ROZZANO
U·LAB
ACTIVITY CENTRE

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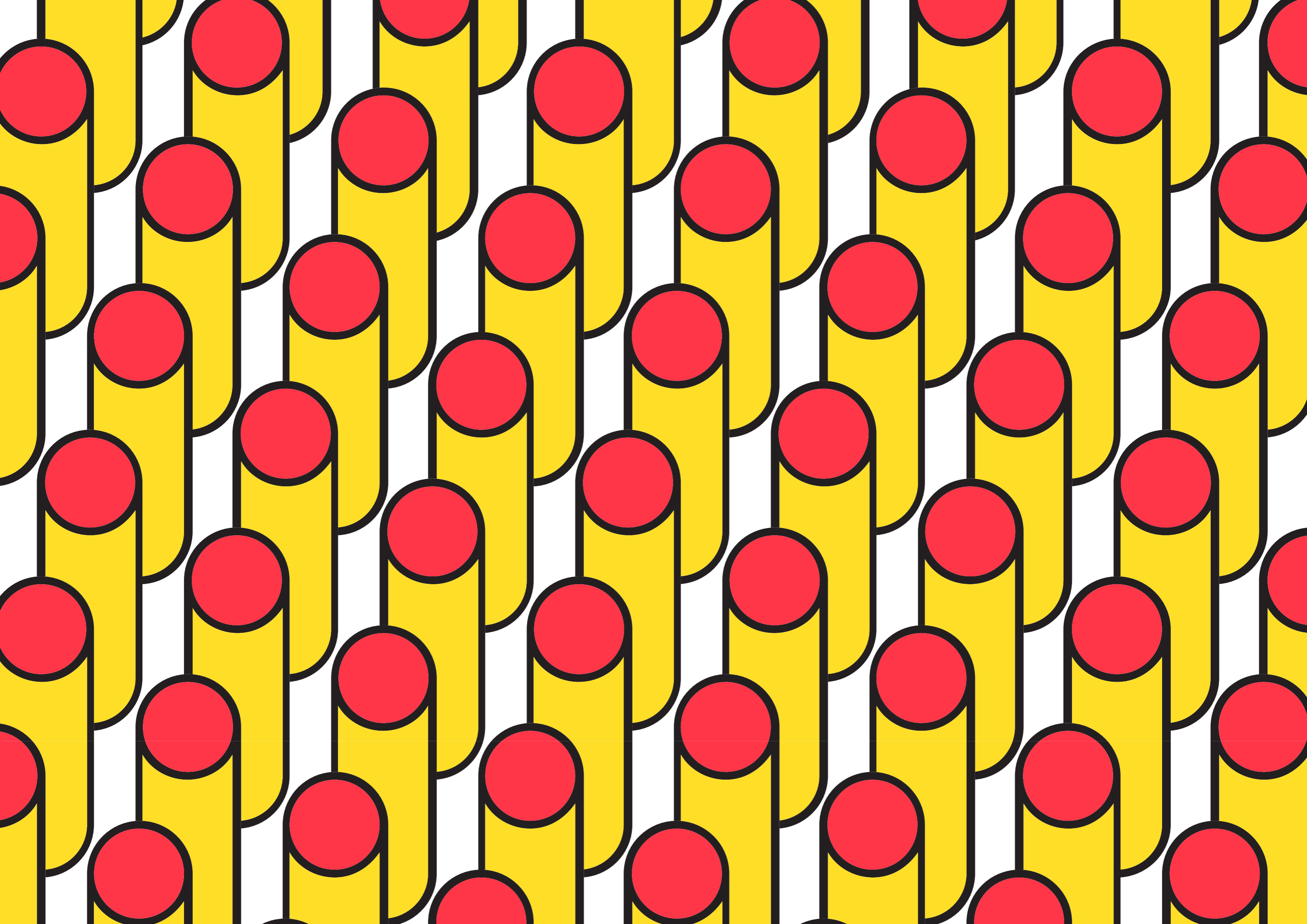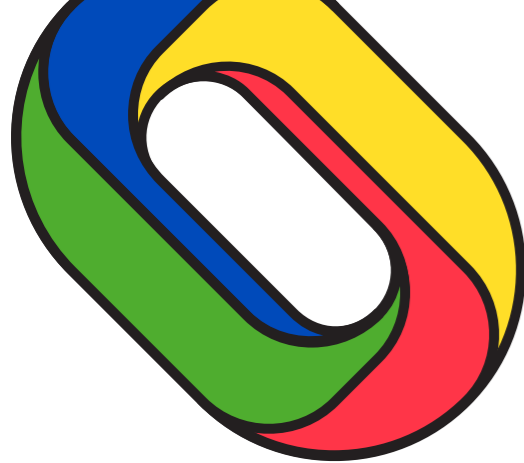
ABSTRACT

Rozzano, a small town located south of Milan, it is acknowledged more by the negative reputation of high unemployment rate and security instability around the neighbourhood for the past few years. The Centro per L'Impiego Rozzano have been trying to motivate the local young people to be more active and even provide job seeking assistance, because of the low social vitality and few social activity communities the city possess, it is hard to solve the problem fundamentally.

To build an Activity Centre that Combining Fab Lab and Co-Working Space was an initial idea that proposed by the Centro per L'Impiego Rozzano, the goal was to motivate people to be more active in their spare time and inspire their passion in order to build the reputation in the neighbourhood.

Start from that, this thesis proved the feasibility of this project by analysing the target space in Rozzano, understanding the mood, lifestyle pattern and the main actors in the neighbourhood. By analysing and benchmarking the cases of the Fab Labs and Co-working Spaces in Milan, combining the practical information provided by Fab Foundation, the author Defined the Service,

Activities and Target Users, the Service take the children related subjects as Community Culture, in order to achieve sustainable service cycle, mainly focus on the Children related activities, organising event and courses for children and others to learn, experience and fabricate their creativities, also provides Co-Working space for people to work on children related or personal projects. The thesis explained the solution by using the persona, storytelling, and a Branding System that unified the information fragments. In the end, the interior solution presented a holistic view of this Service System, explicitly demonstrated the scenario and experiences in the Rozzano ULab Activity Centre.

Keywords:
Rozzano; Children; Fab Lab; Co-Working; Activity; Community

ABSTRACT

Rozzano, un piccolo paese situato a sud di Milano, è riconosciuto più per la reputazione negativa connessa ad un alto tasso di disoccupazione e all'instabilità della sicurezza del il quartiere negli ultimi anni. Il Centro per l'Impiego Rozzano ha cercato di motivare i giovani locali ad essere più attivi e di fornire assistenza per la ricerca di lavoro, per contrastare la poca vitalità sociale e le poche attività sociali presenti.

Costruire un centro di attività che combina Fab Lab e spazio di co-working era l'idea iniziale proposta dal Centro per L'Impiego Rozzano, l'obiettivo era quello di motivare le persone a essere più attivi e coinvolgerli per costruire una nuova reputazione del quartiere.

Su queste premesse si sviluppa questa tesi che ha dimostrato la fattibilità di questo progetto, analizzando lo spazio dedicato in Rozzano e analizzando il territorio in esame. Accanto a ciò, è stata svolta un'analisi di benchmarking assieme ad una ricognizione di casi di Fab Labs e Co-working a Milano. U-lab si focalizza in particolare su un target di utenti specifico, i bambini, che diventa il tema su cui ruotano le diverse attività in termini di progettazione e imprenditorialità.

La tesi sviluppa una serie di personas, una percorso narrativo e un sistema di branding in modo da unificare le attività previste. Il sistema è stato poi declinato in un progetto dello spazio per sviluppare in modo concreto le attività all'intero di Ulab.

Parole chiave:
Rozzano; bambini; Fab Lab; Co-Working; Attività; Comunità
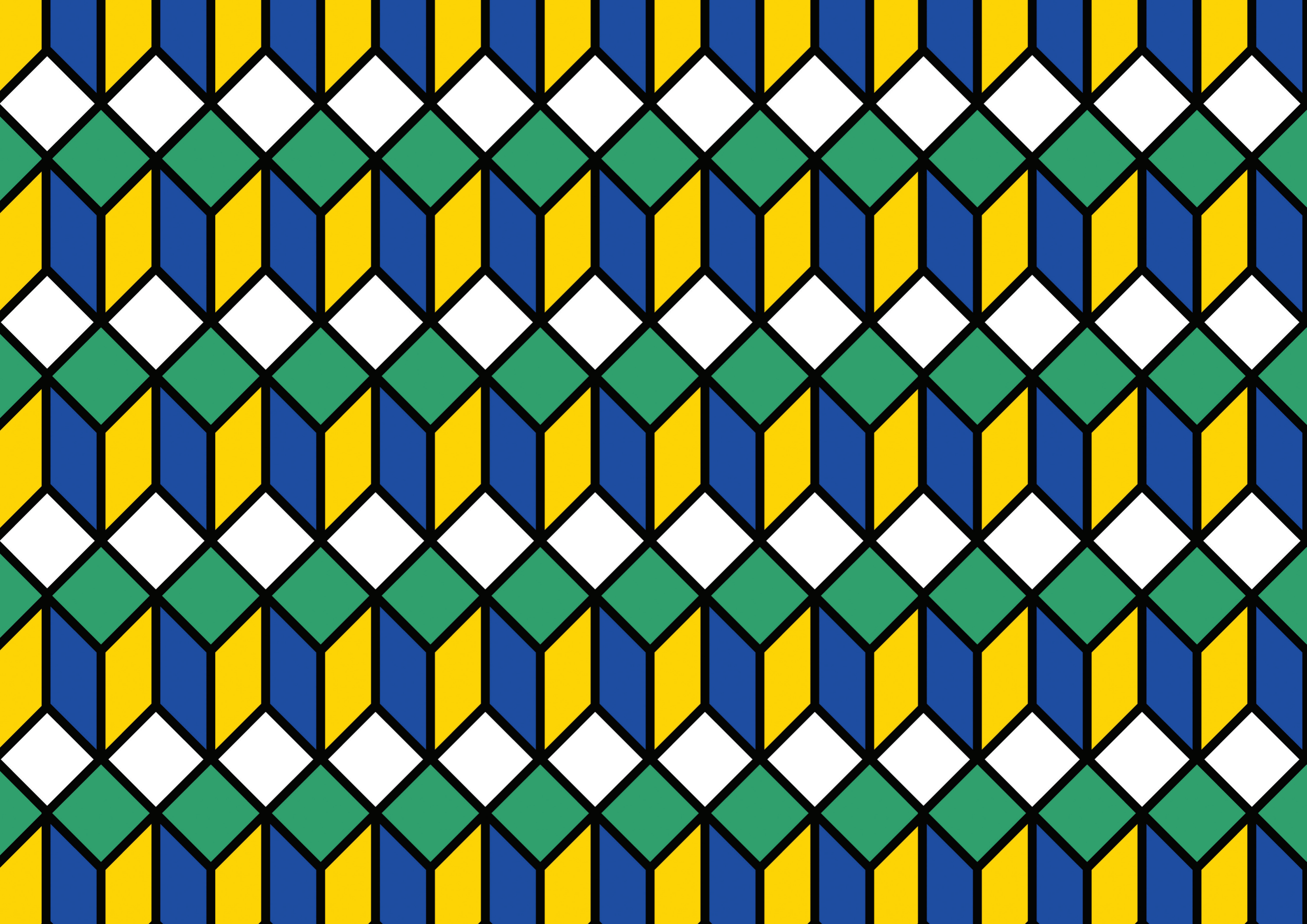
WHAT IF A SERVICE COULD BRING MORE CREATIVE ACTIVITIES FOR CHILDREN AND A BETTER INTERACTION BETWEEN THE PEOPLE AROUND THEM. PARENTS. YOUNG ADULTS AND ELDERS; AND OPPORTUNITIES FOR PEOPLE TO WORK IN SUCH AN ENVIRONMENT AND FABRICATE RELEVANT PROJECTS?

1. INTRO

Since this project has a very specific goal which is rebuilding a space combining Fab Lab and Co-working space in a specified building in Rozzano area, the initial idea is to motivate people to be more active on their spare time, inspire their passion or even assist them with their career, in order to build the reputation in the neighbourhood. Unquestionably, having a Fab Lab will definitely bring positive impact to the society, with the standard equipment in the Lab, is gives the possibility "to make everything", thanks to the fact of openness, everyone could access LabLab, and what's happening inside actual inspires people's creativities and encourage people to communicate and execute ideas, and with the help of the Lab crews, the education system would give people very practical skills in order to accelerate their ideas and executions.

As well as the positiveness that Co-working space would bring into the neighbourhood, the fact is, this idea of combining Fab Lab and Co-working together makes perfect sense, even though in a way they are very different types of service compare to each other.

Fab-Lab is more about practicing, exploring and experiencing, the mood is very dynamic, the Co-working is exactly the contrary, even though they all purpose people to communicate and sharing, but the methods are completely different,

however, just because they are so different from each other, they could be complementary to each other, the two kinds of service could benefit each other in a lot of different ways, it provides various working moods for users to explore and experience, for example, focus and active, calm and lively, execute and explore and so on, and the users could take full advantages of this combination.

Therefore the direction is very clear, yet there are still many things we need to define, what kind of service will this place provide? what kind of people would use this service? and how does it work?
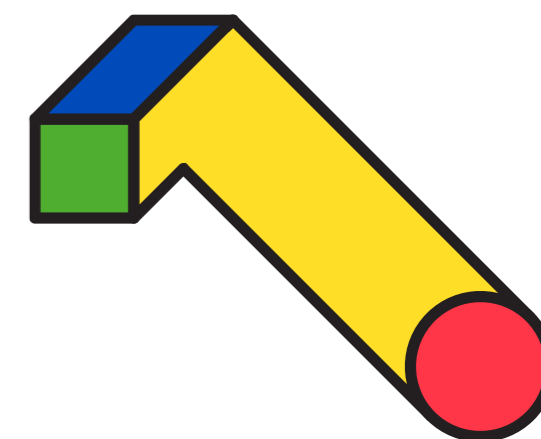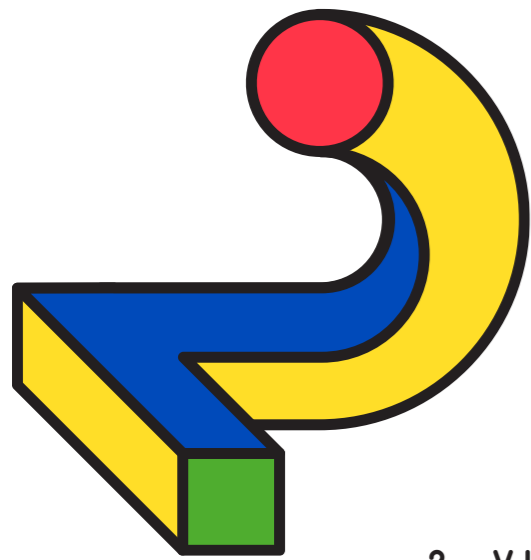
2. VISITING ROZZANO

With this rough brief, I visited the Rozzano Area, trying to get inspired by the things I sense, to get to understand the lifestyle, routine of the neighbourhood, to find the opportunities. the moment I enter this neighbourhood, it was just peaceful, very few cars and very few people, completely opposite of everything in Milan. On the way to my destination, most people I saw are elders, sitting together in the park, moving slowly on the sidewalk...

Then I arrived at the destination, that building is divided into several department, includes a senior activity centre, and the Multi-Lab which is our project space, located on the 1st floor, space is quite limited, I could not get in cause they already closed even though it was only 4 pm. That area was quite big, besides our building, it composed with a Children Activity Centre, a library called "Biblioteca di Rozzano" and in between there is a big park where you can also find Cafes and Shops, which made this area a perfect place to relax and enjoy the afternoon.

I enjoyed the library a lot, it is quite big and open to everyone, basically the ground floor is dedicated to children, very lovely decorated, kids love it; an interesting thing is there were many university students studying on the second floor, and a lot quieter than the kids section.

There is an elementary school besides the park, it was just about the time that the school day was finished, the neighbourhood suddenly got very crowded and lively, kids were playing in the park, parents were chatting, drinking coffee...

In the end of my visit I found, the area we are going to work on, we do have a lot variation of actors in the same space, kids, young adults, adults and elders, but they seem not connected, each actor group is isolated from each other, which gave me a very interesting idea and challenge, I would like to build a bond that connect the different generations, a bond to be a way for them to communicate with, that would be a perfect way to bring the positive impact to Rozzano; another fact is, most of the activities and facilities are children based, and most of the actors are children, which means start with Children as an initial direction would be a safe option.

