



The SCAAA Process: A Framework for Placemaking in the Twenty-First Century

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Abstract: The practice of human/community-centered design has been a central focus for academics, practitioners, and various stakeholders since the early 1960s; however, a disconnect still exists between commercial development processes and placemaking. This article approaches the concept of placemaking through the nomenclature of American sociologist Ray Oldenburg—referring to spaces as “first,” “second,” and “third places”—environments for living, working, and socializing, respectively. In this article, we categorize Oldenburg’s terminology as “ordinal places” (OPs) for ease of reference. The boundaries between these OPs have become increasingly tenuous over the past three decades, calling for new, innovative methods of placemaking. As a response, this article introduces the “SCAAA Process,” an integrated research, spatial development, and design process developed by the global architecture firm SCAAA. The process provides a bridge between siloed zoning processes and human-centered design; furthermore, it serves as a medium between intangible human needs and physical space, finding a way to express society’s changing preferences through operational and architectural design. In the discussion of the SCAAA Process, we posit the emergence of a hybrid second and third place in contemporary society, outline the necessary integration of artificial intelligence technology in the design and building processes, and highlight the centrality of circulation and user experience design in successful placemaking.

Keywords: Placemaking, Zoning, Third Place, Architecture, Design

Introduction

The history of placemaking, as a human-centered approach to designing public spaces, dates to the 1960s when Jacobs (1961) and Whyte (1964) introduced the concept of designing cities for people, rather than solely for commerce or transportation systems. This theory evolved over the subsequent decades to include both a larger scope of design processes and nuance in space typologies. The notion of the third place was first coined by sociologist Ray Oldenburg (1989, 14) in the 1980s to refer to a physical location where people spend time between home (first place) and work (second place). In this article, we refer to Oldenburg’s terminology as “ordinal places” (OPs).

This article introduces the “SCAAA Process”—a process of spatial program development—conceived by the global architecture and strategy consulting firm “SCAAA” (orphan initialism). SCAAA operates on a dual mandate to provide architectural design and strategy consulting services to their clients, which uniquely positions the team to address the complex framework of placemaking in modern society. As a result of years of research and experience within the development, architecture, and strategy consulting industries, SCAAA developed “The SCAAA Process” as a means to reconcile the discord between development processes and the human

experience. The process categorizes spaces by broader human functions: hybrids of the “first,” “second,” and “third” places; by conceptualizing the built environment as a series of places that fulfill certain human needs, the OP framework injects the human experience into the places we inhabit. These OPs have undergone multiple phases of fission and fusion over time to cater to a society that is in constant flux and change. However, in recent years, the three OPs have trended toward integrated, hybrid spaces. As a result, methods of placemaking need to adapt to the increased complexity of these spaces and that of the society we live in. A successfully “made place” is not one that fulfills a single program but rather one that creates synergies between programs according to use and changing needs. This article attempts to make two contributions to the field: the first is to posit the emergence of a hybrid “second” and “third” place in contemporary society (based on research from the “SCAAA Placemaking Library”). The second is to introduce the SCAAA Process as a framework for architects and placemakers to analyze and construct these hybrid OPs.

The SCAAA Process

The SCAAA Process draws from the copious history of placemaking to prioritize two main elements within architectural tectonics: *circulation* and *experience design*. This framework provides a medium between intangible human needs and physical space, finding a way to express society’s changing preferences in architectural design. The SCAAA Process is comprised of four key phases:

1. Phase 1: Preliminary Research and Analysis of “Ordinal Places”
2. Phase 2: Context and Case-Specific Analysis
3. Phase 3: Spatial Program Development
 - a. Experience Design
4. Phase 4: Drawings and Plans
5. Implementing Artificial Intelligence (AI) in the SCAAA Process
6. Limitations

Each phase of the process employs AI technology to aid the speed and accuracy of the research and analysis process (for more information, refer to “Implementing AI in the SCAAA Process” section). This article cites case studies of SCAAA’s projects (Tous les Jours [TLJ], RYSE, and Seoul Private Membership Club [SPMC]) to outline a process of building that both optimizes functional operations (general programmatic functions) and enhances the human experience of inhabiting the physical space.

Phase 1: Preliminary Research and Analysis of “Ordinal Places”

The process begins with a close study of the evolution of an “ordinal place” (first, second, third, or hybrid thereof) typology. The OP is considered a product of the social, economic, and political climate of its time; hence, this phase of the process results in the identification of the exogenous forces that are the key shapers of the OP in question.

All phase one research is archived in “SCAAA’s Placemaking Library” (SPL)—a collection of research on social trends, consumer demographics, and changing economic conditions with regard to specific OP typologies (e.g., first place: residences and hotels; second place: offices and schools; third place: recreation centers and restaurants). Each project leverages the research within SPL as a foundation for further analysis. The SPL is a “living repository” that is constantly edited and updated over time.

A plethora of projects in SCAAA’s portfolio are second and third places in the form of office buildings and commercial projects. As a result, the SPL archives contain deep analytical research on the history, contemporary state, and projected trends of the second and third places. The current research suggests that the second and third places have converged in recent years as perceptions of productivity and sociability have transformed over time to favor more balanced lifestyles and, therefore, spaces.

