



**MILANO**

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# *Esploratori in città*

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**“Forse l’immobilità delle cose intorno a noi è loro imposta dalla nostra certezza che siano esse e non altre, dall’immobilità del nostro pensiero nei loro confronti.”**

**Du coté de chez Swann, M. Proust**



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## *ABSTRACT*

### *English version*

Esploratori in città is an application for tablets and smart-phones, for children between 6 and 10 years old, about the city of Milan. The application is a guide for the architectures of the city and , more generally, the main points and historical places , all involving children and their parents , leading them to spend time outdoors. For each point of interest there will be an explanation of the site, with selected and dedicated infos, that are readable both at home and outside . To each one of this is also associated a mission to accomplish on the site, which provides activities to do together , parents and children. The mission can be of three levels of difficulty , and once it's done it will give points to be used in the ranking that can be formed together with their friends. These missions are on various themes , such as colors , geometric shapes , seasons , numbers and the alphabet. In addition to the points of interest the app. also provides pre-established routes , which also contain missions to play. The application is fully illustrated , and children can choose one of three characters/guide each time, who will accompany them in the exploration of the city.



## *Italian version*

Esploratori in città è una applicazione per tablet e smart-phone, per i bambini fra i 6 e i 10 anni, sulla città di Milano. L'applicazione svolge la funzione di guida attraverso le architetture della città e più in generale i punti principali e storici del luogo, il tutto coinvolgendo i bambini e i loro genitori, portandoli a passare del tempo all'aperto. Ad ogni punto di interesse sarà presente una spiegazione del luogo, con info dedicate e selezionate, che si possono leggere sia in casa che fuori. Ad ognuno è inoltre associata una missione, da compiere sul luogo, che fornisce delle attività da svolgere insieme, genitori e bimbi. Le missioni possono essere di tre livelli di difficoltà, e una volta compiute faranno guadagnare dei punti, da usare nella classifica che si potrà formare insieme ai propri amici. Queste missioni sono su vari temi, quali i colori, le forme geometriche, le stagioni, i numeri e l'alfabeto. Oltre ai punti di interesse l'app fornisce anche dei percorsi prestabiliti, anch'essi contenenti missioni da svolgere. L'applicazione è interamente illustrata, e i bambini potranno scegliere ogni volta uno dei tre personaggi/guide, che li accompagnerà nell'esplorazione della città.

# ***1***



***City for children***



***CITY FOR  
CHILDREN  
IN ITALY***

***(laws and regulations)***

In the last decade, there has been a general and growing interest to the topic of child-friendly city in Italy. Italian governments and also local communities have developed new laws, and allocated funds to improve kids' life in urban environments. There has been registered also more and more attention on the "child-friendly" issue in general in various contests, such as academic world, mass media, and the whole society. (UNICEF research, 2001).

It hasn't always been like this, in fact, before 90's the child has never been considered a citizen, but just someone that one day will be an adult. In the 60's, the economic boom caused a fast and messy development of urban centers, that didn't take in consideration children's needs. In 80's, with the new laws on family rights and adoption there was a beginning of sensitization on urban child conditions: UNICEF and IRC (Innocenti Research Centre), did a research project called "The Urban Child in Difficult Circumstances", that marked the beginning of the childhood culture in Italy. However, talking about governments decisions, the significant change happened in '91, when the ratification of ONU

Convention on Children's rights has been approved. In '96, ANCI (national organization of Italian local communities), set up a Commission for childhood that has the role of coordination of the initiatives on this topic.

This way children are conceived not only as future adults, but as important actors in the society, able to contribute actively in communities' life. (UNICEF research, 2001).

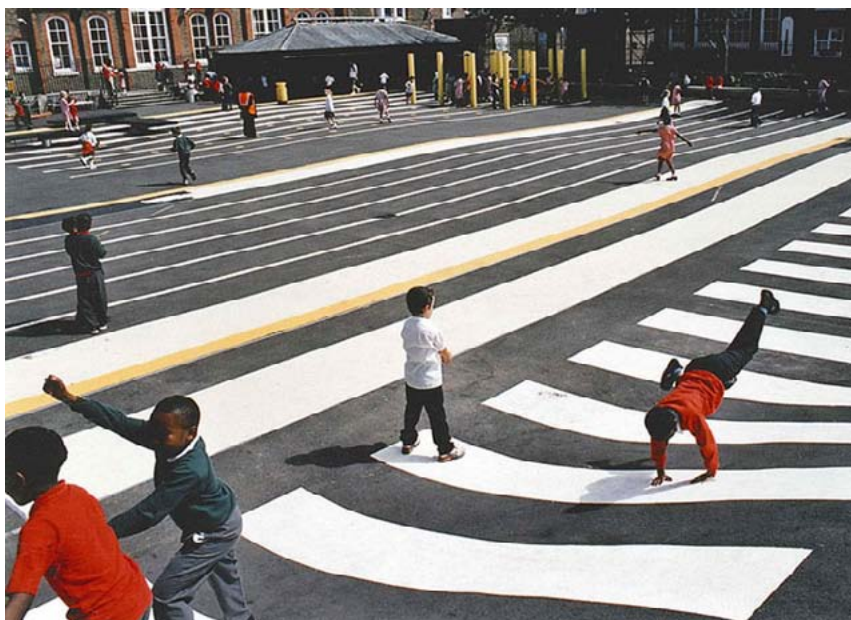
Together with the new childhood culture, 90's brought also a new culture of the Urban City: the vision of the "New City", doesn't involve only urban improvements, but most of all a new relationship between people and the surrounding environments. (UNICEF research, 2001).

The Italian government approved projects on the urban requalification and introduced in the calendar the concept of Child-Friendly City. At the beginning the change touched just structured and institutional places, such as schools, centers for playing, sport spaces, without considering others free places in the city. In '98 the Ministry of Environment published the "guide to sustainable cities for children", with the aim of exploit and diffuse initiatives in urban centers. This means rethinking the city through the eyes of kids. The main points of the guide where the following:

- . reduction of atmospheric pollution,
- . reduction of acoustic and electromagnetic pollution,
- . management of urban trashes,
- . fight against architectonic barriers,
- . improvement of green areas,
- . change of the relationship between people and environment,
- . promotion of meeting initiatives (parties, fairs, ecc),
- . exploiting cultural, artistic places,

. development of services for education and health care. A special attention is reserved to services for children that involve also adults, and more in general the whole family. The most traditional are centers for playing that try to improve the communication between the child and the parents, in the first childhood. Secondly there are game rooms, (ludoteche), that are dedicated to various ages, and develop more the interpersonal exchange between children, more than parents. Parallel to these there are more and more initiatives, that try to bring together children and families thanks to art, theatre, and games in general.

(UNICEF research, 2001).



Daubeney Primary School, Hackney, London

***CHILDHOOD  
IN URBAN  
SPACE***

Childhood has not always been the same, but has changed through years depending on family, society and environments. There has been a switch from one that is child-centered to one over-controlled and over-structured by adults. This trend has led children to abandon life outdoors, in urban places, in favour of staying home or other protected places, where the game are mainly virtual. Children are disappearing from the urban environments, the causes are several, starting from the structure of the cities, ending in new technologies and virtual realities, that are more and more taking place in game activities. Also the family has changed, in most of them both parents work (or have to) all day, provoqing stressful life habits. The time the family spend together is less, while the time the kid spend home alone is augmenting. Children don't use public spaces, causing them the loss of street sense and city knowledge.

In '94 children from different countries in Bologna, Italy, to write the "Children Manifesto", in which they declare what they consider as a Child-friendly city. The results of this workshop is really interesting: these are the main points:

- . having spaces which are not furnished with the same old playing structures, but which we can modify and change,
- . communicate with the others (the sick, kids in difficult situ-

ations, foreigners, etc),

- . to be able to be in company of others,
- . without fixed and unchangeable play structures,
- . to be able to play in places used frequently by a lot of people.

Through these points some aspects are underlined such as the mixed use and the mixed users. Children need to be always in touch with different people, they do not want a specific place dedicated just to kids, they want to meet other culture, to observe and learn from them. From this we can forge a new idea of the term play, which is not only having fun, but also learn and try new functions. Roger Hart, Professor in the Environmental Psychology Ph.D. Program of the Graduate Center of the City University of New York, said in '97: "we are trying to prepare children to be participating members of this society. There is a naïve wing to the children's rights movement that talks about children's power, and the child's world as separate. This is nonsense. The movement should be about children's rights to have a voice with adults". Another concept, is Small, feasible and flexible, in fact children tend to prefer simple structures, that they can modify and change to recreate as much constructions as possible. They don't care about expensive elements, but something that can be flexible. (Christopher Spencer, Mark Blades, Cambridge University, 2001).



“Urban designers need to experiment with creating new forms of spaces in cities for children beyond just providing traditional elements, such as playground and schools. Future urban design must make more of an effort to incorporate children’s rights into plans and policies”. (Bartlett, 1999).



MAD Architects palyground, Shenzhen & Hongkong

## *Case study 1: LUDOBUS*



Ludobus is an itinerant bus equipped with games, that travels around towns and promotes situation for playing, and try to bring together different people from the same place. This service wanted to give the possibility to play and have fun also to children that didn't have this chance, because they lived to far from game rooms or centers for playing. Furthermore, ludobus helps the city to be lived by children, also in unusual places, open air.

One important step is the sensitization of children on environmental and civic education. The Child-Friendly City issue, can work only if it is both side: the city has to be a place where kids can live easily, but also children have to respect and take care of places where they live. It's important to let them understand the value of the artistic heritage they have to respect, preserve and protect. To make this, school should have a really important role, but we have to consider that is not really realistic, since learning programs in schools are already full.

## *Case study 2: FULGURO DESIGN*



Fulguro is a group of designers in Switzerland that between their activities they organize also workshops for children, to learn art art and design in and through the city.

“ we don't have vast experience in teaching. One of the things we asked the children to do was take pictures of things in and around the Villa Noailles, in

order to make an alphabet. They found many examples of shapes in the architecture, and were able to represent every letter.”

- . photography workshop
- . interaction with the city they live
- . stimulate creativity
- . discover new places
- . bring fun in places where there are no children facilities.

# 2



## *Children and technology*



## *HOW CHILDREN INTERACT WITH COMPUTERS*

As said before childhood is not the same it was a decade ago, and this has to do not only on the urban context, but also with the introduction of new technologies, that affects the way kids represent and learn the world.

The screen becomes a window of access to the world , hence a different way of learning : through interfaces, icons, sounds , games, virtual navigation and telematics in constant contact with the peer group . From this derives a type of learning that is not linear .



Superpaquito, tablet for kids

The values that characterize the digital natives are:

- . self-expression
- . customization
- . the constant sharing of information
- . the constant reference to their peers
- . multitasking

Video games are limited to activate brain functions of motor perceptual , stimulus-response automatic actions that harm in the long run learning ability .

