



The Transition to a New University Campus as an Opportunity for the Urban Regeneration of the Former Milan Expo 2015 Areas

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Abstract. In Milan, in the 1990s, the Ministry of Education and Research inaugurated the policy of opening new decentralised university campuses with a twofold aim: to relieve pressure on the central headquarters and, at the same time, restore functionality and liveliness to the suburban neighbourhoods, which have been affected in the last two decades by the decentralisation of industry. The paper presents a research work still in progress, carried out by a group of the Politecnico di Milano on behalf of the Università degli Studi di Milano, concerning the definition of the meta-project briefing for a new campus to be located on the ex EXPO 2015 area. Although the event was a formidable territorial marketing tool for the city, a new destination for the space occupied by the pavilions must be implemented for the future. The company that owns the area, Arexpo, decides to build a scientific and technological park in which public and private institutions must be housed, including the new campus for the science faculties of the university. The project appears as an opportunity to make a transition to a more environmentally, socially and economically sustainable educational and research site. The Politecnico di Milano research group uses methods at the crossroads between Strategic, Service and Spatial Design to immediately involve the various primary stakeholders in a collaborative project to create the guidelines that will be given to the architects in charge of planning the new site.

Keywords: Transition to sustainable futures · Case studies
Cross-cultural product and service design · Design for social development
Localization · Participatory design · Community engagement · Co-design
Capability development · Human experience sense-making
Multidisciplinary research · Learning & teaching environments
Higher education facilities · Meta-design

1 Background

In Milan, a policy supported in the '90s by the Ministry of Universities and Research has favored the expansion of new university campuses towards the outskirts of the city. This has not only relieved the central headquarters congestion but has also saved some peripheral areas from an assured decline, triggering processes of urban regeneration for the benefit of the city as a whole. Examples include the transfer of the IULM to Romolo, the opening of the Bovisa Politecnico campus, a new Bocconi's campus at the former milk plant in Milan, and Unimi Bicocca (see Fig. 1).



Fig. 1. Transferred university campuses within the city of Milan.

The paper presents the report of research work, currently in progress, carried out by a team of the Politecnico di Milano on behalf of the Università degli Studi di Milano with the aim of defining the meta-functional requirements of a new campus to be located in the area occupied by Expo 2015.

In 2015, Milan hosted the Universal Exposition with over 21 million visitors, 141 participating countries and about 5,000 events in 184 days [1]. Although Universal Expositions are a formidable tool of territorial marketing, once the curtain has fallen, often the areas occupied by the exhibition pavilions have not found new uses, taking the path of decline and abandonment, with consequent urban degradation [2].

To avoid the recurrence of this downward spiral, in 2011 the Lombardy Region had already established the company Arexpo to transfer the ownership of the areas of the universal exhibition. After the closing of the event, a first attempt to sell the space for public tender fails, creating a climate of distrust for the future.

Arexpo thus establishes that the area should host a Science and Technology Park based on similar sites around the world. There should be placed several facilities including Human Technopole, the most significant medical and biomedical research center in Italy, the Galeazzi hospital that also has a vocation for research and training, and the new campus for the scientific Faculties of the Università degli Studi di Milano.

The first step requires Arexpo to select a player in the international arena who can fulfill a double role: they not only should develop a feasible and robust master plan but should also be in charge of implementing it as the areas concessionaire for 99 years. Lendlease Italia wins the tender thanks to the proposition of a long-term vision rather than merely speculative which has been presented publicly in Milan in November 2017.

Established in 2000 as an Italian branch of the Australian corporate company, Lendlease Italia has already built in Milan CityLife (2007), the Armani hotel (2011), along with the hospitals of Brescia in Lombardy (2016). The master plan for Arexpo provides for the construction of a 440,000 square meters park whose environmental value increases the real estate value. Lendlease aims to design, finance, implement, and manage in the long term a complex urban regeneration project that has at its core an active and lively community. Therefore, public and private functions are integrated thanks to the requirement to assign a public use to the ground floor of all the private buildings in the area.

For Carlo Ratti, principal of the design studio that authored the master plan, it addresses five main design challenges:

- How to solve the link with the historic center of Milan?
- How to transform the “decumanum” that is the linear park that formed the backbone of Expo, into something new?
- How to create a shared ground capable of facilitating serendipitous encounters, which are a vital component of the contemporary way of working?
- How to transform the master plan into an open and flexible design platform?
- How to respect the DNA of Milan that is a living laboratory in Italy, whose mobility has historically developed around a network of canals and waterways?

Ratti claims that the master plan aspires to transcend the vision of the zoned city dear to Le Corbusier, indeed ordered and functional but arid, proposing mixed uses developments that rely on a digital infrastructure as a backbone of integration.

According to Andreas Kipar from Land, the studio in charge of the landscape design, the park has a vocation to food production, sport, health, and biodiversity. The *cardo* and the “decumanum” axes become the backbone of a system of squares disseminated through the park and the botanical gardens. Not only are the existing trees preserved, but also 3,000 new trees are planted to build pollination strips. Phyto-treatment plants purify the water canals. No fence is foreseen, to allow the around-the-clock fruition of the green area.

