

Politecnico di Milano

Scuola di Architettura e Società - MI

E12 - Master in Science in Architecture

**Are you my type?**

*Future School for the Built Environment at Panama  
A collaborative project with children*

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A.Y. 2012/2013



Juan Del Barrio

Thesis for Master in Science in Architecture

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Unless otherwise indicated, figures, images and photographs  
included in this paper were  
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2014

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*Early results of this project has been presented at:*

*Arkki Congress. Creating the Future 2.0  
8-9th May 2014 Helsinki, Finland  
and*

*Arquitectonica network: mente, territorio y sociedad  
International Congress  
Universitat Politècnica de Catalunya  
4-6th June 2014 Barcelona, Spain*

*To Andres, Argelis and OOperai  
you three told me the value of sharing.  
Thanks*

*Milano, July 2014*



I would like to raise up some questions to myself, as well as to you as creative people... What do we do when we have an idea? What is to have an idea, not in general, but now? Finally, which situations or conditions make us have or at least hope we have an idea?

Certainly, I could rephrase those questions according to the main concern of this issue- the future of form. Therefore, how do we operate to give future to an idea, i.e. is "becoming creative" a way to embrace time? What kind of responses and effects are coming from this process? are these useful to assess values?

How to facilitate attraction/effectiveness

~

Picture 1. Coincidences: school of the smiles.  
From left to right: Panama, Italy, India

## Abstract

*...Far from prioritizing metaphysics, the first two inquiries debate on being on the future i.e. the becoming as a step for creating the future. In other words, more intense the empirical inquiry of our present more we will take action in our immediate future. Finally, the third question is about facilitating the encounters, creating new territories while measuring the assemblages.*

Creative engagements with children, particularly the ones related to collaborative design of schools are becoming popular in recent years.

Countries like Finland, Germany and UK have been pioneers in these engagements and have become *sine qua non* models for good practices.

This thesis is concerned with the effects of children's interaction with the built environment. It focuses on six to twelve year-old-children and how their passions and preoccupations are part of the research or planning process. The sensibility gained during the events with OOperai Foundation are used to argument how significant are children experiences to assess experienced-form and how this is giving a more holistic character to architecture. Children's logic do not make a separation between body and mind, characteristic from the Cartesian model (Kress, 1997). I am interested in how this holistic approach is able to make value/meaning and at the same time increase the effects on children creative development. Children might not have an idea of architecture, but curiously, their poetic drawings do make a strong statement of their understanding of the world and their relationships to valuable people, things and experiences.

The thesis explores how promoting creativity, intuition, memory and imagination provides an opportunity to question the role of type and educational institutions for children.

As part of a collaborative process with children, the thesis will approach the design of a school for teaching the built environment awareness at early ages. Along with the learning spaces and the outdoors areas, the project host a research centre for OOperai Foundation in Los Santos, Panama.

The project ground values from three cases of study. First, The juxtaposition of two models of creative practices in teaching built environment awareness: the Panamanian and the Finnish. Supported by a three year collaboration with OOperai (Panama) and two month project with Arkki (Finland).

Second, the Future School Project held by Sini Meskanen and Innoarch (Finland) and the six building typologies encountered in Arkki (Finland).

Finally, a post occupancy survey of a kinder garden and resident's park for the city of Espoo, (Finland) called Kylätalo Palttinan asukaspuisto. In which, the success of the lived spaces was the result of a integrative approach of all the stakeholders and actors involved in the process.

Since 2011, OOperai is working in Panama and has been involved in the assessment of creativity and space/place awareness with kids from more than ten countries. OOperai works with children from six (6) to twelve (12) years. In 2013, OOperai started a project branch in India with the same scope as in Panama: use architecture to achieve a social goal.

With a social goal as a vision, circa three years ago, OOperai started with the idea to promote built environment awareness at early ages. In which far from creating a generation of architects or building lovers, is giving significance to built environment awareness in informal settlements- *with knowledge comes care and therefore quality.*

This school project is another attempt. Its implications and effects are discussed in the last part of the thesis, these implications are measurable in the tectonic scale of the school, nevertheless the idea keeps its immeasurable character in its capacity to rethink the role of the architect towards quality, education and ethics.

Key Words: OOperai, school, architecture, children, space/place awareness, India, Italy, Panama, Finland, type, Arkki.

## Riassunto

Impegni creativi con i bambini, in particolare quelli relativi alla progettazione collaborativa delle scuole stanno diventando popolari negli ultimi anni. Paesi come la Finlandia, Germania e Regno Unito sono stati pionieri in questi impegni e sono diventati sine qua non modelli per le buone pratiche.

Questa tesi è interessata dagli effetti di interazione dei bambini con l'ambiente costruito. Si concentra sui bambini da sei a dodici anni e come le loro passioni e le preoccupazioni sono parte del processo di ricerca o di pianificazione. La sensibilità acquisita durante gli eventi con OOperai Foundation vengono utilizzati per argomento di quanto significative sono le loro esperienze per valutare tipo e forma. Allo stesso tempo dando un carattere più olistico all'architettura. La logica dei bambini non fa separazione tra corpo e mente (Kress, 1997). Questa divisione è un risultato dal modello cartesiano. Sono interessato a come questo approccio olistico è in grado di rendere valore, anzi significato alla forma, e allo stesso tempo aumentare gli effetti sul loro sviluppo creativo. I bambini potrebbero non avere un'idea di architettura, ma curiosamente, i loro disegni poetici fanno una dichiarazione forte della loro comprensione del mondo e le loro relazioni con le persone, cose ed esperienze.

La tesi esplora come promuovere la creatività, dove la memoria e l'immaginazione offre l'opportunità di mettere in discussione il ruolo delle istituzioni di tipo educativo per i bambini.

Come parte di un processo di collaborazione con i bambini, la tesi affronterà la progettazione di una scuola per l'insegnamento della consapevolezza dell'ambiente costruito in età precoce. Insieme con gli spazi di apprendimento e le aree all'aperto, il progetto ospiterà un centro di ricerca per OOperai Foundation di Los Santos, Panama.

### I motivi del progetto

valori da tre casi di studio. In primo luogo, la giustapposizione di due modelli di pratiche creative nella didattica e consapevolezza dell'ambiente costruito: panamense e il finlandese. Questo è supportato da una collaborazione triennale con OOperai (Panama) e il progetto di due mesi con Arkki (Finlandia).

In secondo luogo, il Progetto Future Scuola tenuto da Sini Meskanen e Innoarch (Finlandia) e le sei tipologie edilizie riscontrate in Arkki (Finlandia).

Finalmente, un sondaggio post-occupazione di una scuola materna e un parco di residenti per la città di Espoo (Finlandia) chiamato Kylätalo Palttinan asukaspuisto. In cui, il successo degli spazi vissuti è il risultato di un approccio integrato di tutti i soggetti e gli attori coinvolti nel processo.

Dal 2011, OOperai sta lavorando a Panama ed è stato coinvolto nella valutazione della creatività e dello spazio / luogo di sensibilizzazione con i bambini provenienti da oltre dieci paesi. OOperai lavora con i bambini da sei (6) a dodici (12) anni. Nel 2013, OOperai ha avviato una succursale progetto in India con la stessa portata in Panama: utilizzare l'architettura per raggiungere un obiettivo sociale.

Con un obiettivo sociale come una visione, circa tre anni fa, OOperai ha iniziato con l'idea di promuovere la conoscenza dell'ambiente costruito in età precoce. Lontani dal creare una generazione di architetti o amanti a costruzione, sta dando importanza di costruire la consapevolezza ambientale negli insediamenti informali -*con la conoscenza viene la cura e quindi la qualità.*

Questo progetto della scuola è un altro tentativo. Le sue implicazioni e gli effetti sono discussi nell'ultima parte della tesi, queste implicazioni sono misurabili nella scala tettonica oppure estetica della scuola, tuttavia l'idea mantiene il suo carattere inmesurabile nella sua capacità di ripensare il ruolo dell'architetto verso la qualità, l'educazione e l'etica.

Parole chiave: OOperai, school, architecture, children, space/place awareness, India, Italy, Panama, Finland, type, Arkki.

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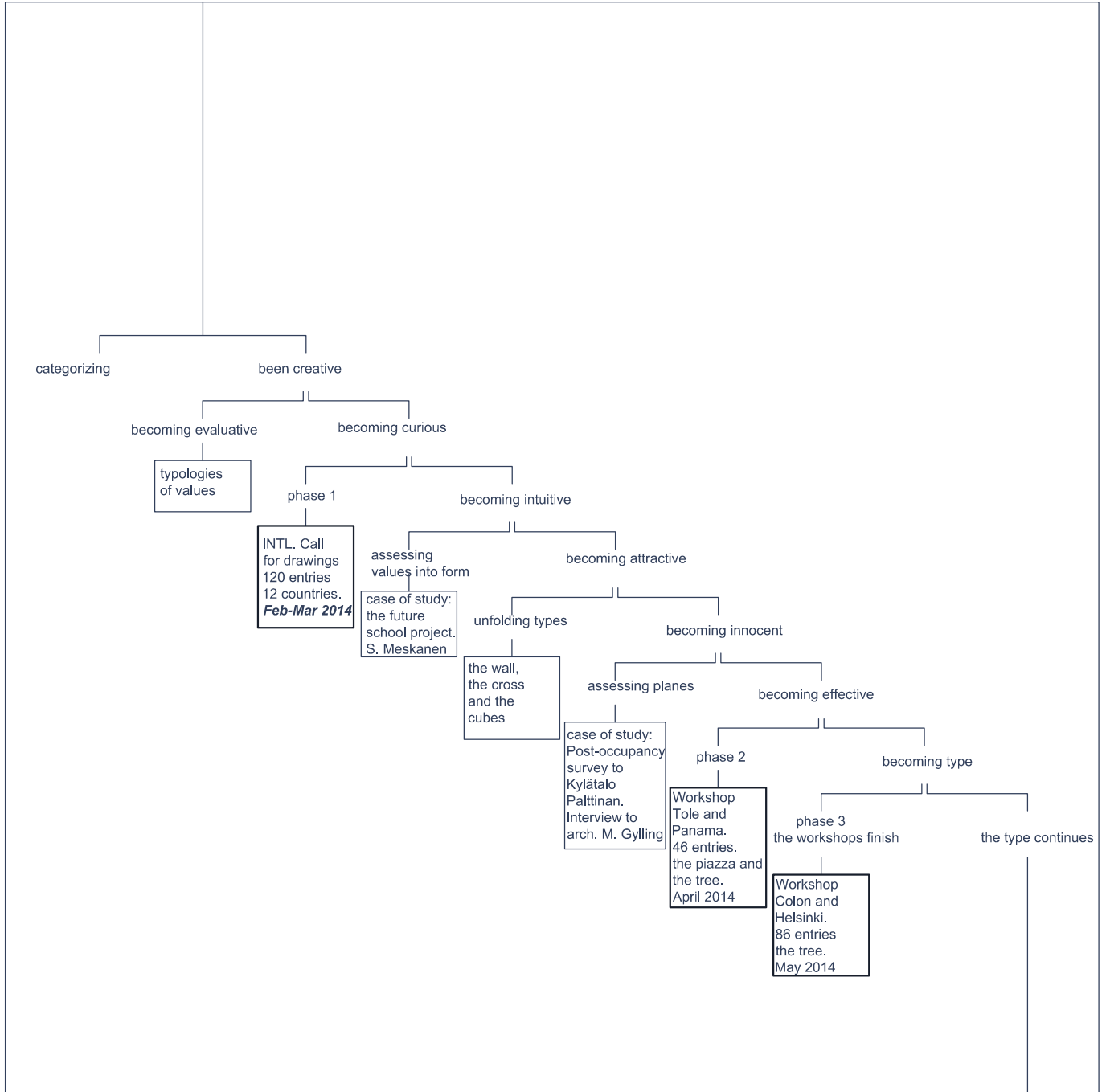
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Annex.

Collective evidence from the encounters

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Author's note



Are you my type?



## 1.

### Preface

#### *Geographies: Notating value and representing it*

Giving value to children's voice in their built environment is a complex adventure. *In fact some years ago, specialists and professionals might consider this as arguable and paradoxical...*

Probably the reasons for such apprehension were the evident lack of a recognized and consensus methodology to tackle the issue and the difficulties found in comparing results among different cultures. In addition, the notion that children do not make a clear distinction between body and mind (Kress, 1997) made the adventure even more challenging.

Nowadays, the panorama is different and indeed it is remarkable the attraction to environmental and architectural research projects with children. These projects are introducing awareness in society and influencing the immediate built environment.

However, the fact that now the authorities and stakeholders are noticing that children are also part of the built environment, still do not facilitate a clear path for the future. In which, those uncertainties need to be tackled at least with more innovative paths.

I regard myself as an amateur in the field. However the following adventure perhaps facilitate values, an approach and tools to achieve effectiveness inside a collaborative design process with children. This document is part of my diploma thesis for the MSc. in Architecture from Politecnico di Milano and involved my own experiences working with children from Mumbai, Rome, Helsinki and Panama.

Ooperai argues the potential of using cross country exchanges for facilitating built environment awareness at early ages. This foundation encountered effectiveness with an operative tool called *type*, which basically promote social interaction in teaching and learning processes.

Knowing the holistic approach this organization is promoting in every educational programs, it was indeed a challenge for me to be coherent with their vision and turn the thesis project into a learning opportunity for their participants as well. There is no intention to use the same approach in different social and geographical conditions. I moved forward with the idea that beside any aesthetical and tectonic reductionism, architecture should bring the possibility for something else - ethics.

Working with children means somehow become children. In other words, rethinking even the most evident facts.

Sometimes, I got astonished by their paradoxical answers to my "rhetoric" questions. For instance, on a workshop made with Arkki in Finland one of the assistant teachers asked to a girl: could you please explain the reasons why to design another park if there is one in less than ten minutes walking? *The girl answers:* because is better to have two than one...

This innocent and poetic answer, made me reflect about what are the effects park are producing and if would it be possible to enhance the accessibility toward this effects. In other words, Children's drawings is not a matter of counting and listing, rather is a strong statement of valuable lived experiences. Perhaps, reflecting on the effects and the atmospheres of the spaces they draw might bring solutions that challenge homogenized spaces.

The same delirious conclusions were more and more evident as the process continue with more drawings, storytelling and models. This was fascinating fact and turned the project into as a learning experience for me as well as for the children as future users of the school.

### *Notating value*

As a starting point, the thesis roots its concept in the notion of type. From Quatremere de Quincy to Aldo Rossi and Rem Koolhaas type has found several definitions. It has demonstrated its abstract, and perhaps mythical character, to produce architecture. On the other hand, type differs from typologies and character which are evident and can be measured in physical dimensions. The concepts of type, typologies and character are constantly used in this project.

In architecture, type has been a fertile idea for synthesizing desire into form. However, far from any reductionism of form and character, type is coincident with its users, society, values and techniques (i.e., it is an holistic representation of the society that embeds it).

Nowadays, the idea of type is not very far from the conscious act of acknowledgement. Several authors have found value in it and have taken it as a way to produce architectural knowledge. For instance, Carlos Martí Arís stated that, in type, the relationship between form and meaning is evident. However, it has already been stated that type should not be taken as a univocal relation. In other words, "type does not attempt to diminish or limit the creative capacity of the artist".

On the other hand, Rossi has noted that type is abstract and synthetic. It is a contemporary operational tool to experience a city. Notating types and its mutations in a time line results in the possibility for reading a society and the signs of its times. Somehow, type is capable of simplifying the experience of a city without hiding the structural skeletons of social and physical phenomena.

Finally, Grassi stated that type is capable of providing a rational and logical organization to architectural knowledge. Reusing it, as a tool, ensures immediate investigation skills in the valuation of students' architectural knowledge. "Type has a cognitive purpose".

I traced on type a creative concept for critical awareness of the built environment, this is why it was important to have exchanges between children from different contexts. I believe that it is possible to unfold knowledge just through differences, at least this was fundamental for me to notate children's passions and concerns for the future school. The same concept, has been used by the Foundation Operai and has involved more than 10 countries, and is currently producing results in Mumbai and Panama.

On the idea of type, Michael Hays wrote:

"The second typology, which substituted for the classical trinity of commodity, firmness and delight of means and ends joined by the criteria of economy, looked upon architecture as simply a matter of technique. [...] Various attempts were made to blend the old typology with the new in order to provide a more satisfactory answer to the question of specifically architectonic form: the primary geometries of the Newtonian generation were now adduced for their evident qualities of economy, modernity and purity. [...]" (Hays, 1998).

Curiously, Hays used verbs between elements: substituted, join, look upon, blend, adduce, appropriate which clearly made evident the act of becoming as part of the notion of type. This also supports the idea that type is not a static concept, it evolves and mutates. If the affection or desire is so strong then the manifestation of type becomes evident, in terms of character or typologies, as it has happened with these three well known:

-The first typology: The Primordial Hut – a human centric model.

\*

-The second typology: The Machine – a systematized model.

\*

-The third typology: The historic city –

The collective memory of A. Rossi and The downtown athletic club of R. Koolhaas.

\*

But... Why Pevsner's History of Building Types (1976) does not express intensity in its manifestation? simply because it was an act of recurrence without repetition. In other words, the concept was killed by making a romantic the list of forms.

This is important in the architecture debate because, the scope of the events was to encouraged experiences and values rather than produce realistic drawings of architectures. This definitely will turn in innovative routes, assemblages and new territories for producing architecture. In other words, the drawings become critical statements with the form of poetic images and representations of lived experiences.

On the other hand, professionals from the conservation and preservation field constantly use the notion of ideal types and categories of values to assess cultural significance. Even though they are in a different scenario compared to this project, we share a common ground: In order to give future to this methodologies, we must build value: educate - because no one will care about something that don't consider valuable.

From Riegl to Burra, these historical notations of value, are frequently used because of their effectiveness and holistic approach to assess value in the built environment.

For me this process of creating and communicating the value was fundamental because of two principles:

First, it is adding different perspective of a complex issue. In other words, it is establishing an holistic approach with clear categories for studying the qualitative evidence.

Second, it is creating engagement. Participants were able to recognize their importance in the process and promote an appropriate atmosphere for participation and collaboration.

Without this kind of methodology would be very difficult to warrantee integrative outcomes.

The children's age range was from six to twelve-years-old and they were approached by OOperai Foundation. Circa, 200 children engaged the events organized.

In this events, the vehicle for assess results were drawings and models. The children were initially encouraged to explore their imagination and memory through intuition and play.

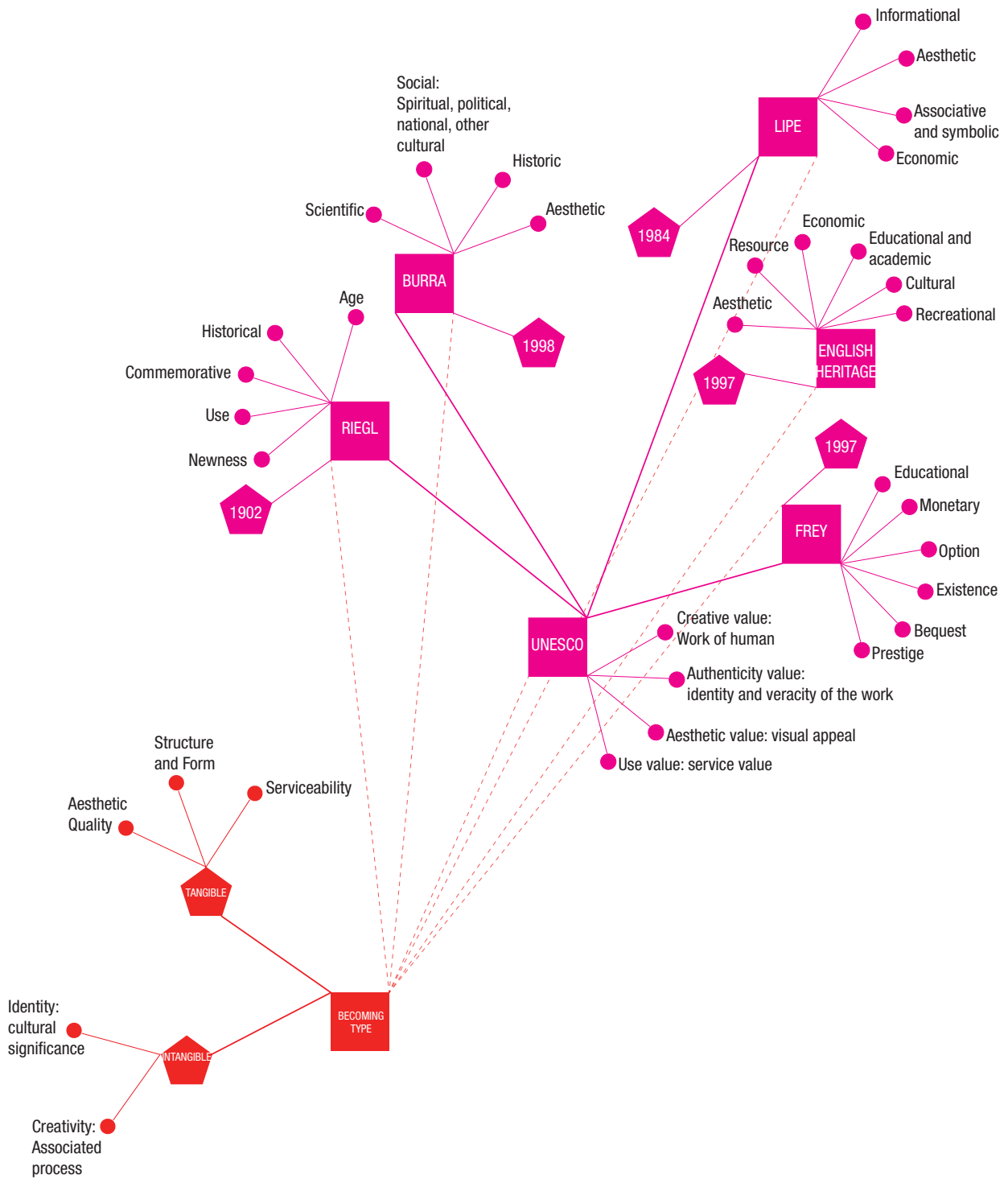
The project leaders from OOperai were empowered as facilitators, they assist the children in how and when to perform the activities. In addition, some parents and local leaders where involved in the events and took an important part in the process. This was with the scope to create an atmosphere for reflection, rather than a result-oriented one. Result-oriented atmospheres somehow push children to produce results aiming to please the facilitators, e.g. a school task that needs to be to overcome. I attempt to avoid it with divergent strategies that involve play, talking and fun engagements. I must say that almost all the children were very committed and eager to participate to the activities, which for them were just games. In other words, some "funny games" that stated that gave to them the possibility to participate in their societies and shape their built environment.

My thanks go to the children, parents, local leaders and OOperai volunteers involved in this thesis project. A list of the people involved in the project can be found at the end of the thesis, meeting them was my biggest reward.

*Written on the way to Milano from Helsinki,  
May 2014.*

*"If teaching has any purpose, it is to implant true insight and responsibility. Education must lead us from irresponsible opinion to true responsible judgement. It must lead us from chance and arbitrariness to rational clarity and intellectual order."*

Mies Van der Rohe



Picture 3. Assessment of values. Back-casting value on type

## 2.

### Background information *Panama and Los Santos*

*Panama is a country that has learned to become modern.*

The Republic of Panama is the furthest south country of Central America. Its territory is an isthmus which connect North and South America. On the west limit with Costa Rica and on the southeast with Colombia. Panama character has always been a transit country, people comes and goes from different continents making the culture richer and complex. In 2012, the population of the country was estimated in 3 787 511 inhabitants by the national office of statistics, where 360 379 inhabitants belongs to 5- 9 years old and 350 991 to 10-14.

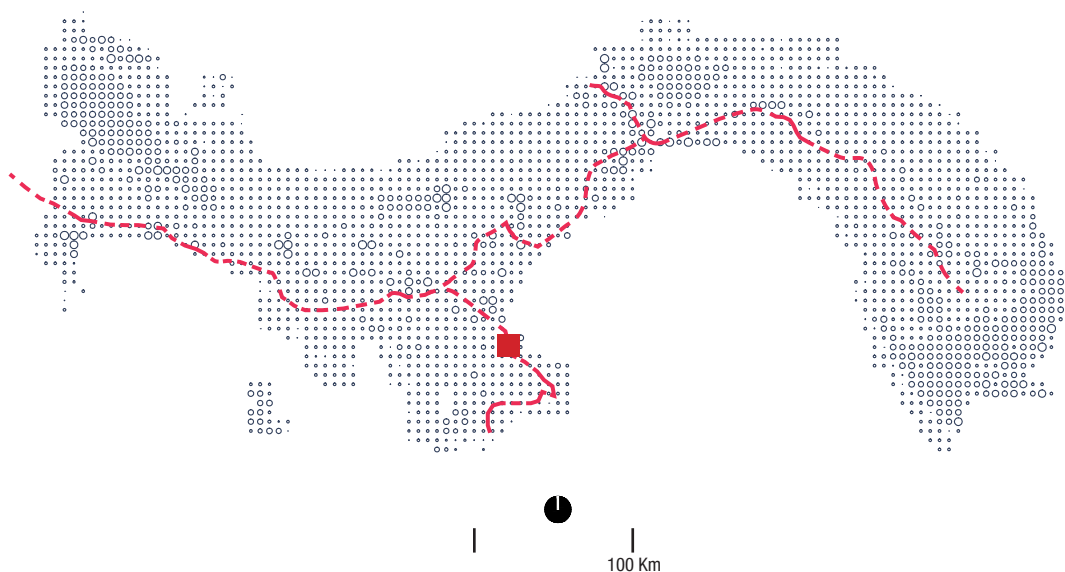
Up to 2012, Panama has one of the strongest and fastest growing economies in Central America. Even though the panorama is very favourable, from the bottom up there is still an evident dual city character, in which less than 15 minutes walking it is possible to encounter towers of 26 -30 floors and urban degraded settings.

