

2017 GII Summit Agenda

Capella Hotel, Singapore

May 24–26, 2017

Wednesday, May 24

07:00 REGISTRATION OPENS

10:00–14:00 INFRASTRUCTURE SITE VISITS (*various off-site locations*)

As an integral part of the Global Infrastructure Initiative (GII) program, we will be hosting five infrastructure and technology tours, learning how some of Singapore's leading organizations are improving the way that infrastructure is planned and delivered. The list of tours include:

- Changi Airport and Jewel
- The Singapore story at the Urban Redevelopment Authority
- Siemens City of the Future
- Singapore's Next Generation Tuas Port (NGP 2030)
- Project Lighthouse and Advanced Remanufacturing and Technology Center (hosted in English and Mandarin)

15:00–15:10 WELCOME AND FRAMING

Speaker: **Diaan-Yi Lin**, Senior Partner, McKinsey & Company; Co-chair, Global Infrastructure Initiative (GII)

15:10–15:40 NEW SOLUTIONS FOR GLOBAL INFRASTRUCTURE AND CAPITAL PROJECTS

To support expected global GDP growth, McKinsey estimates that the world needs to invest about 3.8 percent of GDP, or an average of \$3.3 trillion a year, in economic infrastructure between now and 2030. What are the emergent solutions and innovations needed to enable the delivery of this critical infrastructure?

Facilitators:

Roberto Fantoni, Senior Partner, McKinsey & Company; Co-chair, GII

Rob Palter, Senior Partner, McKinsey & Company

15:40–16:15 PLAN: RETHINKING THE PLANNING PROCESS

Too many infrastructure projects fail to deliver on critical citizen outcomes or never get through the planning process. Inadequate strategic planning, overwhelming political interests, and complex approval chains result in good projects being shelved or not effectively executed. How do we rethink the process and enable strategic thinking, transparency, and optionality without losing purpose? How do we motivate the private and the public sector to work better together?

Panelists:

Mark Birrell, Chairman, Infrastructure Australia

Uwe Krueger, Chief Executive Officer, Atkins

Heang Fine Wong, Group Chief Executive Officer, Surbana Jurong

Moderator: **Jonathan Woetzel**, Senior Partner, McKinsey & Company

- 16:15–16:25 INSPIRING IDEAS: USING “ASSET GENETICS” TO UNLOCK HIDDEN CAPITAL**
Similar to our genetic profiles, infrastructure assets have a set of intrinsic characteristics that establish patterns of behavior and performance. Understanding an asset’s unique traits—such as its location, construction materials, usage statistics, physical condition, and maintenance history—can reduce lifecycle costs while also extending its lifespan. Using these characteristics to optimize at scale—in a city or railway network, for example—optimizes spending, unlocks new capital flows and creates the ability to predict and manage the future. How does this work and is this a serious strategy for narrowing the infrastructure gap without raising taxes?
Speaker: Ashay Prabhu, Co-Founder Director, Assetic
- 16:25–17:00 FINANCE: FINDING ALTERNATIVES FOR FUNDING INFRASTRUCTURE**
Despite an estimated \$5 trillion of institutional capital available per year for infrastructure, the capital that flows into infrastructure continues to fall below expectations due to poor risk/return profiles for the majority of projects. Certain jurisdictions are creating alternative funding frameworks and sources—asset recycling, fiscal diplomacy, public–private partnerships, and structured finance—to address this mismatch. What are the benefits and issues in these and other funding frameworks? Collectively, will they help meet investors’ risk and return expectations in order to meet infrastructure-investment targets?
Panelists:
Keiko Honda, Chief Executive Officer, Multilateral Investment Guarantee Agency
Mark Romoff, President and CEO, The Canadian Council for Public-Private Partnerships
Martin Stanley, Global Head, Infrastructure and Real Assets, Macquarie Group
Moderator: Rob Palter, Senior Partner, McKinsey & Company
- 17:00–18:00 NETWORKING BREAK**
- 18:00–19:00 WELCOME RECEPTION**
- 19:00–21:30 DINNER AND KEYNOTE DISCUSSION**
Introduction: Kevin Sneader, Senior Partner, McKinsey & Company
Speaker: Heng Swee Keat, Minister for Finance, Republic of Singapore
Moderator: Rik Kirkland, Partner and Director of Publishing, McKinsey & Company
- 21:30 NIGHTCAP**

Thursday, May 25

06:30–07:30 SUNRISE ACTIVITY

All participants are invited to join one of three sunrise activities on Tanjong Beach:

- Stand-up paddle boarding (SUP) with Rob Palter
- Beachfront run with Dominic Barton
- Yoga with Jonathan Woetzel

08:30–09:30 DISCUSSION SESSION

Participants select one of four concurrent pillar discussion sessions

PLAN: PLANNING FOR SMART CITIES

The smart city seems inevitable. Today, we can collect more granular data than ever before, and the Internet of Things is imbuing everything from streetlights to trash cans with intelligence. Despite this, commute times have increased, and cities still generate 70 percent of our global carbon emissions. Will technologies emerge that will enable planners to more accurately predict future development and how to design smart outcomes? What new objectives should planners set for themselves?