Third Place

The first analogues to the “third place,” where people choose to pass time between work and home, emerged as early as the mid-sixteenth century with the establishment of coffeehouses in the Ottoman Empire. The popularity of the Ottoman coffeehouses linked the birth of the “third place” to the commercialization of leisure (Karababa and Ger 2011). In the following century, this initial form of the third place made its way to England and became central to the urban fabric and identity of London. The early British coffeehouses became a space conducive to intellectual musings, political discussions, and other matters with just the entry price of a single penny (the price of a cup of coffee). As a result, the coffeehouses carried the moniker of “penny universities” and became a key agent in social life, affording men an unprecedented sociability and access to knowledge (Cowan 2005, 89). Therefore, even from its origins, the third place has exhibited characteristics of a hybrid (second and third) place; public spaces doubled as places to socialize as well as forums for epistemological development. People frequented the coffeehouse to partake in social and political discourse, and by doing so, exercised their civic obligation to advance their beliefs and those of society.

Unfortunately, the rise of private clubhouses or gentlemen’s clubs in the late 1800s brought an end to the Golden Age of coffeehouses as places of diverse intellectual discourse. The gentlemen’s clubs were privatized single-sex institutions that fostered an air of exclusivity. The first gentlemen’s club, White’s, was established circa 1736 (Bourke 1892), and others followed suit soon after (Milne-Smith 2006). Coffeehouses, like St. James’, the Cocoa-Tree, and Tom’s, transformed from semi-egalitarian spaces to completely exclusive establishments (Milne-Smith 2006). As a result, well-educated men with appropriate means and status chose to enroll in clubhouses to satisfy their cravings for intellectual discourse as opposed to coffeehouses. Thus, political discourse and social life became even further divided between the upper echelons, who congregated in clubs, and the rest of society, who were left with no equal space for discourse. Furthermore, the government’s colonial pursuits, with new trade routes to China, led to greater importations of tea, leading to a

drop in tea prices and a rise in coffee prices in the 1750s (Smith 1996). Thus, with the turn of the century, the once vivacious eighteenth-century coffeehouse had been hit by both functional and financial burdens. Although coffeehouses continued to exist, the vivacious sociability within them had been lost.

Second Place

In recent years, the merits of free discourse and informal learning spaces have been incorporated into formal work settings or “second places.” Starting as a hybrid place to perform administrative tasks/obligations in one’s home, the second place evolved to stand on its own as corporate office spaces. Prior to the Industrial Revolution of the 1900s, office spaces were commonly located in houses (Juhász, Squicciarini, and Voigtländer 2020). Therefore, the origin of the second place was in a hybrid form (first and second) where there had been little to no distinction between living and working spaces. However, there soon came a need to separate work from one’s “home” or personal life. Corporate buildings were built after the Second Industrial Revolution when electric power made it possible for work to move indoors and extended the length of the average workday (Mohajan 2019). Shortly after, “Taylorism” emerged as a widely popularized school of thought that laid the groundwork for the open plan office (Walsh 2015, 45). However, these plans took the form of factory-like grids, which managers could monitor from the comfort of their second-floor private offices. Furthermore, during this time, unhealthy work conditions were the norm, and office spaces had been designed to minimize worker mobility (Ayoko and Ashkanasy 2020).

A breakthrough in the rigid grid-like structure of the open plan office came in the post-WWII period when *Bürolandschaft*—German for “office landscape”—replaced Taylorism as the dominant philosophy and ordering principle (Walsh 2015, 45). The new layout adopted irregular geometric circulation and utilized potted plants and curved screens as dividers to celebrate an egalitarian, human-centered culture, and a collaborative environment (Caruso St John Architects and Mozas 2017). This concept carried through to the 1960s when American furniture designer Robert Propst launched “Action Office”—a flexible and colorful configuration of desks, tables, and walls, with the intent to liberate workers by enabling greater mobility, as well as privacy (Caruso St John Architects and Mozas 2017; Walsh 2015). However, economic forces and the need to maximize office space led to the redesign of Action Office; the second edition aimed to be smaller and lighter, as well as give employees more privacy. As an inadvertent result, the office cubicle was born, becoming a billion-dollar industry and a means to cram workers into small office spaces (Denny 2019). The organic, free-flowing circulation of *Bürolandschaft* was again usurped by systematic desk rows in a bid to maximize profits by lowering costs and increasing employee efficiency (Becker 1991).

However, the turn of the century saw the rise of the first coworking space, Spiral Muse, in San Francisco—a watershed moment that marked a shifting tide in work habits (Orel et al. 2022). It was an office space packed with Wi-Fi access, shared meals, flexible workspaces, and meditation sessions and massages. Soon after, the first WeWork opened its doors in New York

City. At the end of 2019, there were around 22,400 coworking spaces across the globe, reigniting the postwar philosophy of *Bürolandschaft* (Orel et al. 2022). Thus, the second place has returned to its early form as a communal space where productivity thrives in “free” environments.

Hybrid Place

Current research within SPL suggests a trend toward a hybrid second and third place, as perceptions of productivity have transformed over the years to incorporate a greater balance between work and well-being in everyday life. Since the demise of coffeehouses as “penny universities,” various forms of the third place have emerged: theaters, bars, restaurants, libraries, social clubs, recreational spaces, gyms, and so on. These third places have appeared either in close proximity to or as a part of residences/workplaces, integrating the philosophy of sociality into the fabric of everyday life (Oldenburg 1989). Furthermore, with the COVID-19 pandemic disrupting the regular operations of work and social places around the world, the ordinal “first place” has been forced back into the narrative. As more companies are adopting hybrid, work-from-home/return-to-office agendas, it is safe to expect more iterations of hybrid spaces to come. It is unclear what exact form these hybrid places will take, but they will surely attempt to optimize society’s preferences for efficiency, well-being, and balance.

