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Foreword

Thank you for your interest in Portugal's VR/AR ecosystem.

We are thrilled to publish this report after a year full of challenges – a special thanks to our sponsor NOS for endorsing our efforts in connecting the ecosystem and making this happen. Cheers!

Through this report, you will access a list of VR/AR stakeholders active in Portugal and, although we are aware this is not a complete list, the quantity (almost 100) and diversity of players in Portugal showcase how positively this market has evolved in recent years.

Hopefully, these numbers and diversity will grow in 2021, along with the VR/AR market worldwide: 5G is rolling out, allowing for new, exciting VR/AR use cases; VR headsets price point is decreasing, while their availability is on the rise and most smartphone makers are now launching smartglasses models.

Besides infrastructure and hardware, VR/AR applications are becoming more and more common in the B2B segment. Of course, this creates a huge demand for VR/AR specific skill sets – and even creates new job profiles.

Moreover, more startups are popping up within the immersive space, looking for smart money, mentorship and all kinds of support to have a better and longer runway, while they prove their business concept and start new investment rounds.

Finally, academic and corporate research centers are now, again more than ever, aware of the transformational opportunity immersive technologies carry and their role in developing knowledge-based solutions.

And of course, to leverage these opportunities, whilst coping with the pandemic, immersive tech businesses are looking to reduce risks in their investment.

Portugal can help with that.

Albeit being a small country, Portugal's talent pool attracts international professionals looking for a peaceful and stable country, with a muti-cultural background and a high quality of life. From digital nomads, that find organized peer communities ready to embrace them, to portuguese-speaking talent abroad, that seek to enter other markets and a multicultural setting to develop new language skills. Oh and we are ranked #7 globally on the English Proficiency Index.

Sitting on the edge of Europe, Portugal has a closer timezone to the American continent than any other country in the EU, which

makes it easier to enter the European market through Portugal, if you're coming from Canada, the United States or Mexico. Through the VR/AR Association, we keep in contact with several of these countries' chapters to streamline partnerships or requests.

Our connection to Brazil is also very important and not just due to our cultural similarities – more and more organizations are looking to tap into a 200+ million people market through Portugal and we are also creating cooperation opportunities with VRARA Brazil.

There are official co-investment opportunities (i.e. www.200m.pt fund) and pre-established partnerships that can help in several ways to soften your landing in our ecosystem. Just **reach out to us**.

Also, a major thank you to our main partner **APDC**, that enables and accelerates all our activities - like this report - through its VR/AR section.

You are also invited to attend our webinars and monthly meetups, taking place on the last Thursday of every month. Check the details of every edition on our **Youtube** and **Linkedin** page.

2021 is only the first year of a decade where 3D content will become the norm. Virtual reality and augmented reality professionals will have a profound impact on how we work, interact with others and even perceive the world. For all the reasons presented before, we firmly believe Portugal is a great setting to setup technical, business development and research teams in immersive technologies and we do look forward to a decade where more and more corporate groups, startups and research organizations make that happen.

Have a wonderful year and here's looking forward to our next report!



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Luis Bravo Martins luis@thevrara.com



Tiago Loureiro tiago@thevrara.com

A Word from NOS

With the launch of 5G in Portugal, a new era of digitalization begins where national companies will be able to take advantage of technology to optimize their business and create new disruptive experiences for their customers. Tools like Augmented Reality (AR) and Virtual Reality (VR) are central to this new era, marked by an exponential increase in information consumption and new, immersive formats for it.

Imagining the future has never been easy, but in the case of AR and VR we have long been witnessing small projects and innovations that surely allow us to unravel not only part of the future but what is already possible to do today. The development we have observed in this area has been exponential, with the maturity of both technologies moving from concepts to 'ready-to-deploy' in very few years. With 5G, we see the missing piece: a network capable of guaranteeing high levels of experience with total mobility, scale implementations and a reliability unavailable until now.

In the near future, we will undoubtedly see these technologies entering our lives and business operations. Being able to start first, learn without fear and choose the right partners will be decisive for national companies to take advantage of this transformation, in order to differentiate themselves and gain competitive advantages.

NOS is proud to belong to this national ecosystem, helping companies and developers to implement innovative projects capable of driving the country's digital transformation.



João Ricardo Moreira Board Member NOS Comunicações, S.A.





Whether creating a 360° music video or incorporating 360° footage into broadcast or film, we have the knowledge and experience to help guide and build your project. We work alongside existing film production companies and film directors to help challenge the creative future of 360° video content. Our team's extensive experience and working knowledge of the entertainment industry allows us to help develop pioneering concepts and bring them to an Imersive Mix Reality. We can provide technical and creative consultancy to your projects. If you feel you or your company are up to the creative challenge, then please contact us and join the Immersive Revolution.

Contact

Name: Fernando Jorge Email: hello@36oplay.pt Website: www.36oplay.pt

Size of Company

Employees or FTE equivalent: 5-10

Case Study

https://edpvr.36oplay.pt

Type of Company

Virtual Reality

Customer Types and/or names

Agencies and companies.



Why are you in Portugal?

Our first experience with 360 video started in Portugal back in 2010 although the company has worked extensively abroad, we always kept our center of operations in Portugal, where we can find a vast supply of talent and creativity, essential to keep 360 Play ahead in this ever evolving market.

What do you need/hope for/from the Portugal Ecosystem?

The Portuguese ecosystem is essential for the ever evolving and innovative offer that is part of the DNA of 360 Play.



3e60 Soluções Imersivas

Company Summary

We are developers of immersive content for the Real Estate and Tourism, developing services with Virtual Reality and Augmented Reality to enhance the user experience in many ways.

Contact

Name: Anesio Neto Email: contacto@3e6o.pt Website: www.3e6o.pt

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.bit.ly/3e6o_tourdemo_o4

Type of Company

Content

Customer Types and/or names

Real Estate and Tourism Agencies, Hotels and Museums



Why are you in Portugal?

Portugal has a great market to develop and we have seen a great opportunity to grow with the Portuguese ecosystem. There are so many opportunities to apply immersive technologies in various markets such as Real Estate, Tourism, Retail, Education and Cultural, for example.

The great variety of tourist and cultural points-of-interest, makes Portugal stand out as a tourist destination, having been awarded few times lately. The COVID-19 pandemic poses a huge challenge for traditional companies that will seek support in technology to rise in the new normal, the post pandemic one, and this brings a huge possibility for immersive technologies.

In addition to all of that, Portugal has a strategic position as a bridge or even a door to Europe that allows, with a relatively lower cost, to approach customers throughout the European Community and in addition to this, an opportunity to connect with the Brazilian and the American market. The cost of developing companies and opportunities in Portugal is significantly lower than in the rest of Europe, in addition to having the support of government and private initiatives.

What do you need/hope for/from the Portugal Ecosystem?

We do believe that the ecosystem can help us to grow up as a local company and that we can build bridges with local companies as well.

Networking events can help us to know local developers, initiatives and opportunities and might help us to achieve our goals as a small startup.

We need help, and we are available to help as well, to develop the local market by running events with local companies and gathering authorities and influencers that can democratize Virtual Reality and Augmented Reality as well.

By doing that we might be able to attract more investors to immersive technologies companies and making it easy to grow the market in the country. Portugal is a small and creative country and we should try to work together, despite the competition between the companies. Each one of us have different skills but if we work together, we might succeed as a ecosystem. One last suggestion, would be to create local content to evangelize among the Portuguese companies, users who will probably be our clients.



Akt is a Creative Innovation Studio with a focus on bringing technology and creativity together to deliver outstanding work. Our goal is to combine the expertise of talented people from very different fields and, together with our partners, help our clients produce and deliver creative solutions for all kinds of challenges.

Contact

Name: Francisco Pinto Coelho Email: hello@akt.pt Website: www.akt.pt

Size of Company

Employees or FTE equivalent: 10-20

Case Study

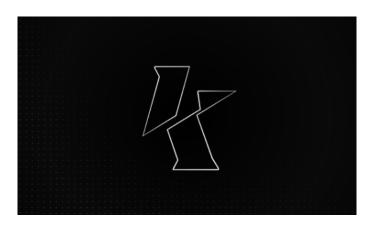
www.vimeo.com/495802080

Type of Company

Creative Innovation Studio, Digital Marketing & Advertising

Customer Types and/or names

Super Bock, Agua das Pedras, EDP, NOVA SBE, AGEAS Seguros



Why are you in Portugal?

We are based in Lisbon and founded by a Portuguese technologist and a Brazilian creative with years of experience working in the large network agencies in the Advertising landscape. Our goal is to gather the creative talent of the creative agencies in Portugal and together with technologists and partners bring innovation to our clients with the help of the most emerging technologies. We are based in Lisbon but we aim to help clients from any part of the world produce and deliver creative solutions for all kinds of challenges. We believe true innovation comes from diversity & collaboration and that Portugal represents exactly that, not only because of the talent the people here but also the partnerships we can establish. Our strength is definitely creativity blended with technology knowledge, but we understand that we need to bring expert partners to help us deliver our ideas. Portugal offers a variety of companies that are each experts in their own areas and we believe can help us with all kinds of challenges.

What do you need/hope for/from the Portugal Ecosystem?

We hope to continue to be integrated and in close contact with this ecosystem that connects 'best in class' companies, each with their own expertise and skills that could eventually become partnerships that will help us together deliver outstanding work to our clients.

As technology continues to evolve exponentially, it hard to keep up with it, even harder to master it all. As a creative studio as we need to understand the technology to come up with solutions for our clients problems, but we also rely on expert partners to advise on and implement all kids of different technology solutions.

ARNote Company Name ARNote

Company Summary

 $Developing \ augmented \ reality \ experiences \ from \ Portugal \ to \ the \ World.$

In the past 6 years we had the opportunity to develop AR experiences for small but also big companies like Hermes, Nike, Ladurée, Max&Co.

With clients in Europe, EUA and Australia plus two awards for our concept of Real Digital Store by Farfetch and CCG has been incredible journey.

Get in touch if you need help developing your AR experience.

Contact

Name: Gustavo Maçães Email: gustavomacaes@arnote.pt Website: www.arnote.pt

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.arnote.pt/work.pdf

Type of Company

Software, Augmented Reality

Customer Types and/or names

Companies looking for AR experiences for their customers.



Why are you in Portugal?

It's my country and believe a great place to work and live. I have been working in augmented reality field for the last 10 years and believe that we shouldn't need to change country to do what we like. So, decided to start freelancing and always looking for opportunities to boost ARNote and keep the dream alive.

So far it was been an amazing ride with its normal up's and downs. Opportunities to develop augmented reality experiences for big brands like Hermes, Nike, Ladurée and Max&Co make a difference. Plus placing second among 50 candidates in Farfetch F-Tech Open challenge with our vision on how augmented reality can change the way people shop online was an amazing boost. The same concept also placed second place in CCG innovative idea award and it was special to come back two years after quitting the company to pursue this idea.

Previously I have been involved in a wide variety of research projects from applications that involved hardware integration to augmented reality solutions for National and European projects in the educational, commercial and industrial fields, you can check them in the projects section.

What do you need/hope for/from the Portugal Ecosystem?

 $Hope the VR/AR \ association keeps it's a mazing work of networking people and that together the Portuguese ecosystem can grow and become a known cluster in the AR/VR field, so I keep doing what I like. \\$



Alexandre Castro Designer

Company Summary

Multidisciplinary designer, passionate for developing new ideas and business.

Founder of Alexandre Castro Designer, specialized in graphical and product design, web design, 3D virtual reality environments. The company offers wide turnkey project services, from conception to its materialisation.

With over twelve years of experience, ACD develops its projects in multiple areas: from 3D housing modelling to photorealistic rendering, which pushed the company to other offers, such as 360 virtual visits as part of architectural projects. The high demand of this service is making it one of our core services.

Contact

Name: Alexandre Castro
Email: office@alexandrecastro.pt
Website: www.3dvr.alexandrecastro.pt

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.3dvr.alexandrecastro.pt/arquitetura.html

Type of Company

Arquitetura e Design

Customer Types and/or names

Arquitetura, promoção imobiliária, stand automóvel, apresentação de empresa, guia turístico.



Why are you in Portugal?

We operate in Portugal since 2006, collaborating internationally with other companies related to architecture and real estate. Portugal's economic expansion of the past years makes it the ideal country for our enterprise to support private investments of business companies and organisations. Our experiences shows that architects, civil engineers, and the construction industry gains from adding virtual visits to their portfolios, as an exciting nouvelle mean of communication between company and customer, and as hallmark of their brand. This type of service helps sell a concept, a project, and ideas, and it has the power to become a key-element in the decision-making process of clients, by allowing them to get more than a glimpse of what they are buying. Virtual visits turn the client experience more real, allowing them to experience the environment and the evolving space as if they are seeing the finished product. It complements 3D virtual modelling, and it can be captured by 360° photography, whenever the building and space already exists.

What do you need/hope for/from the Portugal Ecosystem?

Our aim is to broaden our contact network, to expand our business partnerships, and to participate in exciting new projects that include 360° virtual visits. In addition, we hope to participate in events to discuss and test new technologies that allow the synergy between the AR and VR domains, and the exchange of knowledge and knowhow.



Provide solutions in Photography, Video and VR 360° Matterport

Contact

Name: André Mahlmann Email: mahlmannphoto@gmail.com Website: www.zome.pt/pt/PTM4C501

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.my.matterport.com/show/?m=H5CGn46egC3

Type of Company

Content

Customer Types and/or names

ZOME, KW & REMAX

Why are you in Portugal?