How to put the children as the main content to develop a FabLab?
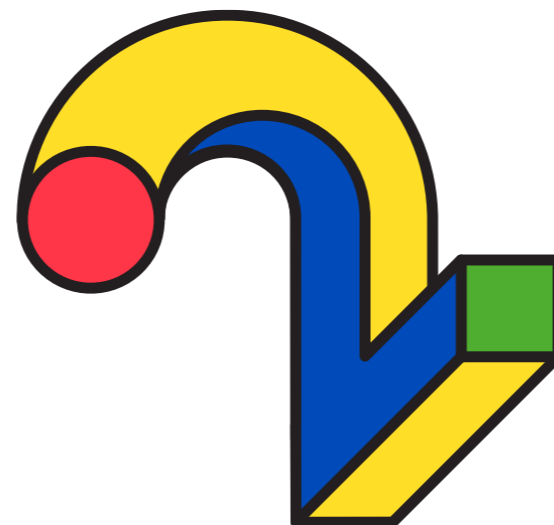
3. UNDERSTAND FABLAB

Fab labs are a global network of local labs, enabling invention by providing access to tools for digital fabrication

What's in a fab lab?
Fab labs share an evolving inventory of core capabilities to make (almost) anything, allowing people and projects to be shared

What does the fab lab network provide?
Operational, educational, technical, financial, and logistical assistance beyond what's available within one lab

Who can use a fab lab?
Fab labs are available as a community resource, offering open access for individuals as well as scheduled access for programs

What are your responsibilities?
safety: not hurting people or machines
operations: assisting with cleaning, maintaining, and improving the lab
knowledge: contributing to documentation and instruction

Who owns fab lab inventions?
Designs and processes developed in fab labs can be protected and sold however an inventor chooses, but should remain available for individuals to use and learn from
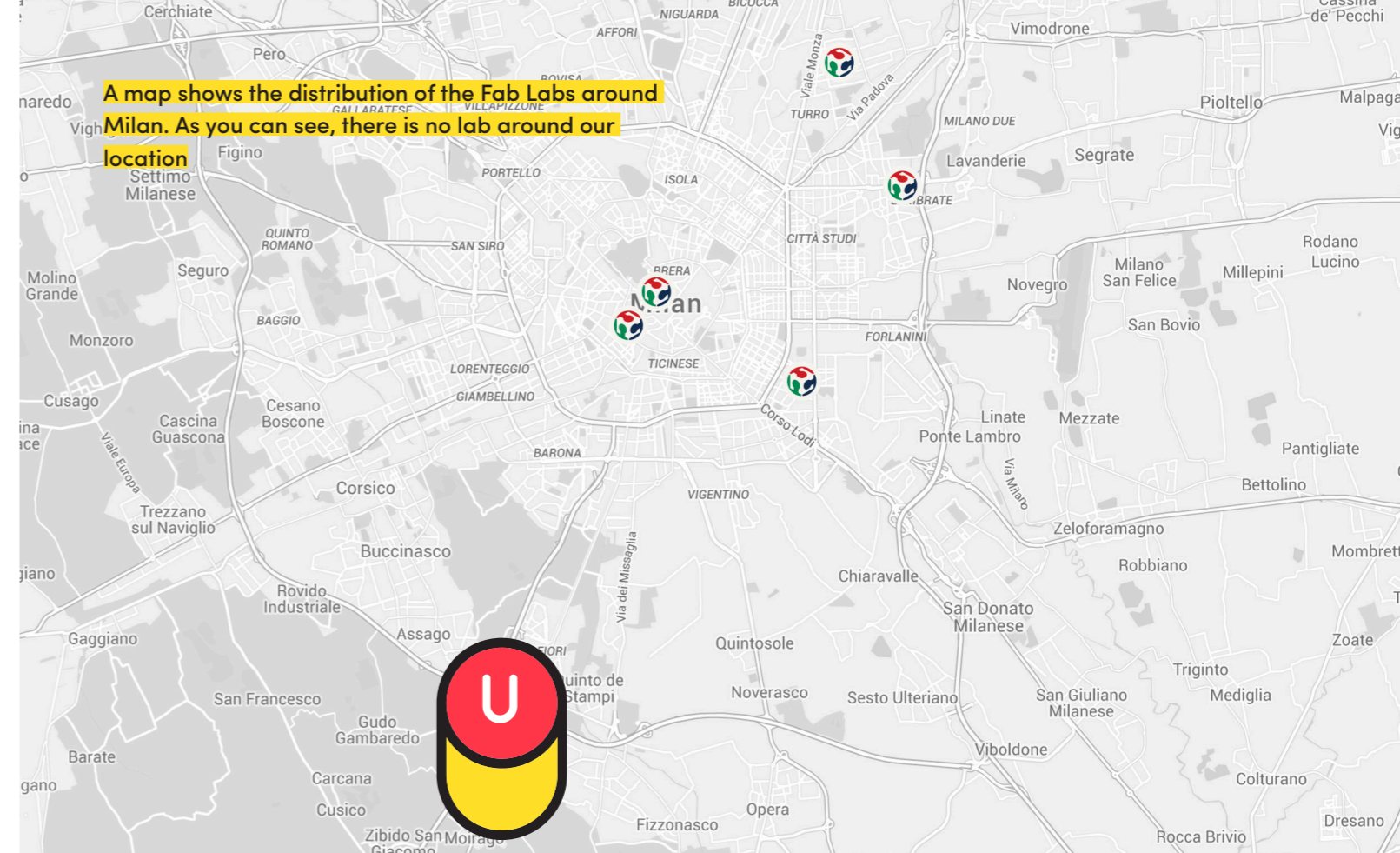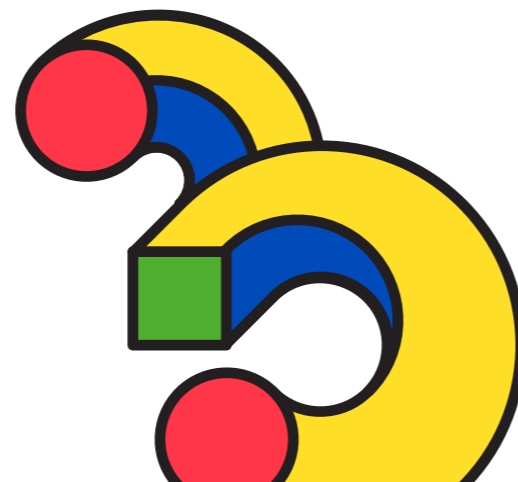
How can businesses use a fab lab?
Commercial activities can be prototyped and incubated in a fab lab, but they must not conflict with other uses, they should grow beyond rather than within the lab, and they are expected to benefit the inventors, labs, and networks that contribute to their success.
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Fab Lab charter
Fab Lab Foundation, 2012

A map shows the distribution of the Fab Labs around Milan. As you can see, there is no lab around our location

There is a common misunderstanding about Fab Lab, not all the facilities that people are capable of doing prototypes could be called Fab Lab. To be qualified as Fab Lab, First and foremost, public access to the Fab Lab is essential. A Fab Lab is about democratising access to the tools for personal expression and invention. So a Fab Lab must be open to the public for free or in-kind service/barter at least part of the time each week, that's essential.

So, before we start anything for Fab Lab, we need to have a better understanding of the standard of Fab Lab.

Fab Labs have to share a common set of tools and processes, which means the equipments in the Lab is standardised. A prototyping facility is not the equivalent of a Fab Lab. A 3D printer is not a Fab Lab. The idea is that all the labs can share knowledge, designs, and collaborate across international borders. Fab Labs must participate in the larger, global Fab Lab network, that is, you can't isolate yourself. This is about being part of a global, knowledge-sharing community.

Luckily, the Fab Foundation provided a very solid information support for me to know everything to start a Fab Lab business, it supported me with the case studies, sample programme, staff organisation, equipment requirement, space arrangement samples etc..

How many fab-lab we have in milano? What are they? What do they do and what are their main focus?v

We analysed all the registered Fab Labs in Milan and 2 additional Labs outside Milan, in those cases, we focused on Activity, Target Users, Schedule and Financial Resources, those cases are:

WeMake
FabLab Ventura
Open Dot
Make in Milano

Muse Museum (Additional)
MC2STEM High School Fab Lab (Additional)

WeMake

Introduction:
WeMake is a Makespace with various production technologies and prototyping accessible to everyone. It is a community supported by its members through a subscription. WeMake is a Fablab as well as an association that joined the international network of the FabLab and then shares the principles of the Fablab.
It has 4 regular type of events in-house (Maker in residence, Arduino day, Fab Academy, open the pod bay). It provides Lab access and use of machines for individual users (subscripted users) and specific service like team building, training and co-design for companies.

Target user:
School and Universities
Companies

Schedule:
Tuesday to Saturday from 10 to 19:00, members access is scheduled, public access is limited.

Financial resource:
Partnership
Direct financial resource of this Lab is from users subscriptions, it have several subscription plans and hourly rate of Machines.

Fab Lab Ventura

Intro:
The Fab Lab Ventura is a manufacturing laboratory equipped with digital technologies whose purpose is to bring together people and give them the ability to plan, design and build almost anything in an environment of sharing space, equipment, ideas and projects.
In fact, FabLab Ventura is a meeting place between people and the sharing of ideas and projects, thanks to the use of design tools and digital fabrication, can see the realisation of the result of their creativity. Most importantly is given to the process of training and introduction to the technology as a fundamental aspect of the interchange of information and knowledge among participants.
The potential users of such resources ranging from home users who want to try their hand in the design and manufacture what they are not capable, schools and universities with interchanges interventions and training sessions on new technologies in the field of digital fabrication and electronics businesses and professionals ranging from rapid prototyping to 3D modeling with small production, the implementation of electronics into new aspects of product and consumer.

Potential user:
Anyone who wants to visualise their ideas, schools, universities, companies.

Schedule:
not found

Financial resource:
The Association is a voluntary social training nonpartisan, non-political, non-denominational and non-profit.
Direct financial resource of this Lab from subscribed users with a fixed annual fee.

Make in Milano

Intro:
The FabLab is a shared laboratory (open lab, co-working and co-making) of digital fabrication in the center of Milan. The FabLab, in collaboration with the Society Encouragement of Arts and Crafts (SIAM) , promotes a new attitude to the world of work, a more enterprising, passionate and contemporary. the Lab specified a course section for students and universities, and has a specific fixed course module plan.

Target user:
Student (middle school, hight school and universities) already collaborate with IED, Politecnico, Tiepolo (middle school), TITO LIVIO (High School), FELTRINELLI Institute (High School), Entrepreneurs and Crafters.

Schedule:
The lab is open daily from Monday to Friday from 14.30 to 19.30.
The mornings and evenings are organized courses, seminars and workshops.

Financial resource:
Partnership and sponsorship
No subscription plans.
Access is free and the use of machines is calculated according to consumption.

Special feature:
Shop: Products designed and manufactured by The FabLab or created in collaboration with selected designers. (potential service)

"FabLab for Families"
For a limited period there is a program dedicate to families and children, collaborating with Codemotion Kids. the course Coding and Robotics will focus on kids (7-13 yo).

Open Dot

Intro:
Innovation and experimentation as the business engines, exploring new method of development and design based on digital technologies and rapid prototyping.
They organize training workshops for different levels of complexity and design fields: training through learning by doing, aiming to give the opportunity to everyone to acquire autonomy in realizing their projects, giving free rein to creativity. The makespace is divided into different work area (carpentry, electronic, textile, rapid prototyping, workshop and kitchen).
It offers consulting services designed to help not only target users but also schools, universities and the wider public. Provides events, consulting service for prototyping and training programs.

Target users:
Companies, professionals, craftsmen, start-ups and SMEs.
school, universities and public.

Schedule:
Monday to Friday from 14:00 to 19:00
No free public access. (Against the Fab Foundation regulation)

Financial resource:
Sponsorship and partnership
Direct financial resource of this Lab is from users subscriptions, it have several subscription plans and hourly rate of Machines.

4. CONCLUSION:

Based on the research above, I have a better understanding about the Labs in Milan, it's limited but very practical, by analysing them, it helps me to find the gaps that the other Labs missed, and benchmarking from their strong and common understanding perspective. Gave me a clear view of what service type the Labs provide, what are the main users targets they focus, what I understand

From the Fab Labs in Milan:
All the Labs have at least 2 type of service offers, which are Community-based and Financial-Based. Community-based offer is like event organisation, course arrangement, aiming to bring people together, communicate and share space, equipment, ideas and projects. Financial-based offer is like renting the Lab machines for manufacturing purposes, whether to individual users or companies. They all have a similar range of prices for the using of those services.

All the Labs has the common focus on the people who are related to manufacturing, technical, craftsmanship field or business purpose, some of them organised programmes for children once a while, noun of them has a long term program dedicate to children, which leaves us a great potential and opportunity to do something unique compare to the other labs in Milan.

They all have the programmes for students or universities, which is a very important aspect as one of their missions, and obviously the education approach would bring great vibes and reputation

for the Labs and that is also the intention of the FabLab foundation.

Basically, all those Labs only provide one type of service, which are standard Fab-lab offers. Event though the Lab Makeinmilano mentions a shared laboratory with co-working space, but it did not provide any service specifically for Co-working like the other Co-working businesses in Milan, for example hot-desk, meeting room, private space, locker space, meeting room and so on.

In the end, the Labs in Milan have those feature we should take consideration:

1. Community-based offer and Financial based offer;

2. The main user targets are middle school and above, universities, entrepreneurs, and crafts-men;

3. Regular event and courses are provided regularly based on the capabilities of the Labs, special events on demand, special dedication for minority user groups and collaboration events are provided occasionally.

4. Financial plan: Free public access, full service for subscribed users, the use of machines is calculated according to consumption. Partnership and Sponsorship.

5. No alternative business models are provided.

SPECIAL CASE

SINCE WE ALREADY HAVE AN IDEA THAT WE MAY FOCUS OUR MAIN TARGET ON CHILDREN. IN ORDER TO UNDERSTAND THE SERVICES AND OFFERS REGARDING OUR IDEA. WE ARE GOING TO INTRODUCE 2 MORE BENCHMARK CASES THAT COMPARE TO US. HAS VERY SIMILAR GOAL. TARGET USERS AND ACTIVITY PLANS. INTERIOR AND BUSINESS PLAN PERSPECTIVE. THE SPECIAL CASES ARE: THE MUSE LAB IS (TORENTO. ITALY) AND MC2STEM HIGH SCHOOL FAB LAB (OHIO. UNITED STATES)

The Muse Fab Lab
MUSE Fablab is a digital fabrication laboratory, housed in the Science Museum of Trento, devoted

to the dissemination of the culture of "doing" in the perspective of community, innovation and sharing. MUSE Fablab houses a complete set of tools for digital manufacturing (3D printing, CNC milling machines, laser cutter...), as well as a location for manufacturing electronic, a wall equipped for processing "analog" and a small library of essays and manuals related to the world of "making". Muse Fab Lab is an important part of Muse museum, the Children as one of their main user target, at this point the Lab is dedicated for children to discover nature and the world as they play, where ingenuity and the drive to overcome ancient barriers lead mankind to devise a different future. Evolution, environment,

innovation, biodiversity, experimenting: these are the elements that lead MUSE visitors on the path towards a well-balanced relationship between science, nature and society.

The workshop is open to individuals and partnerships with non-profit associations. Special programs are offered to the business purposes. The Lab has a special focus for schools, especially vocational schools, as well as very practical events for the grammar school kids. There will be workshops for children (5-10 yo), introducing to them the digital "do-it-yourself" method, through fun and innovative tools. The MUSE Fablab is included in the network of international Fab Lab, and was developed with the contribution of the Foundation Rural Bank of Trento and the European project "SEE Science".

The purpose of this Lab is to grow connections, projects and ideas through an open source, experimental and technological approach. Besides Children, techno-enthusiasts or geeky communities, the Muse Fablab acts as a productive laboratory for local associations, communities and start-ups that want to grow local and global cooperative networks.

Target user:
Children (5-10 yo), school students, techno-enthusiasts, geeky communities, start-ups.

Schedule:
Tuesday-Sunday from 10:00 to 19:00

What we understand from the Muse Fablab, they have a wide range of target users, from Children to Entrepreneurs, and they are very flexible and capable of organising events, training sessions according to the user groups. so this Lab is a very good reference for us to understand interior plan, events organization and Lab machine requirement.

This lab located on Ohio, United States. It is a formal education fab lab for high school students. Educators have put a full fab lab in the center of the specially designed STEM school and trained faculty in the skills to run the machines and design tools.

In turn faculty and the principal have designed the curriculum that incorporates the fab lab tools and processes in every discipline taught at the school (math, science, literature, English, history, technology, engineering, foreign languages). They have designed 10 capstone modules (each module is 10 weeks in duration) that address different overall concepts, and each subject takes both the content and fabrication skills into consideration in teaching the module. For example, Electric Light is one capstone. Students design projects around the history of light, the use of light, the speed of light, the cultural uses of light, the technology and science of light, etc.

Company, the Cleveland public school system, with support from private investors.

Originally the purpose of this Fab-Lab is for communities as prototyping platforms to stimulate local entrepreneurship, fab labs are increasingly being adopted by schools as platforms for project-based, hands-on STEM education. Users learn by designing and creating objects of personal interest or import. Empowered by the experience of making something themselves, they both learn and mentor each other, gaining deep knowledge about the machines, the materials, the design process, and the engineering that goes into inventions and innovation. In school settings, rather than relying on a fixed curriculum, learning happens in an authentic, engaging, personal context, one in which students go through a cycle of imagination, design, prototyping, reflection, and iteration as they find solutions to challenges or bring their ideas to life. This deep, usable, transferable knowledge is difficult to achieve in many educational settings. The hands-on, project-based learning environment inspires students to reach for, to demand, deeper knowledge in science, engineering, mathematics and technology; that is, just-in-time learning for authentic, contextual application. Fab labs foster the development of 21st-century skills, through international collaborations, internet-based communication, documentation and portfolio building.

Target User:
hight school students

This fab lab is co-located on a corporate campus (GE Lighting Company) such that GE engineers can come and work in the lab and help mentor students through projects, and through design, engineering and fabrication processes. In turn, the students can apprentice and/or experience a real engineering environment and work with great professional role models for careers in science, engineering and technology. This is a public-private partnership between the GE Electric

This Fab-lab has a very different business structure compare to all the other cases we analysed, it mainly focus on the students, and basically all the events and activities are orientated by the students' activities and routines. This case is good for us to understand that how can a Fab-Lab maintain the sustainable activities by focusing on one group of target users.
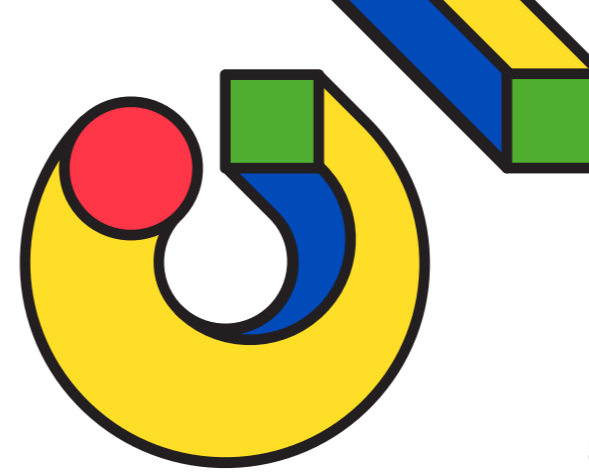
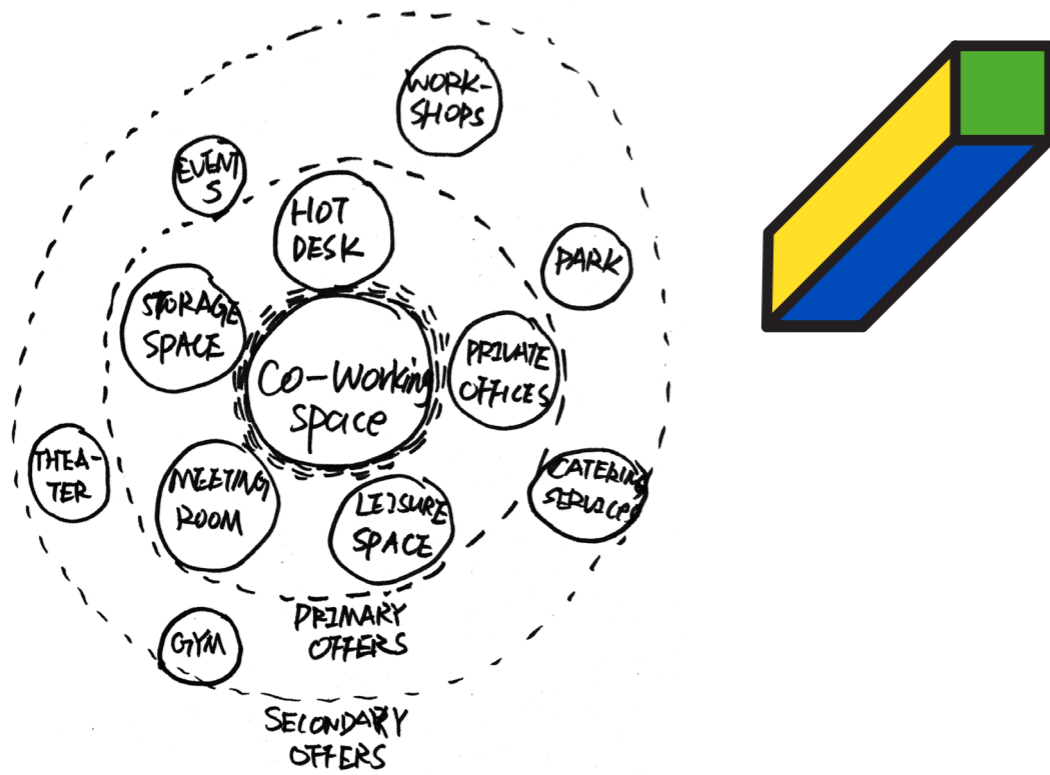# 5. UNDERSTAND CO-WORKING SPACES

As we mentioned at the beginning, this project has a very specific goal which is rebuilding a space combining Fab Lab and Co-working space, so I also did the research for Co-working space in Milan, and some special cases in other countries.

