



YDREAMS
2015

PROPOSAL FOR
MIRAL-YDREAMS
PARTNERSHIP



INTRODUCTION

Miral is the Abu Dhabi government's leisure, tourism and entertainment development arm. The agency is looking to partner with leading innovators in these areas to transform Yas Island and other assets into innovative and exciting destinations on a global scale.

YDreams is a global innovator that has developed over 700 projects for 50 Fortune 500 companies and governments in 25 countries. YDreams' world-class team and ecosystem enables the company to be a "thought leader" in Miral's areas of intervention.

This document discusses how YDreams will approach Miral's challenges. The company realizes that there are already existing and projected attractions that are transforming Abu Dhabi, and specifically Yas Island, in a unique place for targeted customer segments.

The document includes three major sections:

The Challenges

This section intends to be illustrative of previous projects and not yet implemented ideas that YDreams can bring to the table to overcome Miral's challenges;

YDreams Approach

This section presents: the methods that will be used; deliverables that will be produced; and YDreams team and ecosystem that will be available for a long-term relationship with Miral.

General Conditions

This section will include: scheduled deliverables and an estimation of the costs involved; and proposed terms, conditions and exclusions.

THE CHALLENGES

Miral's Mandate

Miral is the custodian of Yas Island, Abu Dhabi's leisure and entertainment precinct. Yas Island currently includes a number of attractions, with the primary ones being the Abu Dhabi Formula 1 circuit – holder of the final race on the annual F1 calendar, and Ferrari World - the largest indoor theme park in the world (<http://www.yasisland.ae/en/visiting/welcome-to-yas-island/>). Miral also manages other relevant assets such as the airport and Abu Dhabi - Saadiyat Island museums.

Miral's mandate is to 'create' leisure, tourism and entertainment destinations in Abu Dhabi that will be innovative, immersive and exciting destinations on a global scale. To support this vision, Miral will provide a 'stage' to experiment and explore how future technologies might be interpreted and integrated into this context over the next 3-5 years and beyond.

YDreams' Role

"Nobody really knows where the future is heading, but YDreams seems to have a better sense than most. Plus, they seem to have the combined tech + design acumen that few outside Apple seem to possess. Rebellion Lab, 2011"

Reality, only better Economist, 2007

YDreams is keen to assist Miral in overcoming the challenges that will face to implement its vision. Those challenges, as identified by Miral, are discussed herein at the light of past projects and not yet implemented YDreams' ideas. These discussions are merely illustrative of what can be developed.

A systematic framework to innovation is presented in the next section. This framework will build on methods that may be used to identify and implement individual solutions, such as the ones that are described below. The framework will analyze the crucial components of innovative projects in these areas. It will also include digital systems providing the information, decision making and communications support required to manage innovation at a broader scale.

Specific Challenges

Geography: Yas Island, Abu Dhabi

Leveraging the landscape – Desert, Water, Air

Illustrative YDreams projects

YDreams was a pioneer in the development of 3D terrain representations as interfaces for data and logic layers. Those 3D terrain representations were explored using virtual reality, tangible tables, and augmented reality.

Examples include:

The Santander project - 3D model +augmented reality visualizations



SANTANDER VISITORS' CENTER

[**VIDEO**](#)

(After 2.01 minutes)

Santander's landmark project includes a 3D model of the Financial City. Moving displays were used to augment the model and provide explanations on every component of the city, including the olive trees

Rio de Janeiro state (Rock in Rio)



ROCK IN RIO
[VIDEO](#)

A fly-over Rio de Janeiro State using head-mounted displays

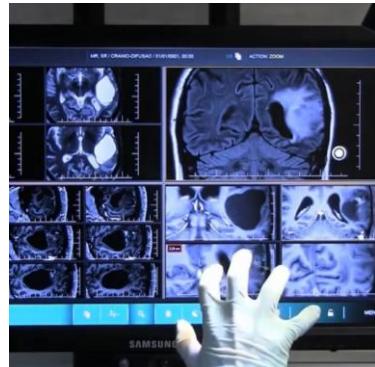
Olympic Park, Rio de Janeiro



OLYMPIC PARK
[VIDEO](#)

An exploration of the future Olympic Park in Rio de Janeiro using virtual reality.

YScope - Natural User Interface Tool for Medical Imaging in Operating Rooms



YSCOPE

[VIDEO](#)

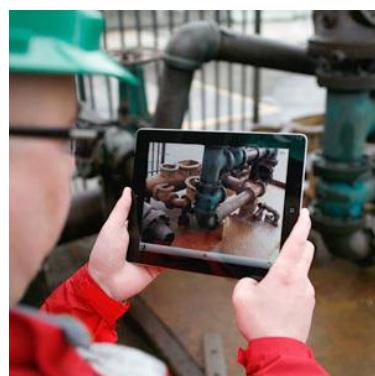
Virtual and augmented reality representations can be explored using natural gestures interfaces such as those developed by YDreams to neuro-surgeons.

At Lisbon's largest hospital, neurosurgeons have access to the patient's image data by using a gesture-based language as they cannot touch the screens. Similar interfaces can be used to explore spatial data

YDreams' ideas not yet implemented include:

The use of 3D representations associated to databases and analytical models in the context of decision theatres for governmental purposes. A similar project was developed for EDP, Portugal's electrical utility, for the operation of a dam.

EDP Picote



EDP PICOTE

EDP Picote visual management system: the external view; and the internal view of a dam where "traffic lights" are used to show if the construction is behind schedule (red light) or following the planned schedule (green light)

"The World As My Browser"



WORLD AS MY BROWSER

The use of indoor as well as out outdoor geographical representations as the foundations of a new concept called World As my Browser (WAB). WAB is based in the use of "like buttons" that may provide a "like map" associated to places, objects and events available in multiple platforms.

By placing like buttons in places and objects, a "like" map can be obtained for indoor and outdoor spaces. With high density "button" environments one can create accurate micro-geographical representations to answer questions such as: where can I buy the most liked ice creams near me?