 $Iwas \ born \ in \ Porto \ Alegre - Brazil, where \ I \ started \ to \ develop \ my \ knowledge \ in \ the \ artistic \ and \ technological \ area.$

I have a degree in music and computer science, but in the last 10 years I only develop works in the area of audio production, video production and photography.

For about 4 years I have been living in the city of Porto, we chose the city due to our family roots and job opportunities.

In these 4 years I have been working with photography and video aimed at the real estate market, serving the real estate companies ZOME, KW and REMAX. Due to the pandemic and the mobility problems caused by it, I started to develop VR360° projects on the Matterport platform.

In this first year I created more than 200 VR360° projects in the north of Portugal, in the beginning of 2021 alone, more than 12 projects have already been carried out. Due to the growing interest in using virtual reality tools, I aim to expand my work to Lisbon and the Algarve by the end of 2021.

Virtual reality for architecture and real estate is a market niche that is growing exponentially, and that needs more quality professionals.



What do you need/hope for/from the Portugal Ecosystem?

Learn I have been a music, photography and video professional for over 10 years. The VR360° is still new to me.

I have been developing my work on VR360° for about 1 year through the Matterport platform. My entire learning and development process, which generated the experience I have today, was done alone and without supervision.

In this 1 year period, I have already carried out more than 200 VR360° projects. Initiatives like VRARA ECOSYSTEM, make it possible to help me grow even more due to the exchange of experiences with other professionals and developers of VR360° from different platforms.

In the north of Portugal, few professionals develop this type of work in VR $_360^\circ$, the ones I know only deliver the basics.

We all dream of growing and developing jobs that are still traditional in our niche market, with the support and exchange of information with other professionals we can reach unimaginable levels.

 $Thank you for the opportunity given by VRARA\ ECOSYSTEM\ to\ be\ part\ of\ this\ great\ information\ network and\ change\ experience.$



Aromni envisions a world tagged by Augmented Reality.

Aromni is a core team of industry veterans with a proven track record of delivering over five hundred AR/VR/MR projects to 50 companies of the Fortune 500.

Our mission is to fully leverage our unique technology to create solutions powered by Augmented Reality that assist, surprise and delight users daily in their professional and recreational activities.

Our solutions are built on a proprietary augmented reality platform that benefits from our team's extensive experience in software development, project development and intellectual property creation.



Name: Edmundo Nobre

Email: edmundo.nobre@aromni.com

Website: www.aromni.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

www.visitserpa.pt

Type of Company

 $Software\ company\ with\ its\ own\ platform.\ Vertical\ markets\ include\ tourism, retail\ and\ entertainment$

Customer Types and/or names

Sumol/Compal, Jeronimo Martins, SportTV, Municipio de Serpa, Centro de Interpretação de Sintra, Fan Hero (USA)

Why are you in Portugal?

We have a highly experienced team that has twenty years of working in the country, and from the country to the outside World. World class talent coming from Portuguese universities is available, enabling the company to scale in the future. Lisbon is particularly attractive for foreign talent as well.

Aromni is part of a rich AR/VR ecosystem boasting more than 100 companies and 12 research labs. There is a forward thinking in public administration and major companies that pay for innovative solutions, enabling the further development of that ecosystem.

The company is engaged in a revolutionary project where all these advantages come into play. This project goes well beyond simple economic goals, incorporating key environmental and social objectives. It will be launched in



February 2021 and should have a visible international impact.

Another major advantage of being a Portuguese company comes from the special relationship of Portugal with Brazil. This relationship has enabled us to develop companies that have a unique mix of talent and test markets.

What do you need/hope for/from the Portugal Ecosystem?

The Portuguese VR/AR ecosystem includes software, hardware, and content companies working in several vertical markets. It also includes research labs and the public sector.

This ecosystem works with Portuguese actors (companies, government, researchers) from other areas such as AI, traditional a new media, design, art, intellectual property management and finance. It is also dependent on foreign partners and clients, several of them either located or to be soon located in Portugal. We want this ecosystem to reach maturity because that will be a sign of an internal healthy markets, providing the momentum to all of us reaching to international markets. We hope that the ecosystem will develop itself based on merit but also considering a mutual aid environment. We (all) need the ecosystem upside to be recognized. Recognition will bring attention and resources sorely needed for development.

In the ecosystem development, we also hope that errors committed elsewhere will not be repeated here: we need a balance between Portuguese born and foreign companies; we can not risk having global "giants" eliminating the Portugues companies.



Axians Portugal

Company Summary

The world is more connected than ever before and the pace of change is bewildering. We deliver the best combination of technology and services to enable our clients to fulfil the diverse needs of their customers. By fostering a deeply and personal relationship with our clients, we want to improve the lives of people and organizations.

Axians is the VINCI Energies brand dedicated to ICT and Digital Transformation. We're present across 23 countries, with more than 11 000 employees and an annual revenue of more than 2.5 billion euros, in 2019.

Contact

Name: João Pedro Domingues Email: joao.lameiras-domingues@axians.com Website: www.axians.pt

Size of Company

Employees or FTE equivalent: 100+

Case Study

www.youtube.com/watch?v=7s5PrJJW9hE

Type of Company

 $\label{lem:banking and Insurance} Digital Solutions in Government, Banking \& Insurance, Healthcare, Education, Energy \& Utilities, Manufacturing and Transports$

Customer Types and/or names

We provide Digital Solutions for major Portuguese clients. Here are some references: Portuguese Government (Tax, Education, Health, Defense and many others areas). Utilities EDP, EDA. Transports Carris, Fertagus, CTT. Banking BPI, Millennium, Caixa Geral de Depósitos and many others...



Why are you in Portugal?

Axians is present in 23 countries providing the best ICT with a human touch.

What do you need/hope for/from the Portugal Ecosystem?

We enable complex digital projects with great clients that want to excel the greatest challenges of our time. With human and machine capabilities working together to help us rethink how existing institutions are organized and operate, from businesses to universities, governments to cities.

With all this in mind, we excel at bridging vision, strategy and business knowledge with technology to deliver innovated solutions. Besides our expert services in Consultancy, Tailored Development, Integration and Testing, our innovation portfolio solutions are based on disruptive technologies like IoT, Digital Twins, Artificial Intelligence, Machine Learning, Predictive Models, Data-Driven Insights and Immersive Technologies (Augmented, Virtual and Mixed Reality).

To be a part of the Portuguese Extended Reality ecosystem, enabling interaction with like-minded gifted creators, entrepreneurs and companies is a critical step for breaking technological mindset and cultural barriers in businesses and society to push immersive experiences to their full potential as an impactful value creation solution for users. The networking and win-win partnerships opportunities are plenty, and for Axians, being a part of this community fosters the conditions to solve high impact business challenges with a virtual team, bridging experienced business knowledge expertise with emerging disruptive technologies skillset passionate professionals.



 $We\,create\,DIGITAL\,ENVIRONMENTS, connecting\,Stories, People\,and\,Spaces.$

"WHAT STORY DO YOU HAVE TO TELL?"

This is the starting point for every by AR project. We believe in STORYTELLING and aim for extending each experience beyond the space and time in which it was told.

We use AUGMENTED REALITY, in association with other technologies and digital content production, as a main tool for every story we tell in museums, exhibitions or any public or private places.

Our specialized and motivated team includes environment designers, technology and programming specialists, illustrators, animators and graphic designers.

Contact

Name: Pedro Pereira Email: pedro.pereira@byar.pt Website: www.byar.pt

Size of Company

Employees or FTE equivalent: 5-10

Case Study

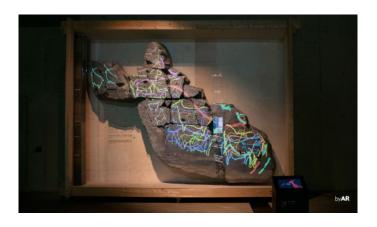
www.vimeo.com/397644389

Type of Company

Story telling, Design, Software, Digital content (AR, VR, Video Mapping, Apps)

Customer Types and/or names

 $Public \ and \ Private \ Institutions, Museums, Exhibitions, Events, Showrooms, Brands$



Why are you in Portugal?

by AR was born in Portugal in 2015. With the conviction that Augmented Reality is part of our natural evolution as human beings and society, by AR was born from the desire to create digital environments that interconnect technology with People, Spaces and Stories.

We live in a country where there is still an express gap between analogue and digital, in public and private spaces, and we want to shorten that distance. We are Culture lovers and Augmented Reality is in our ADN. We are sure that we can help all our clients, whether public or private, to provide interactive and immersive experiences in any other, in a memorable way. That is why all of our projects aim to tell a story and provide an experience that goes beyond the space in which it is being told.

Portugal, in particular, is still experiencing its digitization phase and it is at this point that we know that by AR can make a difference. We design digital projects that merge with the surrounding space, whether in a temporary or permanent exhibition, a museum, an event, a showroom or any other space where they want to tell a good story. We are very proud of what we are doing in our country and, while making a difference here, we will be better prepared to launch by AR abroad.

What do you need/hope for/from the Portugal Ecosystem?

At by AR we believe in sharing ideas as inspiration to do more and better. We all know that the potential of technology in general, and Augmented and Virtual Realities in particular, is every day more infinite. It is an area in constant development and evolving in an increasingly accelerated way. We find inspiration for our projects all over the world and we want tunderstand what is being done in Portugal and how we can improve that.

As fundamental tools for all our projects in by AR, we know we need to be aware of best trends and practices regarding Augmented and Virtual Reality and other emerging technologies. Combining all of this we know we will be able to better challenge ourselves as content creators and to better respond to the needs of our clients' projects. In by AR we believe that every new project is a way to better enhance our goals. As members of Portugal Ecosystem we hope to develop contacts and integrate partners, to know what is best done in Portugal, in the world of Augmented and Virtual Reality, in order to develop our creativity and challenge ourselves.



Cereal Games

Company Summary

Cereal Games is a technology development company based in the Azores.

Our main goal and core activity is the development of serious games, with special emphasis on educational games, advergames and health games. We also study, investigate and develop gamification scenarios.

Cereal Games is a research-based game developer. We have published dissertations, posters, and communications about Digital Game-Based Learning, Health Games and Exergames.

With strategic partnerships with the University of the Azores and various IT companies, we aim to present scientifically proven solutions to provide our users real learning oportunities and entertainment simultaneously.

Contact

Name: Lázaro Raposo Email: info@cerealgames.net Website: www.cerealgames.net

Size of Company

Employees or FTE equivalent: 5-10

Case Study

N/A

Type of Company

Games Development and Gamification

Customer Types and/or names

B2C (Steam, Nintendo eShop, PSN, XboxLive); B2B (municipalities, museums, Science Centers)



Why are you in Portugal?

Cereal Games was founded by Azoreans and is headquartered in the Azores where it operates. Since being a technology-based company, the impact of geographical distance is reduced.

As a peripheral region, the Azores have a good incentive and support system for technology industry, which makes it attractive for companies of this nature to headquarter here.

In addition, tourism in the region has been growing exponentially (with due drops due to the global pandemic situation), and Augmented Reality and Virtual Reality projects have a wide application at various levels in tourism.

Our decision to stay here is also related to our mission of adding value and contributing to the growth of the region, creating jobs, exporting services and actively contributing to academic training through our relationship with the University of the Azores. It is our belief that for a region/country to thrive, it is necessary that projects with disruptive value, and more capable and trained human capital remain.

What do you need/hope for/from the Portugal Ecosystem?

The most important thing about the fact that there is a Portuguese ecosystem for Augmented Reality and Virtual Reality, is that it makes it possible to become aware of the existing players, and who does what. It is a perfect showcase that will enhance the best that is being done in Portugal.

We hope that with this, it will be easier to identify possible partnerships and easier to become visible to other as well.

Cereal Games is open to join forces for research and development projects. Something that we usually do with University of the Azores, and can be open to others partners. Cereal Games is also available to provide services or subcontract, according to the nature of the projects, in order to complement knowledge and ideas. As we have a very specific know-how about gamification and serious games, that we apply to our Augmented Reality projects, we believe we can add value and new ideas to the projects. This said, we hope that a Portuguese Ecosystem could be perfect hub to get everyone in touch.



Cultunatura

Company Summary

Since 1991 we have the reenactment personal experience of some of our members. Culturatura works, since 2006, in several historical cultural events, about different human kind periods, in Portugal and foreign country's. In 2020 we passed from the Legend to the utility with the OnHistory Augemntent Reality Application Immersive technologies in the Territories!

Contact

Name: Alexandre Cabrita Pereira Email: info@cultunatura.com Website: www.onhistory.net

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.passadovivo.com/node/220

Type of Company

Cultural and historical events, Augmented Reality App

Customer Types and/or names

B₂B and B₂C



Why are you in Portugal?

Cultunatura Lda, is a cultural company based in Boticas, at the Territory of Alto-Tâmega, so we have born in Portugal. Portugal was a good staring coutry for OnHistory - the Mobile with Augmented Reality and Virtual Reality experiences, available 365 days per year, 24 hours per day, whether inside of your home, at your workplace or at the outside of an historical monument that you may be visiting!

This project aims to combine history + tradition + culture, with technological innovation, in order to create a unique product of touristic and cultural animation based on the specificities of the Territories covered by the different Thematic Routes.

From museums to monuments, places and different products, both public and private, all of those can become "agents" and benefit from this new touristic, cultural and educational tool with great dynamics but always safe and accessible to everyone!

The launch of On History was on September, the 8th, 2020 through the Youtube channel from Virtual Reality and Augment Reality Association Portugal (you can see the video below).