Co-working space is a very common phenomenon all around the world, based on the registered information provided by Google and the sharedesk.net (Co-Working space search engine), there are more than 20 different businesses provide Co-Working services in Milan, as we can see from the map, the Co-working spaces mainly concentrate in Milan, and there is none in Rozzano area, this is also a good reason to support our idea.

How do you value the co-working spaces, they are generally defined by those 4 perspectives: collaboration, openness, community and sustainability. As we all knew that the most important features of the co-working places are Collaboration and openness, that is why the co-working service is so widely used all over the world, it courage people to communicate, and motivate people to share interests, ideas and values by working with people in a friendly environment. but not all the co-working space has the community cultural value. I think this is a very vital perspective to maintain the service sustainable in a social and business perspective.

However, considering the goal of the project, which is building the reputation of Rozzano in the neighbourhood, too much focus on the Co-working space may not be the right solution to achieve our purpose, Compare to FabLabs, Co-working spaces are more commercial driven, and less motivation, creativity and possibility the community could gain from them. So we want to have the Co-working module as an additional offer for our project.
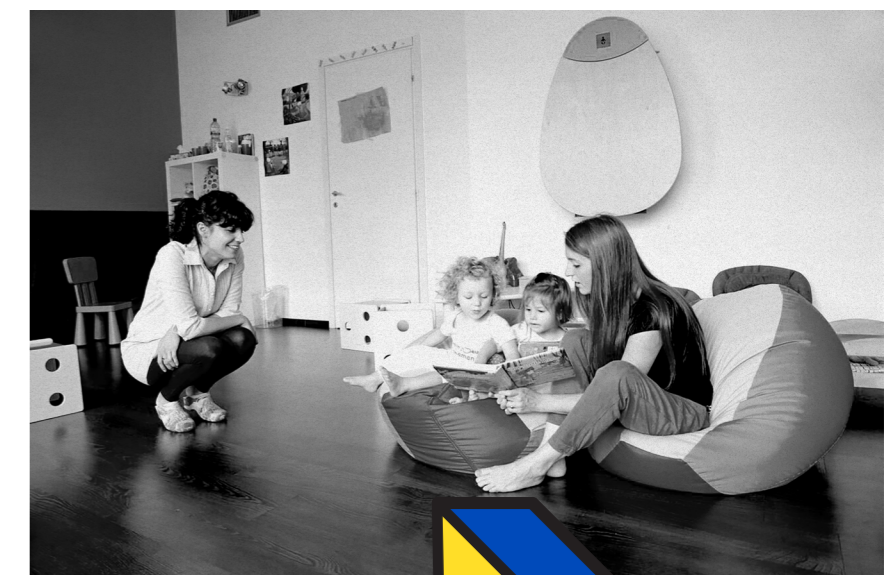
PianoC

PianoC is a special case among them, most of those cases are commerce oriented, this co-working space is purely community oriented, all the activities and services are based on a core values, this is exactly how we picture our service should be.

PianoC is a co-working places specifically designed and optimised for parents (women and fathers) who have children around 0-10 years old, which we normally considered them as family kind, and they normally occupied by house duties and are not able to work continuously. it is full community - integrated service that not only provide in-house services and also a network of conventions and discounts in the neighbourhood, like laundry, shopping and other daily activities. The main services they provide are Room rental, co-baby, recourses timesaver and service package or startups.

Co-baby and resources timesaver is specially designed and optimised for the target users, based on their lifestyle and daily routine, It caught the opportunity that what are the parents are looking for, and what are the needs when they are around with the baby, it also seized the collaboration opportunity among the neighbourhood, like supermarket, laundry, baby grocery markets, and they integrate them into this service.

Besides the special services they provide for the tartlet users, they also have regular offers for regular users.

==This co-working place for their target users is irreplaceable, because their community culture and services are unique and that bond and unite the users.==

I analysed 6 cases in Milan and 4 other cases from other countries, Those are Copernico, Co-working Milano due, Spazio3, Meda36 creativity box, Talent Garden, PianoC, Copass (US), Level office (US), Brooklyn Boulders Somerville (US) and Nova Iska Design Incubator (Serbia).

==Most of cases provide:==
==hot desks (temporary/ long-term), storage spaces (temporary/ long-term), private offices (temporary/ long-term), meeting rooms, leisure spaces==

==Additional facilities:==
==event, workshops, park, theater catering service, gym==

Those features do give us inspirations, according to our project area, also the dimension of the space, some features we could take into consideration, some should be eliminated.

The *HOT DESK* is a must for Co-working space, it is the most basic feature and the most popular one, it actually is a way that invite and courage people to communicate, and motivate people to share interests, ideas and values by working with people

in a friendly environment.
STORAGE SPACE is a very humanised feature, that we would like to have for the interior plan stage. Leisure space is also a very important component in the service, a relaxed and comfortable space would always accelerate working efficiency, the Leisure space may be very small, still better than not having one.

Having a private park may sound surreal, thanks to the natural condition of this area, it comes with a perfect *PUBLIC PARK* with Cafes and Shops, not all the Co-working spaces can compete with this. Since the idea is combining FabLab with Co-Working space, at this point they could perfect benefit from each other, users could take full advantage of this combination, so the Co-working users could also benefit the events and workshops from the Fab Lab.

==Basically, the Co-working spaces in Milan have very similar offers and similar business plans, targeting the type pf users, even thought those bigger Co-working spaces does not stand too much different, they just offer more space and more functions compare to the others.==

6 . CONSLUSION

BASED ON THE RESEARCH ABOUT FAB LAB AND CO-WORKING SPACE. WE TRIED TO ABSTRACT THE ADVANTAGE POINTS OUT OF THEM IN ORDER TO BE ABLE TO CONNECT TO OUR PROJECT REQUESTS AND GOAL. HERE WE HAVE SOME THOUGHTS ABOUT HOW DO WE ENVISION OUR SERVICE BE LIKE.

FOCUS ON CHILDREN:

Since those Labs has the common focus on the people who are related to manufacturing, technical, craftsmanship field or business purpose, some of them organised programmes for children once a while, noun of them has a long term program dedicates to children, for us this is a great potential and opportunity to target a different group of users considering as I mention at the beginning most of the activities and facilities around our location are children based.

TWO TYPE OF OFFERS:

All the Labs we analysed have Community-based offers and Financial Based offers. This is a common business structure that how fab-lab runs, so we should have those as well, for example providing events and courses for our target users, also providing rental service of the Lab machines for manufacturing purposes, whether to individual users or companies.

MULTIPLE USER BRANCHES:

As we mentioned there are plenty different type of users involved in our project area, as we learned from Muse museum, we could focus on a main target group of users, and based on that extend the activities for other group of users, bring in the diversity, in order to build a bond that connect the different generations.
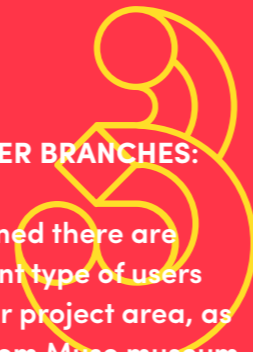
BUSINESS PLAN SUITABLE FOR EVERYONE:

We are going to provide free public access, full service for subscribed users, the use of machines is calculated according to consumption. Partnership and Sponsorship are also considered.

PUT OURSELVES IN THEIR SHOES:

What we learned from PianoC Co-working service, is the service caught the opportunity that what are their target users need in all kind of scenarios, it is very specifically designed, it also seized the potential collaboration opportunity among the neighbourhood. As a benchmark case, we should also use this perspective to deliver a more accurate and holistic service, for example, when a child is using our service, what kind of service we could provide for his/her relevant actors, what is their needs? besides that, what kind of potential collaboration sponsors we could integrate into our service.
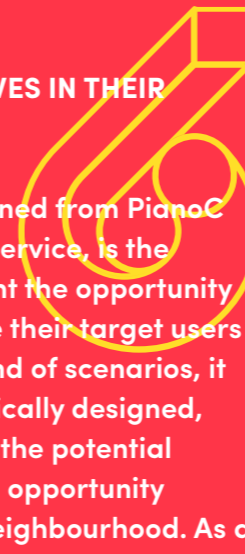
POSSIBLE ACTIVITIES:

One of our potential main target users could be the elementary school children, as I mention at the beginning there is an elementary school right beside our location. As we learned from MC2STEM High School Fab Lab, as one possible activities scenario, we could set the events or courses based on the students routine, or relevant to their curriculum, which this kind of activities would be highly supported by parents, school and government.
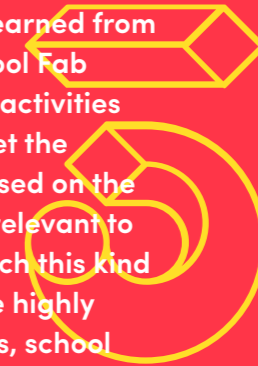
PERSUASIVE COMBINATION:

Those Labs only provide one type of service, which are standard Fab-lab offers, so from the business situation point of view, it provides us a very solid reason why our idea combining Fab Lab and Co-working spaces is a doable idea.

COMMUNITY CULTURE AS CORE VALUE:

In the case PianoC, we learned how a Community Culture brings a sustainable value to the service, setting up a community culture not only gather the users who have same desire, expectation together in a same space, having a more solid topic and theme to share and communicate, also for us it is a lighthouse to reinforce our service, leading us to the same direction, keep guiding us to provide more accurate offers and services, in the end, the service and users are going to rely on each other and push one each other, this iteration process will keep the service sustainable and successful.

The Startbucks shop in Beijing Qianmen

7. COMMUNITY CULTURE AS CORE VALUE

Why we think having a community culture is so important?

A community culture would help us maintain a sustainable service, that we could build fab-lab, coworking space, infrastructure, and business models in a way that they aren't dependent on outside resources to persist, to grow, and to flourish. In the fab-lab perspective, according to the purpose of the Fab Foundation, the fab-lab has to have a universal functionality, means wherever you go you can always fabricate your project in the local fab-lab, because all the fab-lab in the world has the standard set of fabricating instruments, it sounds like a chain business to me, indeed it is, despite the fact of openness, capable of executing ideas, the community culture is the only thing that differ from one another, and it is a very important additional values that could make a fab-lab stands out among many of them;

Community Culture is the shared set of beliefs, expectations, values, desires and rituals that influence the ways in which individuals, groups, and teams will interact with one another and collaborate to achieve common objectives. When we are connected, and use common tools to collaborate, we are more effective and efficient at meeting individual, organizational and collective objectives.

-
Joseph Porcelli, Director
GovDelivery & GovLoop Engagement Services

A Community culture would attract the people who have the same desire, expectation together in the same space, having a more solid topic and theme to share and communicate, which could accelerate the process of exciting ideas and uniting the community, so compare to the services that does not has the community culture, it has a more powerful influence and creativity.

A visual example of Starbucks in Beijing Qianmen. I believe the logics are the same. Building a community culture according to the community you are located in is an important aspect that could effect the service sustainability.
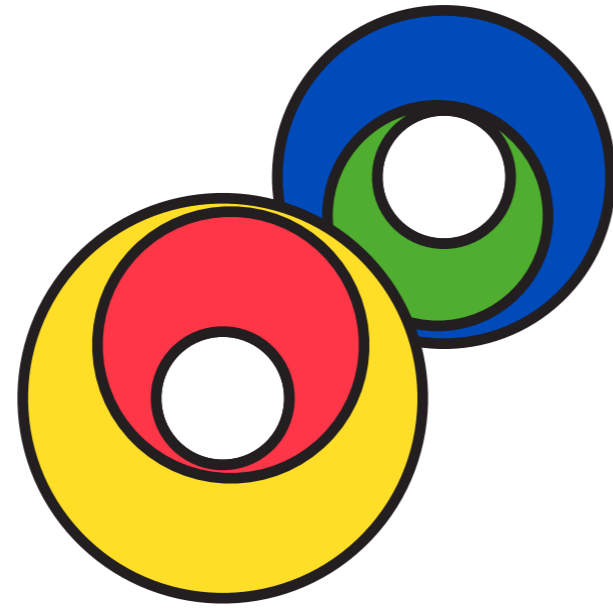
8. SERVICE PROPOSAL

8.1 What if?

What if a service could bring more creative activities for children and a better interaction between the people around children, parents, young adults and elders; and opportunities for people to work in such an environment and fabricate relevant projects?

8.2 What is this Service?

An activity centre that combines Fab lab and Co-Working space, that allows people to communicate, share ideas, get inspired, work and fabricate.

Mainly focus on the Children related activities, organising event and courses for children and the others to learn, experience and fabricate their creativities. Also provides Co-Working space for people to work on children related or personal projects. Aiming to build a dynamic relationship between different generations by engaging them to participate the events together, in order to nurture positive influence in Rozzano.

8.3 How does it work?

In the Fab Lab, Children and the others can participate the events, courses and fabrication activities, by doing that, they can explore their interested subjects, sharing ideas, learning new knowledge and reinforce what they learned, as well as practical skills; the Fab lab also provide services for individual project by renting the instruments in the lab for the people and entrepreneurs who want to execute ideas.

In the Co-working space, we provide hot-desk service, people can work on their own project, it is also perfect for parents to focus on their work while have their children attending the events, also it provides great opportunities for the start-ups who wants to work on children related projects, by using the Fab lab service, they could fabricate their project, furthermore, our staff could organise relevant events to help them explore their project together with the children.
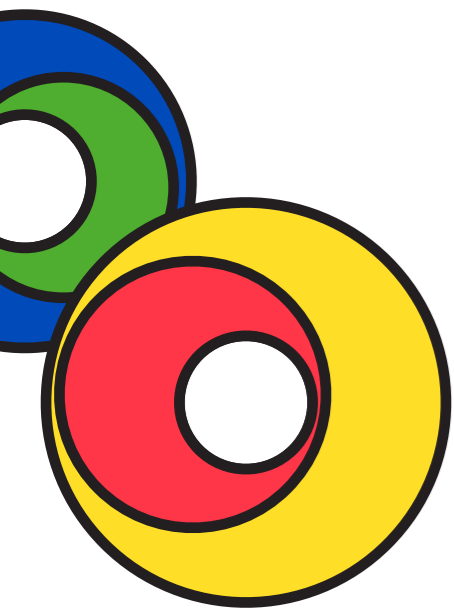
9. ACTIVITY PROPOSALS (OFFERS)

In this activity centre, because of the diverse of the functionalities (Fab Lab and Co-working space), we need to divide the Activity (Offers) into 2 parts, and indicates the primary activity (offers) we want to focus, also the secondary activities (offers) that would live together in the service.

The Fab Foundation has provided a very practical activity examples, so in our project, I am going to come up with a series of personalised offers by replicating the Fab Foundation cases and combining our research conclusion.

9.1 FAB LAB ACTIVITIES:

THANKS OF THE SUPPORT FROM FAB FOUNDATION. THEY DEMONSTRATE SPECIFC AND CREDIBLE SAMPLE PROGRAMS WHICH MADE OUR BENCHMARKING PROCESS MUCH EASIER AND THE RESULT MUCH MORE CONVINCING. ALSO COMBINING WITH THE CONCLUSION THOUGHTS WE GOT FROM THE RESEARCH AND CASE STUDIES. WE LISTED 6 ACTIVITIES (OFFERS) FOR FAB LAB SECTION. AND WE LABELED THEM WITH SECONDARY ACTIVITIES AND PRIMARY ACTIVITIES.

Activity 1:

FOR THE GENERAL PUBLIC.

This group will consist of people who just want to make things or learn new skills or make products in the lab. Also including the people who visit the Lab.

As I also mentioned before, we are going to have multiple users branches, which mean this lab is going to be suitable for any type of people who wants to use the instruments and fabricate products in the lab. The activity for those general users would be fully opened fabrication instruments for everyone, and our staff would provide safety guidance and necessary assistance, as well as one to one personal assistance throughout the whole fabrication process, like a personal trainer in the gym (see Activity 4).

Activity 2:

FOR ARTISTS AND CRAFTERS:

The artists and crafters should be encouraged to come and experiment with the tools and processes of the fab lab. The lab doesn't replace their traditional work, but it augments and broadens the palette of what they can do in their work. It would be great to have artists experiment with the tools in the fab lab. Again, an artist in residency program might be really interesting - offer several active artists one or two month program in which they have access to the entire lab with the technical gurus to help support them.

For this example, actually I am more interested in how can we transform the knowledge and skills of the artists and crafters into more sustainable assets for the lab, instead of just providing them workspace. Indeed, in our ideal space openness comes first, people themselves would share ideas and creativities, communicate and interactive with each other, so in the end we are going to have so many ideas and thoughts, which is good for people to pick what they need, cause we have lots of choices, information and possibilities; at the same time we could also have this option that highlighting those valuable information,
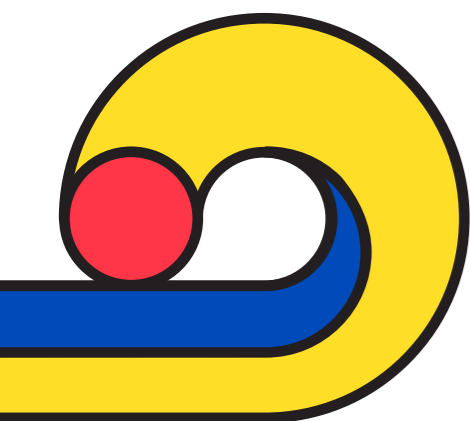
knowledge and skills, reorganise them and present them to our users in a more systematic way.