In 1903, the Panamanian territory got its independence from The Big Colombia and become a formally the country of Panama, after that a new set of institutions, subjectivities and norms were created. And the pendulum swings...

As a result of this, in 1903 Panama started the public education system. Which at the beginning was characterized by a paternalistic and elitist focus, but under the United States influence encounter a way to overcome it.

Since 1903, a lot has been made to provide a better quality to the public Education in which at the moment is responsibility to the central government. In fact, according to the statistics of 2000, 91% of the population was literate and equally distributed in gender. Education in Panama is compulsory between the ages of 6 to 15.

The pendulum swings, once again...



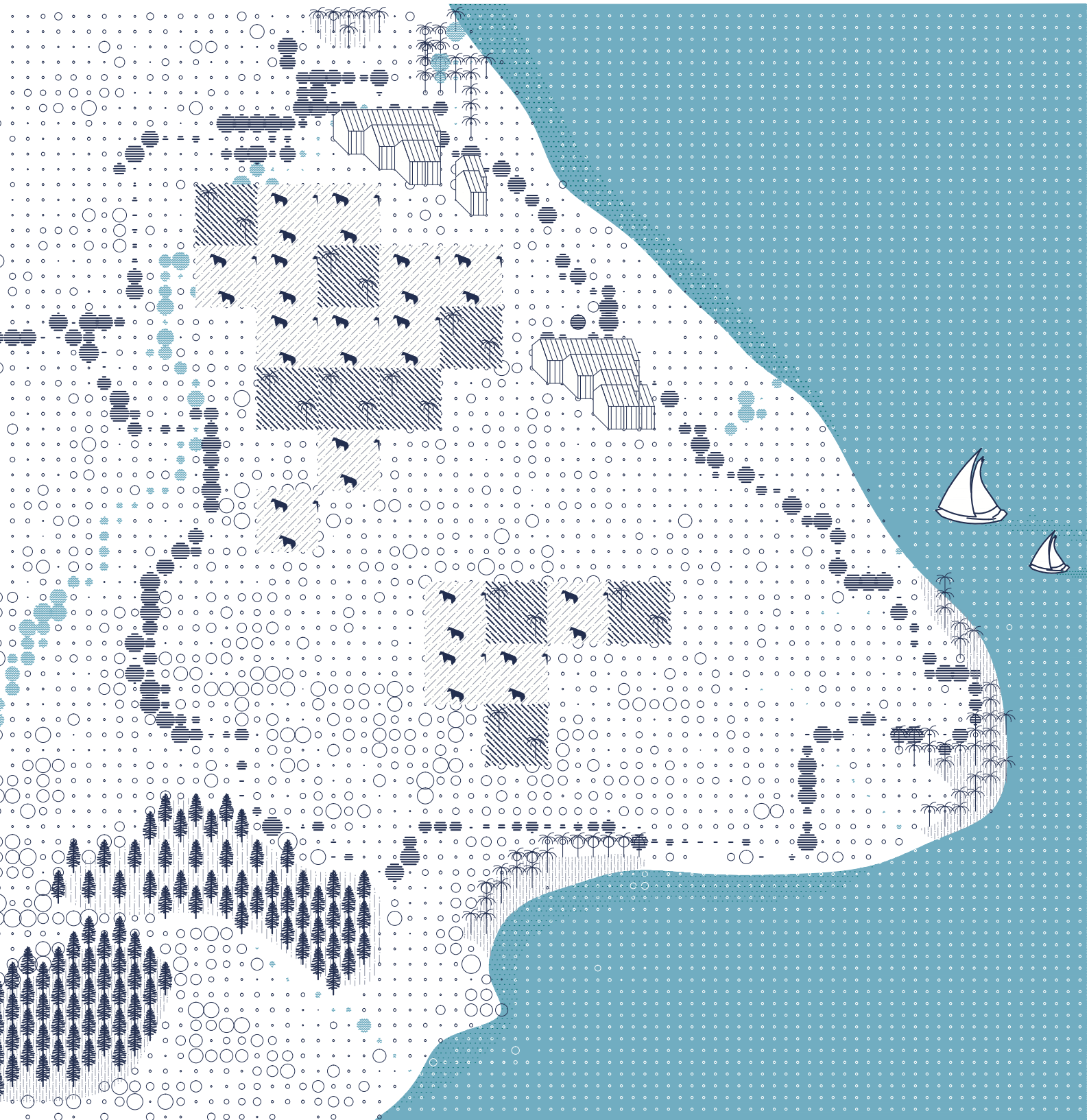
Picture 4. Map of the Republic of Panama

## The Site

*Los Santos is one of the nine provinces in Panama*

The province is famous for its strong cultural significance. Along with Herrera, Los Santos organizes one of the most important events of the national folklore, they are the territory of the Pollera (traditional Panamanian dress) and the carnivals.

According to the census of 2014, the population of the Los Santos Province is estimated in 89 592 inhabitants. The territory is well-known by its livestock and natural resources.



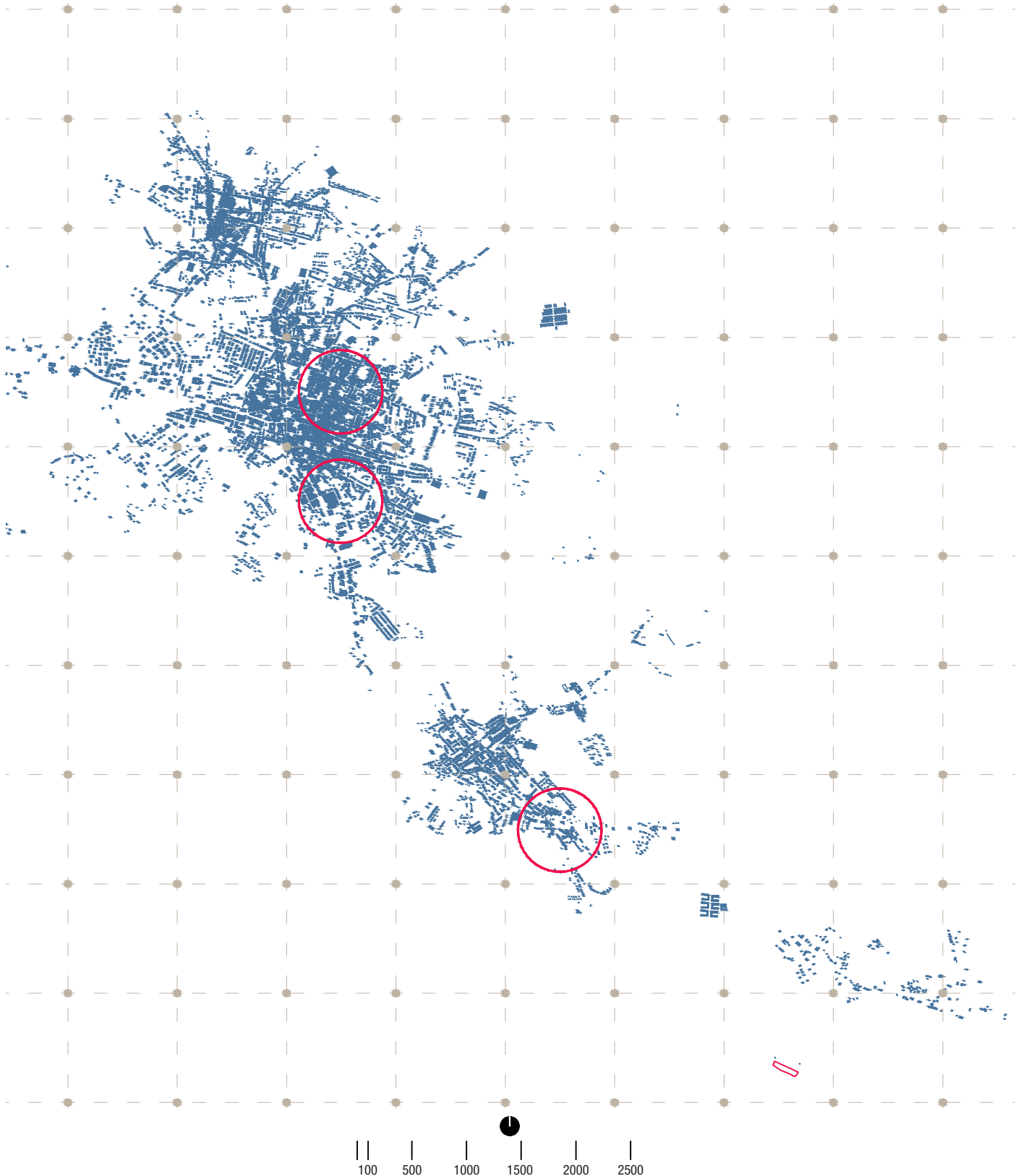
Picture 5. Map of the province of Los Santos



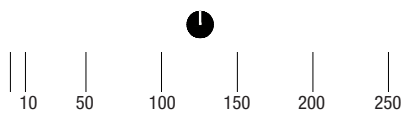
## Reflecting on Local School's typologies

The following drawings notate the urban granulation from the two closest towns to the plot. The plot and its physical borders appear as well on the drawing. The northern town is Chitre which is capital of the Province of Herrera. On the other hand, the southern one is La Villa and is the capital of the Province of Los Santos. The plot is located in the province of Los Santos and 9000 m away from the center of La Villa. Moreover, it has the following coordinates: 7°54'37.4"N 80°23'21.0"W.

This particular urban form of the town of Chitre and La Villa is the result of immeasurable factors, however one striking fact is the tendency of Panamanian cities to grow along the main road. This fact is evident even in social conditions. It is very common to hear Panamanians saying: "abriendo trocha", meaning opening road and referring to the possibilities that brings development often represented by accessibility factors.



Picture 6. Granulation map. Cities of Chitre and Los Santos



Picture 7. Granulation maps. City of Chitre



From the drawings it is visible, that the cities are growing and infill is a common evidence of it.

The first drawing, perhaps is supporting this notion in a more clear way. It is a drawing at the core of the town in which it is possible to notate already the consolidation of different urban blocks.

Even though fragmentation is a common reality in small Panamanian towns. A negative implication it is still arguable because of the small dimension of them and the quantity of inhabitants. This particular facts, are keeping the situation under control.

The same case is stated in the following zoom from the town of La Villa, where it is not possible to identify clearly typologies, at least in terms of form.



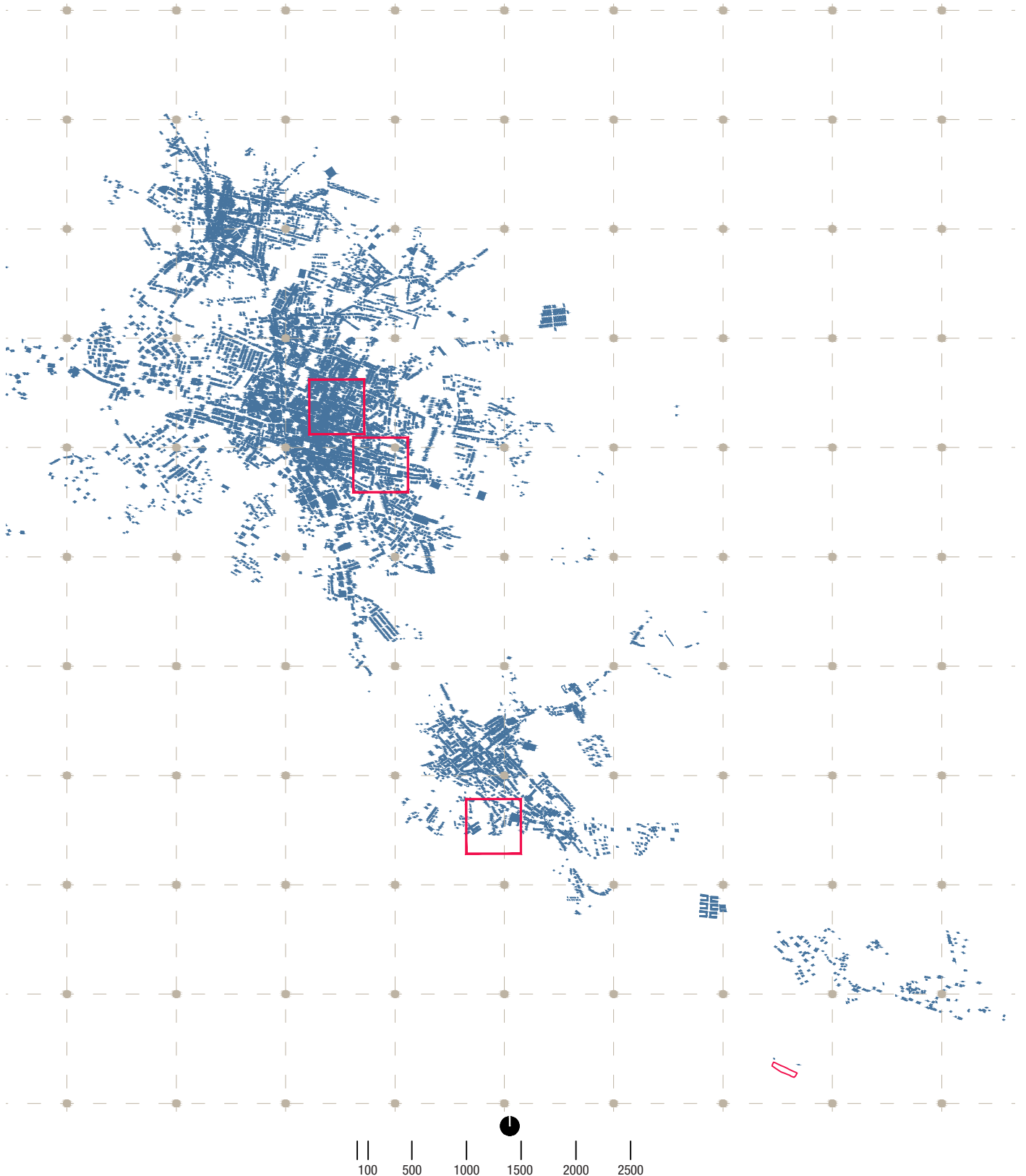
Picture 8. Granulation maps. City of Los Santos

On the other hand, a more striking situation is found when surveying educational typologies in these two towns.

Even though, these educational units host different amount of students and fields of study they are using the same typology. I selected them strategically in order to show their diversity, but paradoxical common form.

The northern cube shows the school of Hipólito Pérez Tello, the middle shows a very influential college in the area called Colegio Jose Daniel Crespo. Which historically, support with education to students from the closest towns, including La Villa. And finally, the southern encloses two of the main educational centres in La Villa.

Note a 5.5 Km radius distance will enclose them all and the striking point is that the typologies remains the same in terms of form, meeting places and classrooms. As said before, these are schools that serve for different purposes and amount of students.



Picture 9. Granulation map. Cities of Chitre and Los Santos

My question was, are we paradoxically encountering homogenized solutions in centres that promotes and encourage creativity. This is a complex situation and would be not fair to tackle it just by a provocation from someone outside the area. Lots of people are involved in the process, however the actual users of them are somehow left aside from their spaces.

On the other, it is important to notice that the quality of the education is not proportional to how the shape of the building it is. However, the shape of the building do contribute and facilitate the teaching and the learning process. Lots of literature has been written in these matters, for instance the Reggio Emilia pedagogic system argues that the built environment can also be used as an education tool for teaching an learning process. And that argumentation could go from the bulletin boards to the disposition of spaces and the height of the ceilings. All of this factors do contribute to the quality of the teaching and learning process.

I have visited all of the selected schools and I can ensure that the teaching, administrator and student staff make everything possible to promote and encourage creativity. For instance, when I visit them I noticed the extensive use of bulletin boards, some of them showing student works, internal activities or celebrating the month of the Holy Mary. Encountering this boards, remained me past experiences in which I fell inspired and proud of looking to my own works in this boards. However, there is a strong contradiction between the architecture spaces and their efforts.

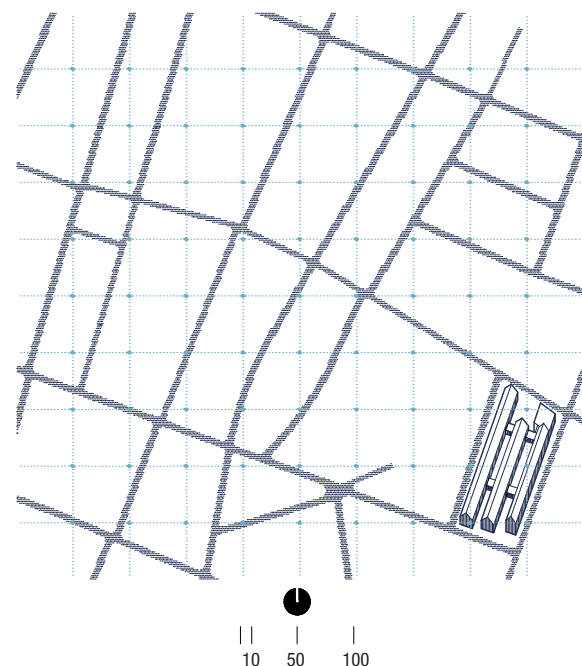
I believe in this inexhaustible eagerness good teachers, professors, administrators and even students to improve their own image. This was evident in the inspiring conversations that I had with all of them and this is why I consider fundamental to let them be part of the collaborating in the design and research process for their own spaces.

I have to notice that is not about making more expensive building, it is rather bringing integrative solutions in order to achieve the main purpose of any educational building: inspire and implant responsibility. This integrative solutions will do bring more quality of lived spaces, because they are shaped according to their actual users, and at the same time will be more efficient and effective for educational and economic means.

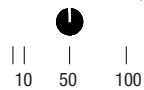
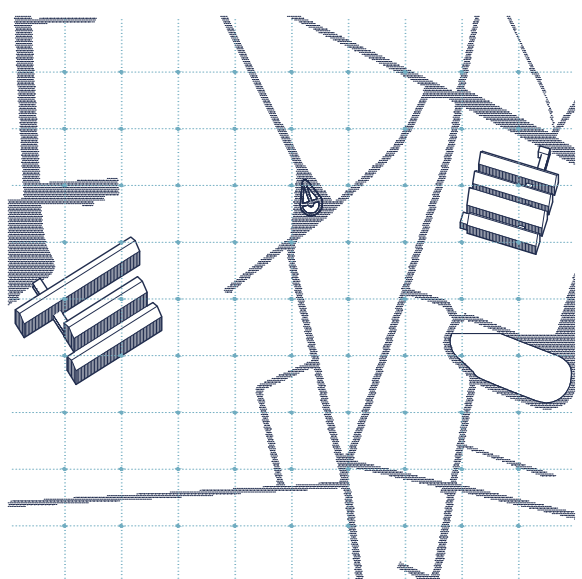
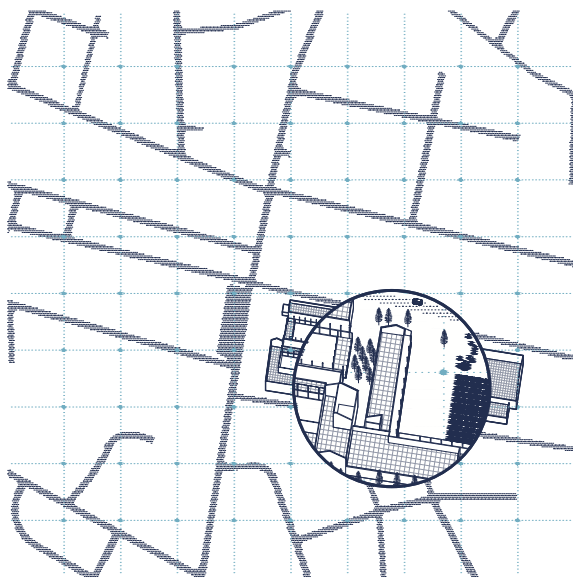
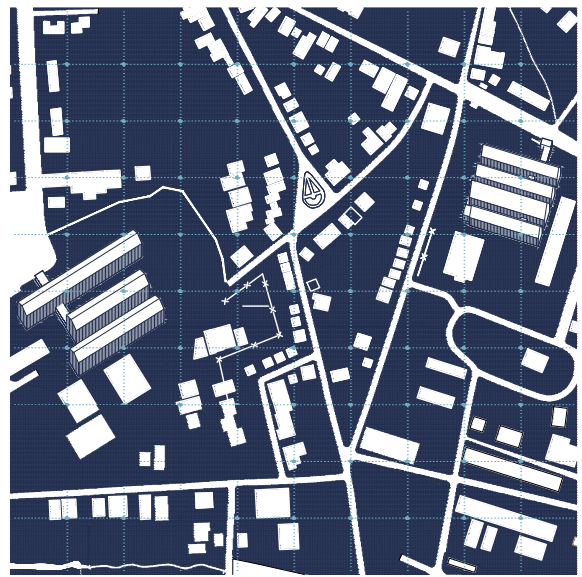
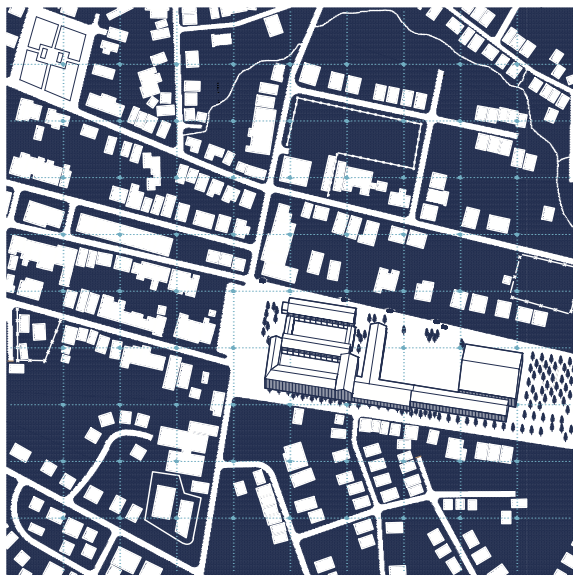
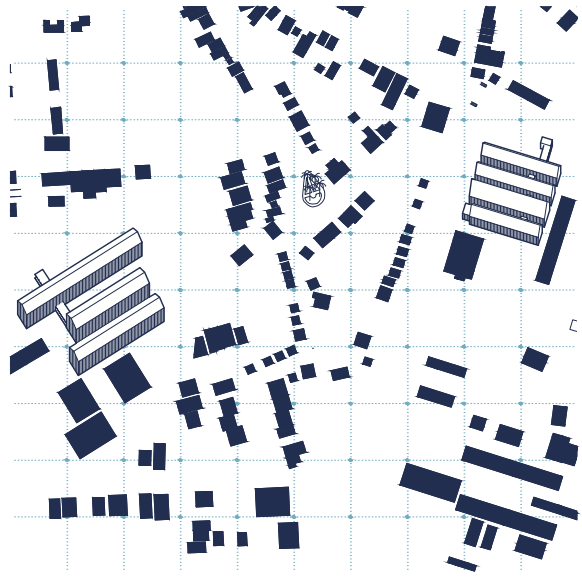
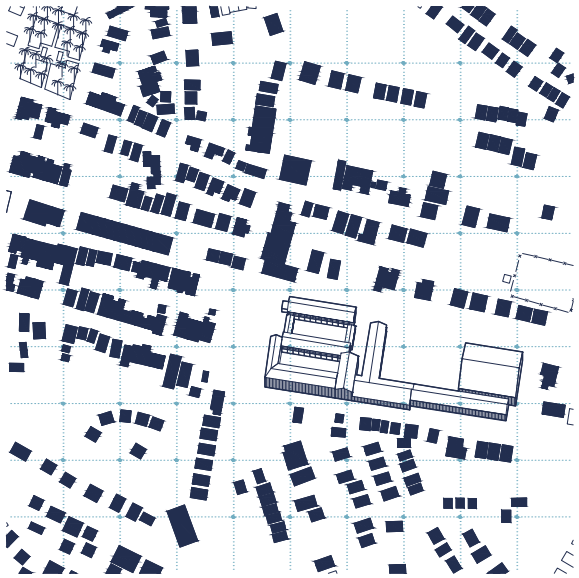
This evident paradox between creativity and space might be arguable due to the rapid growing of the population and the actual need for this centres. However, now he have the possibility to improve them, now this towns are already set and the framework is there. The only thing is to improve them.

In other words, it is important to notice that inside the concept of type is a constant becoming inquiry. We should start thinking of this educational centres not as already consolidated and finished buildings, they are now like that because specific conditions, however it is to late to try to improve them?

The pendulum swings, once again...