What do you need/hope for/from the Portugal Ecosystem?

The launch of On History was on September, the 8th, 2020 through the YouTube channel from Virtual Reality and Augment Reality Association Portugal within the scope of its application to the Entrepreneurship Incentives Program Northern Regional Operational Program - ""Developing the Territory through History"".

So, we need develop the Application with partnership, learning from the "AR and VR ecosystem" with the most experienced technological developers – we are contents producers (not programmers...)

We believe the (humble) experience and knowledge exchanges will be beneficial for all–from the partners, to the competitors, to the client and to the final consumers! So, we have a good cultural and historical background (and sensibility) who can be shared in the sense to improve (all) the market offer and increase the demand.

We are here to learning + evolution + growing up and we hope be a good partner and be a positive reference on that work area for the people enjoy the experiences discovering the places and know History.



Cycloid Technology and Consulting

Company Summary

 $\label{lem:cycloid} Cycloid is a growing technology consultancy company created in 2005, specialized in three key areas – Big Data, Multimedia Content applications \& Cross-Platform Software Development.$

We have had a sustained growth record, particularly in the last 5 years, and we have been listed in the FT 1000 fastest growing companies in Europe for 2019. Within the Multimedia area, we develop cloud-based solutions for Business namely crossplatform content applications, AR & VR solutions, and TV/OTT platforms and services. We strive to anticipate our customer's needs and explore the latest technological innovation to build breakthrough solutions addressing our clients challenges. Our team combines startup disruptiveness with carrier-grade execution.

Contact

Name: Claudia Castelbranco Email: claudia.castelbranco@cycloid.pt Website: www.cycloid.pt

Size of Company

Employees or FTE equivalent: 40-50

Case Study

www.cycloid.pt/awatar.html

Type of Company

Consultancy, Software, Multimedia, Solutions, Business Business

Customer Types and/or names

 ${\it Telecoms}, {\it Retail}, {\it Digital Agencies}, {\it Content Producers}$

Why are you in Portugal?

Cycloid has started in 2005 with its headquarters in Lisbon and has grown since with projects not only in Portugal but internationally as well – UK, Ireland, Brasil, Spain – and we aim to continue to grow our international side of the business. Having said that, being based in Portugal is advantageous from the point of view of the company especially being part of such a growing and dynamic sector like Tech. People wise, Portugal's has a significant and highly skilled pool of tech talent – developers – developing in a wide array of technologies at a competitive cost compared to resources in other European countries, particularly big metropolises – London, Berlin, Amsterdam, etc -. Additionally, Portugal's (and Lisbon in particular) infrastructure and natural resources make it an attractive country to relocate, driving also foreign tech talent to come and live here.

It helps our business when working with our international clients and partners that we are in the same timezone as London and only one hour behind the majority of Western Europe, and travel wise, Lisbon's airport is connected to 120 cities. We



have no problem accessing a pool of resources that are business English fluent, given that the average level of English in Portugal is quite good.

Finally, for a couple of years now the tech startup ecosystem has been growing in Portugal, since 2016 Lisbon has hosted the Websummit, one of the largest tech events in the world, driving awareness and raising Portugal's profile in the tech scene worldwide.

What do you need/hope for/from the Portugal Ecosystem?

I would mainly expect this initiative to raise awareness for the projects, companies and use cases both for VR and AR going beyond the games industry being developed in Portugal. We are a business solutions software company and the potential benefits of applying these technologies in several verticals is still not well known or considered futuristic by potential clients and the market. With VRARA's push and growing awareness and this ecosystem in place, presenting the companies developing in this area, sharing case studies, events, demonstrating applications and live implementations it can really support and gain some traction for the industry. Getting additional momentum and engagement from device manufacturers would also be great and help to further develop the market. Being able via this ecosystem to get their cooperation with subsidized device funds and access to the latest tech would help to try and get ahead the curve when developing using the best to get better results.

Finally, being able to establish some interesting partnerships, or access to pools of resources from universities and research projects as well access to potential clients and projects both at national and international markets.



Didimo is the world's leading provider of automated solutions for the generation of high-fidelity digital humans, enabling content creators, developers and platforms, to integrate a fast, robust, and reliable process to integrate 3D characters in their experiences. Didimo streamlines the production of characters at scale. From a single photo or scan, our platform creates a ready-to-animate digital human, shortening the process from hundreds of hours to under 90 seconds.

Contact

Name: Veronica Orvalho Email: veronica@mydidimo.com Website: www.mydidimo.com

Size of Company

Employees or FTE equivalent: 30-40

Case Study

N/A

Type of Company

 ${\it Platform\,as\,a\,Service\,for\,the\,generation\,of\,Digital\,Human}$

Customer Types and/or names

Gaming, Entertainment, Retail, Fashion, Communication



Why are you in Portugal?

Portugal is our home. Our Founding Team is from Portugal. This market provides access to incredible, entrepreneurial talent, educational institutions, and opportunities. There is a vibrant startup culture that allows us to learn and share with peers as well as find support from business leaders, investors, and advisors that have helped us to improve and grow. Portugal has a globally-minded, technologically fluent workforce that is helping us to grow internationally.

What do you need/hope for/from the Portugal Ecosystem?

We value the creative and entrepreneurial spirit found in Portugal and welcome the opportunity to learn and partner with entrepreneurial teams that seek to create leading-edge experiences and make the digital world more human.



Dimmersions

Company Summary

In Dimmersions we create FUTURISTIC solutions that people can use TODAY! We firmly believe in the power of XR and how important it will become throughout this decade. Our main focus is in the development of WebXR solutions, Audio Augmented Reality and XR-first IP's, all of it powered by our LIMpressive Framework which encompasses everything that is needed for a modern XR app, from back-end to front-end and APIs.

With our framework we've developed several B2B solutions that are already in use by many clients:

- LegendAR: Digital Captions for Museums and Galleries powered by WebAR
- VisualizAR: AR for BIG E-Commerce with a single line of code
- Virtual Concierge: a VR concierge for Hotels that allows guests to experience what's around them with or without the help of a real Concierge and decide where to go.
- Unhe A R r dof: Data over Sound to Augment Events, Radio and TV broadcasts and Live Streams.

And we are currently working on our first B2C products and IPs:

- O dyssey in a Box: An AR powered board-game platform where your smartphone is as important as a dice.
- Night Blasters: A multi-platform multiplayer FPS where Sound is all you can see and where Spatial Audio is front-and-center as your main game-mechanic.

Dimmersions - Dare to Dream

Contact

Name: João Moreira Email: info@dimmersions.com Website: www.dimmersions.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

www.dimmersions.com/best-case-study.html

Type of Company

Software & Content provider. Tourism, Advertising/E-commerce, Entertainment/Gaming.

Customer Types and/or names

Warner Brothers, Toyota, Red Bull, Universal Music, Fiat-Chrysler Group, S. L. Benfica, Zen Pencils, Savoy Hotel Group, Sonae, NOS, La Vie Group



Why are you in Portugal?

Dimmersions was created in Portugal as a Spin-off from Limp an International Digital Agency working from Madeira Island. Co-Founded by Candy de Freitas and João Moreira, both Limp and Dimmersions share a creative and very Portuguese DNA as both founders are Portuguese and met in this country. With a firm belief in working "from Portugal to the World" and enacting change and technological breakthroughs from their Homeland, they decided early-on to build Dimmersion's development team in the country while promoting and commercializing its products and services abroad. The decision was made because Portugal "breeds" a different kind of Developer that thrives in Creative environments and can embrace quick changes and ambitious visions. At the same time, the growing Tourism ecosystem in the country is a great opportunity to create XR solutions for the Culture, Hospitality and Travel industry with an International appeal. Plus it's a great country to live with very creative people that always find unique ways to deal with problems through the Portuguese art of "Desenrascanço".

What do you need/hope for/from the Portugal Ecosystem?

We believe the Portuguese Ecosystem has exactly what it takes to be a XR leader worldwide and we are also fighting to make it so. The extremely creative developers that are coming out of Portuguese Universities along with a need to always think beyond the small borders of our "European Corner" and a first-class internet service all over the country creates a unique ecosystem that has the possibility of creating almost everything with the same standard of quality that you can find on the best development studios in the world. However Portuguese companies are usually slow to band together and lack in the skills to market their products and solutions so one of our Hopes for the Ecosystem is that the XR companies all over the country start working together to fill-in the gaps and create even better solutions while organizing around entities (like the VRAR Association) that can help in promoting these solutions to an wider audience and finally showcase the Portuguese Ecosystem for what it is: the most ambitious and creative place in the world setting the new standards for the XR revolution to come.



Company Name Dotesfera

Company Summary

Dotes fer a is established in the market in response to the growing need for innovation on enterprise.

Our main goal is to offer the best solution on our client needs with the best performance. We want to guide you, offer you the best experience and fast.

Contact

Name: João Rodrigues Email: geral@dotesfera.com Website: www.dotesfera.com

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.dotesfera.com/en/portfolio/zom-3d-3

Type of Company

B2B, Marketing, Tourism

Customer Types and/or names

Centro Ciencia Viva, NEST, A.Matos Car, LARM, REMAX



Why are you in Portugal?

Is the country the founder was born. Portugal is a great country to innovate and to create new pilot projects that can scale worldwide. Portugal has lots of goods to offer, such as gastronomy, sun, and beautiful landscapes. This nowadays is important not just to retain new talent but also to have the best journey while working for a successful company. We find Portugal to be a great place to live and to work, it's a small country but has lots of great personalities and top notch experts in several areas where we work.

What do you need/hope for/from the Portugal Ecosystem?

Portugal's XR community is growing faster. We want to play a critical role as community active participants, and contribute as many as we can for the growth of the community. We may contribute with our expertise, helping other members of the community, develop more workshops, more webinars and create a successful community circle. We need to connect even more and generate more rapport and more value to our customers. And we hope to get even more involved on the community.



Eduardo Acquarone

Company Summary

Eduardo Acquarone is a Brazilian journalist based in Lisbon. He is a writer, director, and creator of digital projects. Mr. Acquarone has been working at the forefront of innovative content since 2008, when he launched the Emmy-nominated Globo Amazônia, a collaborative portal that engaged users in making 55 million virtual protests against the destruction of the Amazon. After a 2015 fellowship at the Tow-Knight Center for Entrepreneurial Journalism in NY, he founded Flying Content, a digital storytelling company. Since then, he has directed dozens of 360 videos and VR news content at Globo, the largest TV network in Brazil.

Contact

Name: Eduardo Acquarone Email: eduacquarone@gmail.com Website: www.acquarone.us

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.bit.ly/Edu_Emmy

Type of Company

Content

Customer Types and/or names

 ${\sf TV\,Globo;British\,Embassy;Editora\,Santillana}$



Why are you in Portugal?

Doing a PhD in Immersive Narratives and exploring the local ecosystem.

What do you need/hope for/from the Portugal Ecosystem?

 $Contacts and freshide ias; I hope to bring \,my innovation \,and \,work \,ethics \,to \,the \,Portugues ecosystem.$



Exaud is an established software development company with expertise in key areas such as Embedded Systems and Applications, Mobile Application Development, Wearables and IoT.

Its experience goes beyond software development: Exaud will help companies expand their capabilities and business as their strategic partner.

Contact

Name: Mafalda Gomes
Email: mafalda.gomes@exaud.com
Website: www.exaud.com

Size of Company

Employees or FTE equivalent: 10-20

Case Study

www.exaud.com/portfolio/typeit-wear-sms

Type of Company

Software Development

Customer Types and/or names

Facebook, Samsung, Audi, Google, Nissan

Why are you in Portugal?

Our company has always been based in Porto, Portugal. It's a country that offers great talent when it comes to Software Development - the academic courses in IT are extremely promising, with universities training amazingly talented people to join the field. Our closeness to several European Markets makes it easier to do business within Europe as well. In Exaud's case, we also have a vast experience working with the North American Market, and the time zones discrepancy is quite manageable, allowing our team to maintain a high level of work cadence and communication with companies on the other side of the Atlantic.

Portugal has also become popular for its quality outsourcing services in the field, so it only makes sense to be part of such an IT business friendly environment, which we recommend not only for start ups starting their business journey, but also potential clients that are looking for competent software development outsourcing companies. Here anyone will find a pool of highly skilled, experienced and driven workforce.

EMBEDDED PROJECTS Touchjet





What do you need/hope for/from the Portugal Ecosystem?

We hope to join networking activities that allow us to learn more about Virtual Reality and Augmented Reality initiatives, news and trends, in a friendly and inviting environment (even if exclusively online due to the pandemic which shouldn't be a problem with the normalisation of online events). Workshops on Unity and other tools are always welcome, as well as helpful material for curious developers that are interested in Virtual Reality and Augmented Reality development. We hope for more interaction between companies that are working/start to work in this field of expertise, along with contacts with potential clients and firm communication and publicity to the benefits of Virtual Reality and Augmented Reality in businesses (even as a response to the current pandemic).

Lastly, we are eager to learn and work alongside with other promising companies that are as curious as we are when it comes to Virtual Reality and Augmented Reality, looking out for new and potential uses of these tools on different industries and for groundbreaking purposes.



Company Name FOOTAR

Company Summary

FootAR is an augmented reality second screen app that empower sports fans to enhance live smart data.

