

SEPTEMBER 16

**CON
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REVOLUTION
SUMMIT 2019



**DELTA HOTEL BY MARRIOTT
MINNEAPOLIS NE**



CONSTRUCTION REVOLUTION SUMMIT

Welcome to the Construction Revolution Summit. Today's event brings together leaders from all sectors of the development and construction community to explore emerging breakthroughs and innovative construction techniques.

Why? Because the cost of developing new housing is climbing faster than people's incomes – and that's keeping builders and developers from building enough new homes. To address Minnesota's current shortage, we need to build 10,000 more homes annually over the next five years than we are currently. Already, rents and home prices are too high for many to afford. There is no magic bullet to solve this problem, but we owe it to ourselves to explore everything that goes into the cost of building new homes and apartments.

Today, we will focus on innovations in off-site construction techniques. We'll see examples from around the country of factories that produce residential panels and modules for delivery to residential construction sites. We'll hear about the potential for off-site construction to provide new opportunities to bring more young workers to the construction trades. We'll also hear about challenges that have kept off-site construction from delivering on its potential for cost savings and efficiencies.

We will finish the day with a facilitated action-planning workshop. We need leaders like you from multiple sectors and industries to come together and define a game plan, and we hope that plan is the first step towards a Construction Revolution in Minnesota! Thank you for being here, and thanks to our sponsors for making this event possible.

Mary Fingerthal

SUMMIT AGENDA

REGISTRATION

7:30 - 8:15am: Breakfast Opens

MORNING PLENARY

(Morning plenary will be held in the Minneapolis Ballroom)

8:15 - 8:30: Kick-Off

8:30 - 9:00: The Promise and Imperative of Mass Customization

Jason Landry, Founder, Jason Landry Consulting LLC

9:00 - 9:20: The Future of Offsite Construction

T.G. Jayanth, Expert - Capital Projects, McKinsey & Company

9:20 - 10:15: Panel Presentation: Working Models

Christian Lawrence,
Chief Executive Officer, Rise Modular

Justin Van Leuvan,
Director of Sales & Business Development,
Multifamily, Katerra

Vern Mattheisen,
Sales & Marketing Manager, Dynamic Homes

Timothy Swanson, Chief Design Officer, Skender

10:15 - 10:30: Break

BREAKOUT SESSIONS

10:30 - 11:15: Round 1

11:15 - 11:30: Break

11:30 - 12:15pm: Round 2

AFTERNOON PLENARY

(Afternoon plenary will be held in the Minneapolis Ballroom)

12:15 - 1:15: Lunch

12:45 - 1:15: Making Offsite Residential Construction Happen in the Marketplace and Community

Carol Galante, Faculty Director, Turner Center for Housing Innovation, UC, Berkeley

1:15 - 1:30: Break

ACTION-PLANNING WORKSHOP

1:30 - 2:30: Brainstorming Strategies

2:30 - 2:45: Break

2:45 - 3:45: Planning For Success

3:45 - 4:00: Break

4:00 - 4:30: Commitments to Action

RECEPTION

(Reception will be held in the St. Paul Ballroom)

4:30 - 5:30: Reception

KEYNOTESPEAKERS



Carol Galante
*Faculty Director
Turner Center for Housing
Innovation, UC Berkeley*

Carol Galante is the I. Donald Turner Professor in Affordable Housing and Urban Planning and the founder and Faculty Director of the Turner Center

for Housing Innovation at UC Berkeley. Galante previously served in the Obama Administration as Assistant Secretary for Housing/Federal Housing Commissioner at the U.S. Department of Housing and Urban Development and as Deputy Assistant Secretary for Multifamily Housing Programs. Prior to her appointment at HUD, she served for over ten years as President and CEO of BRIDGE Housing Corporation. She also serves on the Advisory Board of Factory OS, an innovative new company changing how we build. Galante holds a Master of City Planning from UC Berkeley and a Bachelor of Arts from Ohio Wesleyan.



