are listening to users in order to improve, and in 2024 we plan to launch it en masse," says Isaac.

Emerge Home is not only used to make calls or to “feel” in the metaverse or virtual reality, but rather, this platform will have uses in three other areas: entertainment, education and mental health.

The company has been growing in parallel to the enthusiasm for the product. Two years ago, there were 16 workers, and today there are more than 40 employees, spread out between Los Angeles and Seattle. The actual co-founder of Microsoft, Paul Allen, has invested in this company through its investment fund, and the World Economic Forum has named the company a technological pioneer. In fact, this same forum invited Isaac and his two partners to form part of the organization as members, to encourage dialogue about ethics and security in the metaverse.

His plans precisely include integrating with different devices in the metaverse and “bringing emotions” and the sense of touch to this virtual environment. And this, Isaac says, is just the beginning.

“We work on sending emotions through technology”



How does your system work?

Our system works without controls or gloves. A plate placed in front of the user (the Emerge Wave-1) generates a forcefield using ultrasound waves, while augmented reality glasses introduce you to the virtual world. The waves cannot be seen, but they are felt in the air, similar to how the vibrations of music are felt through a speaker. When you go to a concert you feel the music in your chest. We use that same concept, but to a millimetric scale, so that you can feel it in your hands.

“It is important that we build a sustainable metaverse on a mental and social level”

And what things can we feel ?

The possibilities are endless. You can feel virtual objects and sensations. From feeling the magical powers of your favorite superhero to the caress of the hand of a friend who is thousands of kilometers away. It is a very visceral and emotional experience. Very unique.

Does it feel like a real caress?

The touch and the emotion you notice are practically the same. Our goal is not to replace what people make us feel in real life, that is impossible, but we do want technology to help us not to disconnect from the people we love. We believe in a future in which distance and time do not interfere with the way we are present with the people we care about, because human disconnection and social isolation are often based on the emotional disconnection with the people we care about. Adding the sense of touch to remote conversations allows users to feel much more emotionally connected.

Is the sense that unites us...

Touch helps us develop as humans, allows us to create bonds and express our emotions and has great benefits for our health. Many studies describe how it helps us relieve anxiety, loneliness, depression and even physical pain. It activates part of the orbitofrontal cortex of the brain and stimulates the production of oxytocin. Experts are very concerned about the implications for our mental health caused by the lack of touch due to our current technology and environment.



Emerge Wave-1 cone

What will feeling ourselves in the metaverse give to us?

In immersive environments, it will help us feel more present and empathize more with others, instead of what happens today in social networks, where we often take refuge behind a name and a photo. We consider ourselves to be a company of the metaverse and we will form part of it with our technology. It is important that we build a sustainable metaverse on a mental health and social level and, for that, trust and emotion will be our most important value.

An emotional metaverse ?

The metaverse we want to use must be built on the basis of our emotional and psychological needs. Due to the type of company we are, we seek to have a social impact. The transition to all of this will be technological, but, more importantly, it will be a sociological paradigm shift. The entire debate so far has focused on topics such as virtual property or NFTs, but we believe that it is worth having the virtual and physical worlds coexist so that we can feel that we are present with someone who is not physically close.



“Part of our plan is to work on a brain-to-brain connection”

Isaac Castro together to his two partners and co-founders of Emerge, Sly Spencer-Lee (center) and Mauricio Teran (right).

To shorten distances...

We will redefine social contracts in the virtual world. It must be a world that is an extension of the real world and in which emotions and emotional connections, empathy and security are the most important factors. Social connections are first and foremost, and this will enhance other examples of use as work, education and consumption. A metaverse that puts people at the center.

Won't it just be a utopia?

I am sure that, in five years, we will remember some of our current digital interactions in the same way that we see our emissions of carbon today.

Technology has brought innumerable benefits to our lives, but during the last decade, we have also experienced the dangers of technology when not designed with humanity at the center and commercial models prioritizing shareholder worth over the values of society and our basic human needs. With each new technological paradigm, we have the opportunity to build the world we want to live in.

I hope all the agents involved agree...

We will break down the barriers of distance and time. The idea is not to replace in-person experiences, but to improve our virtual experiences for times when it is not possible to be physically close. It's great to be able

to play chess with our best friend who moved because of work, for example. What we are going to treasure are those significant moments.

What will we be able to do?

Augmented reality is going to free itself from large devices. Lighter glasses will start to be created, even contact lenses and, at some point, holograms will be used frequently to communicate. Instead of a shaky video call with our grandmother on a small rectangular screen, she could appear in our living room. New hardware, platforms, disciplines and senses. We will decentralize the platform experience in favor of human beings.

How will Emerge be integrated into that virtual world?

We will integrate into the metaverse with the marketing of different devices for feeling. Devices of our own creation, but also with agreements with third parties. We are also working on creating what we call “an emotion platform”, to digitize emotions, just as we have digitized touch.

Tell me more!

We have already managed to feel touch remotely, now we are working on being able to “send” emotions through technology. Firstly, we want to start understanding them and, to do so, we

are working on an emotion analytics platform. There are many things that we can analyze in our body, in expressions, our movements, the intonation of our voice, etc.

That does sound like the future!

Our Emerge Home system is just the beginning and the first step on a longer journey to creating a new tactile language in the virtual world. We are primarily working with virtual reality, but we are exploring other interfaces in the future.

For example?

It is part of our plan to work on a brain-to-brain connection. I am sure that, in the future, we will be able to connect our brains to communicate. Science fiction always is science fiction until it becomes reality.



José

Fuertes

José Fuertes is founder and CEO of OWO, a company from Malaga that is already making waves around the world having created and patented the first haptic wireless vest with a pioneering and proprietary system, with which we can feel more than 30 sensations in the body in real time, while we are in the virtual world, for example, playing video games or in the metaverse. The company already has confidentiality agreements with major global technology companies, is firming up collaborations with the US army and its product is compatible with all platforms: mobiles, tablets, PCs, consoles and VR. After attending the prestigious CES fair in Las Vegas, the largest in the world of consumer technology, OWO received 6,000 preorders (orders made before the launch) and was awarded the Innovation Prize for its "second skin". At the end of 2022, the company launched the sensations vest with an initial campaign of a limited number of units.

The company is already working on experiences in the metaverse with institutions such as the Principality of Monaco and has just closed an alliance with Ubisoft, to add physical sensations to the French company's game catalog, starting with the new installment of the Assassin's Creed franchise (one of the most famous games in the world), which will be compatible with its haptic system.

Feeling a ball hit you in the abdomen while playing a video game or enjoying a hug in the metaverse already is possible thanks to the OWO system, which allows users to perceive the sensations of the characters on their skin while in the virtual world. The physical embodiment of this innovation is a haptic vest (there are nine sizes to choose from), which is like a light second skin and is customizable. Until now, haptic technology (interrelated with humans through tactile sensations) has been based on vibrations, but OWO has overcome that limitation and has created “real physical sensations”, thanks to its own algorithm capable of creating “micro-sensations”.

The possibilities are endless: hugs, caresses, the feeling of a gunshot in a game, and so on. And perhaps its applications will not only be used in video games: “we can “feel” movies, enjoy sensations in the metaverse, it can be used for training or for sightseeing in smart cities”, assures the CEO of OWO. The haptic vest guarantees a battery lasting 8 hours, recharged via a type-C USB.

The company was created in 2019 and consists of 22 people, including industrial and telecommunications engineers and biomedics, among other profiles. Despite its youth, the idea comes from another company of José Fuertes, Wiemspro, which was founded in 2015, specializing in muscle electrostimulation for the fitness sector. With that technological base, they designed, developed and patented this new vest, that already has followers worldwide.

One of the main values of this haptic system is its great capacity for adaptation. “During the pandemic, we took the opportunity to improve the vest and patent its adaptation to computers, consoles, mobile phones or virtual reality glasses,” explains José.

For the industry, the process is simple. “It is not necessary to create a specific game for our product; you only need to add some data to the source code of the games already made and it works without a problem,” says Fuertes.

The vest went on the market at the end of 2022, with a series of limited units at a price of just under 400 euros. The company plans to sell one million units in the next five years.

The term “haptic interface” refers to those devices that allow the user to touch, feel or handle simulated objects in virtual environments and teleoperated systems.

“We want to transfer physical sensations to NFTs”



What might we come to feel with OWO?

From the wind on our body or a hug to the sting of an insect or being hit with a ball. You can also feel the weight of objects or a shot if you play an action videogame. Today we have more than 30 real physical sensations. In addition, the equipment is completely wireless so as not to have any limitations of motion, to make it more real and to allow users to act more freely.

Is the world of video games the main application for OWO?

The world of video games is one of its main applications, but not the only one. The US company BrightLine has asked us for the vest for military training and we are negotiating with the Spanish Ministry of Defense to do the same. We also collaborate with the ONCE Foundation so that people with hearing and visual disabilities can experience video games in an inclusive way. We have also closed agreements with audiovisual production companies to make short films, series or films so that viewers can put themselves in the shoes of the characters. We also want to bring physical sensations to NFTs.

How is that?

We want offer digital artists and content creators the possibility of that their works being felt. There are many artists

that create audiovisual works with blockchain and they could get the audience to enter them and feel them. This is something that does not yet exist and we want to be the first. We want to add the sense of touch to digital art and create a new concept of tactile NFTs. Isn't that marvelous?

Now that really would be feeling art on the screen...

Our goal is to partner with creators, because they are a big part of this entire technological movement and, without a doubt, they will be great protagonists in the metaverse. Also, we want to ensure their works can stand out with our vest, because it is 100% customizable and you can have the logo or drawing that you want. Imagine having an NFT Picasso painting on the vest, what art! I think that the customization of objects and avatars will be one of the things creating most money in this world.

“The customization of objects and avatars will be the greatest source of business in the metaverse”

“In order for physical sensations in the metaverse to make more sense, we will need the avatars to also be as realistic as possible”



Is the metaverse a good business opportunity for OWO?

Before there was so much talk about the metaverse, we were already fully committed to our motto and objective, which is to turn the virtual world into a real one, adding the sense of touch. It will be one more place to take our technology of sensations because the aim of this new world is precisely to be as realistic as possible and we can already recreate almost all the physical sensations that we can feel in the metaverse. We will be able to feel a caress, a hug or rain on the body. Now we just need this universe to arrive, because I think there is still a long way to go.

And what will OWO focus on until it arrives?

We believe that for the moment we will be mainly focusing on video games, contributing the sense of touch and taking physical sensations there. Also on what I call “virtual hubs”, which are the virtual universes or proto-metaverses that brands are creating, because in order for the interconnection of worlds that the metaverse needs to exist, I still predict that a few years will be needed. Besides, in our case, in order for physical sensations in the metaverse to make more sense, we will need the avatars to also be as realistic as possible and to flow well between one world and another. I can’t imagine giving a hug to something transparent and shapeless. What sense would that make?

That would be strange...

If the aim is for the digital world to merge with the real world, it is clear that we need to be able to experience the same sensations. What we are doing generates great expectations in the builders of the metaverse because, in a way, we are going to contribute to a true virtual experience similar to reality being offered by integrating touch. Otherwise, we would be faced with a new audiovisual experience in which the format, no matter how immersive it may be, would continue to be interpreted as artificial. That’s why we believe that the technology of sensations is going to be another technology, along with the web 3.0 and blockchain, for accessing the metaverse.

What do you think touch can bring to brands in the metaverse?

Touch creates a new experience in the virtual world and the experience continues to be a determining factor for brands, a differentiating aspect that reinforces the emotional bond and loyalty of consumers. Games, media, sports and events online will benefit from being more emotional and immersive. For the industry, the incorporation of the senses into augmented reality and virtual reality will change the rules of the game.

