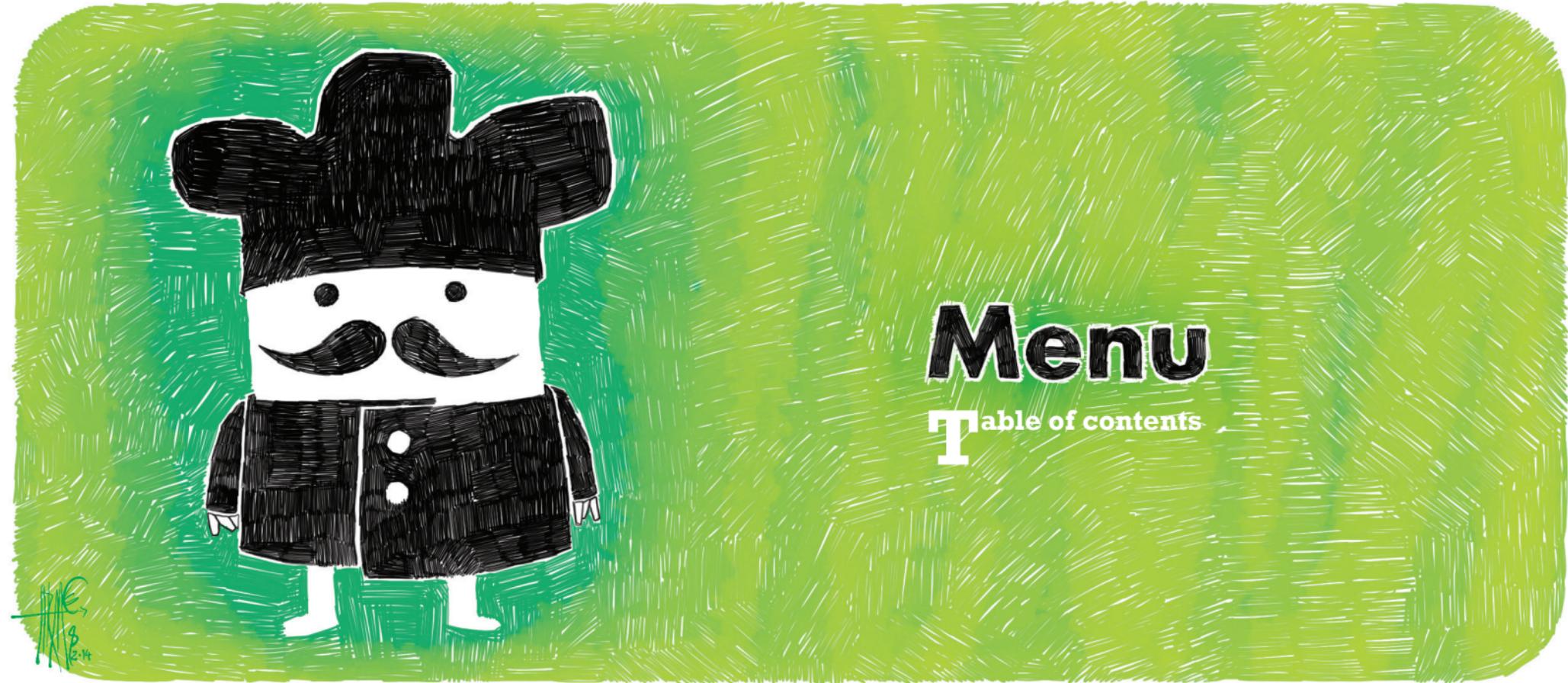


Mémoire de Master 2 Creation et dition numriques (CEN)  
Universite Paris 8 - 2013 - 2014  
**mim.Armand (Mohamed Armand Eshkiki)**

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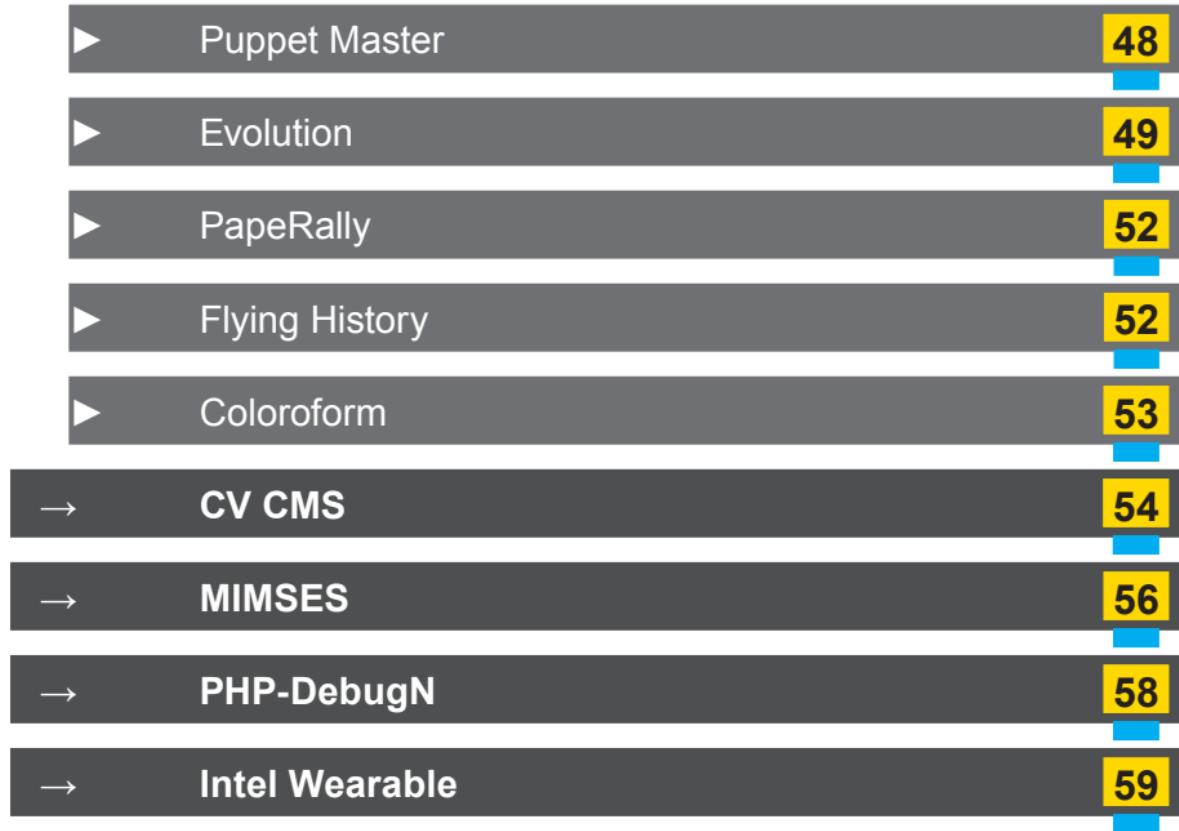
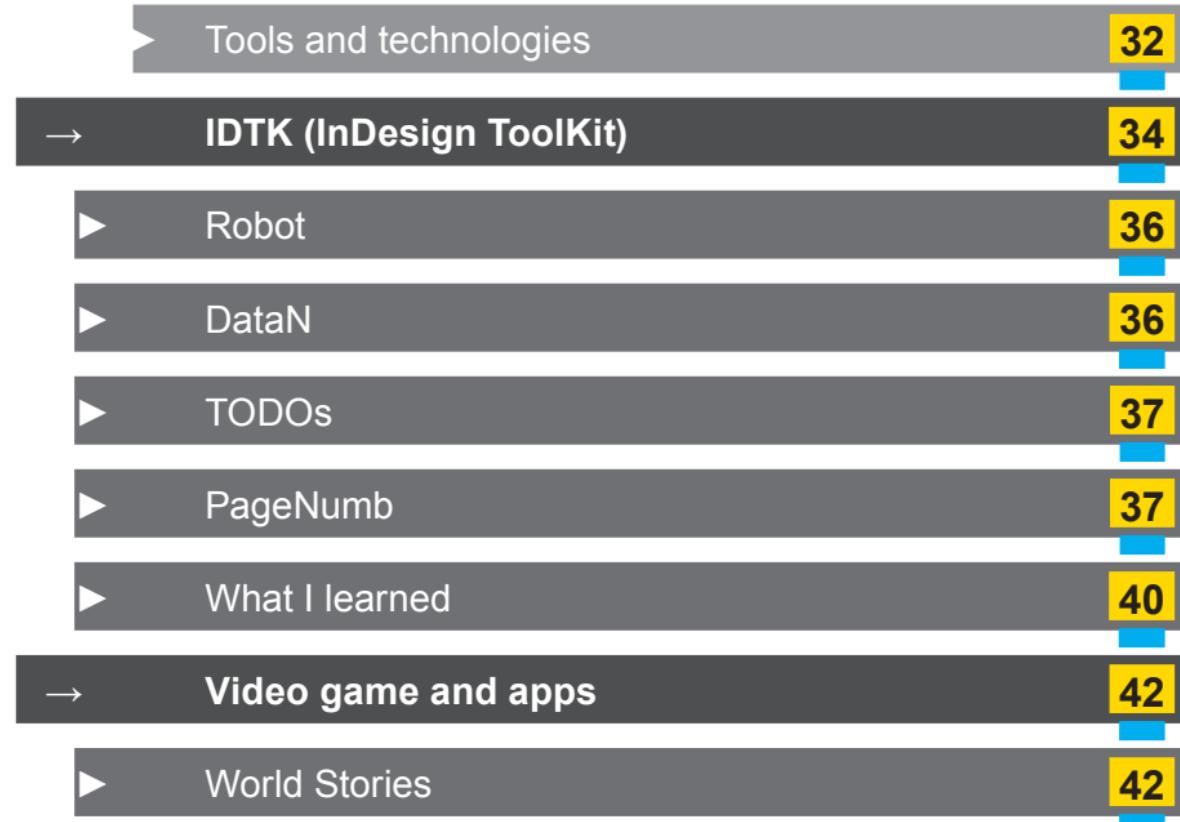
• Fig-01



• Fig-02

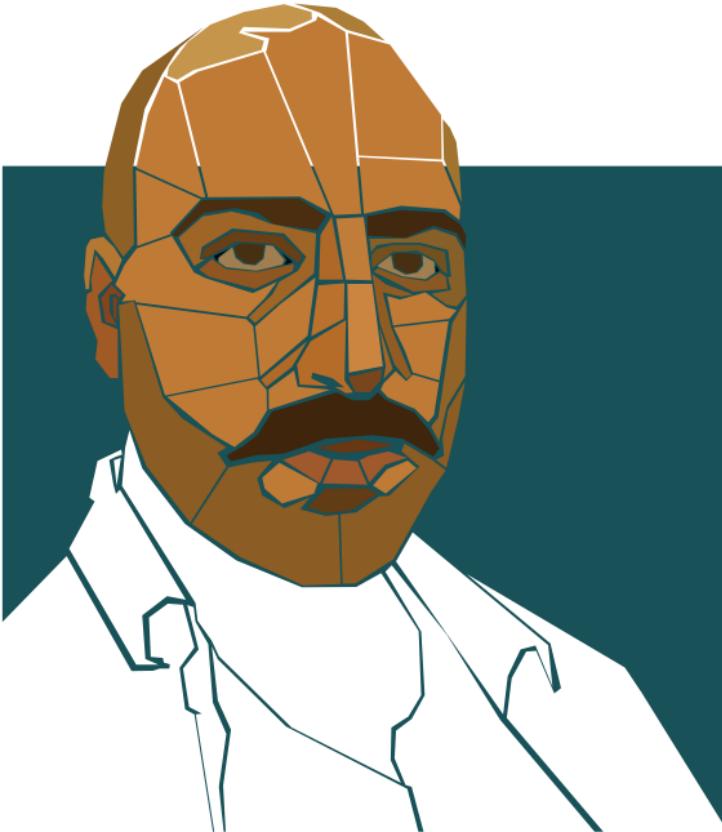
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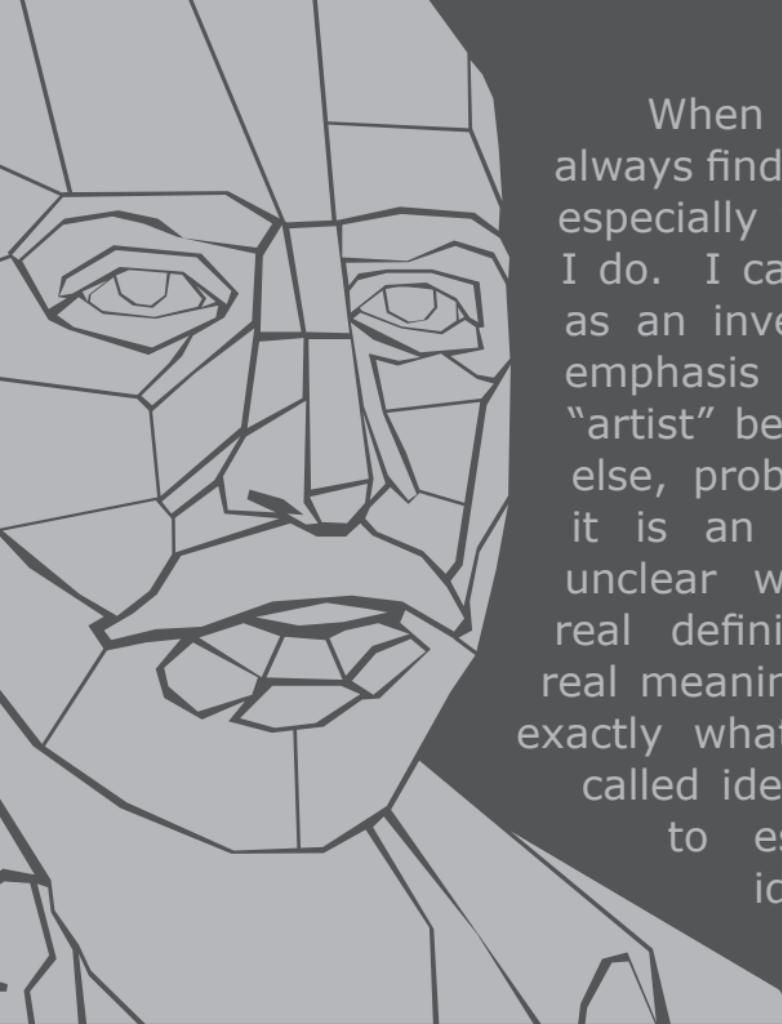
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● My name is Mim Armand (Mohamed Armand Eshkiki) and I am a Masters 2 CEN (Master Création et édition numériques) student at Paris 8 University and this is my thesis (memoire) for completion of this year of studies (2014). Please refer to my resume as well, which is included at the end of this document. Also for my Master 1 memoire (Animetro project), please refer to my personal website at [www.Armand.eu](http://www.Armand.eu). or the project's website at [www.Animetro.fr](http://www.Animetro.fr)

• Fig-03

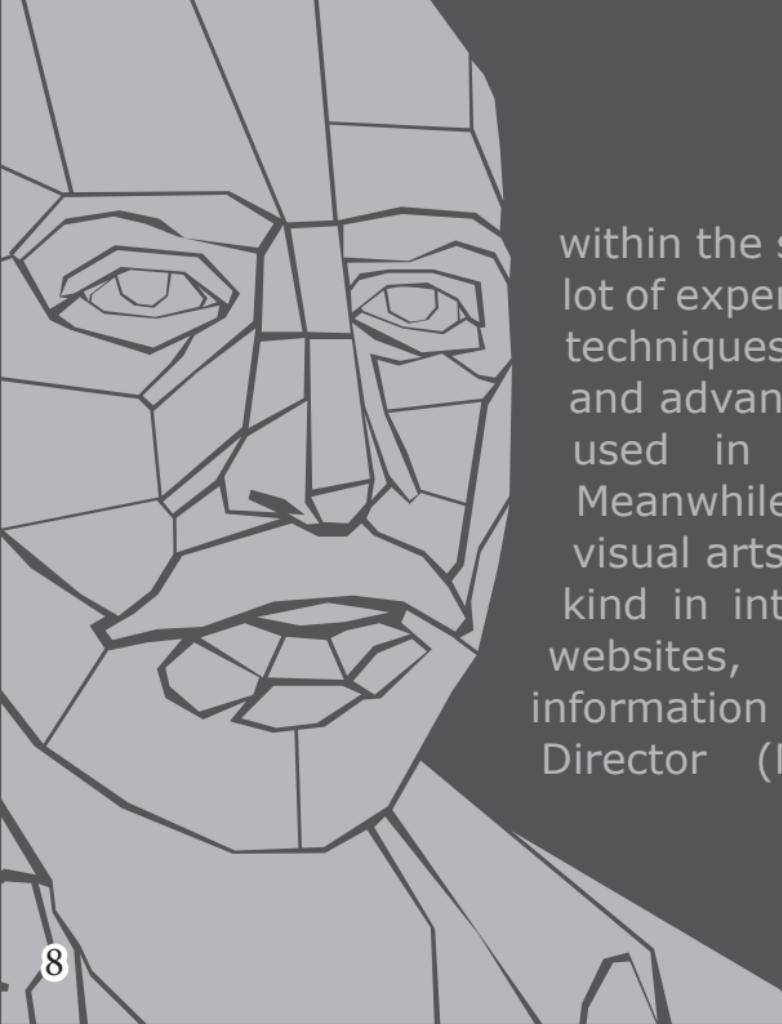


When it comes to introductions, I always find it difficult to introduce myself, especially when I want to explain what I do. I can say I am an artist, as well as an inventor and a developer. I put emphasis on being an “artist” before anything else, probably because it is an obscure and unclear word with no real definition and no real meaning, and that’s exactly what I need to fill the vacuum called identity. It is also an easy way to escape the responsibility of identifying myself within the

rigid categories of society. The main reason for the existence of “Art” is as an uncategorized label where we can put everything that doesn’t fit entirely within the parameters of other labels. That being said, obviously it’s just an escape strategy. I wouldn’t call myself an artist if there were a better word to use instead. I started at a young age as an illustrator/cartoonist for magazines and journals, a path that launched me in my journey from visual arts to animation, where a few years ago

(my last years of being a resident of Iran) I ended up having my own studio and was directing animation series for national television (75 episodes, the longest one with a duration of about 150 minutes, all finished

## MY STORY

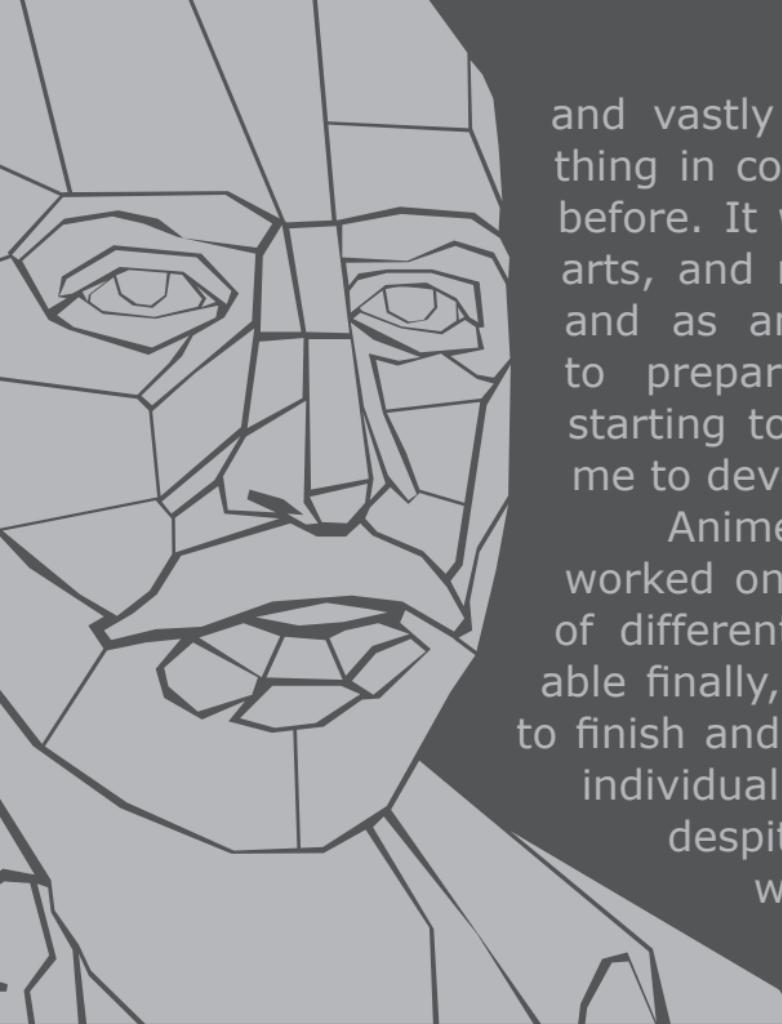


within the span of one year). I acquired a lot of experience using different animation techniques (from stop-motion to cut-out, and advance3D CG Animation techniques used in visual effects for cinema). Meanwhile, I was active in other fields of visual arts as well, especially the modern kind in interactive mediums, developing websites, flash-based applications and information kiosks made with Macromedia Director (Now owned by Adobe). I

developed a very successful studio/company before leaving everything and starting over.