2 Diagnosing the Problem

In this context, about 150,000 square meters of the space should be used for the new campus to host the science faculties of the Università degli Studi di Milano. The plan is an opportunity to question the future ways of teaching, learning, conducting research and multidisciplinary collaboration. From the very beginning, the Università degli Studi di Milano involves the Politecnico di Milano as the consultant responsible of drafting a first version of the meta-design¹ briefing with the functional requirements, both qualitative and quantitative, addressed to the participants to the tender launched by Arexpo. The second version of the document, currently under development, contains more precise quantitative data to allow the winner of the tender, Lendlease, to estimate a realistic financing project.

After a first stage of data collection, including co-design workshops with representatives from different departments and students, site visits and interviews carried out at the current campus, benchmarking activities with recent international case studies, the present state of the art emerges clearly: most of the scientific branches of the Università degli Studi di Milano, at the moment scattered in existing structures, are no longer up to standard and need urgent redesign to modernize research laboratories and annexed facilities.

The core of the campus called “Città Studi” where most of the scientific disciplines are located was founded before the 1930s (See Fig. 2).

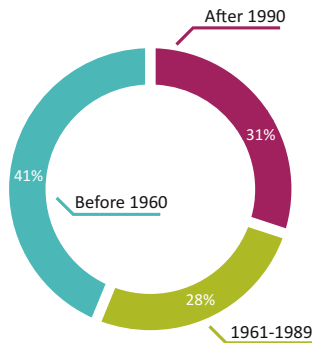


Fig. 2. Spaces classification by year of construction.

Moreover, it is clear that the zoning of the space, rigidly organized by the fields of scientific knowledge, has favored over the decades the consolidation of disciplinary silos and has hindered the collaboration and the sharing of equipment with serious repercussions also on the economic sustainability of the institution.

¹ In the section on methodology (see para. 6), we explain in greater detail what is meant by meta-design and participatory processes.

3 Identifying the Specific Opportunities

For the project team, the problem can be turned into the opportunity to progressively refine the needs expressed by different stakeholders (such as Departments and Programs' Committees) in relation to issues as diverse as prospect enrolments, recruitment of personnel, acquisition of new devices and instruments, activation of innovative teaching and research methods and collaborations, implementation of advanced organizational and management methods, services, ways of smart working, etc.

In any case, the underlying purpose of the Politecnico research group is not to enforce at this stage the most cutting-edge solutions for immediate adoption, but rather to create the conditions so that these innovations, if supported by the community affected, at any time could find implementation within the new structure.

The transition to a new location is seen as an ambitious opportunity to reorganize the complex system in a more sustainable way improving the lives of thousands of people. However, "transition" is not only meant literally as a move to a different location but it is also defined here as "a continuous process of societal change, where the character of society (or of one of its complex subsystem such as education) undergoes structural changes" [3]. In this second meaning, transitions usually impact the entire socio-technical system at hand² because they impact the whole set of required elements and their mutual relationships: institutional policies and regulations, infrastructures, technology, cultural meanings, customs and habits, markets, maintenance networks and supply chains. Adopting a perspective at the socio-technical system level invites to sit at the same table a vast range of stakeholders: in this case, university's managers, staff and students, private investors, suppliers, citizens' groups and associations, etc. Systemic innovation is therefore inherently multi-actor, multi-factor, multi-level, highly uncertain, and long-term [3].

In this perspective, education can be considered as a societal function that requires a cluster of services and products for its implementation. According to UNEP (2002), "Product Service Systems (PSS from now on) are a particular type of value proposition that shifts the business focus from the proposition of (physical) products alone, to the offer of a bundle of products and services that are jointly capable of satisfying a particular customer demand" [3]. Of course, we must broaden our idea of campus not only as a physical compound scattered through buildings and facilities but also as the sum of all daily functions it accommodates. The starting assumption is that the campus is essentially a network in a continuous evolution of nodes that aggregate and dissolve in response to opportunities for collaboration and interaction [4], which should be supported by the flexible and efficient physical arrangement.

Applying this concept to our transitioning demographic group with impelling and always changing education and research needs, we could envisage alternative education and research production and consumption models, which shift the concept of 'equipment' or 'space unit' from something privately owned by a given department to a complex PSS that should be combined with social interactions experiments and

² We refer to education as an example of a complex socio-technical system, but the same could apply to housing, healthcare, mobility, etc.

distributed economies. For instance, it should be possible to access the tools sterilization service without having to take charge and manage a sterilization room for the exclusive use of the department.

A PSS framework is the only promising of steering toward the campus sustainability which is always environmental, social, and financial at the same time [5], and can do so at the required scale and pace.

The starting assumption is that the campus should be considered as a common good [6] organized on a model of “functional economy” [7]: most of its functions are accessible without the burden of managing privately owned devices. This model regulates the availability of space and equipment, organized in intelligent product/service systems with different access rights according to user profiles. Booking workstations, equipment, books, rooms, thinking-pods is possible on a variable time basis (per hour, day, week, month, semester, etc.) and in different ways: free of charge (for students, teachers, and university staff), on-demand or on contract for external stakeholders.