T.G. Jayanth
*Expert - Capital Projects,
McKinsey & Company*

T.G. joined McKinsey as an Expert in the firm's Capital Projects & Infrastructure practice in April '16. He is based in the Houston office, and works with the firm's

clients to improve the performance of their capital programs. Prior to joining McKinsey, T.G. was the Vice-President of Capital Projects for SunCoke Energy, a global manufacturer of a key material for steel-making. During the course of his 30+ years in engineering and construction, T.G. has been focused on developing and managing large global projects in the oil & gas, LNG, metals, manufacturing, forest products and other industries.

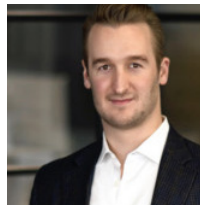


Jason Landry
*Founder
Jason Landry Consulting*

Jason Landry has over 25 years of experience in the drafting, design, engineering, preliminary estimating, pre-construction review, project management, and is an expert in pre-fabrication construction technics. He

has worked on various construction projects throughout the country as a consultant for numerous developers, architects, modular manufacturers, and construction managers / general contractors. Jason has spoken at the World of Modular Conferences in 2017 and 2019 and has been recognized as an expert in the modular industry. He founded Jason Landry Consulting, LLC in 2015 to assist clients with making informed decisions about prefab construction and its benefits.

FEATUREDPANELISTS



Christian Lawrence
*Chief Executive Officer
Rise Modular*



Vern Matthiesen
*Sales & Marketing Manager
Dynamic Homes*



Timothy Swanson
*Chief Design Officer
Skender*



Justin Van Leuven
*Director, Business Development
Kattera*

BREAKOUTSESSIONSUMMARIES

1A & 2A: OVERCOMING REGULATORY BARRIERS TO USING OFFSITE CONSTRUCTION

Carol Galante, *Faculty Director, Terner Center for Housing Innovation at UC Berkeley*
Scott McKown, *Assistant Director, Minnesota Department of Labor and Industry*

Using offsite construction components can present challenges for developers, communities and building officials. Scott McKown will summarize the straight-forward approach that Minnesota uses to approve prefabricated modules and panels for residential construction. Carol will discuss local zoning and permitting issues that housing developers have encountered in California when using off-site building components – and techniques for overcoming them.

1B: FINANCING A BUSINESS MODEL IN OFFSITE CONSTRUCTION

Justin Van Leuvan,
Director, Business Development
Christian Lawrence,
Chief Executive Officer, Rise Modular

Offsite construction lends itself to a variety of business model approaches and different roles for financial partners. The discussion will present two different models for raising and deploying capital that support two different business models and explores their challenges and opportunities. Justin Van Leuvan will discuss Katterra's fully integrated model – design through assembly – and how they are financing and implementing that model across the country and internationally. Christian Lawrence will discuss the startup of a new facility in Owatonna, MN.

1C: MARKET ACCEPTANCE AND BUILDING A DEMAND PIPELINE

Jamie Stolpestad, *Managing Partner, Minnesota Opportunity Zone Advisors*
Paul Mellblom, *Principal, MSR Design*

The long-term success of offsite construction technology requires a depth and consistency of market demand to drive volume and therefore cost-efficiencies in large-scale manufacturing plants. This session examines the key similarities and differences in various housing typologies to help the participants

think through issues of common interests and partnerships that might drive such demand. Existing participants across housing sectors, including those involved in townhouses, workforce housing, affordable housing, senior housing, market rate housing, and even hospitality and mixed-use redevelopment should find the session of interest. The session is intended to foster insights applicable to Action Planning later in the Summit, as well as highly tangible take-away value for all participants.

1D: SUSTAINABLE BUILDING: OPPORTUNITIES FOR IMPROVED ENVIRONMENTAL PERFORMANCE

Moderator: Richard Graves, *Director and Associate Professor, Center for Sustainable Building Research, University of Minnesota*

Panel: Simona Fischer, *Architect, MSR Design*
Pete Kobelt, *Director - Mass Timber, Katterra*
Ivan Rupnik, *Partner, MOD X*

The quality of affordable housing in Minnesota has been greatly improved by sustainability programs in the past, and offsite construction offers a host of benefits for environmental sustainability, including improved efficiency and reduced waste in the manufacturing process. How can the shift to modular construction maintain and enhance the sustainability of affordable housing in Minnesota? What sustainable strategies are easier to implement with offsite construction? Richard Graves will lead an interactive panel discussion on the environmental impacts of offsite versus onsite construction, new sustainable materials on the market, and the critical sustainable strategies to integrate into modular construction for affordable housing.