After my arrival in France, I was introduced to technologies including Arduino and Processing. Even though it may look like it is irrelevant to what I was doing before, I continued my journey into the new universe of artistic and visual development naturally without feeling like I was deviating from my principal rout.

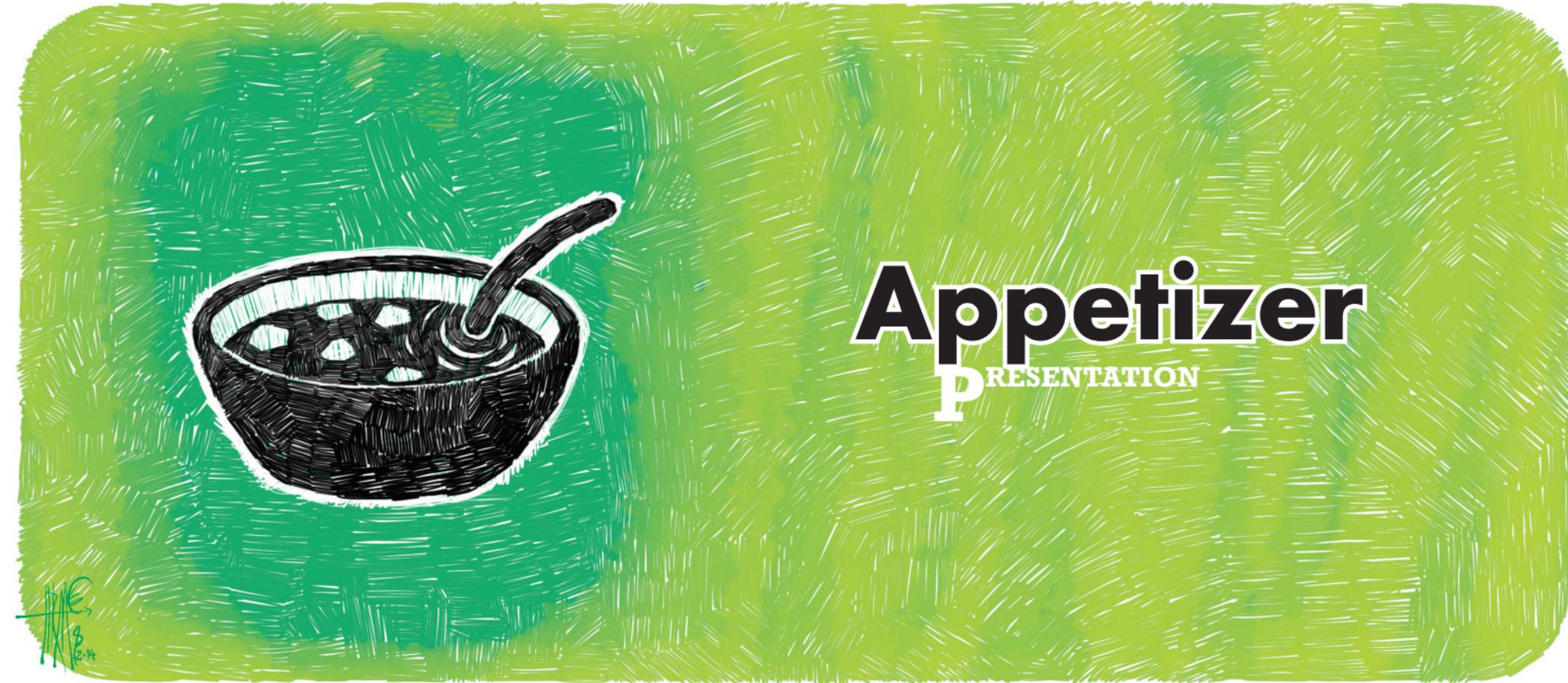
During my second year in France I invented Animetro, which was purely an engineering mission



and vastly new to me, but it had one thing in common with what I was doing before. It was a new medium for visual arts, and more precisely for animation, and as an animator who always had to prepare his own medium before starting to work on it, it felt natural to me to develop this new medium as well.

Animetro wasn't the only project I worked on in France. I worked on a lot of different projects that I hope to be able finally, after three years, to be able to finish and introduce to the public as an individual Artist, developer and inventor, despite bureaucratic difficulties which have stood in my way.





• Fig-04



**D**uring this school year and especially during the past six months (which was the duration of our internship [stage]) I worked hard, not only in my workplace (where I completed my internship) but also during my free time, on personal projects. At the end of the year, this resulted in a handful of projects, some of which I finished during this time period, others which are yet unfinished or in the process of completion.

**A**ll in all, I would conclude that the outcome of this time period has been very successful and advantageous. I learned and mastered many useful skills, technologies and tools, each and every single one of them

opening new doors toward the future of my career.



**D**uring this six months I became an Adobe partner, the third partner ever in France, which is very promising, especially for the future. I also released / published a few final products, either in open-source or commercial sections of the market.

**I**n future chapters I'll explain in more detail each of these experiences, their outcomes and the prospective features of them, in addition to the tools and technologies I learned during each of these projects.



• Fig-05

# • Aikos Mobile Application:



• Fig.06

- THIS SECTION IS ABOUT MY MAIN INTERNSHIP PROJECT, WHERE I DESIGNED AND DEVELOPED A MULTIPLATFORM SINGLE-PAGE APPLICATION FOR THE COMPANY "AIKOS". APPLICATION WAS TARGETED PRIMARILY FOR HAND-HELD DEVICES INCLUDING SMARTPHONES AND TABLETS.



## • The place (about the company):

Aikos is a start-up based on an award winning innovation that involves the fields of home-automation and energy consumption management.

The invention is a device with the ability to control and manage the consumption of electricity, water and gas, either directly or long-distance through via an internet connection. It can also gather consumption data

and information in order to suggest optimizations to reduce the cost and increase the efficiency, as well as for data analysis and comparisons in different areas.

The project won the EDF competition for innovations related to energy management.



I first met the owner of the company in a start-up meeting organized by pepiniere<sup>27</sup> (<http://www.pepiniere27.fr/>), which provides facilities such as placement, etc. for small start-ups. From the beginning I felt that this was the right place for me to do my internship, although it looked like a small company, which would introduce more risks to both its future and my prospective future employment. However, because of the innovative nature of the company, I thought it would be a very helpful experience. In addition, I had a lot in common with what the company was doing, having experience in electronics, coding and innovation, making me the ideal candidate for the company.

So I started working there right away (just two days after our first meeting), earning a good salary for an intern.

The project defined in my contract was the development of a front-end application to control and communicate with the device and I started working on it immediately.



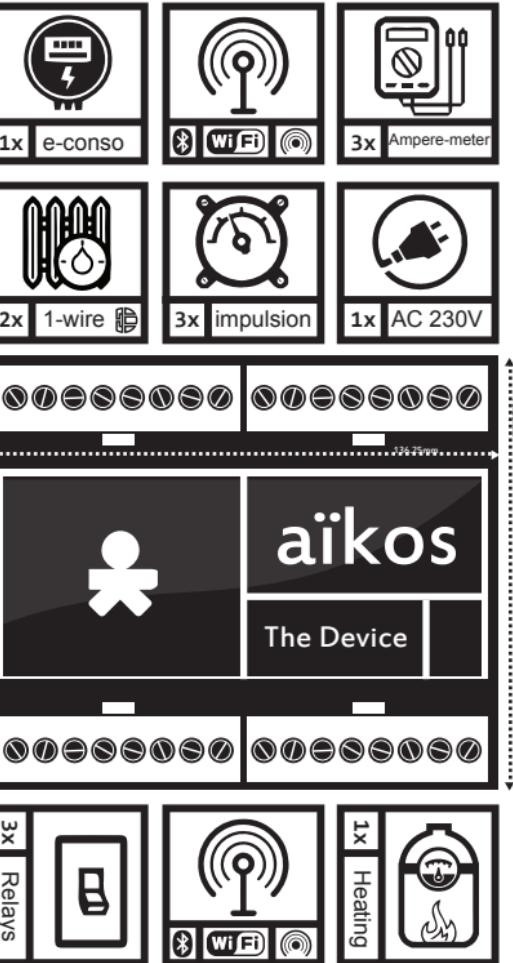
• Fig-08

## • The product:

The company's product was a device (referred to as "box" internally) designed for the purposes of home-automation and consumption management. It included an LCD panel as a way to expose a controlling UI to the users and the ability to connect to internet through Wi-Fi and expose another way of communication to the box through a server-based API.

The device itself is a generic embedded JAVA-based micro-controller designed and developed by third parties and not solely for this project. It includes relays, sensors and several in-put and out-put pins for city electricity voltages (for both measurements and controlling purpose).

• Fig-09

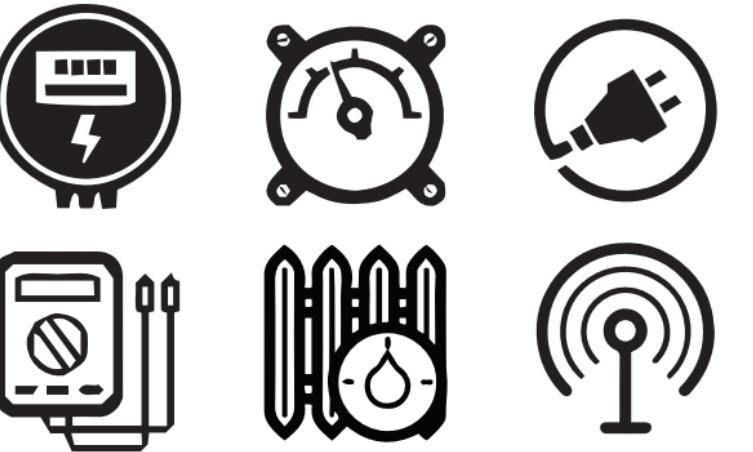


## • Challenges:

**D**uring the first days of my internship I realized that the company was suffering from a common problem experienced by start-ups • management •

I should mention here that the manager of the company is indeed a very talented and smart person • He is the person who invented the device as well • He is definitely a good manager for a company and I have a lot of respect for him, but I believe there is a subtle difference between a good company manager and a good start-up manager • In referring to management problems, my intention would be indeed to refer to this area of differences •

**T**he specific problems in this company's management concerns its definition of the workflow for various projects •



• Fig-10





## • Analysis of the problems:

In this section, I will break down the afore mentioned problems in more detail and, as previously stated, the more precise problems I observed in the company's workflow;

### » R&D:

I observed a significant lack of the appropriate research and development, which usually precedes the production phase of any project, especially in the case of

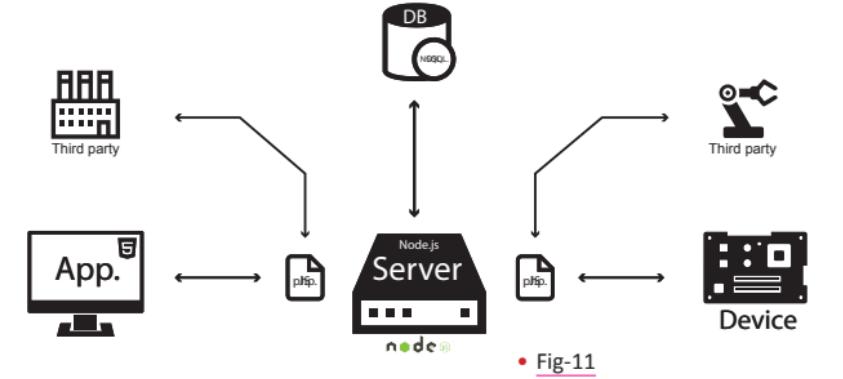
technology and innovation.

On the contrary, the company intended to start the production directly, without knowing all the necessary tasks for the completion. It is not uncommon for companies of this kind to find themselves in the middle of the production of a product (or in this case, even after the release of the prototype) trying to solve a problem that was the direct result of insufficient preliminary research. Now, I should point out that these types of issues are preventable and completely distinct from other types of problems

encountered, such as common bugs, which are unavoidable in all realms of production and development.

For example, in the development of the back-end application in the above-mentioned company, they had decided to build it on a Node.js server, which is not necessarily a bad decision, but a decision made on the basis of proximity rather than practicality.

This decision, for instance, caused a lot of issues for this company later on simply because it was made with no prior knowledge or research. Despite my research before beginning my internship with this company, the



decision had already been made. Not surprisingly, later on, the company (and this particular project) encountered the exact problems that were mentioned in the report I worked on. Even now, while I am writing this document, all the parts of the project are finished, except for the back-end section and areas depending on that.



## » Road-Map:

**A**nother problem caused by the lack of a workflow and a R&D, is the lack of a clear plan and outline for the project, which would indeed be the result of a well thought out R&D project in a well-managed project. Start-ups often intend to start the production without a clear outline in hand, which may translate to a list of tasks they need to know from the beginning and before even starting the project.

**L**ack of an outline will result in slow progress during the development. Without an outline and plan,

there is no priority management of the tasks. This results in either the repetition of tasks (which happened in this start-up as well, where they started working on advanced levels of back-end without having, or even thinking about, an authentication system for users) or working on databases without having the design of a database hierarchy, structure or architecture in hand, which resulted in an infinite duration of back-end development (still under construction at the time of the writing of this document without any advancement from the beginning).

## » Task Management:

**W**ithout an outline, there won't be a list of tasks either. The result of this is that every team member will have to define his/her own list of tasks, which may result in repetition or forgetting of tasks and/or different, paradoxical and sometimes incompatible approaches to certain tasks.

**T**his can also cause a lack of a united priority management of tasks that can prevent parts of the project from advancing when there are dependencies and overlapping of tasks, (for example without an authentication implemented in the back-end, front-end development can't accomplish it either).

## » Global View:

**N**ot having a global view of the whole project can be a real problem in start-ups, especially since often the owner and/or the manager of the company/project is involved in detailed tasks of development as well which will make it easy to lose track of the main goals and objectives. Team members and managers can become distracted by the details of short term goals, making it harder to manage and distribute time correctly across all tasks in order to meet deadlines and accomplish a project on time or with a reasonable delay.



# » Flexibility:

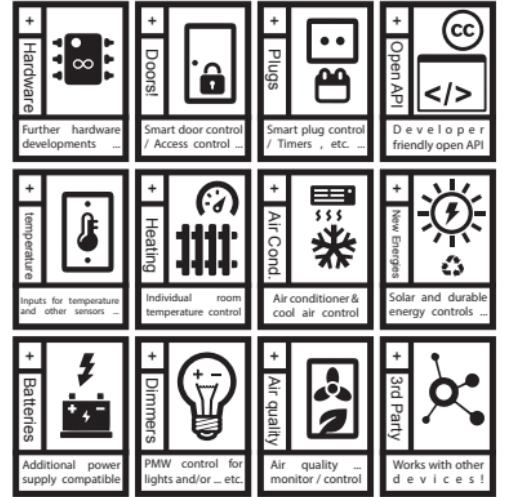
In my opinion flexibility can be one of the biggest advantages of start-ups in comparison to big companies and even sometimes a crucial aspect of their existence. For start-ups to be successful, normally the team members have to work more than an established company in order to handle tight deadlines and financial challenges existing only in start-up situations. On the contrary they normally have more flexible work hours and schedules.

In fact, in small teams of start-ups there needs to be a teamwork atmosphere rather than boss-employee

relationship. For instance, it was surprising for me during my work on this project in which I spent almost a month working up to fifteen hours per day, including weekends, to meet a deadline, to be questioned for being two hours late to the office. It was disappointing and discouraging, although I didn't give up and continued to finish the part of project that I agreed to do from the beginning. However, this issue affected my decision of whether to stay or leave the company after my internship was finished.

Another example of flexibility would be the capacity of risk acceptance by small companies and start-ups in comparison to the rigid behavior of big companies. Start-

ups are not afraid to try new technologies and being creative is one of the big advantages in start-ups and small companies.



• Fig-12



## • Solution:

Immediately after determining the problems of the company's workflow (which wasn't something new to me since I saw similar problems in other French companies, small and big, during the past 3 years) I had two options, either working under this condition even though I was sure that it wouldn't be a successful experience or accepting the huge risk of taking all the responsibilities of a few parts of the whole project and manage it myself which would consist of doing all the tasks of a team all by myself and of course informing the manager of my plan without being rude.

All in all I decided not to lose 6 months of my time on something that I was pretty sure would be a failure, even with good pay. So I talked to the manager and told him it would be the only work condition in which I'd be able to stay and work with the company. I said I'd take the whole part of the project and do it by myself with no additional costs, but I wanted to be able to manage that part of the project and do it in my own way. He accepted transferring all the responsibilities of that part to me.

Although I told him that they should consider changing their workflow for the entire project as



well, he was doubtful about it and told me that he was not even sure if I could finish my part in time. Here, as a quick note, I should mention that, after two months I finished the part and at the time of writing this document, after seven months, it is still the only part of the project that's done, while other parts have a progress of less than 10 percent.