Digital platforms make the access to assets transparent and independent of their management and provide real-time data on the operating conditions of the systems.

4 Research Aim

The objective of the research is to investigate how interactive tools borrowed from spatial, service, and strategic design can contribute not only to the collection of data and requirements, but also to actively involve stakeholders at an early stage of the meta-design brief of a contemporary integrated campus.

5 Research Objectives

The research aim looks more attainable when broken down as follows:

- Reviewing recent literature on design methods and tools within three areas:
 - “Strategic Design”: the intention is to cross methods and tools of spatial and service design to trace a third path suitable to capture the most relevant interactions, whether already in place or desired, to inform the set of spatial guidelines.
 - “Participatory Design”: a co-design framework is required to gain experiential insights and highlight critical issues about daily practices and behavioral patterns on campus;
 - “Spatial Analysis”: methods and tools in this field can afford an in-depth understanding of the settlement’s physical requirements to improve its rationalization and efficiency;
- Conceiving and implementing bespoke design tools for co-design workshops addressed to primary users and stakeholders.
- Running the workshops.
- Understanding and assessing the attendants’ experience of co-designing as non-professional designers.

The adopted hybrid service/spatial design approach looks promising to dissolve the present physical separation between faculties and researchers, which has generated over the years rigid disciplinary silos and self-referential, narrow-minded attitudes to the detriment of innovation and research advancements.

6 Research Methodology

The research team adopted a “constructivist” methodology, involving a continuous interaction with the Executive Team and the different demographic groups of the campus community. According to this worldview, the reality is a social construction, and its meaning is the product of the endless negotiation between participants’ understanding and sense. Shading light on judgments and beliefs is crucial when shaping a complex artifact like “an integrated campus,” which is not a given object of the natural world.

From the constructivist methodology derive the “user-centered methods” employed to address a wide range of participants categories that use the campus facilities on a daily basis. The research team trusts that these methods can help accompanying the community during the delicate transition to the new settlement, seizing the opportunity to question the current situation and to envisage new synergies, working methods, and spaces organization.

The next paragraphs describe the data collection procedures and methods used in this investigation to acquire information from the different demographic categories. Generally speaking, we can conclude that the participants become aware of the fragmented nature and continuously changing layout of the present campus, which has proliferated out of control and rational planning over the years also due to the need for maximum exploitation of the historical assets.

The information is complemented with the analysis of case studies from “desk research,” undertaken with the aim of keeping an open view on the most cutting-edge research and best practices at the international level.

The whole process is based on a practical and productive “communication system,” which allows at each stage the research team to share with participants the information processed, to write the meta-design brief and at the same time build a shared mental model of it.

The research team is leading a process of “knowledge transfer” aiming at transforming users into “experts of their experiences” [8]. On the other side, designers donning the hat of facilitators are transformed into co-designers.

A cross-disciplinary approach is valued for its ability to foster participation, empowerment, transparency, and accountability [9], either by improving the efficiency of public services and public policies or promoting critical social goals such as citizen participation and democracy [10].

6.1 Interviews with the Executive Team

In the initial phase of the research, a series of interviews to the Executive Team of the Università degli Studi consisting of the General Manager, the Rector, and the Property

Manager, was carried out to define three main categories of spaces and to identify a hierarchy between them. “Core spaces” have been established as those that host the main functions, namely didactic spaces (e.g., classrooms and educational laboratories), departmental spaces (e.g., research laboratories and offices/studios), the library, research spaces, and offices. “Essential Ancillary Spaces” are those that accommodate functions not necessary but of important support to the good functionality of the campus. Finally, “Supplementary Ancillary Spaces” spaces complete the main infrastructure, whose development depends on the generated induced activity.

Moreover, the interview with the Property Manager provided the initial set of qualitative and quantitative data on those categories.

The relationships that emerged between those categories of spaces inform the Arexpo master plan, both at the campus and the urban scale. They are represented in a diagram (see Fig. 3) included in an illustrative report, which has been presented to the Departments representatives and, in a second step, to the Academic Senate. This first report has been published on the Università degli Studi website and forwarded to Arexpo before the tender.

