EUROPEANPIONEERS

D2.2.1

Twelve MVPs making use of Future Internet Technologies as result of 1st Open Call Projects (1st Version)

August 2015

This document briefly summarises how the twelve MVPs of the first Batch in the EuropeanPioneers acceleration programme are making use of Future Internet Technologies as a result of the projects in the 1st Open Call.

PP - Restricted to other programme participants (including the Commission Services)

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SEVENTH FRAMEWORK PROGRAMME

FUTURE INTERNET PPP

DELIVERABLE DETAILS

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TABLE OF CONTENTS

1 INTRODUCTION

The startups of the first open call have been selected based on various factors, which included both, business and technology related variables. This report aims to focus on the twelve selected MVPs and in particular their use of future internet technologies (FIWARE). In order to provide an insight into the technology use of the startups from the first open call, it will be necessary to provide the status quo they joined the program with, the results as well as the lessons learnt.

Since the program was running for 8 months, the changes had to be significant. That is also due to the user testing projects but further than this, the FIWARE enablers validation was part of ever changing MVPs. In order to provide the best of insights about the before and after of the MVPs that have been developed in the first open call of the EuropeanPioneers program, it is crucial to show the status quo from various perspectives.

The MVP development played an important role in the milestones that were developed in the beginning of the program. These information will be shared about each startup. Further, MVP development always depends on iteration cycles. The Lean Startup Method has been applied with all startups. Hence, the iteration cycles were adapted in the Build-Measure-Learn methodology. Each startup will be presented in detail, however for the sake of focus, there will be laid a specific eye on the most important changes and discoveries throughout the 8 months program.

Lastly, the MVPs described in the following chapter are obviously very dependent on the advancements of the technologies applied. These may result from FIWARE enablers or self-developed technologies, which have obviously significant impact on the progress. Still, FIWARE enablers, specific and generic, are part of the MVP development for the startups. That means that the speed of the startups product developments may have had a negative influence by focusing on the FIWARE implementation, which may have led to longer MVP building cycles.

2 TWELVE MVPS MAKING USE OF FUTURE INTERNET TECHNOLOGIES AS RESULT OF 1ST OPEN CALL PROJECTS

The Build-Measure-Learn methodology was the overall structure that has been applied throughout the whole program with all startups alike. That means that the startups had to come with at least a prototype in order to jump right into the iteration process. That is why we will show what the before and after states of the 12 startup products have been.

The technology was also a part of the milestones that had been developed. That is how the EuropeanPioneers team was able to track the progress at all times and adjust if necessary. Further, the discussion with the FIWARE experts needed to be very close in order to iterate during development sprints. That was done through support of scrum experts in order to keep the product development on track. The learnings of this process had been applied and made even better within the second open call.

2.1 Konnektid

Konnektid has started their product with a simple email based MVP. Requests from the community were sent to the rest of the community and feedback was easily facilitated with in-mail responses. That way, Konnektid was able to “validate” their assumption of users who would like to learn things from their neighbors. They learnt really well, what worked and what did not. Only then did they start to build an app (the screenshots of the mock up are shown below).

Konnektid was actively exploring on and working with the POI Data Provider. That was very useful because the product of Konnektid is very focused on location based queries. Matching location data (e.g. teachers and/or students) with relevant and related information (a specific topic to learn or a teacher) is a key module of the working app of Konnektid. The integration is not fully done yet. Konnektid has also evaluated Proton Complex Event Processing (CEP) but it turned out to be not ready for been used in their MVP.