SECTORS

Priority 1 – PLAY

Primary Attractions – Major entertainment, leisure, theme parks, event concepts

YDreams has worked extensively in entertainment venues, museums and sports and music events. Major examples include:

Audience gaming for charity



ORANGE CHARITY EVENT

[VIDEO](#)

20.000 playing in a charity event in Lyon sponsored by Orange. At the time, a likely World record

Ayrton Senna Exhibition



SENNA EMOTION EXHIBITION

[VIDEO](#)

An Exhibition celebrating of Brazilian hero Ayrton Senna. The Exhibition includes a virtual reality race where the visitor can drive a Formula 1 car in the Interlagos circuit

Adidas World Cup 2006



ADIDAS WORLD CUP '06

[VIDEO](#)

Part of Adidas campaign for the World Cup, three large “balls” with giant screens and sensors (weather, movement, noise) were used to attract fans around Europe to test their athletic skills as well as their noise generation capabilities

NBA All Star Weekend for Nike Store at Staples Center



NBA ALL STAR WEEKEND

[VIDEO](#)

The first public use of a Kinect camera. You are in Kobe Bryant's shoes and you have to shoot three perfect free throws in the last second because your team is losing by two

Coca-Cola World Cup 2014



COCA-COLA WORLD CUP '14
[VIDEO](#)

Innovative interaction using augmented and virtual reality as part of Coca-Cola campaign during World Cup 2014 in Brazil

Opening for Bon Jovi



COSMOTE CAMPAIGN BON JOVI
[VIDEO](#)



Audience game, powered by YDreams technology, played by 90.000 in Athens while opening for Bon Jovi

Koora Times, Qatar 2013



Virtual penalty kicks using augmented reality in a Qatar event

YDreams has concepts and technologies that will provide new experiences in primary attractions as described below.

The company has also developed a new concept for aquatic recreation. It has gathered the support of 12 municipalities and major agencies to develop a theme park for the Tagus estuary. The financial crisis that has afflicted Portugal in recent years did not enable the implementation of this project. Key ideas that may be used in Abu Dhabi are displayed in the following images



The Guardian, a robot in the Loch Ness monster mode that appears and disappears becoming a legend



Use of large scale interactive projections in the water



Massive use of aquatic drones such as Azorean (a YDreams company) 's Ziphius and, in the future, personal submarines called SUBA;

Small multi-function "artificial islands", that may be used as visitor centers and platforms for playing a brand of aquatic golf with bio-degradable balls



Secondary Attractions - To increase walkability / exploration, enliven spaces 'between the primary attractions', enhance the aesthetic

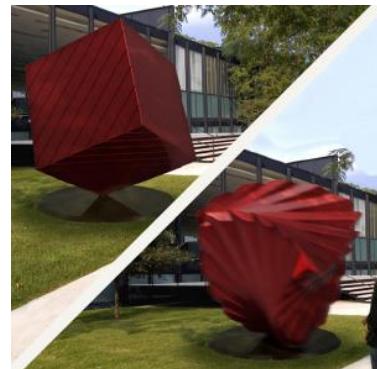
YDreams has also developed unique concepts for urban spaces that were not yet implemented due to Portugal's financial crisis.



Location based storytelling



Outdoor Signage



Smart Public Spaces

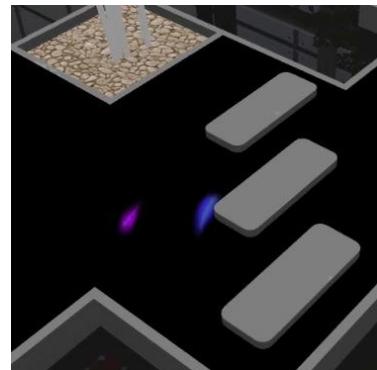
Location based information and storytelling provided via outdoor signage using unusual platforms such novel urban furniture and statues with audio communications built in



INDOOR GARDENS USING ARTIFICIAL TREES

[**VIDEO**](#)

(Password: dafundo)



ARTIFICIAL FISH

[VIDEO](#)

(Password: dafundo)



INTERACTIVE STATUES (at 1:07m)

[VIDEO](#)

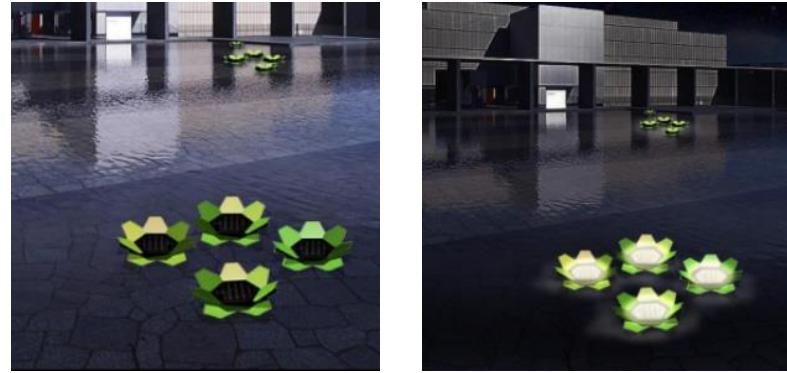
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INTERACTIVE GARDENS

Using interactive statues that enable music playing





Energy gardens using robotic flowers that collect sun energy during the day and provide illumination at night



Vapor trees that can cool down the environment and be used for “holographic” projections

Priority 2 – LIVE

Hospitality, F&B

YDreams has developed for Greenvision and in partnership with Apple a set of apps named James. James was a virtual butler for clients of the W Hotel in Montreal.



JAMES APP

[VIDEO](#)

(Password: *dafundo*)

The company has also developed an innovative interactive facade for a hotel in São Paulo



WZ HOTEL JARDINS IN SÃO PAULO

[VIDEO](#)

Building facade that reacts to noise and user interaction via smartphone

YDreams has worked for leading food & beverages companies providing new concepts that have been implemented experimentally. These include interactive shelves such as in the next figure

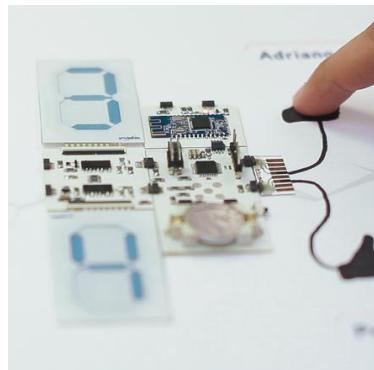


J&B INTERACTIVE SHELVES

[**VIDEO**](#)

The shelves include a proximity sensor that triggers lights and sound. If one picks a bottle, he or she receives a round of applause

Ynvisible, a YDreams company, has also worked in smart packaging using its platform Printoo (www.printoo.pt)



PRINTOO

[**VIDEO**](#)

The can flashes its Leds whenever it receives the signal via Bluetooth that a goal has been scored

Finally, YDreams is teaming with Food Lab in Mertola, Portugal to understand how to develop apps that may generate aromas and smells associated to indigenous food products.