In each project, the SCAAA Process conducts extensive research on how current societal preferences/needs have shaped, and are in turn shaped by, the built environment. The key findings from each project provide a foundation for future cases within similar OP typologies. For example, SCAAA discovered trends toward an integrated second and third place in the research process for Philippine Stock Exchange and implemented them in the design for BLDG BLCKS (coworking space in Seoul).

Phase 2: Context and Case-Specific Analysis

After conducting preliminary research on the OP typology, SCAAA tailors its analysis to the project’s distinct cultural or demographic context. As a global firm, SCAAA’s process operates across continents as the framework accounts for domestic nuance. Although globalization has led to the conflation of consumption patterns to a certain extent, regional markets continue to present distinct consumer preferences. These unique cultures should be reflected in the spatial configuration to ensure operational efficiency and sustainable usage of the space. To this end, the SCAAA Process foregrounds cultural context in both the research and the spatial development phases. These nuanced considerations allow SCAAA’s framework and process to achieve success on a global scale.

In addition to the cultural context, SCAAA considers macro (global, national, and industry) as well as micro (site and client specific) trends to develop unique “positioning” and value proposition for each project. All variables are unique to each project and are analyzed holistically to derive the optimal positioning strategy. The SCAAA team developed the following notation as a conceptual framework for the analysis of the process:

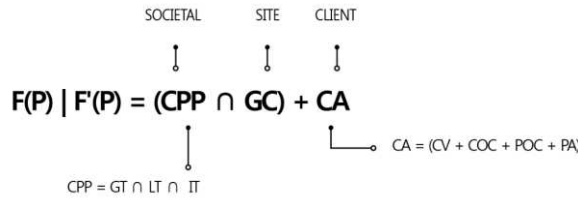


Figure 1: Positioning Notation Formula

Note: $f(P)$ = Positioning; CPP = Context Pattern Projection; GT = Global Trend; LT = Local Trend; IT = Industry Trend; GC = Given Conditions (building conditions, site conditions [local demographic population], existing attractions [low hanging fruit], political implications, symbiotic, opportunities with the site, geographic conditions); CA = Client Aspirations; CV = Client Values; COC = Current Operating Capacity; POC = Potential Operating Capacity; PA = Project Allowance

The notation denotes that positioning is derived from the intersection between context pattern projection (CPP) and the site's given condition (GC), in addition to the client's aspirations (CA). CA represents the combination of the client's values, current operating capacity, potential operating capacity, and project allowance. Furthermore, the CPP is a result of deep research of global, local, and industry trends. Further analysis (spatial development) of areas wherein the GCs of the project intersect with and fulfill consumer preferences presents an opportunity for new programs and value creation.

In total, the intersection between client (CA), societal (CPP), and site-specific (GC) factors determines the project's unique positioning.

The following case studies provide examples of positioning strategies and spatial solutions derived from the SCAAA Process. The cases detail how the SCAAA Process has applied to a breadth of Ops—TLJ (third–second hybrid), RYSE (first–second–third hybrid), and SPMC (third–second hybrid), as well as the depth of analysis (each unique solution is a result of tailored cultural, consumer demographic, and generational research).

Case Study 1: Tous les Jours

The research phase of the TLJ project required cross-continent analysis and an application of domestic context. TLJ, a bakery and café franchise, is the second largest player in the South Korean bakery market (Kim 2023). Prior to launching in the US market in 2004, the TLJ brand and its guidelines had been long established in Korea (since 1997). As the franchise was penetrating a new market, TLJ enlisted SCAAA's services to redesign the layout of TLJ Cerritos café.

SCAAA identified the essential difference between TLJ's South Korean and American consumer demographics rested in the respective perceptions of "freshness." For the Korean consumer, freshness is conveyed through clean packaging and tasteful displays. Furthermore, convenience is a key priority for Korean consumers; therefore, rational packaging (clear, minimal protective plastic) is suitable for local bakeries (Lee 2021; Agariya et al. 2012). On the other hand, American consumers perceive freshness through the production process. Research shows that, within the Western consumer market, hedonic goods (TLJ pastries) benefit from more affective and experimental presentation, as opposed to rational packaging (Mittal 1988; Batra and Ahtola 1991; Babin, Darden, and Griffin 1994; Voss, Spangenberg, and Grohmann 2003). SCAAA used

this insight to create prototypes of the café design that catered to the American consumers' distinct consumption patterns and perception of “fresh” goods.

The renovations brought the process of bread making to the forefront of the consumer experience so people could witness and viscerally feel the “freshness” of the baked goods. To create palpable freshness, the new designs optimized the view and spatial connection to the kitchen. The exposed kitchen showcases the cooking and baking activities to tickle the customer's senses and maximize the perception of freshness. Furthermore, customers can witness the step-by-step production of bread, as the goods are placed directly onto open display shelves (The Fresh Rack). As a result, the renovated kitchen enhanced the sensory experience, as well as the overall operational efficiency of the baked goods' production. After experiencing success with SCAAA's designs, TLJ's parent company reached out to retain SCAAA to redesign more branches across the United States and oversee the rollout of future cafés.

Case Study 2: RYSE Hotel

The research process for the design of the RYSE Hotel was conducted on a local scale—analyzing the vibrant character of the Hongdae arts district in Seoul, Korea. The Hongdae district has strong affiliations with Hongik University and surrounding art academies; therefore, the local demographic comprises primarily of young artists and students (Cho 2019). On the other hand, the target demographic of hotel guests is upper-middle to high-income foreigners (due to the lack of domestic travel in Seoul). Therefore, in the scope of retail opportunities, there was a need to reconcile the differences in consumer demographics (and thereby consumption patterns) between hotel guests and Hongdae locals.