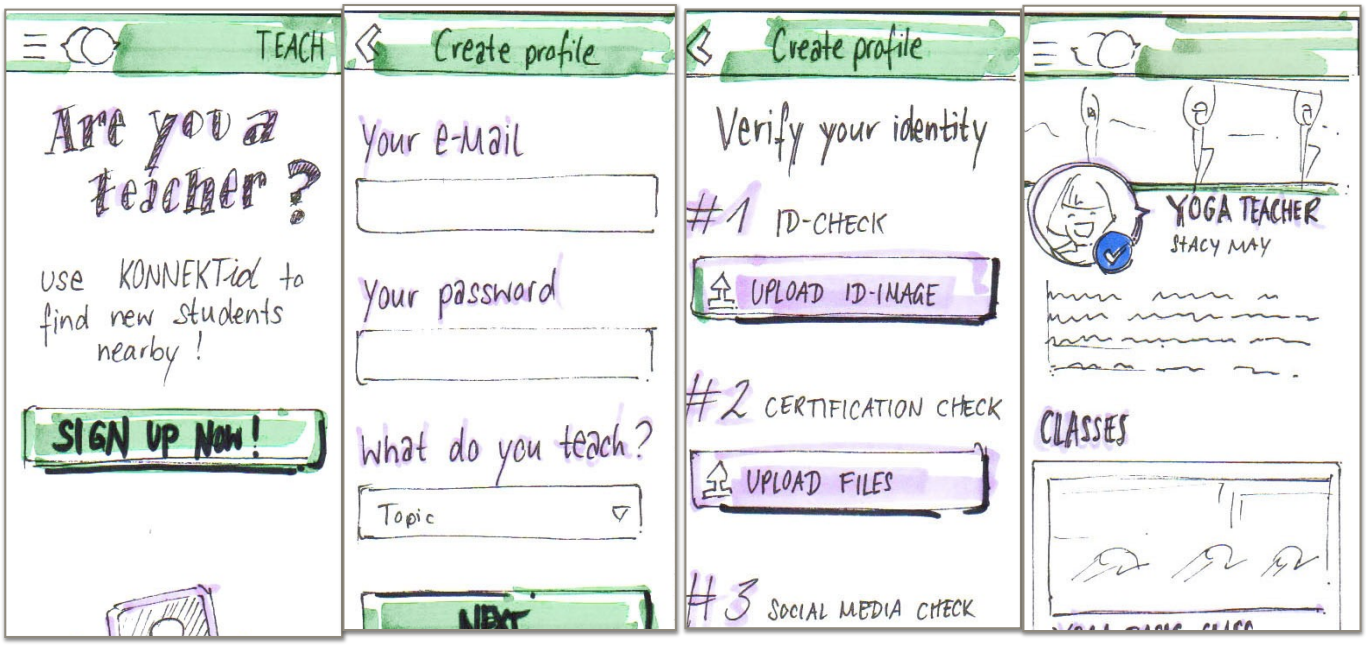


Figure 2-1: Mock up of Konnectid app

2.2 SmartDrive

SmartDrive started as a pure B2C solution, which was validated especially in the German market. The product has quickly been changed to a B2B model after the user testing has been conducted. Strong business development and user feedback allowed the team to understand that their MVP was better perceived by fleet managers than private users.

Especially the Orion Context Broker was one of the main key FIWARE enablers that helped SmartDrive because the information they are pulling from the cars during the full diagnosis have to be pushed back into the app and the dashboard. The displayed information as well as the “look & feel” of the app and the web dashboard are shown in the screenshot below. Data and context scenarios do vary from use case to use case which meant that the Orion Context Broker allowed SmartDrive to secure information that are being used for resolving queries.

Figure 2-2: Screenshots of SmartDrive App and dashboard

2.3 PeopleGraph

PeopleGraph started with a very simple idea (as shown below in the screenshot). They built a data crawler for people profiles in the slimmest way possible: the Google way. The layout was very similar to the search engine and also the result (see below) was adapted to role model companies such as Wikipedia and LinkedIn. Hence, the product was tested quickly. Since the team had many connections to various investors and they understood that finding investors is the biggest pain of startups, they quickly focused on that vertical. Today, PeopleGraph is focused on providing the best insight on investors in one place. That was validated by users.

PeopleGraph was mainly evaluating the Object Storage GE. They considered using this enabler for storing their static datasets and as a persistent backup of their databases. They were also thinking about using it for serving their static website files behind a CDN. However the set up turned out to be very complicated so that they could not use it in their MVP. Hence, the onboarding process has to be optimised.

Figure 2-3: Screenshot of peoplegraph's web interface

2.4 Avuxi

Avuxi was always planning to be a stand-alone website that offers heat maps for travelers. Quickly they realised that it is impossible to compete with the big players in the travel market. They understood that a white label solution is the best chance to enter the market quickly while keeping their competitive advantage. They are still ranking the popularity of every place on earth, but the technology is integrated by accommodation booking sites in order to increase the conversion of users that might find it troubling to take a decision based on the preferences and expectations they have about a certain place to stay. Today, Avuxi is a simple plug-and-play solution for booking sites.

The team of Avuxi was very keen on implementing FIWARE technologies. Similar to Konnektid, Avuxi was also trying to use the POI Data Provider since they are dealing with many location based information that have to be matched with the relevant context. Further, the team was working on the integration of Cosmos (which turned out to be difficult) and Object Storage.