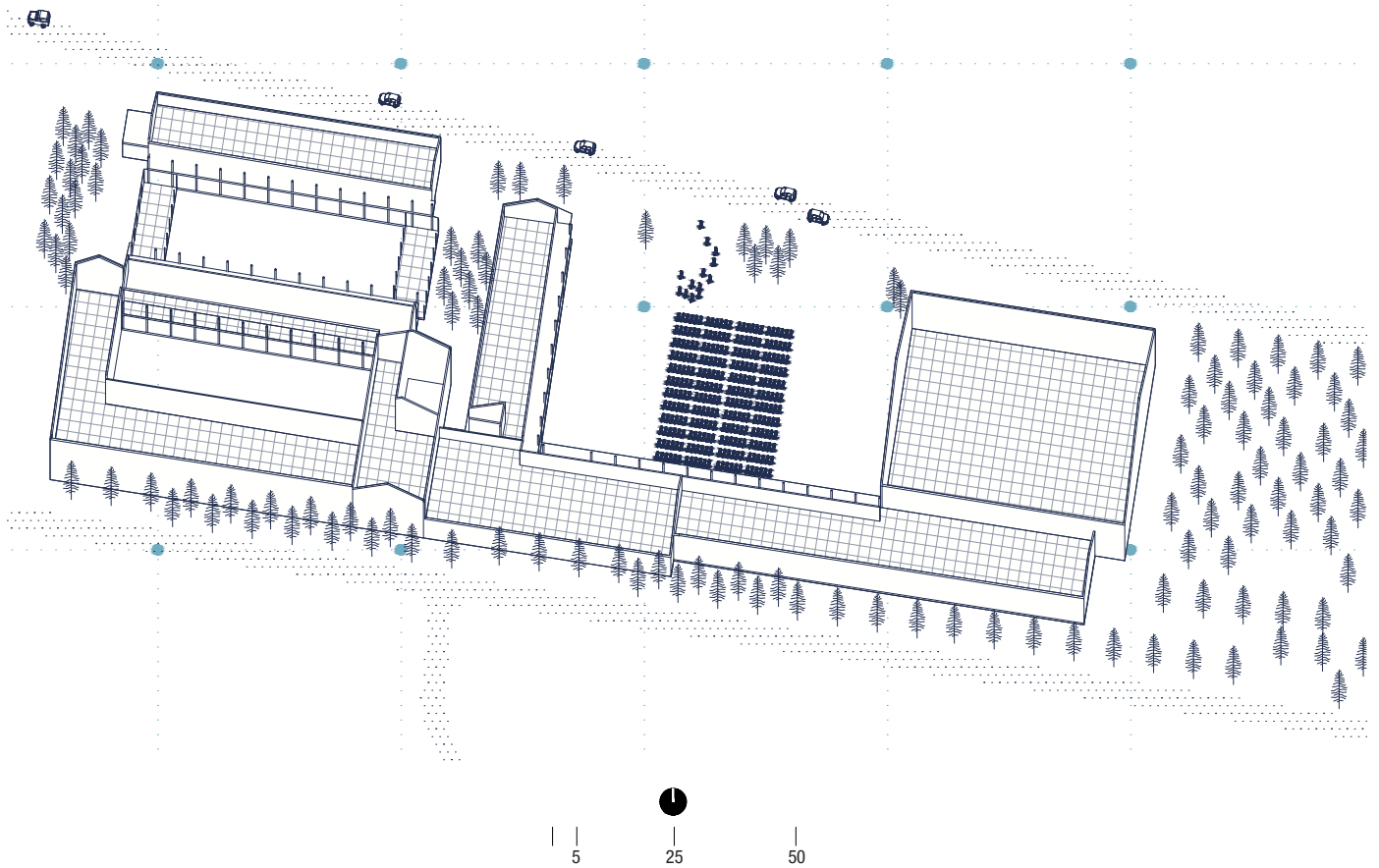


Picture 10. Figure ground analysis. Escuela Hipólito Pérez Tello. Chitre



Picture 11. Figure ground analysis. Colegio Jose Daniel Crespo. Chitre

Picture 12. Figure ground analysis. Instituto Coronel Segundo de Villarreal and Escuela Nicanor Villalaz. Los Santos



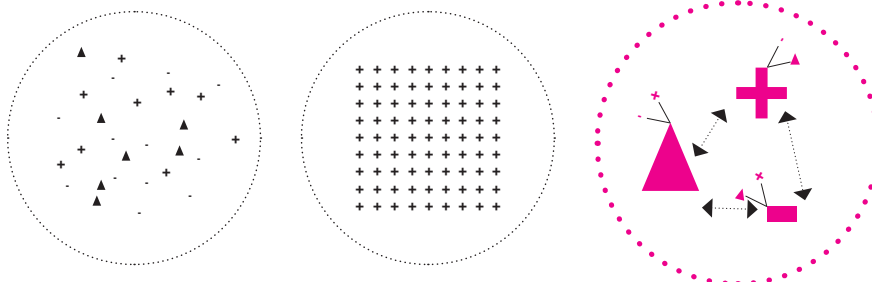
The common model to design public schools in Panama uses one single typology. In which the classrooms are piled and accessible by a long corridor, like the finger-school type quite popular during the 60's.

The drawing on the top is an axonometry of the internal spaces encountered in Colegio Jose Daniel Crespo. In it is visible that the meeting places are the corridors, the central patio and the small courtyard. Sometimes inaccessible because of the weather conditions.

This top down approach of creating spaces are producing homogenized outcomes. Which far from find value in our specificities is producing a generic generation of users without any concern about their own subjectivities.

In the next page, the same homogenized situation is also found in shopping malls. On the left, Panama and on the right India.

Are we suffering of homogenized spaces? What are we doing to overcome this as professionals that give shape to cities?



From top to bottom

Picture 13. Axonometry. Colegio Jose Daniel Crespo. Chitre

Picture 14. Diagram. Promoting subjectivities



PANAMA

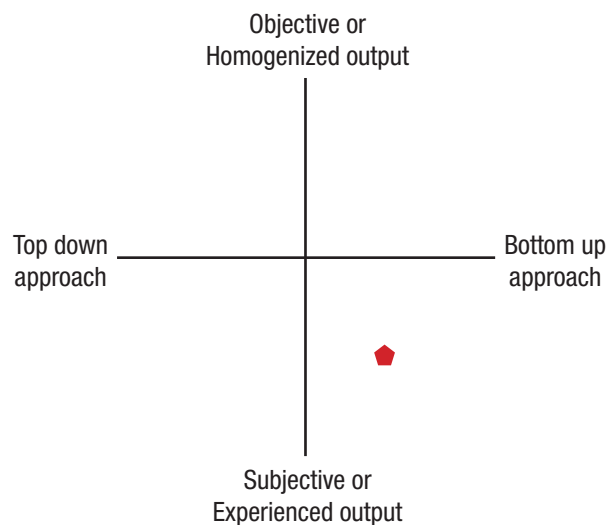


INDIA

3.

At the core of the project's inquiry  
Aims of the project

Amongst the uncertainties, I identified two essential driving forces used to produce architecture and therefore impacting in nowadays built environment. The first one is dealing with: *What to produce?* i.e., type and the second one is *Who produces it?* i.e, governance.



As stated before, the horizontal axis consider the relationship between the subject and the object. On the other hand, the vertical is dealing with the tectonic or aesthetic factors which are also part of the architecture project. By placing together both axis, a geographic framework is created and consequently is giving a time and space notation of the project. Moreover, after defining its plane of consistency it is possible to notate its strengths, opportunities, weakness and threats.



The initial aim of this project was to produce architecture in a collaborative creative basis, by designing a future school for OOperai foundation in Los Santos, Panama. However, during the process it was evident the possibilities of using the same methodology to achieve a social goal. Not only because the children that were involved in the project acquire confidence and felt that their ideas where important, rather because of the effects, which are turning into creative skills and competencies.

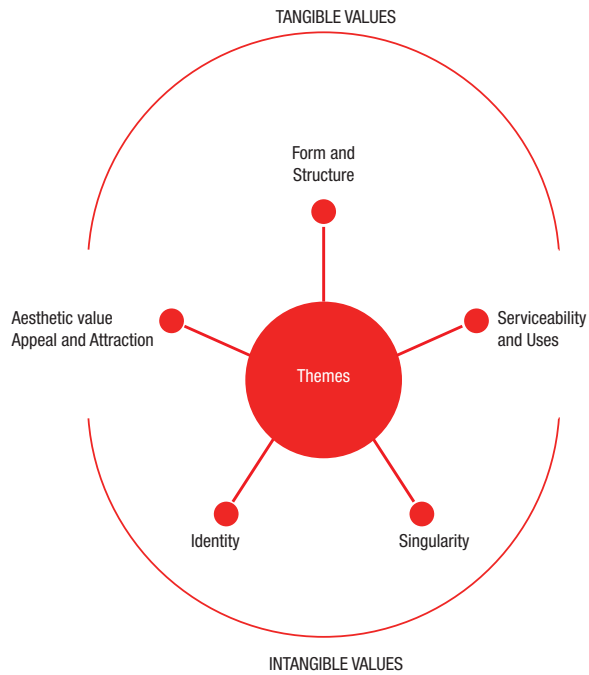
I collected evidence over three months period and more than 200 children from different countries. This cross country exchanges were fundamental to keep Panamanians children more engaged in the events.

From top to bottom

Picture 16. Diagram. Plane of consistency.

Picture 17. Diagram. SWOT analysis

With this in mind, and the previous stated notion of value the following are the aspects of the project I discussed with the children:



As a result this are the objectives present in this thesis:

- Make a strong statement upon the dominants method to produce spaces for children, moreover the ty-pologies of schools or educational spaces for children in Panama. With this the thesis attempts to propose experienced guidelines for taking further a participatory project with children.
- Rethink the The image of the children as active actors for shaping the built environment. The thesis have noticed that societies put a enormous effort trying to frame and predict spaces for childhood instead of negotiate and construct those spaces with them.
- Far from any aesthetical and/or tectonic reductionism, the thesis should make evident the possibility to achieve a social goal and therefore introduce ethics. i.e a methodology that promote values and good practices.

The collaborative process and some strategies

When I decided to use a collaborative process with children in order to produce an architectural project, I was also interested to validate is effectiveness in my own creative process. So it could also serve as a tool for my own future projects and therefore redefine the role of the architect in my own society.

The inquired based events turned out to be a significant way to become aware of children's passions and concerns for the future school. There was not right or wrong, however guidelines to produce knowledge.

The thesis project engage with children in three fundamental moments. At the beginning, in order to establish the basic typologies and then later in two more events with the scope to validate and mutate the typologies into a suitable one.

Another important aspect, is to test the performance of the events before they go to the big scale. The small models, templates and paper folding "origami" were tested with several children in order to control average times, effectiveness and attraction. It was really amazing when Emmanuel, a Panamanian child, said: "I believe, this is coolest this way... it is less boring and the children will enjoy it more", and at the same time flipping the origami up side down, so the children could draw in plan and cover the drawing with the model. Instead of just drawing in the model, and left the drawing visible as I was proposing





From a video  
Picture 19. Emmanuel testing types before the second encounter

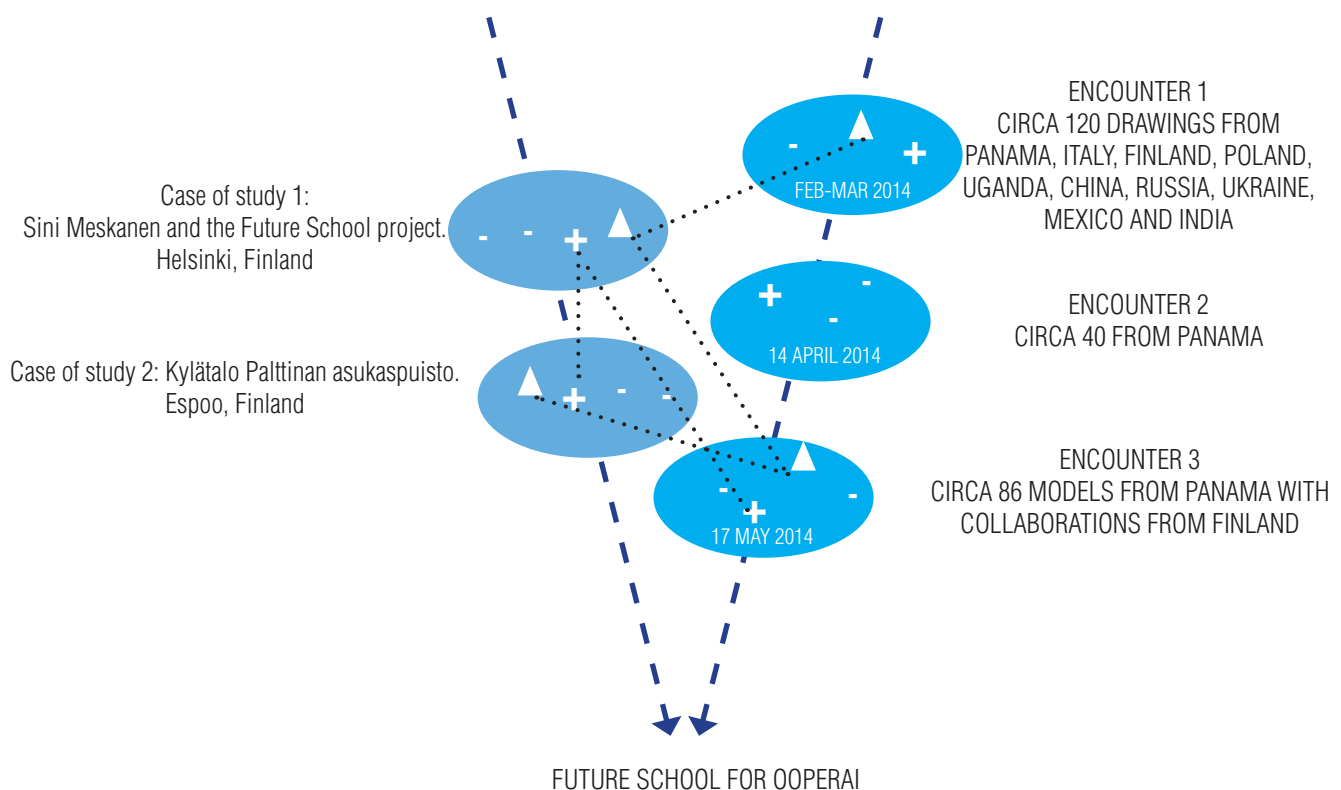
Participatory process implies to identify correctly the actors and stake holders in advance. Even though the project involve children from different countries. The majorities were Panamanian children, which are the final users of the future school.

Being resilient give also value to the project. Every good researcher expect the best, but plan for the worst, so in order to ensure a smooth workflow. In other words, be modest and at the same time powerful, modest in order to understand the limits of the project and powerful when is time to embrace its *raison d'être*.

Keep your feet on the ground, but think high. That is to say, think on time and money, because this kind of qualitative research tend to produce an enormous amount of valuable information. For instance in this project, I planned just three events in different stages of the thesis, even though I wanted to perform more.

Be aware that you are working with children and beside any results it is more important that they found a comfort arena to develop themselves. Children are willing to engage if they feel heard and their ideas respected. It is fundamental to keep in mind that in any participatory process the content of knowledge is negotiated and constructed by all the parts. Like similar bottom up process it is not encouraged to produce knowledge through imitation or reproduction of previous models. It is important to learn from them, but not use them as risotto recipes.

Children are very sensible and they will make evident if they feel if someone is expecting results or pushing them. Give them time and privacy to work and you will notice that they tend to work in networks, if they do not know something or need help they will ask you or the closest mate. Let them go. Prepare the base points, but when the process start just encourage questions rather than solutions.



## Research Methods

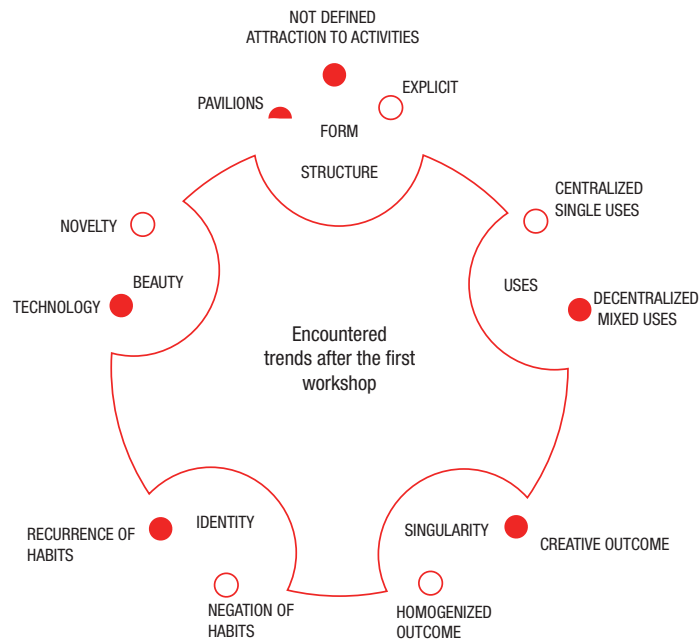
Mainly, in the three events I approached children from OOperai's Foundation, which participate actively from its awareness programs of the built environment. In addition some contributions were made from kids that attend Arkkitehturikoulu in Helsinki, Finland.

The children involved in the project comes from different social backgrounds and more research is encouraged to be made to assess the value of social interaction and cross country exchanges in participatory process for childhood spaces.

In the case of Panama, the parents, local teachers and leaders were involved in the process.

The research method is mainly a qualitative research with a bottom up project that inquiries the ontology of learned discourses and methodologies to produce architecture for childhood. It use the following structure to notate subjectivities and perform an holistic approach for the design of the future school.

Based on the previous illustration and the research made of value and type I produce a list of themes that I consider important to discuss with the children.



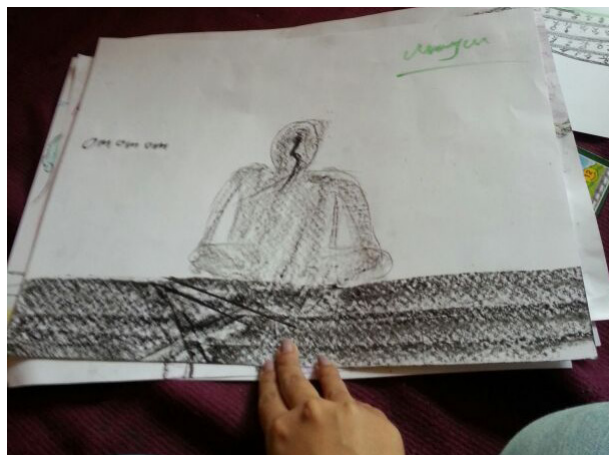
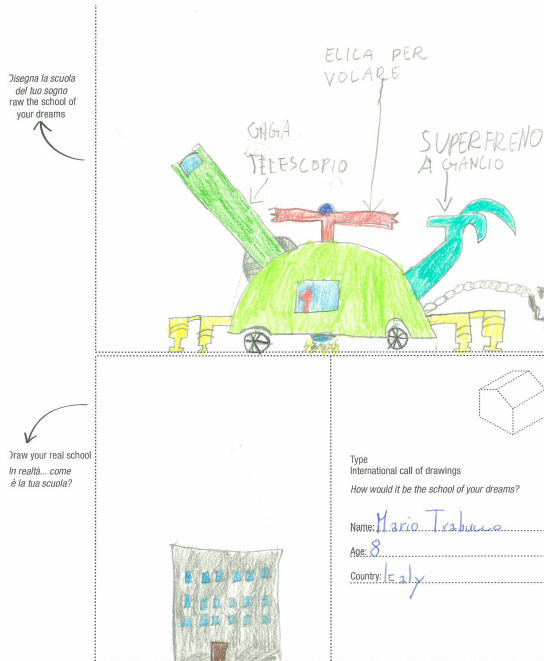
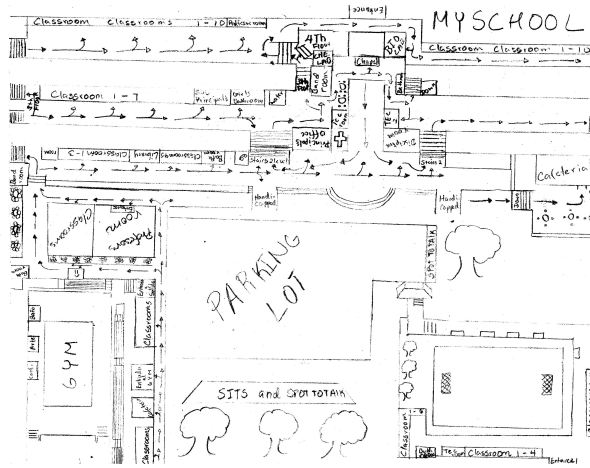
The first event made was an International call of drawings with more than 120 entries from more than 10 countries. This international postcards of architecture, were delivered to me and the representatives of OOperai foundation. These outcomes were fundamental to establish the dialogue and start notating what were the trends that children made evident about the main themes set in advance.

The two main task for this first event were draw the real school and second the dream school. The way to perform the task was an inquiry based model in which the use of memory and imagination were encouraged. It was evident that some of the children just used what they have learned before while others really become creative and start to expand the possibilities.

The theme was presented at the beginning of the task very clearly and also the general instructions were written in a template prepared for the purpose.

It was really evident the influence of schools in children's creativity at different ages. For instance, Panamanian children from 11 to 13 years old did not made much differences between the real school and the school of their dreams. And this goes beyond any learned technique and style, because some of the children were recorded explaining their works.

On the other hand, youngest children 6 to 10 years old, made very clear differences between the two drawings. They worked in more divergent ways but always with a coherent logic, sometimes difficult to find, but still present.



Under the five preset themes, following table state the findings and trends found in children drawings on the first workshop. Along with the phenomena questions were fundamental to create the three primal typologies of the thesis project. It is important to notice that not all the children made evidence for the five categories, some of them engage with some or just one of them. However, this was a positive sign that support the idea that the preset list should be flexible and resilient. As a global finding, in the first workshops children were more fascinating with the themes of form and singularity, while in the next events they engage more with interaction and social themes. The quality of coziness, identity and interaction was evident when I was passing to a more detailed scale.

Curiously, the statement “We are all part of the built environment” has an enormous attraction among architects and teachers of the built environment.

Indeed, it is one of the first motivations for promoting programs of built environment awareness. Possibly, the reason for this appreciation is rooted in the education and training architects received during their studies.

However, for other users of the built environment, the way architecture is perceived and lived in takes on dimensions other than the purely theoretical, technical and measurable (Havik 2012).

In this case, the ambiguity of the phrase makes evident the potential of architecture to introduce value beyond any reductive aesthetics and techniques. In other words, it is due to its ambiguous character that architecture is given room to be something more than the act of dwelling.

Juhani Pallasmaa has also written about this ambiguous element of architecture,

“Architecture is simultaneously a practical and metaphysical act: a utilitarian and poetic, technological and artistic, economic and existential, collective and individual, manifestation of our being”.

This poetic idea, in which architecture goes beyond any aesthetics and technical reductionism, has been the starting point for OOperai’s educational programmes. Therefore, very far from producing a generation of architects, it is proving to be a fertile effort for developing skills and competencies for the future. In 2011, the OOperai Foundation was created in Panamá with the aim of giving free accessibility for children to a creative and evaluative training programme on the built environment. For almost three years, OOperai has focused on children from 6 to 12 years old who live in low-income and conflict-ridden rural and urban settlements. Due to these areas’ rapidly growing populations, residents often encounter a lack of value in their lived-spaces and a diffuse sense of quality in their immediate built environment.

OOperai’s users in Panamá are from Las Ferias in Colón, Tolé in Chiriqui and Penonomé in Cocle. This last location involves children who have minor motor limitations, yet all also take part in OOperai’s creative engagements. In 2013, OOperai began a project in India with children from Chennai and Mumbai. Currently, the organisation is implementing more creative engagements and exchanging their issues regularly in both of these sites.

As part of this vision, OOperai has been responsible for implementing international exchanges of built environment experiences between children in more than ten countries, with the aim of facilitating the exchange of learned and experienced typologies.

We have encountered two paradoxes during these three years of practice:

1. Why care about something that is not visible? Does it make sense to promote architecture in a context in which there is an evident lack of consensus or comprehension of it?

In the case of Finland, it was clear that the consensus was formalised in 1993 when the Finnish National Board of Education established a national core curriculum that viewed training in architecture as one of the arts. The curriculum introduced the use of architecture programmes on a wide and open basis, giving rise to the possibility for experimenting and constructing knowledge. Moreover, it also accorded special importance to how people relate to their immediate space, expanding the dimensions of architecture as a part of everyday life. According to Jaana Räsänen, a representative from the Architecture Information Centre in Finland, the purpose of architecture education is to help pupils to analyse and understand the surrounding environment and the world, to support their general education and to promote their abilities to face the challenges of modern society, such as participating in discussions and making choices. In Finland, there are three schools and one museum that approach architecture as a tool for teaching the built environment: Arkki School of Architecture for Children and Youth; Lastu School of Architecture, Environment and Culture; Jyväskylä Art School for Children; and the Alvar Aalto Museum.

Along with the first school (Arkki), OOperai has made an international project with Panamanian children.

What happens when similar practices are brought to Panamá and India? Although the paradox is easy to dissolve when the approach is one of giving sense to the immediate environment and becoming-active in it; on the other hand, it is still invulnerable when the users manifest a constant attraction to the production of the built environment without architects. Moreover, the diminished sense of belonging in a space/place experience does not make the task an easy one.

During a collaboration with Arkki (Helsinki), the effect of receiving architecture training at an early age was evident; some of the children had been there for more than five years. For instance, on a project for the future OOperai school in Panamá, Finnish children from Arkki started to question the naturally fixed school's typologies and suggest better ways to achieve quality spaces in them. Viljami, when looking at the suggested arrangement, said: "this building is too tall and close to the other ones, the shadow that will be cast will create very dark spaces..."

Working with Panamanian and Indian children on the same project brought interesting challenges. First we had to construct value, which was not straightforward. However, the idea to exchange thoughts between children from more than ten countries brought more confidence to the Panamanian and Indian children alike, and they worked creatively to overcome the task. It was evident that children work in networks, and if they are not sure about something, they will ask to their immediate fellow. In this case, the motivation to learn from different contexts inspired the Panamanian and Indian children as a way to introduce interaction and to accomplish the attraction.

OOperai understands that there is still a lot to do to match the consensus encounters experienced in Finland. However, one of the most important achievements is to look at the benefits OOperai has brought to its users. These are expressed by parents during every workshop. Parents are aware that creative programs on architecture will turn into future skills and competencies for their children.

Maria, a girl from Penonomé, has now found the confidence to stand up and explain this market project, saying: "This is a good place to sell bananas and peppers".

As stated before, a conscious act of acknowledgement should be present. In other words, this is giving a new presence to architecture that embraces a new territory and need: the ethical one.

The 'Type' project questions Dewey's pragmatic engagement through learning by doing with a new assemblage: learning by doing and becoming by exchanging, in which this new territory of architecture transcends any original dwelling intention.

2. Why does it seem we are decreasing the attention paid to creativity, even though it was encouraged at the beginning of the project?

Imagine developing a creative and innovative project. You took your time to engage in creative research, and even questioned the fundamental issues of the process of producing and possible scenarios for future users. Nevertheless, the final results were not satisfactory, and, due to some conditions, it is not possible to conduct more experiments. The conclusion is: the final grade is not based on your creative project, but it is based on the results. This would definitely diminish your belief in creativity and, next time, you will be more thoughtful about the effectiveness of the creative process.

The fact that the product is often what gets judged, instead of the process, definitely makes the paradox mentioned above stronger. Instead, OOperai promotes the notion of becoming-creative, which enhances children's potential by helping them to learn from differences and subjectivities.