Our B2B2C solution addresses markets with high CAGR like 5G, Big Data, On-Demand Content, Augmented Reality and Immersive Betting. B2B clients are Sports Broadcasters, Telco & Bookmakers. Post Covid-19 selections from Accelerators as Hype Sports Innovation, USA and EIT Digital, Europe who invested in us. We've been selected to pilot and running conversations with PSG, FIBA, DAZN, SkySports UK, Vodafone, Altice, among others. We're looking to pilot our solution and to extend our network and only then look for a potential investor that bring value to the solution, more than the money by itself. We are originally a software house for +5y and this is the right time to create an original, scalable and disruptive product in-house to conquer the world.

Contact

Name: David Olim Email: footar@dobsware.com Website: www.dobsware.com/footar

Size of Company

Employees or FTE equivalent: 1-5

Case Study

Vodafone Global (In progress)

Type of Company

Software B2B2C

Customer Types and/or names

Book Makers, Telecommunication Providers and Sports Broadcasters; Sports fans



Why are you in Portugal?

Great mix of quality expertise vs price vs quality of life.

What do you need/hope for/from the Portugal Ecosystem?

Networking/Partnerships



Gema Digital

Company Summary

Gema Digital is a creative technology agency specialised on developing immersive and interactive digital solutions. We combine bespoke software, multimedia and creativity to deliver unique projects for a huge range of sectors such us Engineering, Government and Public Services, Healthcare, Heritage, Manufacturing, Retail and consumer, Telecommunications, Tourism and Visitor Attractions.

VR/AR/MR, interactive solutions, video-mapping, bespoke software and 4D rooms are a few examples of what our team produce on a daily basis. Since 2007 we have developed over 2000 projects worldwide within +100 related to VR/AR/MR, for institutions like Google, UEFA, FIFA, University of Cambridge, Siemens, Altice, Pelé Museum and World of Wine, to name a few.

With over fifty full-time collaborators our production team consists of Front-end and Back-end developers, Designers, 3D artists, Motion Designers, Sound engineers, Copywriters, Technicians and Project Managers.

We are a project oriented company, from a 3D virtual reality animation to the development, installation and maintenance of 30.000 sq m of exhibition areas of the World of Wine project.

Reach us for further information.

Contact

Name: franciscoportal@gemadigital.com Email: portugal@gemadigital.com Website: www.gemadigital.com

Size of Company

Employees or FTE equivalent: 50-100

Case Study

www.vimeo.com/gemapt

Type of Company

Software, Content, Operation

Customer Types and/or names

Google, UEFA, University of Cambridge, World of Wine, Siemens, Altice, Cambridge, World of Wine, Siemens, World of Wine, Siemens, World of Wine, Siemens, World of Wine, Siemens, World of Wine, World of

Why are you in Portugal?

GEMA has offices in the United Kingdom (Cambridge), Brasil (São Paulo) and delegates in Spain (Madrid), Mexico (Mexico city) and Angola (Luanda).

The main factor we are in Portugal is because we are a Portuguese company who operates from Porto to the World.



Since 2007 we have been experiencing a sustainable grow in technological knowledge and know-how that is reflected on the complexity of projects our clients challenge us to develop and implement.

Most of our team is composed by Portuguese collaborators, although we hire based on the skills and previous work and not by the nationality.

One of the facts that contribute to the trust of our clients in GEMA work is due to the talent, experience and creativity of our collaborators and also about the amount of effort we invest on every single project.

Portuguese companies are investing more and more on digital solutions and we are also contact by companies from abroad due to the work we have been developing over the past years.

Portugal is recognised as one of the most enthusiastic environments to startups and technology in the entire world from Portugal to the World.

What do you need/hope for/from the Portugal Ecosystem?

Portuguese Ecosystem is recognised as one of the most enthusiastic environments to startups and technology in the entire world. Portugal has an attractive location to do business mostly because of the competence of its companies, a strategic location, access to key markets, and competitive costs for salaries and offices.

Due to the pandemic coronavirus outbreak 2021/2022 will be a hard task to predict about investments for local companies. We are being contacted by companies which are aware about the benefits that digital solutions such us VR/AR can bring to the business.

Virtual and Augmented Reality can fill a gap between companies and customers, specially for those companies who sell direct services to clients.

As no one know the real effects of coronavirus outbreak we truly hope that Portugal Ecosystem continues to invest in VR/AR, promoting the technological development and innovation of their companies and specially, to continue providing opportunities for the Portuguese entrepreneurial community.



Glartek is a fast-growing technology start-up, focused on new solutions for the industrial sector. Considered as the best start-up of 2017 Web summit, the company crosses technologies to extract the ideal mix to increase Industry leaders results. Glartek has gained, in 2019, a first investment round by three players HCapital, EDP, and Novabase.

Glartek provides its customers with innovative solutions that combine Augmented Reality (AR) and the Internet of things (IoT), to increase efficiency and safety of production and maintenance processes.

The company has been constantly focused on growing its relevance among main industrial leaders. As main customers, Glartek's product is implemented in Renault and EDP. And, as main partners, Industry references like Fraunhofer and Siemens.

Contact

Name: Bruno Duarte Email: info@glartek.com Website: glartek.com

Size of Company

 ${\sf Employees}\, {\sf or}\, {\sf FTE}\, {\sf equivalent:}\, {\sf 10-20}$

Case Study

 $www.drive.google.com/file/d/1wLvsthUTo-46x4HwLxbyaeiU_pHRu8Ph/view$

Type of Company

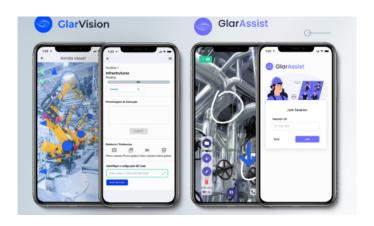
Software

Customer Types and/or names

Automotive - Renault/Utilities - EDP/Facilities Management - Sotécnica

Why are you in Portugal?

We are in Portugal, the company's country of origin, to build up our product, brand, and know-how on the technology we use. Our goal is to provide our customers with strong, and innovative technologies that help our clients to give their first steps regarding their Digital Transformation towards the Industry 4.o. Working with new and fast-growing technologies from the Industry 4.o involves a constant update on the product, and a vision based on continuous improvement. Therefore, we are in Portugal to guarantee that we develop the perfect fitted solution for the Portuguese industrial market, in which are included worldwide manufacturing leaders. Glartek develops products based on three pillars: Augmented Reality (AR), Process Digitalization and the Internet of Things (IoT). These tools support processes execution in several industrial sectors. There is an increasing number of huge worldwide industrial leaders that are in Portugal, to profit from competent labour, that require lower wages than in other European countries. Therefore, it is a big learning experience for start-ups that operate in the



Portuguese market. The goal is to implement our product, learn what is its best fit in this big industry and ensure a value proposition coherent for new markets. Once this learning stage is accomplished, we will internationalize our solution that we believe is clearly fitted to other any other country.

What do you need/hope for/from the Portugal Ecosystem?

The Portuguese Industry 4.0 ecosystem is undergoing a deep change towards its digital transformation. This digital transformation will allow industrial companies to make a profound change in their processes and operations, through the introduction of digital tools that facilitate field operations. New, innovative physical interfaces and products, based on real-time information, allow an industrial digital ecosystem to be created, called the Industry 4.o. A PwC research concluded that in only 5 years, 86% of Portuguese industrial companies will reach high levels of digital transformation. Which represents a high opportunity for technology start-ups it develops their products and achieve a market maturity that is enough to find success, and to be able to open to new markets. Not only there is a wide opportunity to learn from a fastgrowing market, but Portugal is also a country in which there is a technological mindset, as well as several organizations that provide initiatives to help start-ups to develop themselves. There is an increasing opportunity to grow both a customer, partners, and other interest stakeholders, and learn from them. We expect to expand our product to new markets, find new opportunities and develop innovative solutions to help our customers through their Digital Transformation.



Ground Control Studios

Company Summary

Ground Control Studios is a game developer focused on PC, Consoles and Mobile, that also uses game-tech to solve real-world problems.

We are an experienced, highly motivated team of software engineers, game designers and digital artists. We focus on optimization, technological R&D and continuous improvement of pipelines/practices.

Our unusual skill set has enabled us to undertake projects with different scopes and goals, from highly optimized console ports, to B2B sales instruments, marketing VR/AR experiences, IoT industrial solutions, multiplatform game development and automated APIs/communication systems.

The core of our stack is Game Development. All we develop and create, from games to innovative software solutions is done using game development pipelines, combined with best practices for software engineering and state-of-the-art techniques/approaches.

Contact

Name: Rui Guedes Email: rui.guedes@gcsb2b.com Website: www.gcontrolgames.com

Size of Company

 ${\it Employees\,or\,FTE\,equivalent:\,5-10}$

Case Study

www.youtu.be/HTsfFoi1swE

Type of Company

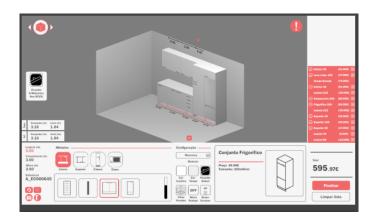
Gaming, Industrial Operations, Training, DIY Retail, Fashion, Retail

Customer Types and/or names

 $Large\ Retail\ Chains,\ Multinational\ Corporations, Established\ Game\ Studios, Indie\ Developers,\ Tech\ Companies,\ Entertainment\ Companies,\ Telco\ Corporations$

Why are you in Portugal?

Good access to talent: Portugal features some of the best tech universities in Europe, Labour costs: Average wages for the same level of talent are lower than London or Berlin, Affordable cost of living: even with the current speculative outlook of the realestate market, Portugal is still a country where living is quite affordable in terms of rent, utilities and general costs, the same goes for companies since an office space costs a fraction than the same space somewhere else in Europe. These advantages do not come at the cost of geographical isolation, from Portugal is easy/fast to reach other countries. Portugal is a country where it is possible to have excelent quality of life, combining great wheather, rich cuisine, very safe cities and a diversified landscape in a rather unique package when



compared to other countries. Having a Portuguese passport is also advantageous, since due to its good general diplomatic standing with others, Portuguese citizens do not usually have issues with visas or visitations to other countries.

What do you need/hope for/from the Portugal Ecosystem?

Wants: Synergies with other tech companies, since due to the national VR market's size and maturity there aren't "monolithic" companies that actually dominate several domains of knowledge. Instead there are dozens of smaller companies that are really good on one or two things and it makes sense that we work together to reach better clients, projects and revenues. Needs: Better access to growth funding, namely VCs who can actually understand the VR market and can identify potential in our local startups. Current funding opportunities are designed for tech companies outside the VR landscape and at earlier stages of maturity. More reasonable taxation, better tax rebates for investments namely on high-risk/long production cycle industries such as VR and Gaming. As it stands, most companies incur on the risk of being financially smothered by fees and taxes while still in the production cycle, heavy taxation over company profits drive foreign investors away and prevents us from landing high-profile/high-profit projects.



 $High\ Dimension-Software\ Solutions\ is\ a\ technology-based\ company\ whose objective\ is\ focused\ on\ developing\ innovative\ software\ solutions.$

The company was established to maximize existing synergies acquired through many years of research and development of software solutions in areas as different as healthcare, accounting, entertainement, sport, etc.

Contact

Name: Pedro Stamm

Email: pstamm@high-dimension.com

Website: www.high-dimension.com

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.chusj.info/simulate

Type of Company

Software

Customer Types and/or names

Largest public hospitals in Portugal

Why are you in Portugal?

Our company is head quartered near Coimbra in the central region of Portugal. This country is the perfect place to develop and showcase our products mainly in the health sector but also in the events sector. In Portugal we market the following products:

AUGMENTED REALITY BASED WAYFINDING (indoor navigation)
Always find the way to your destination inside buildings simply by using your smartphone browser. Just choose where you want to go, point your smartphone to the orientation markers in the building and follow the on screen arrows. No maps, no apps!

INTENSIVE CARE UNIT MANAGEMENT

Projected for mobility this Intensive Care Unit Management is a multiplatform mobile based solution idealized to allow health care staff to be able to access and input patient data near the bed using hospital or their own devices.

HEMODYNAMICS AND INTERVENTIONAL CARDIOLOGY LABS

Management system for Hemodynamics and Interventional Cardiology

Laboratories with the following features: Register of all patient related data

(requisition, lab results, reports, images, films, etc), worklist management,
interaction with lab medical equipment, remote module, automatic and manual





data export to National and European registries, etc.

solutions (sales, bookings, etc).

THEATRE, CINEMA, SPORTS AND OTHER EVENTS MANAGEMENT

One more flexible solution, able to manage many kinds of indoor and outdoor events such as Theatre, Cinema, Music Concerts, Sport events, Museums, Swimming Pools, etc. Configurable to allow centralized or decentralized sales points with secure connections over the internet. Web service API that allows interaction with external

What do you need/hope for/from the Portugal Ecosystem?

We want to further develop and test our services benefiting from the fast technology adoption rate of Portuguese namely in the health sector.

For many years we kept serving our home market and only recently we felt the need to also go abroad. We need Portugal to continue to be our test bed such as the current pilot project in Hospital São João at Oporto with the most advanced indoor navigation and assistance system for hospitals, Hospital21 (https://hospital21.com).

The Portugal Ecosystem already allowed us to find partners for our AR based services for we presented ourselves and our solutions in two monthly events of the TheVRARA Portuguese chapter.

We are now actively looking for medium and large size hospitals, large museums, big events and shopping centers to try our indoor navigation solutions. Knowing that the COVID-19 pandemic complicates and delays many of our potential clients, we can try to take the time by fostering partnerships, improving our marketing and training offerings.



Hivolve is a pioneering company that operates in technological markets world wide.