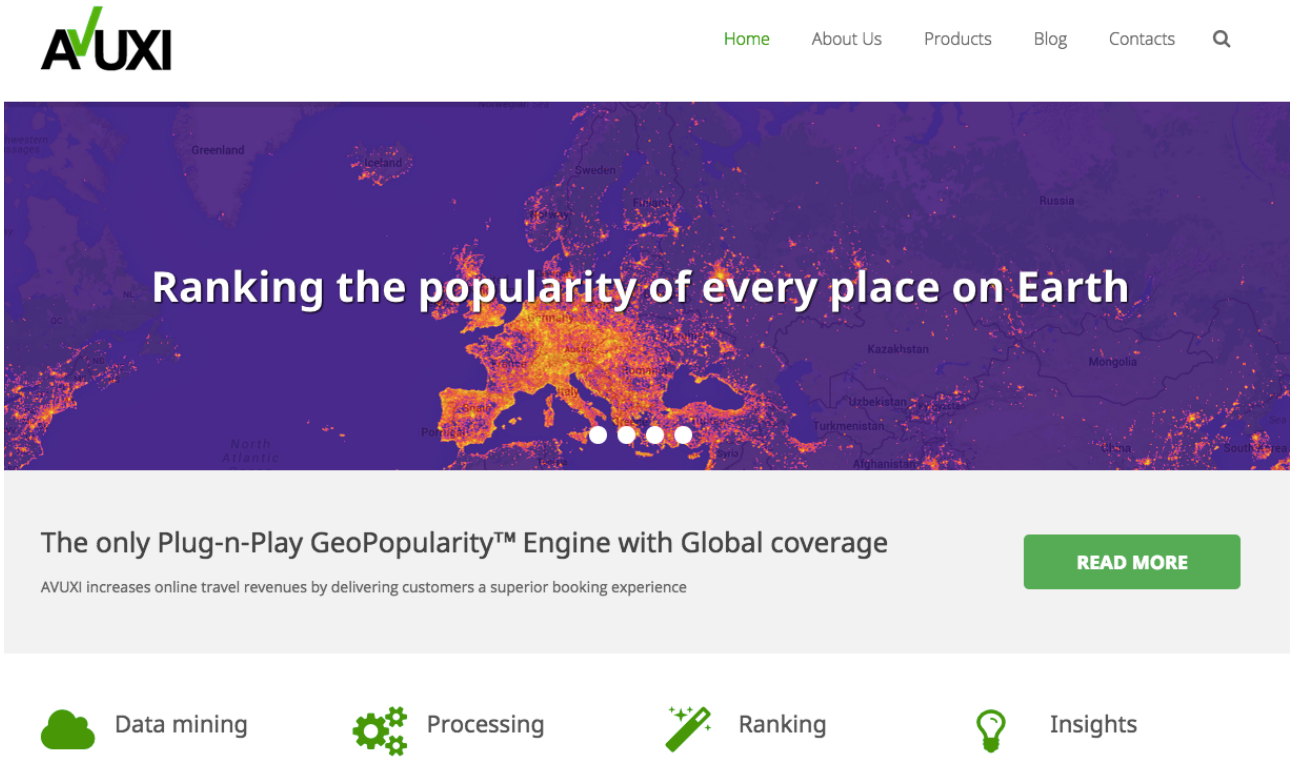


Figure 2-4: Screenshot of Avuxi website

2.5 TobyRich

The MVP development of TobyRich can be seen on the evolution below. The SmartPlane was the first light flyer version which has been sold over 10.000 times in retail stores and online. However, the more advanced versions had been developed throughout the EuropeanPioneers program (see below), which are lighter, faster and smoother to steer. The successful Kickstarter Campaign of TobyRich was suggesting that users where waiting for the brand new products. The product development has been done based on the learnings from user testing projects. The first plane came already with an iPhone app, which was also adapted and changed. Further, the team realised that more and more companies were requesting the services of TobyRich, which is why the development services are shown below as well. These are becoming a real driver for traction and revenues. Hence, the successful SmartPlane technology as an MVP allowed the TobyRich team to explore more business models such as licensing.

TobyRich was mainly using the Complex Event Processing (CEP) enabler to analyse data in real-time, generate immediate insights and enable responses to changing conditions. The use case was implemented for the display of leader boards in the DogFight App. Here users can see their rank, score and game mode among other players.

Figure 2-5: Screenshot of TobyRich's website

2.6 Appscend

Appscend started out as a second screen solution for broadcasters. But they realised that a huge problem their customers faced was the integration with APIs. What followed was a major pivot towards an open source API technology that was also created based on missing pieces in the FIWARE catalogue. Telepat.io (the newly built product) pushes instantly all new information from the central node to all subscribed devices. Therefore, Telepat is an open-source backend stack, designed to deliver information and information updates in real-time to clients, while allowing for flexible deployment and simple scaling.

One of the relevant enablers for Appscend was the Synchronisation GE since the data synchronisation is important when receiving low-latency and real-time updates. They also evaluated and tested CEP but due to stability issues and a lack of active maintenance, the GE could not be used in the MVP.

