

New Technologies for Participatory Planning: Between Parametric Design and Brand Urbanism

Annalisa Rollandi

(PhD Student Annalisa Rollandi, Politecnico di Milano, Piazza Leonardo da Vinci, 32 – Milano (IT), annalisa.rollandi@polimi.it)

1 ABSTRACT

Cities are called to face new challenges. The actions they plan must conform to their image and future values. This way, they can differentiate themselves and become more attractive. It is, therefore, necessary to involve citizens and brands differently from the past and with tools suitable for change.

The ongoing research intends to develop a new design tool applicable in complex contexts and stimulate participation. It is a conceptual model that integrates parametric design, inclusive communication, and planned forms of brand urbanism.

The research intends to introduce parametric design to evaluate urban transformations and coordinate them according to the future image of the city. The tool must be accompanied by inclusive communication that can involve more people to participate: this will also be possible thanks to new technologies such as social platforms that combine information, images, and sounds.

The problem is addressed in Chiasso, in the cross-border region between the Canton of Ticino (Switzerland) and the Lombardy Region (Italy). It is an important hub and has recently been affected by two projects. The design of the future vision of the territory must necessarily take place with the contribution of local actors and brands.

Keywords: gaming, brand urbanism, parametric design, communication, bottom-up

2 INTRODUCTION

The doctoral research still in progress, deals with the difficulty of collaboration in complex fields. The importance of knowing how to manage complexity also means managing the problem that we intend to address with the help of participatory planning in order to obtain a shared solution.

The cities adopt a new long-term strategy to respond to global challenges. The priority measures follow the plan of action identified at the national and international levels. At this historic moment, actions to contain climate change, rethink spaces and functions following the health emergency are at the center of the debate.

Strategic plans on a territorial scale are drawn up with different levels of participation. On the one hand, directives are implemented at higher levels according to a top-down approach. On the other, opportunities for bottom-up confrontation are envisaged with different types of local actors such as associations and trade representatives, but without the involvement of the private partners present in the territory.

Specific projects and initiatives are inserted within the guidelines that the strategic plans identify in a long-term time.

In this framework, one of the most used tools is tactical urban planning. Its advantages include the limited use of resources in financial and temporal terms, the attractiveness and visibility of the project thanks to the design. This tool takes place in non-central or suburban areas that need to be redeveloped. The projects mainly concern squares or road intersections where there are spaces underutilized or to be modernized. Tactical urban planning also has a social objective: to give citizens the open spaces of proximity and support the use of the meeting space within the cities.

The concrete actions concern the re-appropriation of spaces in favor of slow mobility through the reorganization of existing parking spaces and the arrangement of greenery and furnishings. In particular, low-cost materials and colored dyes are envisaged to give a new image to the area. Different types of actors are involved in the project: administrations, citizens, designers, local associations, neighborhood traders. Often, philanthropic associations finance the project and accompany the lead actor (local administrations). As in strategic urban planning, private partners have no involvement in the project's initial phase.

These types of interventions are placed within more significant projects. An example is the case of Milan which includes the "Open Squares" project in the Neighborhood Plan. The Municipality of Milan defines the Plan "(...) how we try to go beyond the suburbs to enhance the identity and specifics of each district of the

city!"¹. "Open squares" was born in 2018 and is promoted by the city administration in collaboration with Bloomberg Associates and with the support of the National Association of City Transportation Officials (NACTO) Global Designing Cities. In the start-up phase, the leading actors had identified seven squares for tactical urban planning interventions. Over time, eight have been added for a total of 15 redeveloped squares (data of 25.01.2020, source Municipality of Milan). According to the official website, 65 proposals from citizens, committees, and associations were received in the context of "Open Squares in each neighborhood", the public notice launched by the Administration to identify new areas of intervention for 2020².