Other games that require strategy , reflection and construction of all possible worlds , instead develop selective attention and intelligence according to a new mode . Relentless pursuit of solutions. (eg. SimCity ) .

“Distrattention” the manner in which they access to contents. Non-linear mode and fast access to information that goes for non-linear associations according to a syncopated temporality , which provides for long periods of distraction and sudden acceleration of a deep attention. The time of the web is boredom and excitement at the same time.

Space and time are modeled according to the needs of the user, since virtually all the contents of knowledge are available everywhere in real time. This allows for a personalized and individualized modulation of the use of time of knowing. Donata Ripamonti, psychologist, did a research in Milan with children aged 5-7 years, in a school, to understand the way they perceive computers. These are the results.

- . Children prefer the computer / tablet the pen or pencil, because they can crush the keys or use your hands directly .
- . prefer to use it at home alone and tend to monopolize it , they want to be their to “ crush the screen.”.

(Susanna Mantovani, Paolo Ferri, 2008).

## *MOMS, BLOGS AND SHARING*

Mommyblogging is moving thousands of readers and is a phenomenon which is also affecting publishing , film and universities. Bocconi , for example, is building a research and information on mothers . The movement spreads ( in Milan there are eighty blog, in Italy three thousand) , but the growth opportunities are huge, as some estimate bloggers, those cities are still less than 10 per cent of the mothers who belong . An increasingly popular trend , which sees the mothers of today become more modern and more “ connected. It has become an habit to do now so widespread: the exchange of information and opinions on the web today between the mother deserves a place on the front page. And in fact these days the news that BlgoFrog , a platform instant American community, has become the largest network of blogs written by moms across the United States , with 50,000 mothers blogger , and 5.5 million moms connected. It seems that in America the number of blogs written by mothers is a total of 5 million , a figure that is steadily growing. In Italy we do not reach these numbers , because our techno-social literacy is lower, but the web is still a great vehicle for moms seeking advice and sharing. (Repubblica Milano, Annalisa Camorani, 2012)



## *MOBILE APPS*

### *for family*

Analysing the main applications for family existing we can understande the relationship with technology. Apps right now are not really tryng to help the family giving them activity or tips to spend time together, they mainly try to solve organization and other more specific problems as “what kind of story can i tell my kid before he goes to bed”.

### *Others*

Since there are not many interesting applications concerning family aspects, it is necessary to take in consideration also other apps for different uses.

## *Save the Mom*

The app was created to help working mothers time management and communication family: sharing lists spending, geographical location to stay informed on the movements of family members, a list of activities planned and calendar of family events.



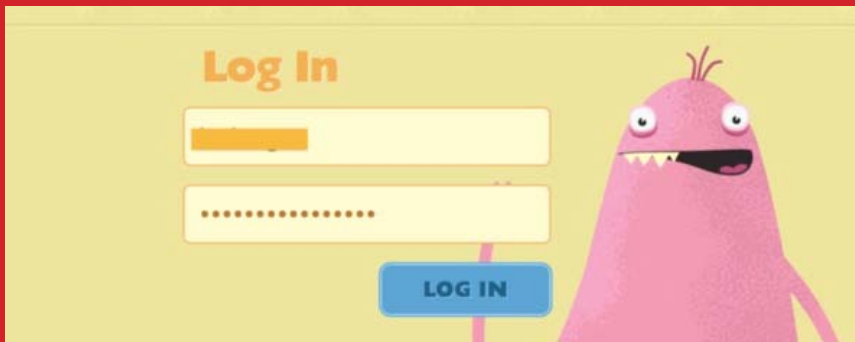
## *Mom Maps*

with which you can locate through GPS system the areas closest with spaces for the little ones, (just for USA).



## *Chore Monster*

The app was created to help working mothers time management and communication family: sharing lists spending, geographical location to stay informed on the movements of family members, a list of activities planned and calendar of family events.



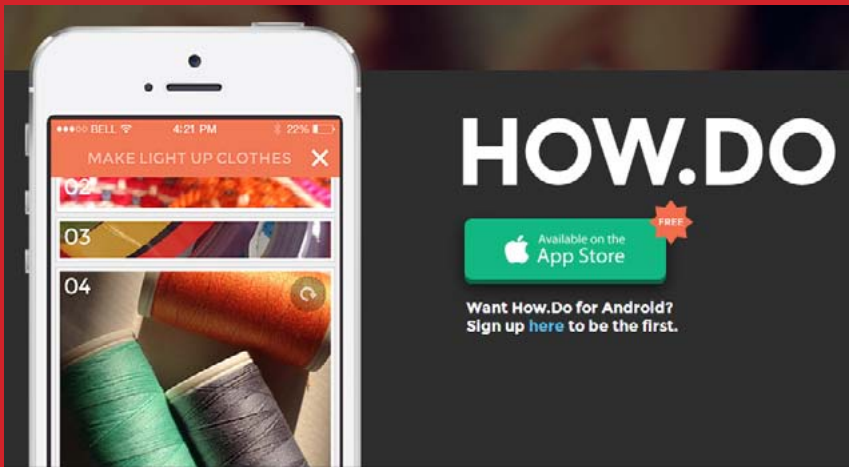
## *Timbuktu Magazine*

Timbuktu is a magazine online for children and parents, every month it publishes a new story for children, based on the big classics of literature.



## *How Do*

an app that lets you record Microwire step by step - assembling different images with audio commentary - to teach you to do something, such as uncork a bottle of wine without a corkscrew repair a bike or find a SPA natural in Iceland.



## *Stereomood*

App that lets you listen music and playlists to set the second mood, with a system of search by keywords.





# 3

.....  
*The cognitive experience*



## *PLAY & DRAW*

During the early childhood ( from 2 and up) , children begin to be engaged in symbolic play or fiction , which is characterized by two main aspects . The first is decentralization with the involvement of other people in the activity of playing such as dolls , puppets, etc. .

The second is decontextualization , with the use of objects different from those required by the simulated actions , (es. the use of a stick instead of the phone) . These two aspects are not developed according to stages or times, therefore they can not be defined , but that depends exclusively on the child. Usually in the first stage are pre-symbolic patterns or ritualized use of everyday activities , outside the usual context . In the second stage , instead displayed an awareness of the fiction and the consequent accentuation of certain actions , such as playing loud noise that you are drinking from an empty cup . As the child grows this type of game takes on more complex shapes.

The first appearance of drawing is through the scribble , and it occurs after the first year of life, but it doesn't come from the desire to reproduce a figure, but from the pure pleasure of seeing a sign on the sheet that comes thanks to an action. From two years begins the visual inspection of the



movement of the hand and arm that produce the sign. While the language is developed on innate basis, drawing requires learning . The first step is then to reconstruct a system of denotation , establishing a correspondence between signs and objects . It should be noted , that before you can play something with pencil and paper , children must recognize that the two-dimensional images symbolize something. Studies show that children before the age of 3 they are not able to understand the difference between reality and representation . In the years before children are not yet able to interpret a figure as something that is going to represent something else. From 4-5 years children can reproduce a drawing defineable as the conventional human figure , with head, arms trunk and legs, which are represented as separate units. From 7 years onwards instead the human figure will begin to be represented in a fluid , such as a single unit.



Dreams of flying by Jan Von Holleben

***CLASSIFY  
& SERIATE***



Hands by Jan Von Holleben

Piaget has conducted various researches on the development of the classification, realized by providing to a number of children between the ages of 2 and 10 years objects that differed in various characteristics, such as color, shape, and sizes, with a request to join the similar ones. The results show that children between 2-5 years do not group objects by reuniting the ones with the same properties, but they build collections of figures, based on spatial relationships. The children of these ages trying to use the relations of resemblance, but constantly change the criteria of choice, depending on what catches their attention more. At 5-6 years-old children are able to distribute all of the objects into groups according to a particular property, but are still not able to connect two groups of objects together, something that only happens at 7-8 years. The operations of seriation instead, consist in recognizing gradations of the same property, for example put in series sticks of different heights. The results are that the 4-5 year-old children are able to reorder only two sticks at a time, from 6 can complete the full set.

## *INFLUENCE FROM OUTSIDE*

Since the early years of life the child is influenced by the environment in a very broad sense, physical and psychological. To avoid too general studies, researchers have sought to better define the word environment was created the theory of ecological systems, which helps us better understand what aspects have an effect on human development. The first system or the microsystem, which is an organizational pattern of interpersonal relationships, shared activities, roles and rules. The most important of miscrosistemi is definitely family. At the level of abstraction we find the opposite macrosystems, which include political and economic institutions, the values of the society and its culture.



Little girl with bubble, by Elisabeth Dunker

## *TOYS AND GAMES*

As described earlier, with the emergence of symbolic play anything can be transformed into something fantastically , and even without anything in hand you can pretend actions more different . However, the availability of toys is a kind of invitation to the game and it profoundly influences the mode . In our society, the game is facilitated by providing the child with a variety of toys chosen to match the age and tastes of the above. For example, it is now known to many people that a teddy bear (or other soft puppet ) is particularly well suited to become an inseparable companion of the child by the end of the first year of life forward , forming a kind of substitute mother figure. Construction toys and small children are given into the hands of grown-ups , which is more developed motor skills . Cars and vehicles are given to boys, while girls dolls and small accessories , are considered unisex colors and table games. But what basis have these choices?

Many studies have been done on this topic , there is a close relationship between the toys and the interactions between children certain angles equipped to design and promote reading individual game, as with other building materials, clothes and fabrics, encourage games collectives , both of which sociodrammatici exercise . Some scholars argue that the very specific toys , such as toy cars and dolls, they are



Reminiscent of honey by Jan Von Holleben

less useful for the development because they stimulate the imagination less . However it must be said that objects such as dolls promote the classic role-playing games , such as pretending to mom and dad thing useful to the intellectual and social development.