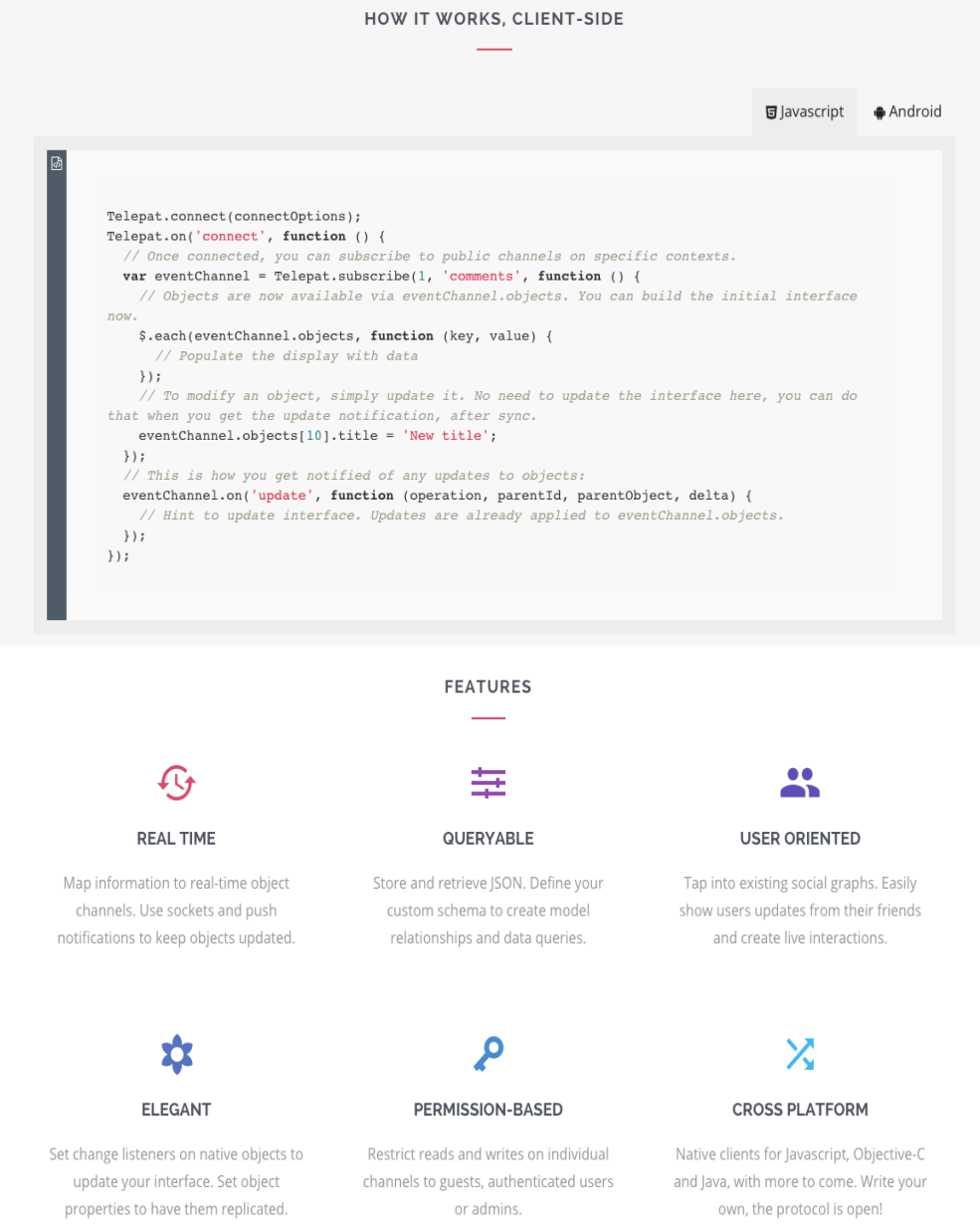


Figure 2-6: Screenshots of Appscend's website

2.7 eLoptico

Eloptico has built their MVP based on questionnaires with dentists and only then sorted out the app's features (as shown below). The mock up was tested before building the product. At that point, Google shut down the Google Glass support for B2C projects. With that, eLoptico changed their activities into the B2B case which lead to the understanding that vendors (who are supplying the dentists) are the real customers to target. Since then, the target customer (medical vendors) had been successfully targeted. The prototype has been implemented since the feedback from the dentists.

The main enabler for eLoptico was the KeyRock Identity Manager GE as it supports the enforcement of policies and procedures for user registration, user profile management and the modification of user accounts. That is crucial for dentists dealing with data of their patients.

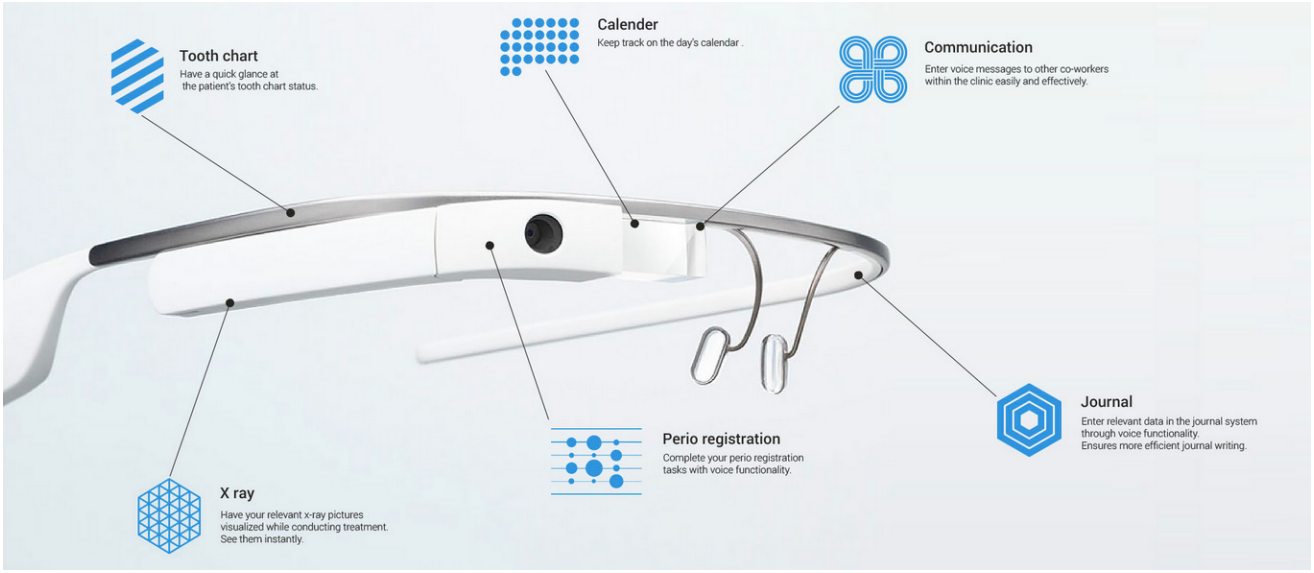


Figure 2-7: Features of eLoptico app

2.8 GameGenetics

GameGenetics had a working core business until they realised that their Game developers needed a dashboard to manage their advertising campaigns (for monetising their games). Since then, a new product was born and quickly built as an MVP. The assumptions had been tested with the current ad publishers who were their users.