As a result, retail programming was developed as a matrix to parallel the vertical and horizontal foot traffic of guests versus locals. As Hongdae has a relatively young population, affordable retail is located on the bottom floors and can be easily accessed by the public. Furthermore, the height of the retail podium corresponds to that of the neighboring buildings to retain the logic of the site and appeal to the local population. Conversely, the high-end or luxury brand retail is located on the higher floors of the hotel to cater to the circulation of hotel guests.

Case Study 3: Seoul Private Membership Club

On both a global and local scale, SCAAA pulled from the wealth of research on the ordinal third place to develop a mixed-use private membership club in Seoul, South Korea. Based on the research of historical trends, specific case studies, and government survey data, SCAAA mapped the origins of the private membership club (as a third place) from its earliest manifestations as eighteenth-century British coffeehouses to its modern form that combines a multitude of programs and functions. However, as the project was based in South Korea, a country with a drastically different postwar history from that of the United States, the private membership club needed to reflect the nation's distinct mode of socialization.

In contrast to the prosperity of the American Golden Era, post-WWII was a time of great turmoil and economic dependency for Koreans (Seth 2013). The demand for leisure and socializing was a luxury the nation could not afford until the 1960s when government-led industrialization sparked Korea's dramatic economic transformation (Kuk 1988). South Korea's economy was reborn through the success of government-assisted chaebols (family-owned conglomerates) (Kim 1991); however, the current market is experiencing a changing of the guard as a younger generation of elites has begun to make waves within the nation's burgeoning tech industry.

Due to Korea's unique history, the region's patterns of socializing are greatly distinct from that of the United States. In the research process, SCAAA identified the recreational club and the social club as the two dominant functions of modern-day private member clubs globally. Furthermore, these membership clubs often tailor their amenities and services to one of two demographics: universal (e.g., fitness/recreational clubs) or niche (e.g., social houses for creatives). SCAAA's research uncovered that the United States has a relatively balanced mix of club typologies and functions. On the other hand, in Korea, the social sphere is dominated by recreational clubs, which cater to a universal population.

To provide greater nuance to the "recreational club + universal demographic" structure, SCAAA identified trends in the changing perception of leisure within Korean society. Before the 1990s, leisure activities had been largely separated from workspaces and hours. Leisure was a sparse, yet highly anticipated, activity that acted as fuel for one's return to work (Kim 2011). By the turn of the century, a series of welfare policies in Korea sparked the inclusion of leisure into everyday life, albeit in smaller doses (Xu and Kim 2020). Data from Korean government surveys, Likert scales, and news articles reveal an increasingly blurred boundary between work and leisure, as well as the desire to save time when engaging in leisure activities. Furthermore, the data reveal the five pillars of leisure (main motivations for seeking leisure in modern society) (Pressman et al. 2009; Kim and Kim 2022; Hwang and Cho 2016; Tudor and Tudor 2013; Stebbins 2017; Hebblethwaite 2008; Valdemoros San Emeterio et al. 2022; Lenhart and Madden 2005):

- Improving physical health
- Improving mental health
- Self-development
- Fostering intergenerational family relationships
- Obtaining selected knowledge/information

Although Korean private clubs have historically adhered to the "recreation + universal target group" structure, the new wave of "elites" has shown a preference for centrally located social clubs (e.g., Tokyo American Club's Nihonbashi Location) as opposed to expansive, yet slightly distant recreational clubs (e.g., Tokyo American Club's Azabudai Location). To reconcile the diverging preferences of the "new" and "incumbent" Korean elites, SCAAA developed the concept of a "club within a club." A dual social and recreational club in one, with overlapping spatial programming.

A "CLUB IN A CLUB"

Meeting the present and future modes of leisure + socialization in Korea
(Projected need based on Domestic and International Case Studies)

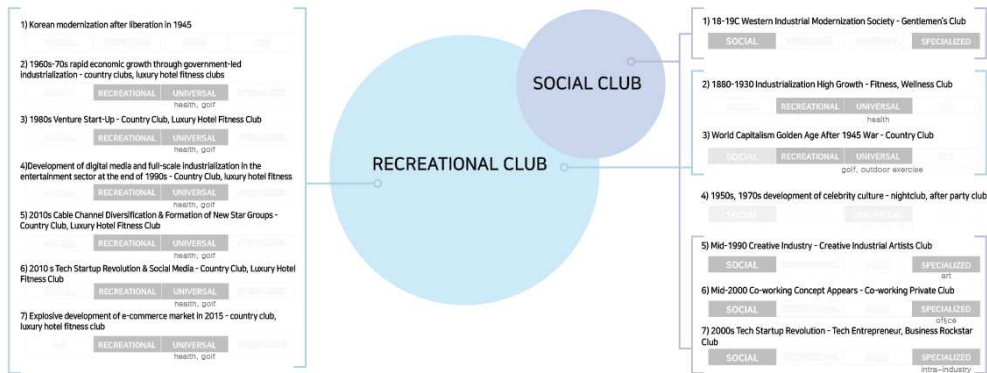


Figure 2: Club within a Club Diagram

Phase 3: Spatial Program Development

The spatial program development is the heart of the SCAAA Process; it harnesses the research from the first two phases to output, weigh, and configure spatial programming that optimizes user experience and operational efficiency. In other words, it is how the solutions derived from phase two are implemented.

The program development takes many forms—depending on the particular case or project—but always foregrounds circulation and experience design. When the two elements (circulation and experience design) come together, they work to respond to the core user and stakeholder needs (as identified in the research), ensuring the project's future sustainability.