After finishing my part of the project, according to our agreement with the company owner, since I didn't have anything else to do (we had to wait for the back-end team to finish their tasks before publishing the application, which never happened, unfortunately) and since I didn't want to waste time (wanted to start



other projects) I proposed to the company owner, to give me a month or two off so they wouldn't have to pay me to do nothing, and could call me back after other parts and dependencies were ready (with the knowledge that it would not happen in the near future with their way of working and workflow). So I separated from the company after two and a half months (with a few days during the next month being called to help them with other tasks) and started other projects (which I will describe in the next chapters).



## • The Job:

The main part of the project I agreed (and proposed) to do was the process of designing, developing and completing a mobile application, which would control and communicate with the device via the internet and the server-side back-end APIs.

The project was challenging from both the technological and the design/ aesthetic point of view. In contrary to my agreement with the project manager, he decided to get a lot more involved in the design process (something typical and always accompanied by tragic results in the design industry in which I've already had a decade of

experience) which introduced many unnecessary challenges to the project, slowing it down and reducing the quality of the final output. (Analysis of this behavior and its effect on designed UI on a day-to-day basis was an interesting study I did, since I kept all of the different steps of the design process which I will not include in this document for the purpose of brevity but which will be available on my website).

Another challenge was that, due to the nature of the project, we had to create something new from scratch, an application that did not exist before, so we had to decide based on technologies available.

I spent the first two to three weeks studying, researching and testing, which is defined as the R&D step in my workflow. Not to mention that my boss considered this a waste of time. However, on the contrary, I would say that it was the busiest and hardest part of the job. I worked close to 18 hours per day, including weekends and holidays. I studied many different available technologies, reading documentation and doing tests and benchmarks.

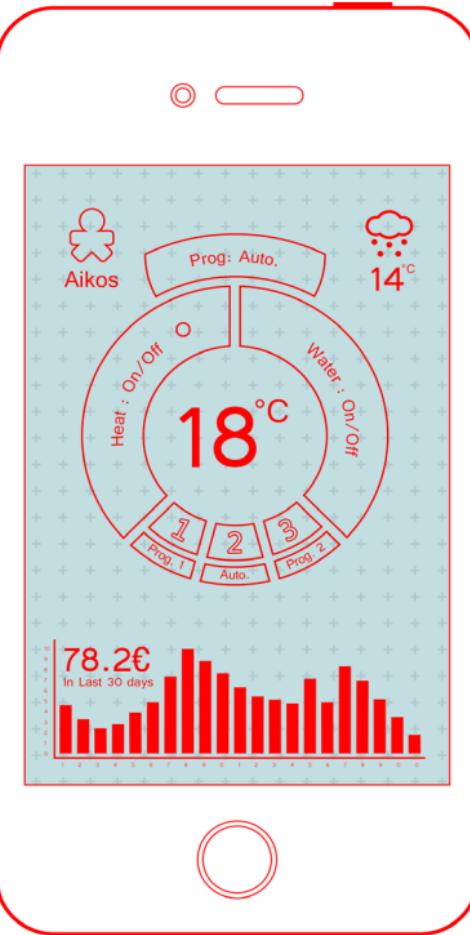


• Fig-13

At the end of these three weeks, I had everything I needed to begin the project at hand; it was just a matter of completing a precisely detailed list of tasks. At that time my estimation was that I would even finish the job earlier than the defined deadline and I would have done so had there not been unnecessary obstacles created along the way, including alteration of the UI and slowing down of the design process and also definition of new tasks in between with no respect to the current schedules.



The application had several different modules, including a complex data-visualization algorithm and various types of charts (Graphs, bars, line, pie, Cartogram, Streamgraph, etc.) with the ability to get real-time feeds, an authentication module, a CORS AJAX communication module, a profile manager module and a very complex intelligent controlling module that would construct the whole UI of the application in real-time according to users configuration (since there were at least 98 different types of UI that would be needed according to users



• Fig-14

configurations. For example, if they had a heater included, five different types and standards of communications with heaters, and whether or not they have defined different zones, etc. and etc.);

Designing a minimalistic and simple UI that can adapt to all the different kinds of interfaces required explaining all of these different configurations without making it complex or incomprehensible. This was challenging enough. Unfortunately, the involvement of

unprofessional team members made it even more difficult and, I believe, finally reduced the quality of the final UI considerably. (I was happy with the first prototypes of UI but honestly I'm not happy with the final UI, even though the company owners are).

Also, since I knew I would probably not stay with the company afterward, I felt responsible to write the code and develop the application in a way that the next person could understand and build upon. Therefore, using name-



• Fig-15

convictions and commenting on the code (massively, as the amount of comment lines at the end was twice the size of actual code) added to the workload as well.

Here, in order to summarize, I will not enter into the details of the development processes of the application but I'll make sure to make it available in my website as well.



## • What I learned:

**A**lthough I cannot call this internship a complete success, since I am still waiting to see the application I developed published on mobile platform markets (and honestly I think I'll never see that if they don't fix their workflow!), I would definitely do the same if I were given a second chance.

**O**bserving these problems and seeing the reason for these types of failures was an invaluable experience, which helped me immediately in my next projects and will continue to be helpful in my future career.

• Fig-16



In the next section I'll briefly explain the knowledge I gained which I mentioned above:

## » Management:

As I mentioned above, it is always very useful and inspiring to learn from the failures of others (and of

oneself) • Some of the most valuable knowledge I gained during this internship experience came to me through observing and being able to analyze the management problems of a start-up. I mentioned in detail these analyses in previous sections so I will not expand upon them here.



• Fig-17





## » Tools and Technologies:

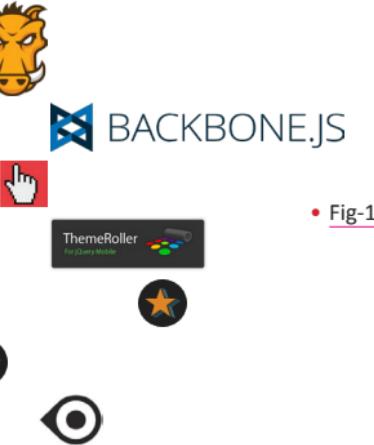
The list of tools and technologies I used or tried (during R&D) is long, so I'll just try to name a few of the most important components that may be useful for other projects and/or students.

1. Intel® XDK <sup>1</sup>
2. Angular.js <sup>2</sup>
3. Building Blocks <sup>3</sup>
4. Intel's App Framework <sup>4</sup>



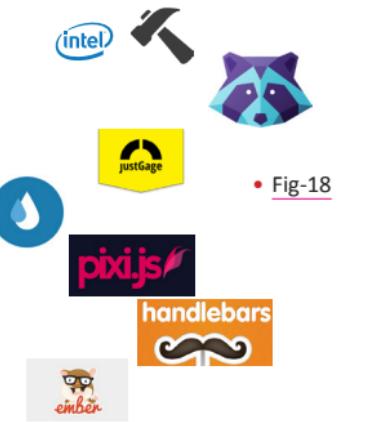
- 
- 1 <https://software.intel.com/en-us/html5/tools>
  - 2 <https://angularjs.org/>
  - 3 [www.buildingfirefoxos.com/](http://www.buildingfirefoxos.com/)
  - 4 [app-framework-software.intel.com/](http://app-framework-software.intel.com/)

5. Gruntjs <sup>5</sup>
6. Backbone js <sup>6</sup>
7. FastClick <sup>7</sup>
8. Themeroller <sup>8</sup>
9. Mobile-boilerplate <sup>9</sup>
10. H5BP <sup>10</sup>
11. EFFEKT <sup>11</sup>



- 
- 5 [gruntjs.com/](http://gruntjs.com/)
  - 6 [backbonejs.org/](http://backbonejs.org/)
  - 7 <https://github.com/ftlabs/fastclick>
  - 8 [jqueryui.com/themeroller/](http://jqueryui.com/themeroller/)
  - 9 <http://html5boilerplate.com/mobile/>
  - 10 [HTML5 Boilerplate](http://h5bp.github.io/) <http://h5bp.github.io/>
  - 11 <http://h5bp.github.io/Effeckt.css/>

- 12. Style Builder<sup>12</sup>
- 13. Topcoat<sup>13</sup>
- 14. JustGage<sup>14</sup>
- 15. Codrops<sup>15</sup>
- 16. Pixijs<sup>16</sup>
- 17. Handlebarsjs<sup>17</sup>
- 18. Emberjs<sup>18</sup>



• Fig-18

- 19. symphonical<sup>19</sup>
- 20. D3.js<sup>20</sup>
- 21. Laravel<sup>21</sup>
- 22. Starling<sup>22</sup>
- 23. Bower<sup>23</sup>
- 24. Bourbon<sup>24</sup>
- 25. Yeoman<sup>25</sup>
- 26. ... (for a full list visit Armand.eu/tools)



• Fig-18

- 
- 12 <http://app-framework-software.intel.com/style.php>
  - 13 <http://topcoat.io/>
  - 14 <http://justgage.com/>
  - 15 <http://tympanus.net/codrops/>
  - 16 <http://www.pixijs.com/>
  - 17 <http://handlebarsjs.com/>
  - 18 <http://emberjs.com/>

- 
- 19 <https://www.symphonical.com/>
  - 20 <http://d3js.org/>
  - 21 <http://laravel.com/>
  - 22 <http://gamua.com/starling/>
  - 23 <http://bower.io/>
  - 24 <http://bourbon.io/>
  - 25 <http://yeoman.io/>

- IDTK (InDesign Tool Kit):



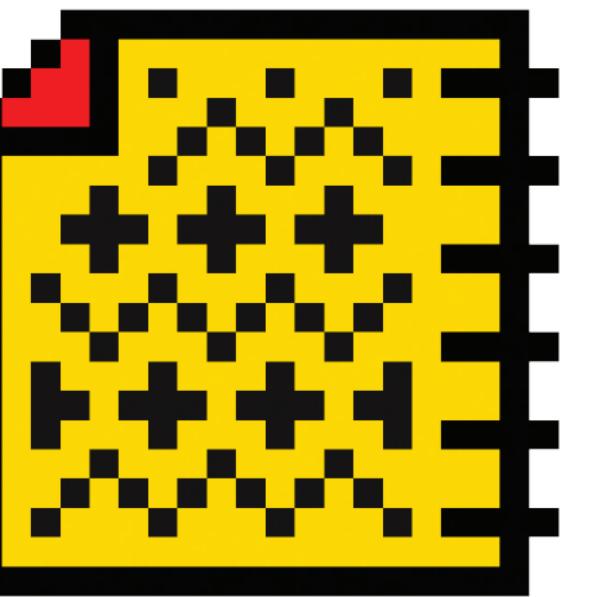
• Fig-19

**I**nDesign Tool-Kit is an adobe InDesign extension I created mainly for the purpose of facilitating the design process of this book. I just decided to do it in a way that would make it possible to share it with other designers which eventually ended up being published in Adobe Exchange website.

**T**he story is that I did the same thing last year and for my Masters 1 degree thesis, but I did it using CMD (Command prompt tools). I wrote a huge base of code but it was formatted in such a way that I

was the only person who would be able to use (and/or reuse) it later (although I have forgotten a lot of it in the past years as well). So it was an effort to make it available as a designer-friendly tool, to others as well as to my future self.

I started the project almost immediately after finishing my internship job and leaving the company and, with all the knowledge I gained from that experience about project management, I was able to define the project and a road-map for it which made this project a very successful and fast/on-time project.



• Fig-20





The toolkit is a collection of tools to help designers and publishers using Adobe InDesign to design books and documents through the software. It includes, right now and in this version (Beta 0.1.9) Four different tools.

## » 1. Robot:

Robot is the name of a module, which was the main idea and motivation behind the project when it started. It is a collection of algorithms, which create and generate unique patterns and motifs for every single page of a document using mathematical

formulas and techniques. (You can see a lot of these elements being used to design the current document as well.)



• Fig-21

## » 2. DataN:

DataN is a complete and complex data visualization tool with a simple and user-



friendly UI that can create many different kinds of charts and visualizations right inside the publishing Software (InDesign) from many different kinds of data inputs, feeds and files.

## » 3.TODOs:

Contrary to its name it is already done. (So not C “To Do” anymore), it is a tool that I found very useful and a necessary option for complex design processes. Having experience in programming and development made me familiar and appreciative of



the concept behind similar tools in different IDEs, so I thought it would be very useful to have it in an application like InDesign as well. This tool will keep track of all the reference words like “TODO”, “ToFix” and other words and variations (with the ability to customize) in a document or book, making it easy to work on different parts of a document and moving back and forth between them. (Like “TODO” add the illustration here when it was ready. Or “ToFix” this paragraph needs references).

## » 4. PageNum:



**P**ageNum is a tool that will help the user to design especial and unique page numbers on every single page of a document in InDesign. All the page numbers of this booklet is designed using PageNumb tool for example.



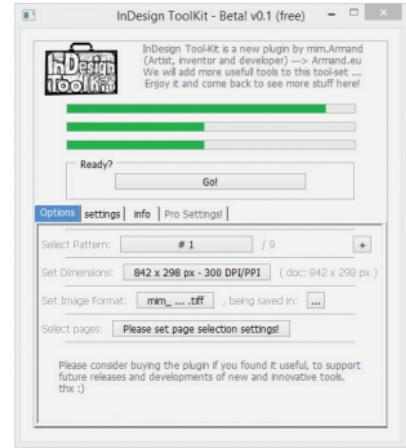
• Fig-22



**A**lthough this plugin was made primarily to solve and facilitate my own design project challenges, it received very good feedback from users all around the world and I was granted Adobe Partner status, the third ever in France. This Partner designation may open up even more opportunities for my career in the future.

**B**ecause I developed these tools for myself and since I didn't have access to any other version of Adobe products, I wasn't able to develop or test it in

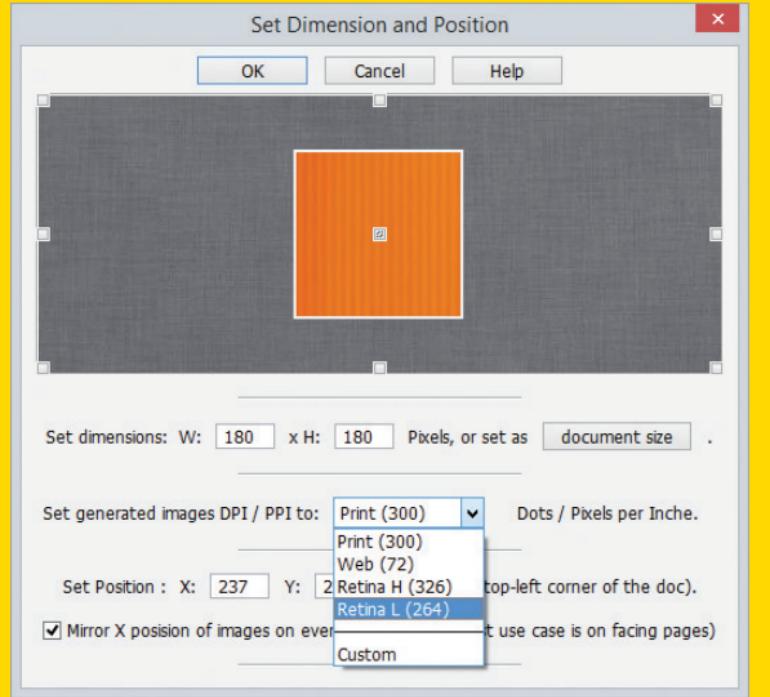
other versions and/or platforms, so I decided to publish the first beta versions for a very limited user target, including only Adobe CS6 and on Windows platforms. Considering these limitations it is still getting a good amount of positive feedback from the community. I should mention here that despite these limitations the code-base is multiplatform and should work for all the versions of Adobe CS from CS6.5 onward. The only reason to limit it was the lack of enough tests on other platforms and versions, which obviously can be solved in the future, increasing the target market of the tool immensely.



• Fig-23

I have also other ideas for new and useful tools to be added in future versions (and before even the first official version after this beta release), which I will add in the first chance (considering the work on lot of other projects that will be mentioned in next chapters), plus developing and refining current tools further.

- Tools and technologies I learned / used during this project:



1. Adobe extendScript<sup>1</sup>
2. Adobe Extension Manager Development<sup>2</sup>
3. Batch processing<sup>3</sup>
4. Java VM development<sup>4</sup>
5. InterApps JSON communication<sup>5</sup>
6. JavaScript<sup>6</sup>

- 
- 1 <http://www.adobe.com/devnet/scripting.html>
  - 2 <http://www.adobe.com/devnet.html>
  - 3 [http://en.wikipedia.org/wiki/Batch\\_processing](http://en.wikipedia.org/wiki/Batch_processing)
  - 4 <https://java.com>
  - 5 <http://json.org/>
  - 6 [developer.mozilla.org/js](http://developer.mozilla.org/js)

- 7. Visual Basic<sup>7</sup>
- 8. EPS programing and development<sup>8</sup>
- 9. ImageMagick CMD programing<sup>9</sup>
- 10. Batch command programing<sup>10</sup>
- 11. ExtendScript UI development<sup>11</sup>
- 12. Color Space conversion algorithms<sup>12</sup>
- 13. Data visualization algorithms<sup>13</sup>
- 14. Usage of Hash grid in graphs<sup>14</sup>
- 15. Git version controlling systems<sup>15</sup>
- 16. XAML development<sup>16</sup>
- 17. XML<sup>17</sup>
- 18. Information package conversion algorithms<sup>18</sup>
- 19. Random pattern generation algorithms<sup>19</sup>
- 20. ....<sup>20</sup>

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7 [en.wikipedia.org/wiki/Visual\\_Basic](https://en.wikipedia.org/wiki/Visual_Basic)

8 Encapsulated PostScript.

9 [www.imagemagick.org](http://www.imagemagick.org)

10 [en.wikibooks.org/wiki/Windows\\_Batch\\_Scripting](https://en.wikibooks.org/wiki/Windows_Batch_Scripting)

11 <http://www.adobe.com/devnet.html>

12 [www.cs.rit.edu/~ncs/color/t\\_convert.html](http://www.cs.rit.edu/~ncs/color/t_convert.html)

13 <http://bost.ocks.org/mike/algorithms/>

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14 [armand.eu/blog/a-simple-spatial-hashing-hashgrid-for-processing-1](http://armand.eu/blog/a-simple-spatial-hashing-hashgrid-for-processing-1)

15 <http://git-scm.com/>

16 <http://msdn.microsoft.com/en-us/library/ms752059>

17 <http://www.w3.org/XML/>

18 JSON to XML, etc. for instance

19 [www.3dots.fr/IDTK/](http://www.3dots.fr/IDTK/)

20 [www.Armand.eu/Tools](http://www.Armand.eu/Tools)





## • Video Games and apps:

**V**ideo games are one of the areas where I want to be as active in the future as I was in the past. During my free time I worked on some of the ideas / projects in different levels of completion or progress and which I will continue to develop and finish in the near future.