Technology is increasingly present in our daily life and business. We work daily to and technology-based solutions that can improve the performance of companies as well as society in general. Innovation and disruptive performance are a goal we pursue in a systematic way. In this sense, we have been able to over our clients a truly unique experience of Virtual & Augmented Reality.

We are the change that we want to see in the world.

We believe in innovation technological. We believe that we can revolutionize the way our customers communicate with the world. We want to be at your side, to also enjoyyour success.

Contact

Name: Tiago Romano

Email: tiago.romano@hivolve.com

Website: hivolve.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

N/A

Type of Company

Content Creator

Customer Types and/or names

All type of companies



Why are you in Portugal?

Portugal is a country full of talent. The past few years have shown this to everyone. They showed the ability that the Portuguese have to turn around bad situations, they showed that the Portuguese are disruptive, entrepreneurial and with a critical and creative mind.

The technical capacity that Portuguese specialized human resources have is incredible. Its soft skills and hard skills, which exist in such abundance, gives us the security of specialized human power capable of meeting needs when necessary. The quality placed in each project is undeniable, making each business partner proud of the final result. In addition, the balance and synergy between work and life provide all our employees with the necessary tools to feel happy and fulfilled.

Portugal is on track to become a major player among IT startups and hivolve will be present. We want to help bring the flag of Portugal to the four corners of the world, as was done by our ancestors.

Let's go beyond and say hi to evolution.

What do you need/hope for/from the Portugal Ecosystem?

Ihope that the Portuguese E cosystem keeps on groing, as had been groing so far. It's really important to bring more disruptive companies and new ideas do the market, adding a lot of value to it.

 $VR\&AR\ market\ is\ evolving\ every\ single\ day,\ with\ new\ hardware,\ new\ software\ and\ new\ content.\ It's\ important\ to\ keep\ going\ this\ path,\ searching\ for\ better\ ways\ to\ improve\ the\ actual\ conditions,\ providing\ for\ better\ perfomance,\ adding\ value\ to\ all\ the\ work\ chain.$

Portugal is a great country to achieve that. We do hope that more companies can come along and work with us because this is the only way to grow, to share opinions and visions and to work together developing better solutions.

We will continue to defend the decentralization of powers, the democratization of decisions and a more open market, both for the national community and the international community. We hope that Portugal goes this way, evolving everyday, creating more jobs and opportunities for everyone at this field of work.



Immersive | Pyx is a StartUp based in Abrantes, Portugal and aims towards the Digital Contents products, namely, the usage of Augmented Reality to improve the real world. Immersive | Pyx is still just a project in development, but our goal is to specialize in the creation of a new layer in the world, magnifying user-experience in underdeveloped areas that can use our products and services to develop their already existing product/service. We believe that the digital world is the future, and our ambition is to implement this world in our everyday life. Immersive | Pyx's vision is to bring to reality a digital dynamic from mobile devices in order to facilitate, intensify and improve the existing dynamics. Immersive | Pyx's vision is to target key-markets for the dynamization of the Augmented Reality technology and its implementation in market, not only as a communication tool, but also as a multiusage tool in national and international markets. Our goal is to be the reference in the usage of the latest technology and contribute to its development and application in the future. Immersive | Pyx's values are based in bringing a unique, useful and integrating vision using one-of-a-kind and pragmatical resources, together with irreverent visions of reality.

Contact

Name: Alexandre Carrança Email: immersive.pyx@gmail.com Website: www.immersivepyx.com

Size of Company

Employees or FTE equivalent: 1-5

Case Study

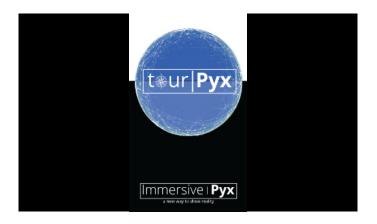
www.youtu.be/INrySjt1aUI

Type of Company

Software

Customer Types and/or names

B₂B



Why are you in Portugal?

Our startup started in September 2018, while on an ideation program called "Tourism Explorers", promoted by Fábrica de StartUps based in Lisbon, which helped promoting ideas to improve Tourism in Portugal.

The initial thought was drafted into what would become Immersive | Pyx. The way of thinking and perceiving reality was more than the human eye can see naturally. The way the world is aiming towards the digital contents and the improvement of what we already have is already a reality. The idea is to improve it.

Augmented Reality is already present in our world. From simple filters you can take photos with, to industrial solutions, the mix between both worlds is now available and reachable. Immersive | Pyx is a StartUp based in Abrantes, Portugal. The two founders are Portuguese, one living in Abrantes and the other in Braga, not being essential in a digital world and a networked technological ecosystem, living in the ""decision-making"" points of the world, such as Silicon Valley. However, distance also poses challenges, and it is clear that Portugal is asserting me as a technological hub, but still with a lot to walk. We must defend this path.

What do you need/hope for/from the Portugal Ecosystem?

Startups, especially technological ones, continue to face a problem in financing for construction and validation of prototyping. Traditional MVP is not necessarily the best solution when we want to produce an alpha solution that validates and poses initial challenges and takes new paths. There will be a lack of funding for prototyping, rather than contests for ideas or acceleration. In our specific case, we are in a stagnation phase because we have not found financing for prototyping, although we have already collected some prizes for our original product ideas.

Basically, we believe that the financial resources spent on campaigns and contests of ideas can be better channeled and managed with another focus. Angel investment is not the best solution at an early stage when it is important to test a real product. When we reach that stage, there is already pressure to enter the market.

In short, it remains to incubate and protect ideas (eventually give up on them) before launching into market competition using investor funding.



With offices in Portugal and California, inciteVR specializes in the production of immersive learning products for higher education and professional training. inciteVR is a market leading pioneer for online learning through immersive learning experiences (ILX) featuring hand-tracking with mobile VR and rich Cloud enterprise features.

Contact

Name: Vasco Torres
Email: vtorres@incitevr.com
Website: www.incitevr.com

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.cutt.ly/fjtCacN

Type of Company

Higher and professional education. VR

Customer Types and/or names

 $\label{lem:continuous} A d talem \ Global \ Education, Purdue \ University, Global, Chamberlain \ University, Becker \ Professional \ Education$

Why are you in Portugal?

The majority of our team is Portuguese and lives in Portugal, thus we aim to continue planting its roots on Portuguese soil.

We believe that Portugal has amazing talent in all the skillsets that a company like ours needs. Our team has been working together for several years now in a vast and diverse number of projects, and whenever we had an open position we hired in Portugal and we were always positively surprised by the quality of their work as well as their dedication. We feel confident that whenever we need to scale up, we will be able to find the people we need in Portugal.

Another important aspect is the segue into the European market. Right now, most of the products we are developing are focused on the US market, since our clients are from there. But we are already preparing these products, with localization systems and highly customizable frameworks, in order to allow us to enter other markets such as the Europe.

Last but not least, Portugal is an amazing place to live, our clients are always looking forward to meet us here, to enjoy the sun, food and amazing views.



What do you need/hope for/from the Portugal Ecosystem?

As part of the Portuguese Ecosystem, we aim to help nurture it and ultimately make it stand out from all other countries. Portugal is already known for the quality of our workforce; we need to show that in the VR/AR ecosystem it is no different. I'm positive that with the help of associations like VRARA, we will come together and by sharing our use cases and best practices, we will uplift the whole community and reach new heights. Every other day we hear about a Portuguese team that is creating an amazing product, and just by reading this news we get motivated to go the extra mile. We are also looking forward to partner with other parties on this ecosystem and come up with the solution to big problems that are too complex to tackle alone. In the end we want to help this ecosystem thrive, because we will thrive with it.



Company Summary

inKlusion is a digital and technological agency guided by innovation.

We combine talented creative people with state of the art technology to develop great quality products in the VR and AR space.

Our goal is to push the envelop when it comes to interactive experiences, whatever the industry. So far we have work in fields as diverse as:

- Entertainment with brand activation strategies that encompass the use of VR and AR to establish brands as innovation leaders through technology.
- Training/simulation with interactive experiences using external peripherals, such as interactables and weather condition simulations.
- Wellbeing with the use of VR for fear/pain abstraction during potentially traumatic experiences.

Inklusion is also heavily focused on R&D with partnerships with multiple public and private Universities and PhD members in both our management and development teams.

Contact

Name: André Barbosa Email: a.barbosa@inklusion.pt Website: www.inklusion.pt

Size of Company

Employees or FTE equivalent: 5-10

Case Study

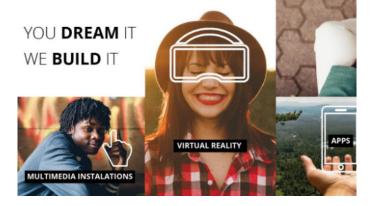
www.bit.ly/inklusion-vrara

Type of Company

Software, AR/VR Simulations

Customer Types and/or names

Sonae, Undisclosed (NDA)



Why are you in Portugal?

First and foremost, we are Portuguese! Portugal has a great ecosystem for startups, especially those whose focus is on innovation.

The ecosystem for VR and AR is also blooming with clients getting better acquainted with the technologies and placing the proper financial backing into them. This allows us – VR/AR development companies - to develop more ambicious projects that will ultimately be more effective for the client and their goals.

The presence of local groups, such as VRARA's portuguese chapter is also extremely important to create sinergies and help companies, such as Inklusion, to promote their work and establish partnerships through networking.

Being in Portugal, we would say, has a lot of benefits in this day and age, where globalization in conjunction with the fact that remote work is now becoming a standard, makes geography a small detail in business relations. Thus, Portugal being a great country to live in, is intrinsically a great place to work and develop a business in the VR/AR space.

What do you need/hope for/from the Portugal Ecosystem?

The Portugal ecosytem is already active, with dozens of companies working in this space. However there are still some challenges in these ever-evolving technologies.

One thing we often identify is the lack of sinergy and cooperation between entities in the area, especially "competing" enterprises. We believe collaboration is key for the overall expasion of VR and AR technolgies and the growth of the ecosystem as a whole. By doing so, we can not only increase the potential of our internal market but also to open doors to external markets. A greater focus on this topic, would surely lead to a better dynamic within the ecosystem that will contribute to the affirmation of Portuguese companies in areas like AR or VR.

Another topic that could be introduced is the decentralization of VR/AR events. Most events are usually organized in more centralized locations, such as Lisbon or Porto, but more likely in the capital. This, we believe, could lead to a greater commitment to the ecosystem by "geographically distant" players by proving them with the same networking, pitching or collaboration opportunities that are available for companies which are located in more centralized areas of the country.



LarM Publicidade SA

Company Summary

Lar M is an Advertising and Content Creation Agency that discovers new opportunities for its clients in the most modern communication tools in the world.

Contact

Name: João Monsanto Email: jmonsanto@larm.pt Website: www.larm.pt

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.livewines.pt

Type of Company

Creativity, content, technology

Customer Types and/or names

Altice, Tranquilidade, Prosegur, Leya, UAL, municipal chambers



Why are you in Portugal?

LarM is a Portuguese company that will soon expand to other countries. His experience of communication in new technologies, mainly in areas such as culture and tourism, allows him to offer exclusive products and solutions.

Vertical products, such as APP Live Wines Portugal, City Go and soon Hotel T, have no borders. Portugal is a country, perfect as a starting point for expansion to Europe and countries that speak portuguese language, such as Brazil, Angola, Mozambique,...

What do you need/hope for/from the Portugal Ecosystem?

The Portuguese ecosystem currently allows finding partners and solutions capable of responding with quality and innovation to all requests from the Portuguese market, as well as from other markets, as long as there is a relatively small dimension of specialized human resources. The growth and collaboration between companies in the Portuguese ecosystem will make it possible to address this issue by allowing Portugal to become a highly competitive country in AR/VR.



Luso VU is an augmented reality company working in the B2B and B2C market. We are developing two different products for each market:

- HIDO: A disruptive augmented reality binocular eyewear much more elegant and with a wider field of view than competition. This product is targeting the consumer market and in the future will replace smartphones
- LEANSPACE: A software platform that support operators to assembly
 hardware using augmented reality. The first version was developed for the
 assembly of satellites and we are now transferring it to non space
 applications (e.g. aircrafts, cars).

Contact

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Size of Company

Employees or FTE equivalent: 10-20

Case Study

www.myeyespeak.com

Type of Company

Smarglasses Hardware and Software

Customer Types and/or names

ESA – European Space Agency, Airbus, Thales Alenia Space, OHB, People with ALS



Why are you in Portugal?

The right question is why we don't leave Portugal. The reason is that beside a very good quality of life (sun,beaches, surf, food, music, people, culture), Portugal has a lot of talented persons and is atracting many foreigners to live and work here. Additionally, we have a culture used to interact with other cultures which is key for creating a global product.

What do you need/hope for/from the Portugal Ecosystem?

Portugal Ecosystem in AR/VR is growing due to two reasons. One reason is the existence of a lot of high human talent, suitable for this new technology/paradigm. The other reason is that portuguese people are much more early adopters of technology than in another country. This makes Portugal a good benchmark for new technologies.



MGO Consulting is and IT integrator with track record on virtual and cloud infrastructure solutions. It has an innovation Lab were is developing solutions to solve immersive market problems. One of the main projects is a VRDM (Virtual Reality Device Management) that can managed standalone VR Headset from the cloud. It is one of the first solutions to address both the hardware device management as well as content management. It facilitates marketing, content creators, training and education industries to manage and distribute their products, solutions and content to VR headsets regardless of its location and in a centrally easy to use cloud based platform.

