

**REPORT ON THE**  
**OPEN BUILDING FOR RESILIENT CITIES CONFERENCE**  
December 6-8, 2018 / A+D Museum, Los Angeles, CA, USA



A conference organized by the Council on Open Building ([www.councilonopenbuilding.org](http://www.councilonopenbuilding.org)) and joined by the CIB W104 Open Building Implementation network was held at the A+D Museum in the Arts District of Los Angeles, California, December 6-8, 2018. Eighty-five registrants heard key-note speeches and took part in panel discussions, peer-reviewed academic paper and poster presentations, all focused on planning for change across a variety of project types.

This was the first major event of the Council on Open Building, launched in April 2017 to advance the adoption of Open Building principles and practices in the United States and eventually across North America, across all project types and at all levels of built environment intervention – from urban design to building fit-out.

Financial sponsorship for the conference was provided by a number of prominent US and international architecture, planning and construction companies: ARUP, HED, SmithGroup, Moore Rubel Yudell, DIRT, CO Architects, Enterprise, Saiful-Bouquet, Nora Systems, Miyamoto, McCarthy and the CAE Foundation. Green Technology provided logistical support; other supporting entities included ARC Document Solutions, Woodbury University and Northeast University.

• **Organizing Committee**

John Dale, FAIA, HED Los Angeles, Conference Chair; Dr. Ewan Branda, Woodbury University School of Architecture, Los Angeles; Anthony Morey – Executive Director, A+D Museum Los Angeles; Farooq Amen – City Design Studio, Los Angeles; Dr. Stephen Kendall – Council on Open Building, Philadelphia

• **Scientific Committee**

Dr. Amira Osman, Tshwane University of Technology, Pretoria, South Africa (CIBW104); Dr. Jia Beisi, University of Hong Kong (CIBW104); John Dale, FAIA, HED Los Angeles; Dr. Stephen Kendall – Council on Open Building, Philadelphia

# THE CONFERENCE PROGRAM

## Open Building for Resilient Cities

Day 1 Thursday, December 6			
	Welcome / Keynote	CONFERENCE OVERVIEW	
5:00 - 7:30 PM	Conference Introduction Presentation	John Dale, Co-Founder, Council on Open Building	
	PechaKucha	<b>Engineering for Open Building - Work of ARUP - Murat Karakas, Simon Rees, Elizabeth Valmont, Irene Martin</b>	
7.30 - 8.30 PM	Reception	Sharing case studies from around the world <i>refreshments</i>	
Day 2 Friday, December 7			
	Keynote / Panel	HEALTHCARE STRAND	
8:00 - 8:30 AM	Coffee / Networking / Registration		
8:30 - 10:30 AM	Keynote	<b>Opening talk by Mehrdad Yazdani of Yazdani Studio, Cannon Design</b>	
	Panel Discussion	Stephen Kendall, Moderator with Mehrdad Yazdani, John Pangrazio, Nirit Pilosof and Bill Scrantom	
10:30 -10.40 AM	Break		
10:40-11:35 AM	Research Paper Sessions	Session 1a	<b>Building Industry / Building Performance</b>
		Pilosof	<i>Open Building in practice: a comparative study of hospital design strategies for future change</i>
		Dekker	<i>Methods and tools for defining usability quality, actual building performance and cost using the Open Building approach</i>
		Ross	<i>A methodology for quantifying adaptability of buildings using an analytic hierarchy process</i>
		Lamounier	<i>Adequacy level of Brazilian constructive systems to the Open Building: a research methodology</i>
11.35-12.30 PM		Session 1b	<b>Building Industry / Building Performance</b>
		Kim / Yang	<i>A study on the development of long-life housing supply model and field-test in Korea</i>
		Choi	<i>Lessons from remodeling aged apartment units in first-generation new towns around Seoul</i>
		Leibbrandt	<i>Architecture without Land. Secure land rental as an open development strategy</i>
12:30-1:15 PM	Lunch	<i>catered lunch</i>	
	Keynote / Panel	HOUSING STRAND	
1.15-3.15 PM	Keynote	<b>Jia Beisi, University of Hong Kong, Partner, BE Hong Kong</b>	
		<b>Quality and capacity of architecture in three social-spatial levels – an analysis of design by BEHK</b>	
	Panel Discussion	Otis Odell, Moderator with Jia Beisi, Tom Franzen and Brian Falls	
3.15-3.45 PM	Break and Poster Session 1	Frantzen, Abadi, French, JoonSoo, Ho Lim	
3:45-5:00 PM	Research Paper Sessions	Session 2	<b>Housing Experts on Open Building</b>
		Bar Abadi	<i>The Adaptable Unit building design methodology:</i>