With the help of tactical urban planning, there are three main objectives: the re-appropriation and liveability of spaces through appropriate redevelopment; make shops and area services more accessible; increase citizens' perception of security. The lead actors monitor the first projects' effects through questionnaires addressed to citizens, associations, and businesses. Out of 640 people interviewed, 76% want to make the project defined³.



Fig. 1: Piazza Angilberto - The "Open Squares" project in Milan, Source: Municipality of Milan

In order to coordinate interventions according to the same values (for example, liveability, accessibility, and safety), it would be appropriate to coordinate the participation phase at the start of strategic plans and urban projects. Unfortunately, some of the actors who are not involved are the brands present in the area. Often they are called to participate only in a second moment and in a timely or sporadic way.

3 METHOD

Cities need brands, and brands need to express themselves in the city.

In an increasingly competitive world, cities must enhance their characteristics to attract people, goods, and capital. They must build their future image based on values that take into account global trends and local characteristics. After that, around the image, cities must create storytelling that differentiates them from others. As the Lombardini 22 architecture firm argues in Medium, cities must brand themselves by making themselves an authentic "product" to be launched into the competitiveness market⁴.

The future image coincides with the strategy to be pursued. It is made up of values and criteria for selecting the projects and partners involved. The actors who decide to participate in creating the city's image will have to abide by the guidelines and contribute to the creation of the brand reputation of the city. Partners who

¹ <https://www.comune.milano.it/aree-tematiche/quartieri/piano-quartieri/il-piano/cosa-e-il-piano>

² <https://www.comune.milano.it/aree-tematiche/quartieri/piano-quartieri/piazze-aperte/piazze-aperte-in-ogni-quartiere>

³ "Piazza Aperte in ogni Quartiere", pp.8, 2020

⁴ <https://medium.com/@lombardini22/place-branding-non-solo-logo-c0927a16b4be>

decide not to follow the established values will not find space for interventions on an urban scale as they would undermine the city's credibility.

The participation of brands is necessary from the earliest stages. Only with collaboration is it possible to work optimally to create the strategy and identify urban projects to be implemented. This method allows to work in an integrated way and to evaluate the effects in the area.

Brands have different potentials that should be used to pursue the aims. First of all, they know the current economic dynamics of the context in which they are and have the tools to intercept new trends on a local and global scale. Private actors choose to position themselves in a context and link their image to it after careful evaluations. On the relationship with the territory, they build storytelling to be immediately recognizable. If it is stimulating and pursues values reward by the community, the brand also benefits from it. In this framework, the brand will be increasingly interested in participating in urban projects. A project that achieves the common objectives, which are implemented and renewed over time. Suppose the territory and the brands work together to give value to a territory and implement urban projects, including those of a social nature. In that case, their reputation will be recognized, and their credibility will be strengthened.

At last, brands have the financial resources to start a project and maintain it over time. Unlike philanthropic associations with interests and financial resources above all to help municipalities in the start-up phase of the projects, local brands have interests and resources over time.

For brands' participation in the planning process to be profitable, local governments must establish new relationships and provide new tools compared to the past.

The contents of the message must be put at the center of the debate. All this means shaping the image of a territory or identifying the territorial strategy to be pursued over time. Brands must be able not to put profit at the center of the dialogue with stakeholders. Therefore, the focus will not be on the logo but on the message you intend to communicate. The analysis of trends in 2020 on digital platforms, evidence that the next challenge for brands will be the message. Users have a large amount of information and "direct" communications that prefer quality messages. Therefore, even brand urbanism will have to deal with this trend. Interventions must be made in a climate of respect for the needs of citizens. Furthermore, they must be interventions with a social value. All this will establish a relationship of trust and, therefore, the participation that will generate long-term processes.

This approach is very different from the one used so far. For example, in place branding, the brand does not play an active role in creating added value. Its success is measured in the display of the logo. Only by making the logo visible does the brand message spread. The values transmitted are interchangeable. As the communication campaign changes, the messages and, therefore, the values disseminated through the imposition of a logo change.