Case Study: Seoul Private Membership Club

This phase of the SPMC project builds on the preliminary research, incorporating both quantitative and qualitative data to derive program type and map the configuration within the club. The respective program developments for the recreational club and the social club were conducted separately to cater to the distinct target demographics. Once determined, the diagrammatic spaces were brought together to develop the programming of the shared space between the clubs. For the recreational club, government data on Korean consumer preferences (publicly available) gathered from the research phase were organized by demographic. The data provided are extremely granular, distinguishing demographic preferences between a single mother with schoolchildren (6–11 years of age) and a single mother with infants (1–5 years of age). Furthermore, the data provided are specific to recreational clubs, detailing the room, activity within the room, and motivation for engaging in the activity within the room (the five pillars of leisure): physical health, mental health, self-development, family relations/gatherings, and selected knowledge/information (Figure 3).

Division	<div><div>Visiting Member</div><div>Purpose of Visiting the Club</div><div>Physical Space</div></div>	Child																											
		Infants (1-5 yrs)				School children (6-11 yrs)				Youth (12-19 yrs)				With Infant (1-5 yrs)				With School Children (6-11 yrs)				With Adolescents (12-19yrs)				With Infant (1-5 yrs)			
		Guardian is physically present and in close proximity				Guardian is physically present, but can keep watch from a distance				Guardian not necessary				Mother				Mother				Mother				Father			
		Physical Health	Mental Health	Self-Development	Family Relations/Gatherings	Selected Knowledge/Information	Physical Health	Mental Health	Self-Development	Family Relations/Gatherings	Selected Knowledge/Information	Physical Health	Mental Health	Self-Development	Family Relations/Gatherings	Selected Knowledge/Information	Physical Health	Mental Health	Self-Development	Family Relations/Gatherings	Selected Knowledge/Information	Physical Health	Mental Health	Self-Development	Family Relations/Gatherings	Selected Knowledge/Information			
Classroom	Lecture Room (Culture Center)																												
	Music Instrument Classroom																												
	Foreign Language Classroom																												
	Beverage class (wine tasting, cocktail class)																												
	Food Class (Cooking Class)																												
	Carpentry shop (Creative workshop)																												
	Study room																												
Exhibition /Culture	Cinema																												
	Gallery																												
	Library																												
	Small Theater																												
Business	Concierge																												
	Hot Desk (1 person office space)																												
	Phone Booth																												
	Printing Room																												
	Private Locker																												
	Meeting Room																												
	Conference Room																												
	Lounge																												
Sleeping Room																													

Figure 3: Snapshot of the Categories from the Data Table

The data in the table are organized by demographic and weighted by population size using the following formula:

The final value of the program = $\sum (X\text{-weighted degree of conformity to the purpose of visiting a recreation club by population } (\alpha, \beta, \gamma \dots))$

This weighting ensures that the program with the greatest projected demand among the target demographic is not only included but is also central to the spatial development of the clubhouse. In the table, programs are tallied and ranked by projected demand and then organized into program “badges.” The size of each badge corresponds to the relative consumer preferences toward the program—the larger the badge, the greater the program’s demand within the target group (Figure 4).

Recreation Club Program Relationship

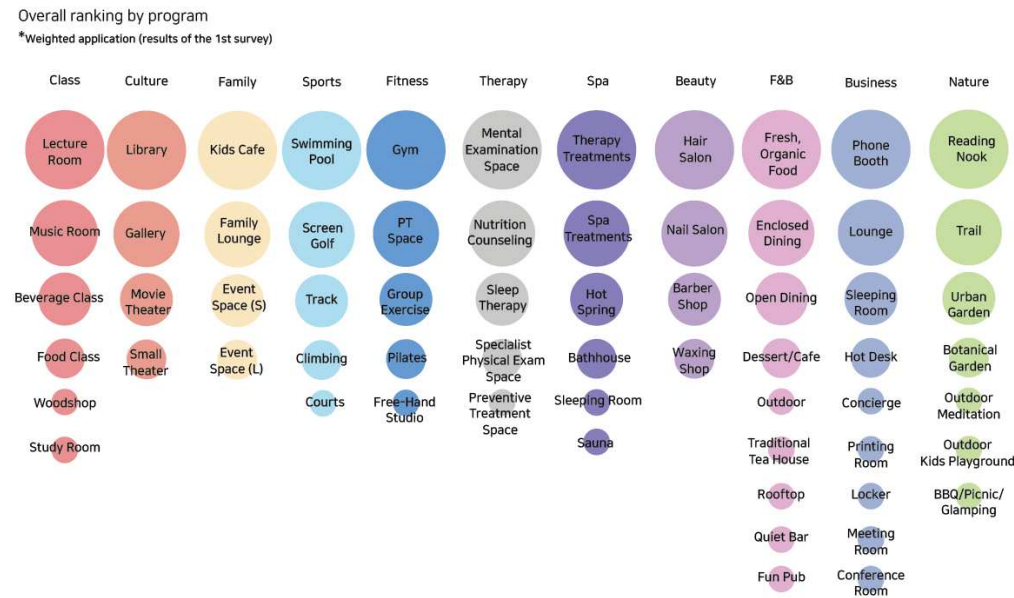


Figure 4: Program Ranking Badges

Once the program rankings are determined, they undergo a series of spatial configuration studies according to the five pillars of leisure (physical health, mental health, self-development, family relations/gatherings, and selected knowledge/information). The first step of spatial configuration is to arrange the most suitable program (highest ranking) for each pillar of leisure. Once set, the next step is to map out links from these central programs to programs of a similar nature (Figure 5). These two steps are iterated through multiple combinations and permutations of spatial arrangements, incorporating societal and niche demographic preferences to arrive at each configuration (Figure 6).