		Nadim	<i>Simplifying the steps necessary for OB implementation</i> <i>Does Egypt embrace open building (OB) housing?</i>
			<i>Informal housing analogy to OB principles</i>
		Aggarwal	<i>Flexibility in Apartments: Examining feasibility of</i> <i>"Open Plan" housing in urban India</i>
		Frantzen	<i>PATCH 22 – A Case Study</i>
5.00-5.45 PM	Keynote	<b>California Perspective on Resilience: Chester Widom, California State Architect</b>	
5.45-7.30 PM	Reception	<i>refreshments</i> Demonstration - Sustainable Building Council	
<b>Day 3 Saturday, December 8</b>			
	<b>Keynote / Panel</b>	<b>EDUCATION STRAND</b>	
8:00 - 8:30 AM	<i>Coffee / Networking / Registration</i>		
8:30 - 10:30 AM	Keynote	<b>Opening talk by John Ruble, MR Y Architects</b> <b>Open Building - The Architecture of Format</b>	
	Panel Discussion	John Dale, Moderator with Kevin Greischar, James O'Connor and Carey Upton	
10:30 - 11:15 AM	<i>Break and Poster Session 2</i>	Sawano, Shin, Wiederspahn, Minami	
11:15-12:45 PM	Research Paper Sessions	Session 3	<b>The Architect's Role</b>
		Oostr	<i>The possible contribution of Open Building towards resilient and responsible architecture and urbanism</i>
		Osman	<i>The Elemental approach to residential architecture: is it Open Building?</i>
		Wilcox	<i>A case study of a 'hijacked' building in Johannesburg, South Africa</i>
		Sarmiento	<i>Towards An Adaptable Architecture</i>
		Wiederspahn	<i>Open Building and Future-Use Architecture – a comparison</i>
		Galle	<i>The architect's role in a change-oriented construction sector: a Belgian perspective</i>
12:45-1:30 PM	Lunch	<i>catered lunch</i>	
<b>URBAN DESIGN STRAND</b>			
1.30-3.30 PM	Keynote	<b>Hybrid Zoning by Patricia Diefenderfer, City of LA Planning Dept.</b>	
	Panel Discussion	Farooq Ameen, Moderator with Christopher French, Patricia Diefenderfer, Dan Rosenfeld and Merrill St. Leger Demian	
3.30-4.00 PM	<i>Break and Poster Session 3</i>	Ross, Gola, Tirapas, Lee	
4:00-4:45 PM	Keynote	<b>Renee Chow, Chair, Department of Architecture, U.C. Berkeley</b> <b>Changing Cities: Challenging the Disposable City.</b>	
4:45-5:30 PM	Panel discussion	Wrap-Up Session - Open Building Council Leadership with Renee Chow and Peter Wiederspahn	
5.30-7.00 PM	<i>Closing Reception</i>	<i>refreshments - MULTI-SHOW OPENING at A+D</i>	

## THE CONFERENCE STRANDS

### The Healthcare Strand

The only thing that lasts is change. Every day we are required to rethink our habits and change our minds. All built environment is subject to the question of “what must have priority” - performance or permanence, readiness or steadiness, change or stability, function or form, present or future. Nevertheless, planning should avoid that limiting “either/or” trap; it should support an “as-well-as” openness. Health care buildings are especially affected by this dilemma. In this expensive and dynamic project type, change and factual developments have led to environments that can hardly be perceived as pleasant. Nobody would disagree that a therapeutic environment is a key factor that any health care environment must offer to patients, staff, and the urban context. Nevertheless, hospitals have become “architectonic black holes.” Instead of being refined over time, what was built at a specific time, to a large extent, conflicts more and more with what ought to be. Dealing with change should become a fundamental aspect of how we perceive architecture, and consequently also how we conceive it. As long as time is not a guiding factor, the planning processes will be dominated by stress.

This panel will discuss these issues and tensions, and share approaches to dealing with uncertainty in planning complex and constantly evolving health care environments.

Panel Moderator: **Stephen Kendall, PhD, RA** (Co-Founder, Council on Open Building)  
Editor: Healthcare Architecture as Infrastructure: Open Building in Practice (Routledge, 2018)  
Philadelphia  
[sk@infillsystemsus.com](mailto:sk@infillsystemsus.com)

Panelists:

**John Pangrazio, FAIA, FACHA**  
Consulting Partner, NBBJ  
Seattle  
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**Nirit Pilosof, Architect**  
PhD Candidate: Israeli Institute of Technology and Israeli representative at the UIA Public Health Group  
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**Bill Scrantom, PE, Principal**  
Healthcare Business Leader for **Arup** in the Americas  
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**Mehrdad Yazdani, AIA**  
Cannon Design  
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### The Housing Strand

