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DOMESTIC DEVICES

**HOW INTERIOR ARCHITECTURE
AND DESIGN REACT TO
THE CONTEMPORARY SCENARIO**

Habitat as a Service

From Bespoke to Custom Interiors

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Abstract

The article discusses the transformation of the Italian domestic environments in the wake of the Covid-19 pandemic and the impact of digital technology. It highlights two key trends: the hybridization of domestic spaces due to remote work, study, training, and socialising facilitated by digital tools, and the increasingly dynamic lifestyles of young people, particularly millennials and Generation Z, who tend to live in rented spaces and embrace remote work. It is then arguable that the identitarian value of domestic spaces is changing, as physical objects and furniture become more interchangeable due to the fast-paced and unpredictable lives of young individuals. This shift must prompt a discussion about how interior design is adapting to such sociological changes. Various options are available for designers to create value through sharing and renting services, drawing inspiration from similar models in the office furniture sector.

The primary aim of the paper is to present novel scenarios for the design of domestic spaces, as the servitization of business models offers opportunities to reconsider how products and furniture are acquired and used, particularly as more adults don't own the homes they live in and frequently change residences. Renting is proposed as an effective model for creating more agile and customizable spaces that align with contemporary lifestyle preferences.

1. (Con)temporary Living Habits

Data show how millennials and generation Z tend to have less static lifestyles than previous generations (Abruzzo, 2022). This leads to greater uncertainty and unpredictability in life choices, resulting in more changes of residence over one's lifetime. In fact, disruptive phenomena such as hybrid and full remote work are gaining momentum among younger generations, and *job hopping* (literally jumping from one job to another) is spreading from the U.S. to Italy as a popular choice to secure higher salaries and a workplace with a better life-work balance (Agenzia ANSA, 2023). In particular, a recent report (Carli, 2023) shows how youngsters are increasingly willing to look for a job far from home (more than 70% would move within Italy, 69% would also move to another European country).

A direct consequence of these phenomena is that several households (especially composed of young adults) spend many years in houses for rent, and they change it quite often. Buonomo and Gabrielli (2016) highlight how the age profile of mobility peaks at 25-34 years old and that - although Italians seem to be less prone to change address than other European countries (Sanchez & Andrews, 2011) - 1,313,176 changes of residence occurred in 2014 in Italy, +18,3% compared to 1995. In 2021 (Istat, 2022), 5,2 million Italian households live in rented housing and 2,2 million have the dwelling in usufruct or freehold. Correspondingly, there are 42,7 million (72,5%) individuals living in owned houses, 11,8 million (20%) live in rented housing, and 4,4 million (7,6%) have the dwelling in usufruct or free use. Living in rented housing are the most re-

cently established households, 47,8 % of single people under 35 years of age and 39,9% of young couples without children (when the woman is under 35 years of age). High percentages are also observed among single people aged 35-64 (33,2%), single-parent families with minor children (30,8%), and those with at least three minors (33,7%).

Lastly, it has to be considered that a data gap exists with regard to people that spend a determined period of time (to study, work, or other reasons) in rental apartments without changing their residence address (Istat, 2022b): quantifying this population has historically been one of the information gaps to be filled in statistics, especially in attractive, university, and business-oriented cities.

A deeper and more intertwined relationship with technology also shapes the domestic environment of digital natives in a different way than their predecessors. The lockdown experience in 2020 accelerated the need to upgrade and enhance technological amenities, with internet connectivity being considered a vital and indispensable component for a satisfactory quality of life. For example, according to a 2019 report (European Commission) Italy lagged behind the European average in terms of smart homes (i.e. convenient domestic set-ups where different devices are remotely controlled through Internet connection) before the Covid-19 pandemic. Italy had 6 smart devices for every 10 households, while the United Kingdom had 18, Germany had 16, and France had 12 for every 10 households. However, more recent research from the Internet of Things Observatory at the School of Management of Politecnico di Milano (2023) indicates that the Italian mar-

ket witnessed significant growth in 2022, with a remarkable increase of 18% compared to the previous year; this growth rate actually surpassed that of other European countries.

The article aims to explore the relationship between these trends and the evolution of interior design choices for domestic spaces, and in which form this practice is adapting to recent sociological changes. To achieve these objectives, we move from a theoretical discussion to an overview of servitization cases within the practice of interior design, that ultimately brings us to define a four step model for the design of such services, and to discuss the social and environmental value of the latter.