Collaborative organizations. Social innovation moves in different directions. One of them, a potentially very interesting one, is driven by collaborative organizations: people collaborating to get results for themselves and, at the same time, to create more general social, economic end environmental benefits.
Collaborative organizations are based on an unprecedented blend of the openness (and individual freedom) and togetherness (and capability and will of doing things with others). They operate mixing traditional ways of doing and contemporary technologies.
-
People-as-asset. Grassroots innovation and design in the (economic, social, environmental) crisis. Ezio Manizni, Politecnico di Milano - DIS; DESIS Network1 (http://www.desis-network.org)

People as Assets as a service methodology has always been a lighthouse for me to guide my idea in the sustainable direction, and that is also been proved by so many successful cases around the world that users are the best providers, for example Airbnb, Uber... ; As a service designer, the best service I could imagine would be the assets of the service that anyone could provide and anyone could use, and the service itself as a breed ground, providing the perfect environment for them to push each other grow.

In our scenario, the artists and crafters should not only be users in this service, they should also be providers (course/ event instructors)as well; Our staff could handpick the artists and crafters with suitable skills and knowledge, based on what they could do, by using our fabrication instruments our staff help them to design the best way to present workshops or courses to children or others, in this way, our staff do not need to think about the event theme or topic, they just need to focus on the course directions. For the artists and crafters, we help them to maintain their skills and to explore

their craftsmanship possibilities by using the technologies, and as course instructors they are able to deliver their knowledge to other people. And the users could learn the most authentic and practical knowledge from the local artists and crafters. And we courage anyone who has craftsmanship skills to apply for instructors for the courses.

In the end, according to the events and workshop results and performance, we will consider to collaborate with some of the artists and crafters again or even for a long period of time.

Activity 3

ACTIVITY 2 EXTENSION:

If they produce some high level art or crafts for exhibit in the lab, and outside in public spaces, this will help you show off the capabilities of the lab, get the artists' endorsements, and build the fab lab reputation in the public. You might want to sweeten this deal by offering a stipend for the month, or to fund the materials they will need for their art work for the month, or something along those lines.

In our project area, we have a wonderful park in between the project building and the library, the park was not being used sufficiently, actually it's not being used at all, as a centre of the project area, endowing the park with Fab-Lab events or exhibitions surely will draw people's attention on our service; at the same time we could advertise ourselves, building the reputation in the public. It also will enrich the citizens daily life. Our activity centre will organise exhibition and events once in a while outside in the park zone, mainly showcasing the works that our users have done in specific themed Fab Lab courses, which will be noticed before they taking the courses, so that the users will be more motivated and passionate about their outcomes in the Lab courses.

Fab Lab Make in Milano, they have an in-house shop that selling products designed and manufactured by the Fab Lab or created in collaboration with selected designers. As an additional activity, by using the outside events and exhibitions, we can help users, designers and artists to sell and promote their works, we could also do a small amount of production for the potential uses and providing the business plan for them with collaboration with legal and business outsources.

Activity 4

FOR THE ENTREPRENEURS:

This group includes the college or university students, and young entrepreneurs who are inventive and creative and need a space and a place and a community to support their invention. It might be interesting to have an entrepreneur in residency program—offer several active entrepreneurs a one or two month program in which they have access to the entire lab with the technical gurus to help support them. They can produce some interesting inventions for exhibit in the lab, and outside in public spaces, this will help you show off the capabilities of the lab, get the entrepreneurs' endorsements, and build the fab lab reputation in the public. You might want to sweeten this deal by offering a stipend for the month, or to fund the materials they will need for their invention work for the month, or something along those lines.

Another approach would be to offer a special Inventor his/her own group time in the lab over a one year period. He/she could invite peers, or clients to work in the fab lab on special programs for the year.

According to this case, Our activity centre will provide several different acceleration plans for them to choose based on their project requirements, for example: full/ semi access of Lab or Co-working space service subscription, hour packages of using fabrication instruments, one to one personal support by our Lab gurus, or event co-organise relevant events to experience or evaluate projects together with the children.

Compare to the other activities, this type of activity is more financial driven, and aiming to deliver direct and effective service to help start-ups and entrepreneurs to accelerate their project process, for our activity centre, this kind of activity is very crucial for the user to maintain the financial loop.

Activity 5

FOR GENERAL CHILDREN (6-12 YEAR-OLD)

This should be the main activity we want to focus and push, and this activity together with second activity will present our goal, community culture and service core value, which is:
building a dynamic relationship between different generations by engaging them to participate the events together with the children, in order to nurture positive influence in Rozzano.

As I mentioned at the second activity, the artists and crafters as providers together with our Lab gurus will provide workshops and courses to children or others. So each week, our Lab gurus will look for potential artists and crafters, and select people who signed up for course instructor, then the gurus together with selected instructor will design the courses, select the theme, making presentations, choosing the right fabrication instruments to use, organising materials, updating events information in all the touchpoint (posters, websites, social medias...) and so on.

This type of activity is full of diversity and possibilities, and it will never run of out ideas, because the course providers are out-sources, in the events and courses, the children will learn the most practical and authentic knowledge from the local artists and crafters, also they will learn how to use the advanced technics to fabricate the object from our supporting gurus, it will all happen in this Lab.

Activity 6

FOR PUBLIC SCHOOL CHILDREN AND PRIVATE SCHOOL CHILDREN:

There is a case we mentioned before, MC2STEM High School Fab Lab, a formal education fab lab for high school students, they have designed curriculum that incorporates the fab lab tools and processes in every discipline taught at the school (math, science, literature, English, history, technology, engineering, foreign languages). They have designed 10 capstone modules (each module is 10 weeks in duration) that address different overall concepts, and each subject takes both the content and fabrication skills into consideration in teaching the module.

In our case, even though we are also targeting students, considering our elementary school children's education stages are very basic, we will balance the complexity of each subject, more focus on experimental and practical aspect. To organise this kind of workshops combining the curriculum requires the collaboration with the local elementary school, together with the school event organiser, according to our Lab capability, we could abstract the practical knowledge and the fun element, by using the suitable fabrication instruments, to present the events more appealing and interesting for the children, and meantime, the children will understand the knowledge behind theoretically and practically.

9.2 CO-WORKING ACTIVITY:

TALKING ABOUT CO-WORKING SPACE. EVEN THOUGH WE WANT OUR ACTIVITIES MAINLY FOCUS ON FAB LAB. WE STILL WANT TO PROVIDE THE MOST SUITABLE CO-WORKING SERVICES IN ORDER TO PERFORM THE BEST INTERESTS AS AN ADDITIONAL PART OF THIS ACTIVITY CENTRE.

Activity 7

FOR GENERAL PUBLIC, FREELANCERS AND PARENTS:

We will provide Hot desks for the General Public and Freelancers, it comes with furniture, storage space, high-speed wifi, heating and cooling system, mini kitchen, relaxing area and technic support.

We mentioned parents because based on research, we found before the children finish school, there are parents waiting for their children outside school, in the park or resting in the cafe, so we think to provide this Co-working space for parents to work while waiting for their children, or the parents could bring their children in the Fab

Lab for the courses or events, and at meantime, they can work in the Co-working space, we courage parents to bring their children to the centre, it is a great opportunity for them to build and reinforce relationship with their children, we will also support this behaviour through financial push.

The activity in the Co-working space does not collapse with any activity happens in the Fab Lab, the activity in this two area can happen at the same time.

ACTIVITY 3
The Lab will organise the public event occasionally according the events need, event events might last a few days.

ACTIVITY 4
The Lab would provide sufficient space for the entrepreneurs, also the lab would provide the events/ courses on demand. the Fab Lab and the Co-working space together would provide suitable services for the start-ups and entrepreneurs who wants to work on children related projects.

ACTIVITY 2
For the artists and crafters, the Lab will constantly organise events for them and help them to maintain their skills and to explore their craftsmanship possibilities by using the technologies, and as course instructors they are able to deliver their knowledge to other people.

ACTIVITY 5
As a main Activity proposal, our lab would organise the events for children regularly, nd we will keep them neat and fun. This type of activity is full of diversity and possibilities, and it will never run of out ideas, because the course providers are out-sources, in the events and courses, the children will learn the most practical and authentic knowledge from the local artists and crafters.

ACTIVITY 1
For General public use or visit, the Lab will open to them occasionally according to the week schedule.

ACTIVITY 6
For School students and children, we would like to organise the events frequently, and make the events/ courses short and fun.

INDIVIDUAL ACTIVITY DUATION — LONG / SHORT

ACTIVITY CONTINUITY — LOW / HIGH

Take a look at this Fab Lab activity Property chart, it illustrates the cycle status of the activities and the duration of the activities, also you can see how much we want to focus on these activities. This will help us to manage the activities' daily schedule, and to balance the activities amounts.

THERE IS ONE THING WE ALSO NEED TO TAKE CONSIDERATION. WHAT IS OUR LAB CAPABLE FOR? WHAT KIND OF MACHINE WE ARE GOING TO PROVIDE IN THE LAB. ACTUALLY THAT DEPENDS ON WHAT SPECI CALLY WE ARE GOING TO ALLOW PEOPLE TO DO IN OUR LAB. THANKS AGAIN FOR OUR AMAZING FAB FOUNDATION. THEY PROVIDE A SAMPLE LIST THAT SUGGEST WHAT KIND OF FABRICATION INSTRUMENTS SHOULD BE PROVIDED IN THE GENERAL LAB.
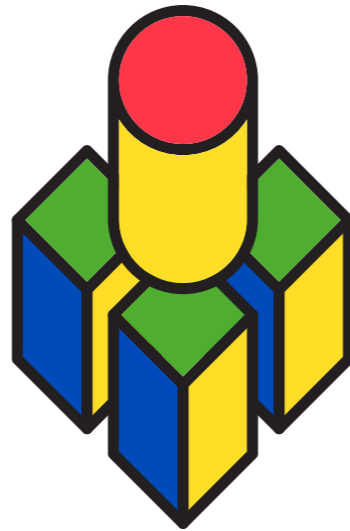
Fab labs have a recommended list of capabilities. These include a laser cutter for making 3D structures from 2D designs, a large CNC mill for making furniture and housing, a NC knife and smaller mini-mill for making circuits and molds for casting, 3D printers, an electronics workbench, and a suite of tooling and materials that allows anyone, anywhere to make almost anything.

The list of suggesting includes:
Large milling machine
Mini Milling machine
Laser cutting machine
3D printer
Electronic materials
Fitter tools
Computers and office facilities
and other minor tools and software...

Since our Activity centre has a very specific theme, major purpose and main users, we can narrow down those instruments from the list;

1. the Milling machines are not necessary for our lab, first of all, the milling machine requires a rather big space and requires high operation skills and highly safe attention, and the purpose of its use does not fit our main activities.
2. Mini milling machine such as Circuit cutter is suitable for our lab, it is small, portable easy to use and perfect for DIY activities.
3. Laser cutting machine also requires a rather big space, but compare to a milling machine, it is safer and requires low operation skills and capable for more precise work, it has a very wide range of capability of processing different material.
4. 3D printer is a must for all the Fab Labs.
5. Besides the main machines, the other materials and tool should be provided on demand.

According to the activity proposals we listed some sample specific activities, and those activities will define what exact instruments we need to prepare in the lab.
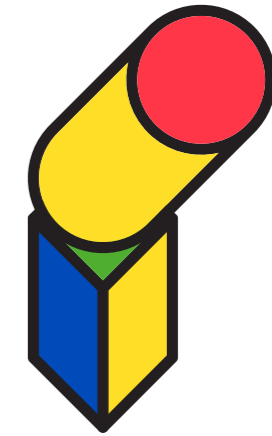
1. For General Public
For those type of users we are assuming that they should be able to make anything in the lab, according to this user group we do not have any specific request.

2. For Artist, Crafters and Children
For this type of users we need to provide the instruments that could help them make detail work, or achieving specific shape or form. As for Children, since one of our main activities is Combining Artist, Crafter and children, and their activities should share the same requirements, more practical, low requirement of technology. For example origami, sewing art, paper cutting art, plush toys making, painting, food design and so on.
The instruments that related to Artist, Crafters and Children:
Laser cutter, Circuit cutter, Sewing machine and other utensils.

3. For the entrepreneurs
Event though the activities they perform require higher standard and capabilities from our in-house instruments, based on the list from the Fab foundation, besides the Large Milling Machine we are not able to host in the lab, all the rest should be capable of achieving any type of experiment, modelling or any other performance.
For example; 3D modelling.
The instruments that related to entrepreneurs:
Computers, 3D printer, Laser cutter, Cricut cutter, Circuit Electronic Materials, Fitter tools and so on.

4. For School students
They are more focusing on the experiments, so the instruments should be able to give them the possibilities to explore and create, they also should be very practical but with high technology involved compare to the activities for Artist, Crafter and Children.
For example: Designing their own T-shirt and making them, Make a simple electronic toy, making a lamp, create vehicle toys in order to understand the revolution of transportations and so on.
The instruments that related to School Students:
Computers, 3D printer, Laser cutter, Circuit cutter, Circuit Electronic Materials, Fitter tools and so on.

10. DEMO SERVICE PLAN AND PRICES

During the research phases, we are not only analysed the activities, offers and users of the Lab and Co-Working case studies, we also did look into their business plans, how do they organise the membership subscription, what kind of instruments they are using and how much do they charge, combining the Personas' needs and our service proposals, we listed several subscription solution for our users to choose.

*The prices are roughly estimated according to the existing Fab labs and Co-Working services in Milan.

Workshop subscription:	Each workshop requests different materials and Fabrication instruments, so each workshop has the different admission fee, that covers the material fee, facility fee and staff costs.
	SPECIAL OFFER FOR PARENTS: IF PARENTS BROUGHT THEIR CHILDREN TO ATTEND THE WORKSHOPSI COURSES IN THE LAB. MEANWHILE PARENTS COULD HAVE THE SPECIAL DISCOUNT ON USING THE CO-WORKING SPACES.
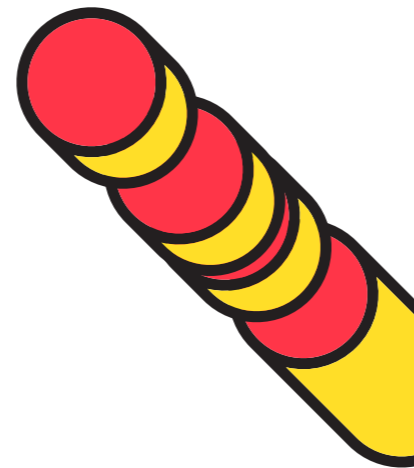
CO-WORKING PACKAGES:

| Smart Hour package:	Tuesday to Friday	150 euro/ month
Medium Hour Package:	Tuesday to Sunday	200/ month
Exclusive Hour Package:	Tuesday to Sunday, fixed table and locker.	250/ month
Flexible hour Package :	Co-working space using fee calculated according to consumption	first 1 hour 8 euro, 5 euro/H for additional time

FAB LAB PASSPORTS:

Basic Fab passport:	Access and reservation Fab Lab course and instruments. discount of using Fabrication instruments)	20 Euro/Year
Advanced Fab Membership:	Access and reservation Fab Lab course and instruments, 20 points/ month of using Fabrication instruments, discount of using Fabrication instruments	600 Euro/Year
Master Fab Membership:	Access and reservation Fab Lab course and instruments, 60 points/ month of using Fabrication instruments, discount of using Fabrication instruments	300 Euro/3 months
Flexible Fab Package:	Fabrication instruments fee calculated according to consumption.	
Fab Points Charge Package	Fab points (Our method of calculating the using consumption, different instrument cost different amount of points)	10 Poins/ 50 euro 20 Points/ 90 euro 50 Points/ 200 euro 100 Points/ 300 euro

*The prices are roughly estimated according to the existing Fab labs and Co-Working services in Milan.

Player Membership : Access the whole activity centre, Fab Lab and Co-working Space, 20 Points [1]/ month for the Lab, 20 Hours/ week for the Co-working space, Tuesday to Sunday.
300 Euro/ month

Champion Membership: Access the whole activity centre, Fab Lab and Co-working Space, 40 points [1]/ month for the Lab, Free use of Co-working space Tuesday to Sunday, 3 Hours/ week personal Guru Support.
400 Euro/ month

Tycoon membership: Access the whole activity centre, Fab Lab and Co-working Space, 120 points [1]/ month for the Lab, Free use of Co-working space Tuesday to Sunday, fixed table and locker, 5 hours/ week personal GuruSupport.
600 Euro/ month

Personal Guru assistance thats help you on your personal project, including application assistance, Fabrication execution assistance.

Personal Guru assistances are calculated according to the time consumption
20 Euro/ hour

1. Our method of calculating the using consumption, different instrument cost different amount of points.

*The prices are roughly estimated according to the existing Fab labs and Co-Working services in Milan.

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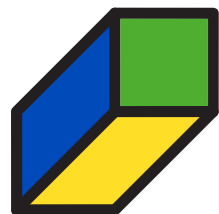
11. ACTORS

11.1 PROVIDER ACTORS:

THE FAB FOUNDATION PROVIDED SOME HANDY INFORMATION THAT HELP US UNDERSTAND THE STAFF STRUCTURE WE SHOULD HAVE FOR OUR ACTIVITY CENTRE. THERE ARE MINIMALLY TWO KINDS OF PEOPLE YOU NEED TO RUN EACH OF YOUR FAB LABS: A CHAMPION, AND A TECHNICAL GURUI MENTOR.

CHAMPION

This is the local community leader who believes in and is passionate about the fab lab concept and what it can do for the community. This is a person who is closely connected to the community base in order to bring resources (financial and otherwise) and commitment to the fab lab from within. This person may already be running an NGO or community center, and has a personal commitment to and community mission for that center, rather than performing merely an administrative role. When times are tough, these champions find the commitment and resources to sustain the operation, and have enough vision to keep the community excited about it. Champions are critical to the success of the fab lab. This person does not need to be technical, just committed and passionate about the idea and well connected within the community to sustain the operation. This person may or may not serve as administrative/managerial support for the lab.