**H**ere is a short list of mentioned games and concepts:

### » **World Stories:**

**W**orld stories is an app/game, targeted mainly to handheld devices. The main audience of the application would be children and young people between ages of 1 to 15. The application aims to gather,



re-produce and re-introduce stories from all around the world, from ancient fables like those of Jean de la Fontaine or the Grimm brothers to folkloric stories known in different regions. It also tries to involve the audience from all around the world to participate, suggest and make new stories. There is also the possibility of using designs and drawings made and sent by children themselves inside the game/app.



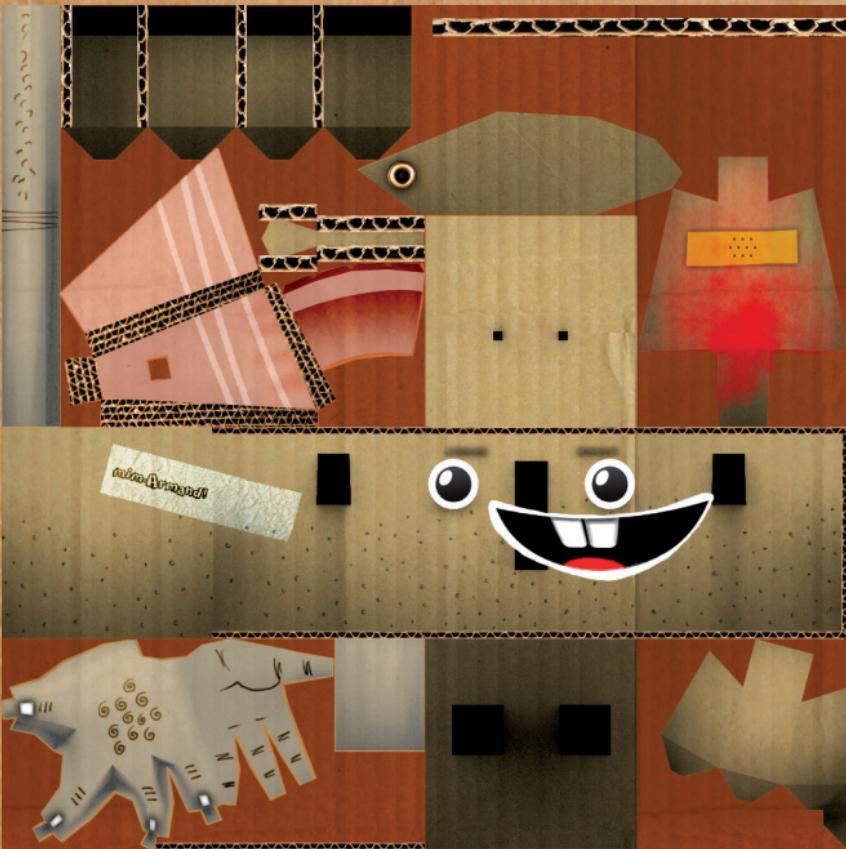
• Fig-25

Due to the concepts and strategies behind the application and according to the results of marketing studies in different app stores (IOS, Google Play and Windows 8 phone market place), comparing the current concept to different similar applications, a strong potential for success would appear to be available for this application. I would estimate a minimum amount of more than 100,000 downloads and installs in handheld devices during in the first months of final release date of the application.



The application would have different features,  
including but not limited to:

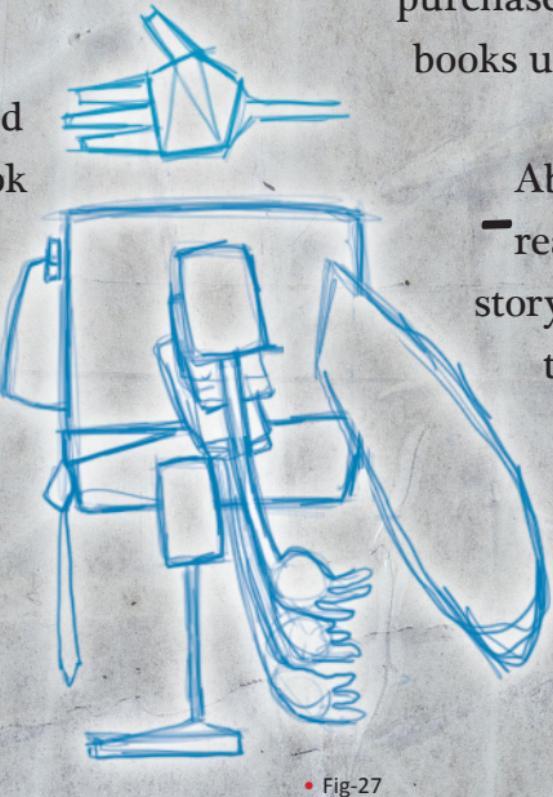
- multi-lingual interface and interactions (including narration and text in different languages, like French, English and Persian to name a few)
- Interactive story-telling features (making it more attractive and intuitive to read and learn)
- Synced text presentation (which would be helpful to teach reading to children for instance)



• Fig-26

Story games (each story may have one or more games available to it)

Real book inclusions and augmented reality (in cooperation with book publishers, it is possible to make a visual and narrated version of the books being purchased) where the story will begin from the book itself by pointing the device camera toward the phone and using augmented reality features.



Virtual libraries, where the user can keep purchased or free books and purchase more books using in-app purchase features.

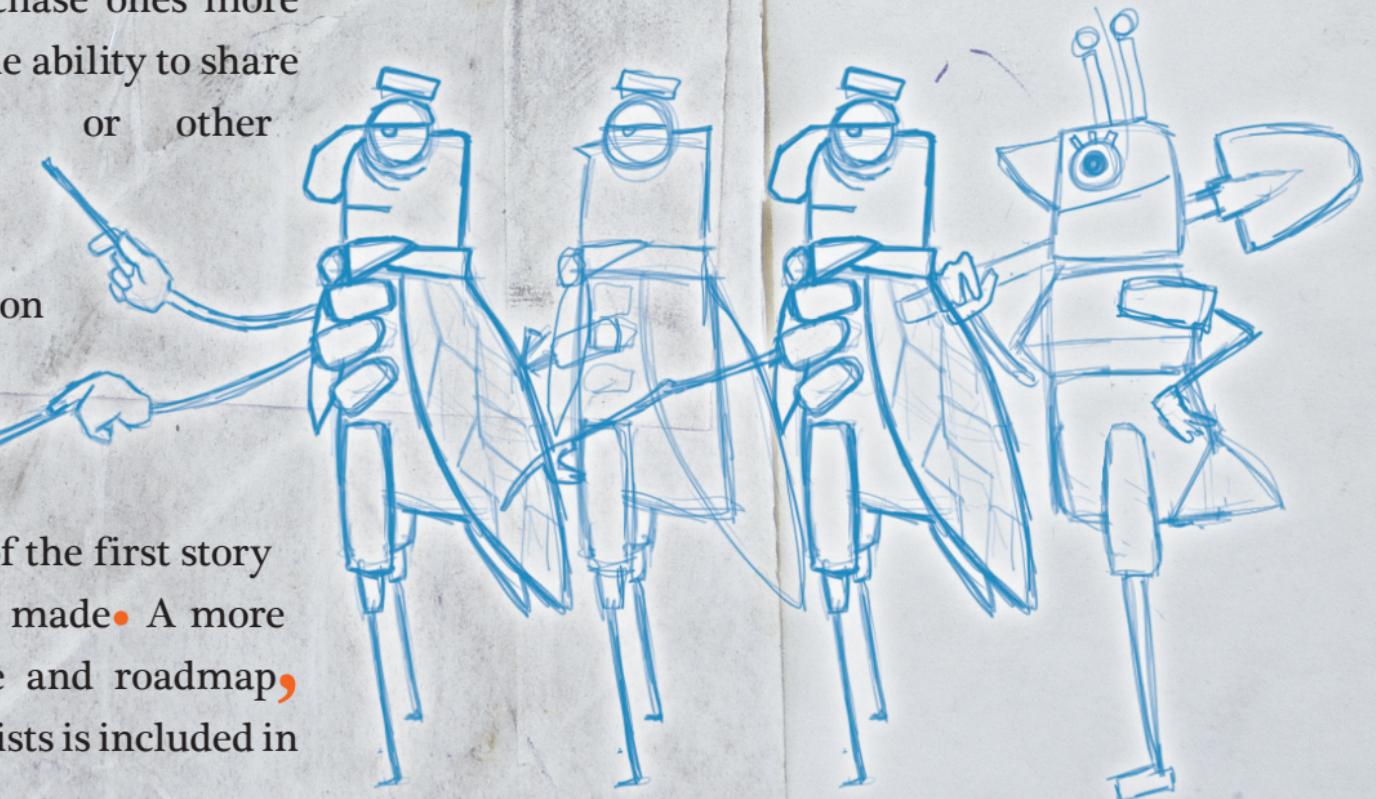
Ability to purchase / sell other in-app or real goodies through application (like story character models made of cardboard, t-shirts, mugs, etc.)

A bility to make/ invent new and unique stories by the user through the inventor section of the application where the user can use



default characters and assets or purchase ones more suited to his/her story and will have the ability to share his/her story with friends, family or other users.

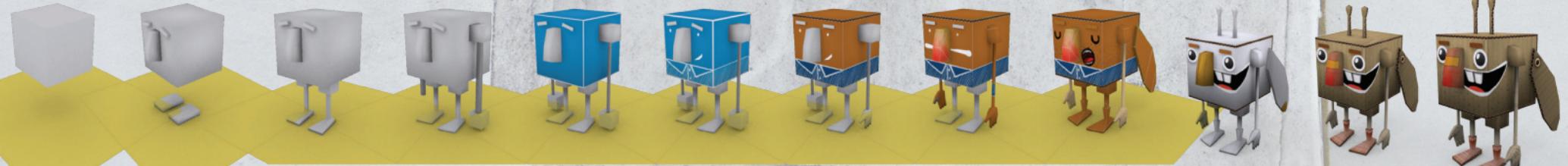
The process of pre-production of the application is already started and is in an advanced level of progress, where even a 3D model of one of the characters of the first story with complete texture and rigging is made. A more detailed project planning, timetable and roadmap, including budget planning and tasks lists is included in



• Fig-28

the last chapter of this book as one of the first projects to be released in future (This project was the candidate to be the first one to be released in a future company/studio because of its margin of safety and estimated level of success)•

**A**pplication strong points are visual quality of assets, story-telling innovations, customizability and flexibility and inter-active communication between the users and the software•



**S**tories can be narrated in 3 different environments provided the technologies being used in the application include a 2D, a 2,5D and a 3D environments•

**T**his project will be discussed more in detail from an executive point of view in future chapters•

• Fig-29



This project is more of a concept although the story and the story line are written and primary storyboards are also complete.

Code named as “kill the master”, A twisted game in which a player will help a puppet to find his puppet master who, at the end, turns out to be the player him/herself! (He/she was the one moving around the puppet, all the way until the end).

## » Puppet-Master

This project would be one the future projects of my studio to be finished (after World Stories and IDTK)•



• Fig-30

# » Evolution

**G**ame of evolution, evolution war or natural selection, a simple paramedical multiplayer battlefield 2D game.

**T**his is a game concept, which I worked on during my spare time. Right now it is more of a concept with a few game-arts being done and ideas being developed but, due to the estimated complexity of the game development, it would be considered a big project, only available to proceed to the next levels of production if my other plans and projects for the future

prospective studio work.

**H**ere I'll just mention a few of the ideas and concepts behind the game:

1. - Players can team up but each of them can get a fraction of what their higher levels get.
2. - Higher levels can define the percentage each individual gets
3. - Players can leave a team, join a new one, create their own team or play by themselves.
4. - People and teams can purchase stuff in-app with





the money they earned during the game-play or with real money.

5. - Team owners can decide to let people join their team for free, by permission or by payment. Meanwhile they have no control over whether they leave or not.

6. - Players evolve by playing the game and gain/lose abilities and characteristics (evolution).

7. - New players live in the sea (and other bodies of water) and have the advantage of not encountering stronger players. As they evolve (and grow up) they go to the land and find new vulnerabilities and advantages.

8. - There will be various different types of species

9. - Players have no control over their destinies nor over



which species they will turn into.

10. - Players, when offline (not playing), will be kept in the freezers and will lose weight and body-power for being asleep and not having activity. To prevent this they just need to wake up every once in a while and open the game (otherwise they will have the minimum amount of energy next time they join the game or even dissolve if the duration of inactivity is too long).

11. - Players will be awarded if they connect and play about the same time everyday.

12. - There will be hidden pieces of primitive objects in the game each day, lucky players may dig to find these and if having all the necessary pieces can invent tools to use in the game (like digging tools, armor, clothes, perfumes, among other things...)

13. - There would be (at least at the beginning) a limit for the number of people allowed on one team.

14. - Players will be awarded a certain amount of gold each day when they connect to the game and for each time they play it.

15. - The freezer or coffin for inactive players risks being exposed, which may result in being robbed and/or being killed by other players (and going back to sea).

16. -The characteristics of the game would be different according to the time of the day (morning, day, night) and time of the year (seasonal and holidays, such as Halloween).

17. - There would be tradable collectibles in the game that may be found (rarely) in the game or may be purchased from the shop.

18. - A unique name and a sign will be assigned to teams at their creation time.

19. - There would be a board of leaders, teams, players, collectibles, etc.

20. - No advertising (at least at the beginning) neither in-app purchase (JUST during the first month or even week).

21. - All players from different platforms will play in one field but each player from each platform will have a sign or visual characteristic that would show his/her origin (they may even be represented as being from different worlds).

22. - Players with a detectable device can have special signs too.



## » - PapeRally:

PapeRally is a car rally game I developed and published in Android and windows phone markets privately (not available to public without invitation). The main purpose of the game was to test the feasibility of the task. I developed the game using different techniques and technologies, from using a bridge between C# and Processing to using Intel XDK toolkit.



• Fig-31

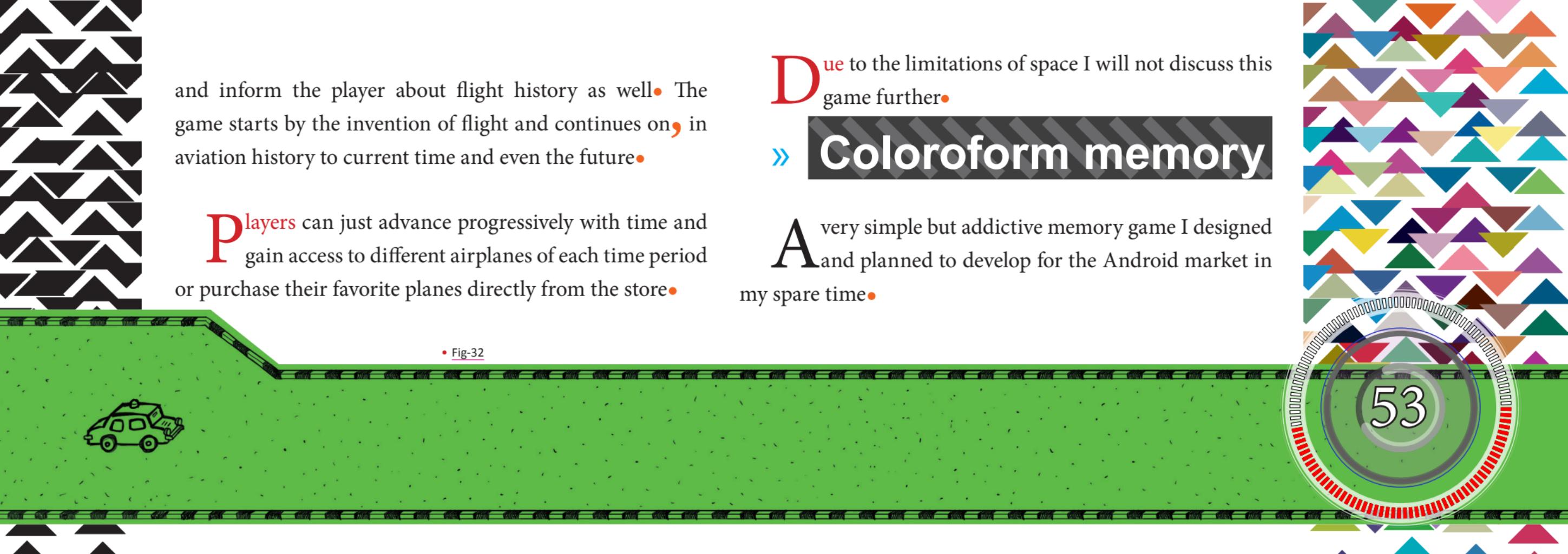
never made the game available to the public since it certainly needs more development and refinements but I will definitely (although it won't be the first game I'm going to publish and make available publicly).

Narrator (dynamic and interactive storytelling and book reading)

## » Flying history

The results were promising and made me more motivated to develop games for these platforms. I

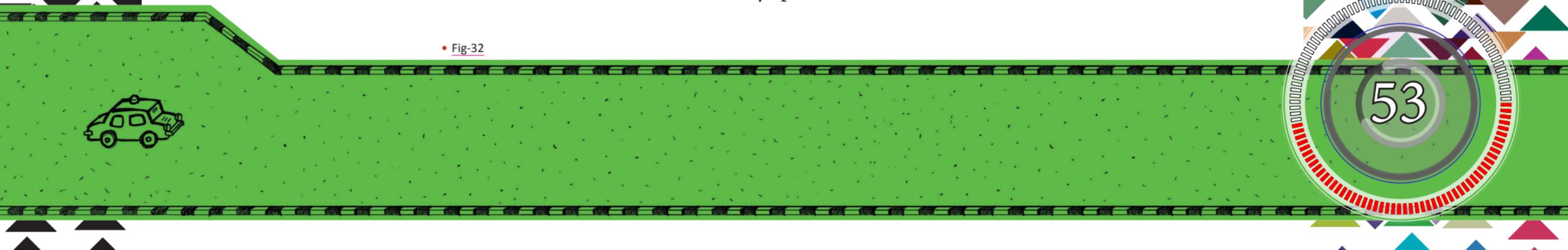
Flying History is a flight simulator game that will teach



and inform the player about flight history as well. The game starts by the invention of flight and continues on, in aviation history to current time and even the future.

Players can just advance progressively with time and gain access to different airplanes of each time period or purchase their favorite planes directly from the store.

• Fig-32



Due to the limitations of space I will not discuss this game further.

## » Coloroform memory

A very simple but addictive memory game I designed and planned to develop for the Android market in my spare time.

The concept is to start the game with easily distinguishable colors and make it harder and harder by reducing the differences between hexadecimal values of colors, forms and patterns.

The Game will have multiplayer functionality and integrated options, native platform achievements and awards for the players.

Due to the limitations of space I will not discuss this game further here but more details will become available later on the website.



• Fig-31

## » CV-CMS:

CV-CMS is an open-source (content management system) I started to answer a real need. As a person who is active in different fields of modern and visual arts, technology and innovation and creative business, I need more often than not to update my CV. This would be an annoying task especially for an online CV for a designer (who needs to have a precisely designed CV).

that may lead you to avoid updating your resume very often.

I didn't find a special tool designed for this reason, so I thought I would do it myself, and for anybody else like myself.