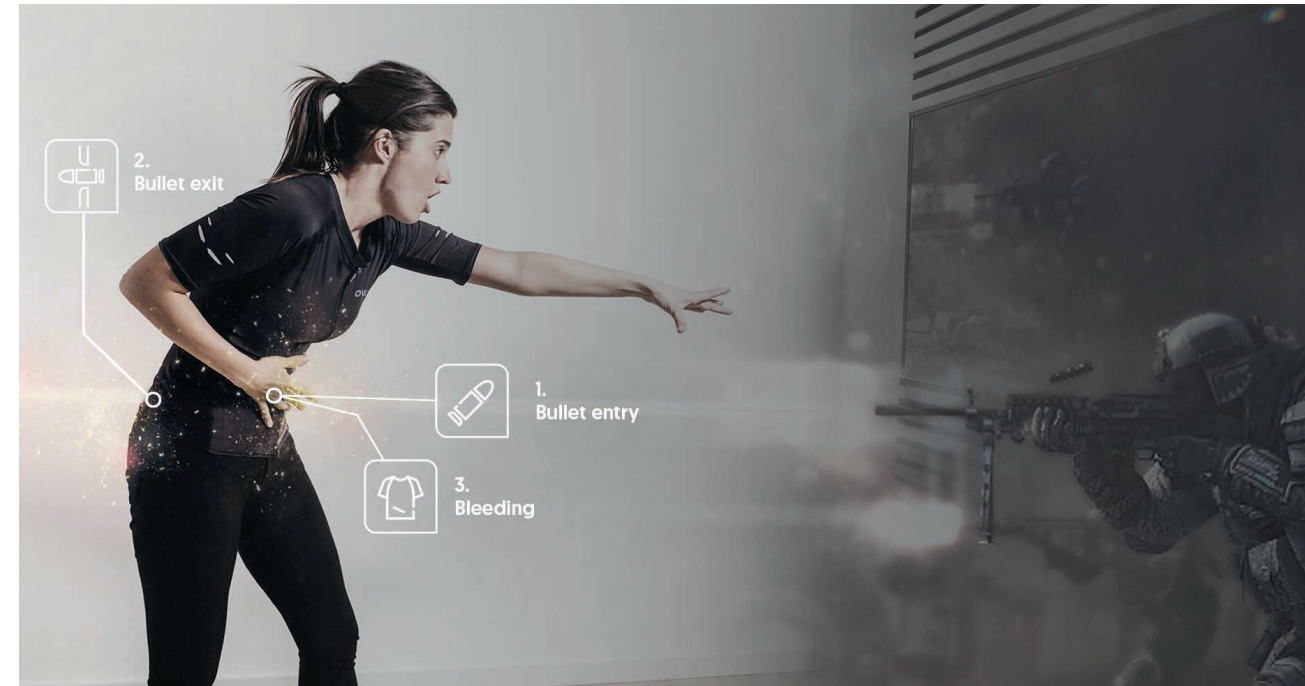
How?

I think that video games, like the idea of the metaverse, are a great resource for educational centers, public authorities and companies and their professionals. I think you shouldn't see all this just as a technological inspiration, but understand that they can make use of it as a means. Concepts such as virtual reality, so established in the videogame sector, are a great challenge for the digital transformation of organizations and provide many advantages: from the design of new training experiences for educational centers and entities, to the creation of new work models, including new marketing campaigns. The possibility of immersing the user through virtual reality and, of course, through the senses, offers great possibilities. But before the metaverse, video games will be the resource. In fact, all the noise about this new virtual universe comes about because large-scale companies have seen a golden opportunity in the number of people who play video games.

“The inclusion of senses in augmented reality and virtual reality is going to change the rules of the game”

Of course there are more than a few...

Two circumstances coexist which I think have gotten us this far: on the one hand, there is a lot of traffic of people playing video games online and, on the other hand, it coincides with them spending a lot of time there, in addition with the option of making purchases, because in video games such as Fortnite, you can buy objects or gadgets for the game itself. I believe that it is this that has meant that large corporations have considered this online universe and want to be there, selling their products inside. For this reason, brands are creating what I call their own metaverse hubs to conduct transactions in the virtual world. They have seen the opportunity and that is where they have to go.



Were video games the visionaries ?

They have been a pioneering vision of the metaverse. Video games such as Minecraft, Roblox and Fortnite have taken over. The latter, the most successful, began as a game, but has turned into a whole social network. Its players do not log in to play as such, but to be with their friends: the virtual ones and those in the real world. Also,

Fortnite is already a habitat within which other brands act, in which musicians of renown give concerts or in which films release their trailers. All this, with millions of users connected. I believe that the metaverse will be an extension of all this.

METAECONOMY

The new virtual economy

Jorge Soriano and why virtual currencies are the future
CEO Criptan

Crypto in the feminine

Claudia Giraldo and DeFi finances with meaning
CEO Common Sense

The new virtual economy

The development of monetary and financial systems in the metaverse will be a key element to its functioning. Transactions will take place, as everything seems to suggest, through crypto-assets.

The new virtual world thus hopes to have its own economy: people and companies will be able create, sell and possess. In this sense, The arrival of cryptocurrencies and the decentralized technology that supports them, blockchain, has involved a substantial change to facilitate this new digital economy.

The concepts of metaverse and cryptocurrencies are united by the need to operate with a virtual currency with which to make transactions in this digital space.

The maturity of the metaverses will be what will enable the functioning of monetary systems comparable to those we know in the real world, or not.



Jorge Soriano

Jorge Soriano is CEO and co-founder of Criptan, the most important Spanish platform for buying and selling cryptocurrencies, which has, in just over three years of existence, garnered more than 60,000 users and 200 million euros in transactions. Its mission: to bring the advantages of digital currencies and the entire blockchain system closer to the daily lives of people and to work on its reliability and security. Under the motto "Crypto for all", the company designed an app with which to simplify daily operations with these currencies and, together with MasterCard, launched a card with which users can pay any business with cryptocurrencies. Criptan is one of the few companies registered with the Bank of Spain as an authorized provider of digital currency services. In early 2023, they closed a collaboration agreement with Vueling to offer customers the possibility of paying for bills with cryptocurrencies. This Valencian startup, which continues to grow, has the support of investors such as the president of Mercadona, Juan Roig, and the former CEO of Banco Santander, Ángel Corcóstegui.

Jorge Soriano says that he left architecture to devote himself to the crypto world “because the creative part was limited by four walls, and in this sector there are practically no limits.”

“I wanted to work to improve the welfare and daily lives of people,” says Soriano. His curiosity led him to investigate technology and create a company “with social impact,” because, as he says, “cryptocurrencies contribute a new type of value”. Convinced of that value, the goal was set to help everyone know how to use them, in an easy and uncomplicated way, without having to be financial experts or understand technology, and with a desire to bring its advantages closer. “We wanted to help encourage adoption, so that people could use cryptocurrencies without mastering technical knowledge, in the same way that we all use Google or the Internet and we don’t understand how their protocols work.” Jorge speaks enthusiastically about his project, with the passion of someone who really believes in what he does and who has discovered and understood the potential of an invention that he wants to share and help reach the whole world. “Once you understand it, you see that it is impossible for this not to change things. It contributes a value a thousand times greater than what we have”. Even so, he recognizes that we must be critical of technology and that there is still much to do.

This entrepreneur started out without having “any idea” about the world of digital currencies and spending a lot of time understanding a technology he was not familiar with. “It took me three years to understand it. I investigated a lot, read all the time, spoke with people around the world who knew about this and tried to soak up everything.”

In 2018, he met those who are now his partners: Jaume Sola and investors Enrique and Pablo Penichet, John Nahm and Manuel Palencia.

“From the beginning, we knew how to see the potential that cryptocurrencies had and it was clear to us that this could change our way of relating to money on a daily basis.”

In turn, they realized that access to these types of digital currencies was very complicated. “You had to have a Master’s degree to understand how they worked and to use them.” They therefore focused on providing much easier access and use.

With that purpose, Criptan was created in 2018 and, towards the end of 2019, they launched the prototype. This was its launch into the real world to see if people would use it or not. “At the start, the users were our family and friends, but then we witnessed how the community began to grow at a rate that we did not even expect.” When talking to Jorge, you realize that the company’s ultimate goal is to add value and simplify things. “When I think about technology, I always ask myself: is this really going to improve our daily lives or is it just a matter of being very cool? The truth is that its philosophy of honesty and its motto “Crypto for everyone” has had a deep impact and, today, many large companies have entered the crypto ecosystem with the help of this company, which now has a team of 25 people and over 200 million euros in transactions.

**“Thinking that
cryptocurrencies are a
money-making machine is
dangerous”**



How do you define yourselves?

We like to define ourselves as the bank of value, in which anyone can precisely store their value, in euros or in cryptocurrencies, with the sole aim of exchanging it for products, services or experiences. Something like a cryptobank.

What can I do on the platform?

You can buy and store the main cryptocurrencies, generate a return on them while you sleep or spend them in any store. A new space through which to interact with what we consider will be the money of the future: more social, useful and focused on providing real value, through all the changes involved in the crypto and blockchain environment.

And how does Criptan earn money?

We get a commission on some of the operations performed. Depending on how much money you have in Criptan, we adjust the “fees” more to the point where they disappear. If you have part of the savings in Criptan generating cost effectiveness, we don’t charge anything. We try to be as transparent and competitive as possible. We prefer to earn less money, but attract a lot of people. We avoid sector speculation.

What type of user enters the platform?

Basically people between 18 and 40 years old that have a true ability to diversify their savings, whether small or large amounts, and that have a great interest in the crypto world. In addition, we have a group that goes from 41 to 70 years old, more senior profiles who know how to manage their money well and who are discovering with crypto that there is a real established and solid alternative to achieving more long-term profitability and to fully controlling their money. Many of them see it as an investment for their children or grandchildren in the future.

What advantages do cryptocurrencies offer over the traditional economy?

Many! Although I think that everything is going to integrate and coexist, if we could choose from the beginning of time, I think everyone would choose digital currencies and decentralized finance in general, because they allow you to interact with traditional finance, but in a more efficient, safer, more scalable way and without intermediaries. You can be your own bank. Who wouldn’t want that?

There are no intermediaries...

To be precise, the fact that it eliminates intermediaries, both in the financial world and in other sectors where it is used, is what has encouraged the emergence of this form of economy. Here, trust is placed in technology (blockchain, in this case) and this technology is supported by all the people who make up the ecosystem. It is one of the biggest paradigm shifts seen so far in the financial world. Cryptocurrencies have also changed the concept of traditional savings.

How?

The lifelong concept of saving money and accumulating it while refraining from spending loses meaning. Unlike other banks, where users save in order not to touch the money, we offer a return of up to 8% in dollars and up to 5% in euros on your savings (without volatility). We pay the proportional part every Friday and we allow customers to spend it with any business in the world. Save, win and enjoy.

And what is the weakness of crypto?

Trust. A lot of mistrust and misinformation exists. Most people still don't trust it. And within those who do, some see it as "a game", not as the technology that is going to change the way we interact with money. We are fighting against

"Cryptocurrencies should be understood as the technology that is going to change the way we interact with money, not as a game"

that. We are focusing on showing that are safe and serious, that we are trustworthy.

And why do you think this distrust exists?

Many of the new users who enter the market do so for speculative purposes, without knowing where they are investing. The adoption of cryptocurrencies in the last three years is a speculative adoption, and that does not allow us to see the potential that all this has. If I start speculating, and I then see that the value of the currency falls, I will think that it is a scam and I will become disappointed with the technology, when really it is quite the opposite. Many people have entered the sector with the intention of earning more money and have lost everything. Doing so is dangerous.



View of the Criptan app

That's annoying...

It is very difficult now to make these people understand that this is a technology that is disruptive, that it has impressive benefits, and that it does not have to be that way. I think we're kind of at this stage. I think it is a matter of time and that there are phases. We are also aware that people are afraid of volatility.

A Bitcoin that costs 5 euros today could fall to 1 tomorrow...

It is generally believed that cryptocurrencies are volatile and insecure, but in reality this is not so. Many

Solutions exist for avoiding this. There are volatile cryptos and others that are more stable than the euro (stablecoins). People often ask how a business can accept payment today with a currency that is worth 10% less tomorrow. We convert volatile cryptocurrencies to euros in real time; therefore, the business receives 100% of what it wants to charge and we eliminate that risk. Furthermore, the volatility of some digital currencies will tend to flatten out in parallel to their adoption; in the meantime, we can use the most stable digital money. The issue of usability concerns us much more.

“We must defend legislation that sees this technology as the opportunity that it represents and not as a threat”

What do you mean?