Program Ranking

① Arrange the programs within the "net" based on ranking and purpose of visiting the club

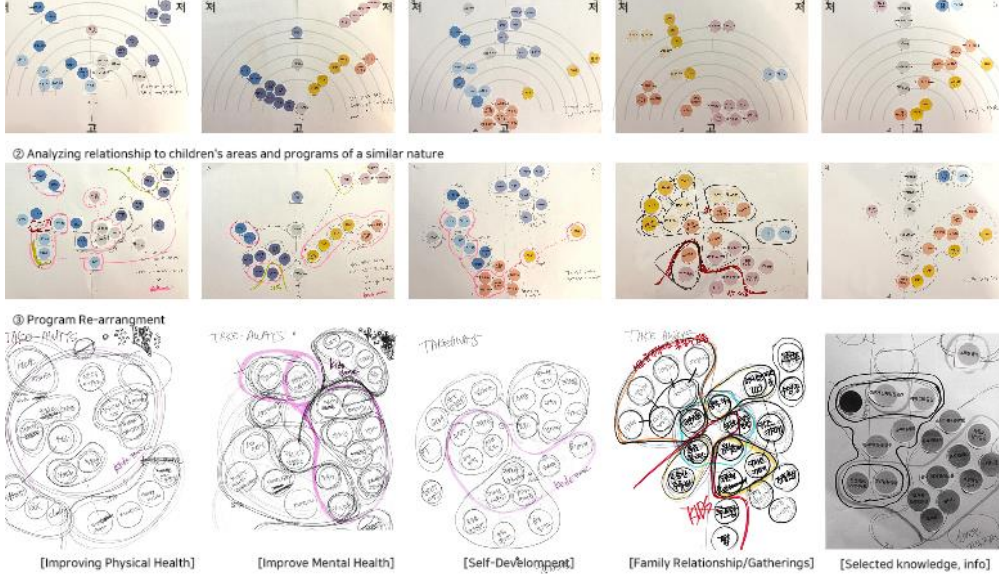


Figure 5: Initial Configuration Study

Program Placement

Integrating Leisure + Work

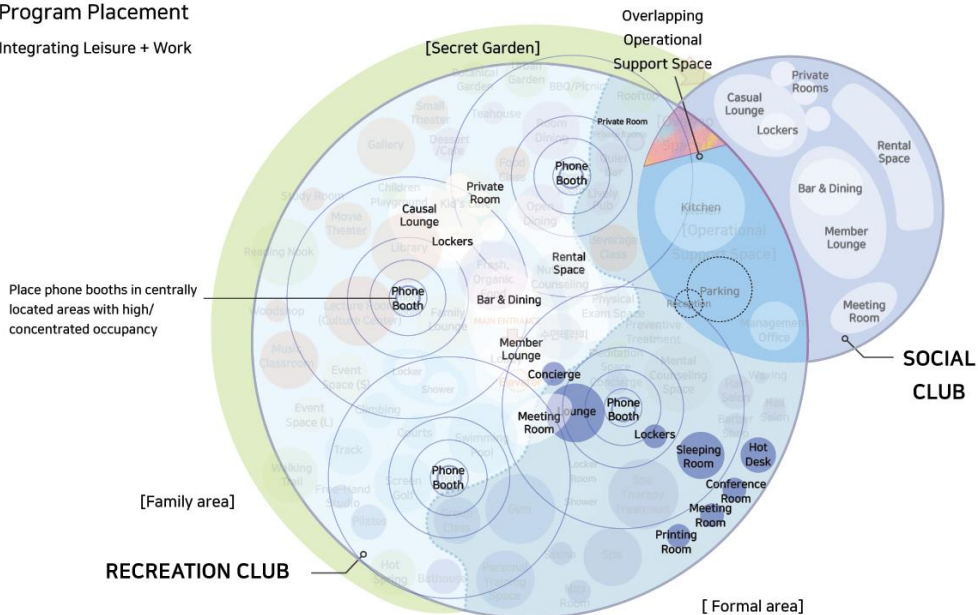


Figure 6: Central Phone Booths in Spatial Development Plan

For example, incorporating phone booths as center points of densely populated areas with distinct program types (culture, family gathering, sports, spa, business, beauty, etc.) caters to the two key societal trends: the blurred boundary between work and leisure as well as the desire to save time when engaging in leisure activities. Furthermore, circulation is

prioritized in each iteration of the spatial configuration diagram and four distinct pathways—sequential movement paths, linkages between different areas, linkages within the same areas, and connections with the external realm—are mapped between programs to optimize operational efficiency and user experience.