The residential building stock is the largest project use type, accounting for approximately 75% of total built floor space in the United States. Of a total of 136 million dwelling units in 2017, about 60% of which are detached houses, the rest some sort of attached dwellings with “shared” elements (many in HOA’s or condominiums). This ratio has remained fairly consistent for decades. These facts are important when we discuss Residential Open Building. The Open Building approach to residential architecture seeks solidity, energy efficiency and adaptability. The approach also seeks to make a clear distinction between the parts of a building that are common to all inhabitants, and the parts that are controlled autonomously per occupancy. This is the principle of technical and governance disentanglement, an essential basis for avoiding legal and technical conflict when one inhabitant’s space use or layout changes (during design or over time). Autonomy of the individual dwelling unit (one reason single family detached houses are so attractive) is the goal of the Open Building approach in multi-family residential buildings. The goal is to assure gradual, unit-by-unit renewal of enduring and culturally-rooted buildings, with minimal disturbance and waste.

This panel will discuss these issues, pointing out barriers to and benefits to be gained from implementing the Open Building approach in the development of new residential projects and in adapting and upgrading existing residential and non-residential properties.

Panel Moderator **Jerome Otis Odell, AIA, LEED AP**  
Associate Principle, Sector Leader, Harley Ellis Devereaux, Los Angeles  
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Panelists **Jia Beisi**  
Department of Architecture, The University of Hong Kong  
Director of BEA Hong Kong  
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**Tom Franzen**  
Lemniskade Projects / FRANTZEN et al architects  
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**Brian Falls**  
VP Development, Palisades  
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## The Education Strand

When we think of the extent to which school construction figures in the construction economy, when we think about how many of these facilities exist all over the country and the fact that school districts tend to do major replacements and renovations in 30-year cycles, it's a challenge. It's a problem that we have a stock of school buildings which are not really in harmony with the way pedagogy is evolving, the way teaching and learning take place, or need to take place, in our current context. Ideas about pedagogy are constantly changing and the approach to teaching and learning is constantly shifting. In this context, rigid buildings really don't make sense. School districts are starting to move away from a one-teacher, one-classroom enclosed, internalized environment to a more fluid environment where people work in small groups, where they work in the classroom and also work outside the classroom. We're starting to see schools require more common areas, where different forms of learning can take place simultaneously.

This is where the Open Building approach meets the challenges of designing 21<sup>st</sup> century educational environments – for K-12 programs and also for universities. Designing for change. No one has a crystal ball, so our challenge is not to develop new standards, or templates, but to plan for the unforeseen. This is fundamentally new, and architects, planners and educational leaders need to work closely together to address these opportunities. Part of our job is to study and learn from the best educational environments built 100 years ago that still endure – precisely because they could adjust to changing realities.

Panel Moderator                    **John Dale, FAIA, LEED AP**  
Principle, Studio Leader, Harley Ellis Devereaux, Los Angeles  
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Panelists

**Kevin Greischar, AIA**  
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**James O'Connor, FAIA and John Ruble, FAIA, Partner**  
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**Carey Upton**  
CEO, Santa Monica Malibu Unified School District  
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## The Urban Design Strand

Urban Design is the level of intervention between urban planning and architecture. It is the level at which a stable stage is set by shaping public space and infrastructure, thereby setting out the themes and rules that will guide well-organized yet varied architectural interventions for a long time to come. Urban design is also the level of work that must anticipate that interventions at the next level – architecture – will be distributed among many firms and developers; it therefore has a built-in need for a governance structure to steer varied interventions while maintaining long-term resilience and spatial coherence.

The challenge for urban design – whether driven by public agencies or by private development – is to create a basis for structured growth and change, as well as offering readily available, serviced yet flexible building plots to realize new buildings replacing older ones. This requires strategic planning tools to steer development for over time, tools that are appropriately updated from time to time in light of changing realities on the ground.

Panel Moderator                    **Farooq Ameen, AIA, RIBA**  
Principal, City Design Studio  
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Panelists

**Christopher French**  
District Homes / Hickok Cole Architects  
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**Patricia Diefenderfer, AICP**  
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**Merrill St.Leger Demian, AICP, LEED AP**  
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**Dan Rosenfeld**  
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## KEYNOTE SPEAKERS

<b>Chester Widom, FAIA</b>	California State Architect
<b>Jia Beisi</b>	Professor of Architecture, University of Hong Kong / Partner Baumschlager Eberle (Hong Kong)
<b>Mehrdad Yazdani</b>	Yazdani Studio - Cannon Design
<b>John Ruble</b>	MRY Architects and Planners
<b>Murat Karakas, et al,</b>	ARUP
<b>Patricia Diefenderfer</b>	City of LA Planning Dept.
<b>Renee Chow</b>	Professor and Department Chair, School of Architecture, UC Berkeley