One of the reasons why I believe that adoption by society is slow is because there is a need to create better usability and access. In general, people's "heads explode" when they enter a crypto page. Most transmit a feeling of great difficulty, that vast knowledge is needed. Users should feel that it is easy, that it is fluid, and even that the web design is inviting them to browse, not that is a mass of numbers without meaning. This, which seems nonsense, is very important to us and is one of the things that I believe is missing in order to be able to democratize the use of digital currencies, although the role of the regulators is key to achieving this.

What would you ask of the regulators?

We must defend legislation that see this technology as the opportunity that it represents and not as a threat. We are missing greater support for understanding technology and trying to adopt it in a way that can improve people's lives.

I believe that the public authorities (with regulation) and banks still have to break down many prejudices so that cryptocurrencies can be a socially accepted method of pay or saving.

Do traditional commercial banks have reasons to be worried about cryptocurrencies?

I think that they will coexist and everything will be integrated. They should not worry about this technology, but they should adopt it. If they fail to do so, then they should be worried. It is like the case of bookstores. Should they have worried? About the Internet? In theory, no. They should have embraced it and launched an e-commerce portal on their own.

Taking action instead of worrying...

The crypto world is the salvation of traditional banks. Although we have to improve the entire ecosystem, all the banks are now entering, some with better vision than others. There are some that are intent on adding this as an investment asset and others

who have understood it as a way to encourage their customers, to improve their experience. It is an evolution and we must ride the wave. In the same way that all banks have adopted Bizum, they will have to integrate crypto, sooner or later. Furthermore, the clearest way to protect yourself against the rise in prices is through decentralized finance, using stable cryptocurrencies that at least allow us to combat inflation.

What position does Spain hold in the crypto race?

We are seeing large growth in adoption by brands and companies, but Spain is a "trap" country for the sector. It's big enough to start something, but too small to scale significantly. There are brilliant people and very cool projects, but we are a bit behind. Even so, at the level of institutions and businesses, I see one step further towards entering the ecosystem, although still with some fear.

What future do you predict?

In 2024 there will be a greater stability of decentralized finance, because we are already experiencing enormous growth in these types of applications. We will have to see which ones are able to attract most users. Each time there are more and more projects, and more and more cryptocurrencies, so it is likely that, in the future, there will be those who do it best. What we are clear about is that the arrival of cryptocurrencies in

people's daily lives is going to mean a radical change in the way we use, understand and interact with money. We still can't perceive even 1% of the cases of usage that will exist in the future.

Its adoption still is low...

Cryptocurrency adoption is around 3% worldwide if you count the number of people who have one. And the share of people's assets is even lower, they probably hold 10% of their money there. In other words, only 0.3% of wealth may be in cryptocurrencies. It will be a slow but sure adoption. It has not yet unleashed their full potential, but it is the future.

For new generations?

When the adolescents who today are fifteen years old turn 35, cryptocurrencies will be everywhere. When the New generations, start to have some money, this will very likely be "crypto" and they will see it as something very normal. People will use this to pay for coffee or in supermarkets.

“We are not clear about which coins will govern the metaverse, but it would be good to have a currency that is also used in the real world. We want services that coexist in both worlds”



What does the metaverse represent for cryptocurrencies?

The metaverse is a virtual environment that attempts to replicate the real world, but is built on a digital foundation, so a native digital currency such as cryptocurrencies can be the ideal payment method in this type of environment. In fact, the majority of metaverses developed so far have created their own cryptocurrency or, rather, their own token with which to access the different services or objects that can be acquired in that environment, although the best option would be a single digital currency.

The web3 ecosystem, on which the metaverse is based, is establishing the basis on which a new, totally decentralized world will be created. The reality is that this takes time, a lot of time. Now we are working on what has value in web3 being used in CRIPTAN as a payment currency. Yes, it is clear to us that we will use cryptocurrencies both in real life and in the digital world. In fact, I believe they are the bridge between these two worlds, which are increasingly connected.

Two united worlds?

For me, the key to the metaverse is that it is transversal, that it has a single access app, not 50. The reality is that society does not want to waste time in trying to understand thousand things at the same time.

We are not sure which currencies will govern the metaverse, but the good thing would be to have a type of currency that would serve for paying in all of them and that is also used in the real world. We want services that live together in both worlds.

Financial services in the metaverse...

There are several metaverse projects that are developing their own currency for that specific world. The ideal thing would be to have a single digital currency.

What would you say to someone who doesn't take cryptos too seriously?

I would tell them not to prejudge and to approach them with a desire to learn what they can do. In history, there have always been enormous technological changes, which at one point represented a great leap, but which today we see as normal. In this case, the same thing will happen, only that, in addition, a transversal world such as that of money will change, and therefore this will affect us all. I believe that this is a unique opportunity to be able to experience this change from the side of contributing and, above all, from the side of benefiting from knowing how to use it.

Crypto in the feminine

Although the financial and technological territory continues to be more masculine than feminine (three out of ten workers in the technology sector in Spain are women), it seems that the cryptoeconomy is growing hand in hand with entrepreneurial women who are building projects in the blockchain universe. If we place the focus on this technology, on which cryptocurrencies are based, the presence of women is increasing.

With the birth of this ecosystem, several initiatives also arise, precisely to enhance the entry of more women in the sector and boost that leadership. Initiatives such “Women in crypto” or “Women in Blockchain Foundation” have created huge communities and also focus on dissemination.

Banking on training and **communication**

The majority of experts and people of reference in this field agree that, for more women to get involved and invest in blockchains and cryptocurrencies, it is important to increase awareness and education. Most of the challenges come from training, since it is a new ecosystem that must be understood, because it is promoting new professional demands.

Although there is still some way to go, all of this has not been a reason to stop women who are already a reference point in the world of cryptocurrencies. Among them, Claudia Giraldo.

Claudia

Giraldo



Claudia Giraldo is co-founder and CEO of Common Sense and one of the leading women in the crypto ecosystem of our country. She has been working for more than 15 years in the world of communication and public relations and has worked in different advertising agencies. She specialized in technology, being responsible for communication strategies for large companies such as Intel, Danone and Amazon Web Services. In December 2021, together with her two partners, she founded CommonSense Finance, a Spanish wealthtech startup, which is aimed at both individual investors and companies, as well as institutional investors that want to enter the market of crypto-assets in a manner that is "more efficient and with more common sense". In 2022, the company closed a financing round of more than 500,000 euros to develop and execute new products and strategies with crypto-assets and tokenized assets, and to continue consolidating alliances with technological partners.

Claudia is restless and curious by nature. Precisely this concern and curiosity led her to investigate about technology and attracted her to the field of blockchain and crypto-assets. “Creating CommonSense was something natural. As soon as I could understand and explore the technology behind cryptocurrencies more, I knew that we had to bring this system closer to everyone,” says this innate entrepreneur. To be precise, placing the investment of this type of assets within the reach of traditional investors is the motto of this company.

At CommonSense Finance, they take investment strategies and methods that work and have been tested in the traditional financial world to the world of digital assets, so that the traditional long-term investor can expose themselves to crypto-assets in a way that is already known to them and more conscientiously, diversifying their strategies.

With Claudia talked about where this technology is going and why it is important that more women should form part of this technological ecosystem.

“Decentralized finance has the power to revolutionize the financial system”



Claudia together with her two partners, Eduardo Forte (right) and Luciano Insua (left)

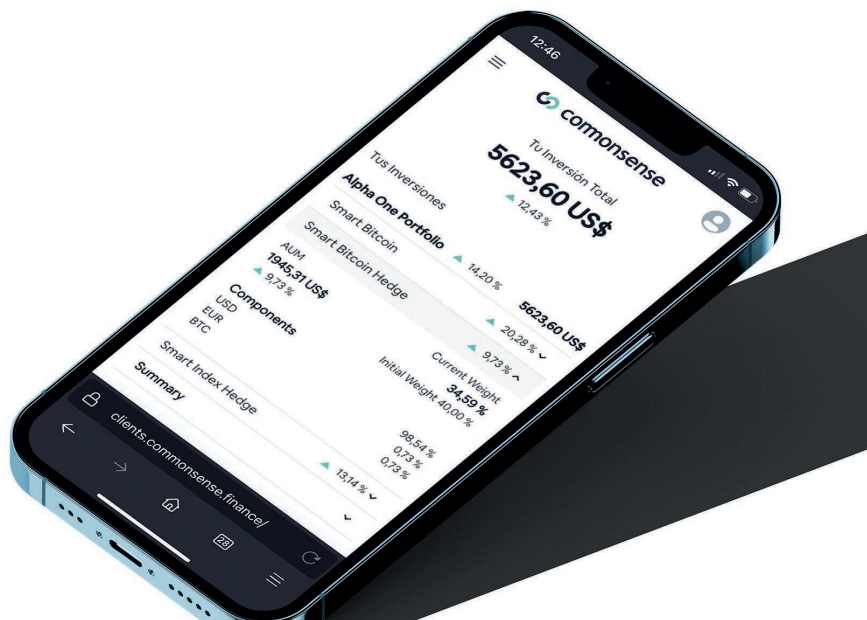
How did your relationship with cryptocurrencies begin?

The first time that I heard people talk about Bitcoin, didn't understand it very well. Months later, I began to read a lot about the subject, since it caught my attention that, for the first time in history, a decentralized and programmable form of money had been created and developed, with a very high technological level. I started to see that this could greatly change who we make payments or transfer value between people, without the need for third parties that mediate in the process.

“DeFi only needs the community on which it is based to function and that is something hyper-disruptive”

How?

Thanks to cryptocurrencies and tokens, we now have the opportunity to build this whole new financial system without barriers on blockchain. Through decentralized finance (DeFi), it is much easier, because to acquire or build a financial product, you do not need anyone's permission. Many times in the bank, for example, they ask you for a fixed salary and there are many people who don't have one, because they work as freelancers or because they have temporary jobs. I am convinced that, in a few years, people will spend more time on the Internet and it makes a lot of sense for there to exist other types of digital currencies and digital assets that we will possess, we will transfer, we will use, buy and sell thanks to blockchain technology.



Your mission is for people to start building their digital wealth through crypto-assets, is that correct?

Exactly! We would like this to be so because they have the power to revolutionize everything about the financial system and the way in which the economy is generated on the Internet. Before the emergence of blockchain, only large institutions and the banks had access to the advantages of the financial world, and to carry out transactions, there were many third parties involved who took their share of the cake. We want put the investor in the center, creating digital products that allow people to invest in an easy, diversified and decentralized way. We can't predict what will happen, but we know this is the future and we want to make it available to everyone.

What must be done in order to “expand” the message?

I believe that those of us who are devoted to this have to do a kind of pedagogical job. It is very important to explain the benefits of blockchain technology and crypto-assets in order for people to have the option of being able to choose while knowing what it is and how it works. It is also important to warn of the risks and threats, as everything is very incipient and there is a high barrier to entry because usability is still complicated, which can expose users to certain dangers and

hacks. I believe that crypto-assets and decentralized finance allow us to move forward as a society and I believe that they represent a great opportunity to empower women.

What can they do for women?

I think there is a great opportunity for more women to be able to lead the technology and finance sector. It is an accessible and open system, where all people can be empowered equally. It is a sector that is creating employability and it has the potential to create more financial inclusion, which benefits us. Many women are already playing important roles in the world of cryptocurrencies, from software developers to executives but, like with STEM degrees, and as in the world of science and technology in general, there is still a long way to go and we have to enter to a greater extent.

“Crypto-assets are an opportunity for more women to lead the technology and finance sector. They empower all people equally”



Why is it important for women to enter?

We have to enter because these are the new finances of the future. The control and management of finances means power to decide and freedom. It is important that we are part of the “conversation”, because together we transform the industry from different points of view. We incorporate and contribute new knowledge to the system and new financial habits. It is also very important for there to be women in the development of software, for programming, because we thus prevent technology from being built only from one gender perspective. It’s coming. I see the progress in my day-to-day life, but it is difficult to change history from one day to another, because in the home and in the financial world and business, in general, finance has always been controlled by men.

How can we attract a female environment to enter crypto?

We need female references to explain their experiences, investing and building crypto projects, for example, so that we can feel identified. Communication is also very important, how we address women to attract them to the technological environment, because this cannot be done in the same way that you address men. Crypto and blockchain companies should adapt their messages to all audiences. It is

important that, from a young age, in schools, things like programming are taught to all children. I perceive that there are many very young women in the sector, although I also detect that in Spain we are very much a minority. In the US, I noticed that there is more equality in the decentralized finance ecosystem. Little by little, it will change. Financial education is also vital.