On a project called 'international talks with children', Gabriel, a boy from Venezuela, took a sketch made by Kimora, a girl from Uganda, and explained to Panamanian children his model of a shopping mall made from recycled materials. Becoming is a process, and it embraces the notion of the future, not as a time yet to come, but as a constant, changing present based on visible and invisible subjectivities. Children from different countries are able to create meaning and find value in their own built environment through their differences. OOperai knows that, in order to build a more meaningful education, we need to start with the idea that knowledge is a collaborative process in which the notion of becoming is fundamental to questioning and can overcome any fixed representation of reality.

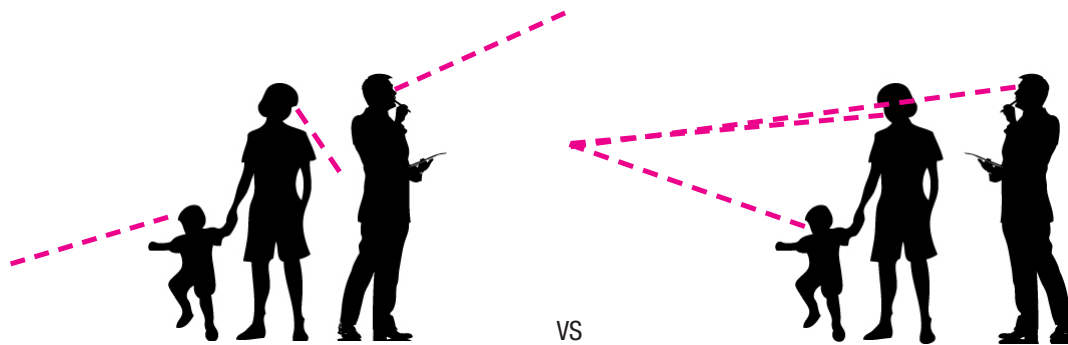
## Analysing the evidence

This qualitative research produced drawings, recordings and media resources. I approached the analysis and give sense to complexities by categorizing the results in terms of recurrent themes and trends found. The scope to use themes is to place together similar passions and concerns and design spaces that where coherent with them as form. This process of translating ideas into form made evident the three typologies that were validated in other two events, with the scope to arrive to a final typology.

The early results of the thesis were presented in Arkki Creating the future 2.0 conference in Helsinki, Finland and Arquitectonics Conference in Barcelona, Spain.

The main domains where evidence was analysed are:

- Observed and documented children's passions and preoccupations about schools and educational spaces
- Difference and significance in repetition. Children from different context were part of the same task
- Values of lived spaces and no Cartesian dualism between mind and body.
- Value of social interaction in learning and teaching process that involve architecture
- Children's point of view on what is creative and what spaces promote creativity



Case of study 1: Sini Meskanen and the Future School project,  
Helsinki, Finland

I met Sini Koivisto on an international collaboration project between Arkki, Finland and OOperai, Panama. The collaboration took almost two months, in which children from Arkki were able to play with Panamanian, Italian and Finnish typologies and place them in different cities.

Three students from Sini's group were able to participate of the from the events for OOperai future school and inspire Panamanian children.

The research project established an inspiring and innovative idea to approach the complexities of a collaborative research project with children, because it gave a voice to children's passions and preoccupations about the future of schools and how considering lived space might promote a meaningful learning process. It also stated the importance for people's well-being to participate of the decision making process concerning their own spaces.

The study was carried out with groups of students, the first from 7-11 and the second from 12 - 18. They produced ideas and enriched with their environmental local knowledge urban and architectural planning. According to the author, the research was taken in consideration for the realization of Opimäki's School competition brief. A new school for the municipality of Espoo, already well-known for innovative school and learning centres.

In order to examine their visions for the future of schools, nine workshops were implemented in which several ranges of scale, themes and subjectivities were studied in the fall 2007 at Arkki in Kaapelitehdas, Helsinki.

Going from the own experience to scale models, the Future School Project was really an example of good practices and excellence for introducing value to its immediate society.

The future School project used an inquiry based methodology with children to approach the notion of typology and how it evolves to embrace the future. According to the literature, the workshop started with a discussion of the theme where the students present questions and comments. Some of these questions were also used to support their own design projects, which is a very interesting characteristic of Sini's work. Her work was humble enough to understand its own limits i.e. listen to children and change according to their needs. On the other hand it was strong enough to approach its main issue, produce knowledge in a collaborative way.

One of the striking discoveries of the project was the very basic, but fundamental things that children stated were missing in schools. By answering to the question how should school buildings change/evolve? Finnish children expressed that they should have lots of space and light, including as well large windows, skylights, colours, plants, technology, comfortable furniture and connection between the nature (outside and inside) and the building.

It was also striking the fact children also consider the building in itself as a tool for learning and teaching process, particularly in the case of ceilings and big structures.

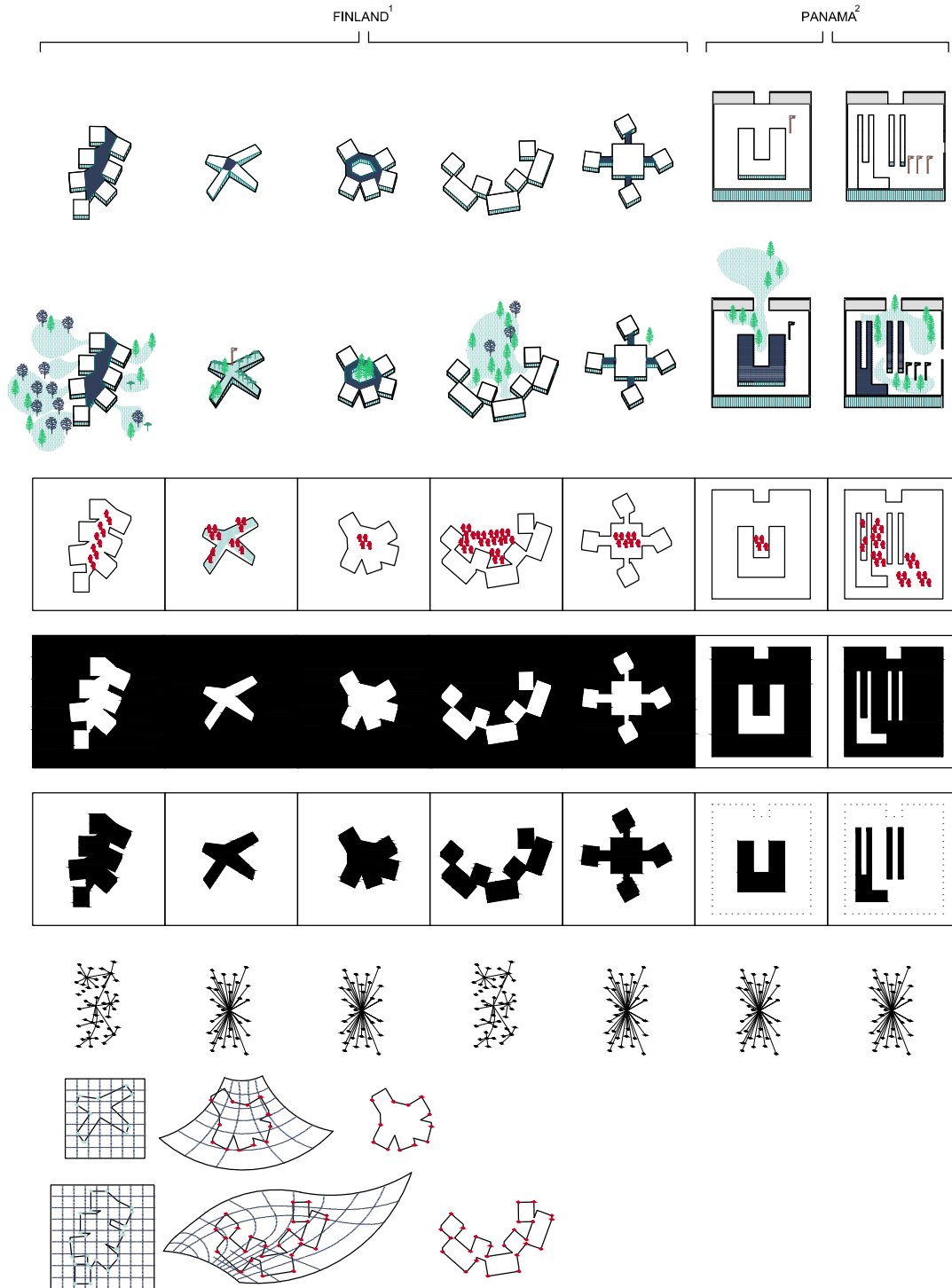
Spaces for meeting and play came up as learning and teaching possibilities.

At the end of the research, the trends encountered from the drawings, models and conversations gave birth to six primal typologies: the Piazza, Roof garden, Stoa, Series of Atriums, the Heart, Bridge and Clusters. Which far from being idealistic models or ready-made solutions for design they made a strong statement the relationship between the object and the subject. Something that might give valuable inputs to overcome homogenized spaces in our society. And perhaps for me here lies the success of the project, this project to not imply to use results, rather is promoting a methodology in which users are involved in the future of their own spaces.

The following drawing makes a comparison in different categories of spaces between the encountered typologies by Sini Meskanen and the two typologies found close to our study area.



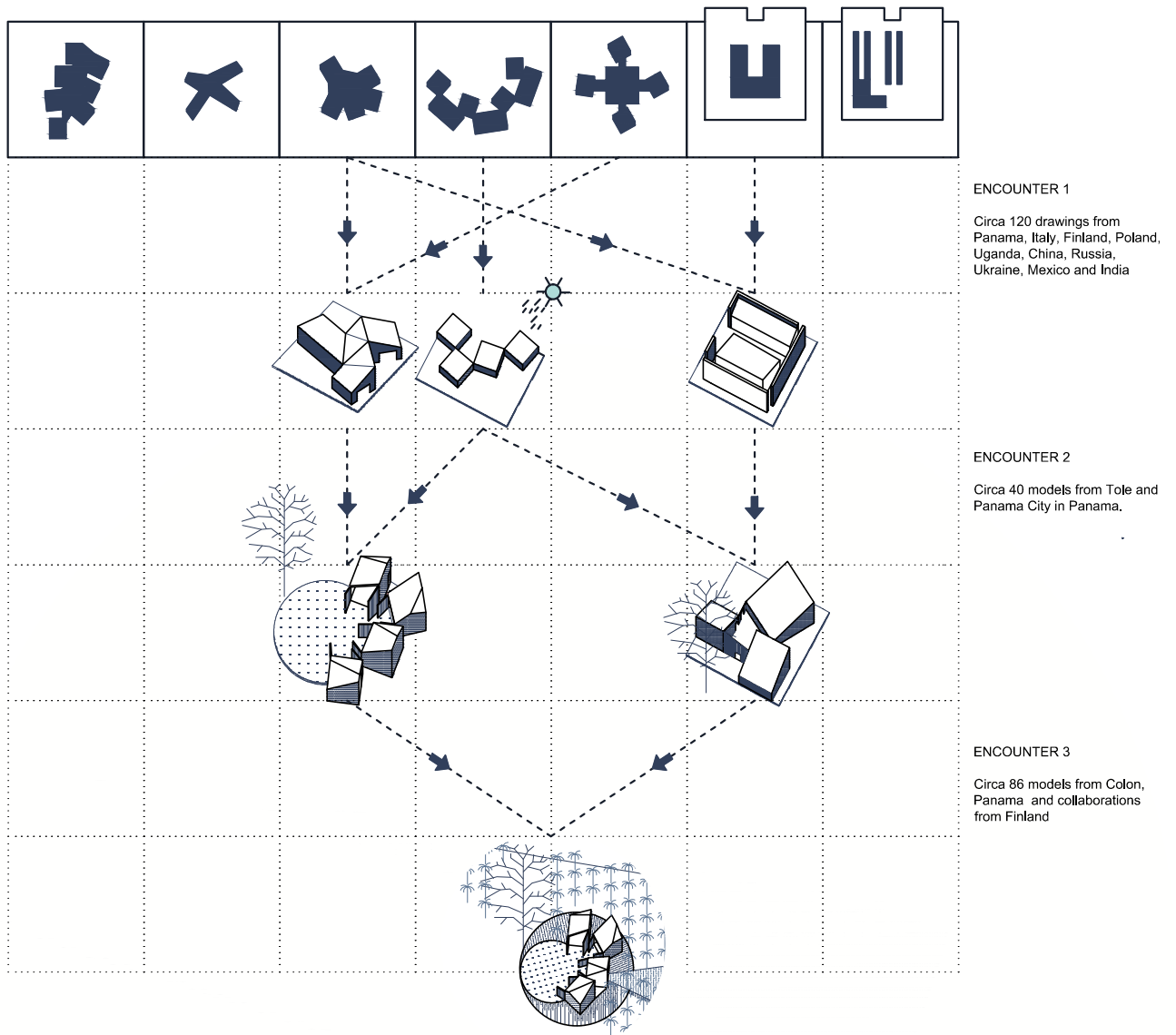
TRANSVERSAL ANALYSIS  
 BETWEEN THE FINNISH AND  
 PANAMANIAN TYPOLOGIES



1. Finnish typologies were taken from the Master Thesis in Architecture: Future School by Sini Meskanen, Finland, 2008.  
 2. Panamanian typologies were encountered in Los Santos and Chitrè, the two more influential towns near the project.

Picture 24. Diagram of figure ground analysis. Comparing typologies from Sini's Future school project with Panamanian typologies

TOPOLOGY BETWEEN THE  
FINNISH AND PANAMANIAN  
TYPOLOGIES



Having the future school project as a case of study, it also gave me the opportunity to make a topological relationship between the encountered typologies by Sini's with the local Panamanian typologies. Then look for any evident attraction or tendency between my collaborative results.

As a result, it was really striking to notice that the typologies encountered for OOperai's future school tend to share evident characteristics with Sini's typologies. Both in topology (form) and typology (meaning). Even though the children are from different context, the fundamental need are the same as well the idea of a type that can promote teaching and learning in itself.

On the other hand, the real situation is different. By placing the Panamanian model in the chart it did not arouse clear relationships between the Panamanian Finger-type and their immediate users. Not even in the promotion of social interaction at different scales.

It is somehow evident, that more research should be done in this matters and a exhaustive revision of Panamanian typologies in order to ensure up to date and better spaces for teaching and learning.

Case of study 2: Kylätalo Palttinan asukaspuisto,  
*An Example for sustainable learning environments and valuable spaces for childhood.*

The following chapter provide post-occupancy experiences at Kylätalo Palttinan asukaspuisto, a Resident's Park and Kinder garden in the city of Espoo, Finland. In addition, this experiences will be grounded with theory values from the of the Reggio Emilia framework. Consciously or unconsciously, it is evident that this framework influenced the success of Kylätalo Palttinan asukaspuisto. As a result, the scope of this document is to communicate and validate the effects of an environmental approach to spaces for children.

In Kylätalo Palttinan sustainability is addressed by promoting quality of natural and built environment and social cohesion among its immediate users.

From the competition's brief, passing to the architectural proposal and finally to the experience of teachers and children in the house, it is evident the success of Kylätalo Palttinan. The common ground is a future preschool educational building built in 2006. In which the undertaken values have facilitated (consciously and unconsciously) the cognitive and social engagement with children, parents and teachers from Kauklahti, Espoo.

The interviews made to the architect, teachers and some kids constitute the main data for this chapter.

Days before the interviews were made, visitors from Croatia spend time in the house with the same scope: assess values for future projects. In that sense it is evident that the Kylätalo Palttinan is not only a building that can be measure simply pointing out by its sqm, its beauty has been the result of several values and stakeholders. Promoting cohesion, curiosity, creativity and innocence were the most superficial values found in the visits to the building.

First, Kylätalo Palttinan architecture is clear enough to be used naturally i.e, as part of the daily life. According to its architect, Mikael Gylling this building was designed with the idea of a democratic shelter for the residents of Kauklahti. "Its form is simple and founds an analogy by using the chimney as a image of community", the architect expressed. On the other hand, Jonna Tuovinen, teacher and substitute manager of the village hall stated that she found in Kylätalo Palttinan a natural welcoming place for the people of Kauklahti in Espoo. In which children's identity and curiosity is promoted.

Second, the approach for Kylätalo Palttinan was humble enough, to understand its own limits- with good spatial provision we cannot solve all the problems; it becomes powerful when it embrace the raison ere of a school- contribute as part of children's learning process by facilitating the relationship between students, teachers and the environment.

What is Kylätalo Palttinan asukaspuisto?

Is a kinder garden and resident's park site for Kauklahti in the city of Espoo. It provide shelter for preschool children and their parents caring them, currently there are four formal groups of kinder garden and one open kinder garden. Daily in Kylätalo Palttinan are circa hundred children.

In this building, the participation in the activities are free of charge and there is no registration required. The operation provides a floating-month program which provide games, child crafts, music and gymnastics for four formal groups of kindergarten and an open one. The building was the result of architectural competition in 2004 and was built in 2006.

According to Jonna Tuovinen, the substitute manager of the kinder garden and the resident's park, this has been a masterpiece of an architectural contest and the main idea was to design it as Reggio Emilia which is not common in the city of Espoo.

The main areas of the building described by Teacher Jonna are:

Kylätupa or the Living room for the family area. It has an open space layout.

Piazza or the central space used everyday as a passage for other spaces, i.e. Every important space in the building look towards this space.

Its a place that people feel that their are welcome.

Giving voice to the users - the lived space:

The following are phrases taken from the immediate users of Kylätalo Palttinan during the interview session.

“My favourite space in Palttinan is the piazza, it is where I can see the whole area... If I am looking for someone, I just stand in the middle...” J.T.

“If I have to think in places that encourage or enhance creativity, those in Palttinan are in the form of “natural” and “easy coming places”, where children can find all the things they need to express themselves. This means how the spaces are shaped and how we prepare them” J.T

“I like Piazza... me two, Piazza is the center of the house” Teachers in Piazza

“There is this place... facing piazza and next to the chimney... due to its configuration kids spend a lot of their time here. This space respect children’s privacy” Teacher 2

“We have put some boards of the massive projects with the kids. I believe with this the kids can feel that their projects are valuable. Even though, the Reggio Emilia was taken in consideration for the design of the spaces, we are also using some points of that pedagogy... for instance, documentation... in our daily activities” J.T

“We encourage the relationship with the environment... Living with nature.

Environment in very important for us. We are going to outdoors twice a day... If the conditions are good we go out” J.T.

“I appreciate that here is a lot of windows, that you can also see throw the building.

Moreover, that there is a lot of open space inside the house”. J.T. In Piazza

“I think this is unique piece in the City of Espoo. People come to see this building... This really make us value more what we have” J.T.

“I like the space where the drawing tables are” girl

“I like the leikki!, referring to the games in the atelier” girl

“I like the room where the soft toys are, referring to a small atelier” boy

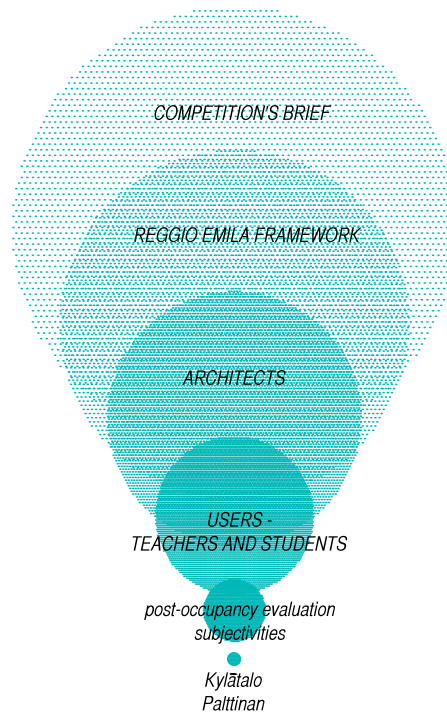
“My favourite place is the big atelier” boy



Picture 26. Inside Kylätalo Palttinan

PAJTTINA on KYLÄN SYDÄN  
PAIKKA JOSSA KAIKKI SAAVAT  
MIELEN HYVÄN. KYIÄTALASSA ON  
TOIMINTAA AAMUSTA ILTAAN,  
YHDESSÄ TEKEMISEN TUO  
ILON PINTAAN!

VAUVA  
"Mieheni ei halua mukaan synnytykseen"  
11.01.2014



### Reflecting on the architecture of Kylätalo Palttinan

Michael Gylling is the professional who design Kylätalo Palttinan. According to arch. Gylling, his first interest in participate in the contest was because of the effects the building was going to bring to its users.

At that time, everything was changing... Kauklahti, one of Espoo's oldest villages was turning from a small village into a town.

According to the architect, his first idea was to design a village house for Kauklahti... spaces inside spaces and the sense of scale and un-scale.

In other words, its strength will be the sense of identity. This sense of identity is materialized in spaces where the users can participate, collaborate and meet the community.

In addition, arch. Gylling expressed that everything started with a good competition brief where the main idea was to design a new type of building. With this in mind, the competition brief encouraged an environmental approach.

For him, the fundamental values of Kylätalo Palttinan are "kotoisuus", "hemul (referred by the Swedish connotation of coziness and being safe)" home like feeling, warmness and humbleness.

According to the planning brief the entrants were to take the following factors into account:

- Decisiveness and consistency of the building's architectural concept
- The suitability of indoor and outdoor spaces for their purpose and the interconnections between them
- Comfortable and pleasant indoor space with the flexibility to cater for the building's entire life cycle
- The capacity of the building and its grounds to encourage enthusiasm and activity
- The nature of the building as a linking theme between Palttinapuisto Park and Klippinkitori Square
- The dimensioning and overall economy of the building.

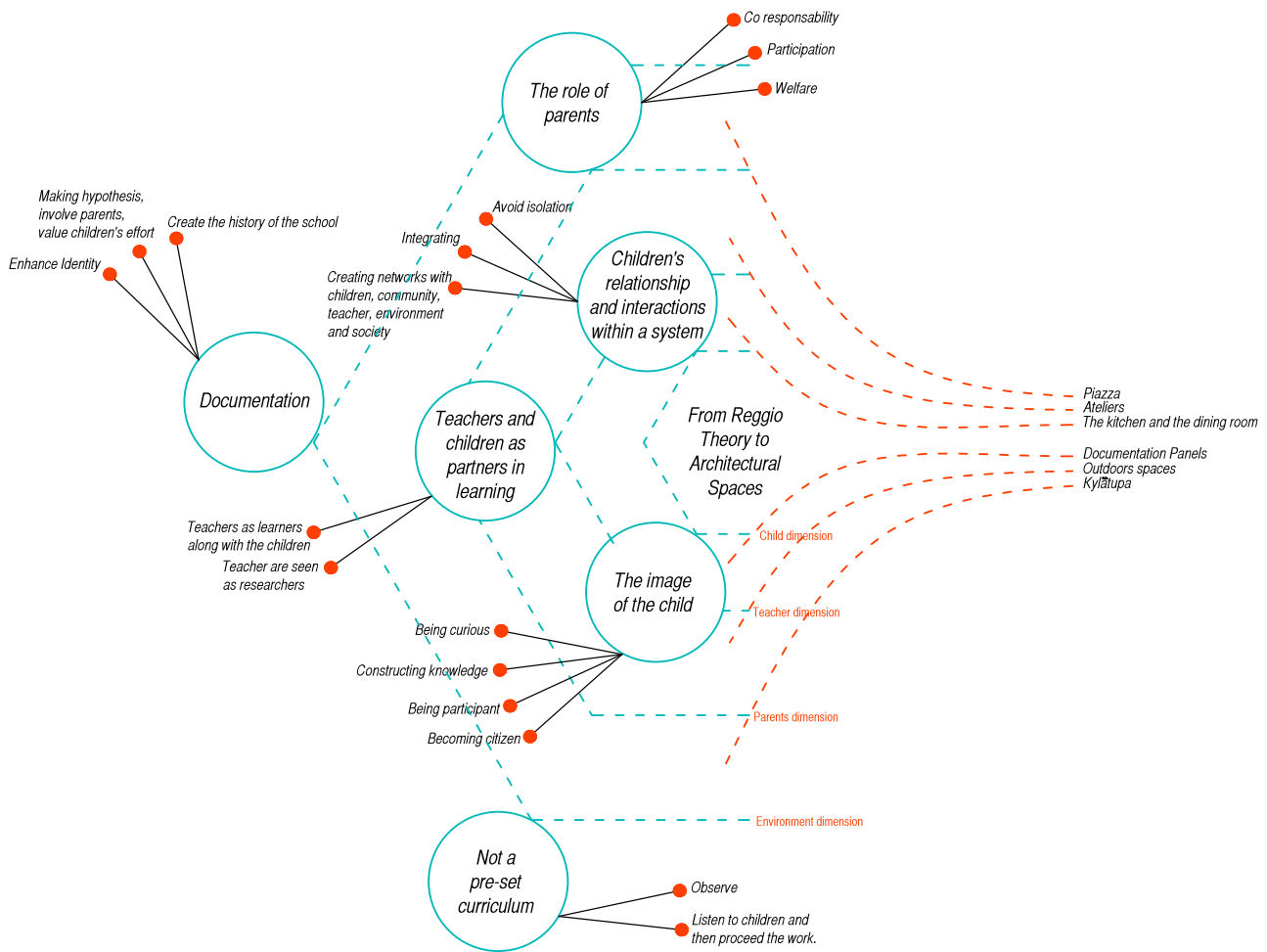
Taken from arkkitehtuurikilpailuja 5/2004

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Picture 27. Inside Kylätalo Palttinan

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Picture 28. Diagram. Levels of the project



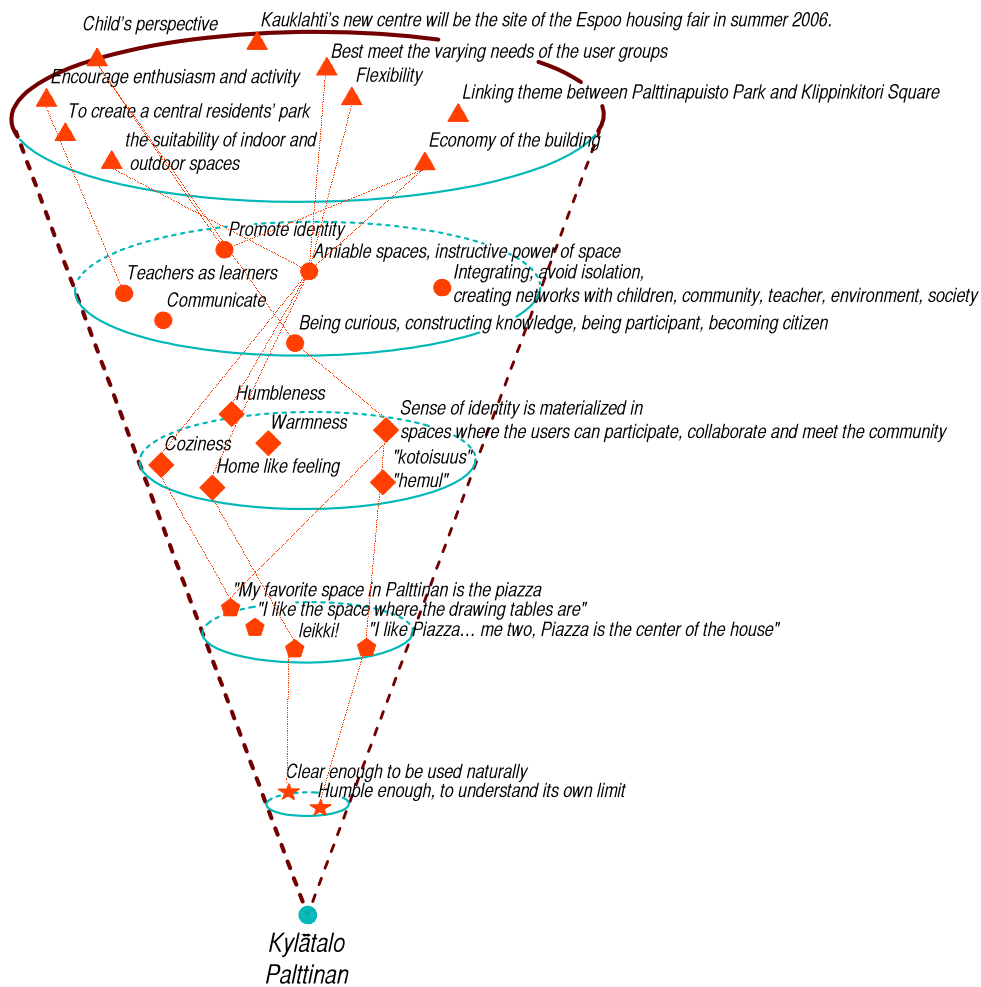
### Finding patterns: The Reggio Emilia's Framework

Loris Malaguzzi, once said, "Learning and teaching should not stand on opposite banks and just watch the river flow by; instead, they should embark together on a journey down the water". With this quote, Malaguzzi clearly states the significance of participation and interactions of the different actors in the learning and teaching process- being the children, their parents, the teachers and the environment.