*KIDS  
EXPERIENCE  
OF  
ARCHITECTURE*

Talking about space and architecture it is necessary to understand the perception of the children, not the presumption of adults of what they can see. Teaching design studio on children's architecture begins with the discussion on functioning of children to the built environment. That is, how sensorial and motoric actions as well as social activities of children are influenced by the elements of architecture and landscape. Finally, the effects on children's functioning are discussed in terms of designing and planning buildings and landscape for the children. Form, shape, color and function are the parameters applied in designing and articulating the spaces inside and outside the architecture. The design approach is somewhat not consistent with the literature on children's functioning in indoor and outdoor spaces, which suggests that the value of a place is determined by its function rather than form and color. In other words, adults perceive space more on form, function and aesthetic whereas children see the space more on its functions rather than aesthetic. As such, architects perceive a pediatric ward of a hospital as a space that accommodates beds, aisle for movement, toilets and bathrooms, a nurse station, a doctor room and a dressing room. Among the reasons that lead children to behave regressively are the healthcare setting are: strange place to stay, no sense of control, and little choice and lack of things to manipulate. That is, hospital indoor environment



Temporary playground, Installation at the State Garden Show, 2004, by Aircraft GmbH

limits children to practice different motoric and sensorial activities. Thus studies in landscape architecture such by Westphal (2003) and pediatric psychology such as Sherman suggests incorporating garden with the ward for children to be away from the stress. Moreover, buildings designed by architectural students are final, that is, leaving little room for children to change or manipulate the architecture. According to the theory of childhood cognitive development and literature on children's perceptual psychology, such architecture may not generate sense of place attachment. Consequently, the children could not develop sense of favorite place to the architecture. As a result children feel bore to go to school or feel fear to stay in hospital. In other words, the architecture fails to stimulate the children's cognitive functioning, affords insufficient space for physical functioning on the children's



Imagination Playground, playgrounds equipments

terms, and allows little opportunities for the children to socialize in their own choice and control. The domination of adults on design and planning of children's space can be seen in kindergarten. The practice most likely confines the young children inside the building and occasionally allows the children to engage with outdoor space such as garden and lawn area. In the indoor, the children may experience with a variety of furniture and plastic toys in a controlled micro-climate where temperature, lighting and humidity are similar throughout the duration of they stay in the building. On the other hand, the outdoor space is spacious and open towards the surrounding that affords the children to move more freely than inside the building. It is a space that their senses are readily stimulated by greenery and animals. Its microclimate is natural and dynamic; changes in temperature and wind and the presence of rain or snow. Such environment affords the children to understanding the facts



that nature is not man-made, it is dynamic and timeless. Cognitively the children will deduce that the architecture developed by adults without their participation as two parts: building and outdoor space. They can clearly understand the architecture is man-made and the landscape is natural. In short, they perceive that architecture is not integrated with the landscape. It also means that they have little sense of control and less opportunity to locomote themselves freely in space in the built environment designed solely by adults. Inasmuch, the environment limits them to assume different body postures, to create their own boundaries and to manifest power and fulfill their potentials. In middle childhood, children are genetically programmed for exploration of the world and bonding with nature that is, they learnt on how the world works in evocative way, their logical reasoning only about concrete objects that are readily observed. As such the children are active in grasping and



Fuji Kindergarten, Tokyo

understanding the natural world through play, that stimulates their cognitive faculties of sight, touch, taste, audio and olfactory. The children are emotionally affected to outdoor settings through direct, literal, or tactile contacts. The cognition enables the children to be active constructors of their own knowledge, leading them to discover certain logical truths about objects and concepts of the environment. Direct contacts with the features and factors of the environment permit the children to explore, imagine and discover.

Children physical movement, cognitive scanning and social transaction in a space directly influenced by the spatial and properties of the environment. These interactions involve complex sensorial and motoric actions. Perceptual responses (sight, tactile, audio, smell and taste) and mobility in an environment reveal a lot of significant information. In other words, perception is an active experience, in which a child finds information through mobility. “We must perceive to be able to move around, and we must move around to be able to perceive”. Since children contact with architecture involves perception and movement, it is appropriate to teach architecture using this framework. (Ismail Said, 2007).



# **4**



*Exploring the city*

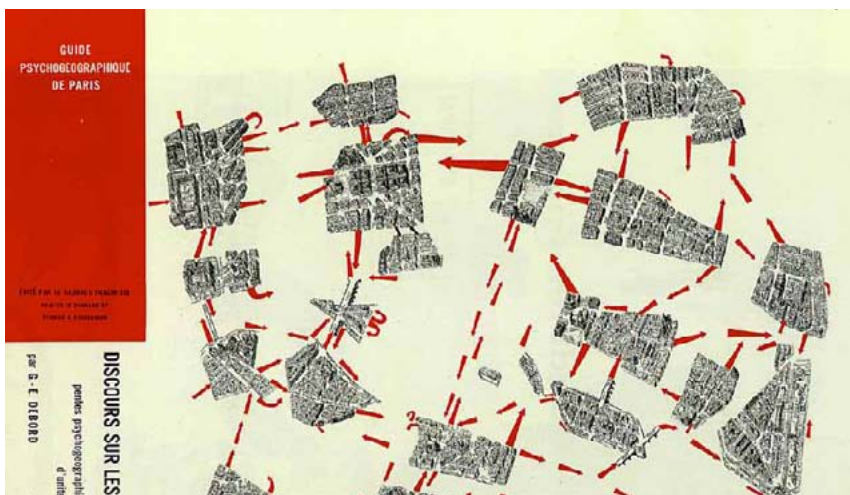


## *WALKING IN A METROPOLIS*

For analyzing the subject of walking in the city, we must clarify several issues that revolve around this theme .The first is undoubtedly the perception of the landscape : space perception is subjective , and every landscape exists only once in the eyes of the beholder. It follows that it can be also understood as a relational configuration , since it does not exist without a protagonist who dresses , it occupies , and then put it in motion. Spatial perception , as well as being individual , as determined by personal experiences , it is also shaped by cultural aspects . For example , Europe sees the space as a container of the earth, sky , buildings, and horizon line. In Asia, however , space is understood as something relational , which arises from a situation like the one that exists between two people who speak or between a sculpture and its spectator ; concept that includes therefore also a time limit . Another important aspect of walking is that you have to undertake it without the order to judge the city , but to learn , to explore, and a fresh look at what we have already seen several times. Walking should not be a passive action of moving from one point to another point , but rather an active action , which gives meaning to the path that we are facing. The observation becomes a fundamental part , and prevents us from carrying out the same thing using a medium other than our own feet , because shift our attention to the traffic and not on what it is around us .  
(Sebastiano Brandolini, 2013).

## *PSYCHO- GEOGRAPHY OF THE SPACE*

An example of mapping of atmospheric unities of a city on the basis of ideas of the international Lettrist and Situationist movement. The map of Paris has been cut up in different areas that are experienced by some people as distinct unities (neighbourhoods). The mentally felt distance between these areas are visualized by spreading out the pieces of the cut up map. The red arrows indicate the most frequent used crossings between the islands of the urban archipel (separated by flows of motorized traffic).



Psycho-geographic guide of Paris

***THE CITY  
THROUGH  
ARTISTIC  
EXPERIENCE***



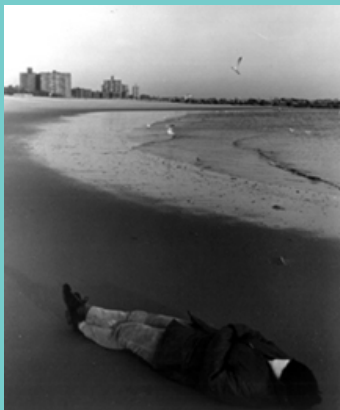
Christo installation at Central Park New York

The city has always been a big container of things: events, art, installations, and with the birth of this metropolis is amplified microworlds going to create more and more tangled. The city has gone from being a place for people with a place for the masses, where it is more difficult to carve out its own space. The art has obviously tried to interpret this change in several ways, the first artistic movements about were born in America to the '70s. In these artistic expressions of the city is no longer a container, but content and subject of the artistic product, such as a drama in which the artist must somehow make sense.



## *Institutional Dream Series 1973*

The artist and musician Laurie Anderson tried to interpret the city in a very innovative way: she slept in different public spaces of New York, such as a library, the seaside, a park, to understand how this places could influence her dreams. The city finally was not seen through her eyes, but through her dreams.



## *Richard Long*

Sculptor and photographer has expanded the range of its action to the land management and documentation performance not short-term. The intent is to accredit Long the relationship between humans and the environment as a “fact” for creative excellence, intimate and primitive, with no bulky implications of voluntary redundancy and artificial mediations.

## *Parkour 1990*

Parkour is an holistic training discipline using movement that developed from military obstacle course training. Practitioners aim to get from A to B in the most efficient way possible. They do this using only their bodies and their surroundings to propel themselves; furthermore, they try to maintain as much momentum as is possible in a safe manner. It can be practiced in any location, but is usually practiced in urban spaces. Parkour involves seeing one's environment in a new way, and imagining the potentialities for movement around it.





## Attenti a quei due

Through the adventures experienced by the characters young readers will visit the city, discovering the most beautiful corners and stories, often mysterious or bizarre, that lie behind the famous architectures. It is in fact a book about the city as seen through the eyes of children, who often capture details invisible to the adult world.



Attenti a quei due, illustration by Barbara Parini

## *Maps*

A large-format book that will guide children through 51 maps on a breathtaking journey to the discovery of 42 countries across 5 continents. The maps not only return a geographical view of the world, but recreate the specific identity of each was telling the history, customs, famous people, plants and animals, dishes and everything more “typical” distinguishes each country.



Maps: USA illustrations

## *APPS. AROUND THE CITY*

There are various types of maps, city guides for children, all very colorful, illustrated and fun. They are all very similar, the only variable is the type of graphic design and illustration that follows the child within the city: the result is a bit 'guides to make the prettiest ones. The problem then is that the content is not selected, without keeping in mind that the smaller not interested in the same things as adults, and even their own points of interest that are told more often they do not catch their attention.

### *Locationazer*

using the GPS of your smartphone, is activated by a notification near places where there is some business to attend to.



## Walk Experience

The guided tours are divided into six routes that will allow to discover the most beautiful areas of the town and do not miss the corners or monuments that may not be so easy to locate, but also tasty restaurants and bars. Every single package (except the path Pantheon, free) can be purchased at any time and listened to many times you want.



## NinCircle

With NinCircle you can choose where to spend the afternoon by the presence of other parents with children of the same age, communicating the intention to reach other parents in a time interval.



# 5



## *The project*





*RESEARCH  
ANALYSIS*

To start designing within the city for children, we must then analyze the problems arising from the previous chapters and add the needs of families and children living in the city..



Art installation, London

## *the city for children*

Despite the improvements undertaken in the last decade in favor of the little ones, the city remains today an environment unsuitable for children, due to town planning, legislation and allocation of space.

## *technology*

It is a fact that families, particularly mothers, are very connected to the virtual level, are active in the exchange of information relevant to the world of childhood and are increasingly using technology to help in everyday life . Children use technology to play, to learn and to fill the time. In general, despite the trend of applications is growing, there are still those few that take into account the problems of the family and the little time available.

