

# 2019 AIA COMMITTEE ON DESIGN INTERNATIONAL CONFERENCE

## SWITZERLAND

September 21-29, 2019

### THE INNOVATORS & MAINTAINERS: SWISS INNOVATION IN ARCHITECTURE, INFRASTRUCTURE & TECHNOLOGY

**David B. Greenbaum, FAIA,  
2019 COD Chair**

**Conference Co-Chairs:**

**Tiffany Melançon, Int'l Assoc. AIA  
Stefan Bieri, Int'l Assoc. AIA**

**By Michael Franklin Ross, FAIA**

**Photos by Tom Rossiter, FAIA**

*(except as noted)*

While this conference stands on its own as an exploration of innovative ideas and extraordinary architecture in Switzerland, it was conceived as the second chapter in a two-part narrative. Chapter One was the AIA Committee On Design Spring Conference in San Francisco and Silicon Valley, April 4-7, 2019.

David Greenbaum, FAIA set the stage at the Spring conference stating that, “we will examine innovation and infrastructure from multiple perspectives, including digital design, urban design and architecture...”

We achieved our goal by visiting “The Innovation Hub” of Silicon Valley including Facebook designed by Frank Gehry, Google designed by Bjarke Ingels Group (BIG) and the Heatherwick Studio and finally Apple Park Visitor Center designed by Foster + Partners. In addition, we visited Stanford University and multiple high-tech environments in San Francisco.



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# INTRO

## **The Innovators and the Maintainers**

We learned that the innovators and the maintainers work as a tandem team. If the innovators are the inventors, then the maintainers are the people that keep the invention working. I suggested that, “the innovators invent the new engine while the maintainers make it run”. Both are critical to achieving success.

There has been a great deal of discussion about the innovators and the maintainers. Our society tends to celebrate the innovators, like Leonardo da Vinci, Thomas Edison, Alexander Graham Bell and more recently Steve Jobs and Elon Musk. The maintainers, while often overlooked, are essential to a project’s refinement. Andrew Russell and Lee Vinsel have lectured and written extensively about the maintainers. In their New York Times article, “Let’s Get Excited About Maintenance,” they pointed out that, “Innovation refers only to the very early phases of technological development and use.” They contend that most of human labor goes into sustaining infrastructure and, “simply has more impact on people’s daily lives than the vast majority of technological innovation”. In the computer industry, for example, software maintenance and fixing bugs accounts for more than 60% of total costs. Most of us have had the joy of buying a new computer or smartphone, then feeling crushed when we can’t figure out how to use it. The maintainers are there to fix the problems.

## **Lessons Learned**

We were exposed to so much creativity and ingenuity that it is difficult to put it all in perspective. However, one theme continually expressed itself, that innovation can come more easily, but implementation is more difficult. It takes discipline and hard work. Le Corbusier taught us that, “Creation is a patient search.” It is not a bolt of lightning that strikes. It requires collaboration and the melding of multiple minds. The innovators and maintainers must work together to achieve success,

as they have in Silicon Valley and in Switzerland.

We learned that innovation is only the beginning and that many other people create the final product, whether it’s a chair, a light fixture, or a building. The value to the attendees was the inspiration to go back home and bring these lessons to each individual practice. And to appreciate the value of infrastructure as the literal foundation of creative thought.

## **Why Switzerland?**

It’s an amazing country. It’s the size of Delaware yet it is ranked in the top 5 countries in the world on the Global Innovation Index. It is regularly ranked as the world’s most innovative economy. In addition, it has the highest number of Pritzker Prize winners per capita, in the extraordinary design work of Herzog & de Meuron and Peter Zumthor. And let’s not forget the giant of Modern architecture, Le Corbusier, who has inspired an entire generation of architectural designers.