Contact

Name: Gonçalo Pratas Email: goncalo.pratas@mgo.cv Website: www.mgo.cv

Size of Company

Employees or FTE equivalent: 10-20

Case Study

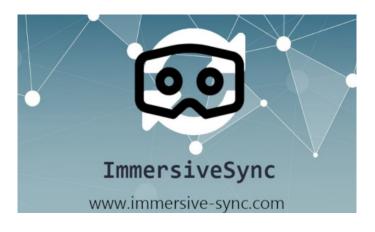
N/A

Type of Company

Hardware and software solution provider

Customer Types and/or names

Government, Utilities, ONG, Finance, Media



Why are you in Portugal?

Portuguese ecosystem for startups is growing to become one of the most thriving ones in Europe, with specific and strait forward policies that enable the creation of value added solutions to the international market. With the involvement of universities and companies in the same ecosystem, provides a easy to implement mapping between market and academia needs, enabling the reduction of costs to develop innovative projects that can be monetized using the several flexible financial solutions that were creating in the startup ecosystem. Regarding the specifics of immersive market ecosystem, there is a vision for becoming an important international hub with ramifications that can connect European companies with Portuguese speaking countries. These ramifications can reach emerging markets with millions of people that are eager to evolve their societies to advanced high tech hubs. With a clear strategy to address those countries Portuguese companies in VR/AR space can reach massive growing markets like Africa and South America.

What do you need/hope for/from the Portugal Ecosystem?

Create a collaboration environment that can be used to enhance the visibility of the solutions developed in the Portuguese ecosystem, as well as enabling an easier understanding how the technology is evolving in terms of customer use cases. With this project, MGO Consulting can solve big issues that exist an are well known by the content and experience providers. So the divulgation and networking between agencies, app and content developers will be one of the biggest advantages of having VRARA ecosystem as a partner.

Enabling the mapping and networking between customers, companies, industry leaders and visionaries, will help this project to be internationally known and became a standard in the creation of end-to-end turnkey solutions, were hardware, software, management and governance can be delivered in a more simplified solution but compliant with enterprise security and governance requirements. This can be a game changer in order to enhance the usage of immersive technologies in enterprise and corporate customers.



NeuroGEARS

Company Summary

 $NeuroGEARS is an early stage technology company bridging Neuroscience, \\ Games, Interaction, and Robotics, born from the desire to explore and create \\ inspiring interfaces for augmenting human experience—and to make technology itself more accessible to everyone.$

Contact

Name: André Almeida Email: a.almeida@neurogears.org Website: www.neurogears.org

Size of Company

Employees or FTE equivalent: 1-5

Case Study

N/A

Type of Company

Software-www.bonsai-rx.org

Customer Types and/or names

Champalimaud Foundation, Fundação Calouste Gulbenkian, Sainsbury Wellcome Centre, Artica, MIT, https://open-ephys.org

Why are you in Portugal?

Because Bonsai RX was born in Portugal but the main creator ended up by moving to London where NeuroGEARS was created. Part of the development of bonsai the core component of NeuroGEARS as always been in Portugal.

It is important for us to to reach the market locally and internationally. It is necessary to ensure ways to collaborate in projects with some relevant players and be able to partnership with european companies, universities and research centres.

At an european level having a footprint in europe ecosystem is very relevant to NeuroGears and Portugal has been always historically important by making bridges between different countries continents and civilizations.

NGR team members have been involved at the forefront of neuroscience technology development in Europe and the United States in the last decade, participating in large-scale European projects and open-source technology dissemination activities worldwide, as well as interdisciplinary art and science collaborations

NGR also develops award-winning tracking technologies such as the HiveTracker (https://hivetracker.github.io/), and the Bonsai visual programming language (https://bonsai-rx.org/). Bonsai is now used by over 3,000 researchers and hundreds of labs worldwide to run all kinds of neuroscience experiments, including



high-density electrophysiology recordings with CMOS silicon probes, imaging of neural activity with miniaturized microscopes in freely moving animals, and real-time behaviour monitoring for driving closed-loop virtual reality environments. NGR started its activity in 2017, building on expertise in designing custom neuroscience research equipment. It has since expanded its R&D activities, building on more than 15 years of experience of its team members in the design of innovative real-time hardware and software technologies for virtual reality and neuroscience research.

What do you need/hope for/from the Portugal Ecosystem?

Create bridges to empower the work and network that we been doing, that is Open Source and available to be used commercially. NeuroGEARS Ltd (NGR) is a technology company bridging Computer Science, Neuroscience, Education, Arts, and Robotics. NGR works with worldwide research and institutional partners across nearly a hundred labs in the U.K., United States and Europe, performing R&D activities, developing custom research equipment and training students and staff. NGR also has running collaborations with University College London and other international institutions on large-scale research projects, such as the International Brain Laboratory, to develop the next generation of open-source tools for reproducible research in Neuroscience.

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NextReality

Company Summary

Next Reality is a leading VR/AR technical team, with proven web, mobile and blockchain skills. Since 2010, Next Reality's team has worked with 1100+ organizations on immersive tech solutions worldwide, through our offices in Portugal and Peru.

Main use cases include remote assistance, immersive training, augmented workspace, augmented logistics and lately 5G-enhanced VR/AR scenarios.

As a Microsoft Gold Partner, NextReality published the first Hololens app in portuguese & arabic and continuously implements bespoke solutions that integrate Microsoftg Mixed Reality products.

Among other accolades, Next Reality was considered in 2020 a Top10 AR/VR Services Consultancy company by CIO Applications Europe.

Next Reality is a spin-off of IT People Group, an innovation-driven corporate group focused on increasing businesses and organizations' productivity.

Contact

Name: Luis Bravo Martins Email: hello@nextreality.com Website: www.nextreality.com

Size of Company

Employees or FTE equivalent: 10-20

Case Study

www.youtu.be/YnzDd88_sVs

Type of Company

Software Dev

Customer Types and/or names

Ex. Microsoft, NOS, Samsung, Deloitte, ENEL More at https://nextreality.com/clients

Why are you in Portugal?

The opportunity to reach, through Portugal, to several markets has been central to NextReality's market expansion and partnership building. Timezone-wise, Portugal is well located, as we can easily talk to most of Europe and North America.

This also allows us to tap into different, portuguese-speaking markets in the shouthern hemisphere. We already have an office in South America and the brazilian market is clearly a great opportunity. At the same time, in Africa, emerging technologies can bring huge cost-savers in Education and Health in countries like Angola, Mozambique or Cape Verde.



Although VR/AR is an emerging market, we already see really nice skills in the available IT talent pool in sophisticated areas like computer vision, interaction design or VR/AR business development - besides Unity, Unreal and other software developers.

Also, there is also a culture for players to partner up - partnering with universities and research centers regarding R&D efforts, both at a local and at an european level is a clear benefit.

What do you need/hope for/from the Portugal Ecosystem?

We definitely need to have more awareness regarding VR/AR opportunities and possibilities in B2B environments. There is still this notion that immersive technologies are going to happen somewhere in the future and that useful applications will only become available in 2 years time.

It's important that more training and education in these areas are made available and that professionals in all areas become aware of the impact and potential changes that immersive technologies are bringing to B2B processes. And that also means training professionals in new job profiles that are rising on demand.

Of course, given the pandemic, official government support is also needed, in order to compensate for the reduced activity and market uncertainty that is happening -

This support could come in the form of projects and/or funding opportunities for companies to test drive VR/AR solutions in their businesses. There are a number of VR/AR use cases that can help soothen the effects of the pandemic, like remote assistance for industrial supervisors and trainers, try-on AR experiences for ecommerce stores or virtual visits to heritage monuments or even to our grandparents at nursing homes.



 $Nimest\, Tech\, is\, a \, studio\, focused\, in\, designing\, and\, developing\, applications\, that\, use\, 3D\, avatars\, to\, perform\, different\, tasks$

 $Nimest\ vision\ is\ to\ use\ technologies\ such\ as\ Augmented\ Reality\ Glasses\ and\ Mobile\ Platforms, and\ Holographic\ Displays\ to\ create\ digital\ humans\ to\ perform\ tasks\ in\ different\ fields\ such\ as\ education,\ customer\ service,\ tourism\ and\ communication.$

Besides our expertises in the most advanced development tools in the market, we are also creating our own tools. With them, it will simpler to integrate distinct Artificial Intelligence Services into Digital Humans, capable of understanding, and showing emotions and body language.

Contact

Name: Carlos Morais Email: carlos@nimest.co Website: www.nimest.tech

Size of Company

Employees or FTE equivalent: 1-5

Case Study

www.nimest.tech/4dtravel

Type of Company

B₂B Software Solution

Customer Types and/or names

Huawei, Vodafone, EventRent



Why are you in Portugal?

Portugal gives a series of advantages that other countries do not. For us, the main thing is proximity to customers. As the country has a medium/low population, contacts are more human and intrapersonal. This means that there is always a connection point in common. Networking flows easier and with that, negotiations and presentations are faster.

Another important point is the operational cost in relation to other countries in the European Union. Nimest has activities in France and Portugal, but in Portugal, access to qualified professionals at an affordable cost is easier. This is extremely important for companies operating in a market that is now emerging and trying to establish activities.

Portugal has proved to be a perfect starting point for companies like Nimest, and Portuguese partners are extremely receptive and active. Thanks to the partnerships in Portugal, we had the chance to exhibit at some of the biggest technology events in the world and to meet people who have helped us immensely.

What do you need/hope for/from the Portugal Ecosystem?

The main point is to know possible partners so that we can grow together. An active ecosystem makes its members increasingly seek to evolve, continue to implement new technologies and helps the market to always be active in search of new experiences.

In the case of augmented reality, the inversion of technology is also very important. Users and even companies are not yet aware of the possibilities and the future of augmented reality. Having an ecosystem that helps to educate these important players so that the market warms up and with that, companies can grow.



At Mirage Virtual Reality we deliver hyper-realistic imagery enhanced to deliver cutting-edge spatial 3D experiences for the real estate industry.

We provide expertise in VR & AR, architecture, design and programming and leverage on the same technology as the gaming and motion picture industries, to create disruptive and innovative visualization tools.

Our solutions are aimed at streamlining the Real Estate Development process and optimizing it's ROI, by offering customizable services that will bring you closer to clients, more frequently, efficiently and anywhere.

Contact

Name: João Caiado Email: joaocaiado@miragevirtualreality.com Website: www.miragevirtualreality.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

www.miragevirtualreality.com/projects

Type of Company

Design/Real Estate

Customer Types and/or names

Real Estate Developers/Architects/Brokers/Interior Designers



Why are you in Portugal?

I was born here and I love living in Portugal, another upside is the access to european union and how fast I can be in a european capital from here, also qualified cheap labor is an upside.

What do you need/hope for/from the Portugal Ecosystem?

Sharing XR industry knowledge so we can learn more and innovate further, and tap into new possible customers or areas.



NOS is the largest communications and entertainment group in Portugal. Offers state-of-the-art fixed and mobile solutions, television, internet, voice and data for all market segments. In the corporate market, it offers a broad portfolio of products and services, with tailor-made solutions for each sector and different sized businesses, complementing its offer with ICT, IoT and Cloud services. With a network prepared for 5G and providing Matosinhos city with the 5th generation of the mobile network NOS is positioned at the forefront in the implementation of this new technology and takes a leading role in innovation associated with smart cities and the development of the 5.0 societies. On the other hand, the objective of reducing greenhouse gas emissions and contributing to the sustainability of the planet has led NOS to subscribe to the Letter of Commitment "Business Ambition for 1.5°C", which confirms the company's public commitment to align its emissions with the decarbonization trajectories, necessary to limit global warming. NOS is in the main national stock index (PSI-20), has 4.9 million mobile customers, 1.6 million mobile customers 1.8 million fixed telephone customers and 1.4 million fixed broadband internet customers.

Contact

Name: Pedro Machado

Email: <u>pedro.machado@nos.pt</u>

Website: www.nos.pt

Size of Company

Employees or FTE equivalent: 100+

Case Study

www.nos.pt/institucional

NOS is implementing Augmented Reality in Industry 4.o, helping several Corporate Clients to optimize industrial procedures from maintenance to assembly, assisting their workers through the provision of information in real time.

Type of Company

Mobile & Telco; Audiovisual & Entertainment; Big Data & Analytics; Cloud Computing (laaS & PaaS); Cloud Computing (SaaS); Data Center; IERP & Business Apps; IoT; Artificial Intelligence; Security & Privacy

Customer Types and/or names

Mass Market (B2C); Corporate; Mass Business; Public Sector



Why are you in Portugal?

NOS is a Portuguese company, resulting from a merger between Optimus and Zon, both Portuguese companies. NOS is fully committed to Portugal and the development of the digital society, investing in the development of next generation networks, fixed and mobile, and working closer to the Portuguese I&D ecosystem.

What do you need/hope for/from the Portugal Ecosystem?

Considering the strategy that NOS has been pursued throughout the years, it's important for the company to be within the innovation ecosystem and stablish relationships with companies that work in the technology field. Following this vision, it's crucial to get to know the startups operating in the AR/VR field.



 $ONTOP is the world leading 5G+Augmented Reality (AR) gaming provider, \\ creating multi-user high-quality AR experiences for both players and spectators, \\ through interactive 5G streaming.$

ONTOP proprietary framework gathers a multitude of technologies to offer innovative customizable advertising solutions, to promote and increase consumer sales of any product or service, based on social and memorable AR activities.