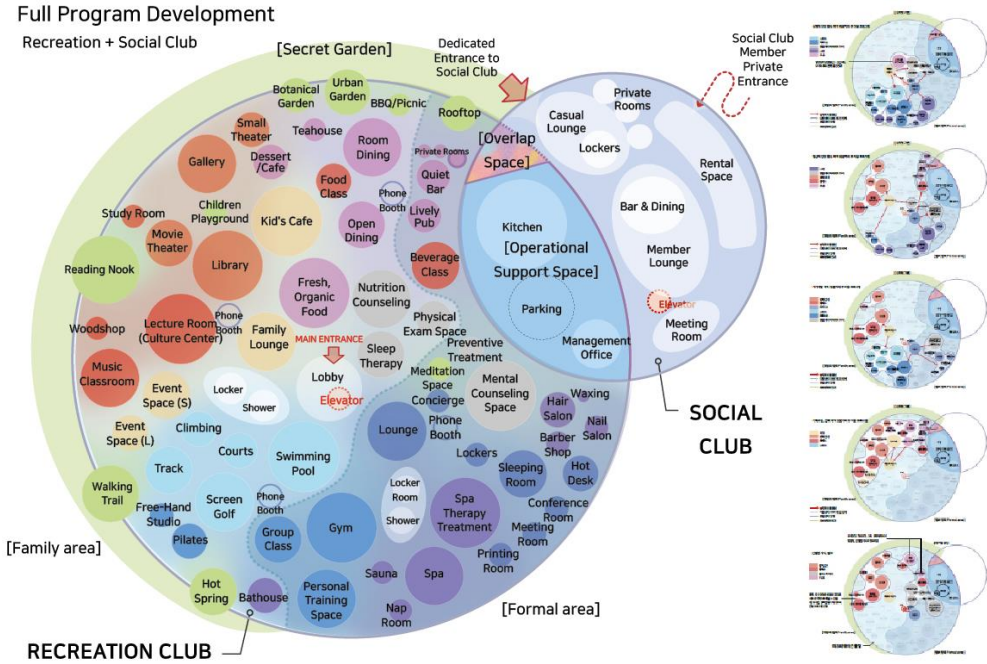


Figure 7: Iterations of Spatial Configuration

Furthermore, in this phase, SCAAA incorporates analysis of fourth spaces within the OP framework. The fourth space is where the back-of-house operation is located in the form of kitchens, parking lots, elevators, bridges, stairwells, and so on. We differentiate these areas as distinct “spaces” rather than “places” as they do not serve a holistic societal need (as the first, second, and third places do). Rather, fourth spaces exist within each OP—they are often where circulation is established and controlled. Importantly, these spaces also have the ability to generate significant revenue and serve their own commercial purpose.

By studying the fourth space’s location and proximity to the OP programming, SCAAA identifies areas of overlap and strategically eliminates redundancies. In the case of the Seoul Private Membership project, this was in the overlapping area between the recreational and social clubs (Figure 7). By providing a shared kitchen, parking lot, and management offices, the fourth space optimizes the operational efficiency and increases the profitability of development projects, particularly in the commercial space.

le Design

The experience design captures the journey between the programs and is a key signature of the process. Borrowing from the notion of the saturated phenomenon, the experience design

is rooted in interpretation theory and hermeneutics. The goal is to amplify the experience such that the whole is greater than the sum of its constituent spaces.

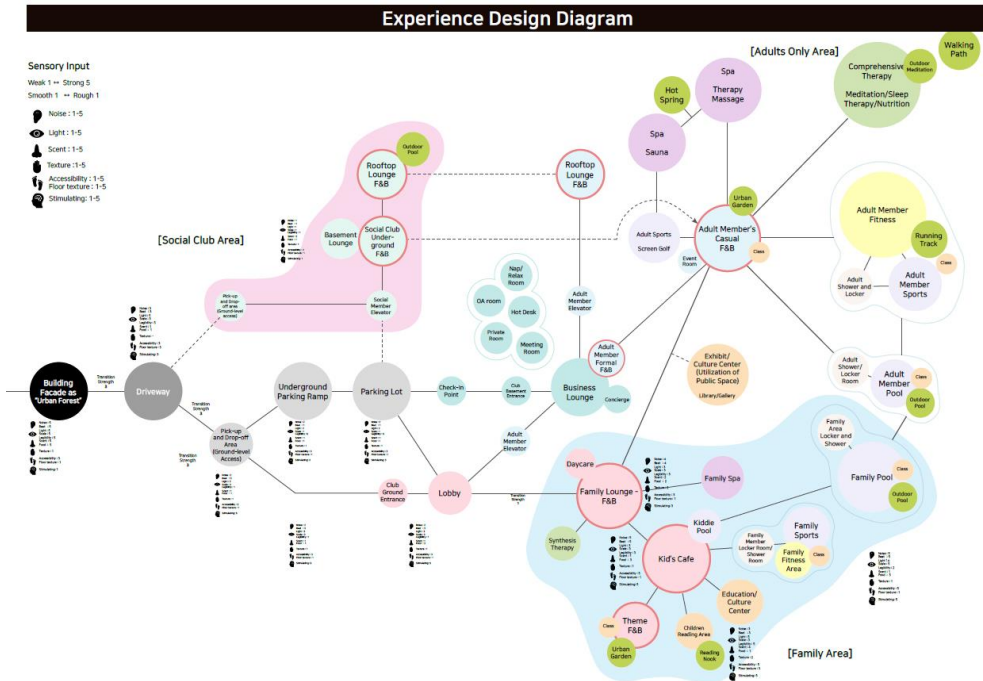


Figure 8: Seoul Private Membership Club Experience Design Diagram

Using the “Program Badge” as a foundation, the circulation between respective programs and program groupings is kept at the forefront of the plans. Between each program space, the experience design determines the strength of sensory inputs—noise, light, scent, tactile signals, floor texture, and mental stimulation—on a scale of 1–5. The inputs are modulated through light design, acoustics, materiality, and architectural form. As a sequential journey through the spaces, the effect of the inputs is amplified to provide a holistic sensorially and mentally stimulating experience.

As the size of program bubbles represents the demand for, as opposed to the physical size of, the program space, additional operational analysis is conducted (specific to each project) to determine the range of respective program areas before they are translated into architectural drawings/plans.