## *play*

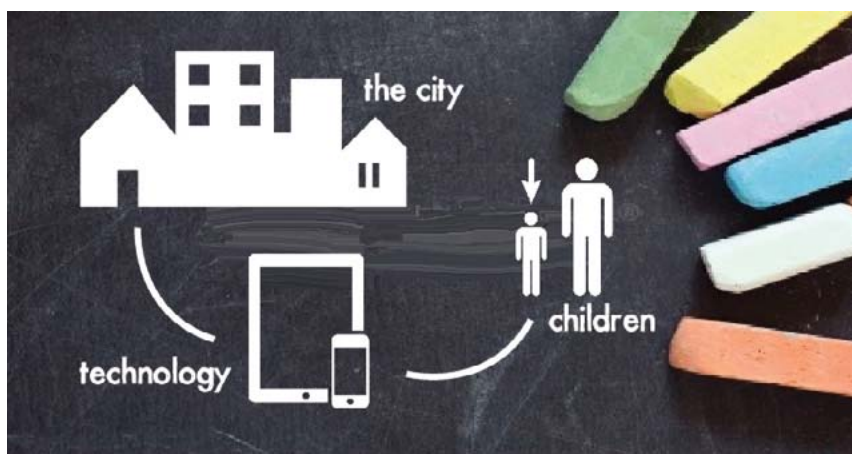
The opinions of psychologists on games for childhood differ in several places, only one puts all agree: they are to favor those games that engage children in a constructive activity that stimulates engagement and problem solving, stimulating the imagination.

## *the city experience*

The city is a very complex world that is constantly growing; investigate and tell this world especially to children is very difficult and in fact there are not enough services to perform this function.

## *brief*

The project should be a tool to tell and bring the city to the children by providing activities to be undertaken with the parent in order to rediscover the city in a new light. All through the use of technology.



## *QUESTIONNAIRES*

At this stage of research, to develop the project, it was necessary to prepare the questionnaires to be filled in including parents with children between 5-11 years, to understand what are the activities carried out with the kids.

The composition of the questionnaire was as follows: an introduction in which he was asked to indicate the age of the children and the eventual possession of tablets, smartphones, and computers. In the first part were asked to indicate what type of business, from a choice closed, was carried out mostly with his own son, for how long and if carried out by technological means. The same thing is for outdoor activities, and those at home. The third part of the questionnaire included a series of open-ended questions, which sought to understand the desires of parents and children, what activities they would like to play, but that they fail for reasons of time and work. Also was asked to indicate whether and what services / applications were particularly useful.

### *Results*

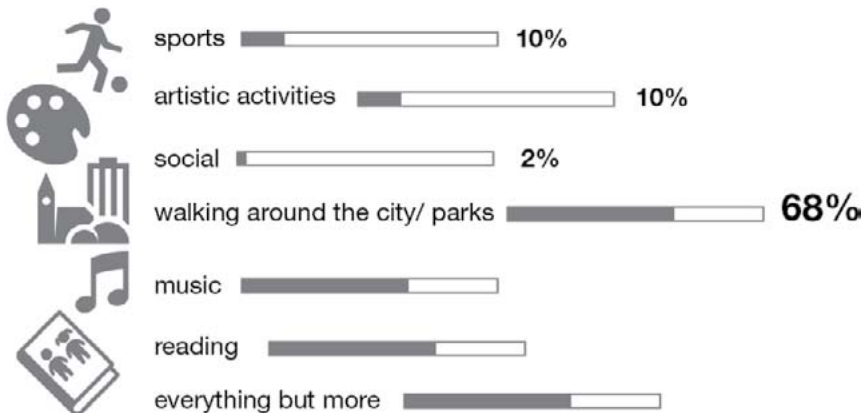
The results of the activities carried out were fairly predictable in the sense that those tasks are carried out mostly and games, all at home with the help of technology, while outdoor activities are very rare and very especially the time available limited. As you can imagine parents who work at

home spend more time with their children. Of note, that among the tools most commonly used for gaming activities appears youtube, videos and, in general or tools not just for kids.

An interesting result of the answers on what to do better, where 70 percent of respondents would like to spend more time outdoors and walking in parks, more than indicating specific activities. Among the useful services are indicated only blog platforms for parents or parents, where they reported the events and activities for parents and children.



Activities they **would like** to do more with their children



## CONCLUSIONS

An analysis of these results must take into account the fact that parents spend little time with their children does not mean that they do not play or do not play outdoor activities, such as with nannies or grandparents, and that increases the number of extracurricular activities such as sports, music and more rarely the field of art. Another fact is that the time spent outdoors with the children almost always includes areas used and controlled, such as playgrounds, difficult in other areas of the city.

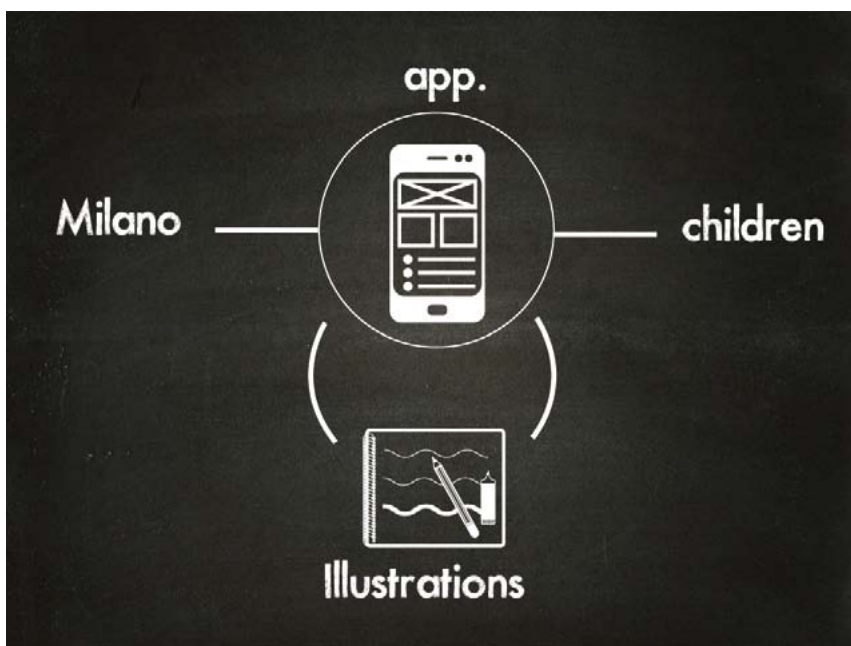
The most interesting is the one that indicates the use of applications such as sounds, videos and photos that are not for children. In fact, there is a strict separation because applications do not provide a considered for children sharing with a parent or an adult, while this is less restrictive and more flexible to the needs of a family.

**70% of the mothers use youtube and  
iphone photo as tools to play with children**



## CONCEPT

*The project ultimately will be an app for tablets and smartphones, which tells the city in its main points in the field of art and architecture, with some illustrated guides, thematic routes that connect the various points and activities / missions that will boost your child the discovery of Milan.*







# 6



## *Systemic aspects*





Logo and first interface illustration for Esploratori in città

# *ESPLORATORI IN CITTA'*



Illustration for the homepage of the application

The project is an application for tablets and smartphones, for children aged between 6 and 10 years old, that, using through maps, routes and illustrations wants to tell the major sites from the point of view of artistic and architectural heritage, in the city of Milan. The application can be used from home and on site, with a few distinctions: the content, as the stories and illustrations are accessible from both, while the missions are to be carried out once you arrive on site.

## *USERS*

This application is addressed to children aged between 6 and 10 years old : this target was chosen because the project requires children able to read and use a technological medium independently. Males or females no difference , because the proposed theme is Exploring , which has no sex : the characters shown , which will guide you in the city , have neutral names , only the villain has been identified with a men name , but for a pure phonetic aspect. The age of choice is due to the fact that with the transition from elementary school to the junior high school , the child develops a desire for independence , which would push it to want to completely exclude parents from the activity of playing, while in this range the degree of autonomy is quite high , but not too much. As the entire application is dedicated to children , its use can not be separated completely from their parents, because it requires a visit to places in the city, that you can not achieve alone. The type of user is thought to be living in Milan , and tourists.



Children, Barnesville

## ***SERVICES & OFFERS***

### ***Content showed***

The app offers content shown to the points of interest in Milan the most important churches , palaces, monuments and parks. Each tab of the POI will be given a selection of information suitable for children of the age group choice, the more everything will be done through the illustrations with the characters who accompany the child in the discovery of Milan. All these contents are visible and usufruibili both at home and outside the home.

### ***Paths***

In addition to the selection of points of interest in the app also provides some paths , divided into various types, which cover various areas of Milan .

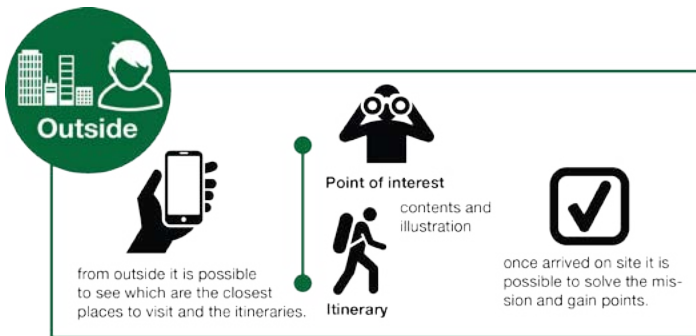
### ***Missions***

Inside the app your child can find a variety of missions , or tasks , which will help to see new aspects related to their city. These missions are based on the use of photographic tools and auditory .

## *Community*

To make sure that children are encouraged to rediscover the city , every mission will be associated with points , which you can share with friends and have a table with their friends or classmates, with whom he made the highest score .

### *method of use*



Method of use schemes







*Illustration design*



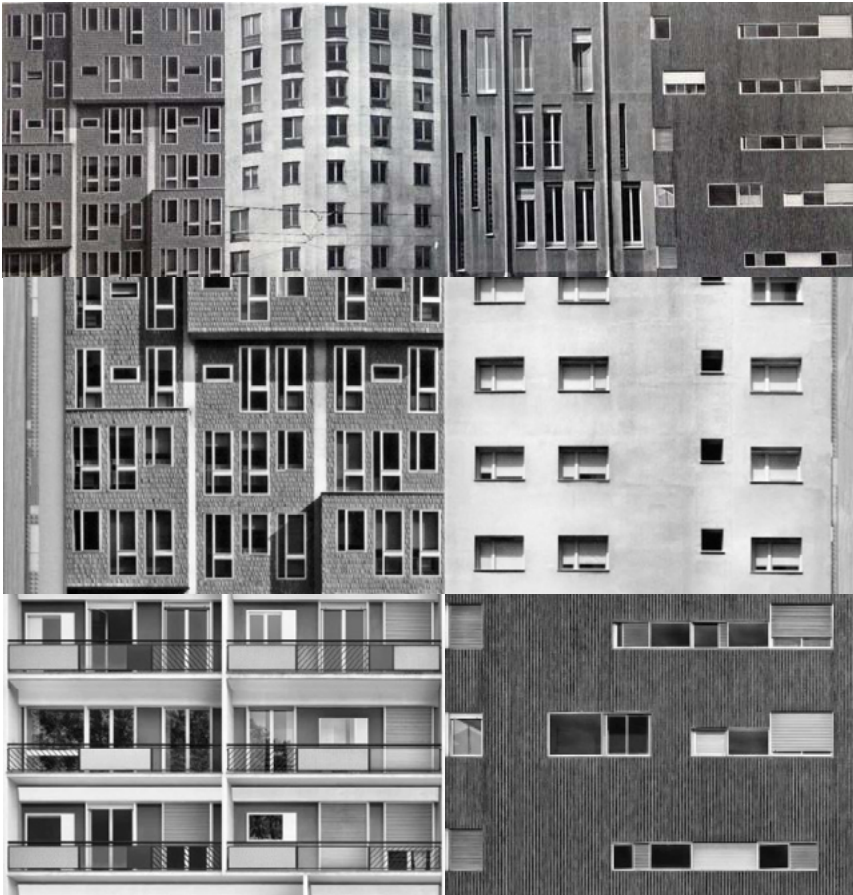
*MOOD  
AND  
INSPIRATION*



Moonrise Kingdome, movie scene

The mood of the entire application is the city explorer, so even the graphic style and the illustrations will draw in this style. The recurring themes are the collage, which simulates different textures and colors very defined. The styles are very illustrative inspired graphics, with smooth edges and blocks of color. As far as the mood that you want to repeat, a good example might be the film Moonrise Kingdom, which tells the story of two young boys, around 10 years improvising a romantic getaway on an island, and to make it become real its explorers, with lots of special equipment.