2. Adaptive Domestic Spaces

As a mirror of life itself (Benjamin, 2004), the design of interiors is constantly evolving according to economic, social, cultural, and technological changes. In recent years, being such changes quicker and more and more disruptive, a strong reconsideration of the common conceptualisation of the interior is taking place among researchers and practitioners. In particular, the interior as a static element strongly tied to its architectural keeper is leaving room to a greater focus on the user of the space, on his/her individual perception, including the emotional and psychological levels (Marlor, 2021). To understand this, it is useful to refer to Sparke's taxonomy (Sparke, 2010) of the three main contexts which impact the contemporary design of interior spaces, i.e. *space* (emphasis on architectural and design modernism), *place* (priority to the relationship between the interior and its inhabitant), and *taste* (focus on

decorative arts and aesthetics). Novel ways to view and design the interior tend to put the ever-changing characteristics of its user at the centre of the project, rather than prioritise spatially oriented or taste based approaches, which have been historically associated with modernist authors of the 20th century. Established architects such as Carlo Scarpa and Umberto Riva would design every part of an interior, making even the smallest detail a part of a bespoke standalone project.

Recently the interior space is being described as a stage on which the events of the user's life play out, resulting in spaces that are more open and neutral, to allow a flux between rather different functions. In fact, the spatial needs of people within the domestic environment have widely changed and become more complex, as digital tools have created new opportunities to work, socialise, exercise, study without leaving the home. As effectively explained by Lucy Marlor (2021), the domestic interior therefore needs to be designed as an open platform for inhabitation. The interior of a person's home has been described as the spatial projection of the self (Todd & Mortimer, 1929), or the material manifestation of the inhabitant spatial practice (Atmodiwirjo & Yatmo, 2018). The sense of home and interiority (Pimlott, 2018) is pivotal to the inner life of humans, so much so that anyone, regardless of their socio-economic status, chooses furnishing, artefacts, and decorative elements in order to turn their interior space into a *place*, a backdrop to their sense of self that allows to experience the quality of living (Nabil & Kirk, 2019). The concept of the interior as a backdrop has strengthened as a consequence of the Covid-19 outbreak, due to the necessity to conduct social and

work activities in virtual meeting spaces, where every participant would bring not only their physical appearance (reduced to the area of the face and torso) but also a suggestion of style, interests, culture, and family in a single frame, showing a portion of their intimate space (Marlor, 2021).

The push towards user centred interior design is also enhanced by digital technology as a means to multiply the capabilities of the space to adapt to the uniqueness of its inhabitants. Interactive artefacts such as furniture and accessories (window shutters, curtains, lights, vocal assistants, vacuum cleaner robots, frames, televisions) can passively or actively modify their behaviour and/or appearance to make the environment more comfortable and personalised according to the user needs (Nabil & Kirk, 2019). The vacuum cleaner robot learns the path between the furniture of the house it is placed in, and starts cleaning in moments of the day that are convenient to the occupant; the smart lights turn on when the sun sets in that specific location, and change their hue and intensity not to bother the eyes of the occupant while he/she is reading or watching a movie; the digital frame shows smiling images of family members and friends that resonate with the inhabitant emotions. Subscriptions to services of entertainment such as Spotify and Netflix allow vocal assistants, speakers, and smart televisions to provide a personalised experience, playing the user's favourite playlists and suggesting new content with a very precise knowledge of his/her tastes and interests (Casiddu et al., 2022). All of these simple interactions, which are now quite common in the lives of most people, seamlessly and almost unknowingly concur to create

a sense of belonging and familiarity to one's interior spaces, that are, even in their immaterial characteristics, shaped around the figure of their inhabitant.

The following section will discuss how to apply these concepts to living spaces that are continuously reshaping in order to host new inhabitants, as the lives of the latter become more nomadic and unpredictable.

3. Habitat as a Service

Migration and mobility represent two of the major and most impactful challenges for urban areas. Beyond the great migratory fluxes of our contemporaneity, the phenomenon of the so-called 'Millennial Nomads' (Karam, 2019) calls for new and versatile approaches to the design of living spaces. These nomadic youngsters are described as a group of mobile citizens that change location quite often during their studies and early years of work, to pursue further formation and better job conditions. Evidently, they need to adapt to new living spaces and move their belongings. Such challenges are not trivial if we consider the effort of planning frequent removals, in terms of stress, time consumption, and money expenditure. Moving frequently influences the furnishing choices, because people may buy cheap and low-quality products, as they are meant to be temporary; others may try to reuse items purchased for different interiors to save money, and not be able to personalise the space and organise it in the most efficient setting. Similar choices have an influence both on the quality of life of the 'nomad' and on the environmental impact of items that may be dismissed too frequently.