The Cosmos GE was planned to be integrated, but due to several problems, was not successfully set up. GameGenetics also considered other GEs but since their working core business was already fully developed, they did not had the need for alternative or additional functionalities provided by FIWARE.

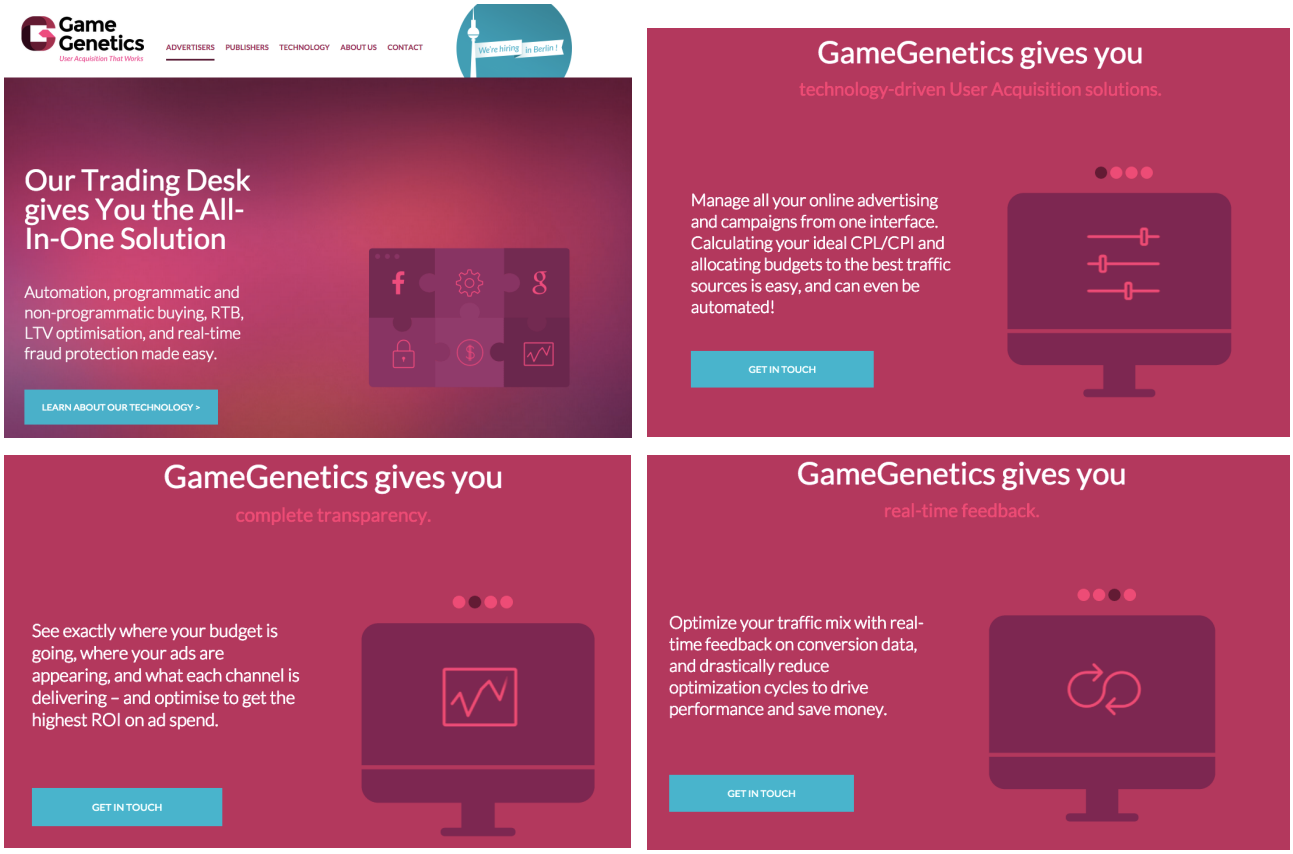


Figure 2-8: Screenshots from GameGenetics' website

2.9 Livecoding.tv

Livecoding.tv was the only team that entered the program only with mock ups of the product but no developed technology. However, the mock ups were quickly validated through a reddit community. Since the core of the live-streaming of coders is depending mainly on the community, the product has been somehow co-built with the users. That was already the case since the first features and continued to be part of the development process as shown below in the screenshot. Based on quick iterations and feedback cycles with the users, the team was able to fully build a user focused product out of the early MVP.