After the WWII most of the important northern cities in Italy were completely devastated. Their reconstruction, restoration and a new vision of society were needed in order to give a future to the territory and its inhabitants. Far from prioritizing any tabula rasa, the Italian society and its the fundamental affinity with its historical values, beauty and culture gave a fertile territory for exploring new relationships between the users and the built environment.

Education also took part of this paradigm and around the years 1968 and 1971, workers, educators, parents and particularly brave women strived for a future vision towards childhood education. This education encouraged a strong relationship with their environment, i.e. what we know now as Reggio Emilia was the result of collaborative efforts of parents, teachers, the environment aimed to cultivate children's natural skills and competencies. This framework rather than rerouting children toward specific educational models, encourage them into a participatory model in which children act as codesigner in their own knowledge. In this sense, Reggio Emilia is aware the human nature by promoting curiosity, innocence, creativity and intuition rather than imposing popular patterns.

Picture 29. Diagram. Grounding theory in Reggio Emilia Framework



In the following extract by Loris Malaguzzi, best known as the father of the Reggio Emilia framework, it is stated the main principle of Reggio's children education pedagogy:

Our image of children no longer considers them as isolated and egocentric, does not see them as only engaged with action with objects, do not emphasize only the cognitive aspects, does not belittle feelings or what is not logical and does not consider with ambiguity the role of the affective domain. Instead our image of the child is rich in potent, strong, powerful, competent, and most of all connected to adults and other children. (Malaguzzi, 1993)

Based on Lella Gandini article's entitled: Introduction to the Fundamental Values of the Education of Young Children in Reggio Emilia and Linda Thornton and Pat Brunton book called Understanding the Reggio Approach: Early Years Education in Practice.

The current diagram will point out several dimensions promoted by Reggio Emilia's methodology and its translation into spatial planing, function, form, usability and serviceability elements.

There are several ways to give a tangible form to this values, Linda Thornton and Pat Brunton stated:

The use of space:

One of the most striking features of the Reggio preschools and infantotddler centers is the physical environment and the use of space, light and colour. Not all the preschools in Reggio are purpose-built many exist in carefully refurbished buildings- but all are designed to maximize the potential of space and light and to be flexible and adaptable in use.

Picture 30. Diagram. Assessing value at different levels of the project



The buildings provide spaces for children that are beautiful, personal and welcoming. Spaces are created which enable children to develop their potential, abilities and curiosity through exploration and research alone and with others.

Thornton and Brunton have stated the environmental framework into architectural spaces by stating: the piazza, the atelier, classrooms, the kitchen and the dining room, the internal courtyard, the outdoor and the panels.

Thornton and Burton describe these spaces:

The Piazza:

[...] The classrooms are arranged off a central piazza - a light, open space and the heart of the school - a place for encounters, meetings, play and performance.

The piazza is the central space of the school shared by children, parents and teachers. The piazza reflects the image of the city of Reggio Emilia, a place for encounters and journeys which changes with the rhythm of the day, the week [...]

The Atelier:

Each school has an atelier, the creative and discovery area where children work on extended projects, developing their investigative and creative skills and theories.

Great care and attention is given to the selection and storage of materials and resources which stimulate and enrich the very youngest children's curiosity, creativity and communication. The atelier has a system of open shelving for storage and provides a rich supply of resources for the children to access independently.

The kitchen and the dining room:

The dining room is at the heart of the school and the kitchen area is visible all times, reflecting the importance placed upon preparing and sharing food.

5.

Encounter 1

*From the Real School to the Dream School*

The themes were studied from the dream schools. However, the comparison with the real school give me a context to become aware of differences, creativity and influence of learned models into creative practices at early ages. The most creative drawings were always the ones for the future school, in concept and technique. Normally the real school was represented as closed, in elevation and without colours, different from the dream school which even in representation was more creative. For instance, some Finnish students from Arkki took plastics with different colours to add depthness to the windows of their works.

On the other hand there was a strong statement in terms of fun. According to the children drawings, their real school was not that fun and they demonstrated very evident with their dream school.

The themes were divided in tangible and intangible themes. Form and Structure, Aesthetic and Appeal and Serviceability and uses where the tangible, while Identity and Singularity were the intangible.

Theme: Form and structure

Key findings:

- Explicit
- Articulated pavilions
- Not explicit and not defined form. Attraction towards experiences.

In the theme of Form and structure, three where the key findings or trends more evident in the first event. First, the use of a defined building, with a strong and clear character. This building was normally represented as one single monoblock in composition. In some cases, the mono block was almost the same (with some minor changes) to the one depicted as real school.

In this cases the access to the building was very clear.

Second, the use of articulated pavilions, small self-sufficient units which host inside them one or two teaching and learning activities. The pavilions were blend inside a landscape or open area.

Third, it was also evident the absence of a formal building. In this case children, did not defined any structure they were more attracted to depict games, experiences and learning activities that took place in outdoor scenarios. For instance, it was common to notice patios, elements from the playground and learning tools.

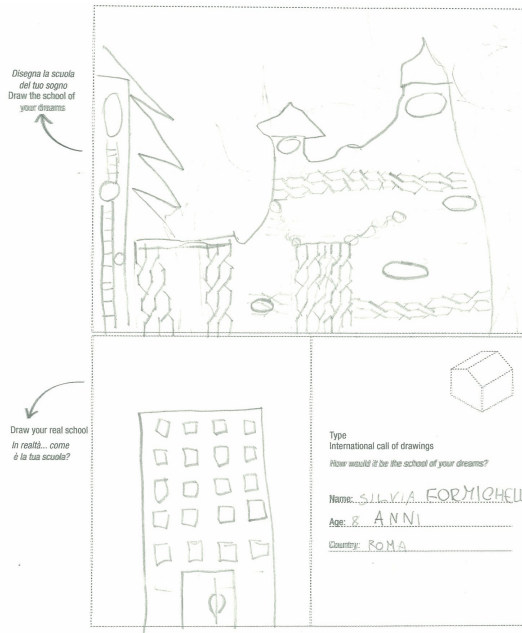


Theme: Aesthetic value: Appeal and Attraction

Key findings:

- Novelty
- Technology

It was evident in the atmospheres depicted by the children the need for big openings and sources for natural light. These were represented with different geometrical shapes like hearts, triangles, squares and rectangles. Moreover this evident game of shapes and forms tend to be interesting for children, for instance I noticed that some of them were more attracted to composition and detailed designs of facades while others were more into drawing experiences and activities as a result of using this primal forms.



Appealing was also evident with the use of colourful facades and decorative elements, somehow children were more attracted to warm colours and rhythm. Novelty on the other hand was drawn with scenarios of friendship or joyful activities between friends. Comfortable furniture and cozy zones were also present.



The relationship with the nature was very strong, even with children that live in strong urban areas. Plants and flowers were important in interiors as well as exteriors.

Technology appear to be another key factor in the appealing of the future school. Panamanian children were really interested to have personal computers and technology gadgets. In addition some other entries were more interested to use solar panels and alternative energy solutions. Indeed, technology was really a strong issue for the children. For Panamanian children, when they had to draw their real school sometimes they draw the computers room.

Theme: Serviceability and uses

Key findings:

- Centralized spaces and single uses
- Decentralized spaces and mixed uses

Children were very attracted with decentralized spaces and mixed uses. Somehow for them the playground and the classrooms should be one. Flexibility was also a key finding, stated by multiples activities that can be made in one single space. Some of the children were interested in learning through different ways that include play and outdoor games.

In addition there were ludic structures that were drawn inside learning spaces. Elements like pools, football and basket ball courts articulated teaching and learning spaces in the future school.

There was a minor trend stated with single and centralized uses with clear circulations and accessibilities toward the exterior. As part of a mono block, this spaces were communicated together with interior meeting spaces. In the case of schools with several floors, the ground level was always public and open to the outside.

Theme: Identity

Key findings:

- Change or negations of habits
- Recurrence of habits

The key findings in the category were the attraction towards changing completely the image of their spaces for learning. Game and outdoors activities were always stated as fundamental for children.

In some cases, the pool and game courts took an important part of the layout.

It was definitely evident that children had a strong statement regarding the real school.

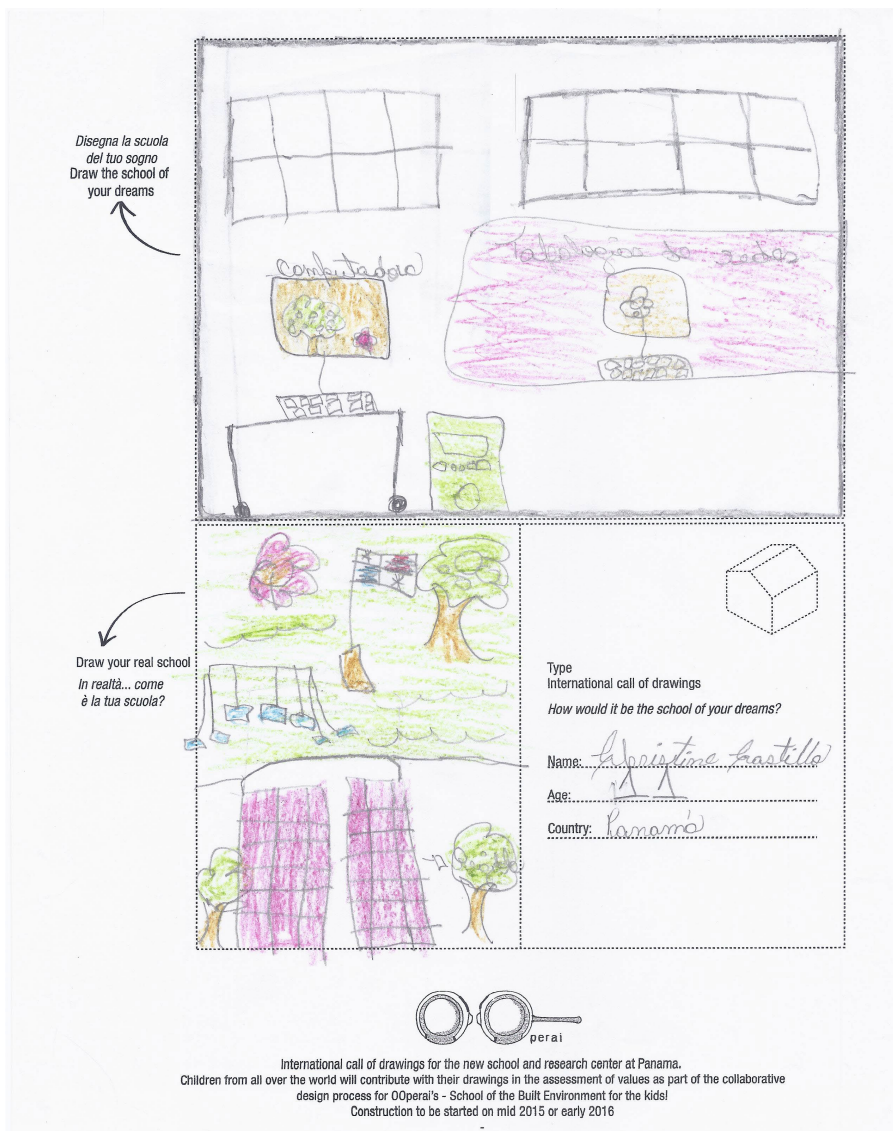
Technology was also an important aspect in this change.

Theme: Singularity

Key findings:

- Creative outcome
- Homogenized outcome

A creative outcome was the most strong trend found in children's drawings. They consider important the possibility of a building that besides education will provide better skills for their future.

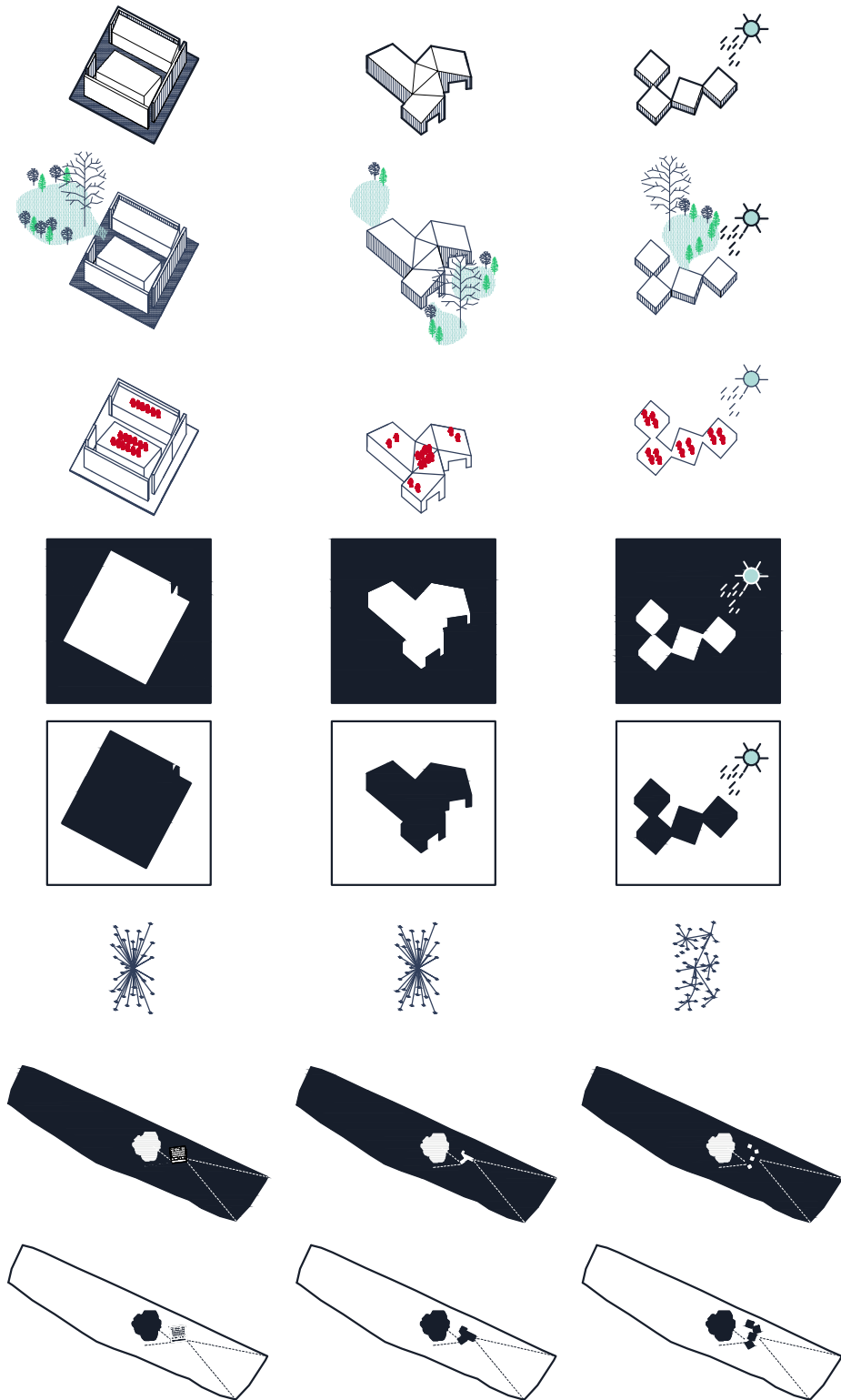


Picture 34. Result. Panama

Typologies: the Wall, the Cross and the Cubes

ENCOUNTERED TYPOLOGIES  
FROM ENCOUNTER 1

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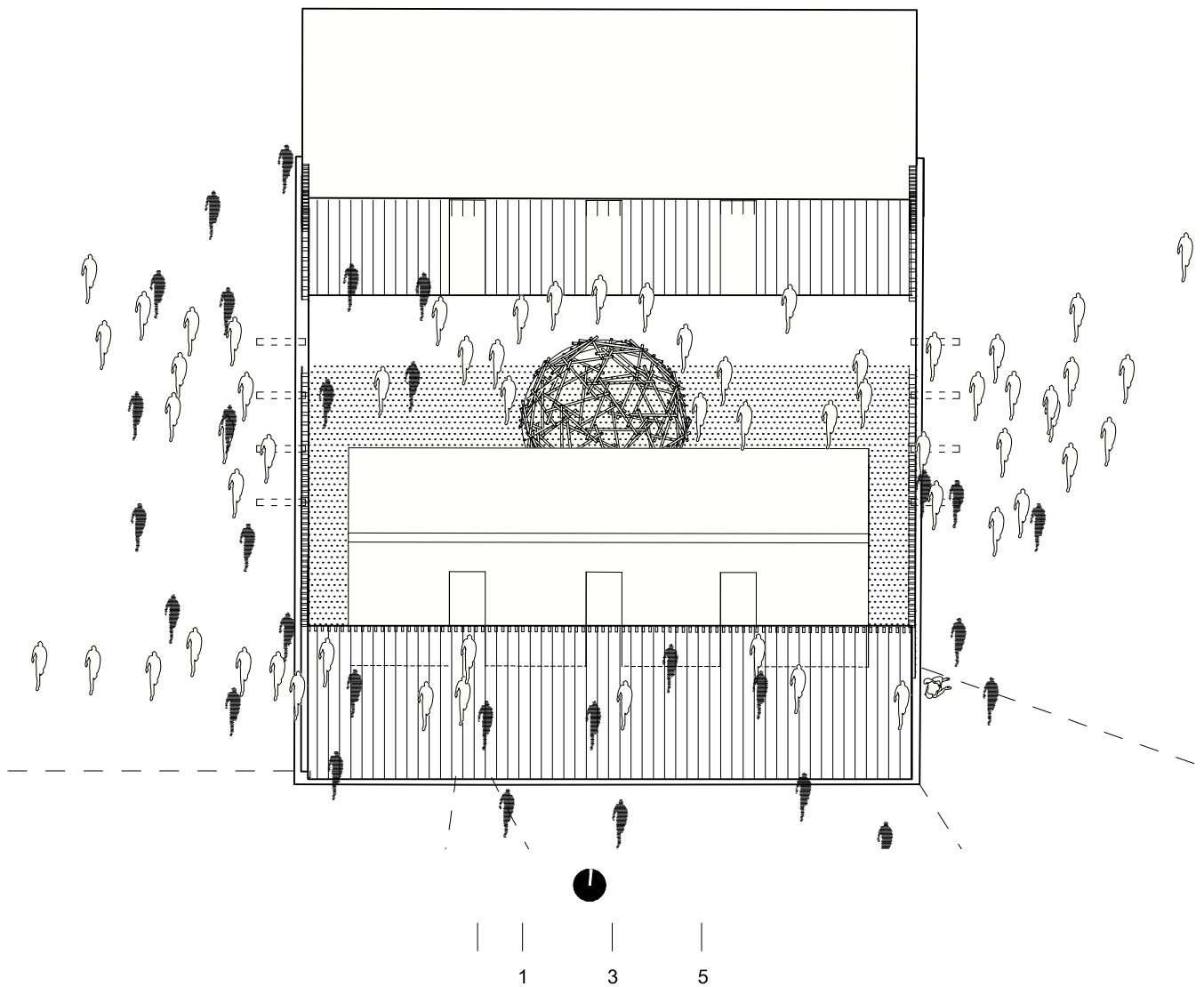
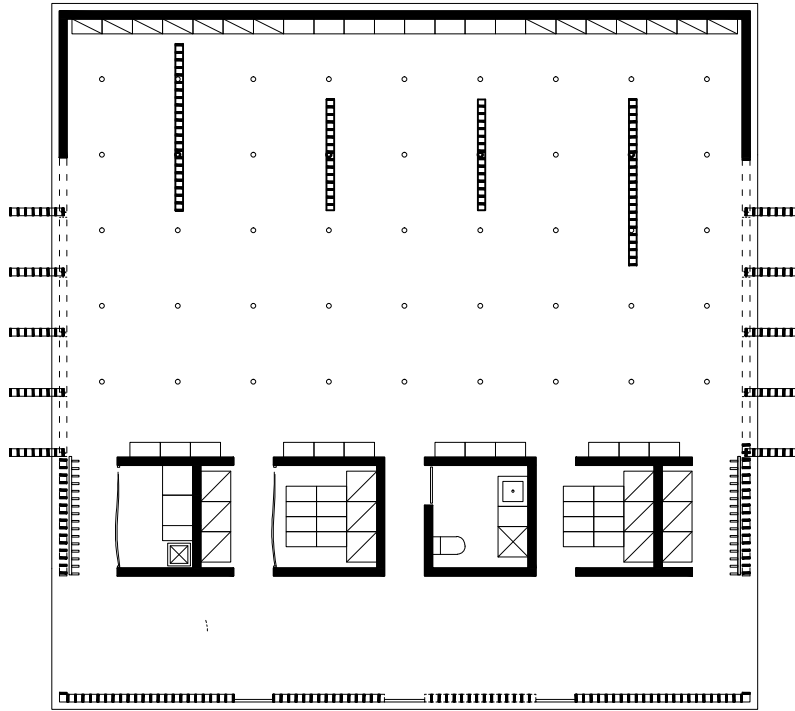
From top to bottom

1. Built space
2. Open space
3. Meeting space
4. Figure ground - negative
5. Figure ground - positive
6. Serviciability
7. Plot and granulation - negative
8. Plot and granulation - negative

