YLabs platform

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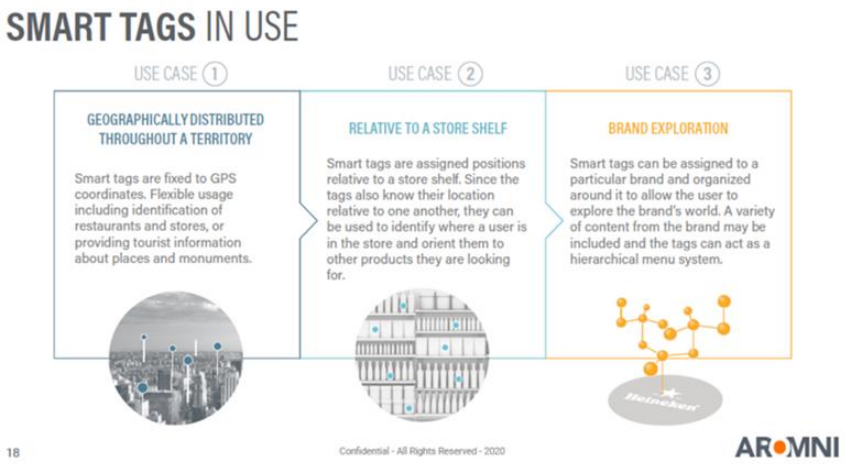
"Nobody really knows where the future is heading, but YDreams seems to have a better sense than most. Plus, they seem to have the combined tech + design acumen that few outside Apple seem to possess. Rebellion Lab, 2011"

In this decade, we will move from the current Data World based Internet to another in which we will interact with the Real World and will explore Virtual Worlds. We already do it through the "smartphone", but the improvements on augmented (AR) and virtual reality glasses (VR) will create a new Internet. Artificial Intelligence (AI) will be its backend using data for knowledge discovery using deduction, induction and now invention in the generative mode. We will move from a 2D and linear Web to another in 3D, where a digital layer, powered by AR, VR and AI, will bridge the Data and Real Worlds, and add Virtual Worlds. Spatial Computing, in its broad sense, will power a new Spatial Internet.

YLabs founders have been involved in the development of software and hardware-software platform combos for this new Internet for 15 years. Fifty of the Fortune 500 companies have been clients and partners of these developments including Apple, Microsoft, Disney, Intel, Nike, Adidas, Santander, Lego and L'Oreal. YLabs founders have also been associated to major sports organizations such as the NBA, World Cup and Olympics. At the local level, YLabs founders have worked with the local governments in Lisbon, Madrid, and Rio de Janeiro, among others, developing landmark projects. You can see such developments here, with a quick summary available here.



The key ingredient of YLabs platform is a software core that coordinates different modules including AI, AR, VR, and other technologies. The "smart tag" is the preferred atomic element. "Smart tags" can represent any object (real or digital) and are nodes in knowledge graphs.

"Smart Tags" enable the development of highly detailed **indexing** of everything ranging from our local stores to our houses. YLabs enables quick and easy indexing using a smartphone app and a backend data infrastructure, as seen in this project for the city of Lisbon. This is the basis required to transform local into global stores, by adding a commerce layer using unique storytelling. It may also be used to manage existing stores that rely on planograms. At the same time, the YLabs platform enables the matching of supply and demand at the local scale, fostering a circular economy.

YLabs indexing app is powered by humans and AI. The latter enables recognition of every object. The former may complement AI by adding metadata to create "Smart Tags", whenever appropriate. This may be the case with another YLabs platform capability: **composition.** Composition is about coupling objects to create other objects (or solve the dual problem: find

objects to complete decoupled combinations of objects). It is the essence of routine tasks such as our daily selection of outfits and meals. But it is essential in most creative human endeavors in art, science, technology, and management. YLabs platform core will enable composition, coordinating existing and new modules to recognize objects, propose alternative combinations and visualize them. In addition, it may create instruction manuals for each object developed by users of the YLabs platform. Composition has been at the heart of YLabs platform since its earliest version (called YVision).

YLabs platform may be also applied to simply visualize and interact with networks and nodes, representing relationships between smart tags and their associated virtual objects. Interactive visualizers can be transformed into virtual **consoles,** an operable representation of a new media that includes old developments (radio, television, gaming, and the conventional Web) and the new formats developed with AR, VR and Generative AI. You can see an experimental project developed with Benfica here.

Video (and its incoming immersive formats using NERFs) is a pervasive media for both past and real time events. Video can be segmented to feed machine learning and provide unique analytics for sports and other activities (imagine segmenting all the videos of Djokovic serve). It can also be used in programming by reproduction frameworks enabling the development of simple games (imagine a predator-prey game inferred from a National Geographic media). YLabs platform may also be used for a high-end real time video application: real time gaming associated to sports events. Imagine driving a virtual car against real cars in a real time car race. Or stepping in the free-throw line in the middle of a broadcasted basketball game as we developed for Nike, during a NBA All-Star Weekend in LA. YLabs platform video handling capabilities can be grouped into what can be called **real video** handling.

YLabs software platform can also be used to provide intelligence to hardware. This has been the case with the landmark robotics project for Santander Bank in Madrid; the development of Ziphius- a pioneer aquatic drone; and the current development of the AR/VR apps for electrical micro-vehicle TUGA. The earlier creation of Printoo- a pioneer printed electronics development platform, opens the possibility of creating low cost, low energy consuming minimal computing devices powered by a basic version of YLabs platform.