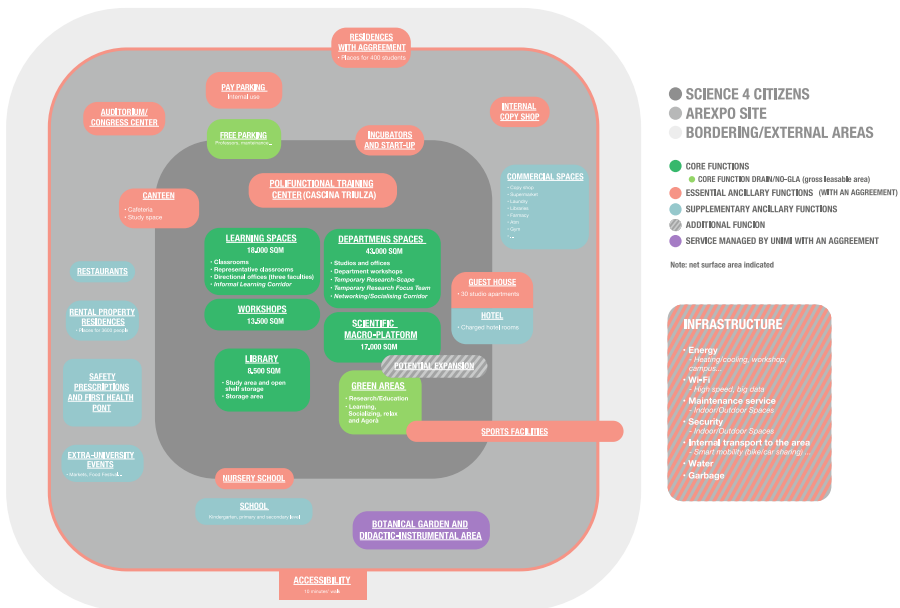


Fig. 3. The diagram of the different functions.

6.2 Students Focus Groups

Data are also collected from students. The first meeting takes place at the beginning of July 2017 (see Fig. 4).

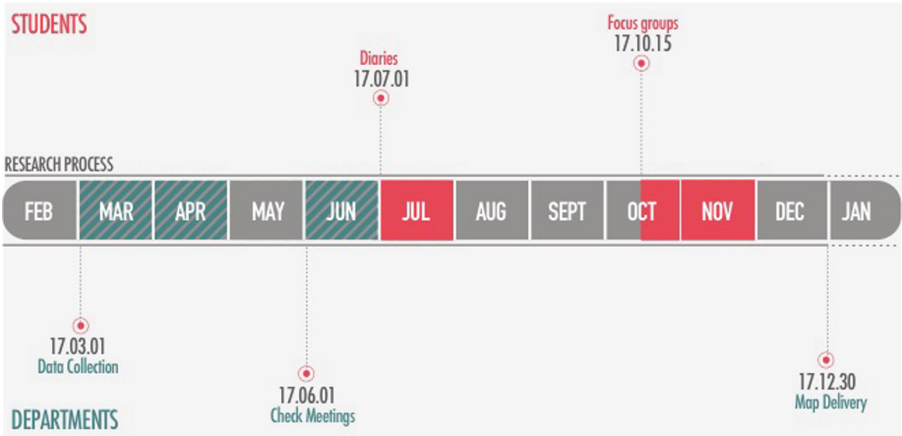


Fig. 4. Research activities timeline.

The research team and the General Manager introduce the state of the art and the objectives of the data survey to twelve faculties representatives, proposing the use of a couple of tools: a “diary” (see Fig. 5) is distributed to each of them to record activities and the relative space-use during the day, along with interviews with other students.

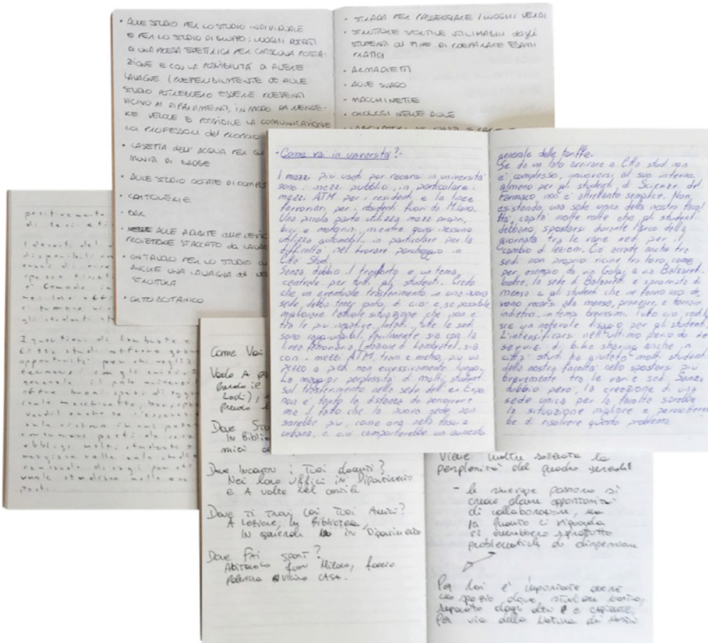


Fig. 5. Students’ diaries.

The collection of the filled notebooks takes place in the middle of October 2017, accompanied by a focus group to better understand the insights weight and hierarchy (see Fig. 6).