The idea behind the project is the principle of separation of design and content in web standards. So the CMS will provide a tool to manage the content and wrap them in desired HTML5 tags, make it easier for a designer to worry just about the design and update the content (CV) easily at any time. The project is planned to have multiple pre-designed themes and skins for people with

no design experience or interest as well. This CMS system benefits from the SQLite and the latest version of PHP technologies to provide a very flexible and user-friendly experience and also to make it installable in almost any server (including shared and strictly limited host servers) with no need for database installation and/or configuration.

Meanwhile, security concerns were kept as a high priority during the development process.

The project is close to 50% completed and hopefully will continue to progress and be finished in the near future, but it is open-source and available in GitHub



so everybody can access and work on it too•

**F**uture plans have been defined as well for future releases of the software, including a service as a product version (SAP) with features like endorsements and references for professionals in web industry•



## » MIMSES:

**M**IMSES is a very simple, open-source PHP script I wrote to manage sessions and Nonces in my applications• It respects all the security issues about sessions andNonce technologies• Although it may not be perfect, it can be updated to be closer to that state of existence• It was one of the projects I finished after my internship t and which is available to the public through GitHub•

**I**t produces and assigns a unique code (token) in each session and each request from or to the server (eliminating or reducing the risk of a MIB [Man In Between]

interruption of the communication in http requests and communications).

This is one of the biggest and most complex issues from a security point of view on the web, where, except with the use of HTTPS protocols, there is no absolute solution (Although there are different essays in progress to resolve the issue like Navigator or browser ID project etc.), but usage of the aforementioned technologies (Nonce and correct session management) will reduce the risk of these kinds of attacks considerably, but due to the complexity of employment and lack of knowledge, especially when the programmer uses pure PHP (no framework), these

solutions may be ignored or improperly employed. This code base is an attempt to reduce these problems and make the technology more available and easier to access to any PHP project.



• Fig-33





## » PHP-DebugN:

**P**HP-Debugging toolkit is a collection of tools I wrote to make it easier to write and develop PHP applications and codes for myself, but I made the tool available to the public as well (through GitHub). This software has different kinds of tools for different needs including tools to examine the server (limitations, characteristics, technologies, etc.)

**T**he aim of this project was mainly to help development of other projects (including previously mentioned ones) and learning PHP (especially the new features of the last version).

Due to limitations of space I will not discuss this project further here, but more details will become available later on the website.



## » Intel Wearable:

**A**s the name suggests, this project was made for a challenge presented by Intel.

**T**he challenge was to produce a prototype (a one-minute video) of an innovative concept for a wearable.

**S**ince I had a few ideas already in this field I decided to produce a one-minute video to present one of them (either for Intel or for future usages). The selected idea was a pair of shoes that would produce energy (by walking,



• Fig-35

running and other activities), communicate with other devices and behave smartly in different conditions.

**D**ue to the limitations of space I will not discuss this project further here, but more details will become available later on the website and the Video will be published on the CEN department weblog as well (Cross media blog).





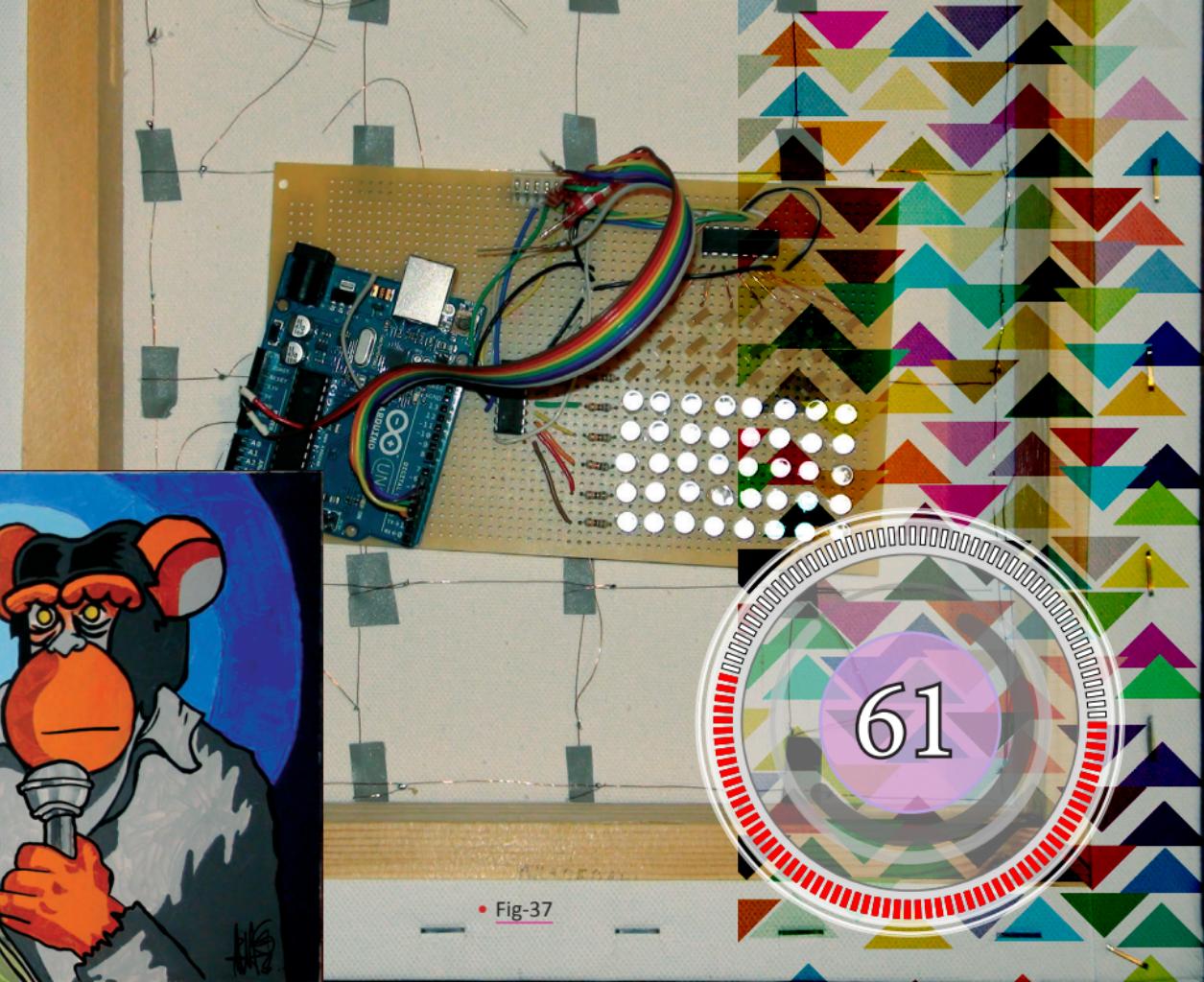
## » Art Projects:

During this time I worked on a few art projects as well, including a few paintings, installations and other artistic experiences (like electronic arts, etc.)<sup>2</sup>

For the purpose of summarizing I will just include a few pictures of these projects in this document but further information will become available on my web site while the projects progress.<sup>2</sup>

• Fig-36





• Fig-37





• Fig-38

**I**n conclusion it was a very successful period of time for me. Now I have an even clearer view of the future and what I'm going to do next. I have other plans as well which can serve as backups in the event that the original projects doesn't succeed, which makes it even more secure to proceed and reduces the risk of failure in general.

**I**already have a product, published by Adobe and I'm now an official Adobe Partner, which may become very helpful in future developments of my prospective company/studio.

**O**n the other hand I already started the development of new applications and video games with real potential for success in the mobile market.

**A**ll in all, the near future looks very promising and successful for me, although there are a few challenges and obstacles I can predict, which are mostly outside of my area of expertise and which I have no control over.

**T**hese are mostly bureaucratic challenges, like the right to work in France and complicated paper work and bureaucracies related to that. These are my

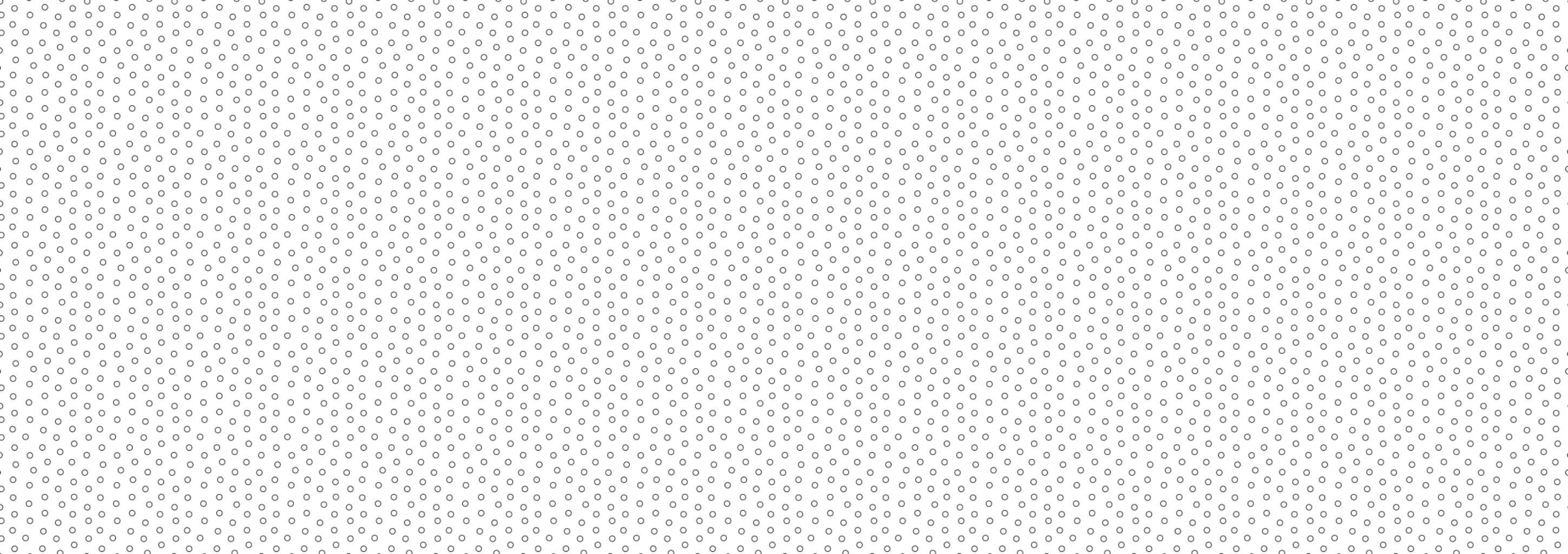




main worries and biggest obstacles. It is unfortunate since they may definitely reduce the productivity and the level of success one may achieve. Perhaps I am overestimating the problem. However, I think it's better to be a pessimist since I have no expertise and knowledge concerning these things. I was and still am very hopeful about the possible aides or facilities being provided by the university or similar institutions to support students and researchers with these kinds of challenges.

In the next chapter I'll explain in more detail my future plans and projects from a more realistic point of view, including project plans, time tables, budget planning and

marketing strategies.





• Fig-39

In this chapter we will discuss the future, especially the near future of this journey, the kick-start of a start-up studio. This is just the beginning and I have a lot of plans for the next steps. Even though it looks very promising, except for the bureaucracy issues, and I don't see many signs of possible failures in these primary steps, we have to think about unpredictable situations and have backup plans.

Here but, we will have a look at primary business and project plans, prepared for the “start”, including a primary and general business plan of the company (produced for the incubator selection exams) and an execution plan and project time-table of the first project in hand.

We mentioned already some of the other projects in previous chapters which may become the next opportunities in the future of this studio life but I should mention here that despite all the emphasis on the financial aspect of success for the company (which is vital for its existence), money won't be the main or only goal of the company. Our main focus will be on cultural and artistic aspects of our activity but in a way that makes it possible to maintain our existence in an independent state of activity in a commercial point of view. I believe that most of the actors in the entertainment market are overly focused on the commercial success and profit-based strategies that make it even more achievable for truly balanced start-ups to achieve success in this market.





## • Studio/ company summary and primitive business plans

3 Dots would be the name of my future, prospective studio (although I had a successful animation studio with the exact same name for years before leaving my country)•

The main activities of the company will be based on research and development in the fields of technology, art and culture with products such as short films and animations, documentaries, video games and applications, invention and production, software development, etc•

At the end of this chapter you'll find a resume of a primary and general business plan of the company (after the “World stories” project time-table)•

- First project execution plan and details:

- » **About the Project**
- » **-World stories-**

World stories is the working title of a project including a complete package of products all based on art-works around the stories from all around the world.

The project will be started by a few stories from famous ancient fables but will continue to discover and present stories from all the different cultures of the globe.

The products range from illustrated books, e-books, audio books, magazines, video games and interactive story telling applications. These may extend to side products like advertising materials, T-shirts, Cards and other fan-related products.



The project aims to revive the historical culture of story telling and all the related benefits of it in human societies in an era that is overwhelmed by digital devices, nonsensical games and an entertainment market whose main goal is wasting time. In contrast, this project wants to give quality entertainment to its audiences, allowing them to enjoy and relax as well as benefit from the cultural and artistic richness of the product, filling their spare time with quality experiences.

## » Targeted audience

The first target group of the product are children and teenagers in addition to their parents, which is the defined goal in the first releases of the product but it can go further and includes a higher range of audiences including adults and other age ranges by providing quality content for them in future releases.

It's enough to have a look at Android, IOS and WP marketplaces to realize that these kinds of audiences are exactly the ones who are forgotten. Low quality products and senseless apps made these markets an unsuitable place

for parents and children to find solutions to entertain and educate their children, and that is despite the high demand of such applications. Hand-held devices are becoming more and more popular especially among youth and children. It's not a surprise anymore to see a five-year-old playing Candy Crush in an IPad. But we all know that Candy Crush probably wasn't aimed for this age range, a game that does nothing more than kill time, waste energy and distract the child from all other important things to learn at that age. And although it may seem the same for an adult but most certainly not as tragic! And one can't blame the child or the parents. After all, it would be a useful, even necessary skill to learn how to use these devices from childhood. In fact,

the problem comes from the market, which doesn't really provide suitable and quality games and applications. Except for a few low-quality and easy to fill this vacuum, with AAA class visuals, quality and new storytelling techniques and looking at this whole situation makes it even easier to see and expect a huge success for such products.

## » Features

1. Interactive and narrated stories
2. Language learning mode
3. In-app purchase



- 
4. Possibility of interaction between users
  5. Integration of native achievement systems in different platforms
  6. Possibility 2D, 2.5D and 3D techniques depending of the mood of the story
  7. Possibility of different endings and story lines by user interaction
  8. Story games
  9. Inclusion of educational material in line with stories
  10. Introduction of different cultures
  11. Paper book inclusion
  12. Online multiplayer mode
  13. User profile manager (after first release when back-end is included)
  14. Advertising opportunities for related businesses

## » Marketing strategies

The project is defined with the worst scenario in mind, without any funding necessary for its survival all the way to the first release of the application. This is because I believe, for the success of a start-up, in

being a pessimist, especially in these aspects.

That being said, it should not stop the project from benefiting from these opportunities to boost the project. It just means that during the project plan design, the manager or project designer should try not to increase financial dependencies (which will increase the risk of failure). And this is one of the common reasons for failure in many start-ups, to involve unpredictable behaviors of sponsors, funders and social networks in principal



• Fig-40

and vital cores of the start-up existence. There are lots of competitors out there, a lot of different tastes and directions as well, and trends tend to change in short periods of time.

In this environment, a successful project is the one that can stay on its own feet and be independent from the outside world, at least during development phases.

In addition, communication is a real challenge for start-ups. Nothing can be more clear and obvious than a real product, a functional app or a playable game, but to gain funds and get the attention of





investors at the beginning you need to transfer your message and your idea through text and charts etc. which is an unnatural way to do it, increasing the risk of not being able to transfer the message correctly and conveniently and as a result risking the whole project's continuation.

Here I list different possibilities in this field with a short description when needed:

- » **Kickstarter**
- » (And other crowd founding services)

**K**ickstarter and other similar services represent a huge and very useful opportunity for new ideas and small start-ups. The reason for that is that, by using this kind of funding you don't sell the company itself or share it (as it goes with private investors), instead you just sell your product or service before producing it.

This makes it not only a source for obtaining funds but also a way to introduce your product to a prospective crowd of customers. Making people think and

• Fig-40



talk about the product and wait for it, follow its progress and help you in development by their feedback and probably the most important part for new ideas • to encourage you and let you know that there are people out there liking the idea who are ready to pay for it, keeping the uncertainty of the team about how the market will receive their product and other kinds of fear, low, and their courage for continuation high.

For being successful in this area though, one should not hurry! It's the same principle as convincing the private investors in your project. Talking about the idea with texts and charts and diagrams wouldn't be that effective. So, in this project we will try to do this in the middle of

development, after releasing the first Alpha version of the project, to make it easier for crowds to decide.



KICKSTARTER

• Fig-40





## » Advertising And sponsoring potentials

This would be one of the possibilities of revenue and funds for the company and project, during and after production.

Companies, publishers, factories and other related businesses can sponsor the product and benefit from the exposure of their brand names and products inside the app or games.



It's even possible to make free and/or sponsored stories available to everyone that will represent certain companies or products. Now, it's not the main goal of the project but in cases where we are sure that another company's product is in the same line and for the same kind of audience we can consider these options and cooperation opportunities. A third party may provide the story, characters or assets to be used in apps and games.



• Fig-40

1. Web-sites, journals, magazines, blogs and social media

**T**here are a handful of magazines, communities and websites with loyal users and readers, which we can use to introduce and present our product.

**S**ometimes it can be free and sometimes with a cost but it may be necessary anyway to introduce a service to its audience. Otherwise, sometimes it may be long process to wait and let the target audience discover the product by chance.





**I**t may be a very good idea as well to use social networks and advertising to gain audience attention. In the same way, being active in social networks is possible in either free or paid options or even a mix of both. Using advertising on the Facebook platform, for example, or sponsored ads in the Google search engine are two popular options which are probably more dynamic and at the same time cheaper mediums of advertising than traditional options.