1E: BUILDING THE FUTURE: PARTNERSHIPS TO CREATE THE NEXT GENERATION WORKFORCE

Timothy Swanson, *Chief Design Officer, Skender*

The move to offsite production will create demand for a host of technology-enabled, next generation construction jobs based in the factory. Meeting this demand will give rise to a host of new opportunities for partnership between construction firms, trade unions and workforce development providers, including to train new workers and create paths to advancement

into supervisory or traditional positions within the trades. Timothy Swanson will discuss Skender's experience working together with the Chicago Regional Council of Carpenters and deconstruct elements of the deal that formalized their partnership. He will also share perspectives of national labor leaders and more about Skender's efforts to create a continuous feedback loop between workers on the factory floor and in the design and engineering function.

2B: FINANCING DEVELOPMENTS IN OFFSITE CONSTRUCTION

Dan Smith, *Senior Vice President, U.S. Bankcorp Community Development Corporation*

Chris Wilson, *Senior Director of Real Estate Development, Project for Pride in Living*

Financing a development with offsite construction has a different set of risks, challenges, and opportunities than traditional stick-built construction. The panelist will discuss lender/investor experience, underwriting, collateral, loan advances, timing, contingency planning, and tips for arranging financing. Dan Smith will discuss his experience with U.S. Bank, and Chris Wilson from PPL will provide the developer perspective.

2C: OFFSITE CONSTRUCTION TECHNIQUES IN MINNESOTA – LESSONS LEARNED

Harry Melander, *President, MN State Building and Construction Trades Council*

Jim Boo, *Principal, Team Boo at High Pointe Realty*

Darrell Debele, *Plant Manager, Frana Construction*

Paul Okeson, *CEO, Dynamic Homes*

Minnesota has examples of offsite construction businesses in the past and the present. Harry Melander will moderate a panel with several different stories of lessons learned. Jim Boo will share lessons learned about a single-family modular construction plant in Hugo that may have been ahead of its time. Darrell Debele will share the successful story of how Frana has used its pre-fabricated wall plant since 2000 to pre-build large sections of most of its multifamily residential construction projects. Paul Okeson will share the story of Dynamic Homes, one of Minnesota's oldest and most active modular builders.

2D: TAILORED DESIGNS AND CUSTOMER SPECIFICATIONS

Jason Landry, *Founder, Jason Landry Consulting, LLC*

Modular construction relies on the potential for standardizing design components, while at the same

time enabling customer-centric personalization. Standardization does not have to mean uniformity in our streetscapes and living rooms. How can we maximize the potential of standardization while still delivering high-caliber, unique finished buildings? Jason Landry will lead participants through a discussion of different components of a finished project and identify where designs can be streamlined and when a tailored approach will return the greatest value. This session will consider comparisons with different industries, the requirements for initial designs, and customer expectations for turnkey homes.

2E: THE POWER OF VERTICAL INTEGRATION: SEAMLESS SUPPLY CHAINS TO SMOOTH INSTALLATION

The location of the build is only one small step in realizing the potential of offsite construction. The core disruption—and the cost savings potential—comes not from building in a factory instead of a tract of land, but in developing a new model which maximize efficiency. This session will cover an end-to-end look at a bringing a new building online and dive into the places where the greatest waste occurs under traditional methods to explore how to excise that in a future system. We will discuss what it takes to deliver components, panelized or volumetric, which can be smoothly and quickly on-site. Learn how companies have stretched and partnered to create integrated supply chains and streamline development and construction.



ACTION-PLANNING WORKSHOP



5 INTEGRATED GROUPS

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