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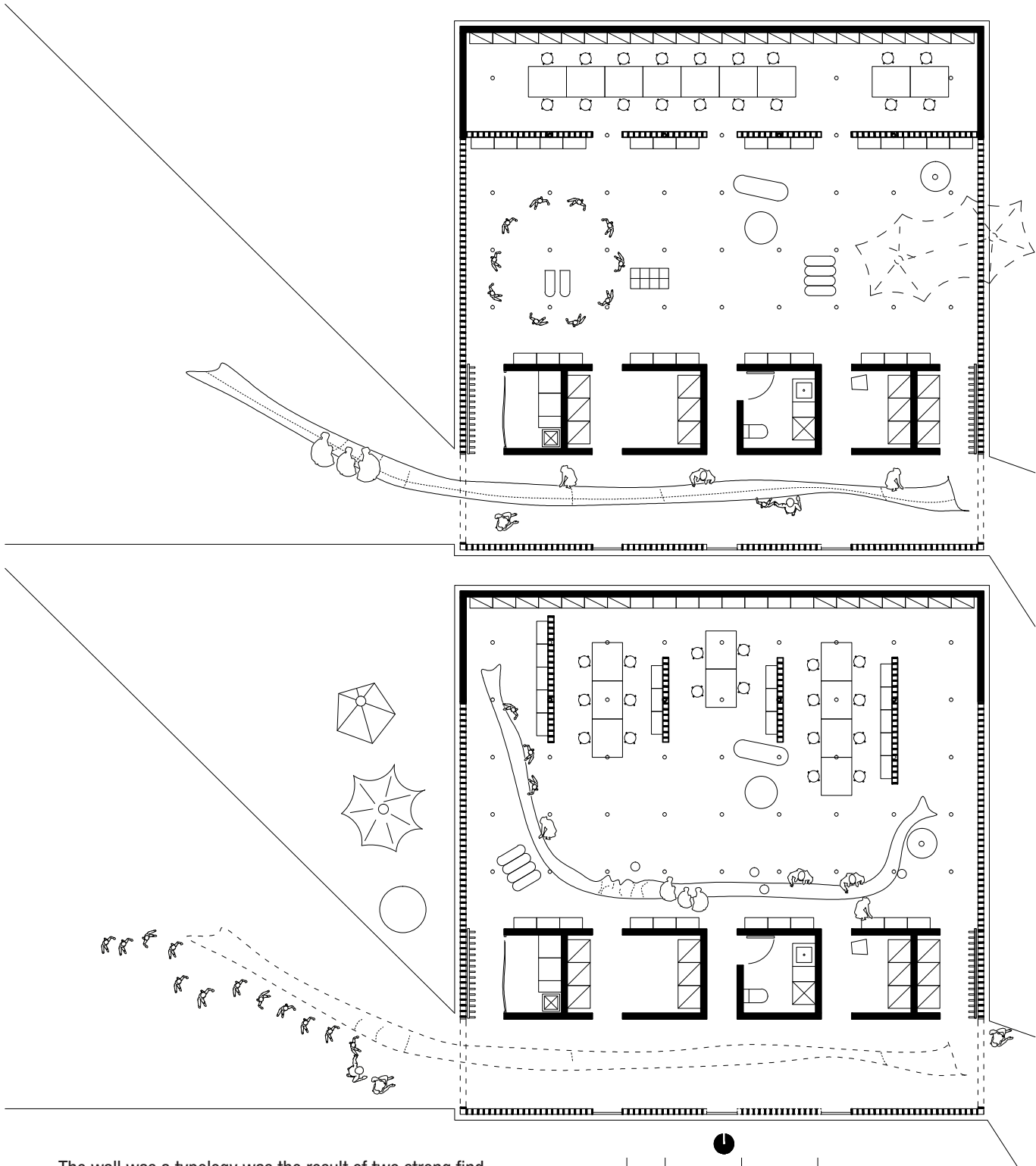
Picture 35. Diagram. Figure ground analysis. Typologies after Encounter 1

# The Wall



Picture 36. Plan. Wall typology

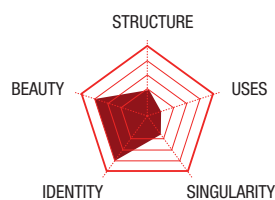
Picture 37. Axonometry. Wall typology



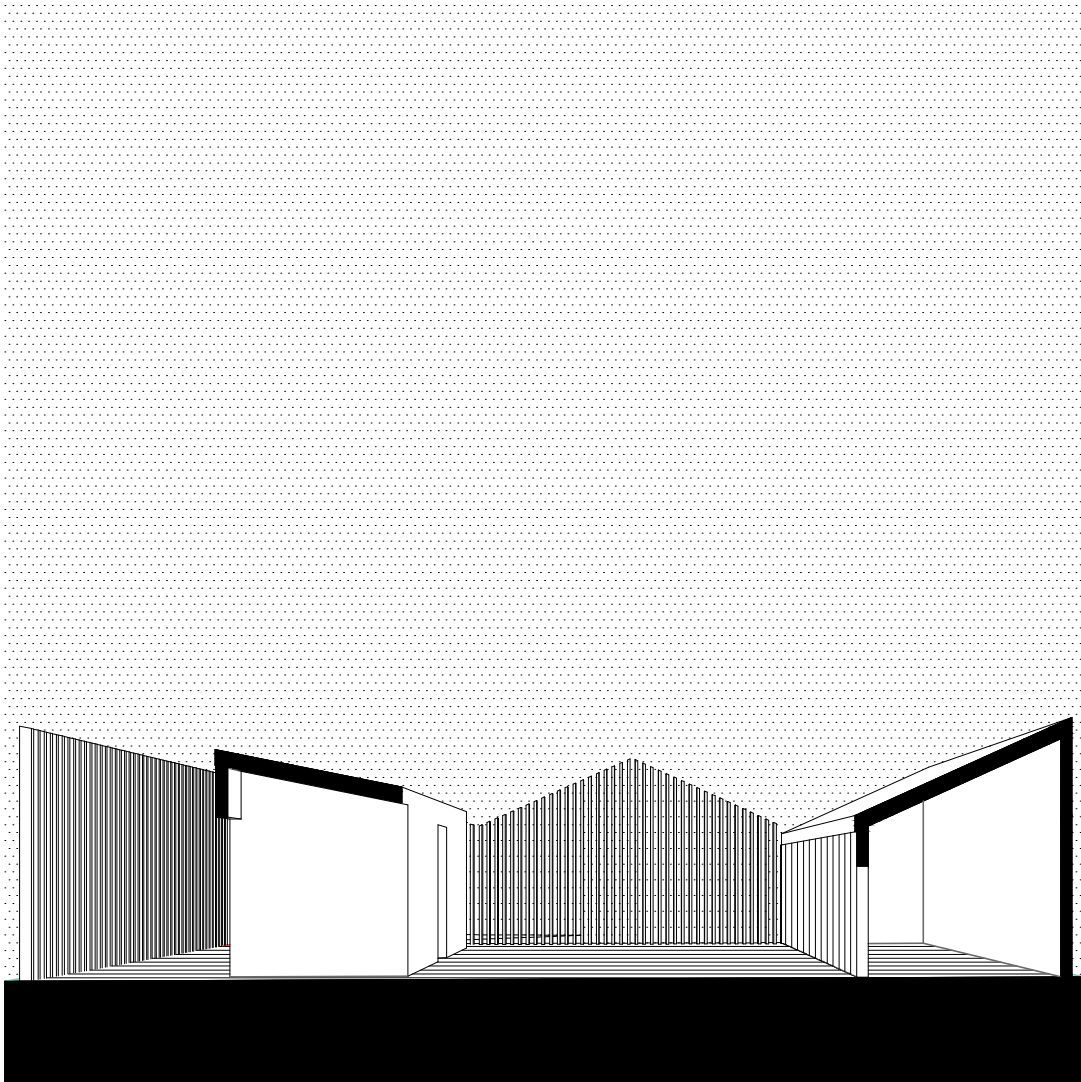
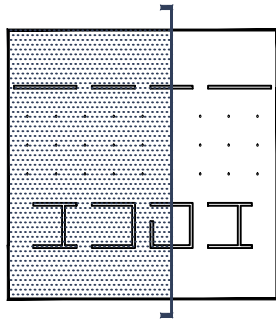
The wall was a typology was the result of two strong findings. First, the need for a flexible spaces in teaching and learning process. And second, the apparent trend for a school with a strong character as one single building. Moreover, it separate the uses making a clear distinction between outside/inside and services and spaces for learning.

In addition, it is the only typology with a strong connection with the historical fence and corridors, normally used in schools from the area.

After the first event, the typology was dismiss. According to the children, when comparing it to the other two typologies, this typology was not promoting good spaces for learning and teaching. However, the flexible character was taken for the further typologies.



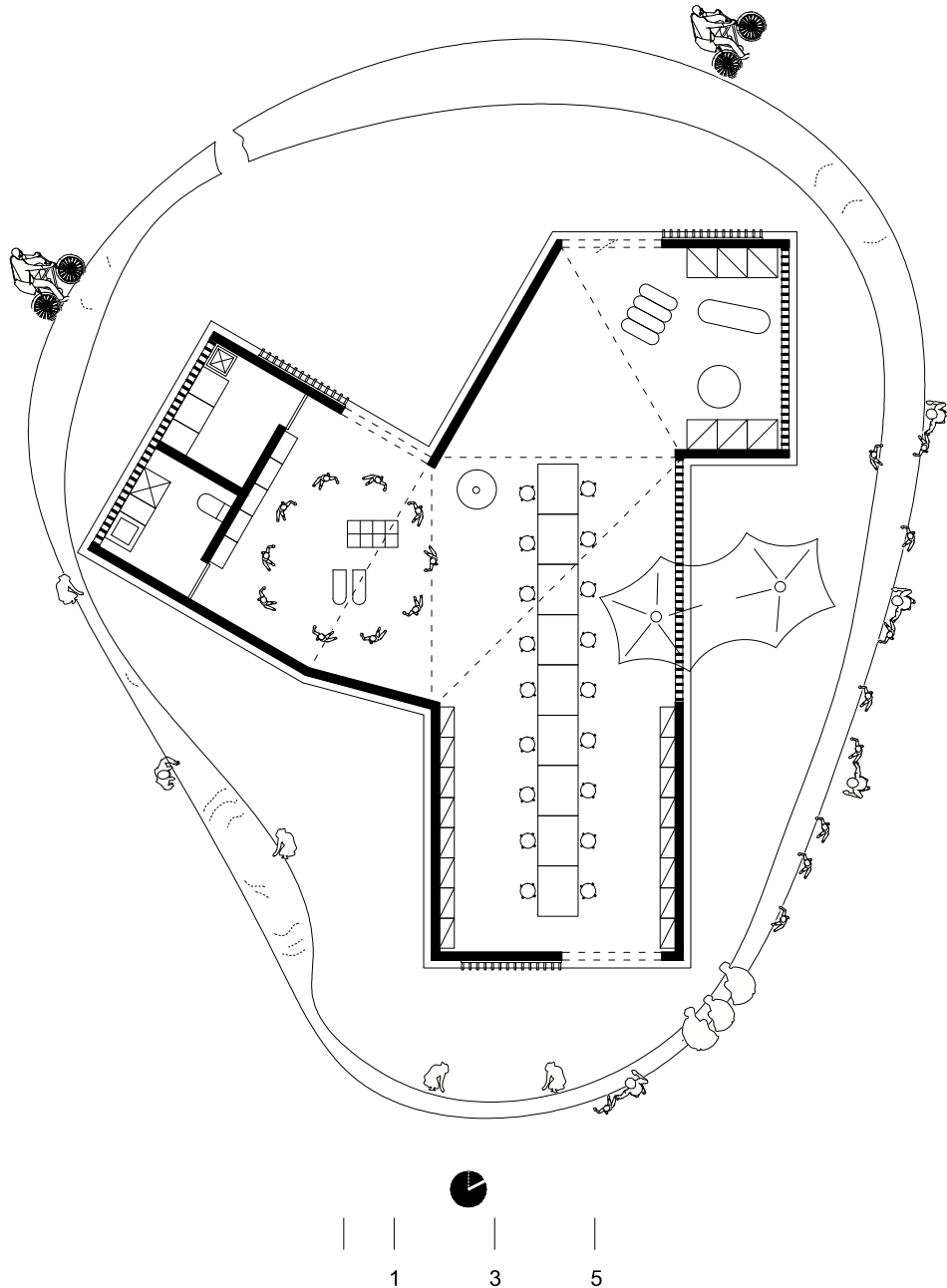
Picture 38. Plan. Wall typology flexibility



Picture 39. Prospective Section. Wall typology



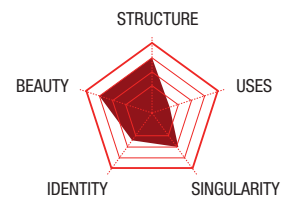
## The Cross

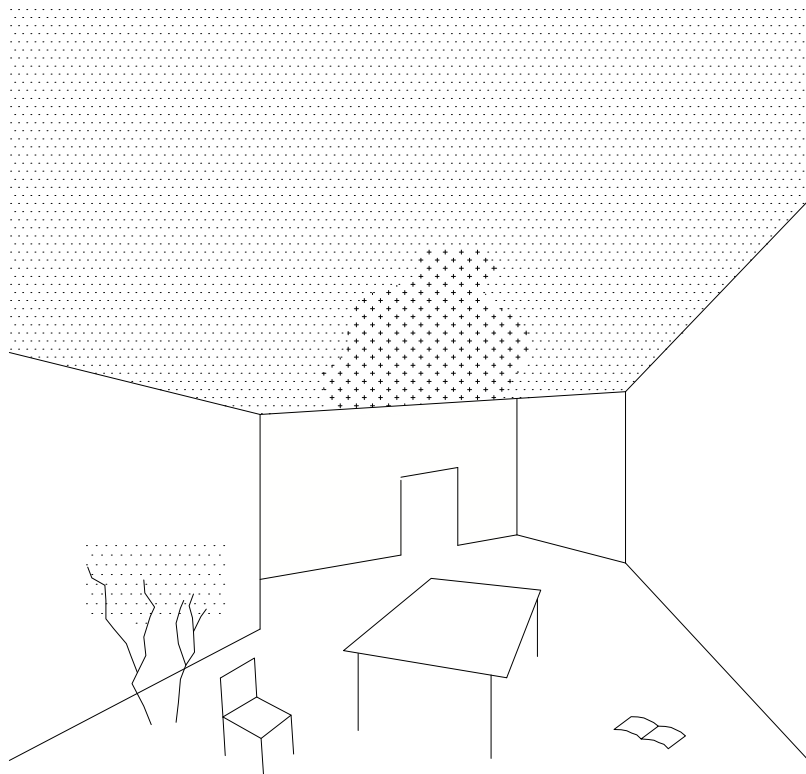
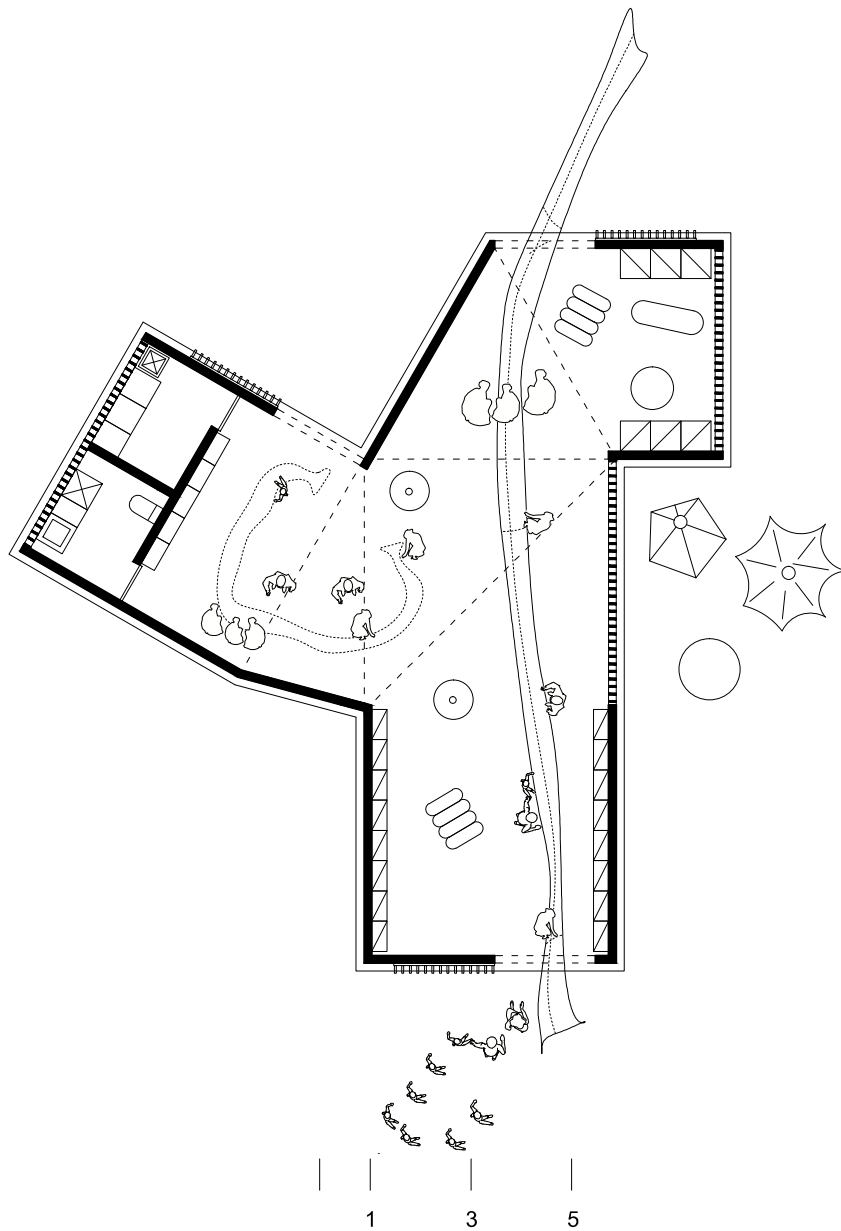


The cross, called like that because of its shape brings was the result of the arrangements of the internal classrooms, which are facing to a central space. Its beauty lies in maintaining the character of one simple building with different shapes of roof. After the second workshop, this typology was taken further with an open space consideration.

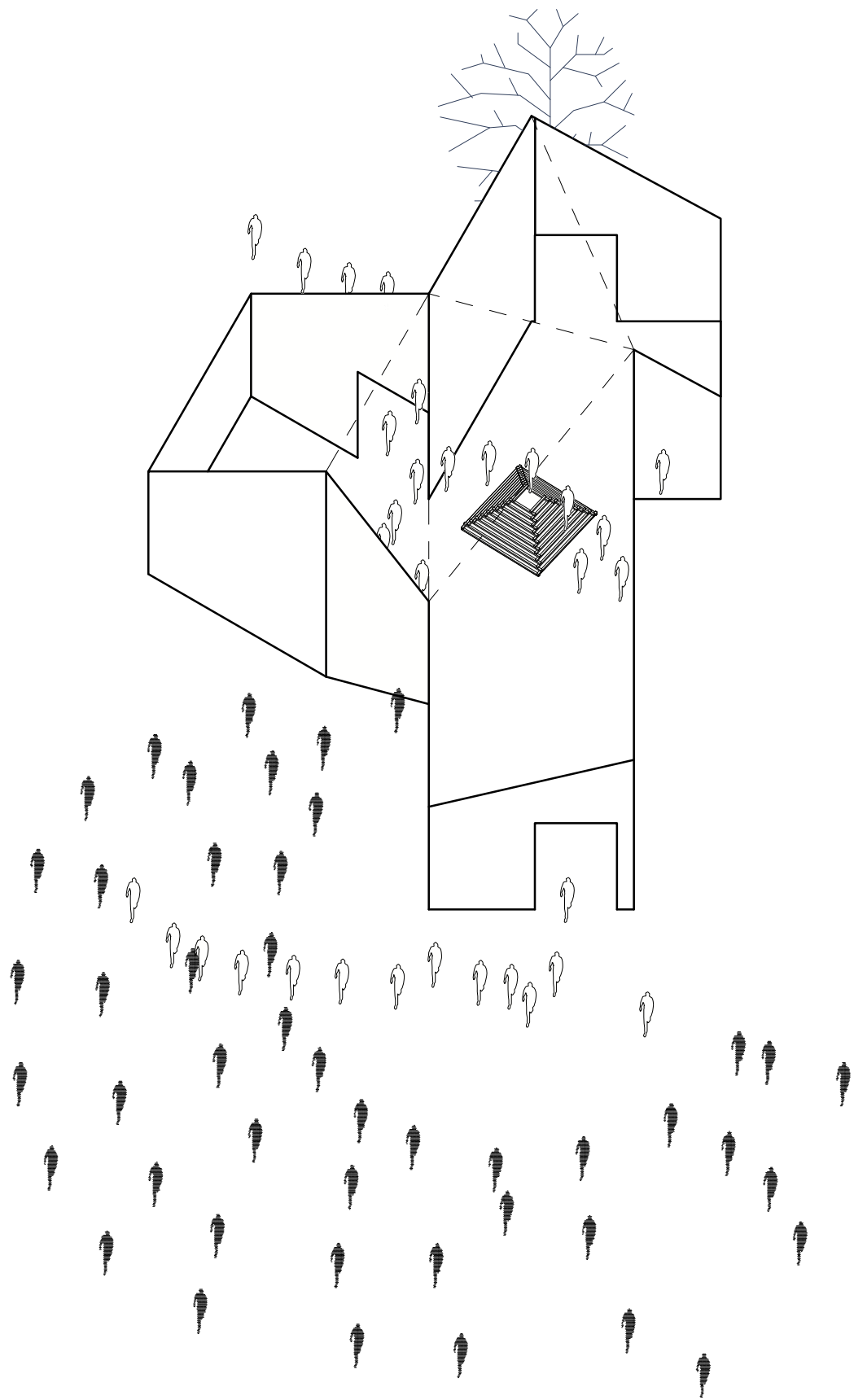
This form is not common in the area, however is very common on Reggio Emilia frameworks in which children learn also by looking to other children.

This typology was the second in popularity as well in promoting spaces for creativity, children were interested in the possibilities might different rhythms of roof experience of space. They also were interested in private spaces and public spaces to play, this was also solved by this form.



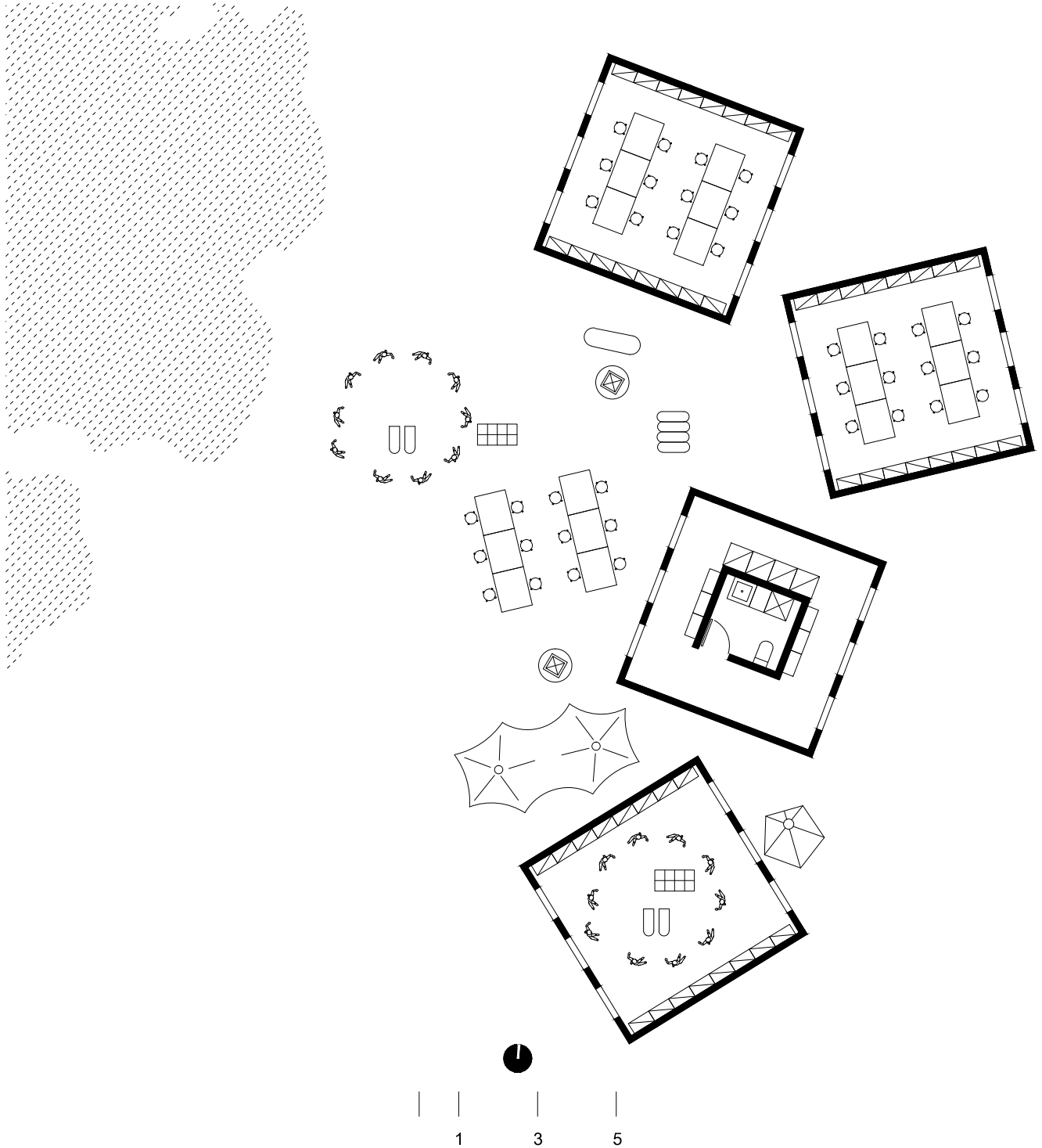


Picture 41. Plan. Cross typology  
 Picture 42. Perspective. Cross typology



Picture 43. Axonometry. Cross typology

## The Cubes

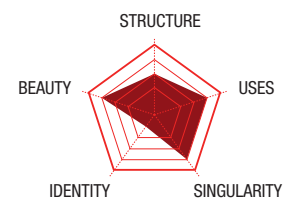


The cubes typology was the most popular, both as a building that might promote creativity as well in form.