EXPERIENCES

Unique – Innovative, world-leading / first, differentiated, new technologies

YDreams has worked extensively in entertainment venues, museums and sports and music events. Major examples include:

Provide virtual guidance to venues and shows using artificially intelligent agents (virtual or physical robots)



VICTOUR, VIRTUAL TOUR GUIDE

VIDEO

Experimental project that has been lauded by Bruce Sterling comment at Wired, see <http://www.wired.com/2011/04/augmented-reality-victour-from-ydreams-ylabs/>. An intelligent virtual being guiding visitors in a smart environment

See also physical robots guiding visitors at Santander's financial city at

VIDEO also featured on Wired magazine and at Bradesco Bank of the Future at
VIDEO featured on Fast Company and CNN



Immersive - Genuine (e.g. feeling like Ferrari in Ferrari World), engaging

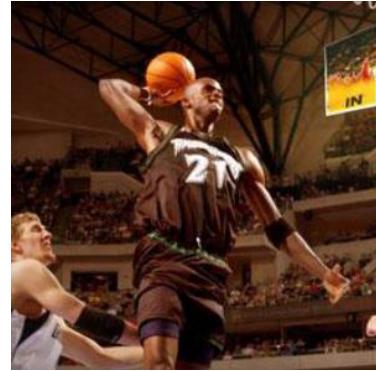


AQUADUCK, DISNEY CRUISE LINES

[VIDEO](#)

Augmented reality immersive experience in advergame for Disney Cruises which was played in the top 20 movie theatres in the US

Global Stadiums. Teleporting spectators to any major event in the World while sitting in Abu Dhabi by using YDreams technology including tele-presence (image and audio) and avatar composition



People may be watching and screaming from home. The screams may be reproduced in the remote arena. If people allow the use of Web (or preferably Kinect) cams their image can be used in real time TV based avatar composition in the arena, generating the illusion that you are there

Exciting- Yas Island DNA (F1, Ferrari World etc.), fun, thrilling, exhilarating

YDreams has developed a platform that will enable the driving of a virtual car racing against real cars in real time



REAL SIM, VIRTUAL CAR RACING

The SimVideo technology is based on the insertion and control of virtual characters in real scenes in real time such as in the video available at

VIDEO

In this case, you will be driving the brightest cars against the other real cars. They can bump you; you cannot naturally affect the real cars

YDreams is also involved in frontier research in the following areas that may yield applications that may be implemented by Miral:

Brain-machine interfaces via cooperation with Champalimaud Foundation neuro-sciences team. These have been applied to control drones but also to develop engagement statistics;

Multi-sensorial experience designs using haptics. Taste and smell in addition to vision and hearing. YDreams is an advisor of a University of Texas at Austin-Portugal doctoral research project in this area;

Sensory ecology, to develop vision and hearing filters that emulate birds and fish senses for virtual reality applications. For example, if you are looking to a fish in an aquarium and you see virtually how the fish sees you in reality. This is achievable using a head-mounted display and filtering software.. We are also following the research work on animal and plants communication as part of robotics developments.

INTEGRATION

Transportation Experiential, 21st century, attractions in their own right

Azorean, a YDreams company, is working in innovative underwater drones. It is also following the development of unmanned and manned water and air innovative vehicles. The company has partnered with innovative micro satellite and large-scale air drones, and also developers of Remote Operating Vehicles for water.

YDreams has connections with leading researchers and companies in the autonomous/electric automobile space. It has also working relationships with researchers that are investigating the potential impacts of a large-scale adoption of such vehicles.

In addition, YDreams is following research on exo-skeletons for individual transportation both terrestrial and aerial.

Digital / Virtual - Customer information, attraction information, engagement with attractions

YDreams has an extensive experience in the development of engaging information for tourism purposes having worked with cities such as Rio, Madrid, Macau and Lisbon, and regions such as Azores. Illustrative examples include:



MACAU TOURIST INFORMATION COUNTER
[VIDEO](#)

Macau recently opened its Tourist Visitor Center powered by YDreams technologies



MADRID'S TOURIST STAND
[VIDEO](#)



YDreams worked with Madrid to promote the city internationally. The project won the top award at FITUR



AZOREAN BOOTH AT LISBON TOURISM FAIR

[VIDEO](#)

YDreams has been working with Azores government to promote the beautiful islands

Links with Abu Dhabi - Saadiyat Island museums, Airport

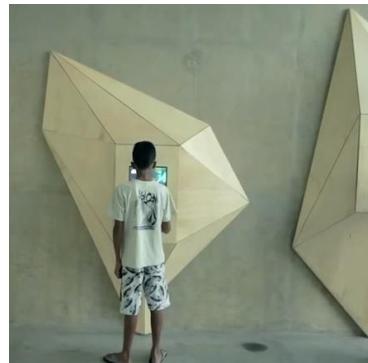
YDreams has developed landmark interactive museum experiences such as:



BOHEMIA MUSEUM, PETROPOLIS

[VIDEO](#)

The largest beer museum in the World, a hit in Petropolis, Brazil



KNOWLEDGE VESSELS, RIO

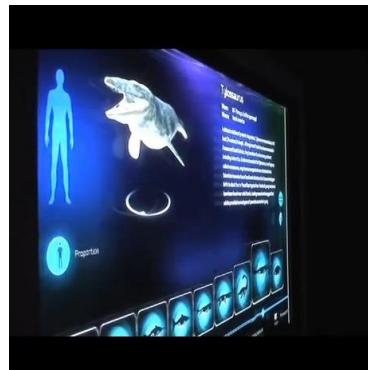
[VIDEO](#)

A project with Rio de Janeiro municipality building learning centers in award winning buildings in poor neighborhoods



COCA-COLA HAPPINESS FACTORIES

YDreams Brazil built seven Coca-Cola Happiness Factories in Brazil, a project to create a brand experience visitation into factories with technology and interactivity.



OCEANARIUM INTERACTIVE INSTALLATIONS

[**VIDEO**](#)

Interactive installations for the Sea Monsters Exhibition at Lisbon's Oceanarium, one of World's largest



LEGO AQUARIUM

[**VIDEO**](#)

A Virtual world where kids create and feed artificial (in this case) Lego fishes



NOKIA JC DECAUX

[VIDEO](#)



NISSAN WALKWAY

[VIDEO](#)

A 20 meter long interactive carpet in the baggage claim exit corridor

'Wall-less' island - Breaking customer barriers (e.g. ticketing, transport, information) between experiences and assets, seamless transitions

YDreams has partnered with companies that have developed ticketing platforms with seamless transitions between events and transportation systems.