## CONFERENCE PAPERS

### BUILDING INDUSTRY/ BUILDING PERFORMANCE

Nirit Pilosof	<i>Open Building in practice: a comparative study of hospital design strategies for future change.</i> <a href="mailto:nirit.pilosof@gmail.com">nirit.pilosof@gmail.com</a>
Karel Dekker	<i>User requirements for usability versus building performance and impact on costs: Methods and tools for defining usability quality, actual building performance and costs using the Open Building approach.</i> <a href="mailto:Karel@decco.net">Karel@decco.net</a>
Brandon Ross	<i>A methodology for quantifying adaptability of buildings using an analytic hierarchy process</i> <a href="mailto:Bross2@clemson.edu">Bross2@clemson.edu</a>
Rosamônica da Fonseca Lamounier	<i>Adequacy level of Brazilian constructive systems to the Open Building: a research methodology</i> <a href="mailto:rosamonicafl@gmail.com">rosamonicafl@gmail.com</a>
Sooam Kim	<i>A study on the development of long-life housing supply model and field-test in Korea</i> <a href="mailto:sakim@kict.re.kr">sakim@kict.re.kr</a>
Jaepil Choi	<i>Lessons from remodeling aged apartment units in first-generation new towns around Seoul</i> <a href="mailto:jpchoi@snu.ac.kr">jpchoi@snu.ac.kr</a>
Amy Leibbrandt	<i>Architecture without Land. Secure land rental as an open development strategy.</i> <a href="mailto:amyleibbrandt@gmail.com">amyleibbrandt@gmail.com</a>
Chung JoonSoo Seok Ho Lim	<i>Design and Construction Plan for the Practical Use of Infill In Long-Life Housing</i> <a href="mailto:joonsoochung@kict.re.kr">joonsoochung@kict.re.kr</a>

### HOUSING

Gali Bar Abadi	<i>The Adaptable Unit building design methodology: Simplifying the steps necessary for OB implementation</i> <a href="mailto:gali.abadi@gmail.com">gali.abadi@gmail.com</a>
Wafaa Nadim	<i>Does Egypt embrace open building (OB) housing? Informal housing analogy to OB principles</i> <a href="mailto:w.nadim@gmail.com">w.nadim@gmail.com</a>



Kriti Aggarwal *Flexibility in Apartments: Examining feasibility of "Open Plan" housing in urban India*  
[agg.kriti@gmail.com](mailto:agg.kriti@gmail.com)

Kazunobu Minami  
Ma Lingxiang *The effects of the KEP adaptable infills for the aging residents*  
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Tom Frantzen – *PATCH 22 – A Case Study* [tom@frantzen.nl](mailto:tom@frantzen.nl)

## THE ARCHITECT'S ROLE

Mieke Oostra *The possible contribution of Open Building towards resilient and responsible architecture and urbanism* [mieke@noorderruimte.nl](mailto:mieke@noorderruimte.nl)

Amira Osman *The Elemental approach to residential architecture: is it Open Building?*  
[osmanaos@tut.ac.za](mailto:osmanaos@tut.ac.za)

Afua Wilcox - *A case study of a 'hijacked' building in Johannesburg, South Africa* [afuawilcox@gmail.com](mailto:afuawilcox@gmail.com)

Jaime Sarmiento *Towards An Adaptable Architecture* [jsarmien@unal.edu.co](mailto:jsarmien@unal.edu.co)

Peter Wiederspahn *Open Building and Future-Use Architecture: A Comparative Analysis*  
[p.wiederspahn@northeastern.edu](mailto:p.wiederspahn@northeastern.edu)

Waldo Galle *The architect's role in a change-oriented construction sector: a Belgian perspective*  
[Waldo.Galle@vub.be](mailto:Waldo.Galle@vub.be)

## POSTER PRESENTATIONS

Bongjai Shin	HED
Chamnarn Tirapas	Lecturer, King Mongkut Univ of Tech Bangkok
Joonsoo Chung	Korea Institute of Civil Engineering and Building Technology
Tom Frantzen	FRANTZEN et al architects, Amsterdam
John Pangrazio	NBBJ Consulting Partner
Brandon Ross	Clemson University

## EXHIBITION

A curated exhibition – **PERSISTENCE** - was mounted at the close of the conference by Northeastern University School of Architecture's FUTURE USE research group, headed by Professor Peter Wiederspahn ([p.wiederspahn@northeastern.edu](mailto:p.wiederspahn@northeastern.edu)).