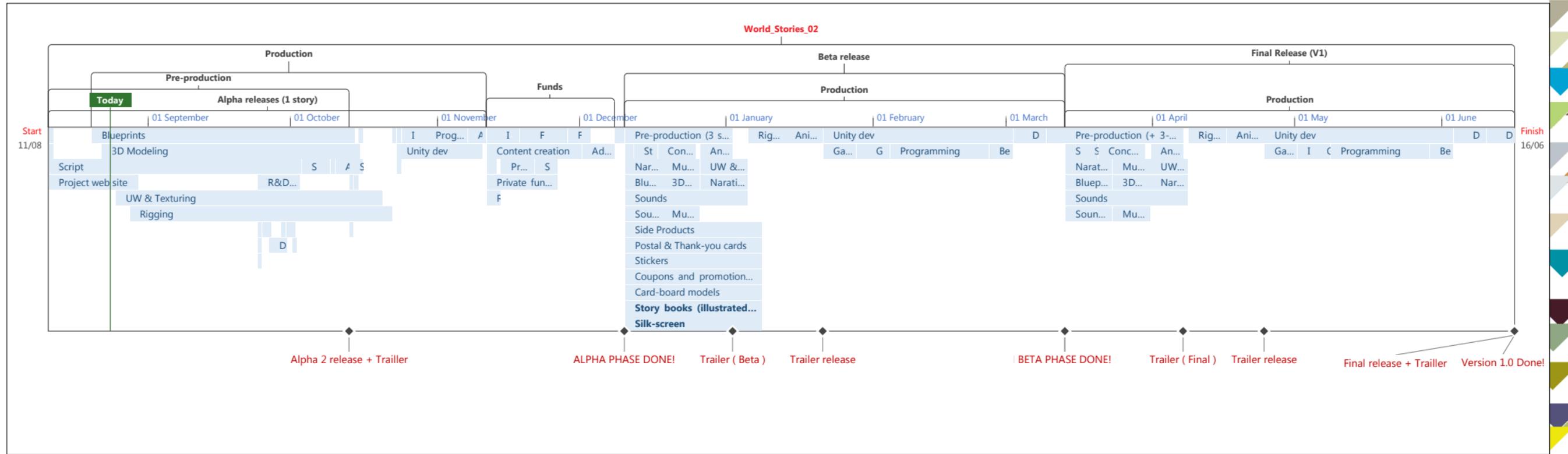
## 2. Local advertising in different areas

**A**nother option would be to introduce the app and related services in different communities, meetings, etc.

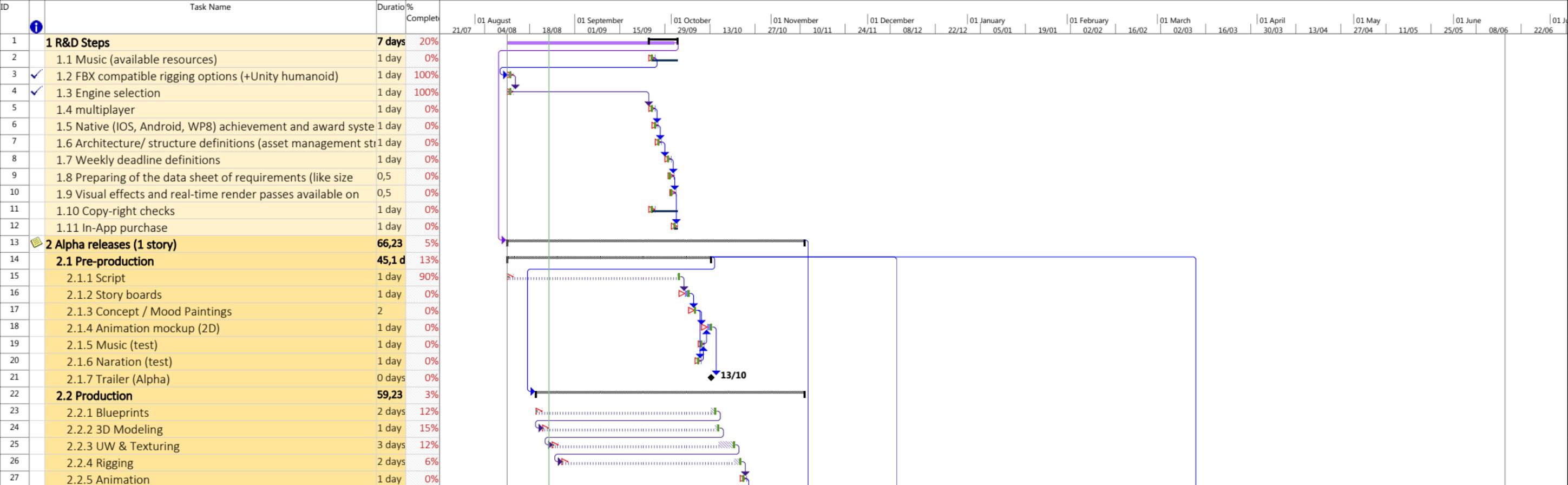
**E**ven printing brochures or cards and distributing them in different places may be very helpful, especially in places like cultural centers, book stores, libraries, kindergartens, schools, etc.

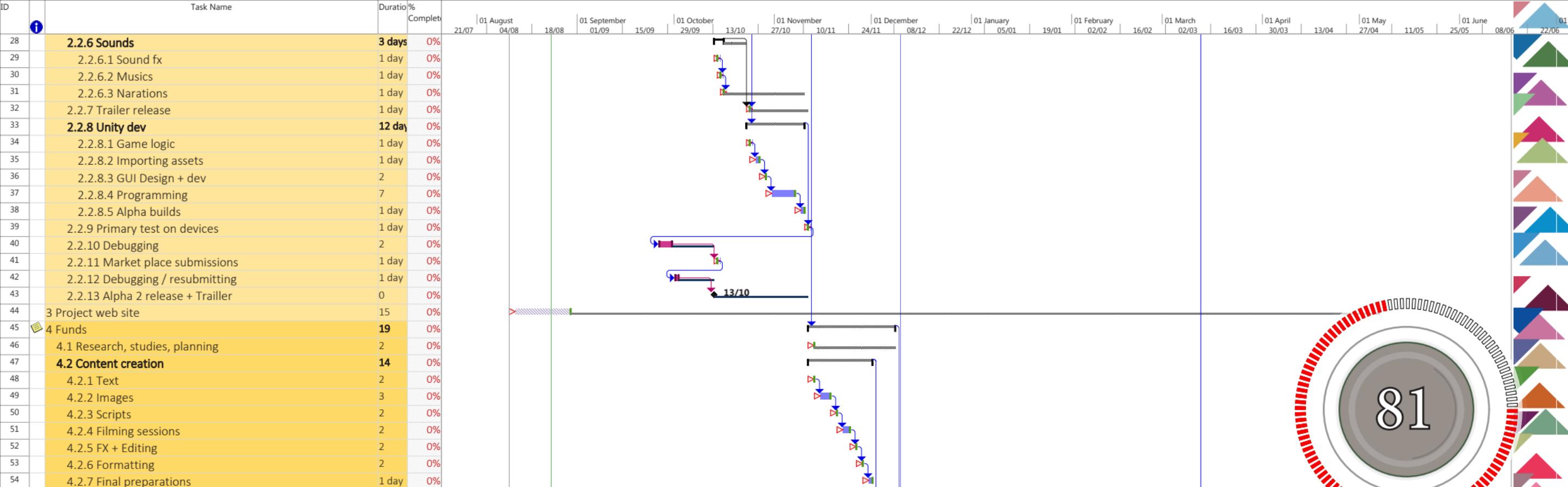
**I**n addition this technique would be a cheap option to let the audience know about the product as well.

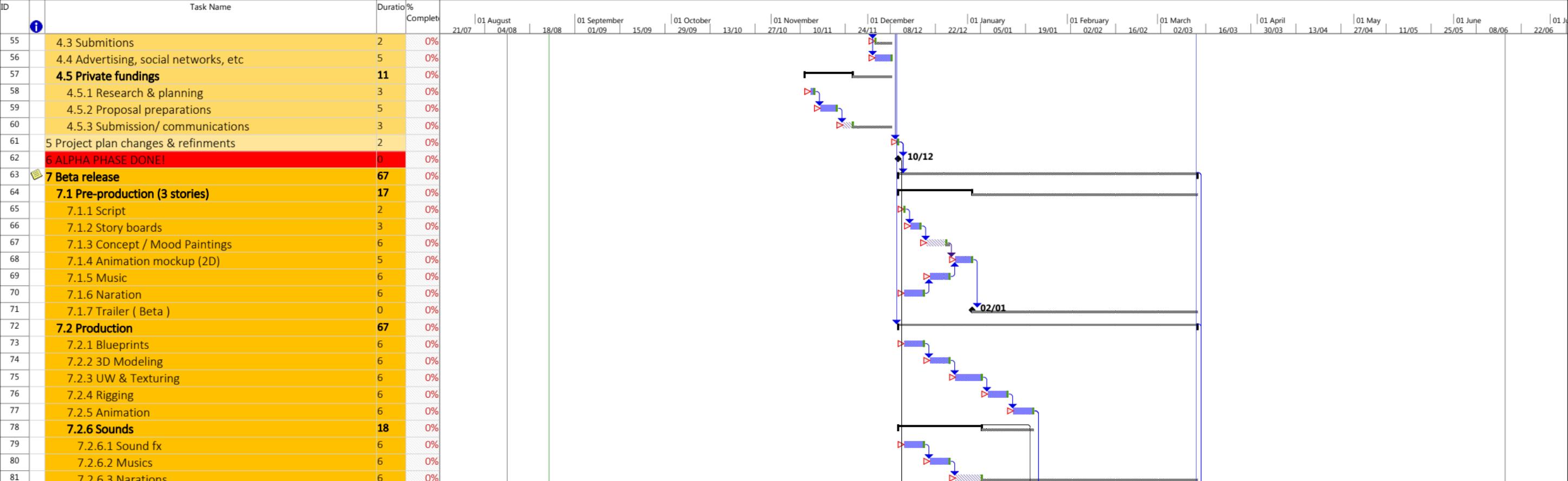
**T**hese ads may contain discount or award coupons or even extended trials to encourage the receivers of the message to try the app.

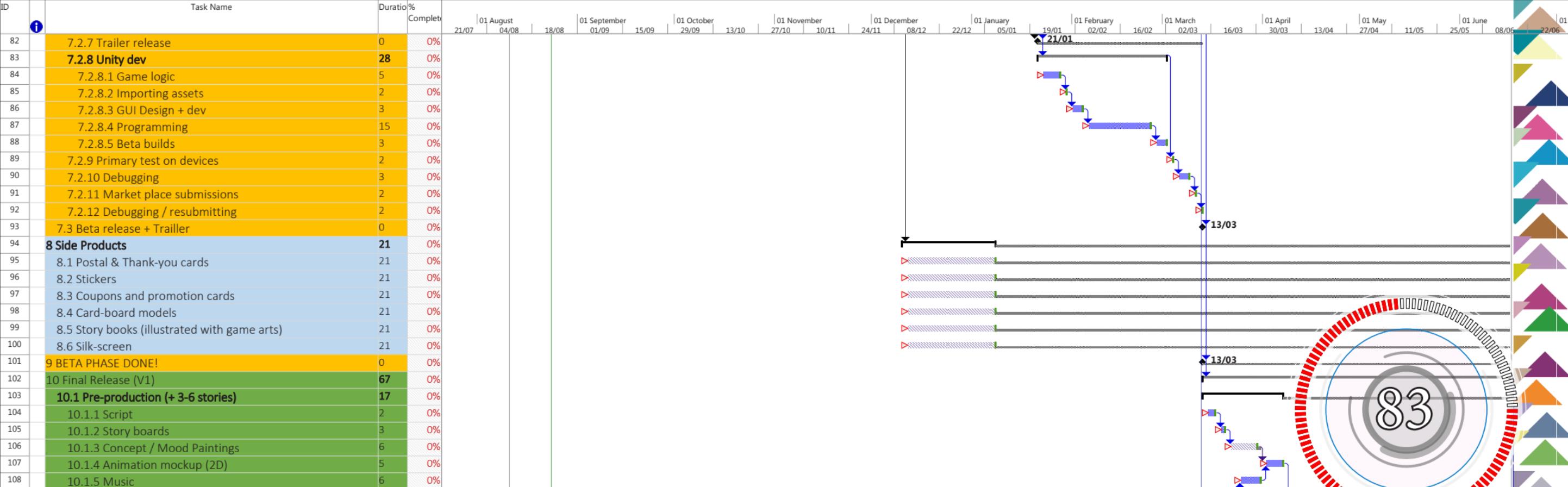


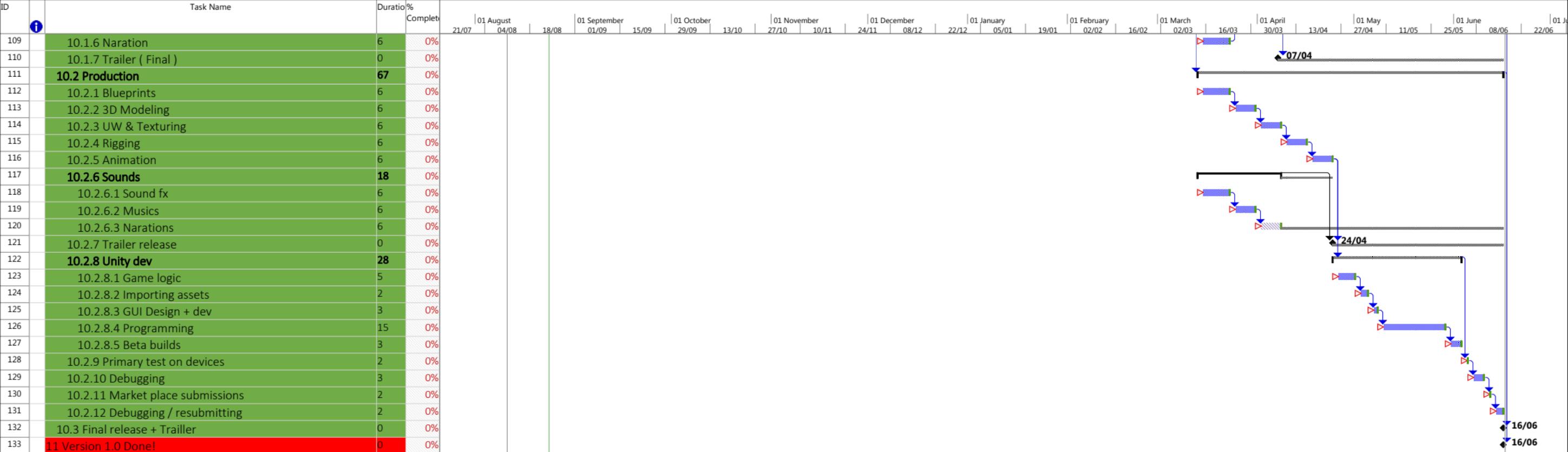
• Fig-41









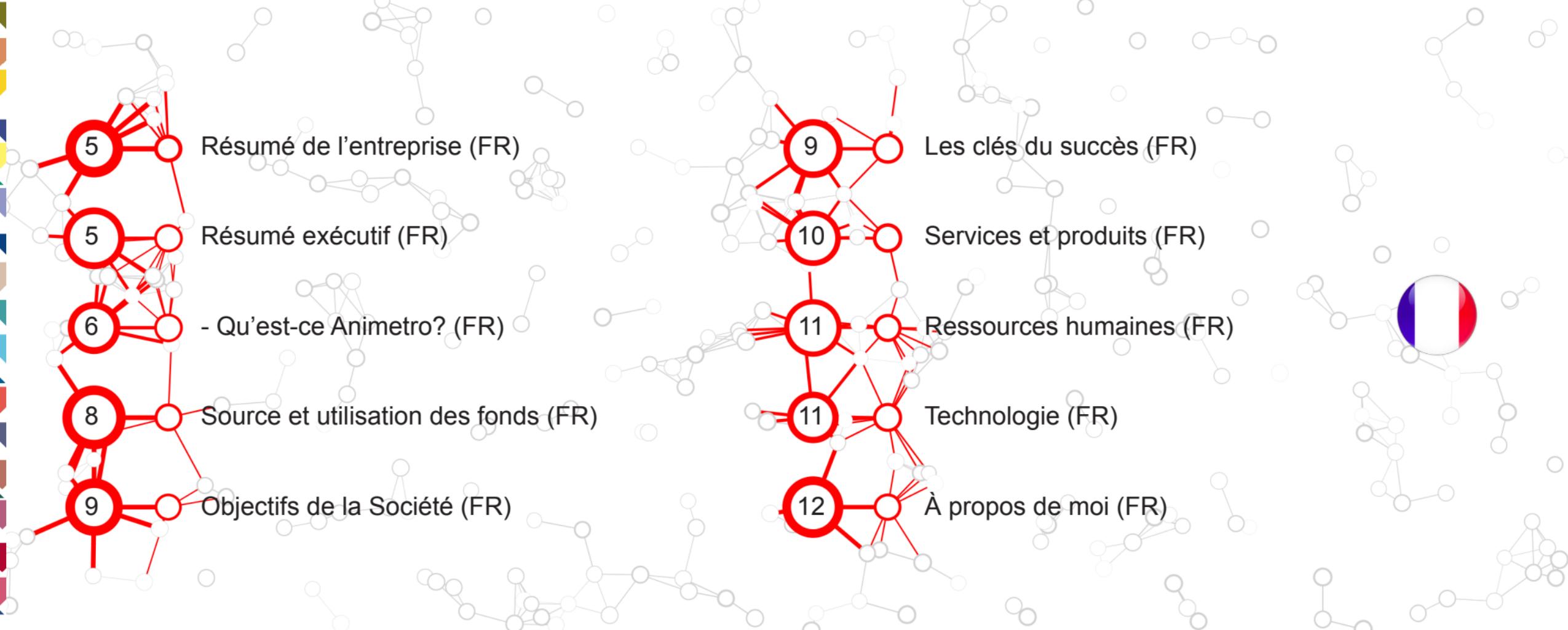


• Fig-43

# 3Dots Business plan

EN - FR  
2014.06

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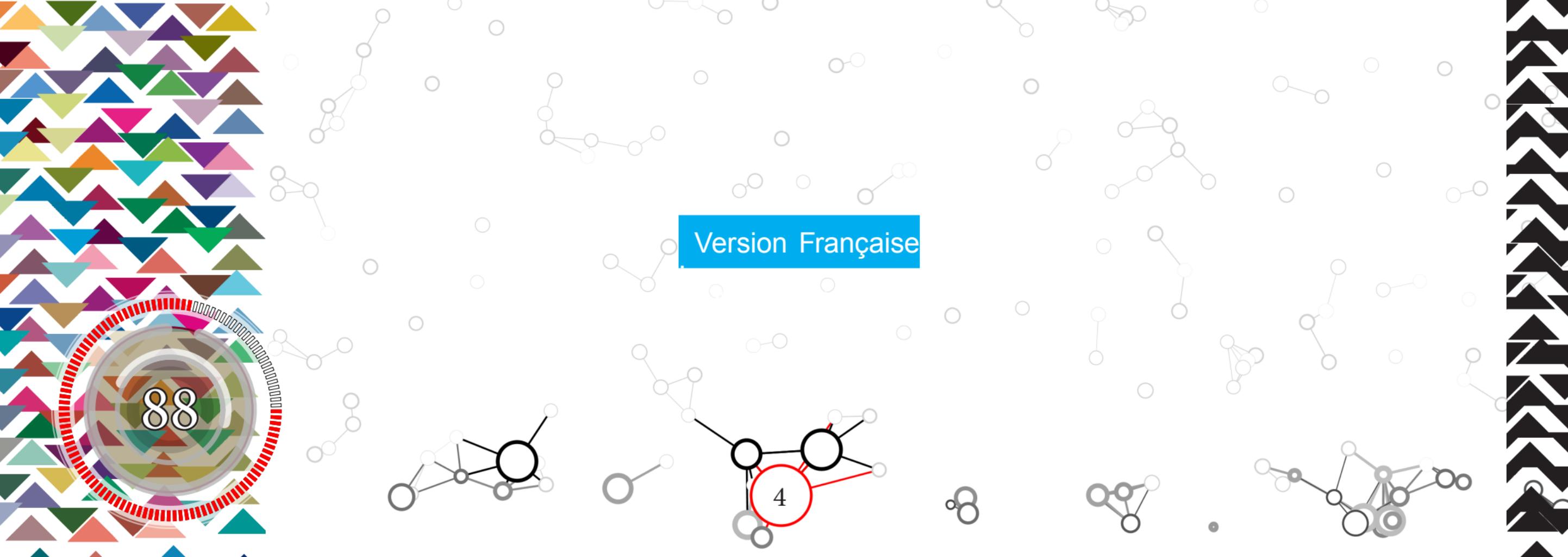
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Technology (EN)

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Version Française

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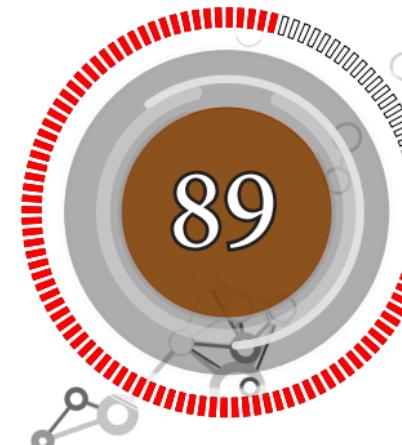
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## I. Résumé de l'entreprise:

3 Dots aura un studio de R&D (recherche et développement) avec une approche différente de la recherche dans les domaines des arts, de la culture, de l'ingénierie, de la technologie, de l'architecture et de la communication. Il y a un ensemble des différents projets déjà en cours de développement qui garantira le succès de l'entreprise. Certains de ces projets comprennent des projets architecturaux et urbains, les logiciels commerciaux et open-source et les produits innovants.