For the use of textures, surfaces of materials to reproduce the feel of the illustrations, I took inspiration from the photographic project by Fulvio Irace, architect and professor, presented at the Biennale of Architecture in 2012, when photos of the facades of the houses, out of context from the surrounding environment, they become like abstract geometric designs, similar to prints on fabric.



House façade in Milan, Fulvio Irace

For the rest, however, inspiration is due to various illustrative styles, which are consistent with those of the project for different reasons: the sharpness of image outlines, the use of photos and graphics combined with 2d, finishing a bit 'rough and the use of colors.



Temporary art Tattoo, Tattyoo, left side page. Christmas gift tags, Love & Design, right side page. Harriet Russell illustration, bottom page.



Hungarian Alphabet for children, by Anna Kovecses

## *ILLUSTRATION AND CHARACTERS*

The characters of the application will be the guides that accompany the child in exploring all the sights of Milan, for this reason have been chosen three elements that are part of the city, so it's the same in Milan tell. The characters are also categories of splitting points of interest. Each category represents a different point of view : the cloud represents Milan top view , therefore, will be part of all the high places where you can see the city from another perspective. The leaf guides users to the city in the countryside, parks and gardens and villas , and finally the particle of smog is buildings and churches, also wants to raise the awareness of children to the care of the city against the pollution and all those elements that ruin buildings .

As for the style of the illustrations the general theme is that of collage , with the combination of different textures , in order to reproduce the effect of the various materials that characterize the city. The intention is to reproduce the idea of home-made maps , the result of clipping and gluing various things.



Flap la Foglia



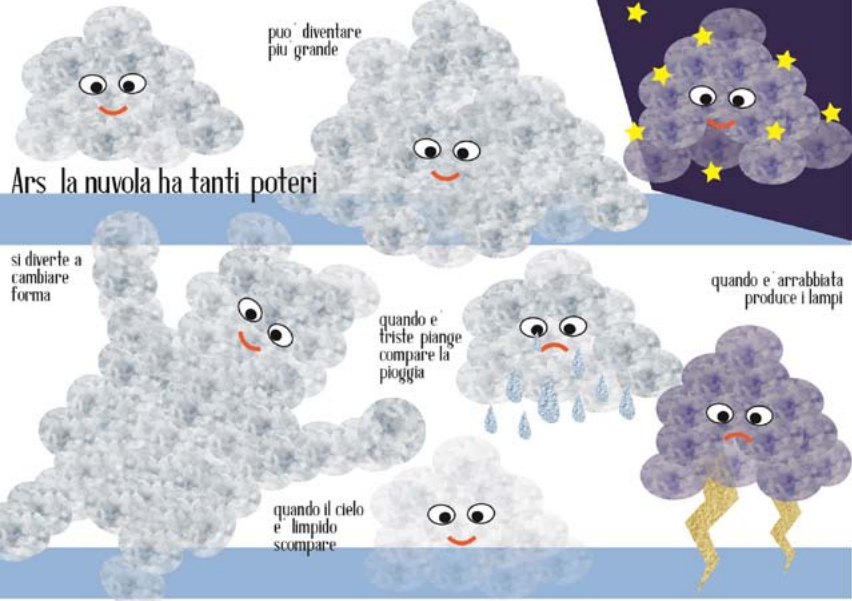
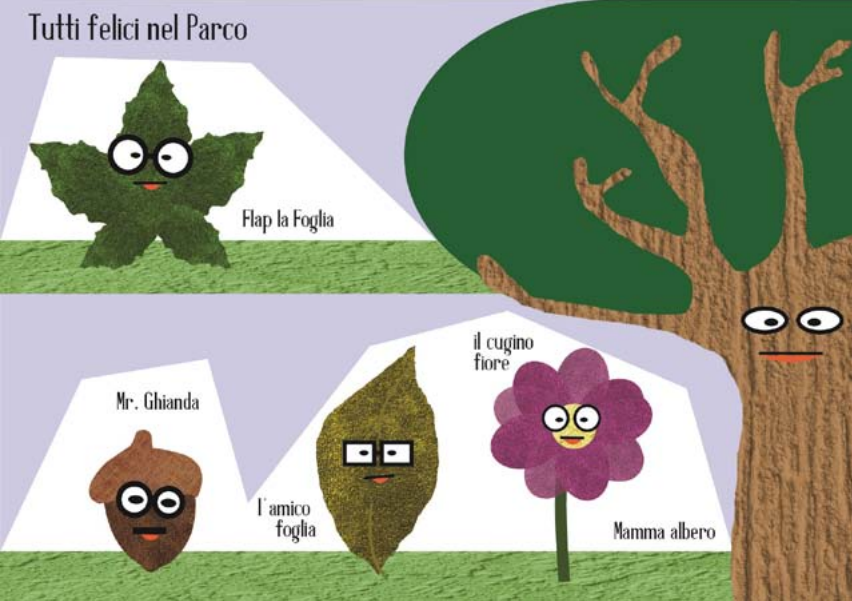
Ars la nuvola

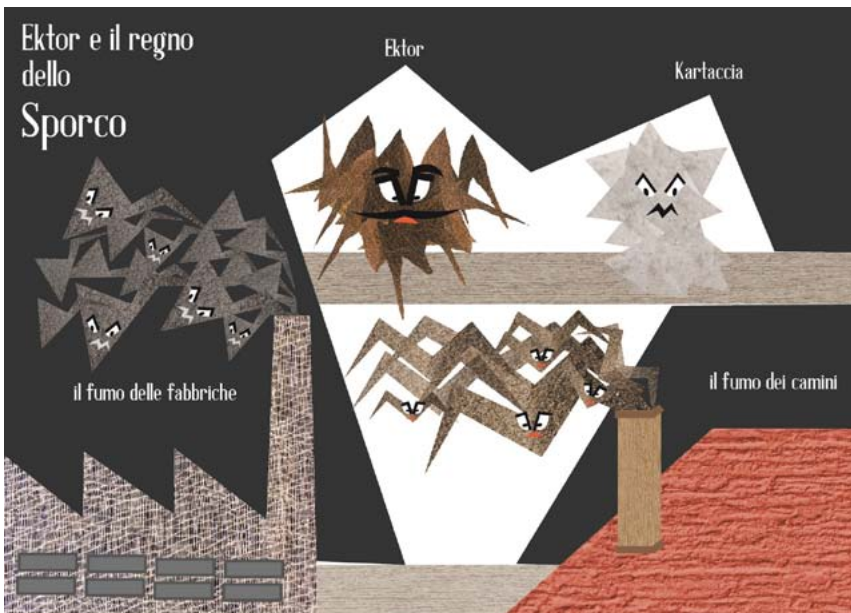


Ektor lo sporco

Characters: Flap, Nives and Ektor.







This page: Ektor and his world; Previous page: Flap and his Friend, Nives and her superpowers.



# 8



## *Choice of contents*



## *ITINERARIES AND POINTS OF INTEREST*

The points of interest are the most important places in Milan at the level of architecture, history and art, will therefore be included museums, churches, historic buildings, historic house museums, squares, monuments and parks. Each point of interest will be presented by an illustrated story and a mission. The points are divided into three categories: Milan from above, Milan in green and Buildings in Milan. These categories, as explained before, are formed by three guides, namely the three characters showed. The first category recount the high points of the city, from where you can watch the rest of the city from above, such as the Pirelli Tower. The second shows the places in Milan that are located within a park or green areas, finally, the third tells architectures. The application provides the user with predetermined paths, which lead him inside the city, and are also divided according to the categories listed above. The paths connecting various important points in the history of the city, and especially try to pass it on to children through appropriate missions, will be part mainly churches, the Castello Sforzesco and some other building. The paths show the architecture and explain to children why Milan and, in general, larger cities are formed from very different homes, and what styles they belong. The paths in the parks will provide the map in the open, and will explore the palaces or museums that are inside.

**EXEMPLES**

***Milano from above***

Il Duomo  
Il Pirellone  
La montagnetta di San Siro  
Torre Velasca  
Torre Branca  
Gasometro  
Arco della Pace  
Collina dei ciliegi



***Milano green***

Museo della Triennale  
PAC  
Museo di storia Naturale  
Il Planetario  
Palazzo Dugnano  
Villa Necchi Campiglio  
Acquario  
Cimitero monumentale  
Edifici Gio Ponti Porta Venezia  
Casa con aironi



***Milano Buildings***

Il Duomo  
Chiesa di Sant' Ambrogio  
Santa Maria delle Grazie  
Hangar Bicocca  
La Pinacoteca di Brera  
Museo del 900  
Castello Sforzesco



## *MISSIONS*

The Missions are special tasks that children should play in their exploration of the city to acquire points. They are divided into three types: those relating to points of interest, routes and those of the free ones. The first are your point of interest is that each of them will have different, the missions of this type bring the child to reorganize the information of the surrounding environment, by selecting them in order to accomplish the mission. The missions of the second type are traveling, or are to be carried out in moving from point A to point B, and are based on the collection of information, format pictures and sounds, eg photographing all the red leaves. These two types have three levels of difficulty: Ranger 's Apprentice, Explorer and Ranger expert, which are characterized by an increased difficulty in terms of instruments used, such as methods of calculation, comparison to its body, to its name, and so on. They are developed over several common themes, which are the numbers, the alphabet, colors, materials, surfaces and seasons. See the following examples. In addition, the missions related to routes and those related to the points of interest are to be carried out on site which is linked to the mission, and you can not do from home.