The topography of Switzerland requires technological innovation. It is 61% mountains with vast areas of agriculture. Jacques Herzog pointed out that, “The buildings that really shape Switzerland are not buildings, but the civil engineering works”. The infrastructure itself. It has always been like this. The first bridge in Basel opened the way for the North-South link through Europe. This was crucial in the 12th Century. Today tunnels and bridges weave all parts of the country together.

David Greenbaum’s opening remarks introduced us to the “Ten Types of Innovation” and to “Integrating Innovation in Architecture, Design, Methods, and Technology” by Ajla Aksamija. Through this research we learned that, “Innovation almost never fails due to a lack of creativity. It’s almost always because of a lack of discipline.” The Swiss understand this thoroughly. They are nothing if not disciplined.

## Campus Design

Although we visited many beautiful individual buildings, perhaps most impressive was the design of campuses; clusters of buildings that shape the spaces between them. We examined several, some with a few structures integrated into the landscape and some more urban campuses with multiple buildings over large areas.

### The Fondation Beyeler

The Fondation Beyeler is a museum set in a Park. It is the most popular art museum in Switzerland, visited by over 400,000 people per year. The current collection is housed in an elegant modernist building designed by Renzo Piano. The galleries and the landscape are integrated together. Some spaces seem to be floating on a pond.

A few years ago the owners realized they needed more space and held a design competition. In 2016 they selected Pritzker Prize winner Peter Zumthor, who surprised the jury by proposing three

buildings in a park, rather than a singular object. Zumthor spoke at the conference and presented his innovative design ideas. He was determined to preserve ancient trees and form outdoor spaces framed by his cluster of new buildings. He expanded the notion of a campus for art set in the Berower Park at the foothills of the Black Forest. His concept was both radical and subtle at the same time.

### Vitra Campus

A larger, more complex architectural collective is the Vitra Campus in Weil am Rhein, Germany, just across the Swiss border. Vitra is a family owned business for 80 years, that is based on the philosophy of creative collaboration. This is a phrase we hear a lot, but Vitra optimizes this approach. We heard from Nora Fehlbaum, Vitra CEO and third generation family owner.

Her approach is an extension of the ideas started by her parents and uncle who built a long-lasting



*Views of The Fondation Beyeler art museum designed by Renzo Piano.*



*Peter Zumthor describing to our attendees how the new pavilions will situate on the expanded site.*





*View of the Vitra Fire Station, by Zaha Hadid which is adjacent to the Schauderpot, by Herzog and de Meuron and the Design Museum by Frank Gehry.*

*Image of the VitraHaus by Herzog and de Meuron.*

collaboration with Charles and Ray Eames, manufacturing and selling their furniture throughout Europe.

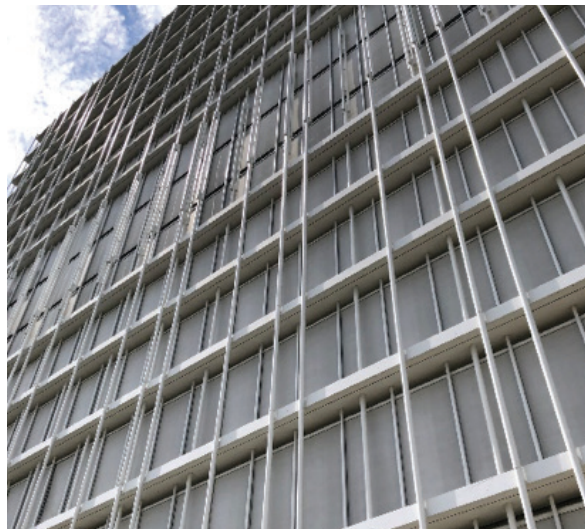
The Vitra campus includes buildings designed by seven Pritzker Prize-winning architects. Vitra is recognized for its willingness to take risks and explore innovative ideas. The company is proud of its history and its series of “firsts”. They commissioned Zaha Hadid to design her first built work anywhere. In 1989 the Vitra Museum was completed, the first Frank Gehry design outside the US, and later they created the first Tadao Ando building completed outside of Japan. Vitra believes in inspiring their designers and to create an atmosphere where innovation flourishes.