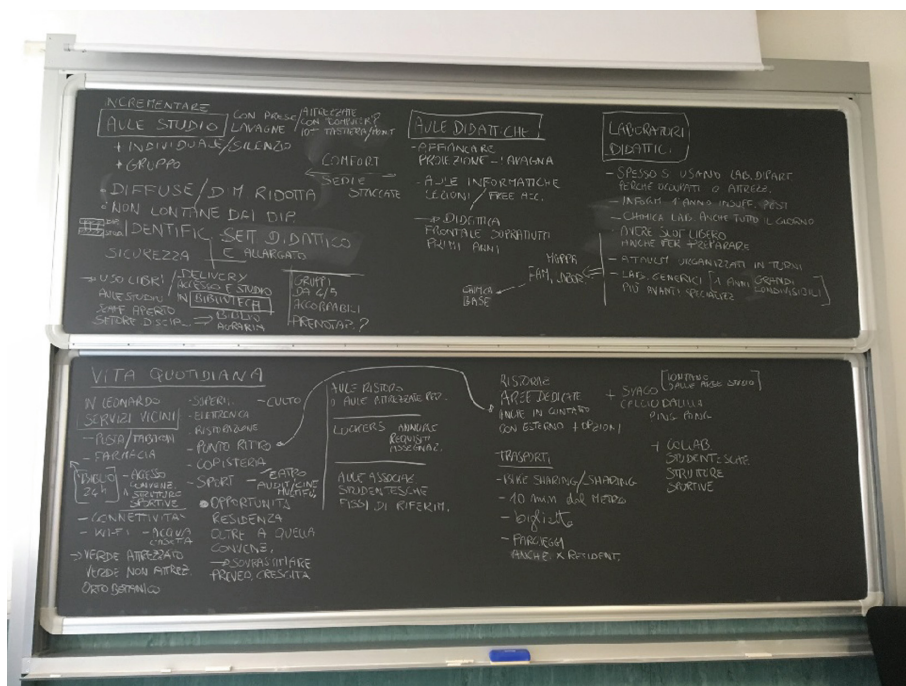


Fig. 6. Students' insights.

The second tool is a password-protected *Pinterest page* to document issues such as the lack of services or space or, on the contrary, to propose case studies or best practices. Being online, this tool has the potential of reaching out a more extensive range of students, including those who are currently studying abroad. Unfortunately, despite the expectations, this tool fails to be successful perhaps due to the requirement to sign up or the unfamiliarity of students in scientific disciplines.

6.3 Co-design Workshops with the Research Departments

The research team acts as the facilitator to stimulate a participatory process of rationalization of activities and spaces within the research laboratories in each department. The proposed design challenge at this stage is to spot any opportunity for micro-aggregations, namely the organization of shared areas and activities between related departments, or their arrangement within the macro-platform of shared infrastructures.

In March 2017 starts the data collection to design the deck of cards. Charts for quantitative data collection are at first presented to the participants during a public meeting and then forwarded by Property Management to each department delegate. After finalizing the deck of cards, the method for their use is explained to departmental directors during a meeting chaired by the Executive Team. Subsequently, a calendar of appointments is organized with working bees consisting of two or three departments with similar themes or research methods. The result of this first round of workshops is the creation of an initial draft of functions and aggregations diagram. In a second round, the departments' representatives finalize it autonomously, this time with the collaboration of colleagues from very different specializations. The purpose is to conceive a robust map of spaces and functions (see Fig. 7) more consistent with reality.

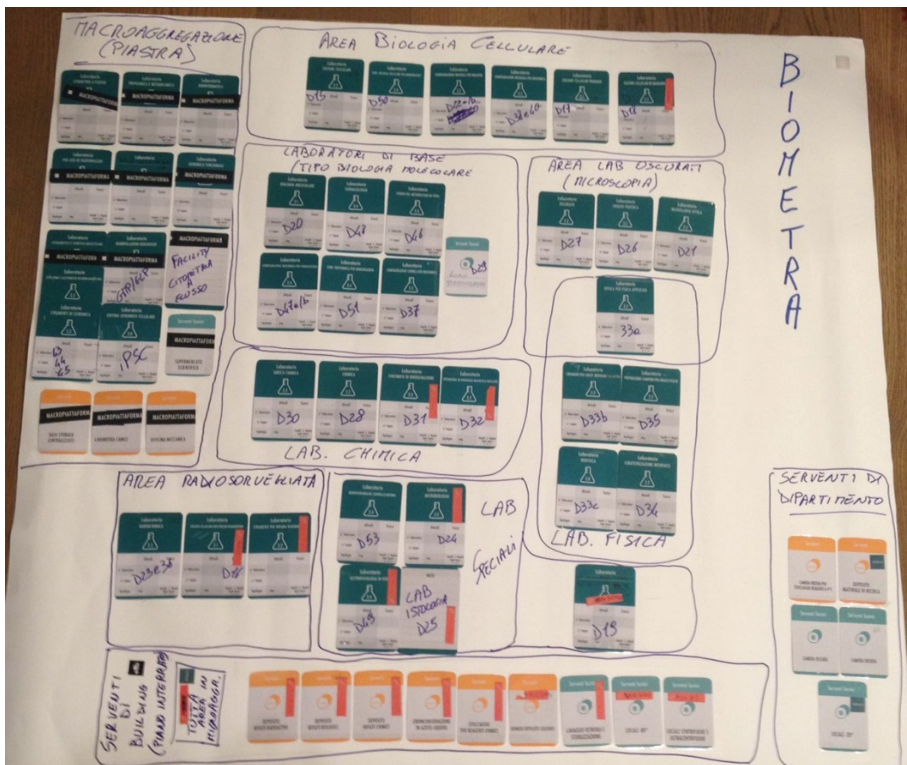


Fig. 7. Sample of a map of spaces and functions.