The proposed new tool, brand urbanism, is radically different. In this case, the brand contributes to creating added value. It does not focus on the logo (itself) but on the content (a message), which must comply with the selection criteria established in the territorial strategy.

3.1 Brand urbanism

Brand urbanism is an opportunity and a challenge.

"Brand urbanism is collaboration between a city and a brand in which the brand (partly) launches or funds a project in exchange for visibility. Brands finance brand urbanism projects from their marketing budget, often substituting them for other forms of advertising."⁵ The first applications of brand urbanism have been in Anglo-Saxon countries in recent years.

This tool provides for the participation of brands, local administrations, and stakeholders. It comes from the awareness that, in economic terms, public administrations do not have the same resources as brands to redevelop public spaces, means of transport, and infrastructures.

Furthermore, in agreement with Luca Della Dora, Marketing & Innovation Director of We Are Social. He said that we are in a historical moment in which there is growing mistrust of institutions and governments,

⁵ <https://popupcity.net/trends/brand-urbanism/>

and in which our choices are often guided by the will to find new references that reflect our values. These references are increasingly those brands that demonstrate that they take a position and act concretely.⁶

According to We Are Social agency, there are three forms of brand urbanism. “Light: when the brand works on limited-time operations, temporary interventions that have an immediate effect on the city, but limited in time. Mid: in this case, the brand actively collaborates with institutions, acting on projects with a longer time horizon, and which have a lasting impact on local communities. Hard: these are the most complex and demanding operations, in which the brand decides to undertake a long-term project, collaborating with institutions and citizens, to create something that then remains in the hands of citizens and has a positive impact on long term.”⁷

Pop Up City agency identifies ten characteristics of the urbanism brand: creating real and visible value for residents; large budgets and every city has its price; the project is sustainable, running over a few years and possibly permanent; shared responsibility and intensive cooperation; free publicity and goodwill as ROI; part of a bottom-up strategy; success depends on shared core values; the right moment is the key to success; both brand and city can take the initiative; its about consumer brands rather than brands whose core business is the city itself.⁸

The success of this tool depends on four fundamental factors underlines in the study carried out by the Utopies Agency in collaboration with the JCDecaux Group. The collective interest, the contribution given by a Brand, must be the concrete response to social and environmental needs, expressed or observed; a valuable intervention that requires a preliminary analysis of needs, the choice of a specific urban space and consistency between the project, the Brand's commitment and its values; participation and duration means consultation or co-creation of the project with the inhabitants who must also be involved in the maintenance of what is being done, evaluation and monitoring of the impact of the project; transparency and honesty, or communication and presentation of the objectives of the partnership and traceability of funding with a view to continuous improvement.⁹

Nike made an example of brand urbanism in Milan.

For many years, the Porta Venezia underground station in the historic center has been the stage for classical and modern dance rehearsals. In the first phase, the rehearsals were organized spontaneously by small groups of teenagers. Over time this space has attracted more and more people. Nike made the stage by changing the design of the subway. It made the environment safer, more visible, and accessible.

From a social point of view, the project has a broader meaning. It means recognizing a practice, analyzing needs, and giving it importance. In this case, Nike added value to something that already existed. In the foreground, it was not the brand logo but the message. Like any sporting activity, dance has a quick connection with Nike even if its logo is not put in the center.

⁶ <https://wearesocial.com/it/blog/2021/03/wtfuture-brand-urbanism-dalla-fiducia-alla-collaborazione>

⁷ <https://wearesocial.com/it/blog/2021/03/wtfuture-brand-urbanism-dalla-fiducia-alla-collaborazione>

⁸ <https://popupcity.net/trends/brand-urbanism/>

⁹ <https://www.igpdecaux.it/blog/our-say/brand-urbanism-lazione-dei-brand-sugli-spazi-pubblici-urbani-parte-1/>



Fig. 2: Nike area sport in Milan – Porta Venezia metro station. Source: MAS Thesis by Leonardo Cabianca

Initiatives such as that of Nike in Milan must be planned. There were short-term interventions leased to events, brand pop-ups, or experimental forms of brand urbanism in the past. The city needs that all projects follow the general strategy and, above all its values, to strengthen its brand reputation.