What role does it play?

I believe that training and educating yourself in new forms of economics, beyond the traditional ones, becomes essential. For everyone. Many times, we do not understand traditional systems, nor how a loan or mortgage works, never mind when we talk about tokens! Information, risk management, investment in secure and trusted platforms are also part of this formula. Information is power. We must educate and, at the same time, demystify.

“Educating yourself in new forms of economy becomes essential. Information is power”

Invest with the head...

I think that before investing in tokens or in crypto or DeFi companies, it is important to train a little in blockchain or cryptocurrencies, review the projects and find out who is behind them. The same thing that is done, or that it should be done, when you buy a share of a company that is listed on the stock market. Why do people invest in Amazon or Microsoft? Because they believe that it is a company that has all the ingredients to succeed, corner the market and generate high returns for its investors. I think the most important thing when investing in cryptocurrencies, just as on traditional markets, is to do so in an orderly manner, with objectives and diversifying the risk.

Do you believe that crypto will come to be used globally?

The adoption curve of new technologies is not as fast as we think, and that's why I think it will occur but there are still some years to go. Instagram, for example, took eight years to become

a network that people of all ages use. This will be faster than then, because social networks already exist and this accelerates it, but it is true that in crypto now there are those who are concerned with technology. There are some barriers to overcome...

Which is the greatest?

One very big barrier is user experience. Access is still difficult for everyone. This is the most complex part. In the end, a wallet must be created, tokens bought...people on the street are not familiar with this. We are in that prior stage in which technology has to facilitate the entrance of the user. There is also a cultural issue. We have to understand that, with money, we can do many things and that your money can generate more money. I think that in Spain, we do not have this culture so much. We also need third-party validation.

What does that mean?

When you see that your relatives and your close circle are doing this and using it and that there is no problem, then we will be more encouraged. As humans, we need third parties to validate us. That is what we are working on most, on the issue of reputation. I have studied the technology and seen how it works, I speak with the people that are building all this and for me it is real, but most people do not trust how this works due to ignorance. Then there is the issue of regulation...

Technology is always one step ahead of legislation.

It is not easy to regulate the crypto-asset market, because each type of token can represent an asset of a completely different legal nature and its own specific regulation. It is difficult to fit them all under the same regulatory umbrella. Most countries already have laws to regulate the marketing of financial products, but they are designed for products traditional financial products.

Is a good time to invest in crypto-assets?

Definitely, because this will not mean only investing in an asset, but in a project with its objectives, its roadmap, its tokens to be used and its vision about a part of the new financial system that will happen and is already happening on blockchain. This is the perfect time to investigate and enter this world, to be with the pioneers, with those who are setting all this up.

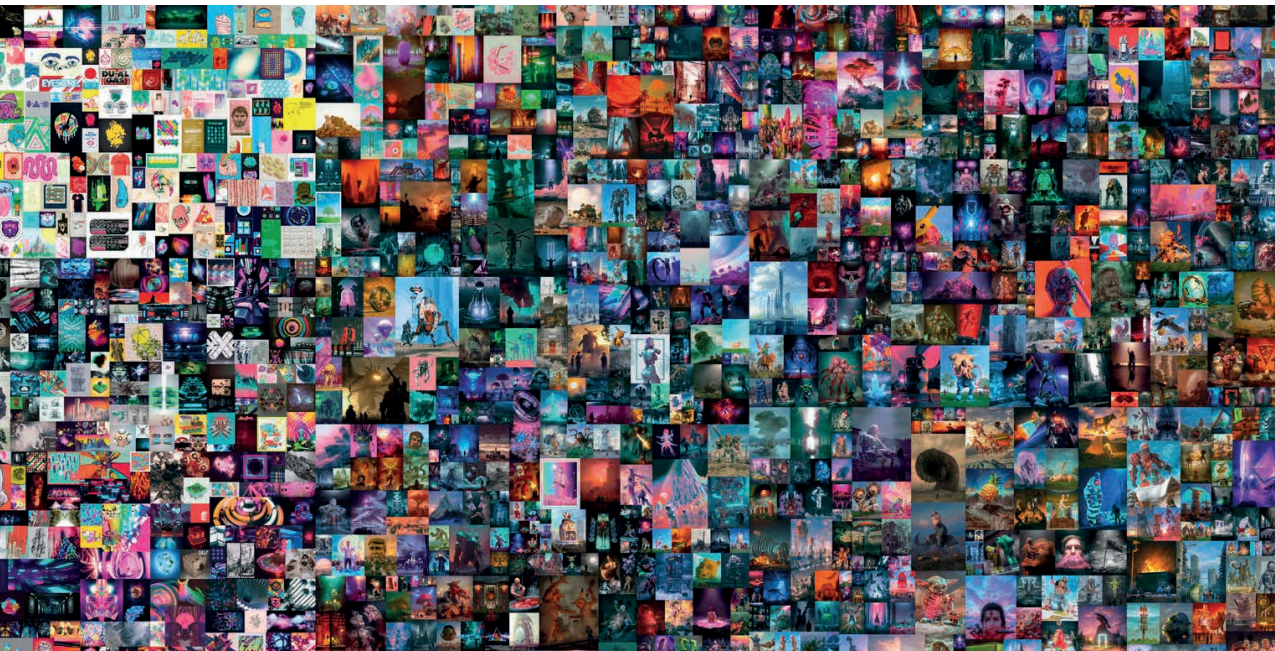
CRYPTO-ARTISTS and NFTs

Javier Arrés

and global fame with digital art

Gala Mirissa

and female talent made into NFTs



Everydays: The First 5000 Days (2021) by Beeple

CRYPTO-ARTISTS and NFTs

They have become the most prized objects of collectors and have revolutionized the art market. How can a Picasso painting cost the same as a digital file? Many will ask themselves.

The truth is that crypto-art is moving millions of euros. These are digital works that are paid for with virtual currencies and some involve colossal figures. The technology that is behind this type of artistic creation comprises the famous NFTs, (Non-Fungible Tokens), a technology that allows the buyer of the work to prove that it is their property—even if it does not involve intellectual property rights— and regardless of the number of copies made.

The market has risen so much that auction houses do not want to be left without their piece of the pie. The famous Christie's makes more than 100 million dollars a year with this new art form and even sold a collage consisting of more than 5,000 virtual images for 69 million dollars, a figure that exceeds the sale price of Salvador Dalí's most expensive painting.

With the arrival of the metaverse, it is expected that crypto-art will continue to expand throughout this new universe and that activities related to culture and art will take center stage because, according to experts, it will be a perfect decentralized showcase for artists.

Javier

Arrés

Javier Arrés is one of the most recognized crypto-artists in the world. Passionate about drawing since he could remember, his illustrations have appeared in such prestigious publications as The New York Times (he designed a cover for the newspaper) and Corriere della Sera, and won the London Art Biennale in 2019, but It has been blockchain technology and digital ownership certificates known as NFTs that have changed his life. At the start of 2020, he was among the 16 best-selling artists in the world and in 2021 he obtained a volume of sales of 1 million euros with his works and collections.



Drawing is nothing new to him. From a very young age, it was his passion and, before being the visible side of crypto-artists, Javier worked as an illustrator and graphic designer in advertising agencies and in animation studios. In 2019, through the MakersPlace platform, he came into contact with NFTs and discovered the potential of being able to make art with this technology, something that radically changed his life.

The New York Times or the American Football League bid for works from this man from Granada, considered to be one of the main world figures in crypto-art. An example: his “Cool glasses” collection is made up of 26 animated glasses that were auctioned off, and in the first hour, they had already sold for half a million dollars.

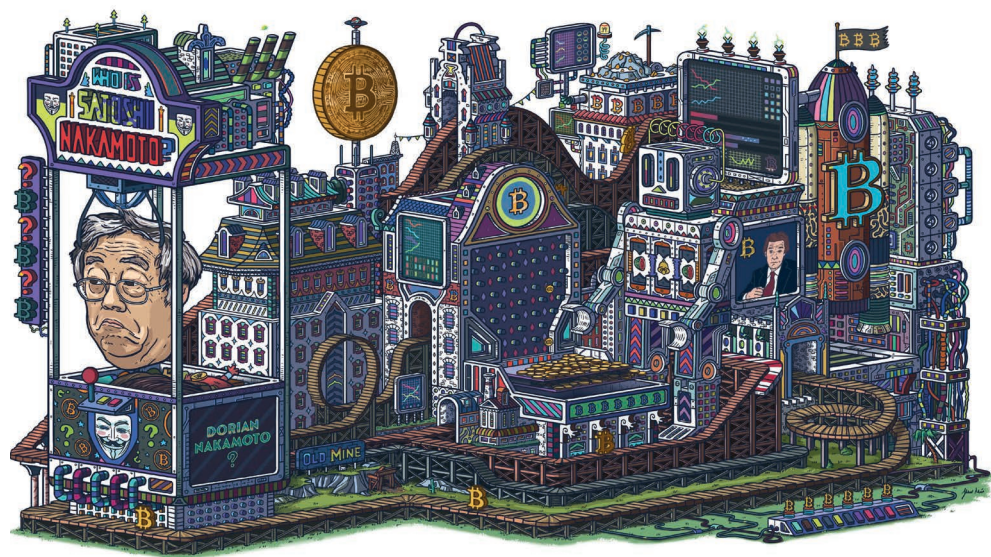
Now he lives for and focuses on creating his work, whether for collectors, brands or his own collections, which are auctioned on online platforms.

For him, NFT technology was the perfect solution to be able to sell his digital art. “People were fascinated by my works, but there was no way to sell them until NFTs arrived.” Arrés ended 2019 with 300 euros in his account but by the spring of 2021 had 900,000. “I believe that everyone looks at the amount of money I have earned, but I look at the immense number of artists who, like I used to, have another job to live off and now sell their works for 500 and 600 euros thanks to NFTs.”

Javier is witness and firmly convinced that the metaverse and blockchain technology are able to revolutionize all sectors, as is the case of culture and art, and that the characteristic of decentralization provides “a freedom that we artists cannot find in the real world.”

“All NFT artists should have a specialized tax advisor so as not to unintentionally defraud ”





Who is Satoshi Nakamoto

Why do you think people like NFT works?

They are digital and unique works, because they are created with codes that guarantee they are original. An NFT in itself is proof of authenticity. It is something that only you have. We human beings love to feel the desire of having something that everyone wants, but that only you can possess.

How is the price of a digital work set?

NFTs can have a fixed price or be sold during an auction. In any case, as the creator, you have full authority to choose the best pricing strategy. If you set a price too high, you run the risk of never being able to sell that item, and if you select a price too low, it will be more difficult to increase it gradually. What is certain is that we earn the most money at auctions.

For many people the amounts paid are an enigma.

The collector is interested in the authentic piece and having an original has a price. Without an NFT, it has no value. The collector who believes in this and is dedicated to this is familiar with the ecosystem and knows what they are buying and the worth that it has. I myself had many reservations at the beginning about setting prices, but I gained confidence because there is a community always willing to encourage the bidding. People also have to understand that there are works that take an artist many years to make and then digitize it, like the collage sold at Christie's. Also, thanks to the fact that there is already a market and that people are interested, there are many artists that are able to have a normal salary, which they could not have otherwise. I was a waiter for many years, I know what it is like to go out of your way to make ends meet.

What can comprise crypto-art?

A painting, a sculpture, almost anything that can be digitized. Even a tweet! Someone bought two converted tweets from me in NFTs and it was the first time in Spain that this had been done. They paid me almost 600 euros for each one, even though I would have sold them for a few euros...

How is digital art consumed ?