## II. Résumé exécutif :

Une liste des différents projets dans différents niveaux de progrès peut être explorée plus en détail dans un document séparé, mais dans l'intérêt de temps, ce document sera d'expliquer le projet qui a fait l'objet de ma thèse à l'Université Paris 8, *Animetro*.



## Qu'est-ce *Animetro*?

**A**nimetro est le nom d'un projet visant à aider les entreprises de métro à améliorer leurs techniques de communication en utilisant le contenu multidimensionnel pour mettre en valeur en même temps tous les deux types des messages publicités et des œuvres culturelles et artistiques. Animéto est le résultat de deux années d'études de divers aspects de la recherche technique et d'ingénierie dans les moyens nécessaires à l'exécution de ce projet et la construction de prototypes, à l'analyse philosophique et théorique de la réaction du public à un tel système.

**E**n résumé, *Animetro* est un système basé sur plusieurs innovations dans la conception et l'exécution, permettra aux entreprises de métro avec la possibilité d'avoir des images animées sur la surface des murs du tunnel. Cependant, ce n'est que le début.

**L**e projet proprement dit est un package complet qui comprend différents modules et processus devant être utilisés au cours de son exécution, la livraison, la maintenance et l'utilisation, comme on s'y attend d'un projet urbain bien pensé dans une ville moderne. La description complète (comme un work in progress) peut être trouvée dans le livre principal (y compris plus de

300 pages d'explications sur les différents aspects du projet). Ci-dessous sont mentionnés quelques-uns des principaux objectifs du projet.

## Festival d'Animétro :

C'est la première fois dans le monde, un exposition /compétition en cette genre, ce qui entraînera les courts métrages d'animation accessibles au public dans les tunnels de métro. Avec de nombreuses avantages pour la ville, y compris de nouvelles attractions touristiques pour Paris -à la fois comme une ville moderne et historique-, un ajout aux infrastructures culturelles de la ville comme un musée et exhibition mobile capable d'accueillir des centaines de messages visuels artistiques et culturelles et de les livrer à la

plus grande audience possible dans un format riche et dans le meilleur temps possible au cours de la Voyage (système de métro de Paris est le plus achalandé en Europe après Moscou, portant 1.541 milliard passagers en 2012 [REF\_01]- RATP)

## Les avantages publicité :

Pour des centaines de grandes entreprises, actifs en Europe, en France et en particulier dans la ville de Paris, qui sont toujours à la recherche de nouvelles, efficaces, modernes et riches techniques de publicité, d'informer leurs clients potentiels sur leurs produits et services est immense. Selon des études similaires et des enquêtes officielles, cette technique est parfois de 10 à 50 fois plus efficace que les techniques traditionnelles de publicité (9 sur 10

groupes cibles interrogés ont pu remarquer et rappeler exactement le message annoncé et la marque elle-même, contre moins de 1 sur 10 des techniques publicitaires traditionnelles)

## augmentation des revenus :

Une source importante de revenus élevée pour les entreprises municipales et de métro. Selon les résultats d'une expérience similaire par WMATA (Transit Authority Washington Metropolitan Area), un total de \$ 700,000 de bénéfices purs a été généré juste dans la première année de fonctionnement du système en 2006 et a été estimé à 15,000,000 de dollars en 5 ans pour une entreprise relativement petite comme MARTA (Metropolitan Atlanta Rapid Transit Authority).

## Création de nouveaux emplois:

Création de nouveaux emplois et des possibilités pour la ville et ses citoyens dans les processus directs et indirects liés.

## III. Source et utilisation des fonds :

Il ya plusieurs options et possibilités de financement, y compris les clients actuels et potentiels (entreprises de publicité, la RATP, l'office de tourisme de Paris, le maire de Paris, SNCF, les organismes et les entreprises de conception et d'ingénierie urbaine, les organisations gouvernementales pour le développement, Airbus, Adobe, etc.) cependant, cette section a besoin d'être développé en plus avec d'autres études de recherche et de marketing.

**U**tilisation des fonds serait de nouveaux développements de projets de recherche et la croissance globale de l'entreprise.

#### **IV. Objectifs de la Société:**

**P**our établir sa place comme un acteur à la frontière de la technologie et de l'innovation, ouvrir des portes pour de nouvelles technologies respectueuses de l'environnement et des solutions innovantes pour le public et d'autres entreprises. Pour être un lieu pour les chercheurs et les innovateurs à développer de nouvelles idées à l'utilisation de technologies nouvelles et émergentes, tout en étant un lieu pour les entreprises et les clients à trouver des solutions à leurs besoins en un seul endroit.

#### **V. Les clés du succès :**

**C**réativité et un nouveau regard sur le marché et ses problèmes

**T**echnologie

**A**pproche

**R**essources humaines

**C**ollaboration ouverte

## VI. Services et produits :

R&D est la clé du succès pour presque toutes les entreprises. C'est pourquoi chaque entreprise prospère considère cette section comme le cœur de leur avenir et la raison de leur succès sur le marché actuel. En 3Dots R&D n'est pas seulement le cœur de la société, mais l'ensemble du corpus, la section principale et le seul qui définit l'identité de l'entreprise.

Notre plan est de ne pas seulement utiliser nos propres forces en recherche et développement pour développer et maintenir une entreprise à succès en bonne santé, mais aussi de fournir un service de R&D à d'autres entreprises et organisations. 3Dots auront d'autres produits et services ainsi (à la suite de processus précédents de recherche réussis) mais la R & D sera

notre principale ligne d'activités sur le marché. Sans aucun doute, chaque processus de recherche et de développement se traduira par des produits et des services nouveaux et innovants. Par exemple, à la suite d'une recherche approfondie dans les domaines de conception urbaine et de l'ingénierie dans les deux dernières années, en ce moment, il ya environ cinq différents projets et propositions dans les différents niveaux de progrès pour être proposés au projet de développement urbain de Paris. Il existe également des produits secondaires ainsi y compris des morceaux de logiciels et de matériel avec des potentiels pour le marché public, certains d'entre eux dans les dernières étapes de tests, (including both open-source and commercial software, like CV open source CMS or AES toolkit or Adobe CS extensions and plugins developed for companies internal uses, also actual innovated, new products like the project of "Trace" or "Air window" for Airbus or "Shoekit"). R & D dans

**3**Dot de n'est pas seulement la recherche dans la technologie, mais dans tous les aspects de nos activités, y compris l'art et de la culture.

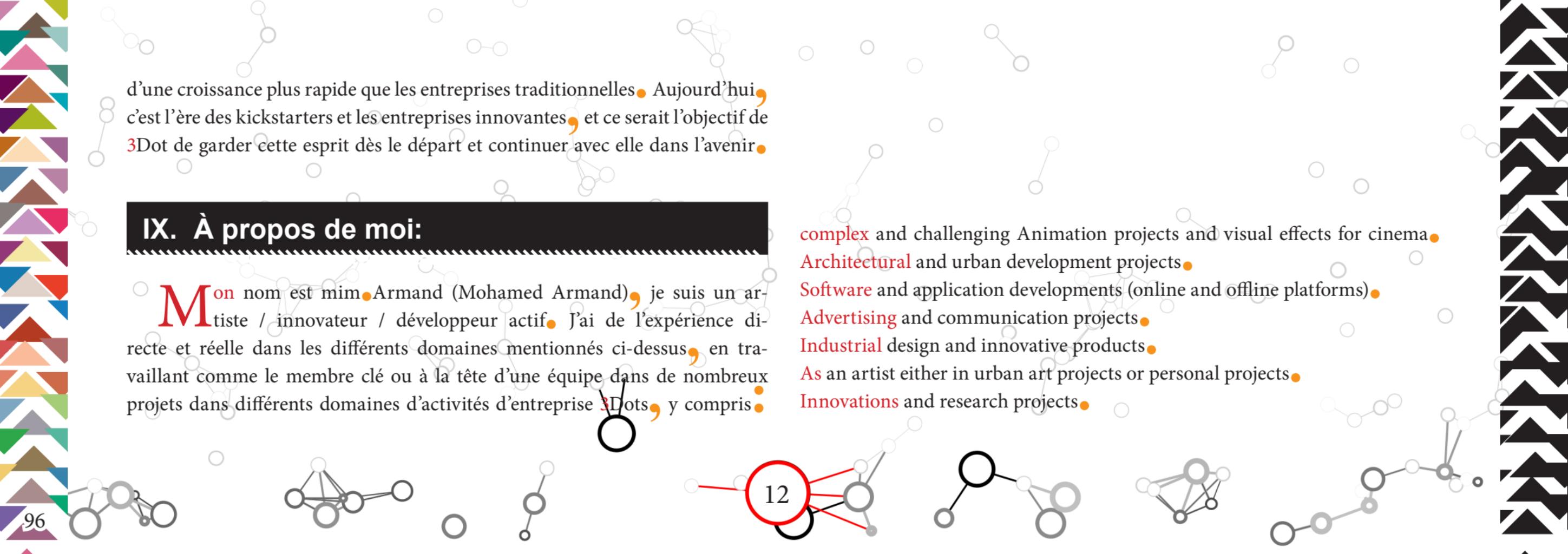
## VII. Ressources humaines:

**L**a société aura une nouvelle approche sur cet aspect car nous croyons que c'est l'une des clés du succès pour tous les entreprises. En tant qu'entrepreneur, Freelancer et la tête des entreprises dans les différentes périodes de temps, j'ai gagné une expérience inestimable des problèmes et des limitations de façon traditionnelle d'aborder les problèmes de ressources humaines; En **3Dots**, bénéficiant de ces expériences, l'entreprise aura une porte ouverte, la politique souple, pour permettre aux

nouvelles idées et à garder l'entreprise active, vivante et toujours en cours (explications complémentaires peut être livré dans un autre document)

## VIII. Technologie :

**A**ujourd'hui, nous sommes dans une période de transition de temps, dans lequel nous vivons une métamorphose dans les voies de l'utilisation et l'intégration des nouvelles technologies dans le cycle de vie de l'entreprise. La technologie est maintenant plus accessible pour les petites entreprises, mais contrairement aux grandes entreprises, les petites entreprises sont plus ouvertes aux nouvelles technologies qui leur permettront la possibilité

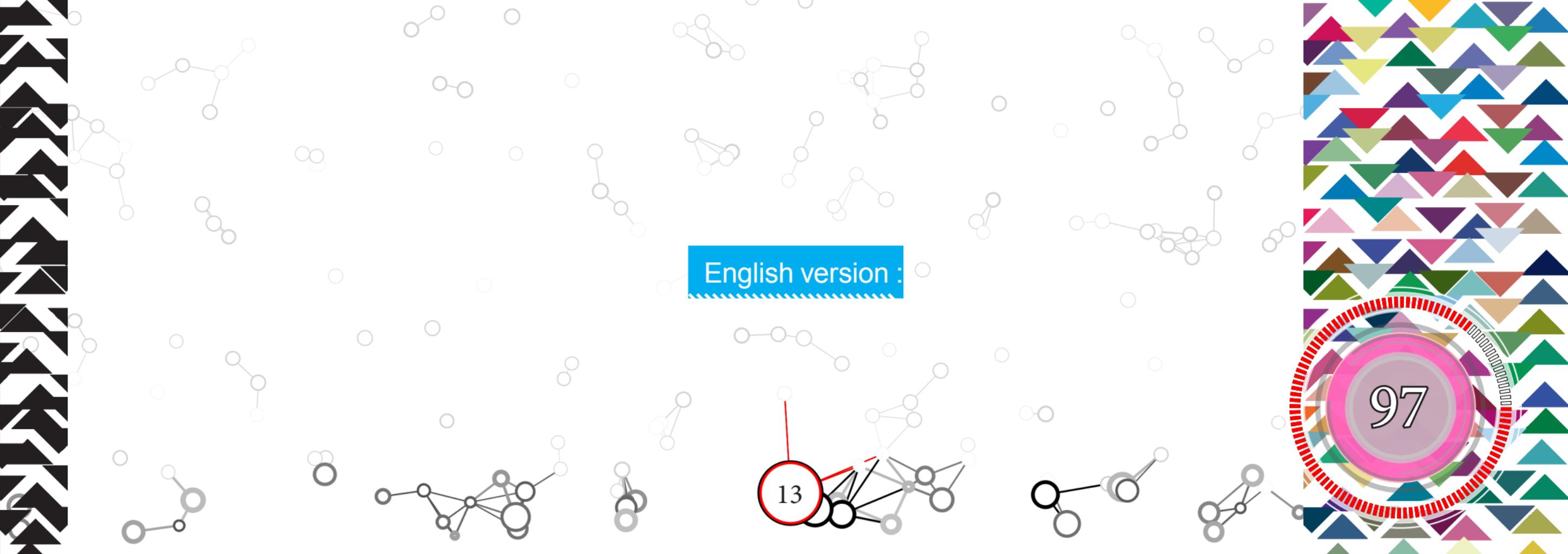


d'une croissance plus rapide que les entreprises traditionnelles. Aujourd'hui, c'est l'ère des kickstarters et les entreprises innovantes, et ce serait l'objectif de 3Dot de garder cette esprit dès le départ et continuer avec elle dans l'avenir.

## IX. À propos de moi:

Mon nom est mim. Armand (Mohamed Armand), je suis un artiste / innovateur / développeur actif. J'ai de l'expérience directe et réelle dans les différents domaines mentionnés ci-dessus, en travaillant comme le membre clé ou à la tête d'une équipe dans de nombreux projets dans différents domaines d'activités d'entreprise 3Dots, y compris :

complex and challenging Animation projects and visual effects for cinema.  
Architectural and urban development projects.  
Software and application developments (online and offline platforms).  
Advertising and communication projects.  
Industrial design and innovative products.  
As an artist either in urban art projects or personal projects.  
Innovations and research projects.



English version :

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## I. Company summary:

- 3 Dots will be a R&D (research and development) studio with a different approach to research in the fields of arts, culture, engineering, technology, architecture and communication. There is a set of different projects already in the process of development that will guarantee the company's success. Some of these ventures include architectural and urban projects, newly developed open-source and commercial software and innovative new products.

## II. Executive summary:

A list of different projects in different levels of progress can be explored more thoroughly in a separate document but in the interest of time, this document will explain the project which was the subject of my thesis at Paris 8 University, *Animetro*.

## What's *Animetro*?

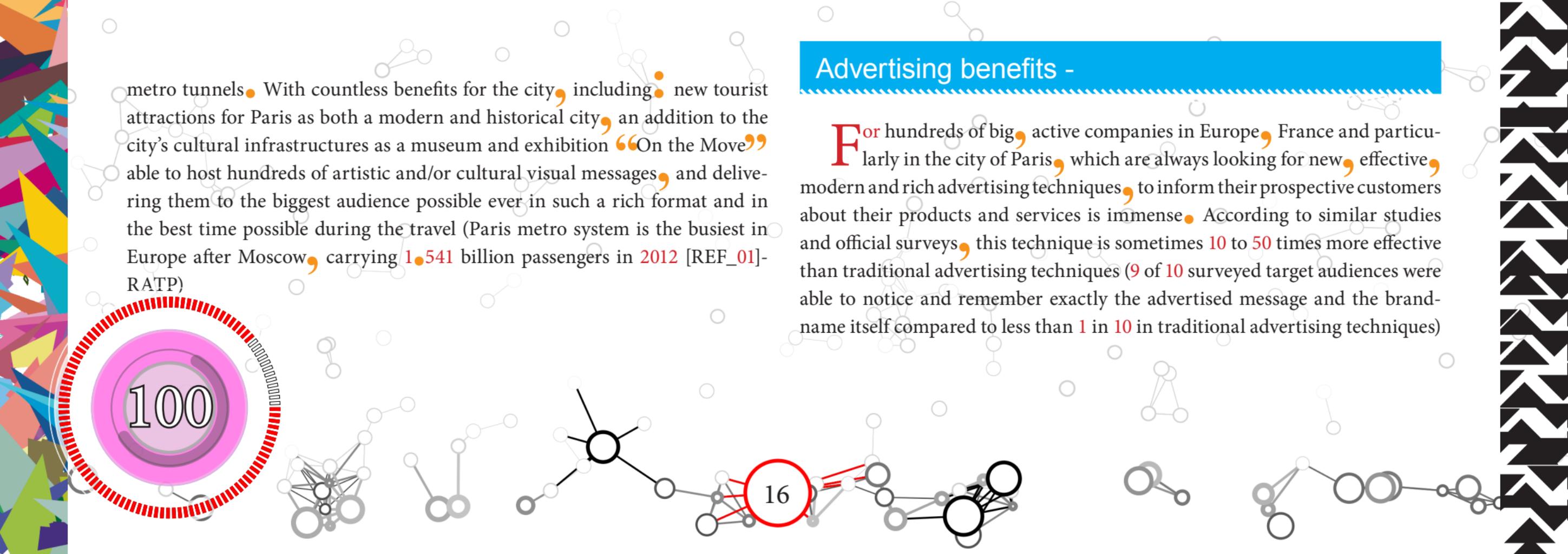
**A**nimetro is the name of a project aimed to help metro companies improve their communication techniques using multidimensional content to showcase both advertisements and cultural and artistic works. *Animetro* is the result of two years of study of a variety of aspects from technical and engineering research into the necessary means for executing this project and the building of primary prototypes, to philosophical and theoretical analysis of public reaction to such a system.