Discussion leaders:

Michael Berkowitz, President, 100 Resilient Cities, The Rockefeller Foundation

Graham Bradley, Chairman, Infrastructure New South Wales

Sean Donohue, Chief Executive Officer, Dallas Fort Worth International Airport

M.R. Jaishankar, Chairman & Managing Director, Brigade Group

Moderator: Subbu Narayanswamy, Senior Partner, McKinsey & Company

FINANCE: BUILDING A MARKETPLACE FOR BANKABLE PROJECTS

Over the past two years, a number of nascent infrastructure marketplaces have emerged, including the Global Infrastructure Hub. With these, the transparency and pipeline is improving, but what more is needed to make projects bankable and create an efficient marketplace? What are the legal, regulatory, and other conditions required to create a framework for managing project development and delivery, sustainable revenue, and an appropriate allocation of risk?

Discussion leaders:

Christophe Dossarps, Chief Executive Officer, Sustainable Infrastructure Foundation

Chris Heathcote, Chief Executive Officer, Global Infrastructure Hub

Greg Hodgkinson, Chairman, Arup

Frank Kwok, Senior Managing Director, Macquarie Infrastructure and Real Assets

Moderator: Tyler Duvall, Partner, McKinsey & Company

BUILD: BUILDING A TALENT PIPELINE TO MEET DEMAND

The number of global megaprojects is expected to dramatically increase over the coming decades, with the majority occurring in developing countries. Analysis demonstrates that ineffective or inexperienced management teams are a major cause of project delays and cost overruns. How can the industry enable capacity building and knowledge transfer to build a talent pipeline to meet demand? What is the next wave of capabilities training for infrastructure leadership, and how do we transfer knowledge to the owner organizations to improve their capacity?

Discussion leaders:

Roger Bailey, Asset Management Director, Tideway

Raymond Ch'ien, Chairman, Hang Seng Bank

Vahid Ownjazayeri, Chief Growth Officer, AECOM

Sean Tompkins, Chief Executive Officer, Royal Institution of Chartered Surveyors

Moderator: **Maria Joao Ribeirinho**, Partner, McKinsey & Company

OPERATE: USING DATA TO INCREASE ASSET CAPACITY AND PERFORMANCE

Capacity is often constrained across asset classes, but increasing capital investment is not always the solution. Technological advances in data collection and analytics are generating valuable insights on how to optimize assets. How can owners and operators utilize these insights to improve asset performance, customer experience, and maintenance? What are the opportunities to work with advanced technologies to improve asset capacity and reduce the need for new investments? What can we learn from other sectors?

Discussion leaders:

Michael Hassing, President and CEO, Ports America

Bruce Hogg, Managing Director, Head of Infrastructure Americas, CPPIB

Gerhard Kress, Director of Mobility Data Services, Siemens

Ashay Prabhu, Co-Founder Director, Assetic

Moderator: **Martin Hjerpe**, Partner, McKinsey & Company

09:40–10:15 OPERATE: MANAGING THE THREATS OF CYBERSECURITY

In October 2016, a major cyberattack was launched through passive connected devices, shutting down Internet platforms across the world. Worldwide, infrastructure assets and utilities are implementing new technologies that make them vulnerable to disruptive, even destructive, cyberattacks. As we strive for the efficiencies and new business models that connected infrastructure can provide, how do we also ensure their safety from rogue actors and cyberattacks? What can we do to prepare for the inevitable breaches and related issues?