On this occasion, forms to collect and combine quantitative and qualitative data on surfaces, equipment, and requirements about the spaces indicated on the maps are also distributed. The overall process requires seven meetings with 14 departments throughout June 2017.

The deadline for the delivery of the refined maps is set up in September 2017. Each department forwards to the Property Management team a photo of their map, along

with the related quantitative data sheets. The research team then begins processing the visualization graphs, indicating the shared spaces or services between departments and envisaging the infrastructure macro-platform. The contents of these revised maps are verified through a new calendar of meetings with each department in November/December 2017. During a joint meeting, the general outline is eventually presented without quantitative data to highlight the qualitative value of the suggested micro and macro-aggregations.

We recall here that the original aim is to guide the campus community in a delicate process of questioning the current status and imagining collaboratively viable and desirable configurations for the future.

7 Deliverables

According to the consecutive steps of the research, and the related goals, different typologies of deliverables were produced including graphics, reports, and presentations. The primary challenge has been that of finding a trade-off between the abstractions of a meta-design brief that should leave a certain degree of freedom for further project developments, and the need to accurately define, describe and visualize the qualitative and quantitative requirements of the new campus.

7.1 Guidelines 1.0

The first report was part of a more comprehensive set of documents for the master plan tender. Therefore, its purpose is merely that of determining the main characteristics of the new campus and its surroundings. The guidelines convey data and information through different methods including texts, graphics, drawings, and pictures. The report adopts a performance-based approach and includes a general statement of the primary objectives of the new complex regarding activities and infrastructures along with a detailed requirements description at the urban and campus scale. The overall draft of the future settlement is the result of both bottom-up participatory processes and top-down decisions resulting from the present situation. The document lists and describes the primary functions of the campus and their dimensioning according to standards developed through the comparison between the current facilities and the benchmarking with similar complexes at an international scale. “Core Functions” which are strictly part of the campus (directly managed by the state university) and “Ancillary Functions” (outsourced or externally offered) distinguished in “Essential” or “Supplementary” are singled out also to highlight the diverse management frameworks and ownership.

A large number of case studies collected are classified and inserted as images to synthetically illustrate the characteristics of the different internal and external typologies of spaces required.

Moreover, being the final positioning of the campus a topic of the tender, the guidelines include the morpho-typological exploration of three different arrangements within the Expo site (see Fig. 8) to evaluate the related planning indexes and the core

functions areas. This section of the document is delivered with the aid of an external architectural firm as a consultant.

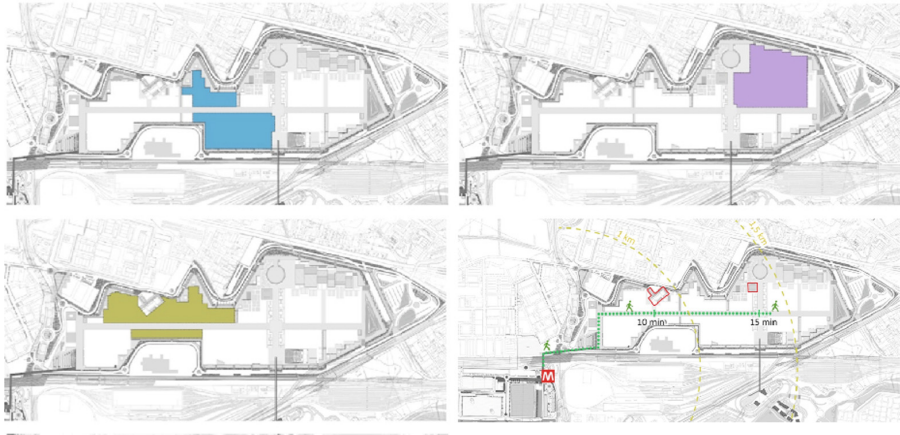


Fig. 8. The morpho-typological exploration of three different arrangements within the Expo site

As a result of the participatory process, a more thorough description of specific research facilities is added as attachments to the report, edited by the staff representatives.

Finally, a diagram (see Fig. 3) shows the different levels of correlation between the campus and the urban context regarding accessibility, integration, and proximity.

Concentric areas around a central polarity with the Core Functions of the campus hub appear distinctly in the chart. Proceeding outwardly, the Essential Ancillary Functions are not directly related to the campus' mission but are of great importance to the functionality and sustainability of the project. Finally, Supplementary Ancillary Functions allow the completion of the primary infrastructure, whose development depends on the generated benefit and the neighborhood dynamism. The diagram is integrated with quantitative information about spaces and users, retrieved from sector-specific studies and survey data on existing and required size. Essential Ancillary Functions (e.g. dining, residences, etc.) and Supplementary Ancillary Functions (e.g. catering, shopping malls, etc.) can be located either within the campus buildings, or within the EXPO 2015 area or in the neighbourhood, favouring the concept of an urban integrated campus that guarantees the site permeability and the multi-functionality of the complex.