The third type is the only one that you can play from home and provides insights and tips to perform other missions, such as: how to build a measure looking for?, Who is Eleonora Duse '.



For each mission is assigned a score, which varies depending on the type and difficulty. The missions do not have free points , those related to the points of interest are tied to a fixed score level , while those related to the paths they have a score variable that increases with the degree of difficulty and with the increase of the collected materials .

## *examples*

### *Numbers*

- . Compose your date of birth with house numbers
- . measure the square, how many steps are ?
- . how many times is your hand in the circle of the fountain ?
- . photograph five objects as tall as you

### *Alphabet / names*

- . create an alphabet of objects , associate each letter with an object that has the initial
- . find out who is the character that gives its name to the street
- . photographing the names of nearby streets and put them in alphabetical order

### *Colors*

- . creates a rainbow of objects , photographing objects with the colors of the rainbow

- . the colors of the park, located seven different types of green
- . how to change the color of the Cathedral, from clean to dirty

### *Shapes*

- . In this building there are at least five triangles , find them all
- . photographing clouds round five
- . with the help of an object in the park form five letters and photographe them

### *Surfaces*

- . photographer five smooth surfaces
- . photographer rough surfaces
- . that have the sound on the concrete steps ?
- . how it changes the sound of footsteps in the square ?
- . do five photos of yourself and your fellow adventure in the reflection of the glass

### *Seasons*

- . records the sound of the wind at different points
- . records the sound of rain on different surfaces
- . stopped at the same spot and photograph the movements of the sun
- . what are the colors of autumn / spring / summer / winter ?
- . find friends Flap , but only the yellow ones



# 9

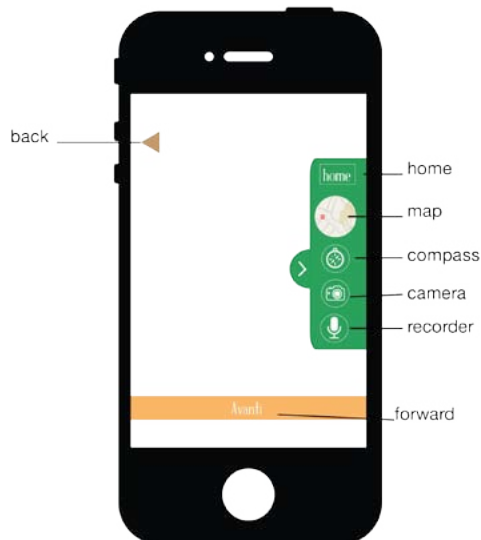


## *Application*



## NAVIGATION MENU

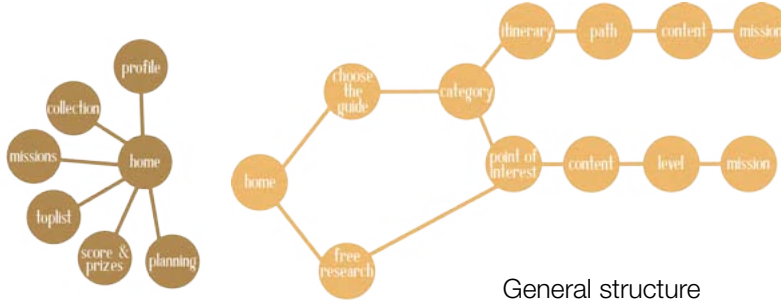
The navigation menu has been designed to facilitate the use of maps for localization and other tools that are used to fulfill the missions, which are taking pictures and recording sounds. For easy navigation there is a button at the top to go back and a bar at the bottom to move forward. The sliding part that is on the right will change color depending on the category of the contents, and once opened it facilitates the user in accessing the home page, the display of the actual map, compass for navigation, the camera and the recorder.



Navigation menu scheme

## **GENERAL STRUCTURE**

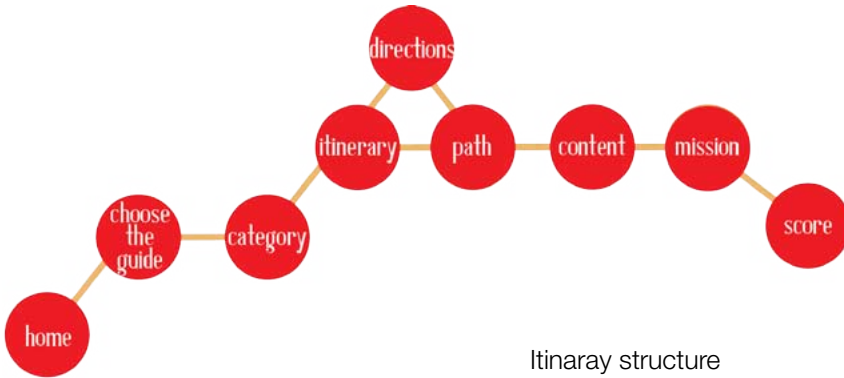
The general navigation is divided into two parts: exploring the city, and the consultation of the data. The first is divided into three different ways to explore the city through the routes, points of interest, and free exploration. The second collects all data generated during the exploration, which are related to content: pictures and sounds, or score.



General structure

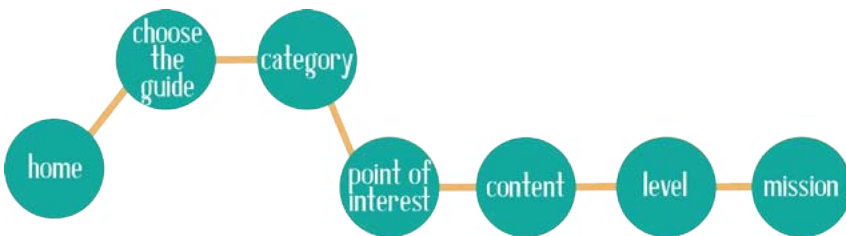
### ***Itinerary***

To access the itineraries you need to choose a category, or a guide, one of three characters: Nives, Flap and Ektor. After you have access to trails, listed by name and length of time of the trip. For each path is given starting point, end point and intermediate steps. To get to the starting point it is possible to calculate the distance from your current location and display your location. Along the way, appear to play the missions, which can be one or more depending on the length of the path, and insights pertaining to any characters or other specialized knowledge to their places of passage.



## *Points of interest*

The points of interest are divided according to the three categories and belong to a guide / character. They are listed by name and duration of the visit. After viewing the content, you can choose the level of the mission.

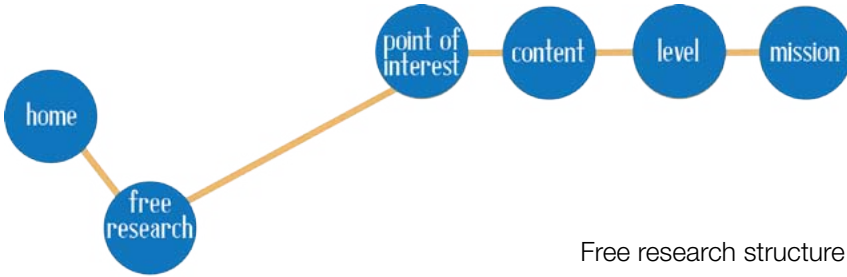


Points of interest structure

## *Free research*

The free roaming part from the view of the city map with the current location and points of interest closest, once you have chosen the site will proceed as normal points of interest.





Free research structure

## ***Data consulting***

To access the consultation data you scroll the screen with your thumb to the right, and appear in the various items of which it is composed, which are: profile, collections, ranking, points and trophies, missions and plans. Each of these items branches, collections and missions contain the contents collected during missions already carried out, such as photos and sounds, divided into categories. The missions also contain free ones, including insights. The other items do contain personal information and rankings with a score. The last one to plan, allows you to see the points marked in the calendar to see and choose from the other plan.



Data consulting structure

## TECHNICALITIES



The application is an all-in-one channel that merges all different tools an user will need during the journey.

**GPRS/EDGE/3G/  
WiFi**

**Automatic localisation  
Notify push by geo-  
graphic sensorHD**

# *INTERFACES*

## *Start*



Homepage interface, from here it is possible to choose which way to start the exploration.



This is the category interface: here the child can choose which one of the character is going to be his guide.

# Itinerary



1



2



3



4

1. Choosing Ektor as a guide.
2. selecting itinerary and choosing which one
3. interface of the chosen itinerary.
4. How to get to the starting point.



5. Street and bus directions. 6. itinerary with all the points where to stop.  
7. point A, starting point 8. Deepening about the name of the street.



9



10



11



12

9. Point 1 with the mission 10. Point 2, history and explanation.  
 11. Arrival to the last point. 12. Visiting the point of interest.



13. Content about the point of interest. 14. Choosing the level of the mission. 15. Mission 16. Points gained.

p.d.i.



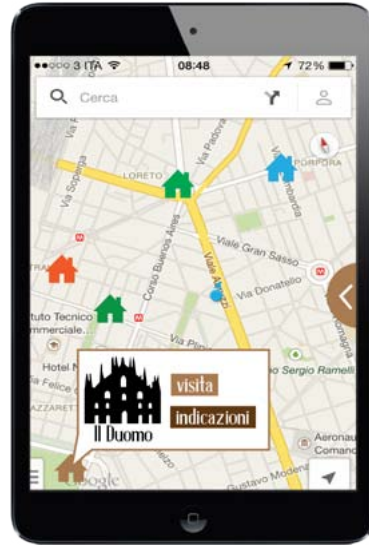
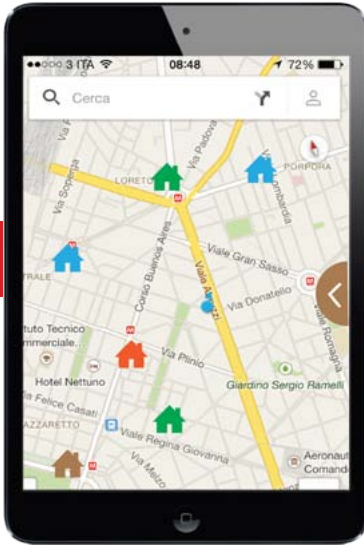
1. Choosing Flap as a guide. 2. selecting point of interest and choosing which one. 3. Point of int. interface 4. Content about it and possibility to go to the mission.





5. Choosing the level of the mission. 6a. mission lower level. 6b. mission medium level. 6c. mission of the upper level.

free  
explore



1. Choosing free research the interface show the map with the hotspot. 2. selecting one it shows what it is. 3. choosing the guide of the place. 4. Point of interest interface.



5. Content of the p.d.i.. 6. Choosing the level of the mission.  
7. Choosing the typology of the mission 8. Mission about numbers.