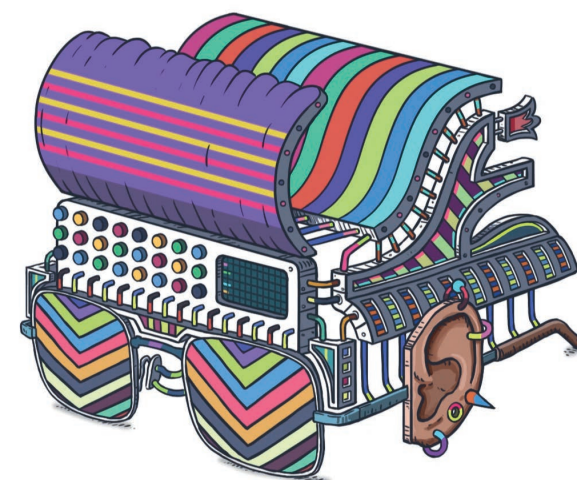
Like traditional art, but on other devices. Many collectors have large screens in their homes or galleries designed exclusively for these works, and they can show them on their mobile phones or include them in their museums in the metaverse. The use is also provided by the artist and the NFTs: the fact of being an owner of a visual could give you the right to participate in an exclusive auction. It is like providing additional value. Also, I must say that when a buyer

buys an NFT from me, I then always send them the work printed on paper, because I think it has a lot of charm.

What has the emergence of crypto-art meant?

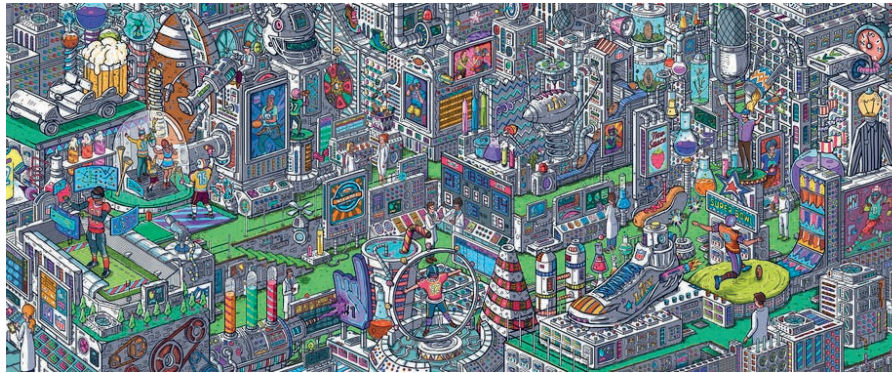
Many things! On the one hand, it democratizes the issue of collecting, because this technology includes people who are not big investors or who would never have considered collecting. It makes the artist-collector relationship closer. You can even chat with them. And, on the other hand, and most importantly, it is a decentralized market, in which there are not so many intermediaries, and through which you can reach people from all over the world with your work. You can find collectors and promote your job without depending on anyone, be freer.

“Crypto-art can cohabit with traditional art and make much more interesting projects. It's another channel, another possibility”



The Cool Glasses

“When you make a lot of money in cryptocurrencies, you have a problem. The issue of taxation and how to do things well keeps me up at night.”



American football laboratory-The mural

A different market.

Exactly! The key is understanding that it is not a style in itself, it is not a technique, nor a way of drawing, but rather crypto-art is the market where the works are sold, the way in which they are sold and the possibilities offered by this market system.

There are many people who do not enter the traditional art world but, however, do enter the world of crypto-art, because they have the feeling that the traditional art market is very elitist. In addition, blockchain makes it possible to monitor all the movements of a digital work and guarantee his authenticity and ownership, in addition to preventing counterfeits. It is transparent and accessible to everyone around the world. Of course, all this does not replace real art, it cohabits with it, makes projects much more interesting. It is other channel, another possibility.

Is there over-expectation in the market?

I think so. At first there was excessive euphoria and the feeling was created that everything that was NFT was of value and that is not the case. In the end, this is also an art market, it is being regulated and will be so more over time. Now there is great excitement. We believe that anything that is an NFT is worth money and that is not the case. There are people who think that their vacation photos on the beach are going to be NFTs and that a collector is going to buy them for \$20,000 and that is a mistake. The wish is for the most solid projects to be those that succeed.

They are not for everyone...

The thing is that I receive millions of emails from people who have never drawn in their lives and who have no



The Cool Glasses

idea about art to ask me how they can become rich making NFT works. When this started to make a lot of noise, like in 2020, a lot of celebrities started to come out and jump on the bandwagon, like Paris Hilton, and people started to think that this was a piece of cake and to speculate. Not all NFTs are art and not all are of value.

Do you only charge for your work in cryptocurrencies ?

Today almost 100%. When half of what you earn is in cryptocurrencies, you have a problem. The issue of taxation and how to do things well in that sense keeps me awake at night. At first I had no idea how it worked, I was earning large amounts in cryptocurrencies and I could have defrauded a lot of money and would have gone to jail if he had not found specialized tax advisors. The management I have always used had

no idea, for example. Everyone who dedicates themselves to this should have advisors to help them sleep at night. It's very easy not to know what you're getting into.

I can imagine...

Earning so much money in cryptocurrencies and in such a novel way is crazy. I believe that I have aged ten years all at once. When I earned half a million in just over an hour, I didn't even know what to do with it, how to present it or what information I had to provide. Although we are working on it, the ways and framework have not yet been created to legalize everything in a simple way. It is very important for regulators to prepare themselves. I want to know what I have to pay and have peace of mind. Artists who want to get into NFTs write to me every day asking me how this works.

And what do you say to them?

Two things: on the one hand, that they should forget about getting rich in no time and nonsense like that. This is going to have continuity, a style of its own and it is necessary to be very constant and honest with your work. In addition, you must be present on the networks and try to do good marketing and be seen. And, on the other hand, that they must have good advisors who are trustworthy, because I would be surprised if an artist could control everything that must be taken into account in the fiscal aspect in order to do things well.

What path do you believe NFTs will take in our country?

The certification of digital assets through blockchain will follow in the long term.

People forget the immense usefulness of this, which goes beyond crypto-art. NFTs can be lease agreements and serve to guarantee the authenticity of many things, or be used as a way to finance projects, for example. In the case of Spain, I think it had not quite taken off and there is a lot of mistrust due to the fact that they are non-tangible assets. There is no internal market for digital art and there are no large-scale collectors. In that sense, we are quite a way behind other countries, but I believe that we will soon realize its potential. I'm convinced that NFTs will focus more on video games and enter the world of promotional marketing. It's going to have a great impact.

What role do you think the metaverse will play for artists?

It will be a great showcase for culture in general. Decentraland, for example, has the most important crypto-art museum so far and it is a golden opportunity to be able to reach people from all over the world with your work. That is marvelous! This will allow us to connect more with the public and reach it in far more creative ways, such as doing personalized tours where the actual artist shows their work directly, or to offer, through the virtual and augmented reality of the metaverse, the possibility of actually entering the work, for example.

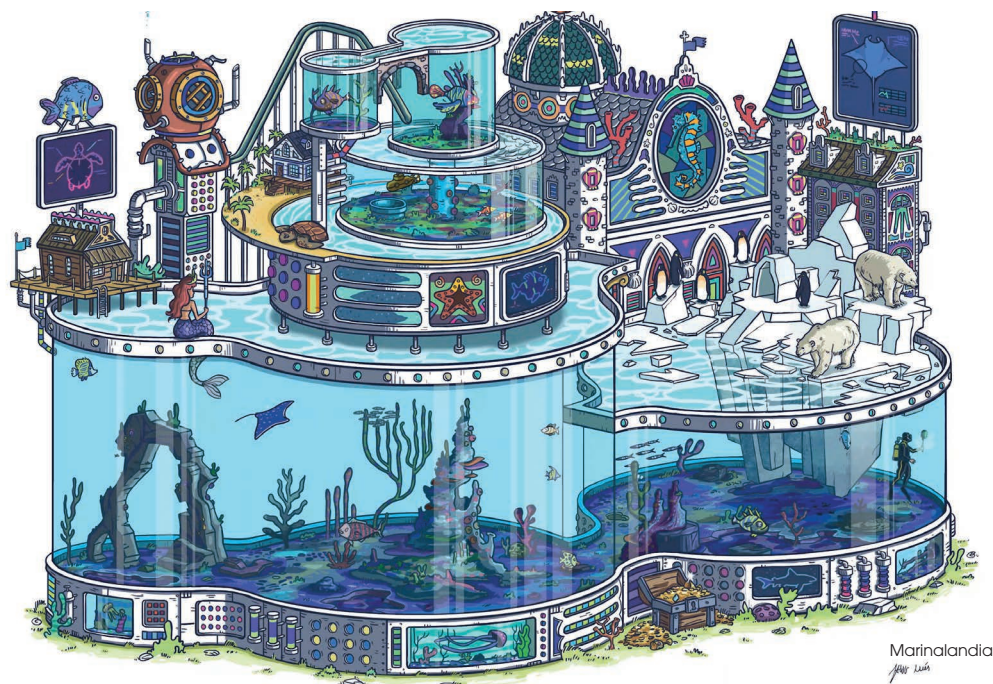
And what should this metaverse be like?

What we have to try to do is not transfer to the virtual world the problems of the real world, as the such as speculation, misappropriation of works or the lack of diversity in the market, in which the majority of artists are men. These are challenges that metaverses must take into account if they want to build spaces that are truly diverse and safe, where crypto-artists from anywhere in the world can develop their creative careers with all due guarantees and under equal conditions. I sold a work in exchange for two pieces of land in a metaverse, which I intend to benefit from with my art.

What do you believe Picasso would think of the metaverse and NFTs?

I think he would love the idea that what you do in the real world can be reflected in the virtual one. I think Picasso would buy land in the metaverse and would create his own universe of paintings and sculptures. I do not think that he would be worried that it was digital, because what the artist wants is to create and be paid for buying time and continuing to create.

“We have to try not to transfer to the virtual world the problems of the real world, such as speculation, the misappropriation of works or lack of diversity”





Gala

Mirissa

Gala Mirissa is one of the pioneers of crypto-art in our country.

With more than 420 NFTs sold on the main international platforms, she is recognized around the world for her works, in which women are the protagonist and her main source of inspiration. The BelnCrypto platform, a leader in crypto-art sales rankings, have named her one of the three most influential Hispanic women in the industry. She created the first front page NFTs for Elle Spain magazine and even a small collection of digital works for a Hollywood movie.

Gala explains that she came to create NFTs based on a video call from the founder of Makersplace, one of the main digital art platforms. Before that, she was devoted to creating GIFs and animated works by renowned painters and photographers for exhibitions or advertising. The history of her relationship with this technology and digital art is that of a person that arrives without expecting it. "It started as a hobby. I had to stop working because I was diagnosed with fibromyalgia and I could not move for three years. The fact of being able to create something that involved movement made me feel freer," he says.

In fact, her Painful collection is the work with which she most identifies. "In this collection, I reflect the pain that I feel, the love, hate, my fears, and the most intimate part of my being. My female empowerment or my fragility," Gala tells us.

Gala recognizes - and agrees with other artists - that the world of NFTs and digital art is stressful due to the boom that has emerged, "in which everyone wants to join the bandwagon due to the impression that it makes a lot of money". She also recognizes that there is a lot of intrusion on the part of celebrities.

"For me, it is just another form of an expression of art," she says, a decentralized form of art that allows artists to sell their works around the world and become known thanks to the globalization of the Internet.

Gala is one of the nine women who appear on the TOP 100 list of NFTs digital artists around the world. Convinced that this type of art is here to stay, she also believes that, in a few years, virtual galleries in the metaverse will be something we regularly attend.

"The metaverse can ensure that access to art is democratized "

What is crypto-art for you?

Crypto-art is a very real revolution. It represents a new way of getting things done and a huge opportunity for creators and artists. It has come to stay, of that I'm sure. In the virtual world, NFTs, along with digital art, will be key.

It seems that it is clear to you...

The metaverse is being building with NFTs. Before "moving" to that world, we are already buying the things that are going to be inside, such as plots, clothing for the avatars and, of course, art. As the consumer society we are, we like to differentiate ourselves from others through objects. NFTs are the way in which we are going to take our objects, our properties, our works of art to the metaverse... Thanks to blockchain technology, we can be holders of digital assets.

They represent our value in the digital world.

That is right! It is very important for NFTs that people own to be able to travel with them throughout the metaverse, to



exist in any virtual world of any nature, because this will be our digital identity. Our value, our belongings, have to be worth something anywhere in this new world. It is like an identity card showing who we are and what we have in the digital universe.



Kumiko, of Gala Mirissa

“The metaverse is being built with NFTs. Before “moving”, we are already buying the things that are going to be inside.”

As regards everything that we own...