Therefore, it is important that local administrations and the actors involved in participatory planning equip themselves with tools that can plan interventions, simulate them, and evaluate the effects.

3.1.1 Gaming

Often, to better understand a new phenomenon, it is helpful to look at it from another perspective or analyze it in a different field. In this research, it was decided to understand better the impact that brands have on the community by analyzing their role in the gaming world.

The analysis of the “Digital 2021”¹⁰ study conducted by We Are Social highlights that game apps are the most downloaded from the Google Play Store and Apple's iOS. 17% of paid apps downloaded are game apps. As for e-commerce, 135.8 billion dollars are for video games, which increased 23% compared to the previous year. Finally, as regards brand-related online activities, 13.9% of users played a branded game.¹¹

The analyzes conducted have shown that since 2018 there is more interest in the sector: the community is increasing, and games are not a closed sector. Indeed an element that has contributed to the success is the possibility of playing online. This element allows the gamers to interact anytime, anywhere with other players around the world. In addition, different types of experiences arise: playing in a team, being a spectator, and a supporter: these are all elements of a community. Like social platforms, games also have chats. Therefore it is possible to dialogue while playing or to dialogue on a specific theme. This possibility has grown considerably in the year of the pandemic crisis. Video games have replaced public spaces for concerts (for example, Travis Scott and Fortnite¹²) and events (for example the anti-racism event on Fortnite¹³).

The choice to analyze this world is not accidental. According to Juval Portugali, “Games accompany humans since early days, and yet, as a category, they are impossible to define in terms of necessary and sufficient conditions. The reason: they form what Ludwig Wittgenstein (1953) in his Philosophical Investigations has termed a family resemblance category. Cities too are hard to define and for the very same reason: they form

¹⁰ “Digital 2021 – Global digital overwiev”, pp.218, 2021.

¹¹ “Digital 2021 – Global digital overwiev”, pp.269, 2021.

¹² <https://www.youtube.com/watch?v=wYeFAIVC8qU>

¹³ <https://www.eurogamer.it/articles/2020-07-04-news-video-giochi-fortnite-evento-anti-razzismo-modalita-party-royale-4-luglio>

a family resemblance category. The resemblances in such categories are determined by logical connections (e.g. analogies) and imaginative connections (e.g. metaphors), that is, by fantasies.”¹⁴

There are two similarities between planning and gaming: technical and social.

The first refers to the tools used to create the settings. For example, CityEngine software is used both for parametric design in planning and for video games. Using the same tools allows the same opportunities for developers and the same effects on the stakeholders/community. From this point of view, the evaluation of design alternatives appears similar to choosing a game setting.

This is important to understand the second analogy, the social one. As described above, parametric design and new technologies allow for an immersive experience that engages the actors. The parametric design in gaming helps to create the same effect: the player is immersed in virtual reality with sensations like in real life (joy, fear, anxiety, etc.). In addition, from a social point of view, the multiplayer game mode allows to interact with the community and talk about various topics.

A growing sector attracts the attention of brands. The goal is to make one's presence felt, to position oneself. As with brand urbanism, this does not just mean inserting the logo in the setting but above all communicating their presence to the community. Also in this case, one of the fundamental aspects is respect for the players and the game rules. Brands must make their strength available to the community in order to create a relationship of trust.