7.2 Guidelines 2.0

The second report contains the breakdown and analysis of the Core Functions, to be used for the concept design of the complex, once the contract will be awarded and the campus site defined. The guidelines, still under development, include information on the spaces for education and research, particularly stressing on the primary goal of

flexibility required from a rapidly changing environment. In particular, the research facilities are extensively addressed through the gathering and organization of the results of the participatory process.

The main challenge of the document is to link and translate the language, activities, behaviors, and even idiosyncrasies of the scientific community into a synthetic architectural brief addressed to the architects. Diagrams provide a communication device understandable both by the participants particularly eager to check their desiderata and by the architects in need of synthesis and an information selection.

Single diagrams (see Fig. 9), one for each Department, show the lists of labs and related ancillary spaces. Highlighted are the shared facilities used simultaneously with other departments. Hatched areas signal the possible positioning on underground levels with neither direct natural light nor ventilation. Colored dots identify the typologies of spaces according to structural and services requirements. Finally, the department’s activities located in the shared research facility, which hosts cutting-edge equipment and instruments, are detailed.

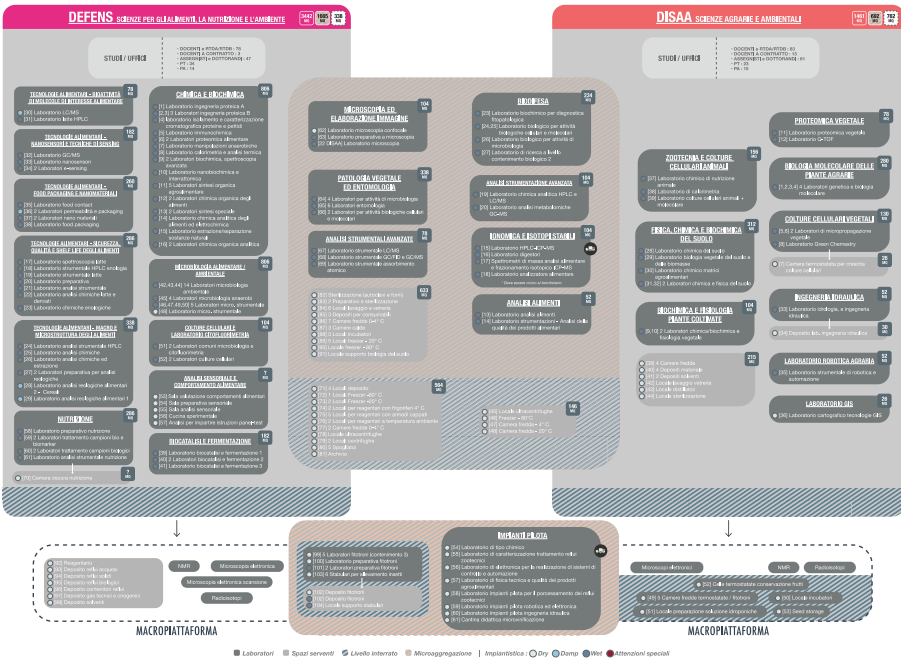


Fig. 9. Sample of two departments that share facilities (Color figure online)

A summary diagram shows the proximity relationships between departments suitable for sharing space. A different set of charts has also been developed for the breakdown and analysis of an advanced research platform, which includes completely different areas and facilities.

Finally, the guidelines include tables to classify and quantify the different research spaces according to construction characteristics. No subdivision among the departments is shown to allow for the maximum flexibility considering the time gap between the construction phase and possible future changes. Consequently, the approach pinpoints the goal of a “loose-fit” architecture [11], able to accommodate future reorganization of the layout with a reduced amount of work, energy, and resources, thus pursuing environmental and economic sustainability objectives.

8 Research Impact and Recommendations

To measure the effect of the transition to a new campus, we provide some figures about the demographics affected.

On average, about 12,000–13,000 people per day are present on campus, with a reduction during the summer break, particularly evident in August. The group includes teaching staff, administrative, technical staff, students, research fellows and doctoral candidates, maintenance staff, and external visitors (researchers, teachers from other universities, attendants of conferences, meetings, recruitment procedures, etc.).

The current average number of students per month is 11,000 (excluding August), and the average number of staff from Monday to Friday is 80% of the total number of employees (July - 40%, August - 80%).

A trends analysis of enrolments, associated with the placement data of the various disciplinary areas, suggests an increase of between 10 and 15% in the number of enrolments due to the higher attractiveness of a new campus. Therefore, the estimated student population can rise to 20,000.

Given the massive impact of the campus move, we include some recommendations to the primary stakeholders of the new campus project based on the insights that the Politecnico team has gained over these months of data collection, analysis, and development of the meta-design briefing.