In the context of urban and architectural studies, such challenges are approached through the practices of Mobile Architecture or Pop-up Architecture, i.e. spatial designs that don't have a permanent address and can be moved, or spaces temporarily set up for different purposes (Harris, 2015). These practices are being enhanced by the use of different kind of data (Karam, 2019), and are undergoing a process of *uberization* – a business model innovation named after the company Uber by the Cambridge dictionary, which describes how to introduce a service in the market by proposing a new way to buy or use a commodity, especially through the use of mobile technology.

More broadly, the term 'servitization' has been in use since the 1980s to indicate the process that allows combining a product to a service, and merging these categories towards a PSS (product-service system) that drives the passage from ownership to fruition (Fagnoni, 2022). Tukker (2004) highlights how business models based on this approach are more competitive and more sustainable at the same time. Following such trends, it is possible to outline a scenario of servitization of the interior, by leveraging a use-oriented PSS. Section 4 will provide an overview of international companies that are already proposing similar services on the market.

As the primary living environment of an individual, the home should contain objects with which he/she is comfortable, and adapt to changing needs during the day. In this sense, a service for interior design should propose a *custom home*, that offers the user chances to purchase the package of furniture necessary, plus technological items to connect personal ac-

counts that, as mentioned above, create a condition of familiarity without physically intervening on the space. Such service may function with two different models according to the needs of the user: a DIY model leaves the autonomy of every choice to the expert person that wishes to select his/her own items according to personal taste; an all included model instead offers a pre organised kit, based on preferences and parameters requested by the user in an assisted process. The two models can coexist and be mixed, as design consultants are available for suggestions, and the basic kits can be edited by the users for special needs and choices.

To design the kits and define the offer of different pieces of furniture, companies and designers need to be aware of the target group that requires the setting: the primary targets are young nomads (students or workers) who do not intend to settle down in a place for an extended period of time; other possible users may also include families that move for work reasons, or even residents who are interested in renovating their furnishing quite often according to changing taste and needs, without the burden to buy. A home furnished with rented items, same as a regular one, should satisfy three basic needs (fulfilment of basic functions, self-esteem and status, wellbeing), plus integrate technological assets that function as touchpoints to use digital subscription services.

Finally ancillary services may be introduced to facilitate the user. Shipping, on-site assembly and pickup at the end of the rental period may be included in the offering, as well as the ability to periodically upgrade furniture at discounted prices, or replace damaged products.

4. Servitization Applied to Interior Design

This section offers an overview of recent case studies of servitization of domestic interiors in Italy and beyond. Different companies approach such a challenge in different ways, but all describe their services as more sustainable and coherent with circularity principles, in an effort to reduce the impact of the sector by enhancing chances of reuse, repair, and recycle of furniture. There are options to rent a piece of furniture or even single parts of it, to purchase move-in ready packages for periodic living needs (i.e. students, digital nomads, military), and for property owners to fully rent furnishings for apartments that they intend to lease.

4.1. Modular Furniture as Service: A Lott of Space

Currently available and locally produced in the Netherlands, the A Lott of Space¹ modular sofa system features modules with a straightforward frame and upholstered cushions that offer adaptability through various configurations, while maintaining rigorous sustainability standards in the choice of materials and possibility to remove, repair, or replace every single component.

The company fully commits to circular principles, and has thus developed an innovative and flexible service that enhances the adaptability and lifespan of the sofa: customers have an account on A Lott of Space website and can modify their home setting any time by purchasing new modules or sending back old ones that no longer fit their environment or needs. At the moment, a system of re-selling is also active, where the com-

1 A Lott of Space. De Sofa die met je mee groeit. <https://alottospace.nl/>

pany buys back the entire sofa from the customer that wishes to get rid of it; however, a subscription plan to the sofa is to be launched soon, as an alternative to regular purchase.