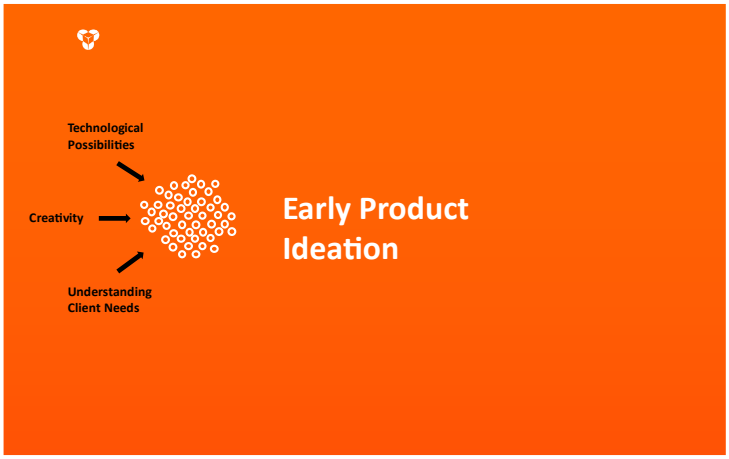
Thus, YLabs platform can be seen as an enabler of the development of **software-hardware combo** projects.

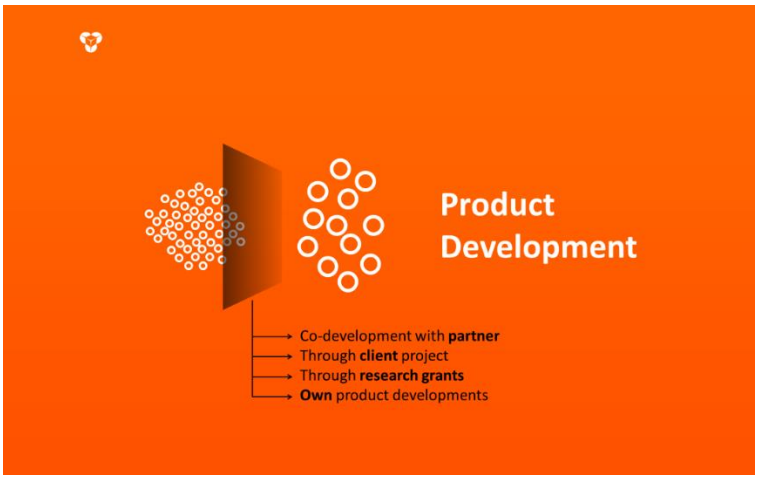
YLabs platform business development will be mostly based on software as a service model. This revenue stream can be complemented with others including sale of content for Large Language Models and other Generative AI models; gaming; special Metaverse development projects, and those associated to hardware developments. In addition, YLabs can create revenues from training using the Spatial Computing Playbook, under development, that will demonstrate the company's thought leadership in a field that its founders helped to create.

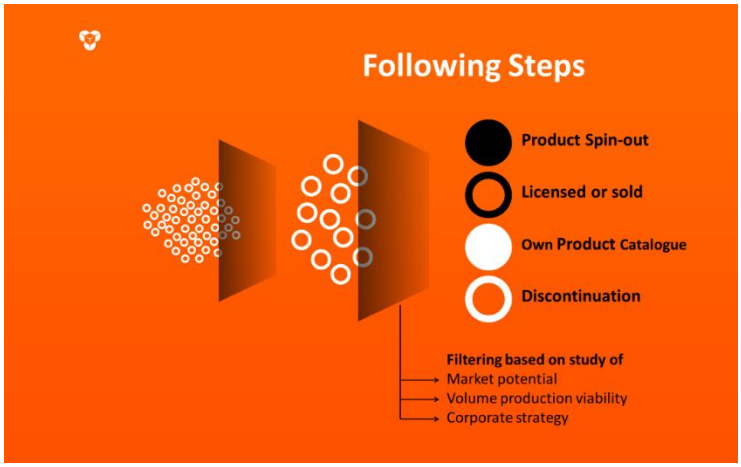
YLabs platform is the result of years of development at YDreams Informatica SA and Aromni. YLabs founders are the majority shareholders of both companies, now in stealth mode. They are also shareholders of Azorean (Ziphius aquatic drone), TUGA Innovations (TUGA vehicle) and Ynvisible (that developed but never explored Printoo).

YLabs founders think that this platform will enable the creation of a new generation of platforms, and, ultimately, companies for the new Spatial Internet (also called the Metaverse). To foster this ever-green wealth generation they will use excubation (see Appendix I) and incubation (See Appendix II).

Appendix I- YLabs excubation process







Appendix II-Incubation at YLabs

YLabs team is highly experienced in talent and company development. It is associated to creative projects and entrepreneurship development programs in three large Portuguese Universities: NOVA **(SBE** and **SST**), Lisbon (**ISA**), and Porto (**PBS**). It also operates the highly innovative Seixal Criativo program for high school students. In the UK, it has been associated to the Spirit of London initiative, which has now been expanded across the country including several successful hackathons.

YLabs team estimates that it will be able to generate 50+prototypes/mock-ups with associated business plans every year. It anticipates a conversion rate of 20% to convert those 50 into 10 startup prospects.