Because Livecoding.tv is a streaming service, it has been obvious to leverage the Stream-oriented Kurento GE. The Livecoding.tv team is experienced in Java which fits perfect with Kurento. The multimedia technologies needed for this product are audiovisual communication (streaming the coder live) and real-time communication between the coder and the learners. In addition, they use Keyrock Identity Manager GE for user authentication.

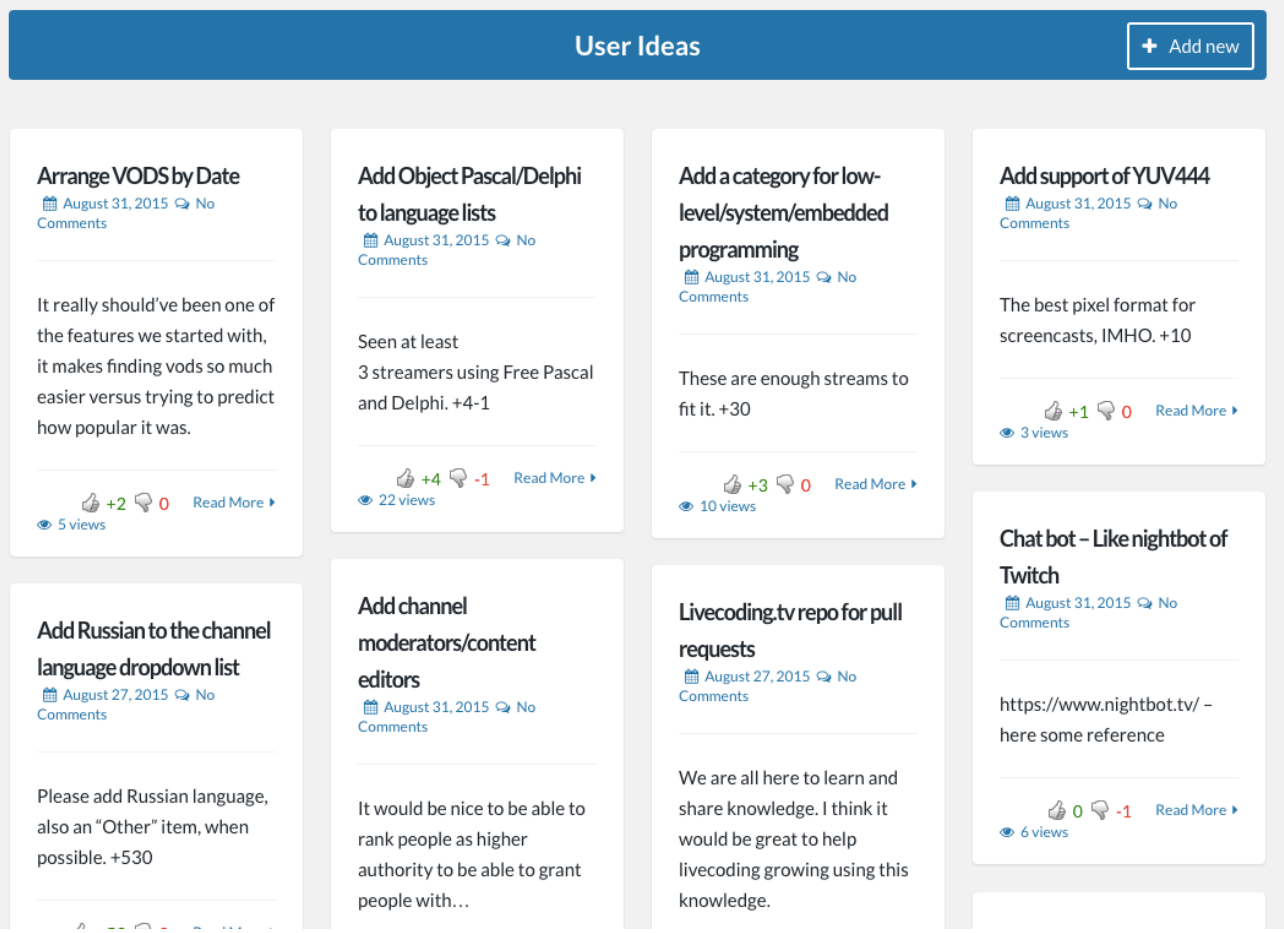


Figure 2-9: Screenshot of collection of user ideas

2.10 Muuselabs

Muuselabs has developed their MVP very early but needed to re-iterate after the kids played with it. The kids enjoyed it but the story integration with the publishers was very difficult. The learning was that publishers need to have better impact on the content itself. Therefore the team used their technology and rebuilt the below shown MVPs. These are still the current state because the corporate customers have their very own ideas on the look and feel of the product. That means that the Muuselabs team realised that they are much better in delivering the technology. Eventually, companies like Disney signed licensing deals with Muuselabs since that turned out to be their core competence.

NFC detection is at the core of Muuselab's embedded low-power hardware prototype. Hence, the Orion IoT Context Broker was a key corner stone for their product. The use case is the mediation between the sensor (NFC or RFID) and the consumer application, which is taking advantage of the context information provided by the sensor. Since the figurines are activating an action by being placed on the Muuse-box. Here, the right content (speech of the figurine) must be played by the speakers. That's a perfect use case for the Orion GE. Muuselab also successfully evaluated and tested Object Storage GE.