In 2010 VitraHaus was completed by Herzog and de Meuron to display and sell their many award-winning products. At first glance, from the outside, it looks like a bunch of prefab houses stacked haphazardly one upon another. However, after touring the inside, one discovers a series of beautifully interlocking spaces that intrigue the visitor and encourage one to explore further. It reminds us that creativity isn’t always apparent at first blush. Further investigation reveals the brilliant design concept.

### **Novartis Campus**

Perhaps even more ambitious than the Vitra headquarters is the Novartis Campus, which has seen the construction of 20 new buildings over the past decade. Novartis’ mantra is, “Spurring innovation to improve health care for patients around the world...” The Novartis campus provides workspace for its more than 7,000 associates. It includes buildings designed by an international array of renowned architects including Frank Gehry, Tadao Ando, SANAA, Rafael Moneo, Yoshio Taniguchi, Alvaro Siza, Fumihiko Maki and Herzog & de Meuron. This potpourri of design talent is organized by an orthogonal grid master planned by Italian architect Vittorio Magnago Lampugnani.

The campus’ main pedestrian spine, Fabrikstrasse, defines the rigid circulation. As one walks along the Fabrikstrasse you are led by tall colonnades in front of each building, that follows the strict geometry of Lampugnani’s plan. Happily, the Human Resources building designed by Frank Gehry, creates a sculptural counterpoint to the rectangular grid. Gehry’s building designed after the Vitra museum, is more sophisticated and carefully crafted. It also benefits as the edge to an outdoor public park.



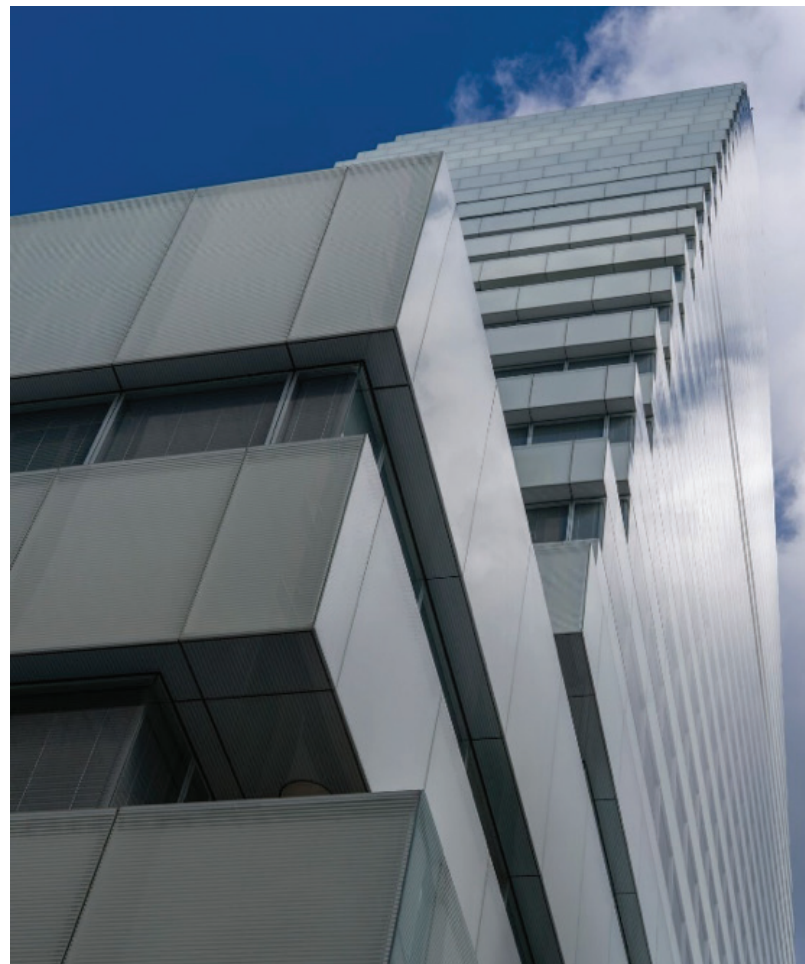
*Glimpses of two Novartis Campus façades: Virchow 16 by Rahul Mehrotra (RMA Architects) and Asklepios 8 by Herzog and De Meuron. Photos by others.*