I believe that NFTs, especially in the world of the arts, are successful because we live in a society where you want to have something unique. The attraction that they have over other types of assets is undeniable. This contributes to them continually being revalued and this is why it is a great business and a great investment for the future metaverse. NFTs have become perfect allies for the digital format not to undermine the authenticity or exclusivity of works of art. If previously it was an expert that used to ensure the authenticity and ownership of a painting, this is now done by the blockchain network. It is also true that NFTs can be many things. Nowadays, almost everything can be digitized and turned into an asset.

What is your average day like as a crypto-artist?

Far from what it may seem, it is a full-time job. I work from Monday to Sunday and it has hard work. You have to always be connected and be attentive to all the exhibitions that come out and to everything new going on. On the other hand, it is a much freer job than if I did it for a physical gallery, for example.

How do you imagine art in the metaverse?

As a crypto-artist, I would like art, like other cultural disciplines, to be present in the metaverse to contribute to a better, more equal and free society. I think it is a tool and a technology that has the potential to ensure access to art is democratized. I would like it to be used to explore art galleries outside of the usual elitist environment and I believe and hope that all artists can have their space there. I imagine virtual cities, with their open museums, where NFT art is displayed in new ways, taking advantage of that new digital environment, and that these can be enjoyed free of charge. I am sure that visiting art galleries will be part of our daily lives.

What has this technology brought to you personally?

The freedom to work autonomously and independently without the need to be promoted by third parties who benefit from the artist's efforts, who ask for exclusivity by limiting the horizons of the creators or who provide contracts with abusive commissions. Another advantage is the freedom of expression of our works. We are freer in that sense.

What do you like least about the sector?

In the beginning, I was passionate about the idea of decentralized art, around which all this was created, but by misfortune, this movement has been exploited and today there is a lot of speculation. Crypto-art and cybersecurity are also very closely connected. Scams in the world of digital art are very common and one has to be very careful. I am also concerned about volatility. Every time I get paid in cryptocurrencies, I convert it directly into euros at the time so as not to lose anything.

How do you set price of your works?

Once the work has been created, I check the price of "GAS", which is the fee that blockchain technology charges you to make a transfer, and which can be as volatile as the currency.

Do people earn more with crypto-art?

Well, it's like everything, once you're in a community of artists and collectors, and you have a certain name in this world, it is easier to sell than in the physical world. I know people who find this difficult, but there are also others who arrive new and are successful. Obviously, you earn more money because there are no intermediaries, although if I were a man, I would earn more.

Is there a lot of inequality in the prices?

Men earn much more than women. Many times, I think I regret not having created a fake profile as a man, because I would have earned far more with my works. There are many women in crypto-art, but they are in the background and the most visible and relevant figures are men. In the end, it is the same in all professions. But it is true that in the area of NFTs, I see a lot of movement in favor of the visibility of female artists. People are tired of those archaic paradigms. That is why I believe that the NFT community is helping to narrow the gap, both with us and with other minority groups.

How can we avoid this?

It will be difficult. We must focus on making the women who already exist in this field visible, and there are many. What I am clear about is that a very powerful and prepared female movement is being born in crypto-art that is going to leave us speechless. I believe that women are not going to be silenced in art as we were historically in the past. I think there is going to be a change.

A lot of technology, but society is the same.

Exactly! Despite digital developments, all this is based on the society that we already are and the same problems are transferred: inequality, no recognition of work in your own country and having to look for opportunities abroad.

“A very powerful and prepared female movement is being born in crypto-art that is going to leave us speechless”

Immigration in the digital universe?

I hadn't seen it that way! In Spain, very high commissions are usually requested from digital artists and, in the end, you end up going to international platforms. In the United States, you have a lot of freedom to move in this sense and they treat you as if you were a star. I believe that there is still a lack of culture of the digital world and awareness of what we have at home in order to be able to protect it and give it value. We have missed very good opportunities in this sense.

What do you mean?

An example: an NFT was made of the Casa Batlló in Barcelona. It has become the first UNESCO World Heritage building to become a digital work of art, to then be projected into the metaverse. It was sold for a final price of 1,380,000 dollars. That's really amazing. The fact is that they commissioned it from Refik Anadol, a foreign artist, who has just positioned himself as number one thanks to this job. Deep down, with such good artists that we have in Spain, it is a bit annoying that we don't draw on the talent here to do this type of work, which also has to do with the art of our land. We could stand out in this artistic discipline, because we have the professionals, but we have to bank on them.



The voice of Frida Kahlo of Gala Mirissa.

“I regret not having created a fake profile as a man, because I would have earned far more with my works.”

Do you believe that NFTs are already affecting the traditional art business?

Physical galleries have long ceased to be the main search center for major art collectors. Now they are looking for more on the Internet or on social networks. In just three years, art has gone from being something almost non-existent in the purchase of NFTs to becoming a boom. I also believe that the differences between investing in traditional art and doing so in NFTs are becoming narrower. Traditional art involves many costs and this technology democratizes investment and makes art available to more people. Not only this sector, but traditional businesses in general are changing.

Is this the time to adopt it?

We must be aware that blockchain is part of the engine that will activate the economy in the virtual world and that represents a great opportunity. All this new technology changes the way of doing business and managing it, the way of making money or the way we buy. Everything is changing and we must be attentive and take action as soon as possible in order to be leaders in

this new digital ecosystem, which takes us to worlds with new protagonists, such as immersive reality, the metaverse or the NFTs themselves, which are key to the virtual world that is coming.

How do you imagine the future of culture in the virtual world?

As far as art is concerned, I think that collectors will increasingly enter virtual galleries to buy NFTs and artists will buy plots to create our own spaces and centers for exhibiting. I believe that all this will settle down and there will not be such an explosion of digital art as now. I also imagine going to a concert with our avatar and acquiring tickets to cultural events as collectible NFTs.

And how do you imagine or wish your future to be in the sector?

When I retire, I want to make physical art! Now I have a lot of stress and I want a calm and slow future. I would like to be on the beach enjoying and disconnecting from technology. There is nothing better than that real life. We cannot miss out on it.

WOCA (Women of Crypto Art) is a community focusing on emphasizing and supporting women in the crypto-universe. Founded in 2020 by a group of artists and collectors, it currently includes people involved in the world of NFTs with an interest in supporting the diversity of those acting within the space.

METAVEVERSE

in our cities

María Jesús Villamediana

Head of Madrid in Game Videogame Campus

» The metaverse enters the cities

It is clear to us that the metaverse is generating a business economy and is growing as its own industry. Besides the companies and brands that are already committed to this environment, governments are already creating their strategies to be in a good position and attract talent and business.

Pure business aside, the metaverse goes far beyond video games, social networks or mere entertainment. In this ecosystem, we can find applications devoted to urban planning, engineering, economics or health. That is why large cities around the world are already immersed in digital projects based on the metaverse, with the aim of promoting a new way of managing the city and encouraging the participation of its citizens.

Precisely as a result of these applications, the concept of twin cities, or digital twins, has emerged, which defines the virtual representation of real cities in the metaverse, in which a multitude of situations can be simulated that help their management and in which can obtain data from the real city to predict, among other things, demographic trends, possible failures in supplies or mobility problems.

Tourism and cultural heritage already benefit from technologies associated with the metaverse, using, for example, so-called three-dimensional backup copies, exact reproductions, such as that of León Cathedral, which has allowed architects to improve the positions of certain structural support elements, saving thousands of euros in future planned repairs or restorations. The metaverse in our cities.



María Jesús Villamediana

María Jesús Villamediana is an industrial engineer and director of the Madrid in Game Videogame Campus, a project that was born to boost the development of the video game sector and technology in the capital, and that has become one of the greatest public initiatives for fostering national talent, creating jobs and attracting foreign investments in our country. Convinced that the metaverse can provide benefits and multiple applications for cities and their citizens, she is a firm defender of the sector public in Spain focusing on fostering this industry and collaborating with companies and universities to position ourselves as an international benchmark and take advantage of its full potential.

From the CES in San Francisco to the Mobile World Congress in Barcelona. María Jesús almost never misses the main technology events and fairs in the world. She is passionate about technology and everything to do with innovation, especially if applied to cities. An industrial engineer, she was one of the pioneers in using artificial intelligence in Spain and was responsible for automating some of the Unión Fenosa power stations with this technology. She was also responsible for information systems at the Madrid City Council, where she created Línea Madrid, the citizen attention service. Now she directs the Madrid In Game Video Game Campus, a kind of Silicon Valley in the Casa de Campo of the capital: it has a cluster formed by more than 70 organizations, between universities and companies, with the aim of generating networking and functioning as an accelerator of projects linked to the industry. It also has a convention center for holding competitions and conferences, and a Center of High Performance for e-sports. Everything is for the purpose of training, attracting and retaining professionals and boosting the technology sector. María Jesús always emphasizes that, in our country, “there is a lot of talent” and that “the efforts of the governments and authorities have to focus on retaining it and offering opportunities to stay”.

As a good fan of technology, she says she started to read and hear about the idea of the metaverse years ago, and it was clear from the outset that the reality of this virtual environment, blockchain and artificial intelligence could be “tremendously useful” for the management of cities and of its citizens and serve to bring public administration closer to society.

In fact, she confesses that her team has been studying for some time what real initiatives are being carried out around the world to apply this environment to different types of cities to improve their management, with the idea of seeing what could be applied here.

With her, we talked about why it is important for governments and administrations to promote and bank on the metaverse, how society can or cannot benefit from it in our daily lives, and the challenges this entails.

“The metaverse has enormous potential for improving city management”



Why create a videogame Campus?

The purpose of “Madrid In Game” is to retain talent, create quality jobs and attract large companies in the sector and strengthen the business fabric to position ourselves as a world leader in this industry. We have tremendous talent in our country and a booming sector. The issue now, which is in fact the objective of the projects we do, is to ensure that all that talent stays in Spain and does not go abroad as has been happening.

And how will it be possible to retain it?

I think supporting entrepreneurship is key to attracting and retaining that talent and generating new opportunities. For this, we have a program of entrepreneurship. We also offer business advice and access to technical and technological resources to promote the development of new companies and projects.

What does the entrepreneurship program consist of?

Right now the first 30 companies have already been selected to work in the Campus and with the first entrepreneurs who, for six months, will be able to accelerate their projects to convert them into solvent and sustainable companies on a business level. Besides,

the different companies that present innovative or interesting projects will receive advice from mentors, help with investment, legal advice, presence in events and the support of specialists in business.

Assistance to grow.

Institutional support is key to new industries being able to produce companies and projects. We have collaboration projects with companies and other agents in the sector because, personally, I believe it is the best formula to promote this industry. Public administration is a key factor for doing this, but those alliances must always be sought.

Are there any disadvantages that companies note as regards setting up in our country?

Some of those we have talked to demand tax improvements, because in other countries there are indeed state reductions for this sector or tax incentives, as in the case of the audio-visual industry. It is something pending that I think will have to be managed.



Campus Madrid in Game.

“Its application can be key to the management and optimization of resources”

Why is it important for Spain to position itself in the metaverse industry ?

It is a chance for innovation and competitiveness, in addition to generating new economic opportunities and promote the growth of industries related to virtual reality, augmented reality and artificial intelligence. Spain can stimulate growth and development in the technology sector,

attracting investments and companies related to these areas. This would contribute to the creation of jobs and the strengthening of the ecosystem.

How could the metaverse help with city management?

The metaverse can help in many ways! Allowing better urban and architectural planning, helping to foster greater citizen

participation or facilitating education and access to information. It is true that there is still a long way to go for it to be a reality, because the technology that achieves interconnectivity between several metaverses or common interoperability does not yet exist, but its potential is enormous. We are doing a study on projects and ideas being designed in other cities around the world to see what we could apply here.

And what is being designed?

Right now we analyze initiatives from 60 cities and do follow-up and monitoring to see which ones are actually carried out. This is a medium-to long-term study. Although it is true that there are many interesting projects, they are not yet being implemented. Curiously, Seoul is the city in the world with the greatest metaverse initiatives and we realize that none has yet been implemented. Even so, we have to pave the way and not wait, because if not, we will arrive late.

In what other ways could it be used?

In general, it will be a perfect tool for doing tests and simulations, because it will generate a way of feeling and living closer to reality than any other format. Although for me, as regards a specific implementation, one of the key points or useful areas is in the management and optimization of resources.