Figure 2-10: Pictures from Muuselabs MVPs

2.11 usheru

usheru started with an native mobile optimised website in order to mimic the use case. Over 5000 users were on-boarded in order to test the assumptions. This was a great MVP to show the possibilities to cinemas and understand what certain features users would really use. Only then was the app built. Further, the MVP was based on assumptions about the cinemas' needs. That has been changed quite a lot because the intelligent analysis had to deliver many more insights than initially planned.

usheru initially planned to use the Object Storage to store all their application objects and built a startup script so they can launch blueprints that would automatically install and configure an instance of their application, taking all required objects form Object Storage GM.

They have analyzed a few hundreds of fiction books from Spanish and South American authors, and have calculated a factor for each author measuring their 'vocabulary depth' using Cosmos API. The idea was to find patterns between these factors and users preferences that can be used in future for analysing movie scripts. They have also run keyword analysis tasks using user ratings from IMDB and some log analysis based on Cosmos Big Data Analysis.

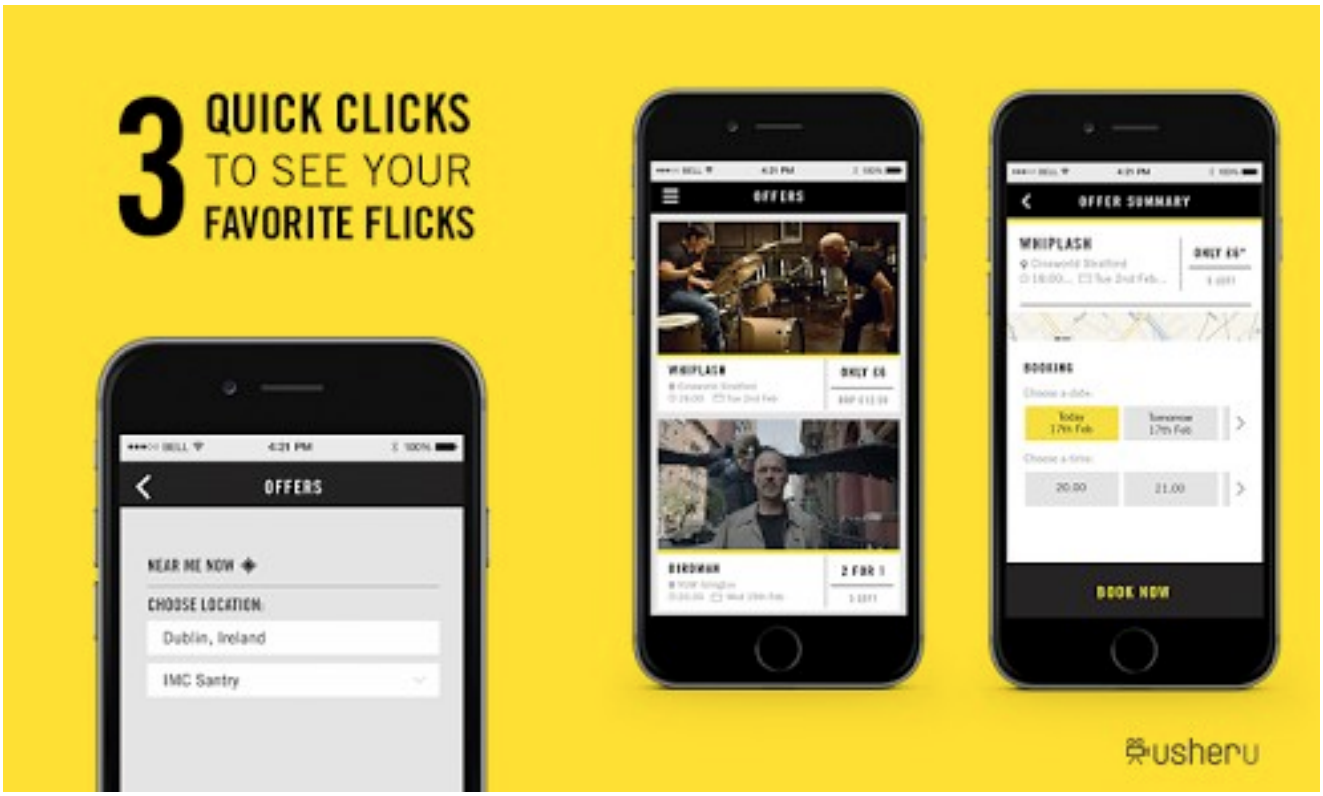
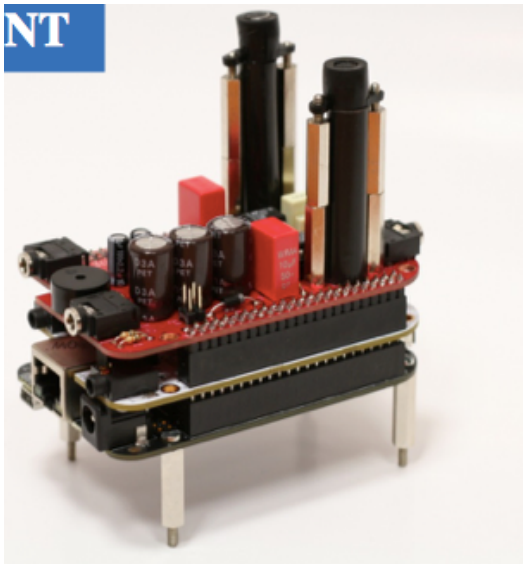