TECHNICAL GURU

This is the person that makes the lab operate on a day to day basis. They must like to make things. That's far and above the most distinguishing factor for a fab lab guru, they must love to make things. It helps a lot if they have either a mechanical or electrical engineering background, OR a background making things professionally. Electronics and programming are good skills to have as well. In the US, high school teachers who lead robotics competition design classes are terrific for this kind of job, as are those with arts or architecture training, or training in industrial arts. This person is always multi-tasking, between maintaining the equipment and supplies, to helping mentor people through projects, and training users on the design software and the fabrication hardware. It's a big job, and if you have a big lab, you need two of them. Below is a job description from one of the fab labs in the network that's a pretty good model. Most of all this person has to be open to new ideas, have a passion for making things, and patience and capability to teach users.
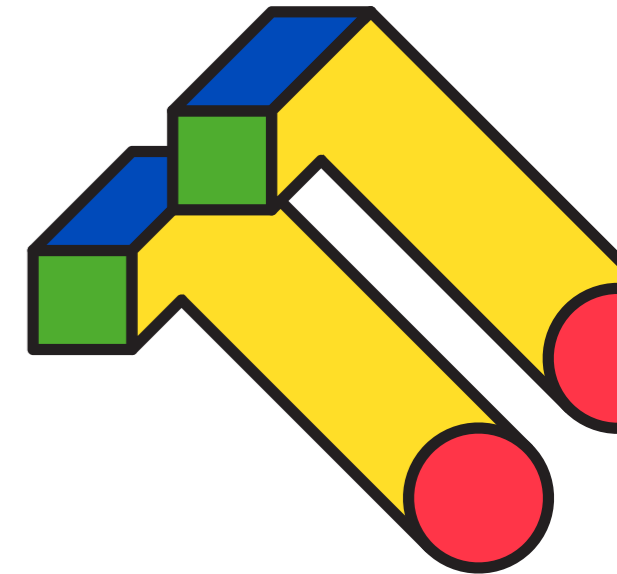
## 11.2 ADDITIONAL ACTORS THAT OUR LAB WOULD COLLABORATE WITH ARE:

THIS TYPE OF ACTORS ARE CLOSELY CONNECTED TO OUR MAIN OFFER. THEY ARE PART OF THE ACTIVITY ORGANISER.

ARTISTS AND CRAFTERS:

The people who have craftsmanship skill or artists skills who wants to dedicate their knowledge to the other people, together with our technical gurus, Fab Lab would organise events based on their knowledge and their skills.

SCHOOL EVENT ORGANISER AND TEACHER:

The people from the elementary no matter teachers or event organisers, that would provide theoretical information that is suitable for children or students to learn, together with technical gurus, we will design the events, courses or programmes according to the theme or topic they provide.
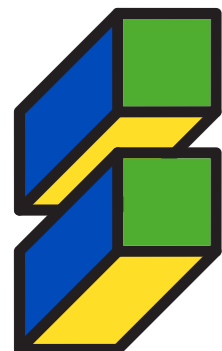
11.3 USER ACTORS:

ANYONE WHO WANTS TO USE OR VISIT OUR ACTIVITY CENTRE SERVICE NO MATTER FAB LAB OR CO-WORKING SPACE. ESPECIALLY FOR THOSE WHO NEED TO USE THE FABRICATION INSTRUMENTS.

ARTISTS AND CRAFTERS:

The people who have craftsmanship skill or artisan skill, wants to manufacture their project or products in the Lab, or by using our Fab Lab fabrication instruments to speed up or upgrade their manufacture processes. As well as for the people who has craftsmanship skill or artisan skills, wants to dedicate their knowledge to the other people.

**GENERAL CHILDREN AND PUBLIC/ PRIVATE SCHOOL CHILDREN:**

The children around 6 to 12 year-old, who are interested in learning new Fabrication skills and knowledge, or interested in doing DIY and fostering DIY hobby.

START-UPS, ENTREPRENEURS AND UNIVERSITY STUDENTS:

People who want to user our activity centre service no matter Fab Lab or Co-working space for the career/ commercial/ education purpose.

Users
Providiers
Suppliers
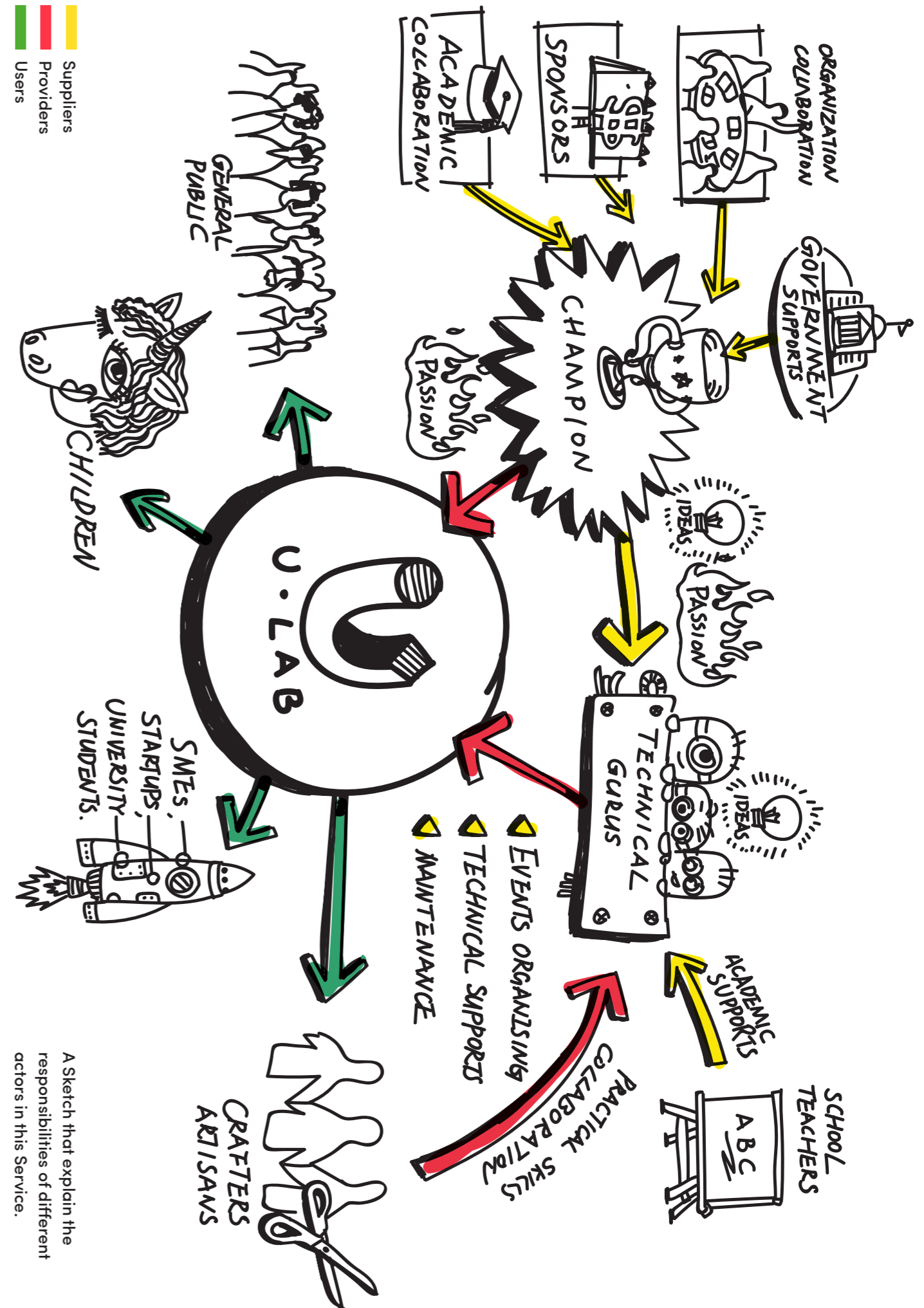
A Sketch that explain the responsibilities of different actors in this Service.
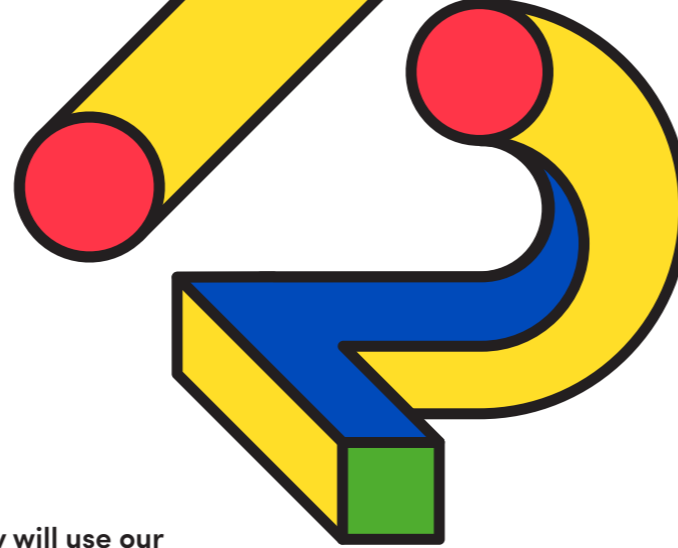
12. PERSONA

Here you can see the user personas that potentially will use our service. Regrading to to our user actors, each persona represents each one of them.

**MARIANGELA
(GENERAL PUBLIC)**

Mariangela is 34 years old, a journalist freelancer, currently lives in Rozzano, she has a beautiful 6-year-old daughter, her husband works in the city every day, so basically she work at home so that she can look after their baby girl. Their daughter paints a lot, about little animals, and her imaginary friends, she always tells a lot of stories about her painting. Recently Mariangela is planning the birthday party for her daughter, and got this idea that she wants to make plush toys out of her daughters' paintings, she think that will make an excellent birthday gift. But where can she find the sewing machines and materials? Most importantly, she cannot leave her daughter at home, is there such a place that she can do this and bring her daughter along with?

**CAROLINA
(ARTISTS AND CRAFTERS)**

Carolina is 42 years old, lives in Rozzano. She is a painter and an Origami artist, she sells her paintings for a living, as a part-time job, she also does origami installations for showcases. Recently she got this client that request a huge project from her, so she have to prepare a lot more materials than she usually does, to make the process faster, it's better to have her materials pre-cut. But where can she get that much pre-cut materials?
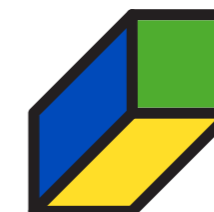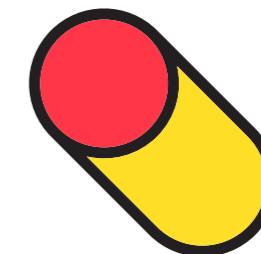
**DARIO
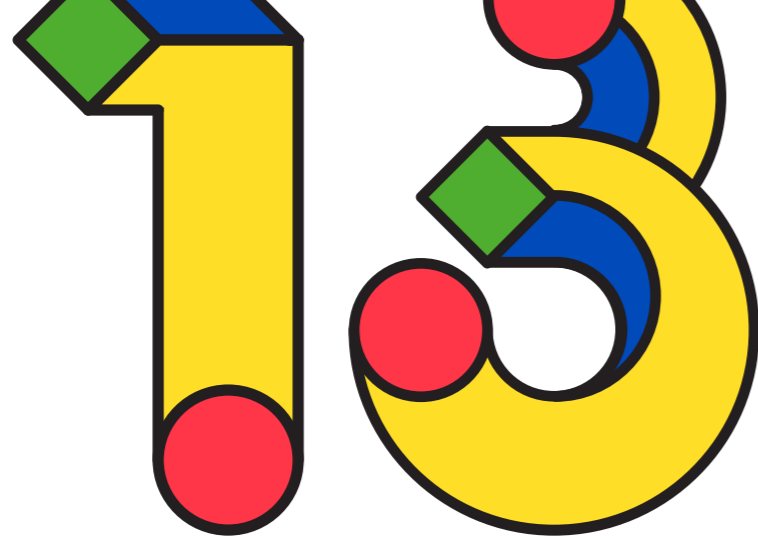(GENERAL CHILDREN AND PUBLIC/ PRIVATE SCHOOL CHILDREN)**

Dario is a 7-year-old elementary school boy, lives in Rozzano close to his school with his parents, he is about to enter second grade next year, he loves natural science very much. One time, Dario's parents took him to the MUSE Science Museum of Trento, and they happen to attend a workshop about making paper lamp by combining origami, electrodes, LED lights and 3d printed holder. Dario was very fascinated about that kind of activities, his parents would love to him to attend more activities like this, but those events are all very far away from where their live and they don't have time to take him to.

**FEDERICO
(START-UPS, ENTREPRENEURS, UNIVERSITY STUDENTS)**

Federico is 25 years old, currently lives in Rozzano, he just finished his Product Design Master Degree in Politecnico di Milano, his graduation design is about an interactive toy that designed for children, his project was very well designed, and he is very passionate about it, recently he found a great opportunity that an incubator organisation would love to take a further step on his project, but after the discussion with the incubator team, there i something he needs to reconsider, change the design, redo the mockups and doing some test and evaluation about the product usability. He knows there are several Fab Labs in Milan that he could do mockups but they all really far away from Rozzano, most importantly, where can he found the children to test his project?

13. STORYBOARD

Going through the storyboard, it is a emotional approach that put us in the users shoes, that will help understand better the users subtle needs in every single scenarios happen in the story line, also will help us test our Lab instruments capability, define the proper touchpoint, potential stakeholders, and reenforce the offer iteration design process.

This map presents where does the actors (Mariangella, Carolina, Dario and Federico) live in the sotries, tell the stories in different locations will help us explore better the possible touchpoints.

General Public Story Board:

Recently Mariangela is planning the birthday party for her daughter, and got this idea that she wants to make plush toys out of her daughters' paintings, she think that will make an excellent birthday gift. But where can she find the sewing machines and materials? Most importantly, she has to carry her daughter all the time, is there such a place that she can do this?

Once Mariangela went to the shopping centre Fiordaliso, as usual, she brought her daughter to the **CHILDREN DAYCARE CENTRE**, and they spend a little time together there. When they left, she found a **FLYER** of our activity centre on the reception counter, she was quite curious about what this service enter like.

Mariangela checked our **WEBSITE** when they got home, she was very happy about our fabrication instruments and the materials we provide, and so many interesting courses that her daughter may like. She checked the coming-up course schedule, **BOOKED** a "Painting with Vegetable" course for her daughter and also made a reservation on the sewing machine for herself at the same day. Finally they made it to the centre, she left her daughter at the courses, and she was ready for using the sawing machine, after a short safety

instruction, she started to make the toy. There are actually quite a few people working on their projects in the room, they were all very passionate about each others project, chatting, discussing and sharing their ideas.

Mariangela had a little trouble on cutting the fabric, because her daughter's painting is a little bit abstract, it is not easy to cut out some details. One of the girl in the Lab told her that she could actually use laser cut to deal with the fabric cut-out process, it's faster and more accurate, with the help of the technic gurus, the job is perfectly done! To make the toys still need a couple more days, Mariangela was very satisfied with our service, and she enjoyed very much in the Lab, she was planning to come back again soon. Also her daughter made a new painting! This time it won't be easy to make a toy out of that.

Possible Service plan Mariangela might subscribe:
Basic Fab passport
Fab Points Charge Package
Personal Guru Service

Artists and Crafters Story Board:

Carolina is 42 years old, lives in Rozzano. She is a painter and an Origami artist, she sells her paintings for a living, as a part-time job, she also does origami installations for showcases. Recently she got this client that request a huge project from her, so she have to prepare a lot more materials than she usually does, to make the process faster, it's better to have her materials pre-cut. But where can she get that much pre-cut materials?

One day Carolina when to buy some origami materials in Brico Shop, she saw a poster in the entrance from us saying that there is an Origami competition in Rozzano ULab Activity Centre, and also that place provides lots of instruments for different kind of fabrication activities, she was very interested, so she wore down the phone number and address. In the checkout, she asked a little more details about the poster she saw earlier, and the cashier told her that if she had a membership card from Rozzano ULab Activity Centre, she will get a certain percentage discount on the Artisan Materials.

Carolina called us when she got back home, and visited us after a few days. Our technical gurus presented our centre to Carolina, explained to her how the Fab Lab works, the subscription plans and also gave her a solution for her material problem. Carolina was very impressed by the fabrication

instruments in the Lab, she did not event know that those instruments can make her project so much easier.

Carolina had a lovely conversation with the gurus, and we knew that she paints and do origamis, she showed us some of her works, we loved them very much, they were very traditional, elegant and perfect for people especially kids to learn, and we told her with our fabrication instruments she could have so much more possibilities on doing origamis. Carolina decides to come more often to our Lab and trying to use our instruments to create modern origami.

We invited her to come to the competition also we would love to have a further discussion about the collaboration on organising origami workshop together.

Possible Service plan Carolina might subscribe:
Basic Fab passport,
Flexible Fab Package,
Advanced Fab Passport,
Personal Guru Service,

Children Story Board:

Dario is a 7-year-old elementary school boy, lives in Rozzano close to his school with his parents, he is about to enter second grade next year, he loves natural science very much. One time, Dario's parents took him to the MUSE Science Museum of Trento, and they happen to attend a workshop about making paper lamp by combining origami, electrodes, LED lights and 3d printed holder. Dario was very fascinated about that kind of activities, his parents would love to him to attend more activities like this, but those events are all very far away from where their live and they don't have time to take him to.

One Saturday afternoon, Dario was planning to go to the Biblioteca dei Ragazzi to borrow some books for his art homework, he asked his father to come with him, on their way to the library, they saw there is an event in the park, that is our Rozzano ULab Activity Centre's event, we held this event to present the works that our members made in the lab courses. Dario was very happy to see those works, he like them very much, he wish that he could participate this event someday. Our technical gurus introduced our Lab to Dario and his father, and invited them to our activity centre, they came right away because our centre is eight behind the park.

Dario was very excited to see all those cool instruments in the lab and everything was very similar to the lab in the Muse Science museum. Our technical guru presented our courses that Dario may like, and gave him little gadgets we made in the lab as a souvenir. Dario's father was very happy as well, because he really wanted to take him to attend this kind of events, but he is very busy, and now his son has a wonderful place to go and do the things he really likes. We also introduced Dario's father our Co-working space, he can come to work during our open hour.

Possible Service plan they might subscribe:
Single workshop admission fee.
Special offer for parents: if parents brought their children to attend the workshops/ courses in the Lab, meanwhile parents could have the special discount on using the Co-Working spaces.

Start-ups, Entrepreneurs and University Students Story Board:

Federico is 25 years old, currently lives in Rozzano, he just finished his Product Design Master Degree in Politecnico di Milano, his graduation design is about an interactive toy that designed for children, his project was very well designed, and he is very passionate about it, recently he found a great opportunity that an incubator organisation would love to take a further step on his project, but after the discussion with the incubator team, there i something he needs to reconsider, change the design, redo the mockups and doing some test and evaluation about the product usability. He knows there are several Fab Labs in Milan that he could do mockups but they all really far away from Rozzano, most importantly, where can he found the children to test his project?

As usual, Federico was checking the information about the Fab Labs in Milan, he was very excited to found that there is a new one in Rozzano, which is our Rozzano ULab Activity Centre, he checked our Facebook page, found lots of interesting information, he looked into the schedule, decided to come visit.

One day Federico came to our Fab Lab, and there were a bunch of kids having a working shop, one of the technical gurus gave him a tour in the lab, Federico explained the detail information about his project and what kind of service he needs, after that, our guru made a plan out of his request, since he need to do a mockup, he could use our Fabrication instruments to manufacture them, and there are many hour package he can choose according to the time he needs to use those instruments; additionally, since his project is related to children, our guru was very happy to exhibit his product in the lab, so that the kids could play with it, meantime, Federico can get the feedback immediately from the kids.