For example?

It could be used to simulate and optimize the waste collection system. Data can be analyzed in real time, such as traffic, location of garbage containers, volume of waste generated and the weather conditions, in order to plan, for example, more efficient routes for garbage collection trucks. It can also have great applications for improving urban mobility.

“The metaverse can improve transparency in city governance and facilitate citizen participation ”

Tell me more!

We will be able to simulate and optimize urban mobility, including public transport, vehicle traffic and transport infrastructure. We could design efficient transportation systems, predict and address traffic problems and promote sustainable mobility. Also, it will be very useful for urban planning. Urban planners could create digital representations of cities and the citizens could also participate in the process, contributing their opinions and visions about how they would like their environment to be developed.

Metaverse to encourage participation?

Definitely! I think it could foster greater transparency and democracy in city governance and facilitate citizen participation in decision-making. Perhaps also interact virtually with the administration. The metaverse could act as a centralized platform to access public services and obtain information about the city, for example.

Do you think citizens know the potential of the metaverse?

Not at all! Nowadays there is a lot of ignorance and I think there is a lack of information and pedagogical work at the important level of society. Technology is moving forward and we will end up being part of this; therefore,

it is important for us to become familiar with it. In the same way that the projects we mentioned before are very important, it is equally important to give them visibility and bring all this closer to the general public, to the population, so that they know the potential of this industry and of the technology and how they could use it. One way to promote this is also by making it “knowable” to everyone. On the Campus we have an area dedicated to raising awareness in society, to bring this sector to the people, to families, through events and seminars, among other actions.

What challenges could emerge on using it for city management?

It will be necessary to ensure it is inclusive and represents all communities and social groups. It is also important to guarantee the privacy and security of citizen data and the city’s sensitive information. Another challenge is ensuring that decisions and planning made in the metaverse are reflected in the physical world and have a real impact on the lives of people. Although it can be a powerful tool for managing resources, it is vital to consider the technical and, above all, ethical and privacy challenges, because we must be able to guarantee adequate governance to implement it and for this to be a safe environment. That will be the first thing. Without this, it is meaningless.



“It is important for governments and companies to work together to take advantage of its potential”

How can governments and businesses collaborate to harness that potential?

It is important for governments and companies to work together to take advantage of the potential of the metaverse in city management. Governments must provide a clear regulatory framework and establish ethical standards and privacy for data management, for example. Companies can contribute their technical and

financial experience to develop innovative and scalable solutions in the metaverse. It is also important to encourage collaboration between the different sectors and communities to ensure that planning and management in the metaverse reflect the needs and interests of all citizens.

THE LEGAL RULES of the metaverse

Pilar Sánchez-Bleda

Director Metaverse 360 by Auren

Legal challenges of the metaverse

It is a reality that the metaverse, since it was an idea, has revolutionized the legal sector. A markedly traditional sector, which has had to “get a move on” to form part of this new technological universe.

Once again, technology is ahead of legislation and, as far as the metaverse is concerned, almost everything remains to be done.

In this virtual world, situations or problems might arise that involve complex legal issues, which require an appropriate approach and a legal strategy and operations, in order to have a secure environment. This has underlined the need to have legal professionals to address these issues and develop legislation.

Data Protection, the regulating of NFTs, Digital Identity or Governance in decentralized environments are some of the great challenges.



Pilar

Sánchez-Bleda

Pilar Sánchez-Bleda is a lawyer and one of the greatest experts in our country in Intellectual Property, technology law and audiovisual and entertainment law. With more than 25 years' experience, she is today director of Auren's Media & Tech area, where she heads a team that is in charge of everything related to these sectors: from the management of the image rights of personalities or legal aspects in national and international film productions, to business plans for the industry of eSports and video games. In 2022, she created Metaverse 360 by Auren, a comprehensive and transversal advisory service, with a 360-degree approach, aimed at people and companies that want to immerse themselves in this new virtual environment.

One of the aspects that triggers greatest doubts about the metaverse is the ethics and legal part. Without a question, the need to develop legislation to face this new technological universe is enormous. Pilar Sánchez-Bleda knows a lot about that. She is one of the greatest experts in our country in terms of technology law and, in addition is passionate about innovation and everything related to new technologies.

"I'm always training, I try to stay up to date with everything. I think that is vital in my work," she confesses. If there is a conference or technological event, she is usually there to enlighten the attendees. On the one hand, talking about the legal implications and, on the other, helping to promote the business fabric of the tech sector in our country. Precisely in order to achieve this, she became one of the promoters of the Madrid videogame Cluster, where she advises companies of the sector so that they can conduct their business in Spain.

In 2022, she created Metaverso 360 by Auren, a comprehensive transversal advisory service for the metaverse, comprising all the divisions of the company: from the actual creation of the virtual environment and technological format, consultancy regarding strategy and business opportunities (to see, for example, which metaverse might be the most appropriate, depending on the type of client) to specialized legal and tax advice. Pilar leads a specialized multidisciplinary team, in which consultants work along with technicians and engineers, tax advisors and expert lawyers in different areas such as technology law and cybersecurity. "Waiting for the existence of a developed metaverse is a mistake. Now is the moment to invest", she forcefully assures. And she is very convinced that the metaverse has come to stay. "We must be cautious, but not

waste any new business opportunities that it might offer", she states. "I believe that the main monetization will consist of a hybrid business model, combining physical and virtual business, to expand possibilities: what is known as *Phygital*. This is what we're seeing", she says. Despite this, she emphasizes that "it is important to assess the best moment to enter or whether this is worth it or not, analyzing each case," she explains. "The target market is going to be millennials, Generation Z and those who come later."

It is also clear to her that the role of lawyers is key in the development and "disembarkation" of the metaverse because, as she says, "there is a long way to go and massive legal interpretative work is needed."

"At present, there is no specific regulation for the metaverse and we are still in a very incipient phase," she points out. Given this, Pilar underlines the urgent need to have legislation that protects, above all, personal data in decentralized environments and regulations that establish what bodies will be in charge of "intervening" in necessary cases in this virtual universe.

We spoke of all this with her and of the main legal and ethical challenges that the metaverse entails, as well as the stage we are at with respect to regulations and everything that remains to be done.

“The role of the lawyer is essential. The metaverse requires enormous interpretive work”



At what stage are we as regards the regulating of the metaverse?

Today there is no specific legislation for the metaverse, except regarding some topics of industrial property. Even so, we have to think that we are in a much better situation than when the Internet was created, because now there are indeed regulatory bodies that come from fields such as data protection, digital identity or digital fingerprints, for example, which can be taken as a reference and which give us some legal certainty, although much more progress needs to be made. You have to see what existing laws can be applied depending on the area in question. It must also be emphasized that most of the metaverses will be based on blockchain, and this already offers a certain guarantee due to the very nature of the technology.

What are the main legal challenges?

There are key issues such as digital identity and fingerprints; the development of specific regulations in intellectual property environments; the regulating of NFTs and everything related to the committing of crimes, although the main and greatest challenge has to do with data. The metaverse is going to be a universe in which the use of data is going to grow exponentially and the mass use of biometric data will also

come into play, i.e. data describing our individual and physical characteristics and that also serve to identify us, such as our voice, our feelings or facial patterns. They collect data from our body in real time. We urgently need a more detailed regulation regarding this type of personal data.

What aspects should be regulated?

Regarding the use of mass data, we must develop regulations that control their use and mechanisms must be created to minimize or establish limits to the data collected through the metaverse or wearables (clothing or sensation devices) that we will use, to protect the data transmitted and stored. Norms must also be developed for the protection of rights and, above all, roles must be established for “the interveners”, that is, determining whether there will be control bodies to which this new universe will be subject.

“It is urgent to regulate the use of biometric data in the metaverse in order to be protected”

That is no small thing...

We must also remember the security of personal data related to the protection of minors, auditing and transparency regarding automated decisions, avoiding abuse and bias or developing specific guarantees of privacy for the avatars and the fingerprints of the metaverse. There are many regulatory bodies that govern this, but many things are missing. We are not void of data protection, but we must delve into regulations in decentralized environments and establish who is responsible or to whom responsibilities are assigned. There are many issues subject to debate about data that are vital to be able to have a secure environment.

For example?

What responsibility and legal obligations will metaverse platforms have regarding data? How will privacy notices be displayed? How can transparency be expressed and how will we be able to give consent? All this must be detailed. We must move to a higher level of development to protect ourselves.

And who has to answer these questions?

The metaverse has no borders, but a lawless universe cannot exist. It is not possible to establish a single regulation on a global level. Based on our legal

system, the European Union should create unanimous regulatory bodies, either directly applicable or to be developed by each Member State. I believe it will be similar to the case of e-commerce, where there are European rules that regulate it and then have to be interpreted with other laws from outside of European countries to ensure legal certainty.

What should be noted from Europe is the responsibility and obligations that these platforms or virtual hubs known as metaverses should have. It cannot be that each one simply has its own rules.

“Europe must determine if there will be control bodies for users and platforms of this environment”

How is this being developed?

Apart from the General Data Protection Regulation and the Data Governance Act, several regulations have been developed that will expand on the existing legal certainty framework, such as the Digital Services Regulation, the Digital Markets Regulation, as well as the Regulation on Crypto-asset Markets. There are also new proposals for regulations in the European Union on artificial intelligence that are advancing. Even so, the legal elements in relation to the data fall far short for all this. We urgently need further updated development.

How are elements like NFTs going to be regulated?

NFTs are digital assets linked to blockchain, but no specific regulation exists. Each case must be analyzed and its commercial purpose noted. There should be a specific regulation and points must be clarified such as what rights they convey and their ownership, as well as the role of the digital platforms that allow their creation, sale or exchange. The fact that this is not regulated and that each case must be examined individually is an important problem that must be resolved.

And what about digital artists or creators in the metaverse?

From the point of view of intellectual property and copyright, there is nothing specific, but it is possible to apply the laws existing that make digital artists be considered authors due to the mere fact of their creation. Where greater development work is needed is in the tax system, because everything is in a very incipient phase.

What does that mean?

If authors or artists sell their works in the metaverse, how will they be taxed? What if an asset is acquired or sold in a metaverse? Transactions have tax consequences and it is necessary to clarify the tax system for creations, acquisitions or sales within this virtual environment. A group of OECD experts is working on creating a series of points and clarifications about all this. Another example: what if an avatar buys land? Is it taxed? Will it have legal personality? Right now there is an asynchrony between the real and virtual world. New worlds, same taxes? This question must be answered.

“It will be necessary to determine the rights of avatars to set boundaries. At present, they do not have any legal personality that is answerable to the law.”



How will the currency be regulated?

Although the economic transactions of decentralized metaverses will take place in virtual spaces and between virtual people, they will generate income in the real world in the form of cryptocurrencies. It will be necessary to determine whether taxable events occur that are subject to taxation and it will be Europe that will have to agree on this. With the approval of the Markets in Crypto-Assets Regulation (MiCAR), approved in April 2023, the issuance and provision of services related to crypto-assets and stablecoins was regulated. This is at least a starting point.

Let's talk about digital identity...

Digital identity is one of the pillars of the metaverse, because to interact in this environment, we will use an avatar as a digital representation, with which to operate and explore. Our real person will be represented by an avatar, and this brings to the fore the need to add security measures and privacy controls. The use of avatars poses important legal and ethical issues that must be answered: from what to do with the image rights, which only natural persons have, to the possible committing of crimes by our digital representation.

What do we need to do?

We must add security measures, controls and limits on the exploitation of image rights. Regulate image rights in digital representations and develop the issue of express consents, for example, so that other people can use our avatar.

Are there existing regulations for this?

There is the European Charter and the Spanish Charter of Digital Rights, which are a framework of reference applied to new technologies, and whose main objective is to protect the rights of citizens in the new era of the Internet and artificial intelligence; therefore, this could be applicable in the case of the metaverse. Also under development is the project on sovereign identity, so that the user has full control of their data and which is based on blockchain technology, to allow individuals to store and share their personal information in a secure and verifiable manner. The data are stored in cryptographic format and are protected by asymmetric cryptography.

“The metaverse represents a great opportunity for the legal sector to support innovation and help to invent the new future”

Can it be applied on a large scale?