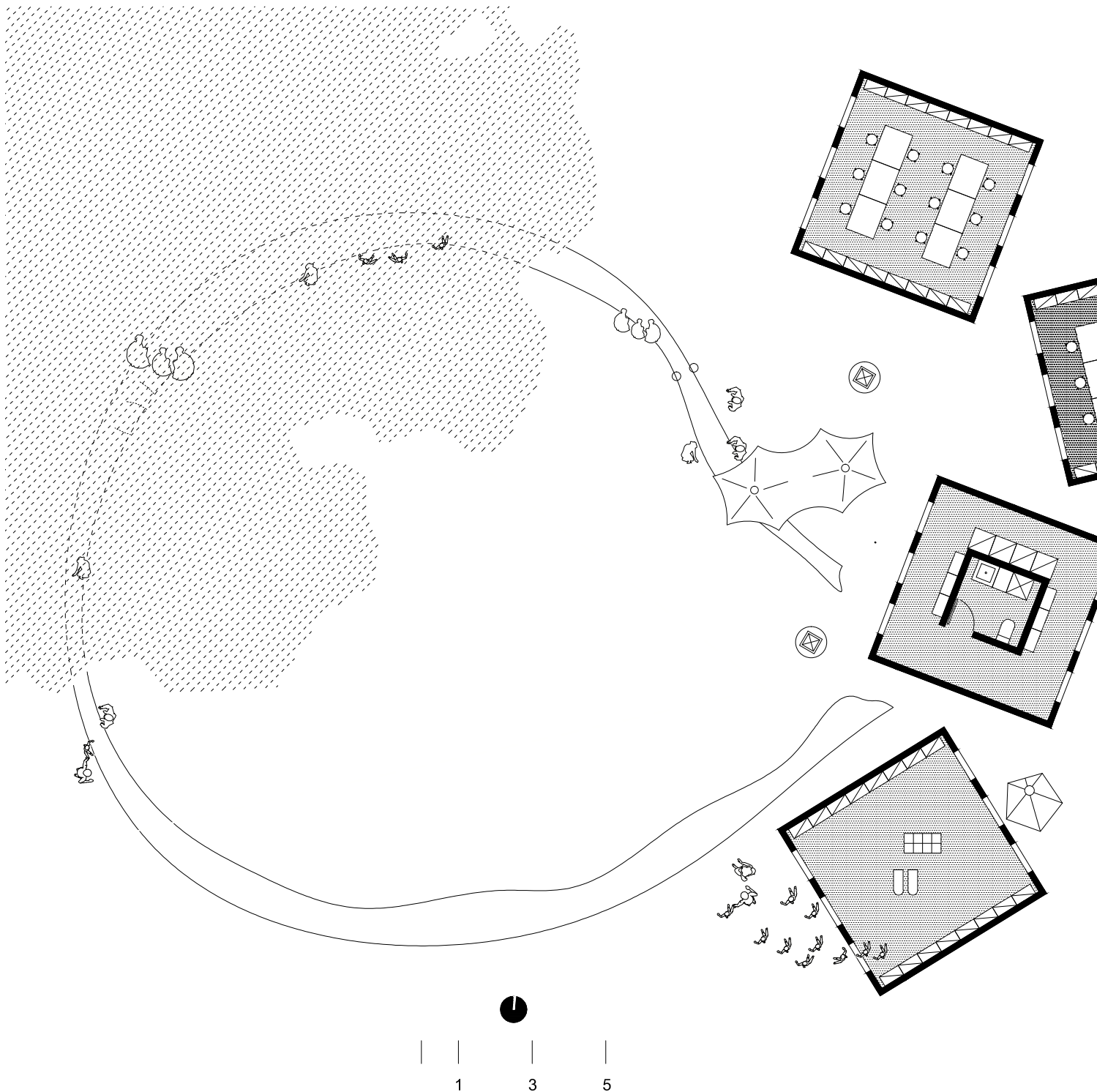
Along with the cross this typology passed the next round where it was discussed the public and meeting spaces of the future school.

Children were inspired by the singularity this building might bring. Indeed, was the typology that brought more delirious explanations and storytelling.

Is not a formal building, like the two previous typologies, is it rather a set of pavilions distributed in the landscape. It also differ from the previous ones in the way uses are distributed. While the cross and the wall were centralized uses, the cubes typology is promoting decentralized and autonomous uses.



Picture 44. Plan. Cubes typology



The cubes typology is singular, in the sense that this kind of structures are not evident in the area. Even though children were able to give sense to it and push it forward the final steps.

The typology is also coherent with the site, in which was highly appreciated to have a strong relationship between the outdoors.

This typology was very well accepted by the representatives of OOperai foundation because it gives the possibility to work with big canvas connecting the pavilions together, and as well stating a connection with the outdoors activities.

*These three typologies were validated and changed with the children in a second workshop. The children expressed the popularity for the cubes and the cross typology, those passed to a second round and will have to evolve. Now considering how should be the meeting and public spaces of OOperai's future school.*

*Even though the cross typology was left behind, its main value of singularity and flexibility were taken in consideration for the next encounters.*

Picture 45. Plan. Cubes typology with the tree

Encounter 2  
*About Meeting and Learning Places in OOperai's future School*

The main five themes were again studied this time with the OOperai users of Tole, Chiriqui in Panama.

The first part of the workshop was discussing each of the encountered typologies, then each children took two of them based on the capacity to promote creativity and learning and teaching process. Finally there was a discussion about the meeting and learning places in OOperai's future school. At the end I also validate the results and test if the more popular typologies also matched the most creative and innovative results.

First as a methodological step and to be sure that the typologies were selected with the purpose to fit their own need, I prepared this set of questions to be discussed with the children. Once the answers were more or less clear, then they should select the two typologies that fits better. In other words, the ones that bring answer to their questions more easily.

1. Formulation and identification of the phenomena. (How should be the meeting and learning places in OOperai's future school)
2. Description of the encountered phenomena (Asking to the kids: How do you remember your school? Do you see any difference between it and this models? Why do you think this typology (referring to the second one) is called the cross?)
3. Arriving to the essences (The structure: form and meaning of each typology? Which are the themes that make them different in form? For instance, the cross typology is like that because each room look to a public center point?)
4. Provocation and interpretation (By placing themselves inside the typologies. How does type is giving a sense of the lived-spaces and experiences?)
5. Exchanging the results and evaluation (Now is time to select the two typologies and make them change).



Picture 46. Results. Panama



*Once the form was decided, colour tends to be the way to express feelings and experiences.*

Key findings:

- The capacity to produce semi-public spaces by articulating the pavilions in specific ways. Some of the children argue the need of space to play in privacy, while some of them use this spaces as gardens.
- The idea to break the center point of the cross typology and transform it into an open public space instead of closed public area. Which is more open to the landscape.
- The notion of order and geometry was not a concern for this children. They rather were interested with the possibilities of having a natural disposition of the units based on the openings.
- There should be indoor meeting places as well as outdoor ones.
- Something called: el llano or solar referring to a open space surrounded by the buildings was also appreciated. Sometimes by putting structures like pools, or lots of trees and people. Openings and doors were facing all a central area.
- Moreover, centrality was very much encountered as well as hierarchy. The last one sometime represented by the red colour.
- Colours like red, orange, purple and yellow were often used.
- Lots of trees and a clear relationship between interior and exterior were a strong need.
- Some of the cubes typologies were explained as small houses.



*From top to bottom*

Picture 47. Participants from Tole, Panama

Picture 48. On the workshop

*On next page*

Picture 49. Participant from Tole, Panama

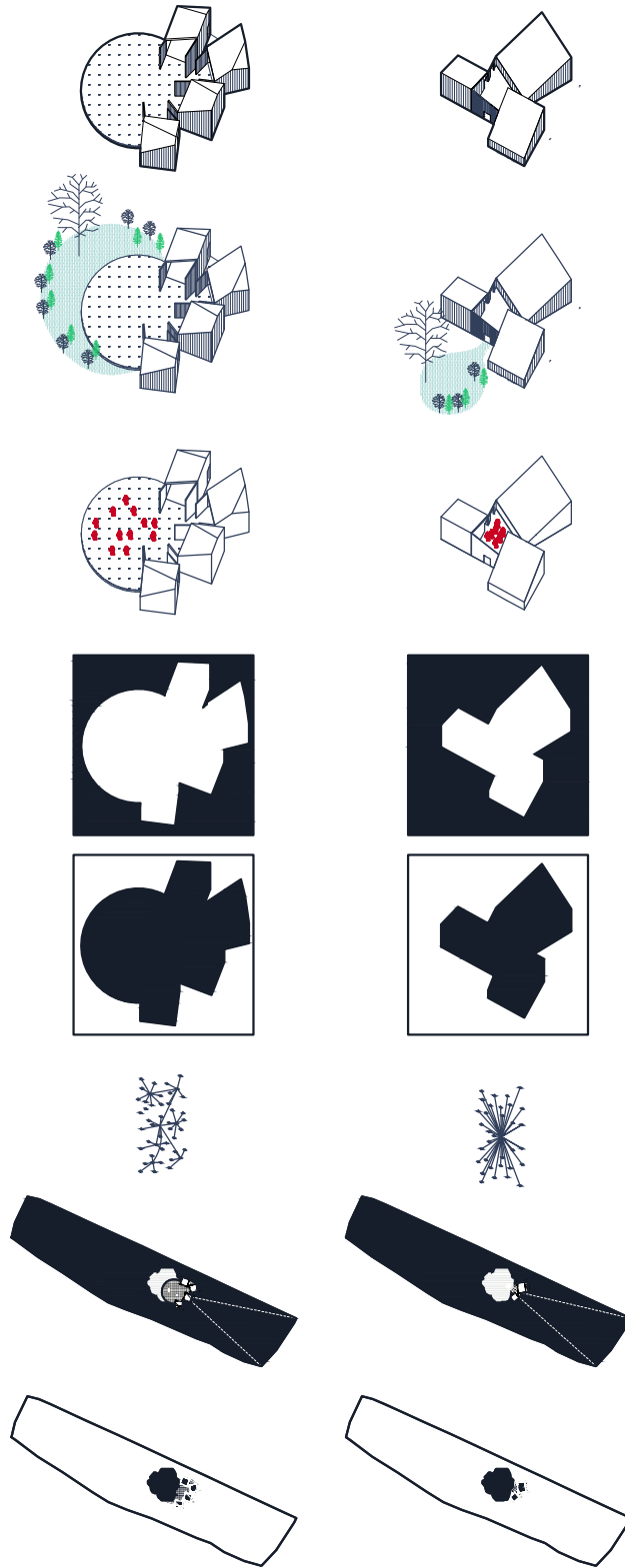




Typologies: the Piazza and the Tree

ENCOUNTERED TYPOLOGIES  
FROM ENCOUNTER 2

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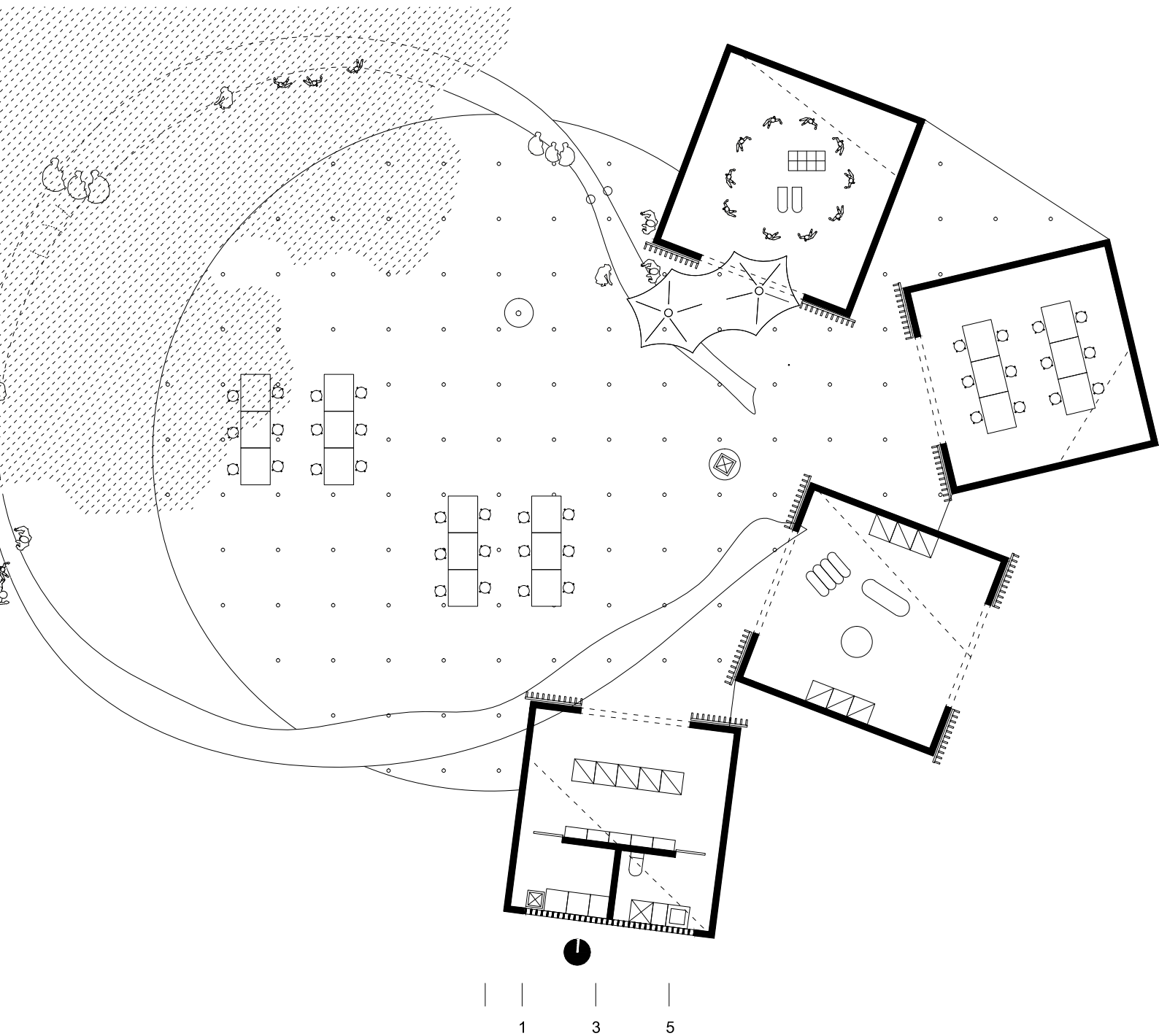
From top to bottom

1. Built space
2. Open space
3. Meeting space
4. Figure ground - negative
5. Figure ground - positive
6. Serviciability
7. Plot and granulation - negative
8. Plot and granulation - negative

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Picture 50. Diagram. Figure ground analysis. Typologies after Encounter 2

## The Piazza



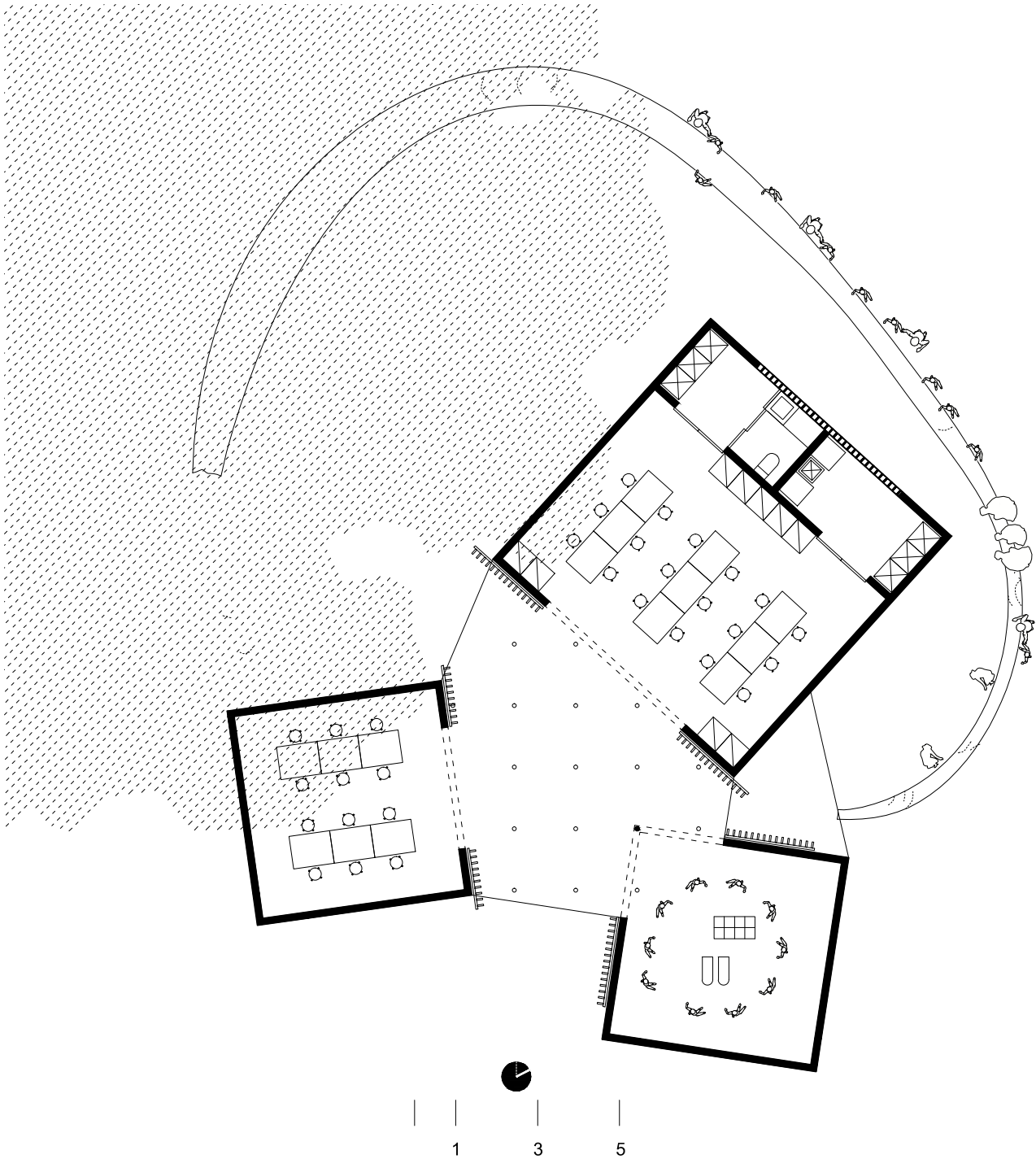
The piazza typology give the possibility to have an open space surrounded by the three and the pavilions. As something discovered by the second encounter, the opening and doors well also giving priority to this public space.

Big opening and light from above were valuable. As well the possibility to use the shaded spaces between the pavilions.

Between the two typologies resulting from the analysis of the results in the second encounter, this was the typology selected for the last event. This last event, will explore the design of the outside areas.

In this typology, order and geometry was the result of the learning spaces for children. They ask for public as well private spaces for playing and learn.

## The tree



This typology called the tree, was an evolution of the cross typology. In which the main center point was open to the outside, but still keeping the main characteristic of a central point where children can learn by looking to other children.

The need of hierarchy was solved with this typology that keeps a big pavilion in which is possible to find all the service needed and the storages for the school. Small classrooms are facing them.

A more indirect, but still present relationship with the tree. The idea was to use it as an articulator, for instance for the big canvas projects, rather than part of the architecture masses.

Encounter 3  
*About Outdoor Places in OOperai's Future School*

Once again the main themes and the methodological questions were the starting points of this event in which some Finnish children from Sini Koivisto's group participated and inspired Panamanian children. The two final typologies, the Piazza and the Tree were studied with Panamanian and Finnish children. The three Finnish participants were Kasper Luoma, Akseli Anttonen and Vijami Narinen.

Key findings:

Tree typology:

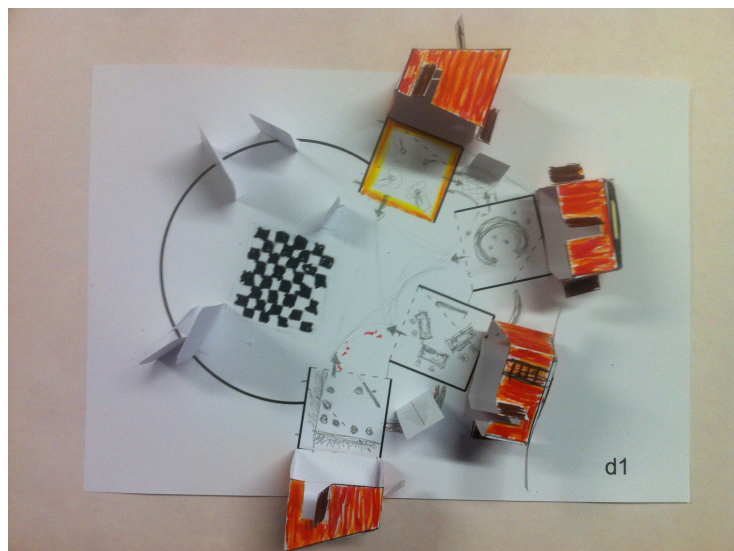
- In the tree typology it was very valuable to have difference in hierarchy. It helps to facilitate orientation and perhaps a main dining room or other important public areas should be there.
- However, to relationship between dimension of the buildings and the open piazza seems to be too small, and a dark place. Children changed the previous disposition.
- Natural light, particular light from the roof is important. It was also mention, more important for the big building.

Both typologies:

- Bigger windows are always better, they introducing.
- Round shapes and openness between buildings were also important.
- Roof terraces were also important, even bridges between different roof where important. Children described them as cool.
- Having the roof with solar panels is a good idea.
- When asking the children about what would be their experiences if they imagine that they are inside their selected typology, they expressed that they want to be surprised, somehow a different experience from the outside.

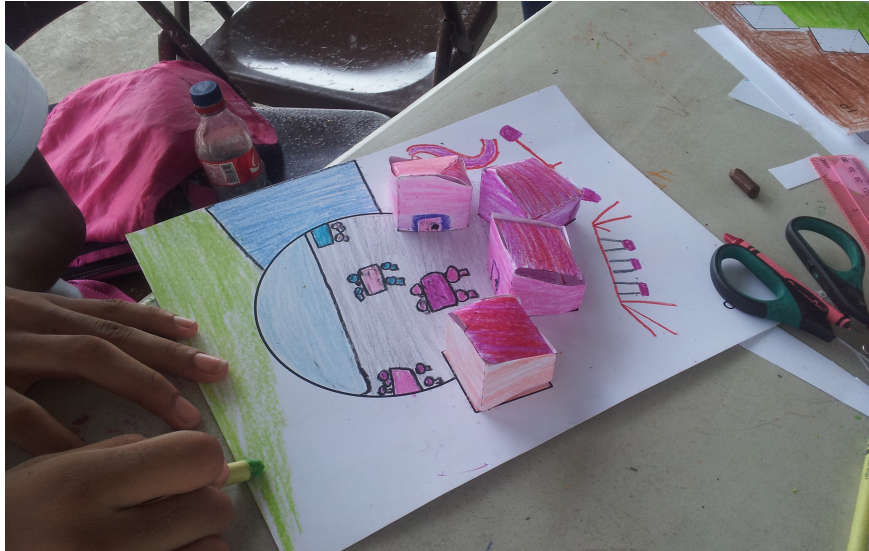
Piazza typology:

- Some of the children give the quality of "aldea" referring to a small village.
  - Children were described it as an nice upgrade of their actual school.
  - The idea that the buildings should be connected somehow was also important.
- In the center, flexibility and human scale sculptures. Since the piazza has a significant dimension, children suggested something to relate with scale and the human. Big art pieces, fountain or human scale art.
- Different form of roof make the building more interesting and give more design look.
  - Flexibility was an important value for outdoor places.
  - It would be cool to have one classroom were you can work on the floor, without traditional furniture. And then one house with the services.



Picture 53. Result. Finland

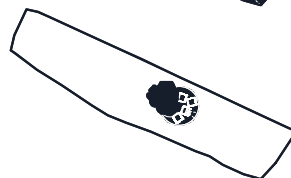
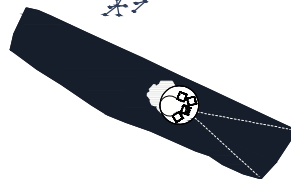
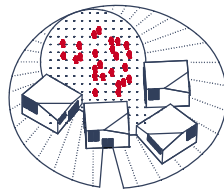
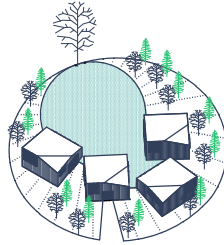
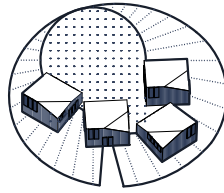
After the workshop the most popular typology was the cubes typology. Also this typology gave the most creative and delirious stories. As a result, this will be the typology that will be construct by OOperai foundation in the middle of 2015 and developed in the following pages. This typology was able to fit the needs of the responsible of the Foundation as well the demand from the children. It was also the one that promote more creativity and inspired most of the children during the events. It was also the one that introduce value in a clear and evident way: children described them as home, small village of smiles and dream school.



Picture 54. Result. Panama

Typologies: the Piazza  
 ENCOUNTERED TYPOLOGIES  
 FROM ENCOUNTER 3

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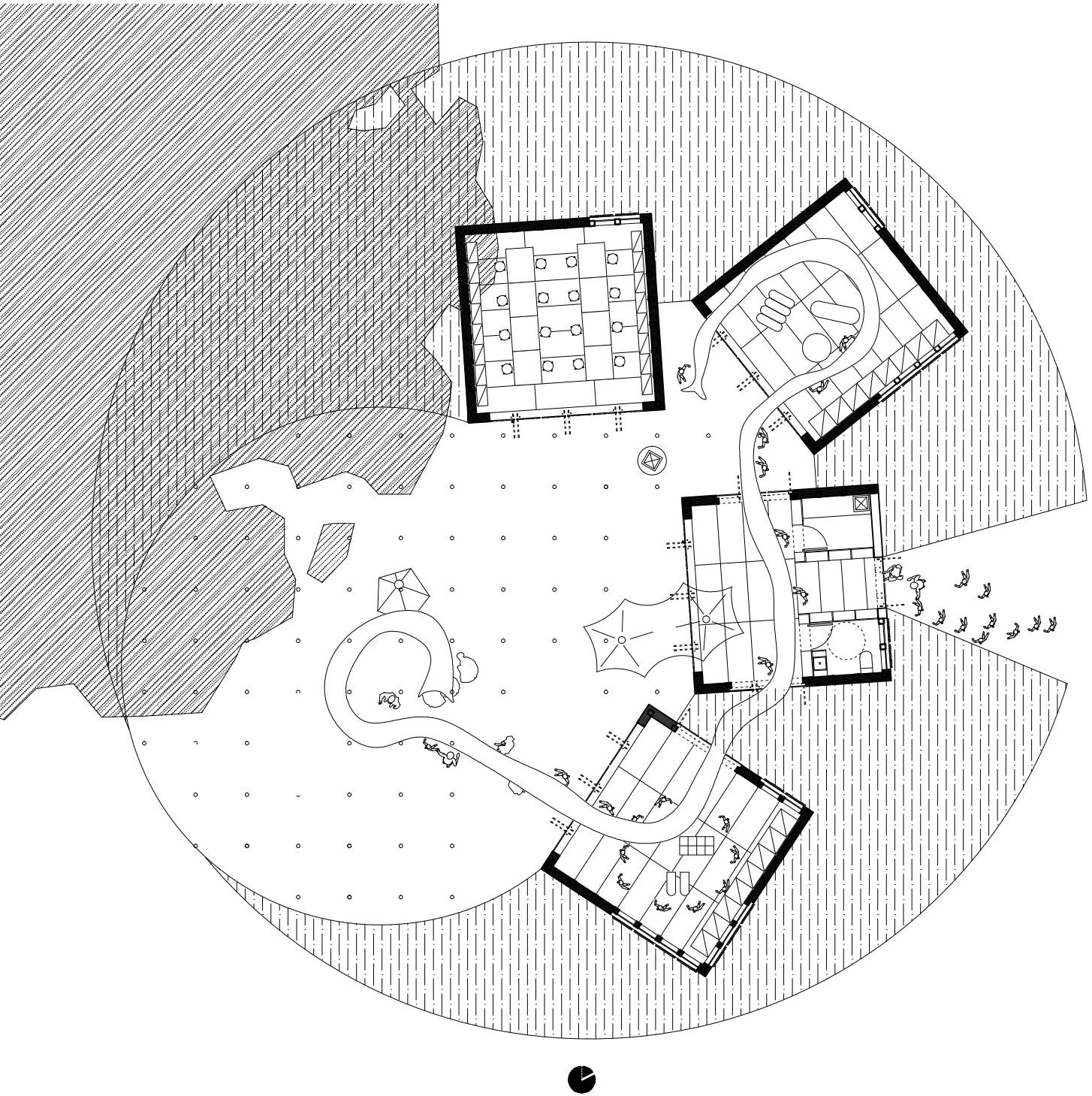
From top to bottom

1. Built space
2. Open space
3. Meeting space
4. Figure ground - negative
5. Figure ground - positive
6. Serviability
7. Plot and granulation - negative
8. Plot and granulation - negative

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Picture 55. Diagram. Figure ground analysis. Typologies after Encounter 3

## The piazza



This typology called the tree, was an evolution of the cross typology. In which the main center point was open to the outside, but still keeping the main characteristic of a central point where children can learn by looking to other children.