# ***10***



## ***Business analysis***



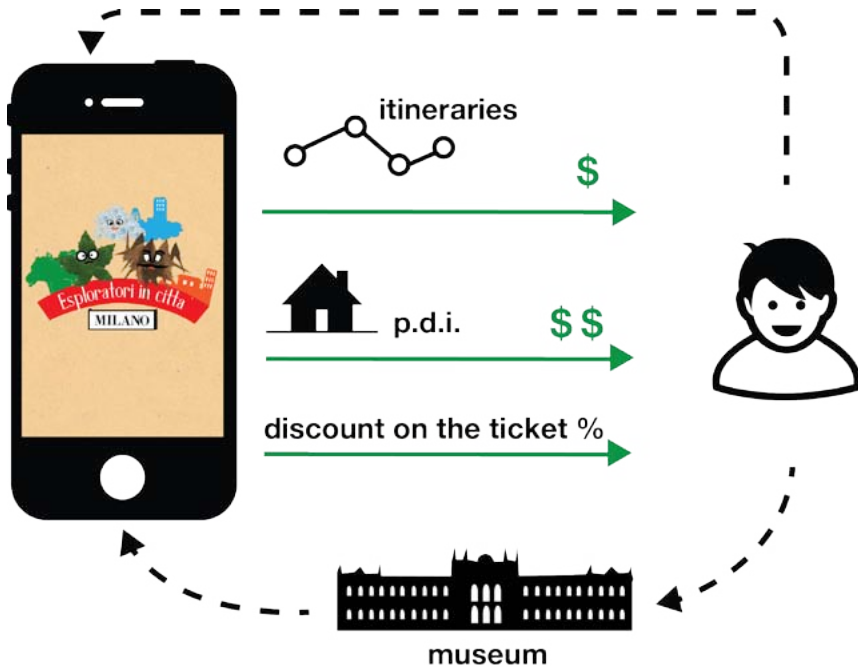
# BUSINESS MODEL CANVAS

Key partners	Key activities	Value Proposition	Customer relationship	Customer segment
Public transportation local company (ATM)  Public museums of the city	Selection of places Selection of infos illustrations Missions for kids	Application for kids that guide them around the city to show and explain architecture through illustrations and activities to do with the family.	Dedicated activities for family	Children aged between 6 and 10 years old, able to use technology: smartphone/tablet.
	<b>Key resources</b>  City Architectures Illustrations		<b>Channels</b>  Application	
<b>Cost structure</b> Application development Subscription Appstore		<b>Revenue Stream</b> Itineraries Points of interest		

Key partners	Key activities	Value Proposition
Public transportation local company (ATM)  Public museums of the city	Selection of places Selection of infos illustrations Missions for kids	Application for kids that guide them around the city to show and explain architecture through illustrations and activities to do with the family.

## *MONEY FLOW*

To access the consultation data you scroll the screen with your thumb to the right, and appear in the various items of which it is composed, which are: profile, collections, ranking, points and trophies, missions and plans. Each of these items branches, collections and missions contain the contents collected during missions already carried out, such as photos and sounds, divided into categories. The missions also contain free ones, including insights.



## *BUSINESS MODEL*



2,69 euros  
10 p.d.i.

app free download  
with 1 p.d.i., the  
map with all the  
points, and three  
free missions.  
They will also be  
able to read the  
story of the  
characters.



4,49 euros  
10 itineraries



5,49 euros  
10 p.d.i.  
10 itineraries



## *NUMBER OF USER*



The users of the application, as mentioned in the relevant section, consist of two groups, one of the resident and one of the tourists. To calculate the number of members of the former was necessary to search on the site Istat, the number of children enrolled in primary schools in Milan. Once you find this data, but we must take into account that only a percentage of around 76% has access to your tablet or smartphone, and will therefore reduce the initial number.

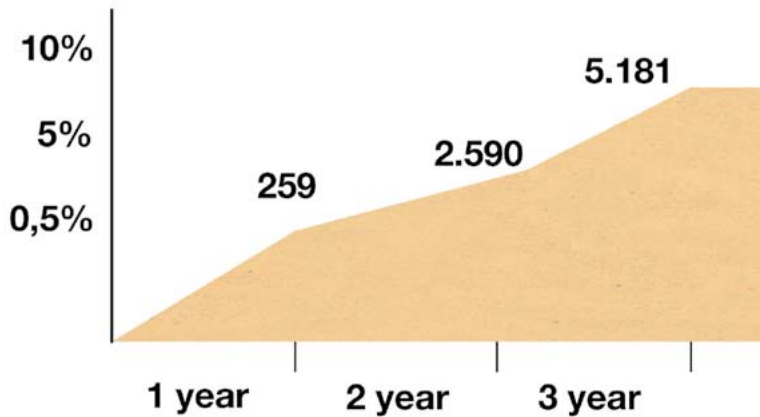
The second group, the tourists, it is very difficult to assess, since the tourism data do not indicate the number of children in Milan tourists every year. The amount is therefore difficult to establish an annual percentage justifiable on the number of children who visit the city every year. Therefore it was decided to add to the number of residents of the app users a 5% a year, indicative figure, which will constitute the data of the second group.

children between 6-10 years old in Milan (Istat.it)

**68.164**

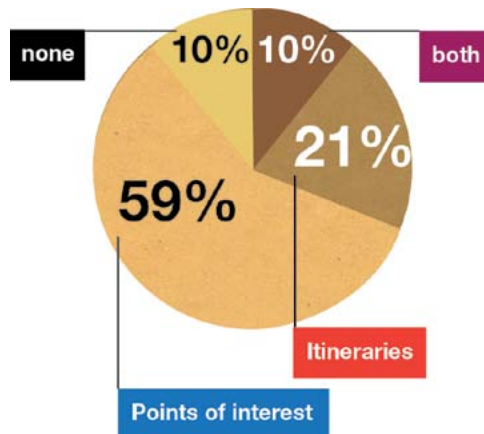
76% has access to tablet/smartphone

**51.805**



## *PERCENTAGE OF USE*

The application can be downloaded for free from the app store, but inside it will present only a few pages, including the history of the characters and an example of a point of interest. Everything else will be available for a fee as specified in the business model. Based on these rates were calculated by the percentage of use. Assuming that the majority of users will be living in Milan, certainly the highest percentage will download the package relative to points of interest, since they will not need routes that connect multiple points, knowing the city well. It was also calculated a small percentage of people that once you download the app will decide to abandon it, without paying any amount. Finally, the other two types, for which a small part drain paths, given mainly by tourists, and another half, which will download both of them, for the maximum cost.



**REVENUE**

year 1: 518 users	
59% download p.d.i.	306 x 2 = 612 euros
21% download itineraries	109 x 3,20 = 349 euros
10% download p.d.i. and itineraries	52 x 3,90 = 203 euros
<b>Total:</b>	<b>1.161 euros</b>
	<b>+</b>
3% of tourists every year	16 x 3,20 = 53 euros
<b>Total:</b>	<b>1.214 euros</b>

**year 2: 2.590 users**

<b>59% download p.d.i.</b>	$1.528 \times 2 = 3.056$ euros
<b>21% download itineraries</b>	$543 \times 3,20 = 1.738$ euros
<b>10% download p.d.i. and itineraries</b>	$259 \times 3,90 = 1.010$ euros
<b>Total:</b>	<b>5.804 euros</b>
	<b>+</b>
<b>3% of tourists every year</b>	$78 \times 3,20 = 350$ euros
<b>Total:</b>	<b>6.154 euros</b>

**year 3: 5.181 users**

<b>59% download p.d.i.</b>	$3.057 \times 2 = 6.114$ euros
<b>21% download itineraries</b>	$1.088 \times 3,20 = 3.482$ euros
<b>10% download p.d.i. and itineraries</b>	$518 \times 3,90 = 2.020$ euros
<b>Total:</b>	<b>11.616 euros</b>
	<b>+</b>
<b>3% of tourists every year</b>	$155 \times 3,20 = 496$ euros
<b>Total:</b>	<b>12.112 euros</b>

## *COSTS*

The main part of the costs will be given from development of the application, which is around 15.000 Euros, calculating that the application will use several devices, such as interactive maps, gps, camera, recorder, compass and service calculate the route. More are to be added the cost of the subscription program developers Google or Apple, which are around \$ 90 each, plus the cost of maintenance and upgrades. In calculating the cost of development was taken into account only part of the computer, not the graphics and interaction. You

Also important to calculate a 30% withholding on each sale by operators Apple and Google.

**year 1**

application development

**15.000**

subscription Apple and Google

**200**

**Total: 15.200 euros**

**year 2**

application updatings

**2.000**

subscription Apple and Google

**200**

**Total: 2.200 euros**

**year 3**

application updatings

**2.000**

subscription Apple and Google

**200**

**Total: 2.200 euros**

***TOTAL***

The main part of the costs will be given from development of the application, which is around 15.000 Euros, calculating that the application will use several devices, such as interactive maps, gps, camera, recorder, compass and service calculate the route. More are to be added the cost of the subscription program developers Google or Apple, which are around \$ 90 each, plus the cost of maintenance and upgrades. In calculating the cost of development was taken into account only part of the computer, not the graphics and interaction. You

Also important to calculate a 30% withholding on each sale by operators Apple and Google.

<b>year 1</b>	<b>year 2</b>	<b>year 3</b>
1.214	6.154	12.112
-15.000	-13.786 -2.200	-2.200
- 13.786	-9.832	1.112



## MUSEUMS

The museums are certainly an important part of all cities, and appear within the application in the various categories. The idea is therefore to seek a partnership with the major museums of the place, which includes the sponsorship of current exhibitions in the pages of within the app, all in exchange for a discount on the ticket users Scouts in town . For each museum you will have a good used one time for the exhibition in progress at the time of carrying out its mission.

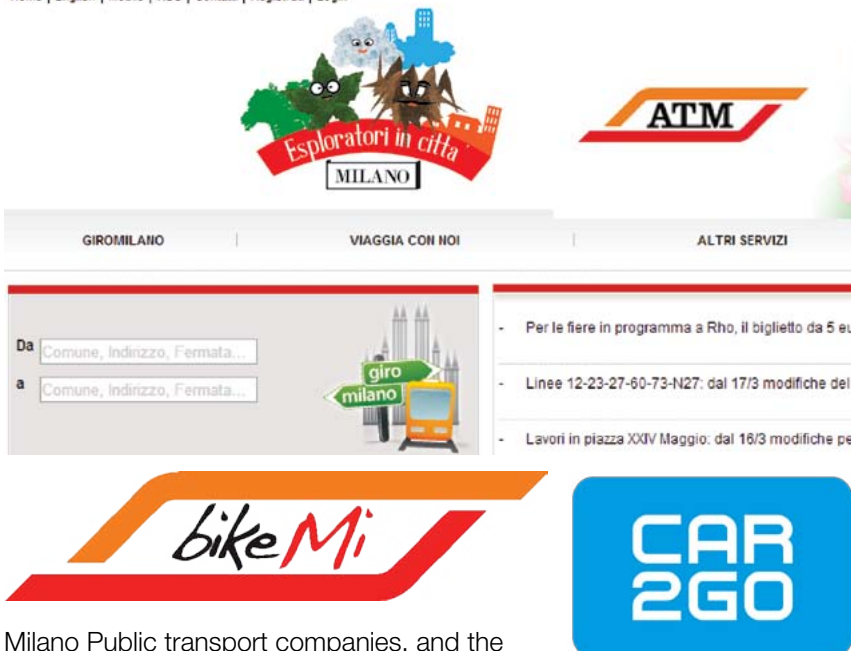


Interfaces with the pop-up of the exhibition of the museum, and the code for the discount

# LOCAL PUBLIC TRANSPORT

The partnership with the local transport companies are essential to provide users with a service to achieve points of interest proposed by the application. Also, with this mutual exchange, as the app would give visibility to transport, and vice versa, you would feed the promotion of the app.