It has also connections with companies that develop smart cards that enable the breaking of customer barriers.

One may also study the feasibility of scenarios that, at the moment, are certainly not mainstream such as the use of digital money.

DESTINATION MARKETING

Social Media

YDreams has an extensive network of partners in its ecosystem for social media management. The company itself has experience in social media campaigns associated to successful Kickstarter campaigns of YDreams spin-offs which have reached of millions of Twitter accounts.

Brandkey Digital, that manages key brands in entertainment, food and beverage, is a regular partner.

Bviva, started by a YDreams co-founder and a close YDreams partner, manages Cristiano Ronaldo's multi-million social media presence and is very active in other sports as well.

Activation

YDreams has also extensive experience in both brand activation (including activation of touristic destinations as show above) and has partnered with leading brand activation companies such as Brandkey, which has a similar geographical presence.

Customer Segments

Customers of Yas Island and other Abu Dhabi destinations come from everywhere in the World but mostly from MENA, India and China. YDreams is a global company that has been present in these markets. It will also include an expert in its team for this project with deep knowledge of the Middle East and Asia.

YDREAMS APPROACH

The previous section was based on the illustration of YDreams' past and not yet implemented solutions for Miral's specific challenges.

They are merely illustrative. The goal is to develop an innovation framework that will enable Miral, in the future, to adopt solutions that fully achieve its goals. Some of those solutions may be similar or, at least, inspired on YDreams work. Some will be radically different.

This section will include three main sub-sections:

Innovation methods used by YDreams for individual solutions (YThinking); and how it further manages the stream of innovative solutions generated (YDreams Excubation);

The innovation framework proposed by YDreams to assist Miral, including a Consulting Project and innovation infrastructures. These infrastructures may include an information support system- that may be called Miral's Telescope; an exploratory decision support system- Miral's Navigator; and a project management system, where tools such as YDreams' own YNET, may be used to manage individual projects;

The presentation of YDreams Team and Ecosystem.

YDREAMS' INNOVATION METHOD

YThinking

YDreams solutions take into account as pre-requisites the client requirements, space and time constraints, number of users, and, above all, the narrative associated to the individual project.

YThinking, the method followed to develop unique projects, includes five phases: Discover, Define, Design, Develop, and Go Live.

Discover. In this phase, project goals and clients insights are identified. A benchmark report is developed. A "Debrief" report is the deliverable of this phase;

Define. Brainstorm sessions are used for ideation purposes. Technological possibilities, client needs and our own creativity are used to generate alternative solutions. These solutions are synthesised into the project concept. Moodboards, mindmaps, a conceptual report and macro specifications are the deliverables of this phase.

Design. The technical project is developed including detailed elements about the interaction experience, content, graphical components and layout, and the technological infrastructure required. Technical and design reports, a detailed budget and schedule are the deliverables of this stage.

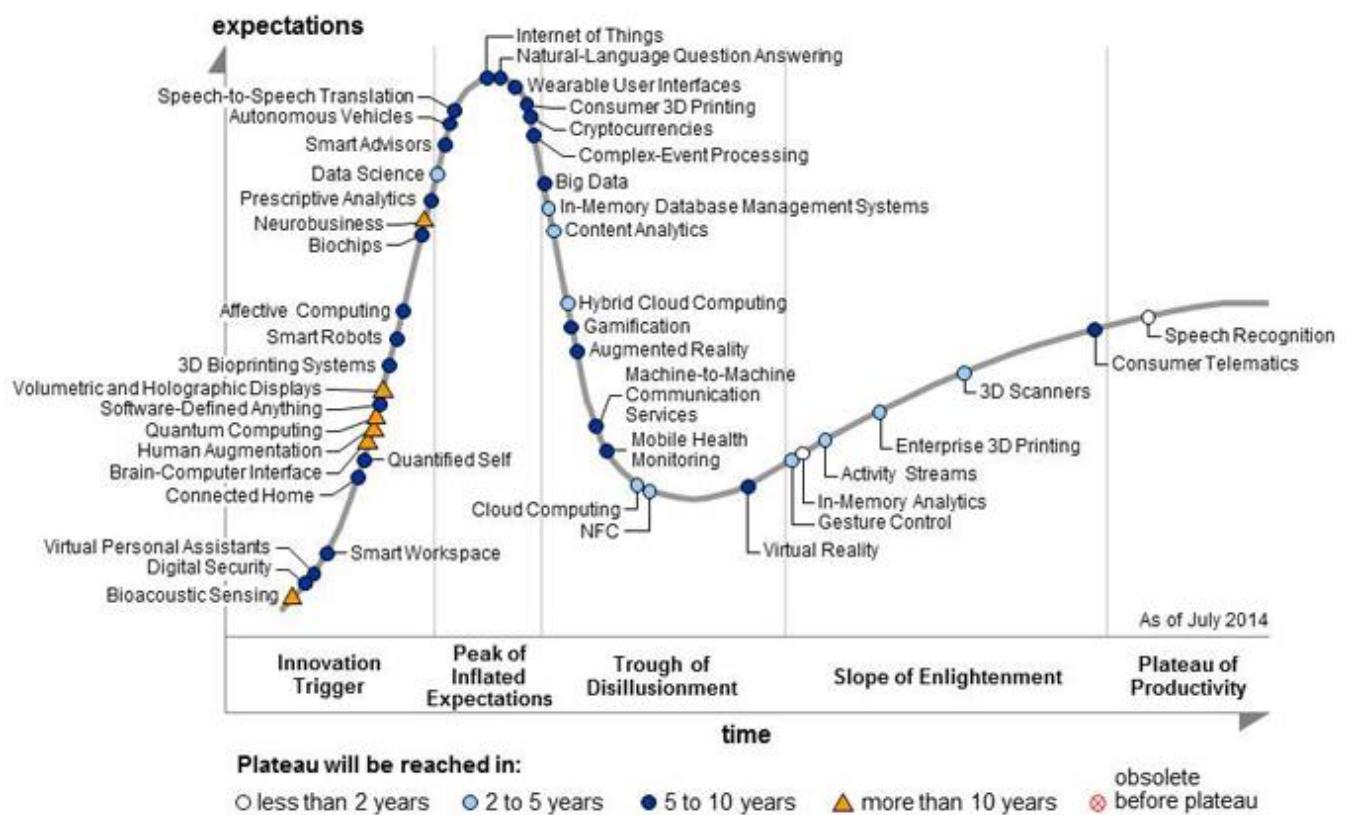
Develop. A prototype is developed is needed for testing purposes. The individual technical solutions are then developed and integrated into the final smart environment, in more comprehensive projects. Project reports, user manuals, and a case review are the deliverables of this phase.