Federico's project went very well with the incubator organisation, the usability report was very convincing since Federico optimised the project among the children, and the feedback are very valuable and accurate.

Federico was very motivated by the late project he did, and he decide to develop more projects related to children in our Lab, he also would love to conduct a workshop for children together with our technical gurus, he wants to tech the children how to make interactive toys, in this way, Federico will get a lot of inspirations from the children and that will help to develop his project, for us, we could really use Federico's innovative knowledge and skills to make our workshop more interesting and appealing.

Possible Service plan Federico might subscribe:
Master Fab Membership
Personal Guru service
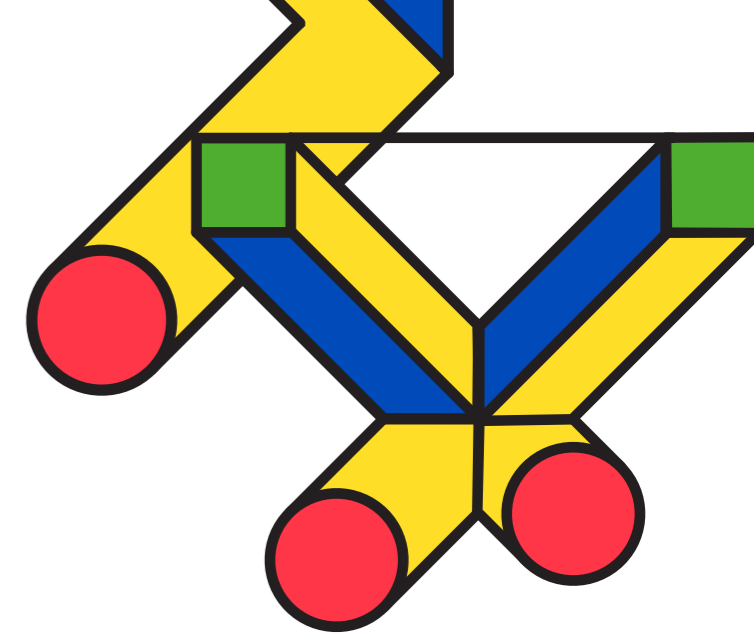
14. DEMO WEEK SCHEDULE

Accordion to the demo program example from the Fab Foundation, combining to all the information we concluded, we sum up a week schedule to demonstrate how should we organise our activities and assign user in a reality point of view.

Personnel for a Super Fab Lab:

If we want to accommodate school groups of approximately 15 to 20 children per group, we should have two technical guru support people working in the lab.

If we have the extended hours then we need two shifts each day.

Our staff would include:

One logistics, planning, outreach and communications manager.

3-4 technical gurus/ support staff for mentoring, teaching, maintaining and supervising the use of the equipment. They would work two to a shift, with two shifts per day: 8:30- 16:30 and 13:30 – 21:30.

The three-hour overlap in time would be used for lab maintenance, professional development and project/group visit preparation.
One technical manager – to maintain computers, equipment, network, and technical problem solving.

Tuesday through Friday,
8:30 AM – 21:30 PM
Saturday and Sunday,
10:00 AM – 17:00 PM
(two tech gurus would work on
alternate Saturdays)
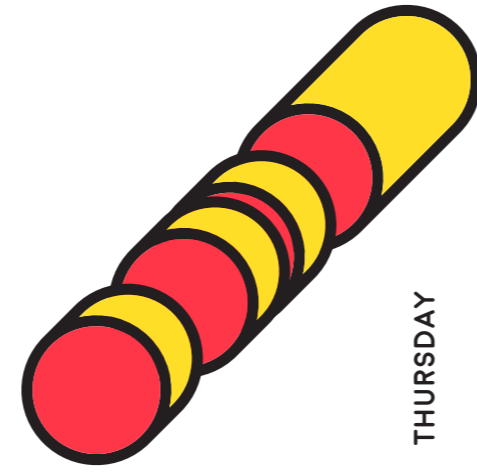
MONDAY

CLOSE

TUESDAY

8:30	Activity Centre opens, Co-working space opens. Preparation for school sessions.
9:00–13:00	Public / Private School Sessions. (Activity 6)
13:30–15:30	Entrepreneurs Session. (Activity 4)
15:30 – 17:30	Special Program Session (like Special Needs groups), Entrepreneurs session continues, professional development and preparatory time for staff.
17:30 – 21:00	Employee time/Workforce training.
21:30	Center clean up.

WEDNESDAY

8:30	Activity Centre opens, Co-working space opens. Preparation for school sessions.
9:00–13:00	Public / Private School Sessions. (Activity 6)
13:30–15:30	Artists / Crafters workshop for children Session. (Activity 5)
15:30 – 17:30	Next time/ session workshop preparation with Artists / Crafters and Technical Gurus (Activity 2), professional development and preparatory time for staff.
17:30 – 21:00	Open Hours for General Public (Activity 1).
21:30	Center clean up.

THURSDAY

|	
8:30	Activity Centre opens, Co-working space opens. Preparation for Entrepreneur sessions.
9:00–13:00	Entrepreneur Session. (Activity 4)
13:30–15:30	Artists / Crafters workshop for children Session. (Activity 5)
15:30 – 17:30	Next time/ session workshop preparation with Artists / Crafters and Technical Gurus (Activity 2), professional development and preparatory time for staff.
17:30 – 21:00	Open Hours for General Public. (Activity 1)
21:30	Center clean up.

FRIDAY

8:30	Activity Centre opens, Co-working space opens. Preparation for school sessions
9:00–13:00	Private/ Public School Sessions (Activity 6)
13:30–15:30	Entrepreneurs session (Activity 4), professional development and preparatory time for staff.
15:30 – 17:30	Fab Academy Class preparation (Technical Gurus organising events by using our fabrication instruments)
17:30 – 21:00	FAB ACADEMY CLASS
21:30	Center clean up.

SATURDAY

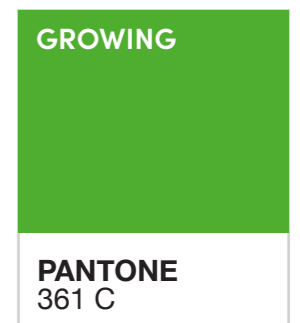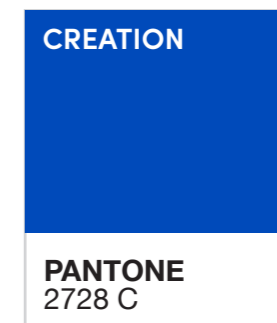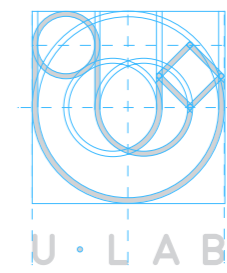|	
10:00–17:00	Activity Centre opens, Co-working space opens. Open Hours for the public and for employees.
17:00–21:00	Co-working space opens.
21:30	Center clean up.

SUNDAY

10:00– 14:00	Activity Centre opens, Co-working space opens. Artists / Crafters workshop for children Session (Activity 5)
14:00–17:00	Next time/ session workshop preparation with Artists / Crafters and Technical Gurus (Activity 2), professional development and Staff weekly meeting.
17:00–21:00	Co-working space opens.
21:00	Center clean up.
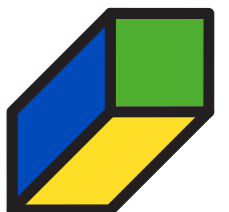
15. VISUAL IDENTITY

In order to build a strong image of this Activity Centre, a well-organised activities are not enough, a strong and accurate visual identity and branding would emphasise the reputation and improve the user experience.

U · LAB

U · LAB

YOUTH	PASION	CREATION	GROWING
PANTONE 107 C	**PANTONE** 1787 C	**PANTONE** 2728 C	**PANTONE** 361 C

15.1 MOODBOARD

15.2 TOUCHPOINT

The Touchpoint are generated by going through the storyboard, the emotional approach that put us in the users shoes, recapping the journey together with the users gave us lots ideas that when are right moments to expose our service.

In the Storyboard I mixed several touchpoint in them, these are:

- Flyer (Could be distributed in the children related organisations or business spots)

- Posters (Could be distributed in the children related organisations or business spots)

- Membership Card (Once a user subscribed one of our services, the users get a certain membership card)

- Business Card (Could be distributed in the children related organisations or business spots, in the centre and our staff)

- Gadget (Could be Postcards, Stickers or Badges)

- Website (Our own Website, for public image and all kind of information)

- Social Media (Facebook, Twitter, Youtube, Vimeo, Flickr and so on.)
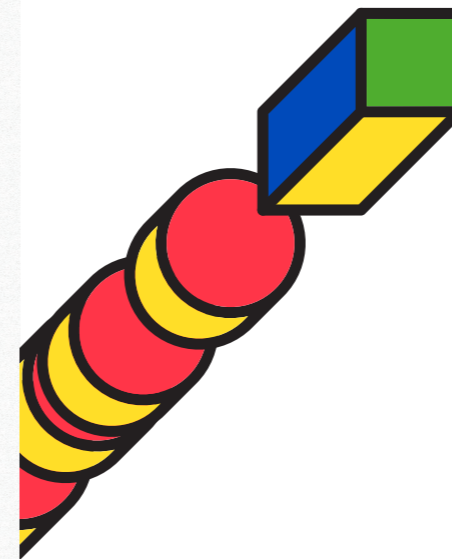
FUN AND TASTY

FOOD DESIGN WORKSHOP

**turpis egestas. Vivamus tincidunt bibendu
m urna eget rhoncus.
10:00–16:00, 13:00–16:00
Vestibulum nisl enim, luctus sit amet varius vitae, e
fficitur in felis. Aliquam enim vel mi congue**

U·LAB

Lorem ipsum dolor sit amet

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mentum enim.

**Lorem ipsum dolor sit amet, consectetur
adipiscing elit.**

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Nunc efficitur metus nibh, et sollicitudin
diam tempus id. Pellentesque habitant
morbi tristique senectus et netus et male-
suada fames ac turpis egestas. Vivamus tin-
cidunt bibendum urna eget rhoncus.
Vestibulum nisl enim, luctus sit amet varius
vitae, efficitur in felis. Aliquam erat volutpat.

Posters/ Flyers

PAPER BOOM

ORIGAMI WORKSHOP

**turpis egestas. Vivamus tincidunt bibendu
m urna eget rhoncus.
10:00–16:00, 13:00–16:00
Vestibulum nisl enim, luctus sit amet varius vitae, e
fficitur in felis. Aliquam enim vel mi congue**

U·LAB

Lorem ipsum dolor sit amet

sollicitudin diam tempus id. Pellentesque
habitant morbi tristique senectus et netus et
malesuada fames ac turpis egestas. Vivamus
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efficitur in felis. Aliquam enim vel mi congue
finibus. Pellentesque eu congue est, id
semper urna. Nam sed fermentum enim.

In rutrum tortor vel sem volutpat l

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tudin diam tempus id. Pellentesque habitant
morbi tristiquam erat volutpat. Sed ut ante
non metugue finibus. Pellentesque eu
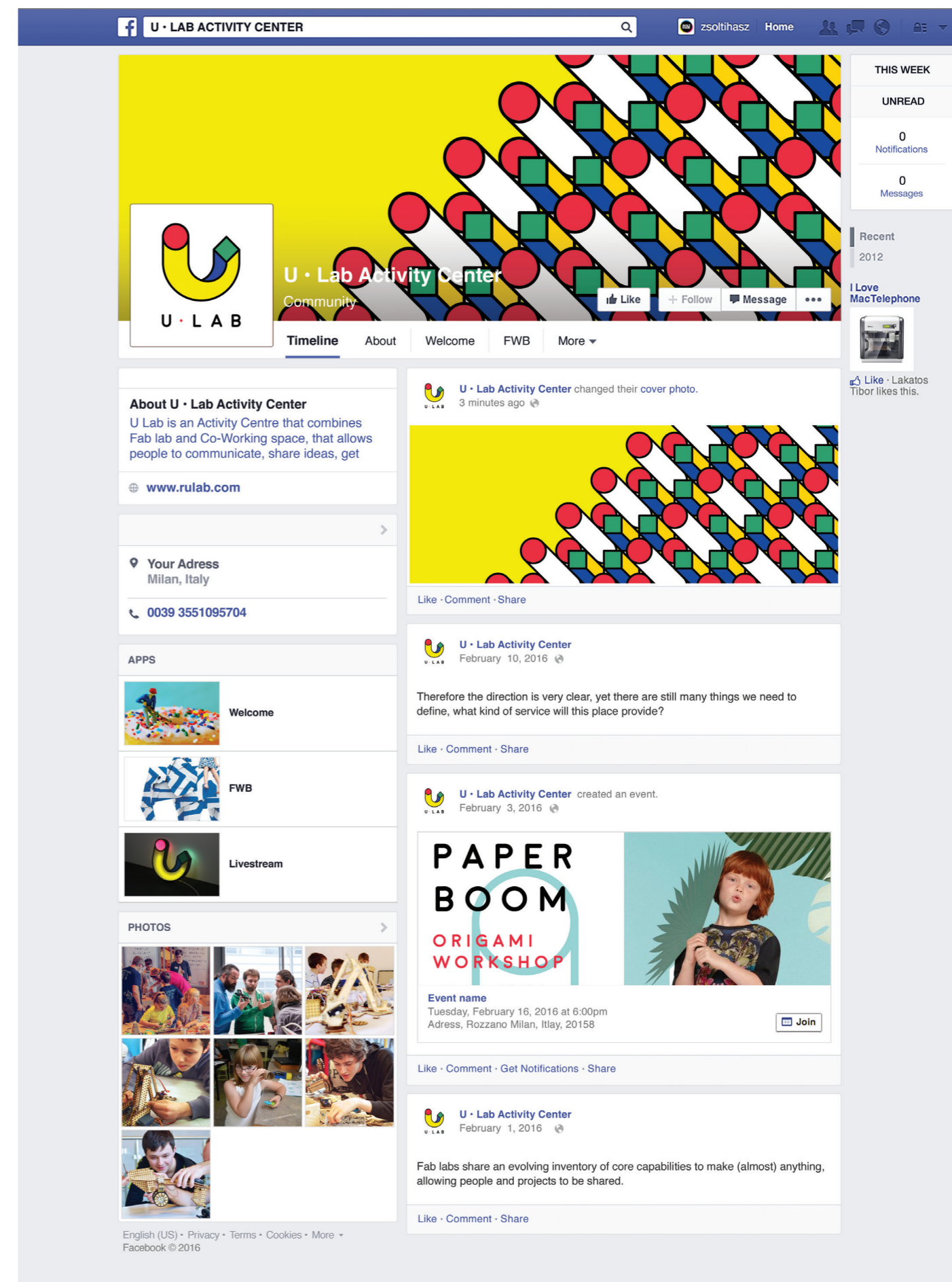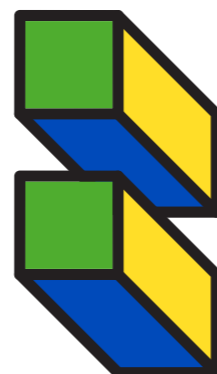congue est, id semper urna. Nam sed fer-
mentum enim.

**Lorem ipsum dolor sit amet, consectetur
adipiscing elit.**

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Vestibulum nisl enim, luctus sit amet varius
vitae, efficitur in felis. Aliquam erat volutpat.

BASIC
FAB PASSPORT

U·LAB

EXCLUSIVE
HOUR PACKAGE

U·LAB

Membership Cards

Sticker Variations

Bags and Packagings

zsoltihasz   Home

THIS WEEK

UNREAD

0
Notifications

0
Messages

Recent
2012

I Love
MacTelephone

Like · Lakatos
Tibor likes this.

U • Lab Activity Center
Community

Like   + Follow   Message   •••

Timeline   About   Welcome   FWB   More ▼

About U • Lab Activity Center
U Lab is an Activity Centre that combines
Fab lab and Co-Working space, that allows
people to communicate, share ideas, get

🌐 www.rulab.com

📍 Your Adress
Milan, Italy

📞 0039 3551095704

APPS

Welcome

FWB

Livestream

PHOTOS

U • Lab Activity Center changed their cover photo.
3 minutes ago

Like · Comment · Share

U • Lab Activity Center
February 10, 2016

Therefore the direction is very clear, yet there are still many things we need to
define, what kind of service will this place provide?

Like · Comment · Share

U • Lab Activity Center created an event.
February 3, 2016

PAPER
BOOM
ORIGAMI
WORKSHOP

Event name
Tuesday, February 16, 2016 at 6:00pm
Adress, Rozzano Milan, Itlay, 20158

Join

Like · Comment · Get Notifications · Share

U • Lab Activity Center
February 1, 2016

Fab labs share an evolving inventory of core capabilities to make (almost) anything,
allowing people and projects to be shared.

Like · Comment · Share

English (US) · Privacy · Terms · Cookies · More ▼
Facebook © 2016

Facebook Homepage

16. INTERIOR SOLUTION

This Design Process also comes with an Interior solution, that would demonstrate a holistic view of every aspect of this project.