Phase 4: Drawings and Plans

Once the exact circulation and pathways between programs are established, SCAA drafts architectural plans and renders images to paint the user experience, responding to the client's specific needs and requests throughout the process. The drawings give exact form and dimensions to the programs developed in the previous phase; thus, circulation and user experience continue to be the main pillars of the plans.

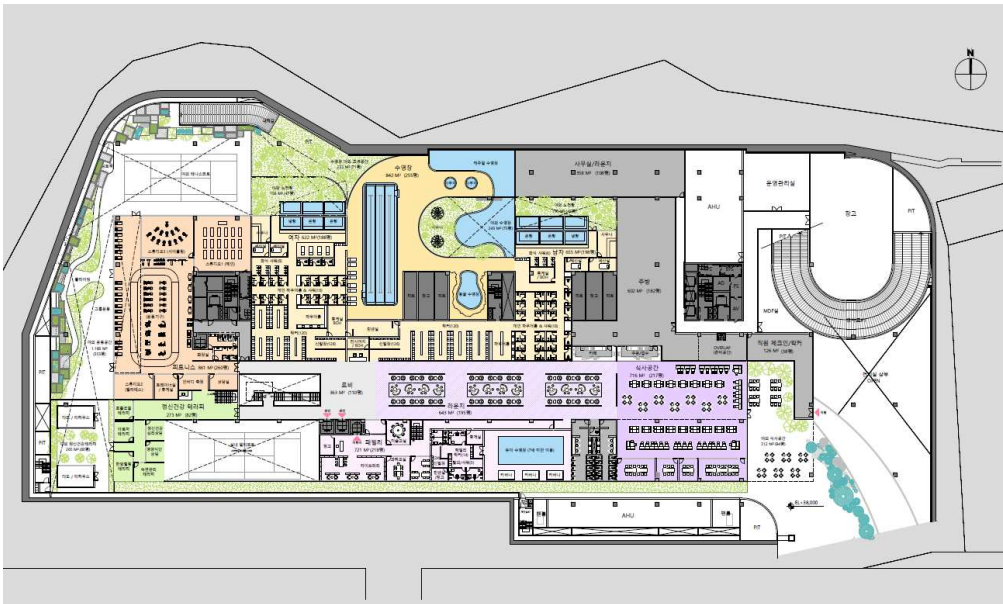


Figure 9: Seoul Private Membership Club Architectural Plan

Implementing AI in the SCAAA Process

Research Process

To aid in the research process, SCAAA has begun to employ AI chatbot technology. The technology scrapes large amounts of data to derive responses to users’ queries with impressive speed and encyclopedic knowledge. However, the AI technology serves as a complementary tool, as opposed to a stand-in for human expertise. SCAAA has retroactively confirmed the research and key takeaways from its previous projects using AI software, so there is proven synergy between SCAAA’s analytic methods and the big data technology. Furthermore, the software produced parallel results at a fraction of the time and labor.

Design Process

The SCAAA Process has also begun to use AI technology to improve the speed and accuracy with which spatial programming diagrams are translated into precise architectural drawings. Prior to the development of this technology, SCAAA had manually conducted research and produced estimates of spaces according to membership capacity, projected occupancy rates, and comparison studies. SCAAA has verified the accuracy of its prior calculations using the AI technology, demonstrating the consistency of the SCAAA Process (in asking the right questions) and the accuracy of the conclusions. As the SCAAA team works to incorporate this technology into the method, there are hopes that the speed, breadth, and depth of the AI’s data analytics will greatly increase the efficiency and precision of the overall SCAAA Process. Although the core logic and process of the SCAAA Process are evergreen, the tools it utilizes adapt to the technological environment and become more advanced and precise over time.

Limitations

Human Bias in Data Interpretation

Although the incorporation of AI technology has helped mitigate the impact of human bias/error in the SCAAA Process, the reliance on human “expertise” in applying the given data leaves room for human error. The variable of human expertise is a key strength in the process, but it also leaves room for a certain level of subjectivity.

Real-World Application Subject to Client Approval

The SCAAA process has proven to be extremely effective in generating innovative spatial solutions for development projects; however, the clients (developers, governments, financing bodies, etc.) ultimately decide whether to proceed with implementing the solution in the built environment. The SCAAA Process generates solutions that help align stakeholder needs (considering the clients’, users’, and publics’ needs alike); however, it is still subject to external economic forces and systems that govern its true effect on society.

Conclusion

As the built environment is born from an assemblage of economic, social, political, and cultural processes, there are inherent gaps between the competing needs of the various stakeholders and the users of Ops (Williams 2015). Contemporary cities have been caught in the web of capitalist systems, responding more readily to financial stimuli as opposed to societal needs or design intent. SCAAA acknowledges that one of the defining challenges confronting architecture is the need to reconcile the plethora of stakeholders involved in a single development project. As a potential solution, the SCAAA Process bridges the gap between the complex systems and the human experience. The key assets of the process are the proprietary placemaking library (SPL), integration of AI throughout the research and design implementation phases, and experience design/circulation studies that serve as a means to simultaneously further hermeneutic theory and drive profits for stakeholders (by improving user experience and retention). Furthermore, the SCAAA Process is differentiated from the process of a traditional architecture contract, where the basic scope of services commences at the design phase. Thus, the first three phases of the SCAAA Process provide services more akin to a strategy consulting mandate, providing deep analysis of markets, trends, and consumer demographics to derive operational solutions in built form. Due to the breadth and depth of research and implementation experience, SCAAA has built an adaptable process that can respond to the needs of society and all its constituent parts.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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