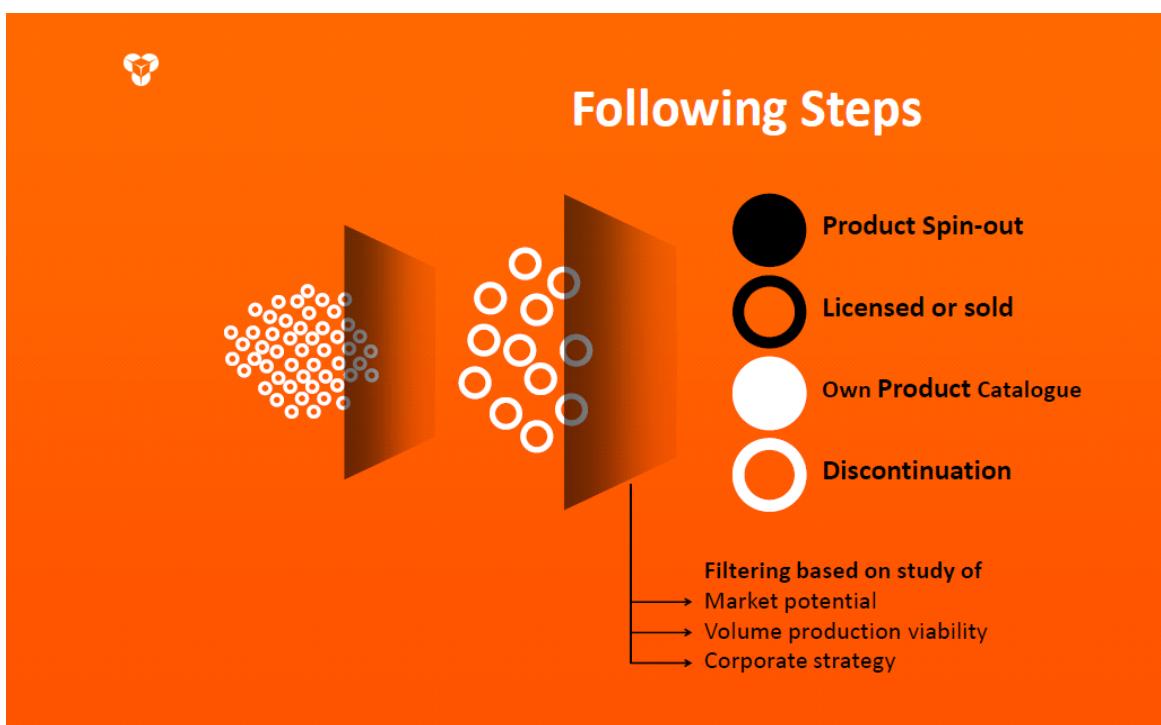
GoLive. The project goes live. YDreams has developed two key tools for this phase: an utility tool that enables remote inspection and maintenance; and, in many instances, statistics of usage. In this phase, monthly reports are usually the deliverables.

YDreams Excubation

The development of unique projects is YDreams Group's DNA and particularly of its main project development company- YDreams Brasil (<http://ydreams.com.br/site/>).

The uniqueness of many of those projects result from the application of technologies that are still ahead of the plateau of commercial productivity as illustrated in Gartner's hype cycle.





Gartner Hype Cycle

YDreams projects have enabled the ideation of new products. These are then filtered as shown above. If there are champions with the required passion to bring the products and technologies to the market, a spin-out company is formed.

Spin-out companies have resulted from this approach such as Audience Entertainment (www.audienceentertainment.com), Azorean (www.azorean.eu), YDreams Robotics



(www.ydreamsrobotics.com), NearUS (<http://nearusapp.com/nearus/>), Ynvisible (www.ynvisible.com), YDreams Vision (www.yvision.com), and Printoo (www.printoo.pt). These are companies focused on the development of products and technologies, but that still contribute to individual projects.

The two latter companies have actually developed platforms that are instrumental in the development of virtual and augmented reality projects (Yvision), and Internet of Things applications (Printoo). Both platforms integrated the best solutions available: YVision's core coordinates the use of modules for simulation, vision, interaction and agents; and Printoo, that has been called the 21st century Lego for the printed world, is an Arduino compatible platform that brings the best of printed electronics solutions not yet available in the mainstream market (printed batteries, solar cells, sensors, transistors).



YVision architecture

PRINTOO.

Product

Modular, programmable, flexible boards



Printoo's Components

MIRAL-YDREAMS RELATIONSHIP

Consulting Project

The previous sub-sections describe YDreams methods applied in the development of individual projects (YThinking), and in the development of new products, technologies and companies (YDreams Excubation). They reflect a Darwinian innovation engine similar to Silicon Valley where a large number of companies are generated, a few get funding, and a much smaller number become infrastructural companies.

Miral's challenges as approached by YDreams will benefit from the company's experience in ideation (as in YThinking) and filtering (as in YDreams Excubation). Ideation will facilitate the definition of problems and solutions. Filtering will be required to select the best solutions.

Miral-YDreams relationship can start by defining a consulting project that will aim at building Miral's innovation engine.

The differences from Miral future system and YDreams internal innovation engine stem from the nature of Miral's challenges: they can be relatively well defined; they are spatially and temporally referenced; they may be solved by a number of companies; and there are constraints (financial, social, political, environmental) normally associated to governmental agencies.

The Consulting Project will deliver sectorial reports showing the results of Discover, Define and Design stages for each specific challenge. It will also produce a global report with a whole view on Miral's challenges.

These reports will be grounded on "stories" that will represent Miral's vision for the different challenges. These "stories" will be told using traditional and digital media. Resulting visionary videos will be key messaging vehicles to approach customer targets and for global public relations.

The “stories” will be also used to infer key variables and their relationships associated with the process. Causal diagrams can then be drawn. These diagrams may be used to structure two dynamic tools: : Miral’s Telescope, an observatory and a digital library with all relevant information on the project challenges; and Miral’s Navigator, an exploratory decision support system that is proposed to assume the shape of a “serious game”, if that is Miral’s interest.