The Fabrikstrasse begins at the entrance gate and terminates at a large steel sculpture by Richard Serra. It's a series of tall curved volumes that make you feel like you are swimming among a pod of steel dolphins, toward the Rhine River clearly visible from the campus.

### **Roche Campus**

Visible throughout Basel is a sloping hi-rise of 41 stories (Building 1) designed by Herzog & de Meuron for Roche pharmaceutical company. It is the heart of the Roche Campus also master planned by Herzog & de Meuron, which calls for additional hi-rise and low-rise buildings.

Roche has been committed to improving lives since the company was founded in 1896 and continues to support design excellence. Building 1 is a model of energy efficiency; heating with waste heat and cooling with groundwater. Since almost all the buildings on the Roche Campus are being designed by Herzog & de Meuron there is a clear aesthetic consistency. While this may be seen as a positive, the campus lacks the visual excitement and architectural innovation of the Novartis and Vitra campuses. The one saving grace is Solitude Park with the Tinguely Museum designed by Mario Botta and the delightful sculpture of Jean Tinguely.



*Photo of Building 1 on the Roche Campus by Herzog*



## Places of Worship

A house of worship is a unique place designed for people to perform acts of devotion, veneration and meditation. At times these buildings achieve inspiration. We experienced two in Switzerland that epitomize the conference theme of “Innovators and Maintainers”. Both buildings have a singular strong concept by the innovator; executed with remarkable detailed craftsmanship by the maintainers.

The Pius Church, designed by Franz Füg from 1964 to 1966, is a simple yet powerful space. From the outside it is an unassuming box, yet inside it is transformed into a mystic sanctuary. The exterior walls are very thin translucent plates of marble that allow daylight to filter into the sanctuary in warm ochre tones. Regardless of your religious beliefs, you cannot but be moved and feel a sense of awe. Of course architects will be reminded of the Yale Beinecke Library by Gordon Bunshaft and SOM, completed in 1963. The Library, while an excellent design, is filled with rare books, whereas the Pius

Church space is open and gives you an uplifting feeling.

While Pius Church is in the heart of a small city, Meggen, Lake Lucerne, the Chapel Saint Benedict is set high in the Swiss Alps. Designed by Peter Zumthor, the wooden chapel was intended to replace a church that was destroyed in an avalanche. Zumthor conceived of the chapel as a single space. He explained, “The idea that its exterior form would be defined by a single interior space fascinated me. This is the notion of a simple vessel. I wanted to find a soft, maternal form for my vessel.”

Zumthor’s vessel is a soft curved wooden sanctuary that comes to a point on one side, like a leaf, or an eye. It is illuminated by a ring of clerestory light that is transformative. It is small, but very moving. Fortunately, the new chapel is protected from an avalanche by the forest above.



*Interior view of Pius Church in Lucerne designed by Franz Füg showing the quality of light and translucency of the stone cladding. Photos by David Greenbaum, FAIA*

*Two views of Chapel Saint Benedict, designed by Peter Zumthor.*

## Individual Innovation



*Two images of Villa Le Lac, designed by Le Corbusier.*

As we searched Switzerland for precedent setting architecture and innovative ideas that broke new ground, we had to visit one early building designed by Le Corbusier, the Villa Le Lac, 1923. Built for his parents on a narrow strip of land overlooking Lake Geneva, the house is a prototype of the international style that Corbu epitomized at the Villa Savoye, 1931, and that influenced architects throughout the 20th century. This prototype of minimal design, Ville Le Lac, encapsulates three of Corbu's future "five points of a new architecture"; the open floor plan, the roof garden, and the ribbon window. In addition to the roof garden, Le Corbusier extended the living space onto the ground floor garden and framed the view of the lake through a simple square window. It is once again a simple yet powerful gesture that has influenced several generations of designers. For example, see Richard Meier's Getty Center in Los Angeles.