Contact

Name: Nuno Folhadela Email: nunof@ontopstudios.com Website: www.ontopstudios.com

Size of Company

 ${\it Employees or FTE equivalent:} {\it 5-10}$

Case Study

www.youtu.be/vwSLFMW-ITE

Type of Company

AR Gaming, Entertainment, 5G

Customer Types and/or names

 ${\sf Telcos}, {\sf Hardware\,manufactures\,(smartphones\,\&\,glasses)}, {\sf Agencies}$



Why are you in Portugal?

High quality talent, competitive costs and lifestyle.

What do you need/hope for/from the Portugal Ecosystem?

Stronger presence on international media through events and showcases.

- More support between all the ARVR developers affirm Portugal as the European/world epicenter of ARVR content.



Company Name

Retrai - Interactive Development

Company Summary

We are determined to accomplish every specific requirement of our clients.

Using the latest technology and processes our final goal is to provide a range of products and services, that ensure the execution of each project in the best possible way, giving our client the assurance that they are in the head front of innovation.

We are always trying to erase the border of impossible, pushing boundaries and developing disruptive paths to get where our clients wants and needs to be.

Contact

Name: Ana Fitas

Email: geral@retrai.co

Website: www.retrai.co

Size of Company

Employees or FTE equivalent: 1-5

Case Study

N/A

Type of Company

Software

Customer Types and/or names

 ${\it Gema Digital}; Next Reality; Brand Key; Clube Criativos Portugal; BAMGF; Infodelivery$



Why are you in Portugal?

Gema Digital; Next Reality; Brand Key; Clube Criativos Portugal; BAMGF; Infodelivery

What do you need/hope for/from the Portugal Ecosystem?

We are fully convinced that the Portuguese ecosystem will grow a lot in the future and we want to be part of this expansion. The national market has a lot of potential, with more and more young talent and interest in new technologies. In this increasingly global world, we can work from anywhere on the planet. Retrai - Desenvolvimento Interativo is a 100% Portuguese company, created by young Portuguese talent during their training at one of the most prestigious Portuguese educational institutions. Now, at the age of five, Retrai continues to invest in investment for Portugal with our work and to believe that it is possible that Portugal becomes a knowledge centre for Augmented Reality, Virtual Reality, Touchless Technology and new media. We have many points in our favor, our location, our climate, Portuguese friendliness, the willpower to be better and continue to explore the world.

In conclusion, we are fortunate to have been born and created the company in this magnificent country full of potential.

S A T O R E S T U D I O Company Name

Satore Studio

Company Summary

Satore Studio is an international, multi-disciplinary creative studio with offices in London, Cardiff, Lisbon and New York. Founded in 2011 by Creative Director Tupac Martir.

At Satore, we combine design and technology to bring bold and beautiful concepts to life, delivering truly memorable experiences to diverse audiences worldwide. We work in unison across three divisions; events, architectural lighting and technology, which allows us to deliver everything from runway shows and stages, to buildings, sets and virtual experiences.

We have specialist teams with comprehensive knowledge which has led to collaborations with some of the biggest names in fashion, culture and brand experience.

As a company, Satore has its roots in lighting and design — including work for concerts, fashion, theatre, opera, and exhibitions. Working in live events has taught us to react quickly and adapt to the moving requirements of the industry. With our knowledge of state-of-the-art techniques in real time rendering with CGI and game engines, and our history and experience in live entertainment, we can work as the bridge uniting both industries.

Contact

Name: Tupac Martir Email: tupac@satorestudio.com Website: www.satorestudio.com

Size of Company

Employees or FTE equivalent: 10-20

Case Study

www.vimeo.com/367299986

Type of Company

 $Content, Film, TV, Creative, R\&D, Conceptual, Art, VR, Virtual \ Production$

Customer Types and/or names

 $\label{lem:concert} Agencies, Production Companies, Fashion, Concert/Touring, Performance, \\ Architecture.$

Why are you in Portugal?

Looking for partnerships, talent and opportunities to grow our team, as well as our offering to clients. Whether it is in Architecture, Immersive Technologies or Live Entertainment, we are hoping to find like minded individuals that want to create new forms of brining entertainment to the audiences.

Satore Studio started back in 2011 as a studio providing lighting and installations for



live performance events. Working on a number of fashion shows during the respective fashion weeks in London, Milan, New York and Paris. The Studio has also worked with a variety of musicians, art installations, product launches and in some cases creating bespoke content for different mediums.

The Architectural division of the Studio is responsible for the design of the interior and exterior of buildings in truly novel and interesting ways, that enable an immersion into physical space. Our vision is to enable the notion that a building itself is part of the fabric of the environment, thus leading to enhancing the audience experience. The division bolsters research and development into emerging technologies in order to maintain a competitive advantage. Developing new, bespoke technologies and filming techniques for projects within the studio and to push boundaries within the wider market.

At the same time, exploring what is possible in Virtual Production and how this can be used to further the opportunities within the performance world, music, theatre, opera and dance. We are also looking at bringing more people into the team, in order to help us develop our R&D, while at the same time growing the offer and providing opportunity to new talents.

What do you need/hope for/from the Portugal Ecosystem?

We want to create relationships with like minded companies and individuals, who are looking at how to not only grow the industry but also find collaborations in the various sectors, Architecture, Immersive Technologies, Live Entertainment and Art. We need to find new and existing talent that is looking to be pushed to new limits of what is possible in the intersection of technology, humanity, arts and performance, while at the same time understanding that the story is king. We want to create a network in which we are able to share the load when possible, as well as exchanging ideas and concepts in the various disciplines.

We hope to be able to be also of support to other companies and be able to exchange the different techniques and ideas, in order to help grow the industry in the country. They don't have to be only on our fields, we are happy to look at other parts of the industry to see how our learnings, can be of help to them.

At the same time, we want to connect with manufacturers, universities and other companies that are looking for new ideas.



Company Name

Sound Particles

Company Summary

Sound Particles uses the power of computer graphics applied to sound. Software Particles software is a 3D CGI-like software for audio post (cinema, tv, gaming, VR), used in AAA game studios (e.g. Blizzard, Epic Games, Ubisoft, Playstation) and in all major Hollywood studios, in productions such as "Game of Thrones", "Frozen 2", "StarWars 9"

Contact

Name: Nuno Fonseca Email: nuno.fonseca@soundparticles.com Website: www.soundparticles.com

Size of Company

Employees or FTE equivalent: 10-20

Case Study

www.bit.ly/3nM6vWo

Type of Company

Entertainment (Cinema, TV, Games, VR)

Customer Types and/or names

 ${\sf Blizzard}, {\sf Epic\,Games}, {\sf Ubisoft}, {\sf Playstation}.$



Why are you in Portugal?

We are Portuguese.

What do you need/hope for/from the Portugal Ecosystem?

Portugal has a lot of potential in terms of deep tech. We will continue to give our contribution to the entertainment world, from cinema to gaming, and help the entire ecosystem in Portugal.



SPIC is a digital studio, focused on technological innovations, hologram development and interactive digital content, mainly used for brand activations and experiences, events, congresses, museums and expositions on both national and international level.

Our market differentiation and innovation lies in the development of digital applications with human interaction, creativity, innovative design and technology.

Contact

Name: Paulo Bica Email: pbica@spic.pt Website: www.spic.pt

Size of Company

Employees or FTE equivalent: 5-10

Case Study

www.vimeo.com/57946727

Type of Company

 $Technological \, innovations, hologram \, development \, and \, interactive \, digital \, content$

Customer Types and/or names

SPIC's portfolio reflects diversity from different sections of business and trade such as Vodafone, Somersby, Renault, SIBS, Novabase, Barclays, EDP, Volkswagen, Heineken, Huawei, Essilor, among others

Why are you in Portugal?

We are a Portuguese based company; an excellent team of dedicated professionals, all of whom have the appropriate academic and vocational training in their sphere of expertise. All our team members are extremely committed and highly creative, which we are all proud to be a part of.

Our team continues to grow in line with the increase in skills requirements and customer base; an excellent team of dedicated professionals, all of whom have the appropriate academic and vocational training in their sphere of expertise. All our team members are extremely committed and highly creative, which we are all proud to be a part of.

The Portuguese are very talented, competent, effusive and justifiably proud of the place they call home. Our culture is reflected in the work we do and how we do it. We are a nation of discoverers, courageous adventurers and yet relaxed. These characteristics are reflected in our very peculiar and unique style.

Another important aspect, is quality of life. Portugal has one of the best quality of



life worldwide.

People living in Portugal are satisfied with their life and describe it as a very easy place to settle in; generally happy with their working life and their work life balance.

What do you need/hope for/from the Portugal Ecosystem?

Mechanisms to leverage technology, cooperation in research and business competence and strong arguments to compete against other larger companies. We hope to be able to share and enjoy more technical skills to embrace a wide variety of projects in different programming languages and technology, with particular emphasis on digital applications allowing human interaction via interactive displays, motion detection, mixed reality, stereoscopic screens and holograms.

We are currently developing an online event platform, which allows participants to be involved in a virtual interactive process. In addition to the virtual space, the platform provides a comprehensive set of tools that guarantee the desired impact for any event. This platform combines the most recent technologies with the suitable creativity and services for creating a virtual conference or event that is more active with its guests.

Companies are constantly looking for new approaches to promote their products and establish effective connections with their customers and partners. Currently, there is a high demand for the hybrid format, in order to expand the reach and attract more notoriety to companies. Therefore, it is also a good opportunity for the ecosystem to provide new approaches that make this platform a more technological space, allowing companies to increase the number of participants involved, during and after the event.



United Creative Group is a 3600 agency that has a multidisciplinary team of experiment and demanding professionals capable of offering you an integrated solution in all Communication areas, both in Portugal and Angola.

Since 2002, we stand for ideas that create value. We stand for the big small details that make all the difference.

We stand for innovation and for sensory experiences that connect people to brands.

We think in a strategically creative way, seeking the differentiation of what your brand has of unique to offer but always remaining loyal and coherent to its principles.

Contact

Name: Hugo Silva Email: hsilva@unitedcreative.com Website: www.unitedcreative.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

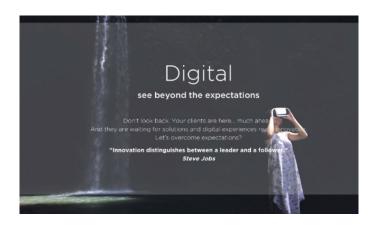
www.youtube.com/watch?v=xqbyABuCi5w

Type of Company

Events, Pharma Industry, Digital

Customer Types and/or names

Continente, Huawei, Novartis, NOS, Warner B., Mercedes



Why are you in Portugal?

We are in Portugal because everything started here. We have 20 years of experience. But we work in other markets (Angola, Spain, Brazil).

What do you need/hope for/from the Portugal Ecosystem?

 $\label{partnerships} \mbox{Exchange of experiences and partnerships that } \mbox{can add value to what we already do}$



Company Name ViP-display

Company Summary

Design and production of wireless see-through AR head sets with unique combined features and respective software solution.

 $\label{lem:production} Development and production of custom-made \ Driver \ Boards for OLED microdisplays.$

Hardware engineering solutions for the commercial and aerospace industry.

Contact

Name: Miguel Martins
Email: Miguel Martins
Website: www.rotacional.com

Size of Company

Employees or FTE equivalent: 1-5

Case Study

Medical Assistant: https://youtu.be/oDjgMnrZQNI

Type of Company

 $Hardware \, (AR\, head sets)\,, Software \,$

Customer Types and/or names

 $Several: TELECOM INSTITUTE, BIOMEDICAL R\&D department of University; \\ DENTAL CLINIC; Optoelectronic department China institution$

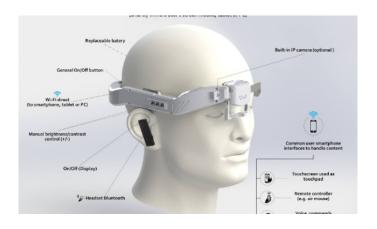
Why are you in Portugal?

Good weather, good beaches and nice food in a peaceful country. Good engineering skills and the desire to make it right.

To show the features and benefits of our technology to the industrial sector. The ViP-displays (our AR headsets) allow users to see any type of information (text, graphics or video), on the move, without obstructing their field-of-view, and keeping hands free to perform any task.

The advantages of our technology against available competitors are as follows:

- $\bullet \ \ \text{High image definition (clear and sharp); small font size 9 letters readable.}$
- $\bullet \, \mathsf{Real} \, \mathsf{See}\text{-}\mathsf{through} \, \mathsf{capability}$
- Adapted to be used in different light environment conditions (indoor& outdoor)
- Manual Control of brightness and contrast
- $\bullet \ \, \text{Wireless connection. The ViP-display version A smartly mirrors the information from users' screen equipment (tablet, smartphone or PC) in front of their eyes}$
- Quick and intuitive adjustment of the virtual image (several degrees of freedom)
- $\bullet \ \, \text{Fast replacement of the front optic element by the user (in case of scratch or damage; does not need to go to factory)}$



- Allows the use of eye correction glasses simultaneously
- Easy battery replacement. Autonomy for approximately one shift (1 charge).

What do you need/hope for/from the Portugal Ecosystem?

To get recognized all of the effort made in design and development of innovative technologies by companies/customers and investors worldwide.

Two granted patents in the portfolio.

The opportunity to network with professionals, entrepreneurs and investors in the field, connect and share experiences with content software developers. To participate in most important VR/AR events, show our innovative solutions, new products, develop skills and stay on top of new products, services and innovations. To be involved with worldwide AR/VR organizations, to help gain exposure and share ideas and best practices with other experts in the industry.