Home | English | Mobile | RSS | Contatti | Registrati | Login

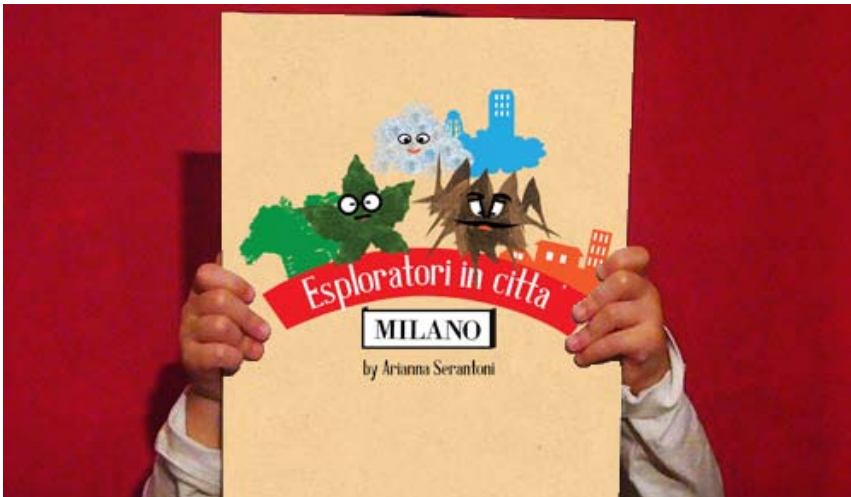


Milano Public transport companies, and the website interface, with the app logo.

## *WHAT'S NEXT?*

The application was designed for the city of Milan, but it is definitely one of the possible developments to extend it to other Italian cities such as Venice, Bologna, Turin, Rome and Naples. Each city may have a different character from the others, depending on the main features of the city, such as Venice will certainly guide a particle of water.

The second mode of development might instead be to have the files printed, to be sold at kiosks that make more tangible the virtual part, in this case, the missions present on the paper would have to be adapted to the use of pens and pencils.



Simulation of Esploratori in città book, to sell in libraries.



Logo for Esploratori in città, VENEZIA edition.



***11***

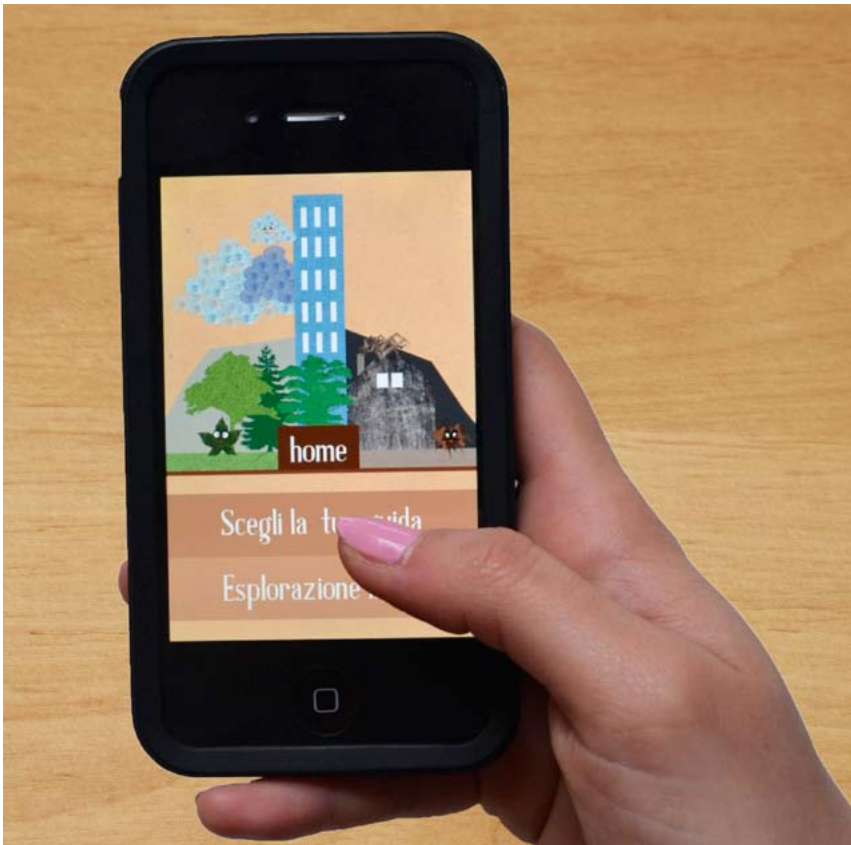


***Testing***



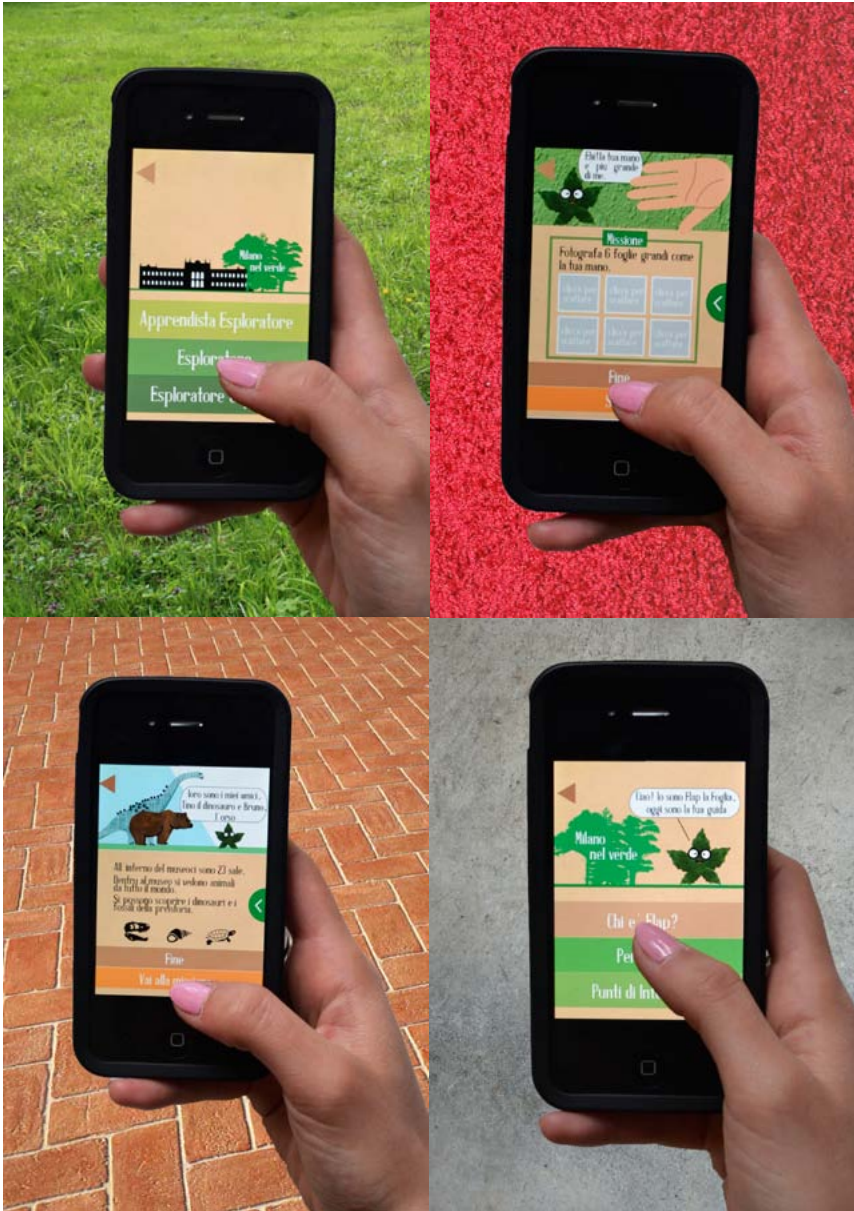
## *PROTOTYPE*

The prototyping part was essential to check the readability of the images on various media: smartphones and tablets. It was also served on a number of users to test the overall impression and the navigability of the menu.



Prototype.





**TESTING**

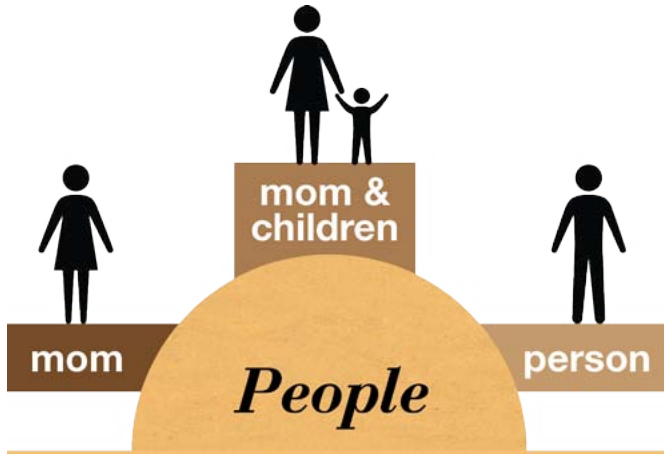


Testing Prototype: mom and children



The survey was structured on three levels: the navigability of the menu, the approval ratings of the images, and the validity of the content. The first two categories were asked to check all three elements, while the third only the first two. The feedbacks were very good especially in the general impression. In particular, it was asked if it would not have a problem of real photos within the app, and the greater response was that they had not even noticed.





The testing part took place on three types of people: the first includes children between the ages of 6 and 10 years, depending on the mothers of children in the targeted range and the third person generic.



Testing fase



**12**



***Conclusion***



## *CONCLUSION*

This project started considering especially the desire on the part of mothers to spend more time with their children and outdoor activities. The enthusiasm with which they have responded to surveys and that was expressed for the viability of the project has been the push for development that ensued. Assessments that have also been seen in the final phase confirm the premises and suggests that despite the business plan shows some difficulties with the gain calculated percentage of users, actually probably if carried, would give more revenue than those calculated. To develop the app should ask for an initial investment in some brands for children, such as Chicco.





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