Preface

As building materials and technologies advance, architects are given opportunities to create new kinds of urban environments. Among the recent innovations showcased in this book are parametric modeling, environmentally friendly building skins, and the development of the HOPSCA building type — an “Arcology” type — collection of hotel, office, parking, shopping mall, convention center, and apartments.

First, parametric design is the latest trend in architecture to use computer-aided technology. Buildings designed with this 3D system are becoming more common and are beginning to influence how architects approach urban planning and the design of cities. Streamlined, free-form, and captivating, urban spaces now have the ability to become as flexible and elastic as the building forms that contain them. Tall buildings can now dance on a city’s skyline like colored bands or floating clouds instead of rising from the ground like ancient pyramids.

The second innovation discussed here — environmental technologies in building façades — includes advancements in energy-efficient design and the important impact these technologies are having on architectural character. For instance, ventilated building skins are multi-functional enclosures that are not necessarily required to carry structural loads. As a result, these “breathable” skins can be liberated from the building’s floor plate; they provide a spatial transition between interior and exterior space and thereby transform the visual impact of an architectural design.

The third innovation is the HOPSCA (Hotel-Office-Parking-Shopping-Convention-Apartment) building type, which can be described as “Archology-like”. Arcology, a concept proposed by American architect Paolo Soleri, is a portmanteau of the words “architecture” and “ecology” that describes a set of architectural principles aimed at designing enormous habitats (hyperstructures) with high population densities. Buildings based on these principles contain a variety of commercial and residential facilities and are conceived to minimize the environmental impact of humans. HOPSCAs could be portrayed as self-contained or economically self-sufficient in the sense of an autarky, allowing people to undertake a range of activities in limited urban space and avoid carbon-based travel. The prime advantage of Arcology principles and the HOPSCA building type is a low-carbon, energy-saving society — an important development for the coming age.

The “dream” buildings shown in this book reflect a changing architectural and cultural environment, and the translation processes that turn these concepts from vision to reality will open a new chapter in architectural history. Three factors will be critical in shaping these processes:

1. Technology. Only with new discoveries in both structural and material technologies can these new building types be physically realized. Even if designs remain virtual, the implications of such tectonic developments still have profound implications for the meaning of architecture.

2. Capital. Buildings can portray images of wealth. Architectural ideas spread internationally, following the process of globalization being promoted by capital investments. “Dream” buildings can just as easily be built in Africa as in Europe or North America. Even in the initial phases of investment, dramatic architectural statements may be one of the first expressions of desired future growth for a location. Countries, regions, and cities look to bold architecture to express their intentions, creating a receptive environment for experimentation and imaginative visions. Examples can be seen in rapidly developing regions such as East Asia and the Middle East. Against this background of aspiration, and with the capital to produce them, many fantastic visions may become realities.

3. Media. Skilful media placement can catapult new styles of buildings to international prominence, intensifying their influence. Often, the more controversial a project, the more attention it receives. In many cases, attention itself indicates success. With the help of the media, some buildings leverage the values they represent far beyond anything their physical reality may warrant. Whether perceived as positive or negative additions to the cityscape, the impressions these buildings make is undeniable provocative. Although many of these buildings may remain at the “dream” stage, if they do come to be built the results may be astonishing.

Many of the architects represented in this book share similar viewpoints and values. They are interpreting architectural space and typologies simultaneously in different locations around the world, and all address 1) developments in built form, 2) the new urban landscape, 3) the merging of nature and architecture, 4) continuity of modernism in architecture, 5) the architectural reply to the urban question, 6) bionic architecture, and 7) buildings that challenge limitations.

Developments in built form

Developments in structural and material technologies enable constant change in building form. Based on functional logic, form shows infinite possibilities. Freedom from physical constraints allows designers to translate their own unique logic into built spaces that appear throughable. Regardless of style, some of the projects presented — Maggie’s Center Fife and Inway, Fukas’ Zenith M, Cheongna City Tower designs — have strong emotional intensity speculation.

Buildings that break free horizontal position can be both effecting a decided expression. The Kunsthalle Bremen by Architects, for example, rises above a pool, forming a calm opening an inner energy. Simulating an inner energy, Simul conting building’s Innovation Tower in a quiet aloofness in the midst. Steven Holl Architects’ Swiss proposes a topological relation to various parts of the building, among the parts opens the interpretations of constantly viewed from multiple viewpoints. The model to express the interplay of media and their sites. Whether in scale, Holl’s Meander project dissolves into its surrounding essential and distinctive character.