The new campus can be an opportunity to conceive a new urban organism [12] local and global, physical and virtual, able to use resources efficiently and regenerate the surroundings thanks to some essential characteristics.

The Flexibility of Spaces (Short, Medium and Long-Term). Current innovation trends in teaching, research and work organization in general, as well as the always changing needs of the university, make it necessary to adopt design criteria that are highly flexible from several points of view:

- “Structure.” It should be considered choosing and setting up a structural grid suitable for different uses (e.g. for vast educational spaces, laboratories, and studios).
- “Construction.” Technical equipment must be inspectable, easily expandable and integrable through advanced initial predispositions and scalable spaces. Mobile walls and staircases, demountable and modular counter-walls and false-ceilings, mobile lighting systems, etc. should make space always reconfigurable.
- “Distribution and space.” The adoption of suitable plots shapes and depths should allow the variation of spatial configurations, both as departments’ extensions and as

a functional destination. The different types of spaces should be reversible both in the short term (e.g., switching from a dining space to a study space at certain times of the day) and in the long term (e.g., from workshops to studios or vice versa in different months or semesters). Over time, volumetric expansions should be feasible to accommodate future needs.

Hybridization of Functions. The styles of production and access to knowledge are constantly evolving under the influence of technological innovation and the possibility of creating “intelligent” assets thanks to the Internet of Things [13]. The campus is no longer only a place of production and access to knowledge, but also a place for meeting, individual and group study, participation in continuous training courses, cultural and sporting events, exhibitions, etc. For some out-of-home students and teachers is even the place of residence. This hybridization is reflected in the space organization and the composition of a varied schedule of around-the-clock activities, which minimize the under-use of assets.

Accessibility. If the management model is that of a functional economy, then it is necessary to map all campus functions and assign a rating relative to the degree of accessibility according to different user profiles, different activity calendars, and forms of payment.

Sustainability. Maintaining a common over time requires the adoption of a sustainable management model, which is by definition complex and multifactorial. A robust framework is not limited to ensuring the economic and technological sustainability of the campus but also includes the environmental and social sustainability. The window of opportunity is already limited, as the restoration of natural resources of the planet occurs at a much slower rate than their current consumption [14].

A Place of Collective Design. A campus is by definition the place of multidisciplinary knowledge. If the future of research and teaching is oriented towards interdisciplinary interaction increasingly precocious and pervasive, then the campus can be an excellent collaborative platform complemented by the proper infrastructure: the scientific macro-platform, the library, gardens, and greenhouses, etc. The management model of the collaborative platform aims to leverage the different competencies within the university to respond to the opportunities of research as they arise.

Recommendation #2 Addressed to the Management Team. New PSS models are always radical innovations, which generally fail if exposed unprotected to the mainstream dynamics. Therefore, it is crucial to let those experiments develop and mature inside intentional niche that can function as ‘incubation pods’ providing the required environmental condition: e.g., the presence of dedicated strategic investments, etc. The pod is a ring-fenced environment where all relevant stakeholders can participate to a process of social learning not limited to the technical aspects but also including new practices and culture, innovative policies and regulations, financial instruments, and legal bodies.

The scaling up process happens according to a constant pattern: at the early stage this social learning effort is erratic and scattered in many directions: trial-and-error attempts are subject to a great deal of uncertainty about design, and this often leads to

dead-end paths. Repeated experimentation and interactions between the niche actors, often under the tutoring of experienced ‘social heroes’ [15], may result into the establishment of a broader community of actors who exchange experience and failures, methods, tools, and best practices.

Gradually, radical innovations percolate into a dominant design gaining momentum and taking advantage of unique opportunity windows. Once the change breaks through into the mainstream ways of doing, the existing regime is seriously threatened, and the new scheme may lead to broader landscape developments [3].

Recommendation #3 Addressed to Teachers, Researchers, and Students. The demographic population directly involved in the transition to the new campus is ultimately the collective subject that can determine its outcome.

The decision to participate in co-design activities, initially perceived by some attendants as a childish game, and the following collaborative development of the meta-requisites of the new campus has paved the way for a new attitude and posture to research and collaboration.

Considering that the participants did not have a background in Design, being all academic from scientific disciplines, it is remarkable the prompt adoption of the proposed methods and tools to make the conversation meaningful, clear of misunderstandings, possible hidden agendas, and even rivalries.

The open discussion and rethinking of the research methods and practices led to the establishment of new partnerships and activities that can take advantage of the equipment’s concentration in a macro-platform characterized by highly specialized areas.

It is recommended that this new mindset be maintained in the future, not only during the construction phase of the new campus but also during the relocation and final settlement.

“Living in and through transitional times calls for self-reflection and new ways of ‘being’ in the world. Fundamental change is often the result of a shift in mindset or worldview that leads to different ways of interacting with others. Our individual and collective mindsets represent the beliefs, values, assumptions, and expectations formed by our individual experiences, cultural norms, religious and spiritual beliefs and the socioeconomic and political paradigms to which we subscribe [16].

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