Swiss luxury watchmaker Audemars Piguet, founded in 1870, was searching for an architect to design an extension to their headquarters that would also serve as a museum taking visitors on a narrative journey through their nearly 150-year history. They selected the Bjarke Ingels Group (BIG) in association with CCHE Architecture. BIG developed an unusual design concept, a double spiraling glass pavilion embedded in the sloping landscape and nestled between two rectangular buildings. The roof is a continuous ribbon of steel clad in brass covered with grass in the summer and snow in the winter. It is all supported by three layers of load bearing glass with two insulation cavities. You can stroll through the building and see expert craftsman carefully assembling Audemars Piguet watches on the inside, then turn and look through the glass with views over the Vallée de Joux below. This is a building that merges innovation and design discipline with the precision, may I say, of a Swiss watch.



*Exterior views of the Audemars Piguet headquarters visitor center in Le Brassus designed by BIG.*



## Vals – The Swiss Alps

Switzerland is a small country with many micro-environments. The Alps are a world apart from the cities below. Nature is your neighbor. You can hear and smell the cows in the fields nearby.

Within this majestic terrain is the 7132 Hotel. The small, monastic rooms have been totally transformed by a group of original, inventive architects that include; Peter Zumthor, Tadao Ando, Kengo Kuma, and Thom Mayne of Morphosis. Each room has its own unique esthetic, maximizing the use of natural materials. The hotel exists as a place of repose

and relaxation and to enjoy the legendary thermal springs that flow out of the hillside at 84 degrees.

The Thermal Baths designed by Peter Zumthor, immerse the visitor in nature; both stone and water are indigenous to Vals. The spa has multiple pools some heated to 108 degrees, others cooled down to 57 degrees. The larger pool extends from inside to outside where you can float along and look up at the magnificent stars above. Zumthor described the design as, “Stone and water: a love affair...two primary materials as mutually invigorating energies.”



*Aerial view of the 7132 Hotel campus in Vals (top left).  
View of the Kengo Kuma designed hotel room in the Architect's Wing (top right).  
Images of the magical Thermal Baths designed by Peter Zumthor (bottom).*



## Atelier Zumthor

When Peter Zumthor was awarded the Pritzker Prize in 2009, he was largely unknown outside of Switzerland. As his work gained more international exposure, he won the RIBA Royal Gold Medal in 2013. Zumthor was born in Basel, Switzerland in 1943. His father was a cabinet-maker, where he was exposed to wood working and fine detailing. He became an apprentice to a carpenter in 1958 at 15. In 1966 Zumthor studied industrial design and architecture as an exchange student at Pratt Institute in New York. His early exposure to cabinet making and the use of natural materials has infused his design work throughout his career. We listened to him speak about his design philosophy at the opening and closing of the conference. It is clear he is passionate about his work. He has a medium sized practice of about 35 people and he is personally involved in all design decisions. He has been described as “uncompromising and minimalist, “ yet his work is unpredictable. He doesn’t have a style. Instead he has a commitment to finding what he believes is right for each project. He explains, “It is only between the reality of things and the imagination that the spark of the work of art is kindled.”



*Views of Peter Zumthor speaking to our group at his atelier in Haldenstein.*



# SUMMARY

The value of the conference was found in the inspiration we felt every day. Experiencing the brilliant creativity of the innovators and the careful, discipline of the maintainers, against the backdrop of extraordinary infrastructure and natural beauty. Everyone left feeling uplifted, taking home ideas they could apply in their own architectural practice.