In this Section, you will see the space arrangement solution based on the field research, service activity; how do we integrate the brand language into the spatial solution; the functionalities explanation in the different area, and the user arrangement in the centre.
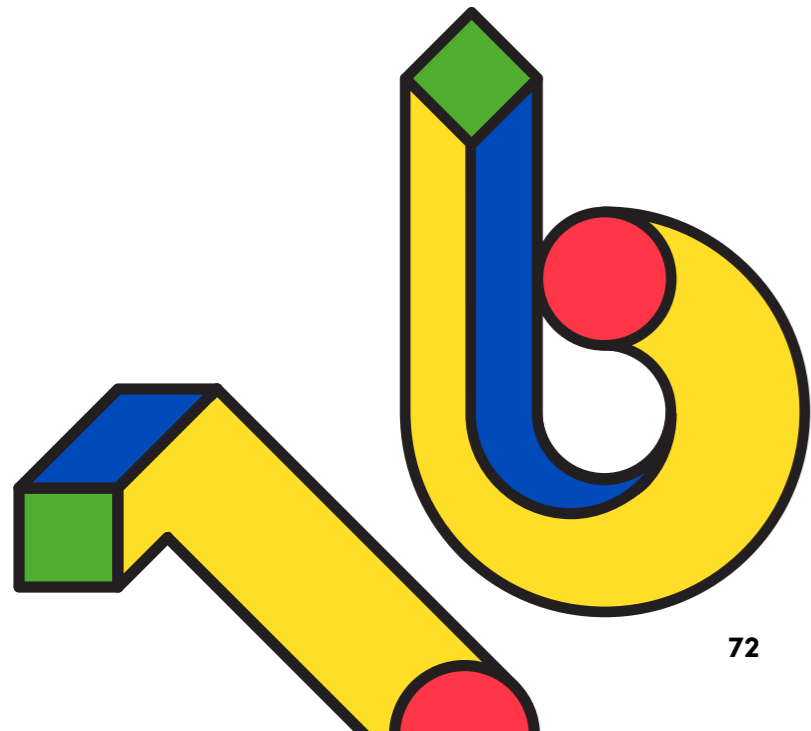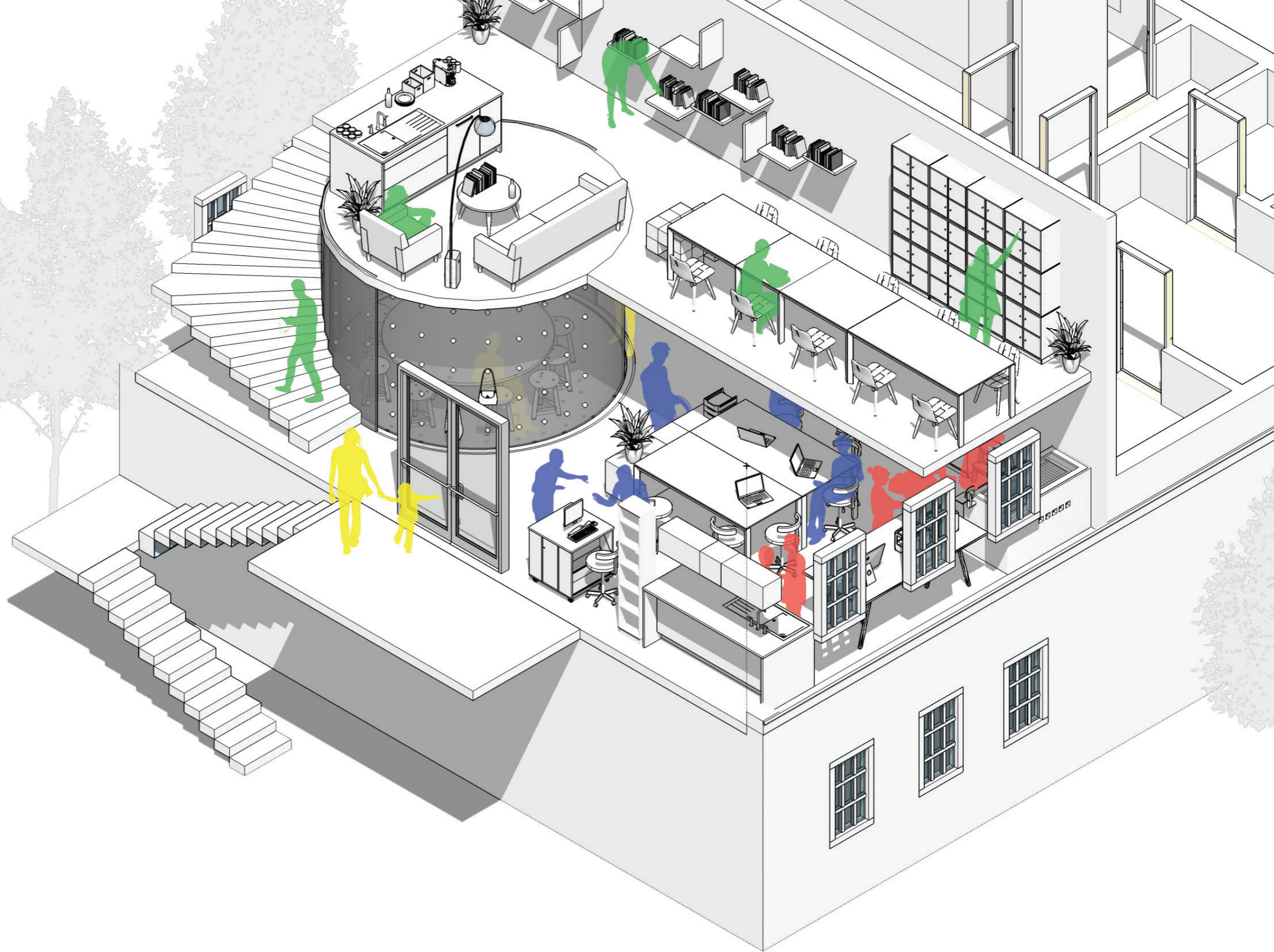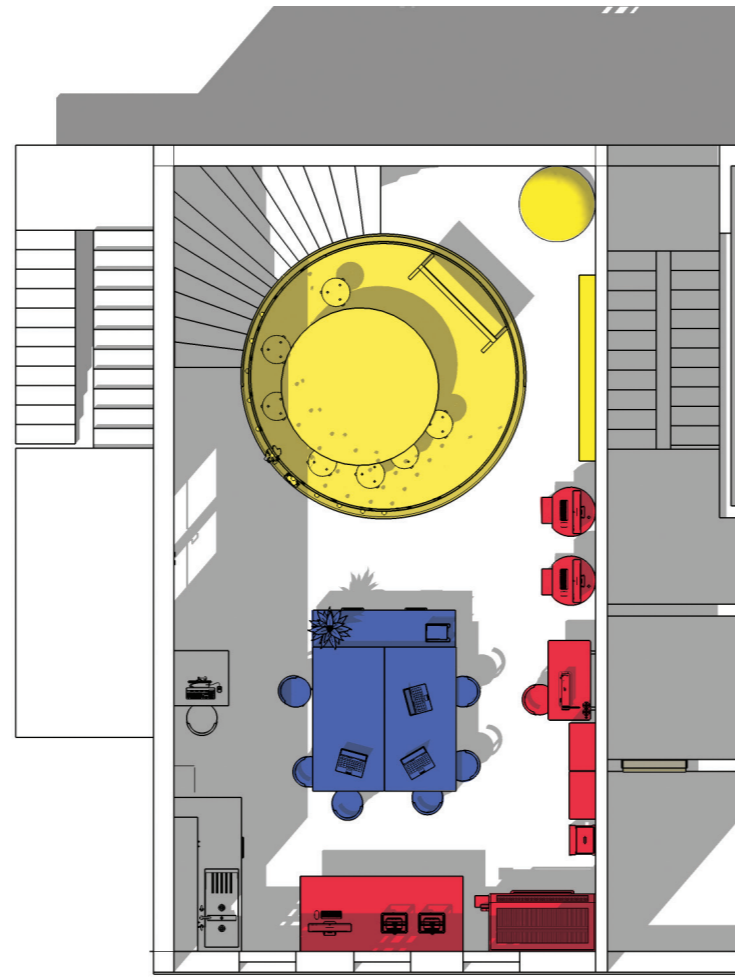
16.1 SPACE FUNCTIONALITIES

1st Floor - Fab Lab

The first floor arrangement is dedicated to Fab Lab activities, it's dynamic and multi-functional.

The **YELLOW AREA** is for private activities, like courses, workshops and meeting sessions.
The **RED AREA** is for Fabrication Activities, like 3D printing, laser cutting, modelling...
The **BLUE AREA** is for technical execution activity, like discussion, extra space for fabrication.

1st Floor - Fab Lab

Yellow - People attend Courses.
Red - People do Fabrication Activities.
Blue - People do Technical Execution Activities.
Green - People in the Co-Working Space.

2nd Floor - Co-Working Space

The second floor arrangement is only dedicated to Co-Working Space.

In this Area, people can browse books, relax in the leisure area, and working in the hot desk.

2nd Floor - Co-Working Space

School Students

Entrepreneurs

Artists/Crafters

School Students

Entrepreneurs

General Public

First Floor – Fab Lab Station
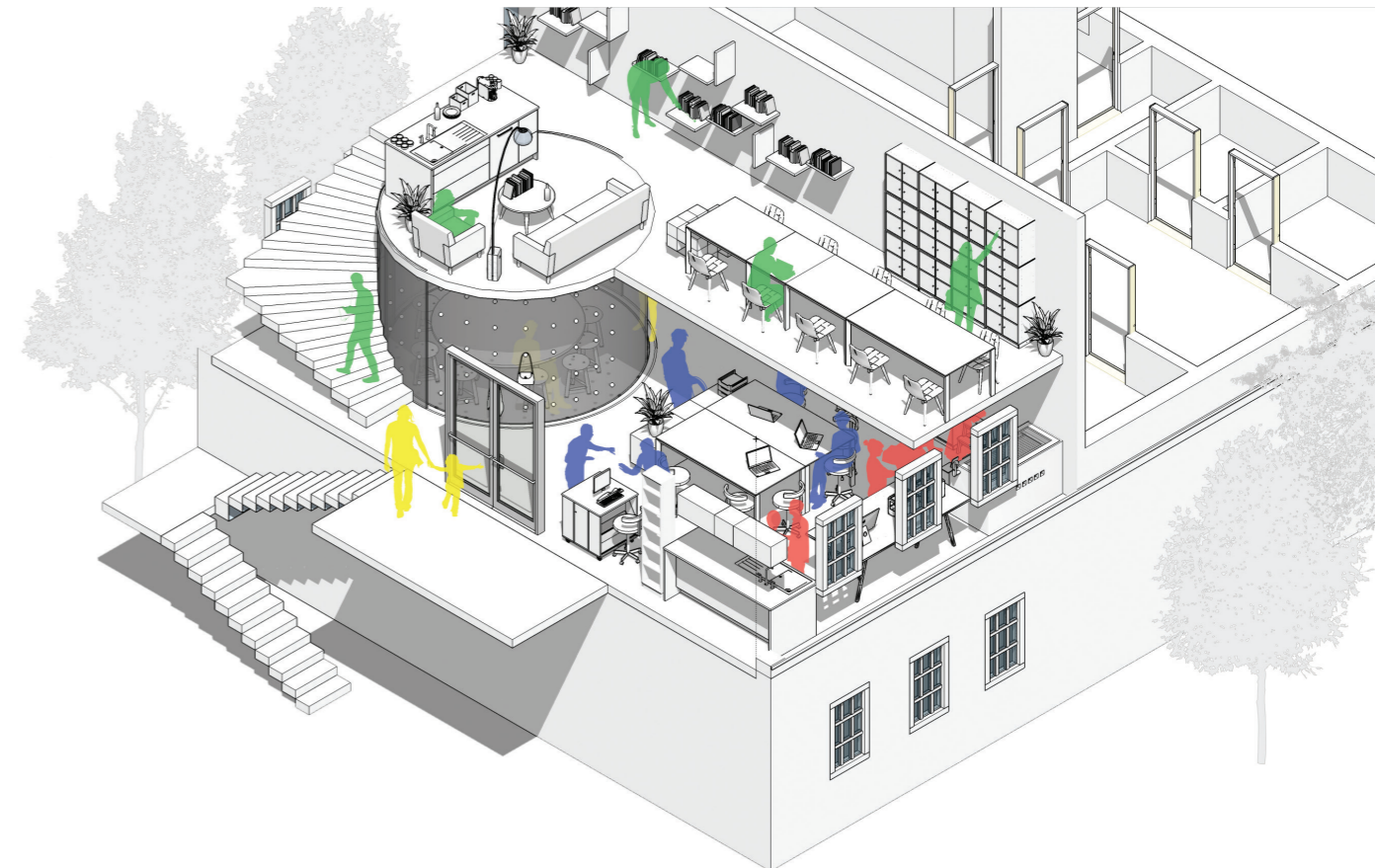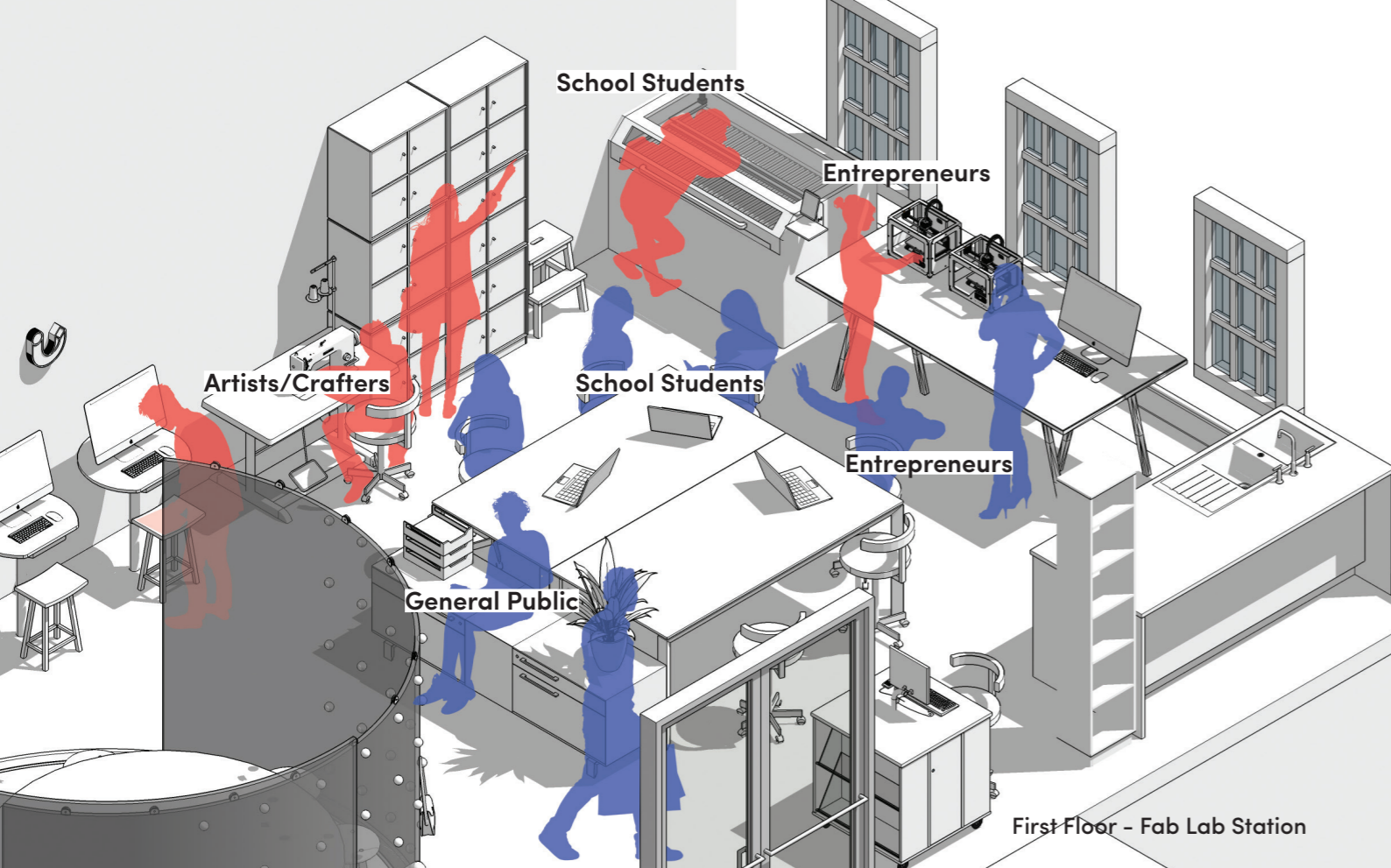
IN THE FAB LAB EXECUTION AREA. WE PROVIDE SPACE AND FABRICATION INSTRUMENTS FOR PEOPLE TO DO ALMOST ANYTHING. ACCORDING TO OUR ACTIVITY PROPOSALS. COMBINING THIS INTERIOR SOLUTION. YOU WILL SEE DETAIL INFORMATION ABOUT USERS. ACTIVITIES AND PRODUCTS THEY CAN MAKE IN THIS AREA.

ACTIVITY 1: FOR THE GENERAL PUBLIC
The Lab is suitable for anyone who wants to use the instruments and fabricate for their personal purposes. Users could just simply visit the Lab or subscribe the preferable plans in order to use the machines.

ACTIVITY 2: FOR ARTISTS AND CRAFTERS
For the Artists and Crafters, our Lab provides the instruments that could help them make detail work, or achieving specific shape or form. We have 4 main instruments, Lasers Cutter, Sewing

Machine, 3D Printer and Cricut cutter, by using thoes machines, they can create unlimited products by using different materials.
Activity Example: sewing art, paper cutting art, plush toys making, painting, food design and so on.

ACTIVITY 4: FOR ENTREPRENEURS
The Lab should give them capable of achieving any type of experiment, modelling or any other performance, so they might use the Technical Execution Area and the Fabrication Area.
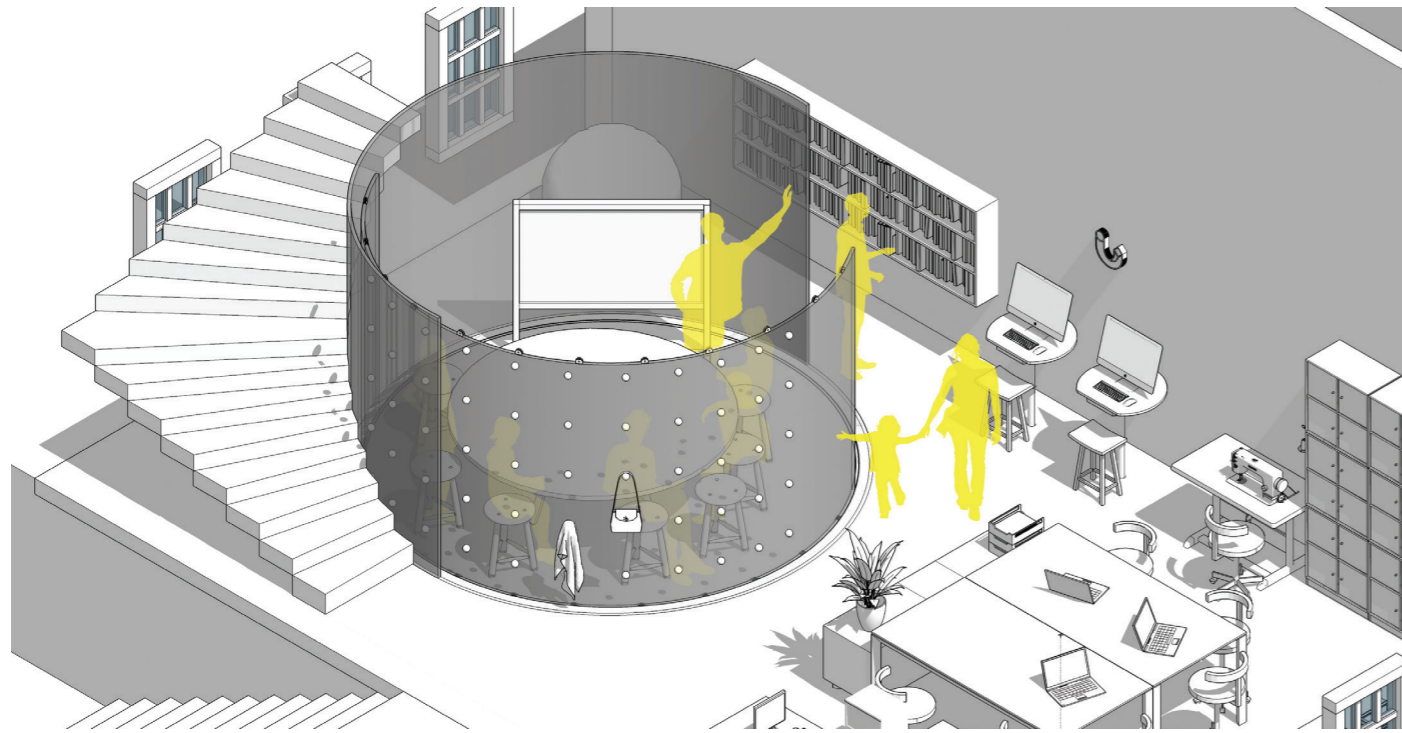Activity Example: Modelling, 3D Printing, small trail production.