The need of hierarchy was solved with this typology that keeps a big pavilion in which is possible to find all the service needed and the storages for the school. Small classrooms are facing them.

A more indirect, but still present relationship with the tree. The idea was to use it as an articulator, for instance for the big canvas projects, rather than part of the architecture masses.

6.

Plateaus:

Topological Summary

Note on Value and a Collaborative Project with Children

Site Plan

Prospective Horizontal Section

Prospective Vertical Section

Pictures

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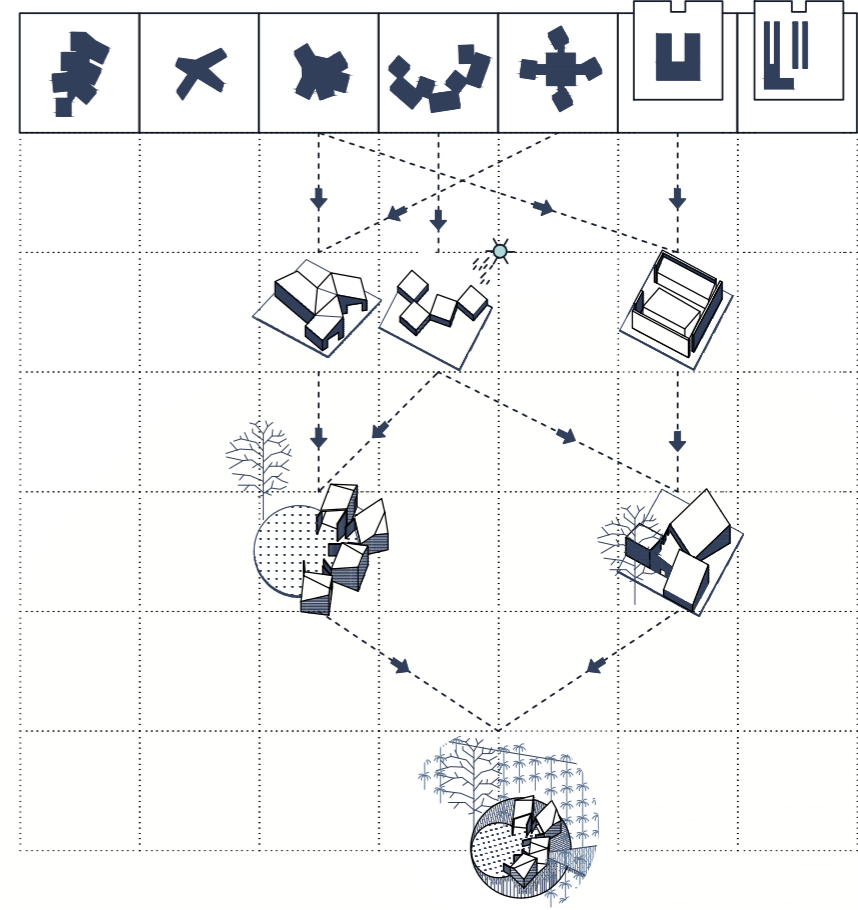


ENCOUNTERED TYPOLOGIES  
FROM ENCOUNTER 1  
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ENCOUNTERED TYPOLOGIES  
FROM ENCOUNTER 2  
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ENCOUNTERED TYPOLOGIES  
FROM ENCOUNTER 3  
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TOPOLOGY BETWEEN THE  
FINNISH AND PANAMANIAN  
TYPOLOGIES



ENCOUNTER 1  
Circa 120 drawings from  
Panama, Italy, Finland, Poland,  
Uganda, China, Russia,  
Ukraine, Mexico and India

ENCOUNTER 2  
Circa 40 models from Tole and  
Panama City in Panama.

ENCOUNTER 3  
Circa 86 models from Colon,  
Panama and collaborations  
from Finland

- 10 50 100
- From top to bottom
1. Built space
  2. Open space
  3. Meeting space
  4. Figure ground - negative
  5. Figure ground - positive
  6. Serviciability
  7. Plot and granulation - negative
  8. Plot and granulation - negative
- \*\*\*

Picture 57. Diagram. Topologic Summary

## Note on Value and a Collaborative Project with Children



The thesis attempt to tackle the methodological inquiry in three specific points:

1. As an effort, attempt to redefine the image of the children and the image of the space for children in Panama. It's a critique of the concept of typology and spaces for children.

2. The project support the fact that beyond any tectonic or aesthetic, the project of architecture has the possibility to improve the quality of life - introduce Ethics and therefore quality in Panama.

The process have involved the circa 200 children from more than 10 countries. Inspiring Panamanian children and demonstrating that we are all part of the built environment. Becoming aware of this at early ages will turn on in competencies and skill for the future. The children are the ones that will be the citizens of the future cities.

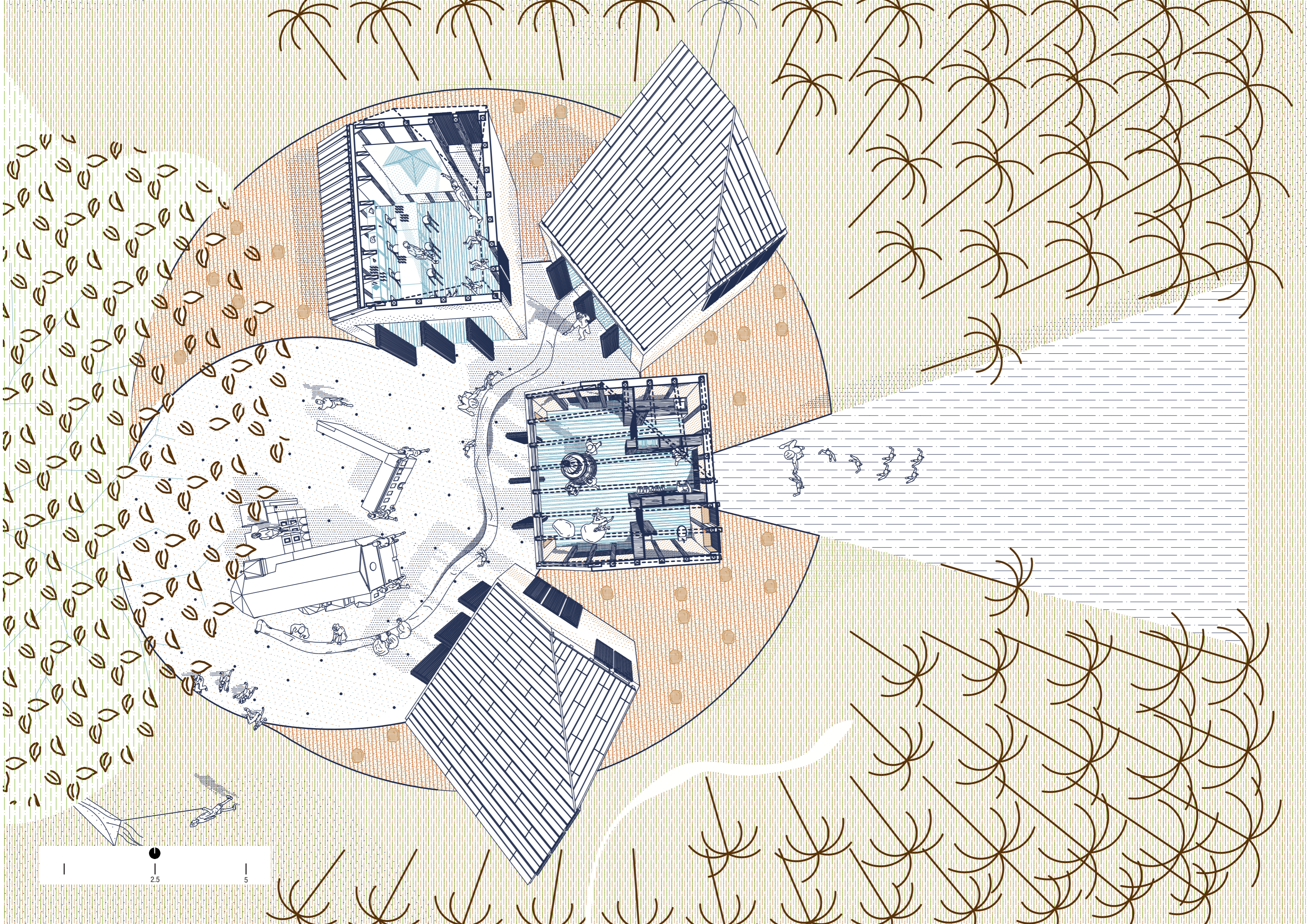
3. Producing architecture is a collaborative process. The project offer the possibility to learn from different frameworks and produce knowledge on the base of an holistic methodology. It took an experience from different cases of study in Finland and create value in a different context: Panama.

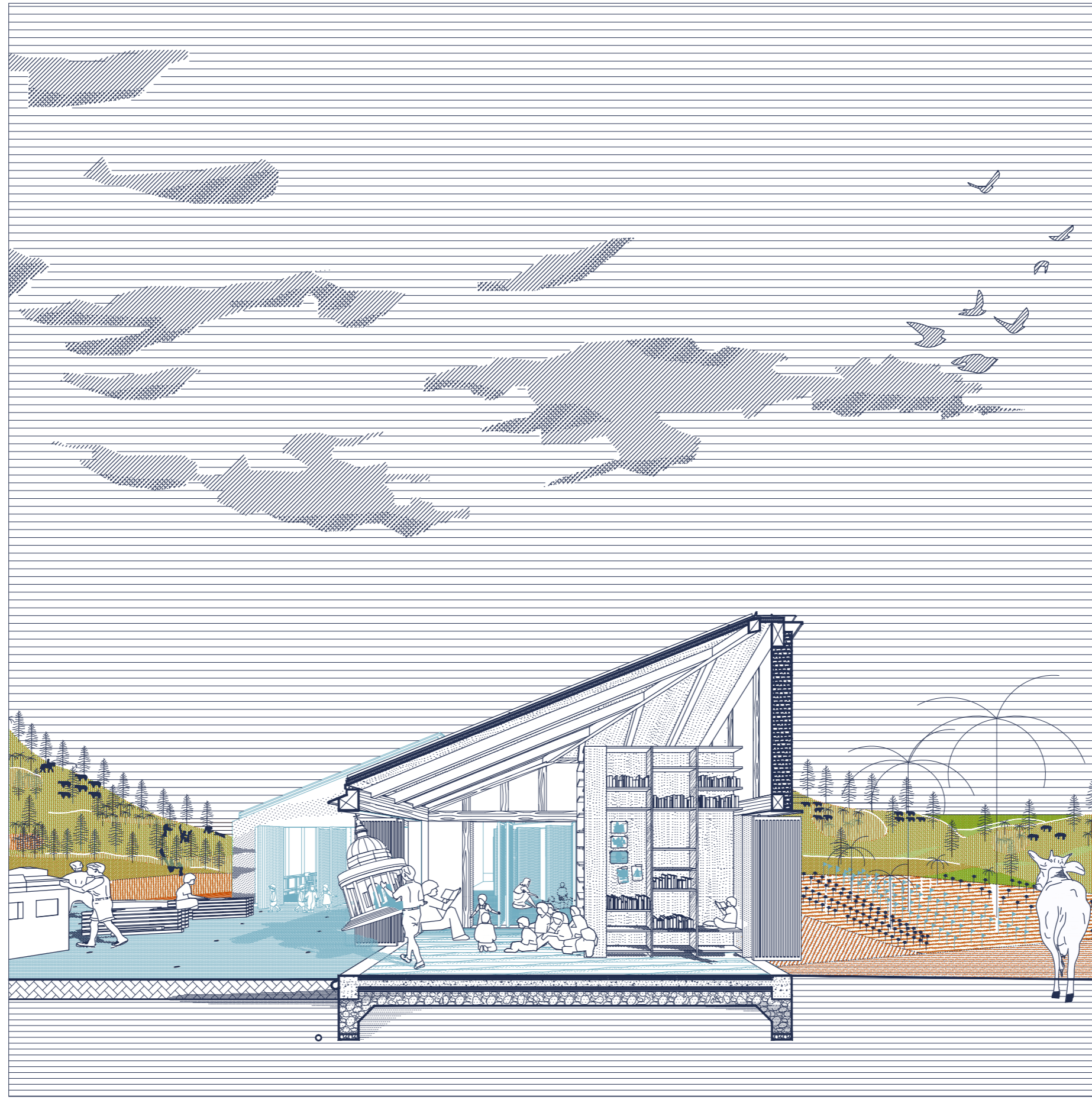


Picture 59. Site plan



On next page  
Picture 60. Prospective horizontal section



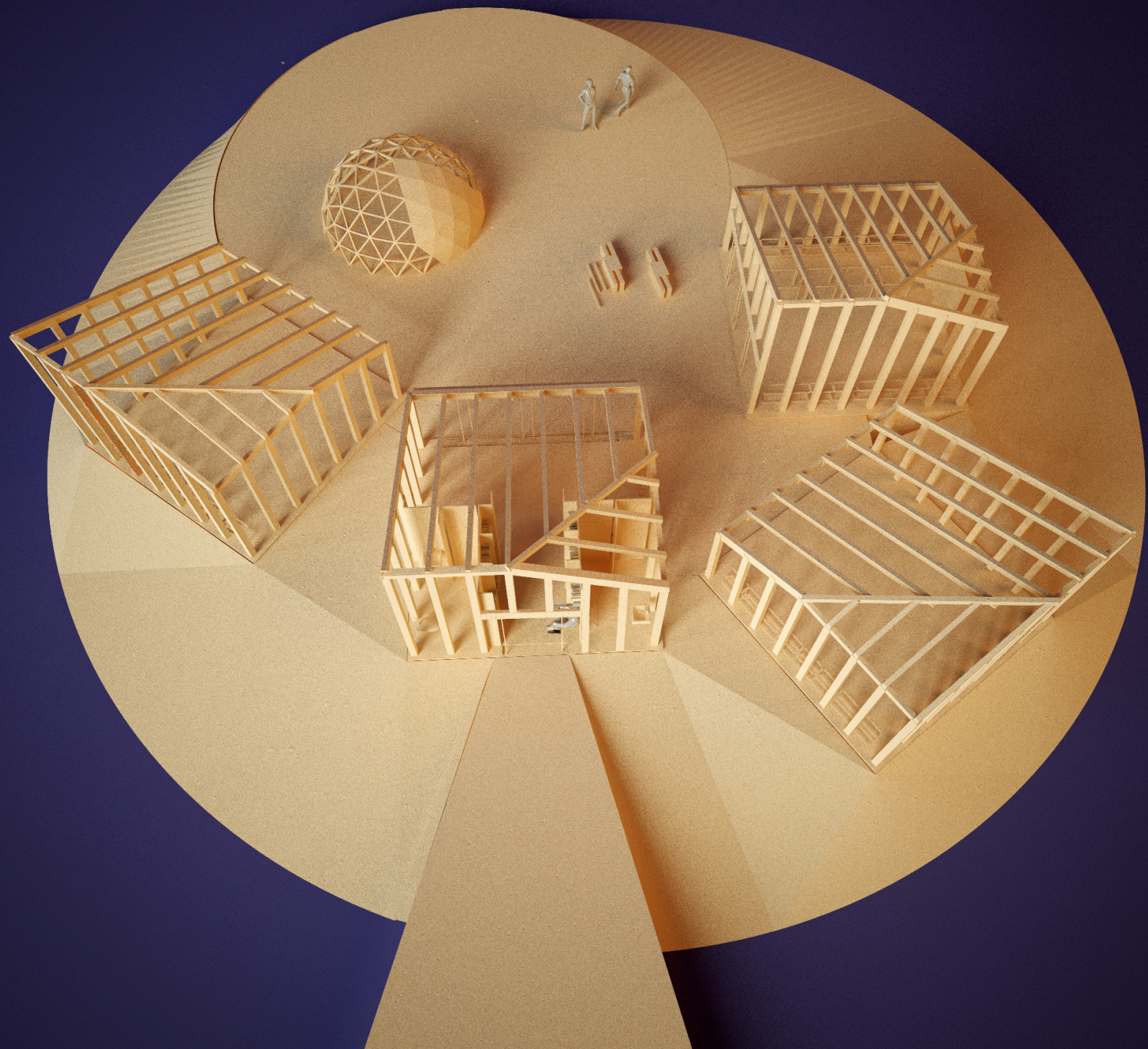


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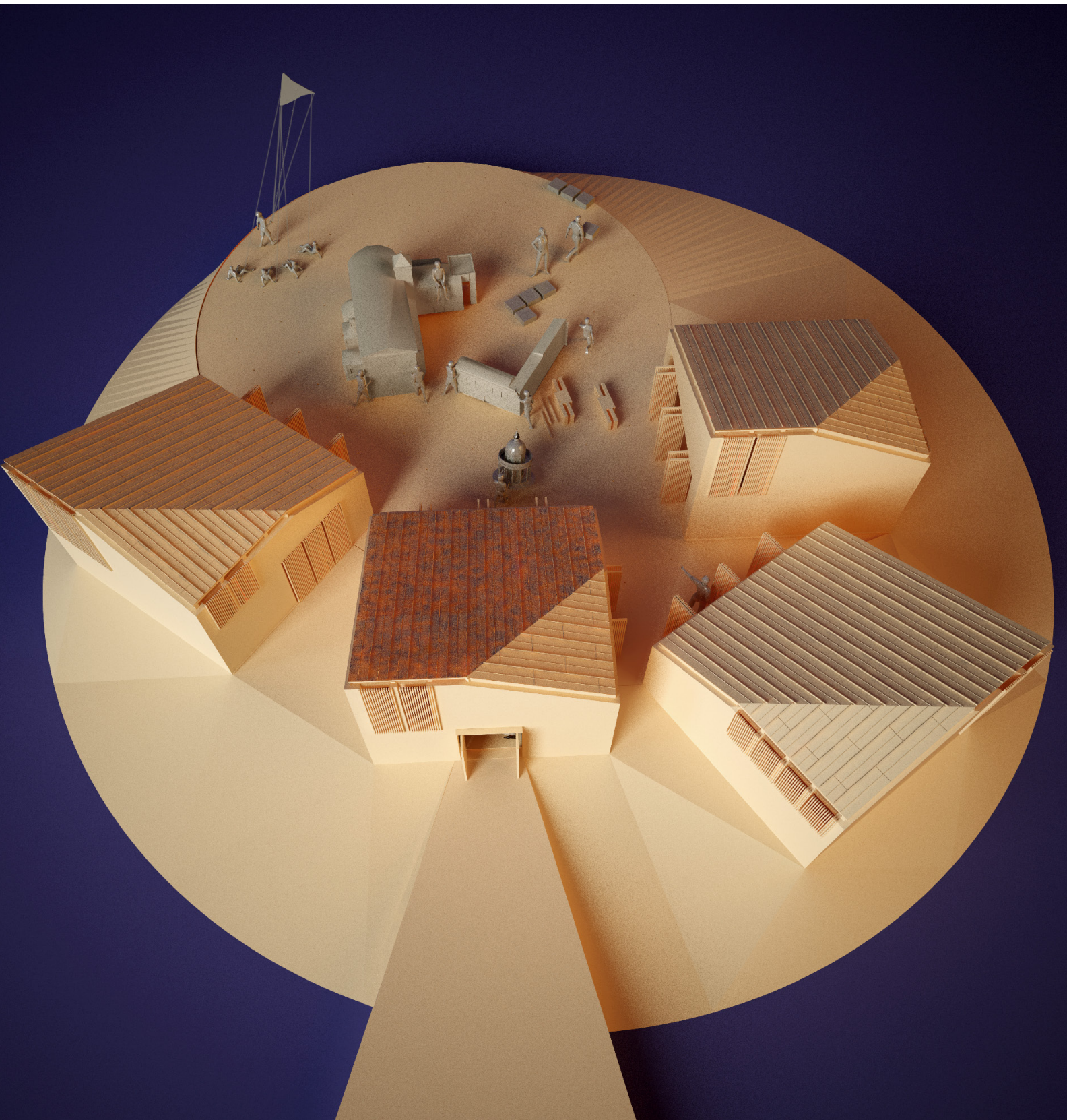
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Picture 61. Prospective vertical section



Picture 62. Plan. Timber frame



Picture 63. Final stage



Picture 64. Elevation from the entrance





Picture 65. From one of the sides

## Acknowledgements

Muchas gracias,

Albert Weand  
Albis Del Barrio  
Andres Del Barrio  
Carlos Arrocha  
Elvis Moreno  
Emmanuel Villareal  
Eugenia Martínez  
Fundación Carmen Conte Lombardo, Penonomé  
Fundación OOperai  
Jair Galván  
Johana Tejeira  
Jorge Barrantes  
Jorge Leonardo Castillo  
Las Abejitas del Colegio San Miguel Febres Cordero, Colón  
Luis Cáceres  
Luis Wong  
Milvia Pineda  
Ricardo Toulie  
Teacher Maria !

Kiitos paljon,

Adrianna Novak  
Akseli Anttonen  
Anni Peljo  
Arkki, Helsinki  
Harry Edelman  
Ilmari Lahdelma  
Jonna Tuovinen  
Juhani Pallasmaa  
Kasper Luoma  
Kylätalo Palttina, Espoo  
Mikael Gylling  
Minna Chudoba  
Niina Humelin  
Panu Lehtovuori  
Pihla Meskanen  
Sini Koivisto  
Song Bok Sung  
Vijami Narinen.

Grazie ancora,

Agostino Spolti  
Alessandra Spiezia  
Antonio Bruni  
Arabella Rocca  
Massimo Alvisi  
Nicola Campri

**धन्यवाद**

Bhoomi Mistry  
Chikodi Family  
Julius Scott  
Mr.Devendra Sing  
Shantanu Chikodi  
Siddharth Tiwari  
Vidhi

\*\*\*

# *Thank you!!!*

The International Call of drawings for OOperai's  
future school is now finished

MEXICO: Elvira Hernández and Angel Guevara

INDIA: Riya Tiwari and the kids from Mumbai

CHINA: Qi Wenzhen

SPAIN: Erika Pulido

GERMANY: Oskar

ITALY: Chiara Semproni, Samuele, Silvia Formichelli, Jacopo Cherubini,  
Mario Trabucco, Giulia Porru and Sofia Rolla

RUSSIA: Ksusha, Daniil, Alina, Nikolai and Anonymous

POLAND: Paweł

FINLAND: Valentina Rider, Sakari, Osmo, Adelè, Emilia, Julia Sosnowska, Elina  
Toivonen, Iris, Essi and Anonymous

UGANDA: Nicole Nkwanzi

SOUTH KOREA: Mun-Jun Song

PANAMA: Luz Andrea, Liz Amaris, Dustin Ariel, Ana Gabriela Lombardo,  
Luzkeyri Salazar, Rolando Yangüez, Brenda Montenegro, Santiago Williams,  
Rodríguez, Katherine Flores, Josue Robinson, Mauricio Parnter, Michelle  
Martínez, Rolando Josué, Angela Reyes, Yulissa Lorenzo, Al Tromi Smith,  
Ramón Alisba Drayton, Antonio Amaya, Karen Sheperd, Joshua Murgas,  
Lisdianis Marin, Génesis Molinar, Milagros Solanilla,  
Janely Ceballos, Giselina Meyers, Santiago Galvez,  
Christine Castillo, Jamerys McLead, Angelina Solis,  
Javier Brooks, Ruth Gallardo, Ashly Salazar,  
Darianis Avila, Yorlenis Chambers,  
Georgina Ross Kelly,  
Alexander Delgado,  
Kenneth Bryan,  
Luis Miguel Brown,  
Navill Wilson,  
Fernando Martínez,  
Luciary Medina,

Daniel Markland, Yaritzel Scott, Justine Rodríguez Marquez,  
Yimalis Costarelos, Veronica Mendoza, Zaritza Castillo, Melquiades Meneses

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## Notes

Lived images indirectly refer to G.Bachelard's poetic images (1969). Juhani Pallasmaa has brought both concepts into the architectural debate nowadays.

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