The new urban landscape

As the scale and complexity to increase, architects must create new urban spectacles or constate “new textures” or constant choice leads to two competing adaptations: to “exceed” or to “extend.”

Most of the featured projects use height, context, and scale, the creation urban landscape that has long been a technique to style now plays a crucial role. In the ile, Ian’s Cheongna City Tower, demonstrates ever-changing this effect, ideal sites meet the environment can intensify like quality. Buildings such as BGA Associates’ 151 Incheon TELC Landmark City dazzle with their urban infrastructure. Some such as the Tour Signal project with the existing landscape extended effects. With a sufficient architects can create an integral part of the trend toward Against the long-accepted...
architecture, the Market Hall by MVRDV uses color and large-scale patterns to mark its significance within the city.

Projects that "exceed" call attention to themselves; the other strategy featured in this book is "hiding in full view" or "retreating". In contrast with the extroversion of the preceding examples, introverted projects such as the 21 Design Sight by Tadao Ando Architect & Associates introduce a built form of silence and tranquility into the noise and chaos of the city.

In comprehensive projects, the scope of which can cover several city blocks, architects strive to find different levels of balance, such as that between city and street. The example in Oslo designed by Jensen & Skodvin Arkitekttkontor As, Anne Henrikksen Arkitekter As, and C-V Holmstake Arkitekt shows how different materials can lead to multiple readings of scale within the urban environment. At street level, this project respects the context of the surrounding older buildings, using an elegant and modest formal language appropriate to human-scaled public spaces. Simultaneously, on the scale of the city, the project's enormity makes an important statement in the skyline. This project demonstrates the appropriateness of using different design strategies at different levels to address the spatial questions that abound in developing cityscapes.

Nature and architecture merge

Some of the projects in this book are clearly inspired by natural form. Others require explanation in greater depth to make evident the sustainable relationship between the building's materials and energy consumption.

For example, in the Leonardo Glass Cube exhibition pavilion with conference rooms designed by 3deluxe, the building's appearance both refers to and interacts with nature through its skin. The irregular framework of its exterior wall spreads to the ground, merging the visual image and pattern of grass with its physical texture and reality, a seamless merger of the built and the natural. Cheongna City Tower in Incheon, Korea, takes nature to the sky with a monumental bridge that scars between buildings, expressing an urban yearning for nature while simultaneously creating a spectacle on an urban scale.

The work of Urban Environments Architects approaches nature differently. Rather than literally referring to natural form and image, the firm brokers energy exchanges, factoring the importance of nature into the fabric of its calculations. The Schaumagazin Abtei Brauweiler project uses solar panels as an important design element; the panels represent the point of energy transformation between the building and the outside world. The building itself has the capacity to change the way we think about the interface between buildings and the environment.

Continuity of Modernism in architecture

Some of the projects represented in this collection do not adopt a flamboyant, extroverted architectural stance, but nevertheless possess the true spirit of Modernism. Simple form as well as traditional materials and construction methods cannot disguise the elegance of the conceptual rigor of projects such as the Manchester Civil Justice Center from Denton Corker Marshall and Blue Residential Tower by Bernard Tschumi, which embody calmness and restraint within the city.

An architectural reply to the urban question

As HOPSCAs develop toward the next stage, they merge with the urban infrastructure. The Seoul Performing Arts Center by Andrés Perea integrates the bridge, roads, and urban elements under one huge roof, a hybrid space where many programs can co-exist. The gateway designed by Snohetta, a self-organizing system in the desert, assimilates the functions of the city and could be called "Desert Utopia".

Foster + Partners' Crystal Island in Moscow also combines multiple programmatic requirements under one superstructure. These projects suggest a future era of "the monumental building as city".

Bionic architecture

Bionics – the application of biological principles to the design of architectural systems – has been used to streamline buildings and simulate natural figures. Many contemporary buildings show more association with biology than with the rectilinear geometries of the past. The Abu Dhabi Performing Arts Center by Zaha Hadid Architects suggests the wings of an insect. Galzigbahn, St. Anton am Arlberg by Driendl Architects, looks as if it is supported by animal bones. Similarly, the Hoverfront project resembles a huge leaf.

Buildings that challenge limitations

Architects challenge limitations through bold and innovative conceptual thinking. The subsequent physical results can be either spectacular or visually chaotic as they address the multi-faceted complexity of life in the city.