4.2. Furniture Rental: Ikea Flex

Italy is the first (and currently only) country in which the pilot project Ikea Flex² is active, offering the option to rent office furniture in a few selected shops (in Bologna, Milan and Rome) with the support of a consultant that follows customers in the design, delivery, assembly, and maintenance process of their workspace. Such a solution is particularly attractive to newborn and small companies or independent professionals that tend to embrace versatile and fast changing work approaches. Employees may spend a part of their working hours at home and need a domestic office – that can also be rented – while actual offices may be temporary and require smaller investments. A single workstation costs less than 30 euros per month; rental also allows companies to benefit from very extensive tax deductions. In the Netherlands, on the other hand, Ikea has partnered with the independent company Move & Rent to offer monthly rental services of complete room packages for the bedroom, living room, dining room, student room or workspace.

4.3. Move-In Ready Packages: CORT

CORT³ is a U.S. based company that offers a fully customer-centric furniture rental process for people that need to

2 Ikea FLEX: Servizio di noleggio mobili per la tua attività. <https://www.ikea.com/it/it/ikea-business/ikea-flex-servizio-in-abbonamento-per-larredo-del-tuo-ufficio-pub96f724d0>

3 CORT Furniture Rental. Subscribe to furniture on your terms. <https://www.cort.com/furniture-rental>

move for a determined period of time within the nation or worldwide. The process starts by specifying the new ZIP code and desired rental duration, with longer leases offering more favourable pricing; the lease period is flexible and can be renewed on a month-to-month basis without fee increases. Customers then have the option to select individual furniture pieces or acquire the services of in-house designers that curate the selection to match the client's style and budget. Specific move-in ready packages are also available with different price ranges and quality (base packages include pieces for the living room, the bedroom and the dining room) and they can be purchased without changes or after a personal customization. Finally, a delivery team brings the furniture to the requested location and assembles it. CORT catalogue offers all sorts of items including kitchenware, linens and pillows, TVs, patio furniture, accent furniture, home decor and more.

4.4. Build to Rent: Milano Contract District

Contract District Group⁴ is an Italian service conceived in response to the growing number of investors interested in purchasing properties for rental purposes, coupled with the increasing preference among families and individuals for rental solutions over outright ownership. Property owners can opt to fully rent furnishings during the purchase process, significantly reducing the upfront costs typically associated with initiating a lease. The monthly rental fee is determined based on rental income projections or the tenant's availability and preferences. Furthermore, Contract District Group en-

4 Milano Contract District. Real Estate + Design. <https://contract-district.com/>

sure the comprehensive or partial replacement of furnishings at the end of their lifecycle or for interior refurbishments. This initiative enables consumers to introduce iconic pieces from Italian and international companies into their homes, with rental terms ranging from 48 to 96 months, mirroring typical residential lease agreements. The addition of a digital application allows consumers to manage various aspects of the product and rental with a simple click, eliminating phone calls and paper-based document exchanges. Contract District Group thus addresses the changing needs of contemporary living by placing the consumer at the centre, offering the flexibility to adapt to changing needs, tastes, and habits without resulting in resource wastage. This approach eliminates capital immobilisation and amortises the investment, with the total of included service fees (transport, installation, maintenance, and retrieval of goods) never exceeding the list price of the rented merchandise.

5. From Bespoke to Custom Interiors

An egocentric and intellectual perspective of the role of architects and designers in the conception of modern space often leads to a disconnect between the project and the actual use that people make of an interior (Lefebvre, 1974). This thought becomes even more urgent when domestic interiors are to be designed with the knowledge that the inhabitants of such space will potentially change often, requiring a very flexible and adaptive setting. In this sense, the job of the contemporary interior designer is radically different from that of the modernist architect: there is a shift that moves the discipline away from a bespoke project where every element and de-

tail is uniquely designed and produced for a specific space, following a comprehensive vision of the architect/designer. Nowadays, the interior designer works at the intersection of changing lifestyles and new technological opportunities, and has to take upon the challenge of customising the domestic space on the dynamic and complex needs of its users. A change in the use of domestic space must result in a change in the process of designing it.

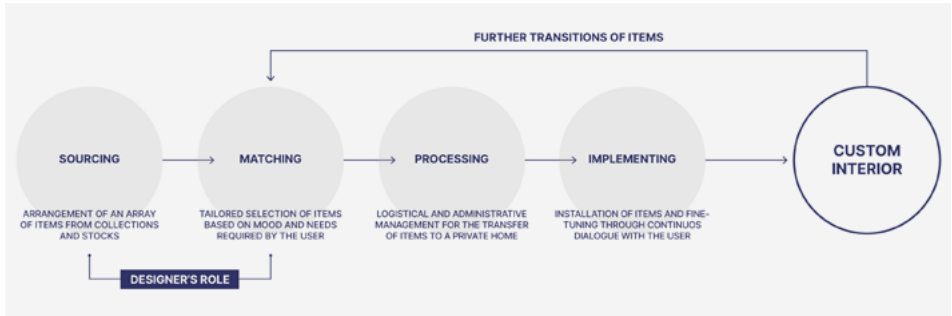


Figure 1. A four steps model for the servitization of the interior design process (credits: A. Vacanti, 2023).