Predictable components of these "stories" are the key elements in the development of attractions: **storytelling**; **computing** solutions; **visualization**, auralization, haptics, and other sensorial representations; **interaction**; and the new world of **communication**.

Storytelling as a tool to design attractions has been rooted in the film scripting tradition. The multimedia side was inspired by music composition.

Stories have become non-linear and interactive. They will be increasingly immersive in virtual worlds and multi-platform in augmented worlds.

Computing is undergoing several revolutions into one: the demand for minimal computing structures for the Internet of Things; computing requirements for realistic virtual reality simulations and holography; and multi-sensorial computing.

Actually, computing has been predominantly used for **visualization** and, less so, for auralization purposes. Large scale and 3D projections are now possible, encompassing football fields. Large scale LED screens are also available.

Haptics has been already a factor in gaming. But smell and taste will make its ways in the next few years.

Interaction is also changing. Natural interfaces based on gestures enable the creation of human joysticks in group gaming involving up to 90.000 people. Brain-machine interfaces are also gaining ground.

Finally, major advances will be happening in **communication**. Interaction with objects is becoming possible by adding some type of intelligence to them. Communication with



"robots" will become commonplace. A new world of communication with the natural world will be open by using lessons from animal and plant science.

The combination of these elements will enable the development of radically new attractions. YDreams team has created a knowledge network covering each of these elements and also on their combination to produce unique solutions. It will offer that network to Miral.

Miral's Telescope

There is an abundance of information published every day relevant for Miral's challenges. There are a number of reports on the future of the key areas associated with this project (such as the ones published by PSFK at <http://www.psfk.com/publishing/reports>).

Miral's Telescope will be an organized repository of all this information available and relevant for the project. It will also include non-published information that may be the key to innovation: "the information by osmosis" that YDreams collects from its ecosystem.

It will also include "dreams" such as the ones mentioned above by YDreams or any other company in the World for Miral's areas of interest.

Miral's Navigator

YDreams team members individually or at the company have been involved with urban and regional processes with a similar scale as those associated with Miral's challenges.

Different types of exploratory decision support systems have been developed for such processes:

A macro simulation model for the re-construction of Lebanon, in the late 70's-early 80's, using methodologies that were then popularized in SimCity;

A spatial information system using 3D terrain representations and data and logic layers with key information and analytic algorithms for Expo98 (the World Fair in Lisbon in 1998);

A collective intelligence system based on predictive markets for the strategic planning of Lisbon Metropolitan area (2012).

YDreams has also been involved in knowledge discovery projects that may be relevant for Miral, namely one developed for TAP, Portugal's national air carrier.

YDreams proposes the development of the Miral's Navigator system to support analysis, decision-making and communication of the agency, building on its previous experience in the development of those platforms.

The Navigator should have a three-dimensional representation of the area (a 3D terrain model draped with aerial photos at different scales), and data and logic layers to be defined. Miral's Navigator will represent visually the challenges and the solutions, and will generate the analytics that will enable the agency to optimize solutions.

The Navigator will not be critical for YDreams proposed consulting work. But it will be a "serious gaming platform" that will enable analysis but also communication, both internally and externally.



Project Management

This proposal is based on YDreams know-how of more than 15 years developing and implementing interactive applications. YDreams has been a thought leader in location based services, augmented reality, printed electronics and robotics. The company is a pioneer in the development of technologies that bring intelligence to public spaces and in the creation of technologies that bring intelligence to individual objects. These technologies were developed or inspired through client or research and development projects.

Project management is one of the most critical tools at YDreams. The company has established processes and methodologies that have become ingrained in the YDreams culture.

From the moment a business opportunity arises, a project is commissioned and kicks-off, and is finally signed off by the client, a project manager or project management team is committed to actively managing, monitoring and ensuring that all the work is in line with the client's expectations as well as the YDreams.

A Project Manager has the responsibility to monitor the project from start to finish. Serving as the intermediary between the client and the project team, firmly controlling project costs and scope, and managing the team and work to be developed for the project, he follows through until the very end.

In parallel, the technical direction accompanies and defines, together with the project team, all elements considered important to the success and satisfaction of the client. He guarantees a close and regular presence with the team, and monitors the project and advises the best course of action.

YDreams has adopted the "Agile project management approach". Project managers work with the various components of the project, ensuring that at all times the entire team and client are in line with new developments and solutions, while also ensuring that the various phases of the project are not sealed or irreversible.

This methodology is achieved in part due to the type of project documents with which YDreams works such as wireframe creation, which defines the structure of interfaces; storyboards, where the story to tell for each solution is defined; and other prototyping approaches. Therefore, the project team develops all the project requirements and solutions iteratively, proceeding to more advanced techniques in accordance with client approval.

In order for this approach to work in the best way possible, client engagement is important to ensure the best choice of paths and a constant alignment between all stakeholders.

Formally, the following management methodology is suggested:

Meetings with the main development team – Agile methodologies advise daily 5-minute meetings with all elements of the development team considered critical at this stage in the project; this ensures constant monitoring of all tasks, the alignment of the entire team's principal tasks and lets us detect and manage any impediments, or priorities, in the project's pipeline.

Weekly Follow-up Meeting - to ensure the strategic vision and long-term project goals are intact, the development team meets weekly to define and refine what the next steps and tasks are, which must be completed during the week, and analyze the overall progress of the work.

Meetings between the development team and client - to ensure that all stakeholders are aligned in regard to project developments and status, we suggest remote 30 minute weekly meetings between the project manager and the client. According to the stage the project is in, these meetings will include team elements that are necessary and relevant for the project phase in question.

Monthly meetings / Steering Committee - Monthly high-level meetings, where the work developed thus far is analyzed along with the overall schedule of the project. In this final stage the project's main objective are reviewed and reanalyzed, and the client's expectations are reiterated to the project management team.

YNET is the platform developed by YDreams to support project management. YNET is tightly connected to SAP for financial reporting.

YDreams will enable the use of YNET free of charge to manage projects related to Miral challenges if deemed appropriate.

Individual Projects

Individual projects will provide solutions to the specific challenges defined by Miral. They will be defined and selected by the agency. YDreams is available to both develop such projects as well help Miral in selecting and managing them.

From YDreams' list of projects presented in the "Challenges" section, one stands out as an immediate fit: Ayrton Senna's exhibition that is now available in Brasil.