In brief, *Animetro*, a system based on several innovations in design and execution, will provide metro companies with the ability to have animated images on the surface of tunnel walls. However, this is just the begin-

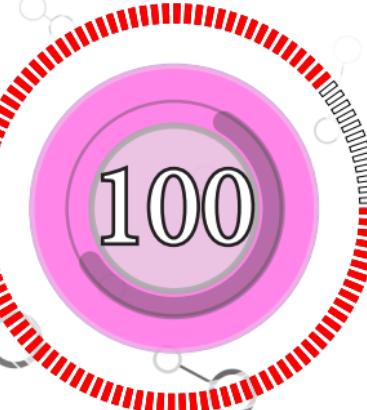
ning. The project itself is a complete package which includes different modules and processes to be employed during its execution, delivery, maintenance and usage, as is expected from a well-thought urban project in a modern city. The complete outline (as a work in progress) can be found in the main book (including more than 300 pages of explanation about different aspects of the project). Below are mentioned some of the main objectives of the project.

## *Animetro* Festival –

This is the first type of exhibition and competition of its kind, which will entail very short animated films accessible to the public in the



metro tunnels. With countless benefits for the city, including new tourist attractions for Paris as both a modern and historical city, an addition to the city's cultural infrastructures as a museum and exhibition "On the Move" able to host hundreds of artistic and/or cultural visual messages, and delivering them to the biggest audience possible ever in such a rich format and in the best time possible during the travel (Paris metro system is the busiest in Europe after Moscow, carrying 1.541 billion passengers in 2012 [REF\_01]- RATP)



## Advertising benefits -

For hundreds of big, active companies in Europe, France and particularly in the city of Paris, which are always looking for new, effective, modern and rich advertising techniques, to inform their prospective customers about their products and services is immense. According to similar studies and official surveys, this technique is sometimes 10 to 50 times more effective than traditional advertising techniques (9 of 10 surveyed target audiences were able to notice and remember exactly the advertised message and the brand-name itself compared to less than 1 in 10 in traditional advertising techniques)

## Increased revenue -

A considerable source of increased incomes for the municipal city and/or the metro companies. According to the results of a similar experience by WMATA (Washington Metropolitan Area Transit Authority), a total of \$700,000 of pure benefits were generated just in the first year of the system's operation in 2006 and was estimated to reach to \$15,000,000 in 5 years for a relatively small metro company like MARTA (Metropolitan Atlanta Rapid Transit Authority).

## Creating new jobs and opportunities-

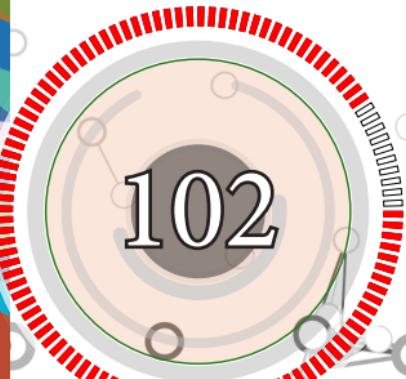
Creating new jobs and opportunities for the city and its citizens in direct and indirectly related processes.

### III. Source/Uses of funds:

There are multiple options and possibilities for funding, including current and prospective customers (Advertising companies, RATP, Paris tourist office, Paris mayor, SNCF, urban design and engineering and architectural companies and organizations, governmental organizations for development, Airbus, Adobe community ...) but this section still needs to be further developed with more research and marketing studies. Use of funds would be for further developments of research projects and the overall growth of the company.

## IV. Company objectives:

To establish its place as an actor at the frontiers of technology and innovation, opening realistic gates for new and environmentally friendly technologies and innovative solutions to the public and to other companies. To be a place for researchers and innovators to develop new ideas with the use of new and emerging technologies while also being a place for companies and customers to find solutions to their needs all in one place.



## V. Keys to success:

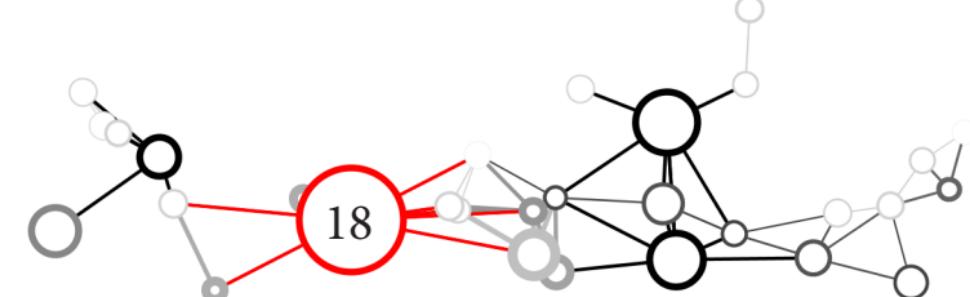
Creativity and a fresh look at the market and its problems

C  
Technology

A  
pproach

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uman resources

O  
pen collaboration



## VI. Service and products:

R&D is the key to success for almost any business. That is why every successful company considers this section as the heart of their future and the reason of their success in the present market. In mentioning that, R&D is not only the heart of 3Dot's company, but the entire corpus, the main and only department that defines the identity of the company. Our plan is to not only to use our own strength in research and development to develop and maintain a healthy, successful company, but also to provide it as a service to other companies and organizations. 3Dot's will have other products and services as well (as a result of previous successful research processes) but R&D will be our main line of activities in the market. With no doubt, each process of research and development will result in new and innovative products and services. For

example, as a result of extensive research into the fields of urban design and engineering in the past two years, right now there are about five different projects and proposals in different levels of progress to be proposed to the Paris urban development project. There are also side products as well including pieces of software and hardware with potentials to hit the market, some of them in final steps of testing and ready for final, production ready releases (including both open-source and commercial software, like CV open source CMS or AES toolkit or Adobe CS extensions and plugins developed for companies internal uses, also actual innovated, new products like the project of "Trace", or "Air window" for Airbus or "Shoekit") R&D in 3Dot's is not just research in technology but in all aspects of our activities, including art and culture.

## VII. Humann ressources:

The company will have a new approach to find and require it's needs of human resource since we believe this is one of the keys to success for any company. As an entrepreneur, freelancer and the head of the companies in different periods of time, I gained an invaluable experience of the problems and limitations of traditional way to approach the human resource problems; In 3Dot's, benefiting from these experiences, the company will have an open door, flexible policy, to let the new ideas in and to keep the company active, alive and always in progress (Further explanation can be delivered in another document)

## VIII. Technology:

Today, we are in a transition period of time, in which we are experiencing a metamorphosis in the ways of usage and integration of new technologies into the company's life-cycle. Technology now is more accessible for small companies but in contrary to big companies, small companies are more open to new technologies that will provide them the possibility of faster growth than traditional companies. Today is the era of kickstarters and innovative companies, and that would be 3Dot's goal to keep this approach from the start and continue with it into the future.

## IX. About me:

My name is mim. Armand (Mohamed Armand). I'm an active artist/ innovator/ developer. I have direct and real experience in the different areas mentioned above, working as the key-member or the head of a team in many projects in different fields of prospective 3Dot's activities, including:

- complex and challenging Animation projects and visual effects for cinema.
- Architectural and urban development projects.
- Software and application developments (online and offline platforms).
- Advertising and communication projects.
- Industrial design and innovative products.
- As an artist either in urban art projects or personal projects.
- Innovations and research projects.



## • Prospective job creation:

In case of success with the first project (the World Stories) which is very probable (according to the result of studies provided in previous chapters) the company will be able (and will need to) hire a small team of creative employees including artists, designers and programmers which will be listed shortly, but I should remind myself here that this would be just the start and just for the first project and in any case it is very probable for the company to grow very quickly and create more and more jobs in this or other future projects.

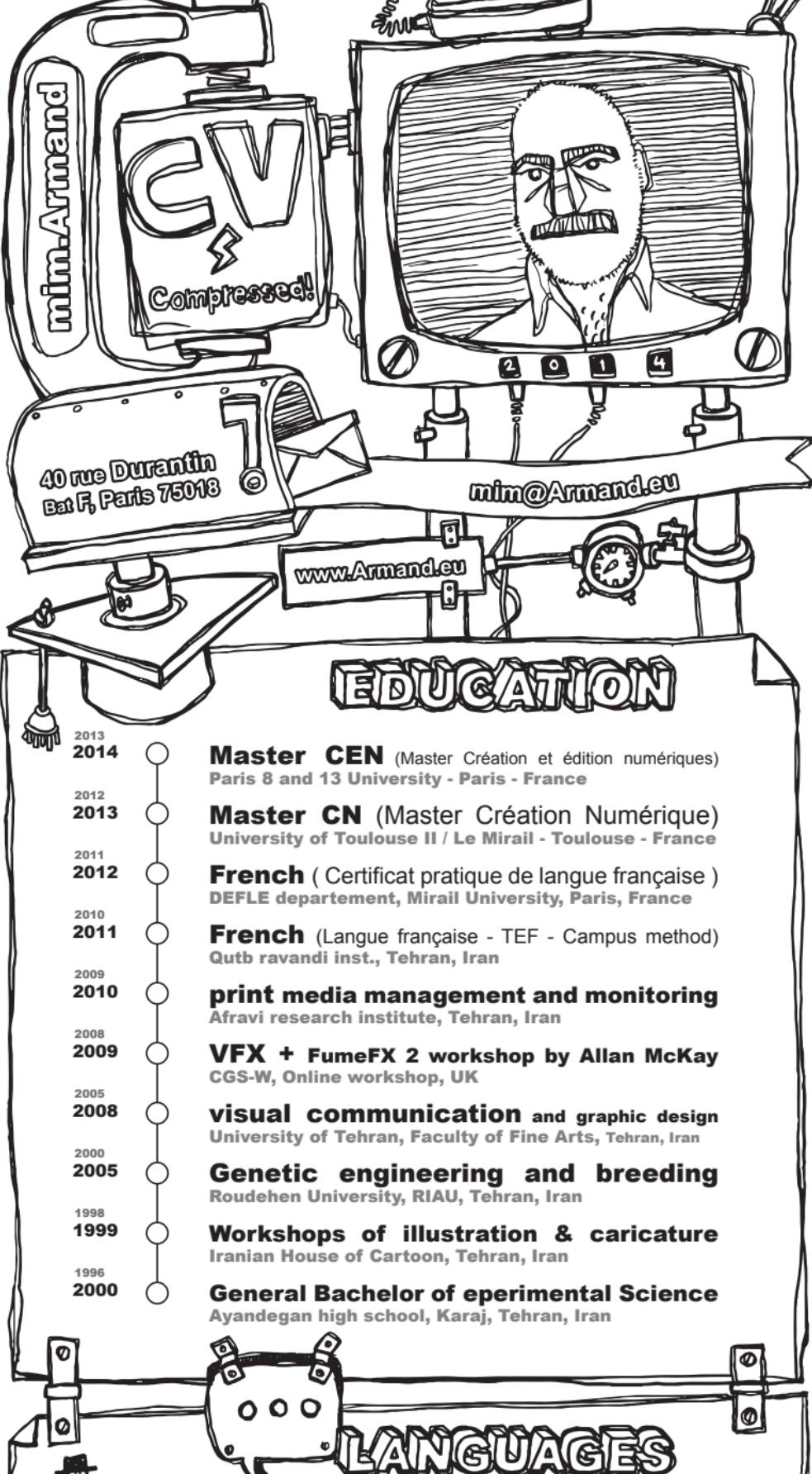
During the next 6 to 9 months of the creation of the company (sooner or later according to the progress of the project) the company will be able to hire 15 persons (more or less) including:

1. 3 2D artists and designers
2. 2 3D artist and modelers
3. 2 Animators
4. 3 Programmer and developers
5. 3 assistants and interns
6. 1 law expert (consultant)
7. 1 secretary



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2013

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2008

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1998

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1996

2000

**Master CEN** (Master Création et édition numériques)  
Paris 8 and 13 University - Paris - France**Master CN** (Master Création Numérique)  
University of Toulouse II / Le Mirail - Toulouse - France**French** ( Certificat pratique de langue française )  
DEFLÉ department, Mirail University, Paris, France**French** (Langue française - TEF - Campus method)  
Qutb ravandi inst., Tehran, Iran**print media management and monitoring**  
Afravi research institute, Tehran, Iran**VFX + FumeFX 2 workshop by Allan McKay**  
CGS-W, Online workshop, UK**visual communication and graphic design**  
University of Tehran, Faculty of Fine Arts, Tehran, Iran**Genetic engineering and breeding**  
Roudehen University, RIAU, Tehran, Iran**Workshops of illustration & caricature**  
Iranian House of Cartoon, Tehran, Iran**General Bachelor of experimental Science**  
Ayandegan high school, Karaj, Tehran, Iran

## LANGUAGES

### HUMAN LANGUAGES:

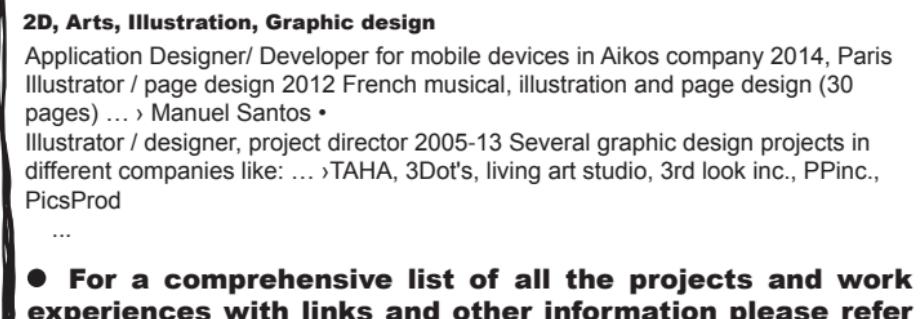


### COMPUTER LANGUAGES:



## Qualifications

### In virtual world:



### In real world:



## Experiences

### Animation, vfx, Media

VFX / 3D Artist - 2012 - SHINOBEZ Video clip ... > PicsProd •  
Director 2008-9 Navid o Neda (65 episodes ~ 120 mins) > 3Dot's (for National television)  
Story-board artist - 2008 - "Shab -e- vaghe -e" film project (cinema) ... > FCF •  
VFX crew member - 2007- 10 - in multiple projects (cinema & tv) ... > 3Dot's •  
Artistic director and 3D artist - 2007- 10 - in multiple animation projects (tv) > Aarmim  
Artistic director / Director - 2005- 13 - three short and documentary films...> 3Dots •  
Technical and Artistic director - 2005- 013 - Several advertising and documentary  
films (animation & real) in different companies like: ... > TAHA, 3Dot's, living art  
studio, 3rd look inc., PPinc., PicsProd •

### Developer / Designer web, multimedia

Adobe Developer (official partner since 2014) writing plugins for InDesign, Paris  
Game designer/ developer, 3Dots studios, 2014, Paris, France  
Application Designer/ Developer for mobile devices in Aikos company 2014, Paris  
Artistic director/ developer 2012-3 Fine arts faculty web site / Mirail university ... >  
UFR-Mirail university •  
Project Director (DEV/DES) 2013 Corporation Web design ... > Duo Gourmand  
Developer / Designer 2011-13 Several Web design projects (including E-commerce,  
corporation and personal websites) ... > PicsProd  
Project Director / developer 2005 07 Several multimedia projects ... > Paryab tehran  
Project Director / developer 2004 HOFEX and MEDEX Exhibition year CD  
Catalogue application ... > HOFEX tehran 2004

### 3D Visualisation, Simulation, architecture

3D Artist / Director 2005-9 Several 3D architectural visualisations ... > The 3rd kind  
of design •

3D Artist 2005-7 Several 3D architectural visualisations ... >TAHA •

### 2D, Arts, Illustration, Graphic design

Application Designer/ Developer for mobile devices in Aikos company 2014, Paris  
Illustrator / page design 2012 French musical, illustration and page design (30  
pages) ... > Manuel Santos •

Illustrator / designer, project director 2005-13 Several graphic design projects in  
different companies like: ... >TAHA, 3Dot's, living art studio, 3rd look inc., PPinc.,  
PicsProd

● For a comprehensive list of all the projects and work  
experiences with links and other information please refer  
to online version of this curriculum vitae.

Notes:

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- 3. Self-portrait by mim.Armand
- 4. Art-work by mim.Armand
- 5. Art-work by mim.Armand
- 6. UI Wireframe for Aikos application during the design process (by mim.Armand)
- 7. Aikos company logo
- 8. Pepiniere27 Logo (Source: Company's website)
- 9. A schematic diagram of the Aikos device designed by me.
- 10. Some of the icons used in the schematic.
- 11. One of the many slides made for the technical possibilities proposal for the Aikos company.
- 12. Schematic diagrams and figures made by me for the Aikos company to explain the current and future possible features of the device.
- 13. UI Wireframe for Aikos application during the design process (by mim.Armand)
- 14. UI Wireframe for Aikos application during the design process (by mim.Armand)
- 15. UI Wireframe for Aikos application during the design process (by mim.Armand)
- 16. One of the approved UI/UX designs for Aikos, this design was altered again during the process.
- 17. A spreadsheet of the UI images used in the application, to save memory and for the reason of efficiency, application will load just one sheet that includes all the images and use a JSON data package to construct the UI on air using the current sheet.
- 18. Icons, brands and images of the mentioned product or technology in the text.
- 19. One of the logos designed for IDTK project (The main application logo) - design by me -
- 20. One of the many logos designed for IDTK project (Internal application logo) - design by me -
- 21. Some of the many logos designed for IDTK project (logos for internal app uses like notification bar, etc.) – design by me –
- 22. One of the many logos designed for IDTK project (Internal application logo) - design by me -

- 23. Applications actual UI (version 1.5) for IDTK project.
- 24. Applications actual UI -> Set dimension and position page (version 1.5) for IDTK project.
- 25. A character 3D model for the World Stories project, designed, modeled, rigged and textured by me.
- 26. Unwrapped texture map (diff) of the above model (2048 x 2048 mipmap enabled).
- 27. Primary blueprint drawing for 3d modeling purposes (design by me).
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- 29. Modeling process of the 3D character.
- 30. Art-work made for the Puppet-Master project (by me).
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- 32. Art-work made for the PapeRally project (Video game) (by me).
- 33. Security Logo design for the project (design by me).
- 34. Source: Internet
- 35. A drawing for the Intel Wearable challenge prototype project by me.
- 36. "Accidental street-art" – Photograph: mim.Armand.
- 37. Few of the art projects I was working on during this time period.
- 38. Art-work by mim.Armand
- 39. Art-work by mim.Armand
- 40. Source: Internet
- 41. Calendar view of the project management design for the World Stories project (MS Project)
- 42. Gantt chart of the project management design for the World Stories project (MS Project)
- 43. Pattern is generated with automatic pattern generator algorithms designed by me for the IDTK project.



W W W . A R M A N D . E U  
W W W . B D O T S . F R