The servitization of the design activity leads to the management of a holistic process rather than the design and crafting of a unique bespoke solution. Such process can be summarised in four consequent phases (Fig.1): *sourcing*, as the selection and arrangement of a vast array of items from collections and manufacturer/retailer stocks (this very step underscores the shift towards access over ownership); *matching*, as the selection of furniture items for the mood and needs required, defining possible correct matches with the space to be populated (in this context, choosing an item is a deliberate and tailored choice of the designer); *processing*, as the various administrative, logistical, and organisational steps that can

govern the effective transfer of items to private homes (logistical efficiency is critical in delivering a seamless experience to users); *implementing*, as the fine-tuning of the model, the installation process and the definition of effective communication with the user. A correct flux in the fruition of the service aims to ensure that the transition from one item to another is not only efficient but also enriching, providing users with a sense of continuity and familiarity in their ever-changing living spaces.

Finally, it is not of secondary importance to highlight how this approach supports the transition from a linear *take-make-waste* economy to a circular economy (Rau & Oberhuber, 2022). By selling access over ownership, furniture items (and/or the raw materials they are made of) do not end up as waste but continue circulating within the economic system. These positive returns, however, are not completely inherent in the servitization process, but also require a priori planning, which involves designing and selecting furniture that can be either easily recovered or quickly dismantled, so that materials can be reused. In addition, the logistics of delivery and pickup from private homes can cause considerable impact, which must be managed and contained. Existing service models often make use of *digital passports* to facilitate the tracking and management of items and materials throughout their life cycles (Hoosain et al., 2021). These passports are essentially digital files that provide a comprehensive record of the history of an item, from detailed information about the materials' origins, characteristics, and potential for reuse or recycling, to the transfers that the item has undergone over time.

In synthesis, from *bespoke* to *custom* interiors, playing with words, sums up a critical transition in domestic interior design, affected by the servitization and the ecological transition. Bespoke stands for tailored-designed furniture, as in houses designed by great architects. Custom stands for the made-to-measure furniture chosen through a rental service, designed to be reused several times to give furniture products a longer life.

6. Conclusions

The paper has explored the evolving dynamics of contemporary living habits, to depict a scenario that supports the understanding of the change in the interior design discipline. The increased mobility of millennials and Generation Z, driven by factors like remote work and job hopping, results in a higher frequency of changing residences (Abruzzo, 2022; Buonomo & Gabrielli, 2016). The text emphasises the growing trend of renting homes and discusses the changing landscape of smart homes in Italy, strongly influenced by the lockdown event in 2020, that also enhanced the need of adaptability for spaces that have various functions, made possible by digital technologies.

A general market tendency towards the servitization of many commodities offers novel ways to address the challenge of mobility, especially among young nomads. The concept of ‘habitat as a service’ is already becoming a reality both in Italy and abroad, with several case studies developing with the aim to give a flexible and affordable response to changing living habits. Coherently with a novel awareness that acknowledges the pressing importance of developing more environmentally

sustainable practices in all areas of human activity, these pilot projects focus on reducing the impact of the furnishing sector by favouring the recycling and reuse of items.

Overall, the traditional model of owning and permanently investing in furniture and decor is being replaced by a more flexible approach that aligns with contemporary lifestyles. Today, people prioritise experiences and flexibility over ownership, whether it's in their choice of housing, furniture, or other possessions. This shift not only contributes to sustainability and reduced waste, but also offers individuals the freedom to tailor their surroundings to their evolving needs and preferences. It's a testament to the adaptability of contemporary living and the recognition that the value of an item lies not in its ownership but in its utility and contribution to enhancing the quality of life.

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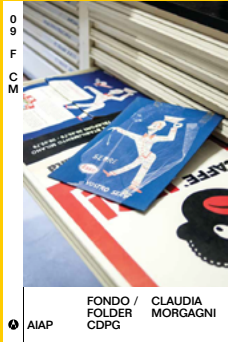
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