From a technical view, there are different ways they can get involved in gaming, and they have different effects. For example, the auto bomb is a poster of the logo within the setting: but it is a positioning that does not allow some interactions. For example, the experience made by Burger King is very interesting. It did not use the logo in the games but created the Stevenage Challenge: on the occasion of the release of FIFA20, one of the most famous football games, it created the jerseys of a small English football team. The colors used remembered the stores. The idea was to support this small team and ask players from all over the world to help Stevenage win the championship. This created tremendous interest and motivated players to make it the biggest team in the online world. Burger King CMO Fernando Machado said “the #StevenageChallenge is here to welcome everyone because thanks to technology, this could also be everyone's team”.¹⁵



Fig. 3: #StevenageChallenge, Source Stevenage FC

Analyzing cases like this can certainly help to understand how to use brand urbanism in participatory planning. They help to understand people's needs as Ekim Tan founder of Play the City claims “Games are as old as society, yet when a spatial designer enters the world of games, a new world opens, bright with novelty”

¹⁴ “Games for cities”, AESOP Meeting, 2019

¹⁵ <https://www.insidemarketing.it/stevenage-challenge-sponsorizzazione-sportiva-burger-king/>

and possibility as a relatively unexplored instrument for shaping spaces that are more meaningful to humans.”¹⁶

4 APPLICATION

In this historical moment, thanks also to new technologies, we have shortened distances, enjoyed various types of content, and communicated. It was not possible to participate or share large and small events. Public places must necessarily be rethought to meet current challenges and must also be created based on the new needs of citizens.

The doctoral research still in progress, takes into consideration all these aspects. The research focuses on conceptual models that can help the actors involved in participatory processes to formulate problems. The conceptual model focuses on parametric design and inclusive communication, capable of increasing the level of engagement of the stakeholders involved and creating territorial and urban processes not only in the immediate but also in the medium to long term. The combination of these elements allows to design and focus on inclusion and creativity. It is a tool that allows to translate different plans and projects into the same language and helps to understand problems and make shared decisions.

Parametric design is “an innovative approach based on the use of computational tools to optimize the performance of the system in relation to the goals of the project.”¹⁷ The technological acceleration of recent years has changed the use of representations in design. Jane Jacobs writes that science passed from the Newtonian two-variable system at the extreme of statistical analysis where myriads of parameters interact. This is the true value of the modern digital instrument: present feedback data in real time from complex and necessary scenarios to obtain one higher design quality. The process becomes thus generative, involving sequentially the variables involved and their implications in comparisons of the completeness of the urban scenario.¹⁸

The following figure shows an example of the use of parametric design in architecture. The masterplan for Beko was created by Zaha Hadid Architect within the city of Belgrade.



Fig. 4: Beko Masterplan. Source: Zaha Hadid Architect.

Furthermore, the new technologies have revolutionized the use of already known tools. We have moved from traditional 3D shapes to parametric representation and immersive experiences. The use of traditional forms of 3D representation differs from parametric drawing for two main reasons. The old software did not allow for the processing of such data. For this reason, the complex problems were analyzed in a sectoral way. The comparison of design alternatives took time, so often only the definitive solution was represented.

¹⁶ “Games for cities”, AESOP Meeting, 2019

¹⁷ “Urbanistica parametrica. Open data, strumenti e tecniche per la progettazione della città di domani”, pp.26, 2013.

¹⁸ “The parametric representation of the city”, pp.133, 2010.

Furthermore, this approach does not include the analysis of the effects on the territory. Thanks to new technologies, parametric design can process data from different fields simultaneously. This allows complex problems to be addressed organically. "Parametric design systems today can adapt to changing context under the influence of parametric languages and scripting techniques and to diverse topological relationships and generative processes of design."¹⁹

The second reason is related to the first. The 3D was used to represent a project already decided: it was often used to communicate a message. Now parametric drawing is used to argue a decision: its use is part of the making process. "The distinction of parametric design in comparison to traditional computer modeling is that rule-sets become basic design procedures in configuring 3D models of parametric design. In building parametric models, designers set variables and digital data flows, adjusting the values of parameters, and revising the rules accordingly. Rather than traditional configuration ways of the object itself, the design of the generative rule set and their logical relationships is becoming the main focus of design thinking. In this way, more alternative solutions can be explored by changing the parameters of the logical relationships."²⁰ Parametric design has many advantages but its use should not replace planners and stakeholders because they have the necessary knowledge, an exhaustive vision, and the necessary sensitivity to tackle complex problems.