In addition, a Miral-YDreams relationship will allow the company to offer Miral the first take on unique projects that have been in conceptual development for years. Examples include:

Large scale projections in the "sky" and in the water;



A new breed of interactive gardens, both indoors and outdoors;

The development of a "printing theme park" using 3D printing and Printoo to give life to printed objects (a modern version of Legoland);

A sports theme park realizing predictions by ESPN for 2025 including: "holographic" broadcast of remote events; analytics driven sports entertainment inspired on NBA modern trends; and real time augmented reality based sports, such as driving virtual cars against real cars in real time.

YDREAMS TEAM AND ECOSYSTEM

Team

YDreams team has fifteen years of experience in working with 50 Fortune 500 companies in 25 countries. The team is distributed in four major locations: Lisbon, Barcelona, Rio de Janeiro da São Paulo.

This project will be managed through our office in Barcelona, although the majority of the creative support and development will come from our Brasil offices. Additional support from YDreams Portugal and international consultants will be provided.

The key team members will include:

Miral-YDreams Relationship Coordinator

Antonio Câmara

António Câmara is CEO of YDreams since 2000. He has been also Professor at New University of Lisbon and Visiting Professor at Cornell University and MIT. Antonio was a Senior Consultant for the Expo98 Project. He has been the recipient of numerous awards namely the Pessoa Award in 2006 and was one of European Union Entrepreneurs of the Year in 2008.

Project Director



Miguel Remedio

Miguel Remedio is the International Business Development Director for the YDreams Group, based in Barcelona, Spain. He is a YDreams Co-Founder and has worked extensively in the Middle East and Asia.

Project Manager

Sérgio Cardoso

Sérgio Cardoso is an experienced project manager. He managed many landmark YDreams projects and has also extensive experience in the Middle East and Asia.

Project Development and Consulting

The development of individual projects will be mostly of YDreams Brasil responsibility. YDreams Brasil is headed by Karina Israel and Daniel Japiassu. The team will include in addition:

Karina Israel

With over 20 years experience, which includes production direction for agencies like Ogilvy Interactive in São Paulo, and later in Portugal, at YDreams, as a precursor in producing real-time location-based games for mobile devices, Karina spearheaded YDreams' move into the professional advertising sector. She majored in Communication at Rio de Janeiro's Federal University, has a Masters in Technology, Science and Society from Salamanca University and post graduate studies in Business Administration from the New Lisbon University and Cultural Studies in São Paulo university (USP).

Daniel Japiassu

An entrepreneur at heart, Daniel has over 15 years experience in project management and business planning. At the age of the 21 he opened his first company. The start up was a success and the experience was the foundation for his work on YDreams. Working with great brands and always on the lookout for new approaches, he found in YDreams the perfect match. Daniel has won several web awards and was short-listed for a Cannes Cyber Lion.

Marcos Alves

Progressive career of 19+ years leading sales, teams, businesses and projects, with particular participations in the complete technology solutions and services life-cycle (buying, delivering and selling). Planned and executed go-to-market strategy in the Brazilian market for global brands. Led technologically the startup of one of the major Brazilian internet portals. Increased sales in 175% at Brazilian software-house. Entrepreneur and general management experience on Retail. Graduated in Business Administration at PUC-RJ with Executive MBA at IBMEC-RJ.

Ana Paula Monte

A Designer with a degree from Rio de Janeiro's Federal University, Ana began her career in 1996 at the National Research Network. She worked as Art Director at Mlab (currently Neoris). In 1998 she made the shortlist at Cannes Cyber Lions Festival for work on the Pepsi Gol website. She then moved to the house agency for Globo.com's portal as Art Director. In 2007 she was hired to coordinate the creation of Weshow's video portal. In 2009 Ana returned to on-line advertising as Senior Art Director for 'Publicidade Interactiva' agency, where she oversaw projects for clients such as L'Oréal Paris, Vichy and La Roche-Posay.

Diego Brito

Works on the creation and development of projects focused on the user through Human/Computer interfaces. Experience in "Design Thinking" applied on services generation, double Bachelor's degree in Graphic Design and Product Design, Esdi/Uerj, and studies in Interactive Digital Medias by HFG Schwäbisch Gmünd, Germany. As portfolio, projects in partnership with HFG Offenbach, Germany, and Microsoft, USA, with exhibition in the international conferences Microsoft Research and Design Expo 2007, Seattle – USA, and Carnegie Mellon School of Design's Emergence 2007, Pittsburgh - USA.

Nuno Capeta

With a BSc. in Environmental Engineering from FCT-UNL and more than 10 years of experience Nuno has always had a keen interest in computing and interactive media, particularly how to merge the digital and analog delivering engaging and fulfilling customer experiences. Starting at YDreams in 2001 Nuno was Head of Software position, co-director of the software R&D division (YLabs). With YDreams international expansion Nuno moved to Brazil in early 2010 acting as Brazil Chief Technology Officer where he combines an active new business profile and hard core technical coordination work (Brazil and ROW offices).

Daniel Prado

Daniel Prado has been working as an IT Analyst for the last 13 years, leading multimedia and web projects for major companies in Brazil, such as Xerox, Petrobras, Embratur, and Brazil's Ministry of Education. He joined YDreams Brasil in 2007. He also teaches Web Marketing at ESPM University and dj's in his spare time.

Eduardo Gomes

University degree in Social Communication with Publishing qualification from Federal University of Rio de Janeiro and MBA in Management from Pontifical Catholic University of Rio de Janeiro. Also has a Master in Humanities and Society in the XXI from University of Barcelona and a MAS (Master of Advanced Studies) from Ph.D. program of History of Philosophy, Aesthetics and Philosophy of Culture Department from University of Barcelona. Currently collaborating as project manager for YDreams, with more than ten years' experience in project management of IT and WWW integration projects and multidisciplinary and multicultural team coordination in Rio de Janeiro/Brazil and Barcelona/Spain.

Theo Weidgenannt

Theo has a degree in Electrical Engineering & Automation from ISEL (Portugal) and a BSc in Information Systems Engineering from Unisul (Brazil). He has vast experience working as a hardware designer and project assistant in the electronics field. Before joining YDreams, Theo worked as an Operations Manager at Funinvest/Castello Lopes, and a project manager at Alrica Multimedia Systems and Electronic Technician at Reason Technology.