ACTIVITY 6: FOR SCHOOL STUDENTS
The Lab should give them the possibilities to explore and create, so they might use the Execution Area and the Fabrication Area.
Activity Example: Designing their own T-shirt and making them, Make a simple electronic toy, making a lamp, create vehicle toys in order to understand the revolution of transportations and so on.

As we mentioned in the chapter 9.3 Fab Lab instruments. We plan to provide almost all the fundamental fabrication instruments that Fab Foundation recommended, Which are **LASER CUTTER, SEWING MACHINE, 3D PRINTER AND CRICUT CUTTER,** even though they seem not much, but those instruments are capable enough to achieve our target users' requirements. Here is some examples what they can do.

Arts

Entertainment

Life Style

Artists and Crafters

Business

Entrepreneurs

Food

Children

Fashion

Students

Experiment

Education

First Floor - For Private Session

This Area could provide different functions according to the events requirements, the flexible slide door could be closed or opened for Private and Open spatial purposes.
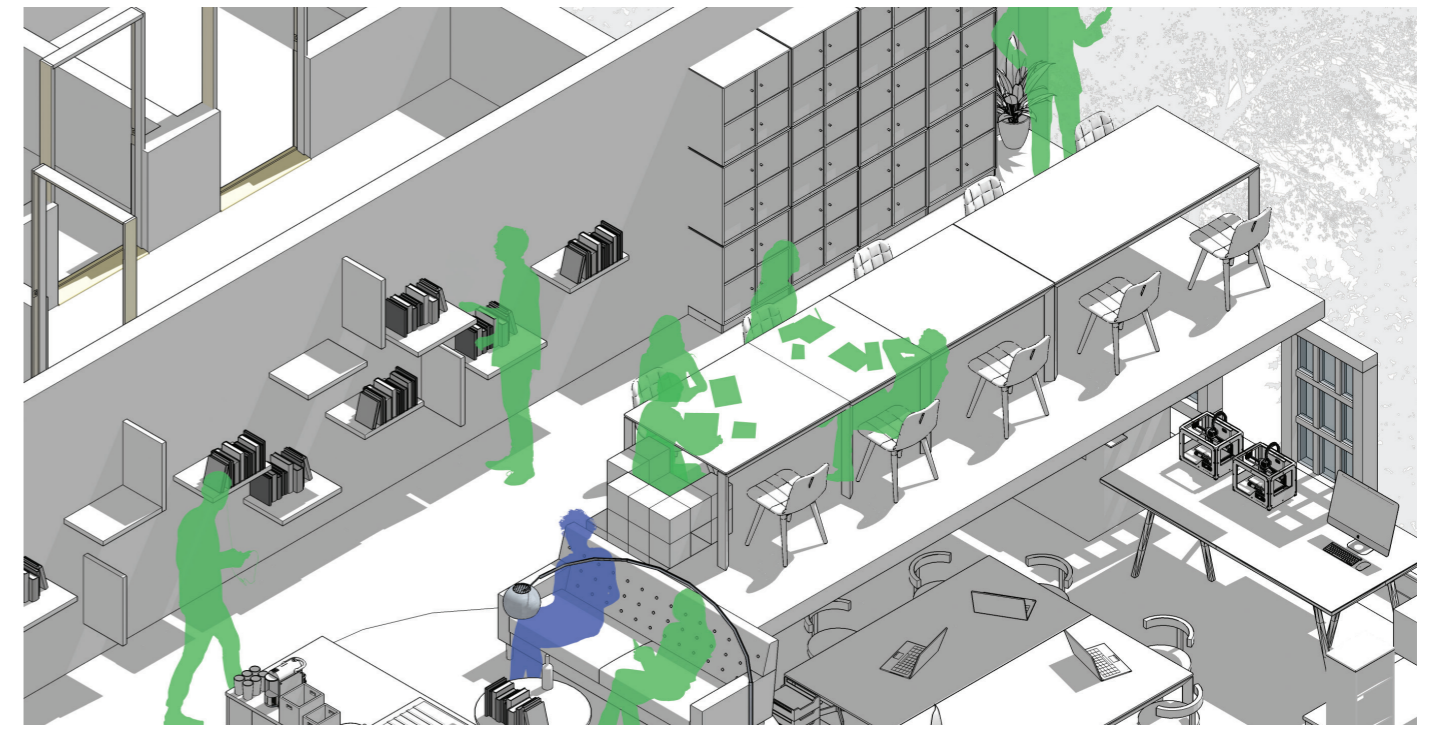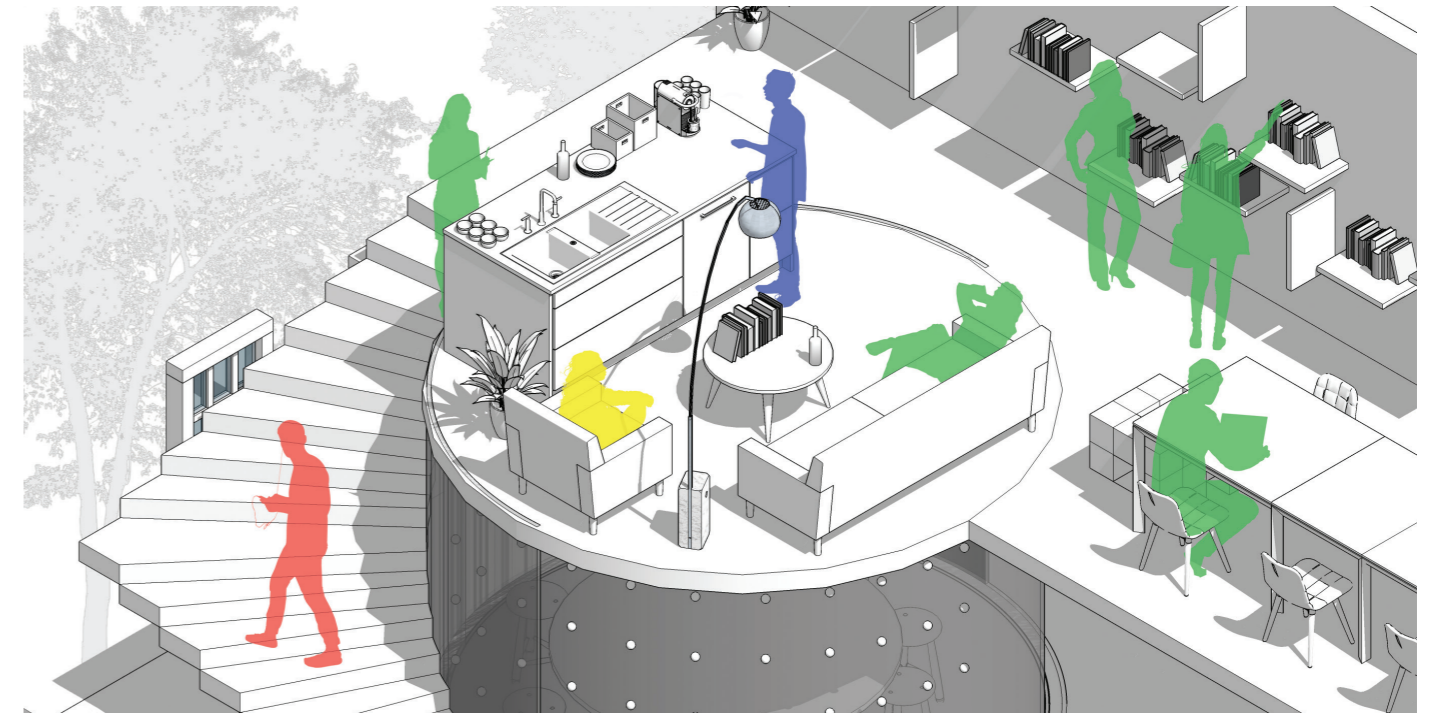

Second Floor - Hot desks

The Co-Working Area is composed by 2 main parts: Hot Desk and a Shared Leisure Space. From the Hot Desk area you are able to see the activities happen on the first floor, for the purpose of spatial interaction.
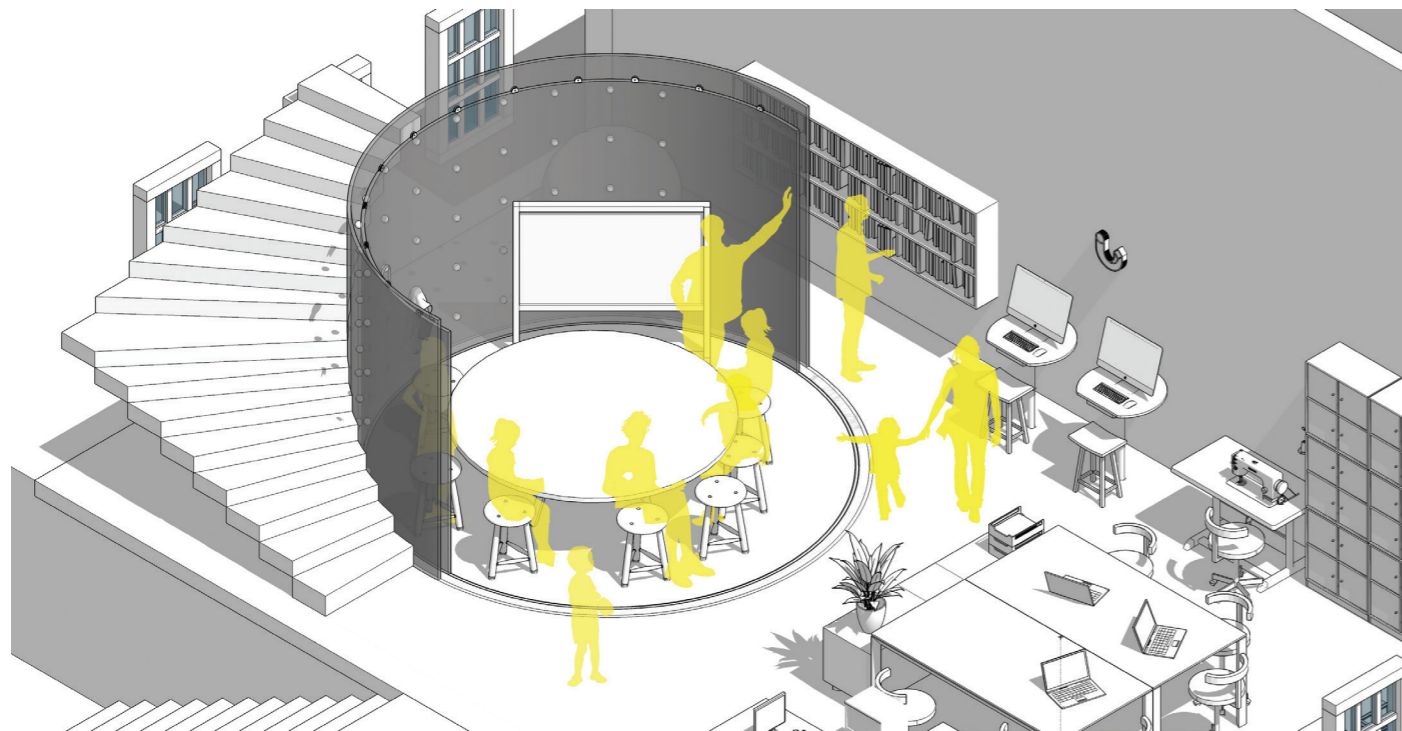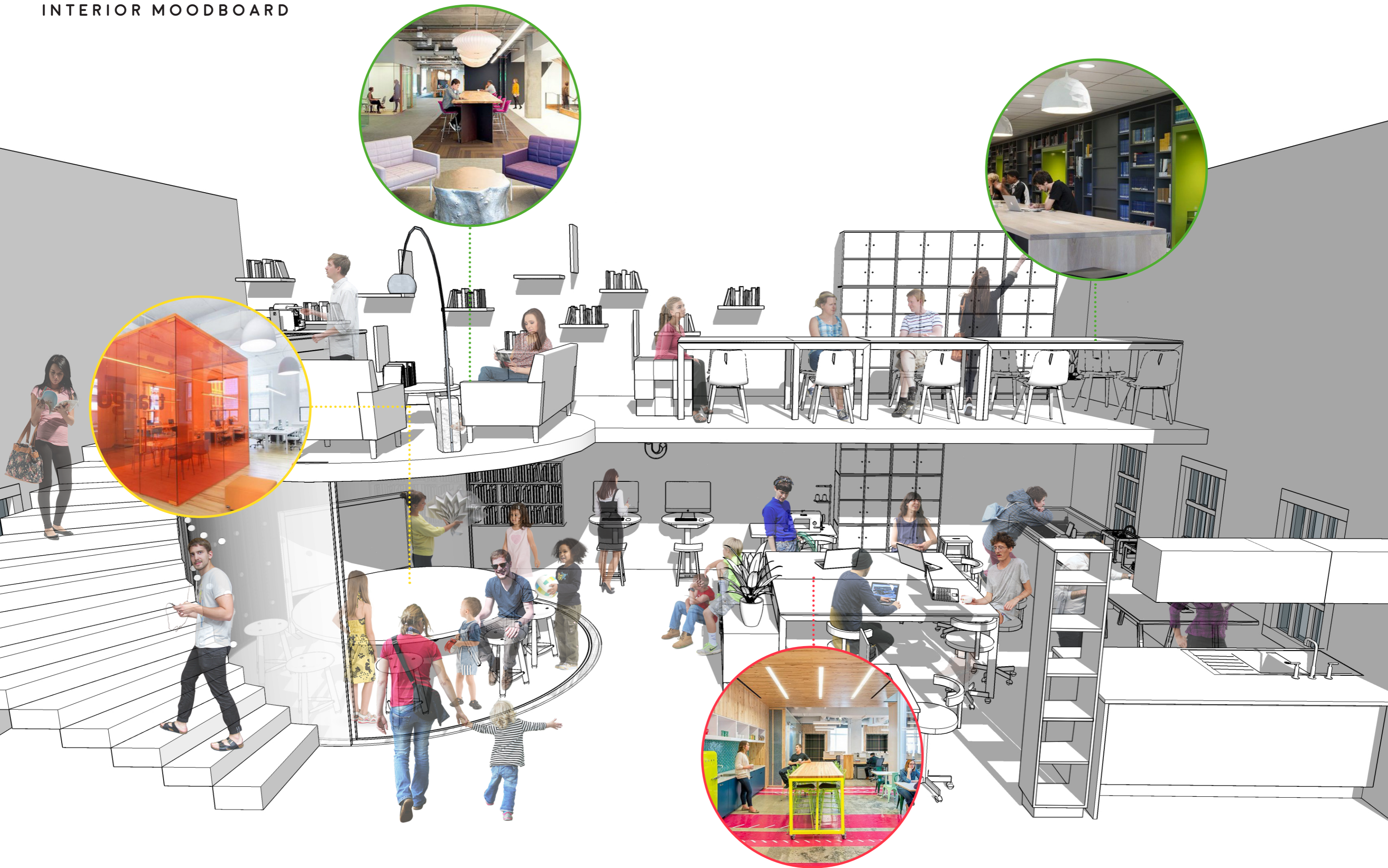

First Floor - For Bigger Public Space

Second Floor - Leisure Space

CONSLUSION

After Demonstrated the Service Activities with Target Users and Visual Languages in a visually interior solution, that presented a holistic view of this Service System, we can literally put our feet in the scenario and experience how this ULab Activity Centre would work.

As a general service proposal, we aim to came up with a strong core value in a short time according to our filed research and general competitors benchmarking, in order to build up the service around it. Additionally, we also purposed as much value as we could cover all the aspects, that could be developed in the future.

Managing a Fab Lab is a complex task, considering the constantly evolving of the technology and technics, the Lab needs to be capable of keeping update and exciting our users, so I guess targeting the right user groups would achieve half of our success.

The 2 Primary Activities are based on our field research and our main target users, so that need to be carried on as our brand activities, along with the other Secondary Activities in order to bring diversities to the Centre. The Service System is also an evolving process, in time, we might need to go over again this iterative design process to refresh or expand our Core Value, our user target, our Activities, in order to achieve a better Goal.

In the end, this service plan sticked to the Goal from the beginning to the end, it adapted and replicated very practical design methods and case studies; involved several design perspectives theoretically and practically to present the ideas and solution in a certain level, it is an amusing and straightforward Design Approach.
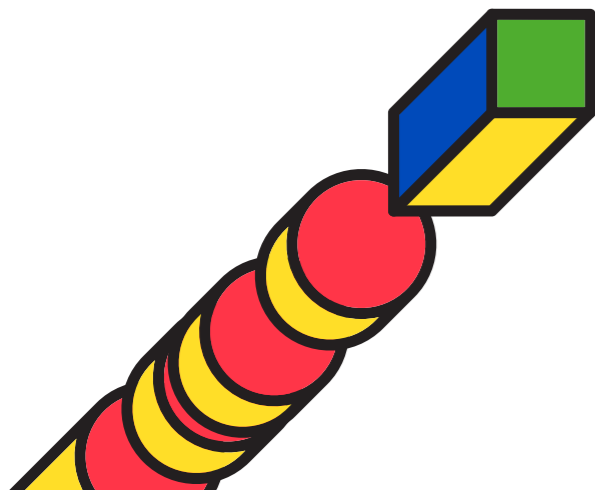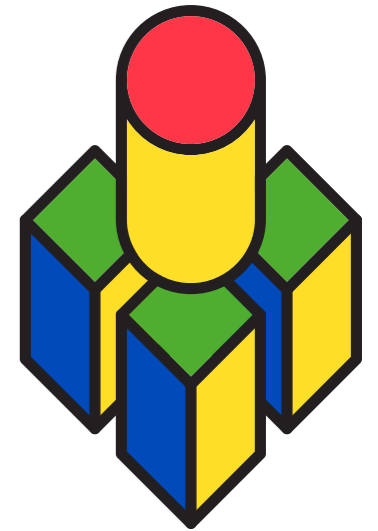
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