The new technologies for communication are an instrument that is part of the life of each of us. The annual report conducted by the company We Are Social for 2020 shows that 60% of the world population is online. 90% of the time spent online is on apps where we spend an average of 2 hours and 24 minutes a day. The data refer to the year of the pandemic where there was an increase in the use of the internet for work, education, and leisure. Among the growing trends, the gaming sector's importance is increasingly emerging, not only among enthusiasts. This aspect is due to better graphics, increasingly compelling stories, and technological and furniture products that help live a 360-degree experience.

"The popularity of Facebook, Twitter, Google, Instagram, Youtube, Blogspot and other social media has spurred a demand for new forms of participatory planning and self-organizing governance by citizens. Unlike with many conventional methods, citizens are keen on using social media tools to engage with planners."²¹ The social platforms connect and involves people of all age and different social groups. As Kleinhans et al. argue well, public administrations should consider these elements for new spatial planning tools. "To overcome the problems of participation as described in the previous section, many governments have turned to social media and social networking tools, with three potential communication strategies: (1) representation; (2) citizen engagement; and (3) networking with the public."²² It will also be essential to know how to create new networks and strengthen existing ones affect in the territory even in the short and medium time.

The idea is to use parametric design, communication, and brand urbanism for interventions on an urban scale. At the territorial scale, these tools are used to create the future vision based on global issues and based on the identity culture. On an urban scale, parametric design and communication can use the collaboration of brands to create interventions that involve stakeholders over time.

4.1.1 Chiasso

The context for applying the conceptual model is the cross-border region between Switzerland and Italy.

"A cross-border region is a territorial entity that is made of several local or regional authorities that are co-located yet belong to different nation-states. Cross-border regions exist to take advantage of geographical conditions to strengthen their competitiveness."²³

In recent times, an excellent opportunity is in Chiasso. It is the southernmost municipality in the Canton of Ticino and thanks to its position, it is an important hub for the flow of goods and people.

¹⁹ "Theories and Models of Parametric Design Thinking ", pp.477, 2015.

²⁰ "Theories and Models of Parametric Design Thinking", pp.478, 2015.

²¹ "The new generation of public participation: Internet-based participation tools, Planning Practice and Research", pp.1, 2010.

²² "Using Social Media and Mobile Technologies to Foster Engagement and Self-Organization in Participatory Urban Planning and Neighbourhood Governance. In Planning Practice and Research", pp.3, 2015.

²³ "Encyclopedia of the City", pp.155, 2004.

Currently, there are two important projects under discussion. Their approval would free up large areas for transformation. However, the discussion is currently at a standstill. It is an excellent possibility of conversion, but the territorial strategy is missing. In the absence of a shared image of the territory, it is not simple to orient projects on an urban scale. Chiasso is part of the territory defined as Mendrisiotto. At this scale, it is necessary to develop the idea for the strategy. In recent years, Chiasso and Mendrisio have been interested in various cultural projects with a cross-border character. Also, in the area, there are numerous parks and green areas of cantonal significance. Furthermore, it is the most important area for the production of wine in the Canton of Ticino. Mendrisio is the headquarters of University of Applied Sciences and Arts of Southern Switzerland and the Academy, architecture studios, and headquarters of relevant design brands.

The analysis of all these factors should help define the future image and work for Mendrisiotto's brand reputation. Although only with local actors' involvement will it be possible to make a paradigm shift in the territory's choices and define a new concept of quality.

In recent months, the first application of the conceptual model is carried out with the students of the "Integrated Planning" course held by Prof. Günther at SUPSI (University of Applied Sciences and Arts of Southern Switzerland).

The test had three main objectives. As regards the method, to make the students work in an interdisciplinary and multiscale way. Regarding the tools, evaluate the effects of the different representation techniques and, in particular, evaluate the parametric design contribution in the final discussion. Finally, as regards the actors involved, verify the need to involve the brands in participation.