Consulting Support

Edmundo Nobre

Edmundo Nobre co-founded YDreams. During YDreams' initial phase he headed the education and culture areas being responsible by selling projects such as the Braganza's Science Center. As Chief Scientist he oversaw YDreams' in-house R&D. In the 1990's Edmundo was a world-leading Portuguese specialist in Virtual Reality, and in 1999 he spent time at MIT as Visiting Scientist. Currently the CEO of Azorean, an YDreams Spinout.

Cristina Gouveia

Before joining YDreams, Cristina had been the head of the development team of the Portuguese spatial data infrastructure, where she established strong worldwide partnerships. At YDreams, she has been responsible for proposing innovative projects for major clients such as EDP or Sonangol. Cristina has a PhD in Environmental Engineering from Universidade Nova de Lisboa, and a Masters in Urbanism from MIT. Currently she is responsible for Azorean's (an YDreams Spinout) operations and general management.

Inês Henriques

Inês Henriques is Ynvisible's CEO. From 2007 to 2010, Inês led the research initiative at YDreams which has given way to Ynvisible. She has a degree in Environmental Engineering from Universidade Nova de Lisboa and a PhD in Civil Engineering from Virginia Tech. She authored several scientific papers and patents, and received several awards for her research and academic achievements.

Francisco Ribeiro

Francisco has a BSc in Graphic Design from ETIC. He has worked at YDreams since from 2002 as a graphic and interaction designer (UI, UX, NUI) and he is now bringing his experience to Azorean, S.A. He also has extensive knowledge and experience designing multimedia contents for social networks and digital marketing campaigns.

Consultants

YDreams key consultants for this project will be:

Arun Duggal

Was CEO of Bank of America in Japan, Hong Kong and India. He has been involved with venture capital investments in India and USA. Arun has been also the Chairman of several India tech companies. He has a deep knowledge of the Asian market and possible support ecosystem for this initiative.

Bob Allen

Held a variety of positions in Disneyland's Live Entertainment Division. Productions included several spectacles, and creative development work on Disneyland. Bob was involved with Walt Disney Imagineering on several attractions that would become part of EPCOT.

Ecosystem

YDreams broad Ecosystem includes "thought leadership", "financial support", "marketing and sales", "suppliers" and "communications" ecosystems as described below.

"Thought leadership" ecosystem

Access via Portugal Research Programs with MIT, Harvard, Carnegie Mellon, University of Texas at Austin and Fraunhofer to state of the art research in all key areas for this initiative;

Partnerships with leading research groups in Portugal and Brasil in all key areas;

Membership in the Roundtable of Entrepreneurs of the European Institute of Technology;

Partnerships with World leading companies in augmented and virtual reality, printed electronics, and robotics such as Intel, Microsoft, Google, LG, Cisco and BASF.

"Financial support" ecosystem

Investors in the group include Novo Banco Ventures (Portugal's top VC), Semapa (Portugal's largest industrial group), and several other individual investors from Portugal, Switzerland, Germany and USA.

YDreams has an agreement with Deutsche Investors, a broker group, to list and obtain investment for its companies in Canada, Germany and USA. Three of our companies are expected to be listed in Toronto and co-listed in Frankfurt in the Fall of 2015.

“Marketing and sales” ecosystem

YDreams group focused on a wide range of products and services that ranges from mass market products to unique experiences (from brand activation to point-of sales) and to more strategic and planning approaches.

Each spinout company has developed its own marketing and sales ecosystem that varies according to the market characteristics and structure. The strategy followed by each spinout is to establish partnerships with the key global stakeholders:

In the area of B2B we have established partnerships with top brands and companies such as Intel, L'oréal or Carrefour where YDreams develops products for them and their commercial partners.

In the B2C market YDreams group has privileged contacts with:

The major global retailers and distributors such as Navarre and New Age Electronics

Major consumer brands such as Coca-Cola or Decathlon that are eager to adopt some of our technologies under their brand through customized projects.

Stores focused on consumer electronics such as Brookstone, New Egg, Robotshop, Rad Thinkgeek, RED5, or Make.

Our strategy consists in building innovative products and services to become a reference company in the interactivity space, providing relatively cheap and unique solutions. To maximize margins and minimize logistics efforts, the YDreams group privilege online marketing and selling channels. Additionally, we explore the exposition on selected physical stores that will function as showrooms for the products and will shorten the distance between the product and the customers.

YDreams have also contacts with set of top-consultants in PR and Channel placement of technological products. Examples include: Invisible (<http://invisible-image.net/>), that has



worked with Parrot, Apple Europe and Sphero and Airfoil (<http://airfoilgroup.com/>), that has Parrot USA, Microsoft, Brookstone, LinkedIn, eBay as some of their clients;

“Suppliers” ecosystem

To support 15 years of international operation in more than 25 countries around the globe, YDreams Group has established a solid network of suppliers in areas such as maintenance, logistics, financial and law (including IP).

Regarding support to execution, implementation and maintenance of international activity, YDreams group operates based on two main geographies with different companies being responsible for each one of them:

All projects implemented in North and South America are in YDreams Brasil's jurisdiction;

All projects implemented in the rest of the world (with special emphasis on European and Middle East geographies) are of YDreams Med (with headquarters in Barcelona) responsibility.

YDreams has established a network of regional suppliers that complements their competences mainly on logistics and maintenance operations. Some of YDreams partners in these areas are the following:

Diusframi – Technical support and installation services;

Trison Worldwide - Technical support and installation services;

Tecnidata (Reditus) - Technical support services;

Alfaloc – Logistics, International shipping services;

DHL – Logistics, International shipping services;

Nacex – Logistics, International shipping services.

Havoc – In Brasil

Our main Law partners is the law office - SRS Advogados, Sociedade de Advogados, with offices in several countries. Regarding Intellectual Property, the European and Rest of World jurisdiction is covered by RCF, Intellectual Property. For the US jurisdiction, YDreams works with King & Spalding LLP.



“Communications” ecosystem

YDreams has developed a media network of contacts, in its home markets as well as globally, that may be used for communication. They include:

Major technical blogs and magazines such as Wired, Fast Company, Tech Crunch, Engadget, Gizmodo, CNET, Cool Hunting, Mashable, and Make Magazine;

Major news outlets such as New York Times, Globo, Time, Business Week, Economist, Discovery Channel, CNN and Quartz;

Major financial news publications such as Bloomberg, Financial Times and Wall Street Journal.

YDreams Group is also active in social media having reached six million Twitter accounts in the last Kickstarter campaign.