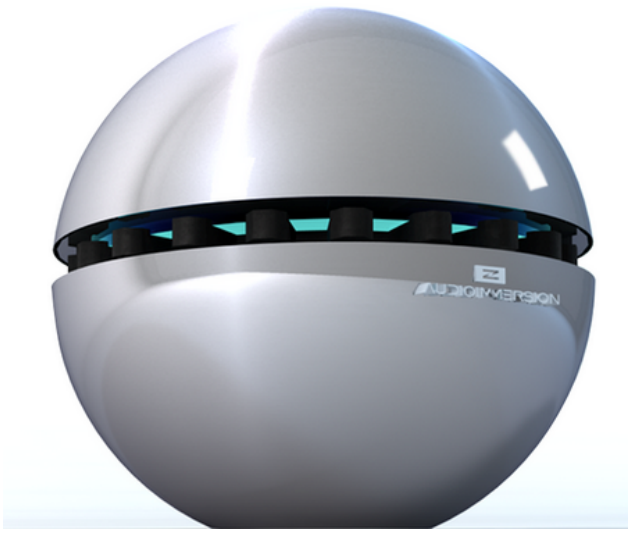
Figure 2-11: Screenshot of usheru app

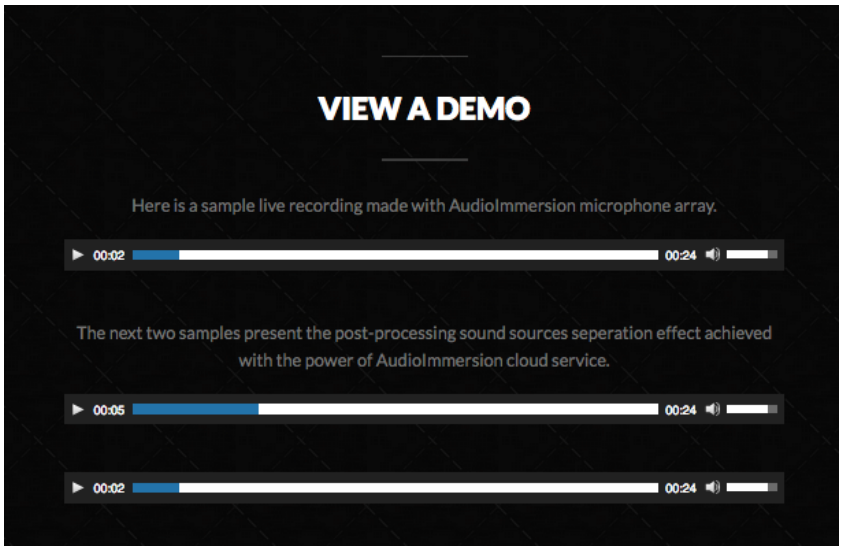
2.12 Zylia

Below you can see the hardware changes of the 3D recording device. First the MVP was showing only the functionality. Later the UX & UI has been changed (as shown with the round device that is the current status and the app that allows the user to engage with the device). The website shows the technology in action through a sound demo that has been developed throughout the program because many target users were not fully clear on the use case. To show a demo is a great way to show the product in an engaging way before going into full production.

The Stream Oriented GE provides developers with a set of robust end-to-end interoperable multimedia communication capabilities to deal with the complexity of transport, encoding/decoding, processing and rendering tasks in an easy and efficient way. The core technology of the AudioImmersion device by Zylia is the rendering of sounds and uploading to the cloud. Hence, the Kurento GE was the right choice to implement.







3 SUMMARY

All startups have started with an MVP that allowed the EuropeanPioneers team to validate the use case. The FIWARE enablers (generic and specific) were a great help to develop the MVPs further. However, the integration was very cumbersome and therefore distracting at times. The technology development was part of the milestones, which allowed the team of EuropeanPioneers to track the development progress.

Certain teams had to go through strong pivots during the program, which was mainly due to major learnings that have been made during the user testing and validation cycles. The integrated communication with the FIWARE experts from Fraunhofer IAIS worked really well, however the owners of some enablers were lacking support in order to support the teams with their issues.

The MVPs of all teams got validated and found a product-market fit, which was a core KPI of the program. A deep technology development knowledge has been injected into the startups (FIWARE and non-FIWARE based), which resulted even in an implementation of strong exchange of learnings between the teams of the first and second open call.

The Build-Measure-Learn methodology was applied by all startups alike. They knew that a decent validation of assumptions is crucial to find their right spot in the market. To leverage future technologies, it was important for all of them to use some FIWARE enablers. The integration and validation of FIWARE enablers was understood by most of the teams as important as the validation of their very own product-market fit.