The students were divided into five groups, and each represents a different actor who intervenes in their ways and times.

The first step was on a local scale and developing a project proposal within 500m of the railway station close to Mendrisio, and the second step was at the cross-border scale. The last one was at the territorial scale: the students created the future image of Mendrisiotto. The proposals were: a territory of culture, the wine route and green paths, and a territory for commerce.

At the end of the course, a debate was organized to evaluate the effects of representation and the actors involved in the projects.

Thanks to CityEngine, a software application developed by Esri R&D Center Zurich, Parametric design has changed the ongoing discussion. It contributed to creating a climate of dialogue and comparison on the various solutions proposed. Regarding the actors, the groups highlighted the need to involve the brands present to realize the projects.

Then, the second ongoing test of the research involves the participation of brands to create the future image of Mendrisiotto.

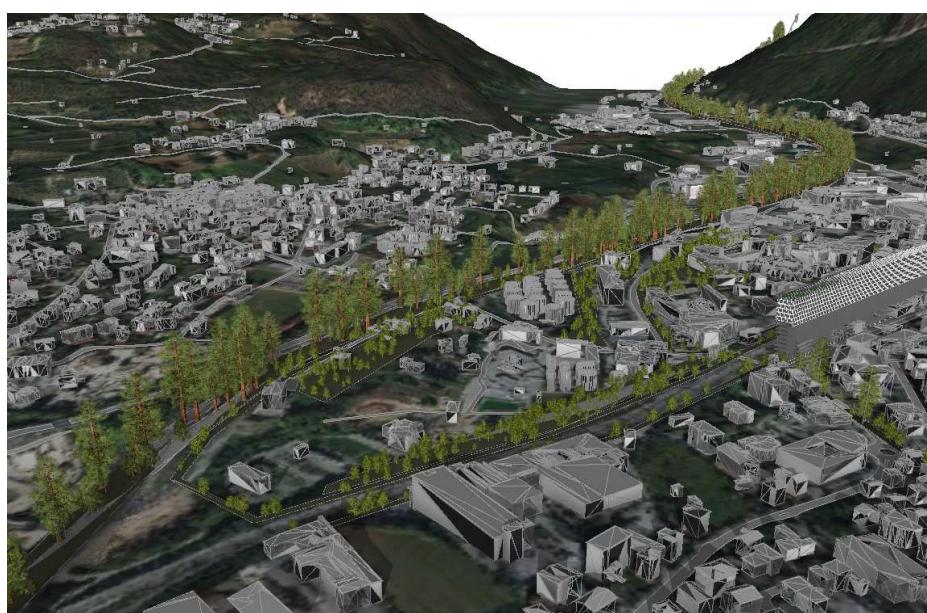


Fig. 5: The first result of the test with the students, by A.Rollandi

5 CONCLUSION

Cities are faced with great challenges. To increase their value, they need to become a brand and differentiate themselves from others. They must create value around their image and the projects they plan. For this reason, they need to involve local actors. Local administrations must communicate and collaborate with brands in a new way compared to the past. They also have to use new tools such as brand urbanism. It considers the values of cities, and it is a tool that will adapt more quickly to citizens' needs than traditional planning tools.

The ongoing doctoral research intends to develop a new planning tool to stimulate participation. It is a conceptual model that integrates parametric design, inclusive communication, and planned forms of brand urbanism. The conceptual model allows obtaining a bottom-up process that combines elements from different disciplines and works at different scales. The research introduces the parametric design to move up the territorial and urban transformations and coordinate them. Furthermore, it will be possible to evaluate design alternatives and their effects on the area. The tool must be accompanied by inclusive communication that can involve more people to participate.

In this context, the model can evaluate the planned forms of brand urbanism. Local administrations and the brands involved also can evaluate the effects in advance and start a discussion with citizens.

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