That is the idea, although its implementation surely will require collaboration between different actors, such as governments, companies and civil society organizations. Furthermore, legal, technical and governance issues still need to be addressed to guarantee the reliability and interoperability of sovereign identity systems.

How are conflicts and crimes going to be handled in the metaverse? Will the laws of the physical world apply?

The main problem is that, when we talk about crimes and jurisdiction, natural persons are always behind it, but what occurs when the crime is committed by an avatar? For example, a one avatar raping another, or what would happen in the case of the avatar of a politician delivering hate speech or an apology for terrorism. Right now there is no answer to this, because avatars at

present do not have a legal personality. It is still necessary to determine what type of rights they have. Legislators must decide what law should take care of this.

This seems to be a vital question.

As a result of the appearance of social networks, there are some behaviors that are already classified as crimes on the Internet, but as there is no specific regulating of the metaverse, we have to continue looking at what existing laws we could embrace. For example, we can look at the Criminal Code and what it says about computer crimes, crimes against moral integrity or against privacy, protection of minors in cybercrimes, and so on, but in these cases, it comes back to the point of a physical person being behind it, which is not the case with digital representation.

And how do you think liability will be addressed?

For me, the key lies in whether the crimes committed in the virtual world by avatars against avatars render effects in real life. If they might result in an impairment of health or freedom or have a psychological impact. Since the experience is very immersive and you can feel things as if it were in the real world, you have to regulate this in a specific way and see what type of law has to do that.



This connection between the real and virtual worlds that makes a mark is not contemplated in any legislation at present.

And if more than one person is behind an avatar?

There can also be several people behind an avatar. All this will become clearer when digital identity is finally regulated as this will allow us to know who is behind that digital representation.

What role do you believe lawyers will play in the metaverse?

The role of the lawyer is going to be essential, because we have to do

the very important job of interpreting regulations and legislation. Lawyers specialized in technology and digital law must be especially prepared to face the legal challenges that might arise in this new virtual environment and we will play a fundamental role in the protection of intellectual property, the privacy of users, the drafting virtual contracts or developing regulations and resolving disputes. Apart from this, I also like say that the metaverse represents a great opportunity for the legal sector to support innovation and help invent the new future.

THE SOCIETY of the metaverse

Juan Uriarte

Psychologist and expert in technology

» The impact of the new virtual world

The pandemic forced us to exist in line and to assume that many everyday activities were virtual. It was something like a preview of a 2D metaverse. The true metaverse, however, will be in 3D. Furthermore, in this virtual world, we will control time and space, because they will be created within it, which already represents a paradigm shift. To what extent does it impact and will it impact society? Among the things we know for sure is that it will change the way we relate to almost everything. Among ourselves (through our virtual identities), as regards leisure (we can now attend concerts and parades in the metaverse) or the way we shop.

The metaverse can represent a radical change in work and educational environments and doctors, with work meetings, classes and medical consultations in this new universe. Virtual Voyagers, for example, has developed a virtual reality program to learn public speaking.



The **social** phenomenon

The metaverse was created as a shared virtual space in which we can have unique social experiences in real time through our avatars. In this new world, we can develop social, work and recreational functions: maintain conversations, work, have online experiences, and so on. It is clear that the metaverse is presented as an influential means for the economy, but also (and above all) for social interactions. Our digital identity can experience a million things in there, which will also carry over into the real world. In an environment where they blur the barriers between the physical and the virtual, what might this make us feel? Can the metaverse contribute or, on the contrary, affect our mental health? To what extent can it impact on our well-being?



Juan Uriarte

Juan Uriarte is a psychologist, technology expert and creator of Pozik, a tool that uses artificial intelligence so that people can self-assess their psychological state and, if needed, to put them into contact with a psychologist for free.

For Uriarte, the metaverse has “an infinite number of positive applications for health, in general, and for mental health, in particular,” although he says he is concerned that this new virtual environment represents “another social barrier in access to technology and not everyone can benefit from it.”

About what we might feel or experience in this technological world, he assures us that “what happens in the metaverse does not just stay in the metaverse” and that virtual experiences or emotions will also affect us in real life. Therefore, he emphasizes the urgency of having a regulation that protects us and prevents users, “hidden” behind an avatar, from being able to “do things they would not do in reality.”

We talked to him about all this and to try to find out what challenges and advantages the metaverse proposes for us in this field and as a society in general.

“What happens to us in the metaverse will affect us in real life”



Can emotions in the virtual world be the same as in the real one?

Emotions are emotions and can be exactly the same. You can feel joy, feel sadness, nostalgia. In the same way, get angry or feel nervous as you would do in a real life event. The brain will respond to reality, not to the metaverse. What changes is the form of interacting, with the “disguise” that we can do it and the environment in which we will do it.

Can we “connect” the same way?

We are human and we want to connect. Doing so in a virtual environment doesn’t make it any less real. The young generations often already do not notice differences between a virtual friend and a real one. What we have to see is that it does not imply isolation and that we can have links in both worlds. Socializing, wherever it is, is always positive for the mind.

The virtual society...

During the pandemic we saw how social networks and the Internet brought us closer together. Like almost everything in life, it will involve huge benefits and risky dangers to be taken into account and not ignored, but it depends how we use it and harness its potential. We have the opportunity to create it well. One of the great possibilities that the metaverse promises is greater connectivity in every

sense. This can bring us great advantages. I view the metaverse as another place in which to establish social connections and take care of ourselves, not the only one.

How can we take care of ourselves there?

For mental health and in psychology it has tremendous applications: from phobia therapy or therapy for overcoming mourning and loss, to mindfulness. The metaverse can be a good environment for psychology. The key could be in combining sessions of the real world with the virtual. The best thing it can offer is that, in this digital environment, psychologists can control the context of the patient in order to be able to work on many things.

“What we must see is that it does not represent an isolation and that we can have connections between the two worlds”

“It is a great space in which to be able to work on fears and all kinds of phobias”



What do you mean?

In conventional therapy sessions, we only have the physical space of the office; however, in the metaverse you can design the context that you want and work around it. It is a great space in order to be able to work on fears and all kinds of phobias. For example, you

can use it to improve a fear of flying by recreating that situation in a hyper-realistic way and working on controlling phobias gradually. There can be controlled exposure to the fear. If you have control over the context, you can control possible dangers much better.

What else can we work on?

We can also work on stage fright and social skills. The fear of public speaking is a very common phobia and can be treated with psychological therapy within the virtual experience. The power to cope with other people can be worked on through the metaverse and the patient can learn skills to handle these situations correctly. What we need to encourage is how the metaverse can help people's real lives. This is what needs to be pursued. It has immense pedagogical capacity that must be democratized.

How?

With the metaverse and virtual reality, we could work on the mobility of older people and stimulate their brain, which is vital to avoid degenerative diseases. It can simulate environments that help them “train” comfortably. The same goes for the education system. We know that the metaverse has enormous potential for society if used well: from education and training to health, including the actual management of a city, but it will be up to public administrations and companies to facilitate access to this world so everyone can benefit. We must democratize it with public investment.

It sounds expensive...

One of the things that worries me about the metaverse is that it represents another line of “classism” in access to mental health, but also to education in general. In my case, I not only have to find patients who can afford to pay for therapy, but who can also have products to access this environment. If we know that it can have enormous benefits for society and that this technology can help us with many things, we must ensure that nobody is left behind, as is happening today with the Internet.

“It is important to be able to demand the same responsibilities as in real life in order to feel safe”

Is there anything else we should pay special attention to?

I think we have to be aware that what happens in the metaverse does not just stay there. Although this world is virtual, the experiences that people will have there will be real. A problem in the virtual world, such as frustration or exclusion, can generate real trauma. In the metaverse, we can do things and take liberties that we don't take in real life, because deep down, it can be relaxing to be behind an avatar, but it is important for it to be possible to demand real-world responsibilities. Virtual citizenship and the avatarization of individuals requires supervision and protection, in all senses, especially for the most vulnerable.

What would avatars be in real life?

The "we" that we would like to be or have. I think the idea is that there is a more fantasy-related avatar and one that is an identical digital version of us. In general, in virtual life and in real life, we are different because the virtual world does not require exposing our physical body and that, together with anonymity, disinhibits us and makes us change. That is why it is important for us to be able to establish the same rules of the game in both worlds.

Legal liability?

For us to be safe there, it has to be an environment in which we are subject to the same responsibilities as required in the real world. We have to enter knowing that not everything goes, and that what happens does not simply stay there. I am referring to the legal liability of individuals and also companies.

The idea is to blur the barriers between the physical and the digital worlds...

You have to know how to separate this. When the intention is to eliminate the barrier between reality and the virtual world, there is a danger of not differentiating between them and that can be a problem. The metaverse should never displace the way in which we relate. It can be a good complement, but people need physical interaction and an emotional face-to-face experience for our mental well-being. We cannot use it as a tool to isolate ourselves and not face our problems.

What about younger people?

The new generations are already living this way. These social, immersive and interactive experiences are already part of the lives of new generations. In any case, it is difficult to speculate over the possibility of this being replicated en

masse among the rest of the population, and all of us pending 24 hours a day there. I believe that, with the metaverse, there will be a coexistence between the physical and virtual worlds.

Do you believe that psychology, in general, sees this as an opportunity?

Psychologists must now do some work to understand how the metaverse will work from medicine faculties. We cannot be left behind, we have to catch up. It is very important to update therapy methods to be able to help people in the most convenient way. Psychology should be able to see the metaverse as a golden opportunity to improve work with patients, not as a threat.

Why do you think the metaverse generates so much interest?

The fascination with everything technological, the lack of physical borders and the possibility of being able to conquer a world new created only for use and enjoyment by human beings is quite exciting.

He created Pozik, a tool that uses artificial intelligence in order for people to self-assess their psychological state. The application is based on psychometry (the branch of psychology responsible for measuring and quantifying psychological processes and cognitive capacity) and assesses on three levels: white personality (basic personality); black personality (pathological personality or acting under stress) and mental health evaluation, assessing people's mental health status and, where necessary, putting them into contact with a psychologist free of charge.

CLOSURE AND A LAST REFLECTION OF THE AUTHOR

When we decided to dedicate our new Governa to talking about the metaverse and the environment it generates, we were clear that we wanted to do something more than talk about technology itself, what it is and future predictions. Much has already been said about this new virtual universe: a multitude of articles, more or less accurate descriptions and a lot of hype, as they say nowadays. The mission became different: to give a voice to those experts who are already working in this present future to find out, first-hand, where we are going and what we have today. To give a voice to the protagonists of change, to those people who are working and being part of it, and to analyze the challenges we face and the advantages from which we can really benefit. Who better to say what is happening than someone who can speak from within?

Writing this book has been like doing an enormous master's degree. Along the way, I have learned many things: that our cities can benefit from the technologies that make up the metaverse so they are managed better; the importance of creating laws that protect us from the implications and impact that the virtual world has on our real life; that health and education can gain many advantages from this new environment; that the technology is being developed that will allow us to standardize the metaverse and make it very real; that a new form of making art and experiencing leisure has already been created and is taking the first steps towards an infinite universe of possibilities to be democratized and that, beyond hearing and seeing, physical sensations are already being transferred to the virtual world and we can feel a hug from a loved one remotely.

To all the participants and interviewees of this publication, thank you. Thank you for having been part of this initiative, for sharing your projects and reflections and for teaching us so many things. Thank you for being enthusiastic about this book, because, in addition to being able to discover where we are going, it is important to know how we should go. As its protagonists say, at the end of the day, we will build the metaverse, together.

Sira Oliver

governa

METaverse WORLD

Experts bring us closer
to the virtual phenomenon



How will we feel emotions in the metaverse? What's left to do in order to make it a reality? What businesses will it boost?

How can we use it in our cities? How will culture and art be integrated into it? Who will set the rules in the virtual world?

These are some questions that you can find answers to in this book.

Technology to hug each other remotely, a vest to "feel" or how people are building the foundations of the metaverse. Multimillion-dollar digital art, the new economy in the form of cryptocurrencies or the legal and ethical limits we need to make the virtual universe that is to come safe. Crypto-artists, builders of the metaverse, experts in legal matters relating to virtual space ...

The new world of the Internet and technology has protagonists who speak in the first person through interviews in which they help us understand where we are going and what the metaverse is already experiencing (or not) with us.