To be able to show our AR solutions: Hands-free and see-through screen on the move. We developed two AR headsets versions:

- ViP-display A (Mirroring): It smartly mirrors the screen of smartphones, laptops and tablets in front of users' eyes. (available with or without camera)
- ViP-display B (vídeo remote assistant): It sends the video streaming recorded on-site to a remote location. The expert in remote location can send information back to the on-site user.

- Access work instructions/training on-site
- Reduce execution time
- Increase efficiency and safety
- Reduce risks and failures considerably



Company Name Voxatlas

Company Summary

Voxatlas works on the creation of contents for books, especially school books. It is in this field that we are interested in Augmented Reality, to attend projects with RA of the group publishers. We are also interested in the development of the market and opportunities in other areas.

Contact

Name: Leonel Fonseca Email: leonel.fonseca@voxatlas.pt Website: www.voxatlas.pt

Size of Company

Employees or FTE equivalent: 20-30

Case Study

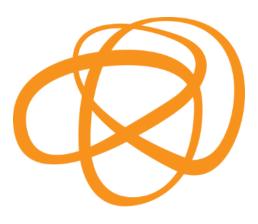
www.youtube.com/watch?v=8HFFuzsDpBA

Type of Company

Content

Customer Types and/or names

Editorial sector



Why are you in Portugal?

We are in Portugal because we are Portuguese, and it is from Portugal that we work for Africa and Brazil.

Portugal offers the means we need, namely well-trained human resources in universities. The access to the whole global ecosystem has no physical boundaries.

What do you need/hope for/from the Portugal Ecosystem?

From the ecosystem we are expecting information on the evolution of technology, the market and the products created.

We also want to invest in the promotion and spreading of the technology so that the market can understand its usefulness and, consequently, the demand for AR becomes effective.



Experts in the development of VR & AR solutions

Contact

Name: Davide Duarte

Email: contactus@vrzwork.com

Website: www.vrzwork.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

www.tinyurl.com/y3ed8db6

Type of Company

Developers off VR & AR Training and Securitye platForms

Customer Types and/or names

Oil companies, Supermarkets, Governmental Institutions, Shipyards, Telco's

Why are you in Portugal?

Firstly, because we are a Portuguese team, but mainly because Portugal has highly qualified human resources with a Quality VS Excellent cost ratio, thus allowing for highly efficient development teams with controlled costs and good quality of life for them.

Portugal is also part of the European Economic Community, which has one of the most developed and regulated markets in the sector, with more than 500 thousand consumers where Virtual Reality and Augmented Reality are booming. 2030. Portugal is also a gateway to other continents due to its language, Angola, Mozambique, Equatorial Guinea, Cape Verde and Brazil, but also because of its history, thus opening a unique opportunity for expansion to other communities around the world.

Portuguese is spoken by more than 260 million people.

Being still a country that is changing its hourglass for digital technologies, where we highlight the Web Summit, we have in Portugal the real challenge of launching innovative and transformative experiences of how we see and are in the world today.



What do you need/hope for/from the Portugal Ecosystem?

We need more support from institutions in obtaining funds, and specific programs aimed at this innovative area of virtual reality and augmented reality, more support for internationalization and of course less bureaucracy.

We also need to have access to more integrated programs with industrial centers and universities in order to take advantage of and forward the same support to innovative areas and with promising and rapidly developing markets.

In our opinion, support, permanent contact with regard to European institutions should be a primary factor for the true expansion of Virtual and Augmented Reality. In a time of innovation, 5G will change the communications paradigm and the way we will deal with our daily lives. Going to the Supermarket, Watching "television", going to the doctor, buying a good or talking to a relative will not be the same very soon.

We think that here these new technologies will be strong allies for telecommunications companies as well as other government institutions.



WaveFunction VR is a studio made up of creatives, artists, programmers and project managers, specialized in the development of immersive experiences.

We create unique experiences in the following areas:

- Immersive Virtual Reality: visualization of architectural and construction
 projects; interactive experiences for teambuilding and marketing; historical
 reconstruction; visualization of industrial machines and equipment; virtual
 reality simulations for training.
- Virtual tours and immersive content: virtual tours based on high quality 360 photos; 360° and 180° 3D video; photogrammetry.
- Augmented reality: augmented reality experiences using web technologies, without the need to install applications.
- 3D rendering: web configurators; virtual tours based on photorealistic renderings; photorealistic videos from 3D.
- Interactive maps: three-dimensional maps for touch-screens, ideal for presenting large-scale projects.

Contact

Name: Pedro Marques

Email: pedro.marques@wavefunctionvr.com

Website: www.wavefunctionvr.com/en

Size of Company

Employees or FTE equivalent: 5-10

Case Study

N/A

Type of Company

Content

Customer Types and/or names

Altran, NORS, Critical Manufacturing, Collective Flow, Edigma



Why are you in Portugal?

 $\label{lem:competent} A mazing people, competent engineers, nice weather and excellent food-we wouldn't want to be anywhere else in the world.$

What do you need/hope for/from the Portugal Ecosystem?

We hope that the ecosystem keeps growing and developing together.



X-Plora is an APP to guide visitors through Museums, or other venues, with context, interactive and immersive contents and storytelling (where AR and VR takes an important role).

Contact

Name: Mafalda Ricca Email: hello@goxplora.com Website: www.goxplora.com

Size of Company

Employees or FTE equivalent: 5-10

Case Study

www.youtu.be/2gA_4gC5SIY

Type of Company

Software

Customer Types and/or names

Museums, Visitor Centres, Cities, Sports Venues, Retail

Why are you in Portugal?

We are in Portugal because of Human Resources convenience and all the synergies that we generate with our business partners that are also companies based in Portugal. We also believe that if something works on a market link Portugal must work on bigger countries with more museums and venues. But working in Portugal doesn't mean that we only work with and for Portugal. We have staff working around the world and our target is to reach more sales worldwide rather than in Portugal. Portugal has also a great international environment for start ups to kickoff and to start scaling and as Portugal as an important role as a tourists host, this facts fits perfect on a start-up like ours were tourists are an important part of our revenue. As we are a Spin Off from GEMA DIGITAL, based in Portugal too, we have a great experience of working in Portugal on immersive technologies from 13 years now, with great results that can be partly justified by the human Portuguese capital and the favorable conditions that this market may have for tech companies. Acording to ACM, Portugal has:

A Strategic location

- Nearest European country to the U.S.
- 3-hour time difference from Brazil and Russia.
- Same time as UK and Ireland.
- Daily flights to major European cities.

$Na\,Attractive\,Consumer\,Market$

- Great and privileged economic relations between Portugal, Brazil, Angola and Mozambique.
- South/Central America potential



- Facilities and Resources
- Portugal ranks number one among EU countries in terms of public services online (European Commission)
- Portugal has world renowned logistics and infrastructure in rail, airways and sea, both for passengers and cargo;
- High potential in geological resources
- Safety-low criminality

What do you need/hope for/from the Portugal Ecosystem?

To generate some synergies with companies like ours, to exchange experiences, learnings, etc. To have an alternative way of reaching developers for our project. Being a part of a business ecosystem like VRARA provides mechanisms to leverage technology, achieve excellence in research and business competence, and compete against other larger companies. Rather than resisting the change, the companies have to reshape and align their business goals and include a business ecosystem - as being a part of one is crucial to succeed. This provides important benefits to each member and understanding the benefits of the business ecosystem you are a part of, is necessary to practise a flourishing business activity. I know that "VR appears challenged at the ecosystem level at this stage of the market, with no clear catalyst on the horizon despite steady growth. And while the consumer smartglasses market doesn't really exist yet, Cook and friends could change everything if and when they decde it's time for one more thing. It's not like they haven't done it before." The same for AR where we don't actually see. So to have an ecosystem to anticipate the best experience that we may all develop to level up the experience while the industry does't come out with a mass wearable solution, is really important for all us that are working on this field of this exciting technology.



Company Name WhitewolfVR

Company Summary

Development of training solutions in VR AR and XR

Contact

Name: Jorge Cabral Email: geral@whitewolfvr.com Website: www.whitewolfve.com

Size of Company

Employees or FTE equivalent: 1-5

Case Study

N/A

Type of Company

Software

Customer Types and/or names

Architects, trainers, etc.

Why are you in Portugal?

After traveling through the world I thought VR would be a good option to grow. Now, the place I live is in the interior and there is a lack of industry in all kinds of technology and with enough knowledge and growth I think that there is enough potential to make this city a large hub for virtual reality. The great option for this is that there is a major IT university here and the ability to get enough students to move directly into this section would be a great kickoff for this city to grow.

What do you need/hope for/from the Portugal Ecosystem?

The ability to have companies look for our services, as well as getting new tecnologies for us. There is also the ability to make the interior grow as previously stated. What we need is the ability to be visible especially now that the COVID has kicked in, so that we can get students to learn how to work.





wTV ision creates integrated broadcasting solutions based on software development, branding and design, live operations and specialized human resources outsourcing.

The company became one of the main real-time graphics and playout automation providers due to its comprehensive knowledge within the industry. From small one-time broadcasts to the most important ones worldwide, wTV ision takes part in thousands of broadcasts every year and has experience in more than 60 countries.

wTV is ion's solutions for sports, election coverage, entertainment shows and news are, together with its master control systems, the preferred choice of major TVs and producers all over the world.

Contact

Name: Daniela Dias Email: marketing@wtvision.com Website: www.wtvision.com

Size of Company

Employees or FTE equivalent: 100+

Case Study

www.bit.ly/3i9EzKA

Type of Company

 $Software \ Development, branding \ and \ design, live \ operations \ for \ the \ broadcast industry$

Customer Types and/or names

Broadcasters (Local, National and International), TV distributors, Production companies, Sports clubs, associations and federations, Stadiums and music festivals. Some examples: Globo, La Liga, Liga Portugal, FIBA, Riot Games, UEFA, ATOS, Eleven Sports, Sport Tv, RTP, TVI, ZAP, NOS, Altice, etc.

Why are you in Portugal?

wTV is ion was founded in 2001 by a group of 5 young Portuguese people with the common dream of bringing "Wisdom to Television". From a small office in Lisbon (Portugal), they set up a real-time TV graphics software company that is now one of the world's biggest real-time TV graphics providers.

Twenty years of success are possible thanks to highly qualified and committed professionals, continuous search for innovative and cutting-edge solutions, and strong technologic partnerships.

In Portugal we found the creativity, dedication, and know-how to grow from a small



company to a power-house in the broadcasting industry.

It's easy to understand why Portugal offers great advantages to grow and sustain a multinational company like wTVision. It's proximity to other European countries makes it easy to implement and develop projects in European territories, in a cost-effective way.

We've learned that, in Portugal, typical set-backs like language barriers or logistics are easily overcome (and we took all those factors to establish offices all over the world). That's why our headquarters is still in Lisbon, even though our company is now spread across 4 continents.

What do you need/hope for/from the Portugal Ecosystem?

During 2020 Portugal received several international distinctions vouching our thrive for constant promotion of technological development and innovation.

We were distinguished, for example, as one of the top 40 best countries to do business, and classified by the Organization for Economic Cooperation and Development (OECD) the country with the most innovative projects to fight Covid-19.

These and other awards are the result of a long journey from national entities promoting the Portuguese entrepreneurial ecosystem.

Now more than ever, companies, developers and institutions must converge to find new innovative solutions, technological upgrades, and share tools of effectiveness and market placement. To find new ideas, partnerships and experiences in one place is something of undeniable value to face the challenges ahead.

With "Portugal Ecosystem" we hope VR/AR Association can help promote Portugal as a country that not only values technological development and innovation but also has several players with outstanding results and distinction, in different fields of activity, worldwide.

 $Portugues etech companies \ like wTV is ion must be showcased as international success stories and we believe the "Portugal Ecosystem" will have a vital role in this. \\$

More companies in Portugal's VR/AR Ecosystem



360view

☑ info@36oview.pt



AAVANZ

☑ info@aavanz.com



AURA Studios

www.aurastudios.xyz

☑ aura@aurastudios.xyz



Altice

& www.altice.pt



Artica CC

☑ info@artica.cc



Bliss Applications

☑ info@blissapplications.com



DOT Vantagem

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Darwin & Warhol

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☑ geral@d-w.pt



Decode



Decskill



Digital Species

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Edigma

& www.edigma.com



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Filmadoria



Franco360

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 □



GMK

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Go Design



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Hi Interactive

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Immersive Lives

□ research@immersivelives.pt



KIT-AR

www.kit-ar.com



Keeplisted

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Konica Minolta

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Lisbon VR

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Lost Room

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Lusisombra

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Main Brain

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Mitdream

☑ info@mitdream.com



My Realities



Nexlys



Nixfuste Nova



PipeCodes

☑ info@pipecodes.com



Pool Live AR

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Rare

SBZ**360**

Prooptica

RARE

SBZ360

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SIEMENS



Sala do Futuro

 Ø www.saladofuturo.pt

Siemens

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Spin360VR

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Subvertice



Tekuchi

& www.tekuchi.com

THINK FUTURE

Think Future

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United Creative

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Unloop

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VANTeC



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VRW

& www.vrw.pt



Virtual Tour

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Virtuaplay

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Virtuleap

www.virtuleap.com



Vivevirtual

www.facebook.com/ViveVirtual.pt



Vodafone



Voxelscope

www.voxelscope.com



Vreality Studio



Wide

☑ info@wide.pt



XR Archi

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☑ info@xrarchi.com



Zero Latency

Ø zerolatencyvr.com/lisbon/home



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Digital Business Community

VRARA Portugal Partner

APDC - Associação Portuguesa para ao Desenvolvimento das Comunicações

www.apdc.pt