Panelists:

Roland Busch, CTO and Executive Member of the Managing Board, Siemens

Paul Nicholas, Senior Director, Global Security Strategy & Diplomacy Team, Microsoft

Fintan Slye, Chief Executive, EirGrid

Moderator: **Zoher Abdoolcarim**, Asia Editor, TIME

- 10:15–10:25 INSPIRING IDEAS: REIMAGINING CONSTRUCTION**
McKinsey Global Institute’s new report analyzes the underlying reasons for the construction industry’s productivity challenges, identifying the root causes and seven actions that could create a step-change in construction productivity. With \$1.6 trillion at stake, where do we start?
Speaker: **Mukund Sridhar**, Partner, McKinsey & Company
- 10:25–11:00 BUILD: THE FUTURE OF CONSTRUCTION**
Proven management processes and innovative technology-enabled solutions—from drones to next-generation building-information modeling, digitization, and advanced data analytics—have the potential to boost construction productivity by 20 to 25 percent and increase profitability. What are the most tangible proven solutions to improve the outcomes and economics? How are leading companies overcoming the obstacles of fragmentation, cultural resistance, and risk aversion?
Panelists:
Greg Bentley, Chief Executive Officer, Bentley Systems
Isabel Dedring, Global Transport Leader, Arup
Shaun Kenny, President, Asia Pacific, Bechtel
Moderator: **Michael Della Rocca**, Partner, McKinsey & Company
- 11:00–11:30 NETWORKING BREAK**
- 11:30–12:05 CROSS-CUTTING: TAKING ACTION FOR THE LONG TERM**
With sluggish economic growth and rising inequality across much of the world, long-term investment in infrastructure is critical to shift countries onto more sustainable, inclusive growth paths. But too often, governments fail to act—and the chasm between what’s needed and what actually gets done continues to widen. How do we find fresh ways to set priorities, build consensus, and develop alternatives, such as private-sector financing mechanisms? What is the new 21st-century road map that governments, investors, and companies should follow?
Panelists:
Dominic Barton, Global Managing Partner, McKinsey & Company
Lincoln Leong, Chief Executive Officer, MTR
Michael Sabia, President and CEO, Caisse de dépôt et placement du Québec
Moderator: **Rik Kirkland**, Partner and Director of Publishing, McKinsey & Company
- 12:05–12:15 INSPIRING IDEAS: PRINTING THE FUTURE**
Shanghai-based WinSun is pioneering 3-D printing as a construction process. With as few as three employees overseeing the process, commercially viable houses are being built in under one week, using materials from construction and industrial waste. This session will explore how large-scale 3-D printing could transform the industry with respect to design, cost, and time.
Speaker: **Ma Yihe**, Chairman and CEO, WinSun 3-D Printing

12:15–12:50 CROSS-CUTTING: TAPPING INTO THE NEXT BIG SKILLS DISRUPTION

Exacerbated by rapid urbanization, infrastructure demand, and an aging workforce, a deficit of leadership skills may be the biggest bottleneck to infrastructure delivery in the future. However, the industry is not tapping into a large subset of the potential—despite McKinsey’s research that diversity is good for the bottom line, women currently hold under 16 percent of senior leadership roles. What proven practices can we apply across the industry to spur systemic change? What is the responsibility of industry leaders to drive measurable progress?

Panelists:

Alice Au, Senior Partner, Spencer Stuart

Lara Poloni, Chief Executive Officer, Australia & New Zealand, AECOM

Bruno Roy, Chief Financial Officer, WSP Global

Moderator: **Diaan-Yi Lin**, Senior Partner, McKinsey & Company; Co-chair, GII

12:50–14:15 LUNCH

14:15–15:15 DISCUSSION SESSIONS

Participants select one of four concurrent pillar discussion sessions:

PLAN: OVERCOMING JURISDICTIONAL BOUNDARIES

Rapid urbanization, migration, and the increasing scale of infrastructure projects are challenging the limits of historic jurisdictional boundaries and our ability to solve problems within the confines of a single municipality. How can regional planning authorities help optimize transport, water, and other networks that span boundaries? How do cities engage their neighbors to learn from each other and improve their planning and integration, while competing for funding?

Discussion leaders:

Andy Goodwin, Chief Executive Officer, SMEC

Eva Skira, Former Chairman, Water Corporation of Western Australia

Nicholas Wong, Co-head of Worldwide Projects Group, Clifford Chance

Tom Wright, President, Regional Plan Association

Moderator: **Jonathan Woetzel**, Senior Partner, McKinsey & Company

FINANCE: ASSUMING THE ROLE OF CATALYST

Governments have a crucial role to play in providing the structure and funding to ensure that markets work and infrastructure delivers the biggest possible dividend. What tangible steps can governments take to broaden their role and help catalyze projects? What more can governments and the private sector do to ensure that projects deliver on both economic and community criteria? How does fiscal diplomacy fit into infrastructure development in emerging markets?

Discussion leaders:

Clive Kerner, Chief Executive Officer, Clifford Capital

Kiyoshi Nishimura, Chief Executive Officer, Credit Guarantee & Investment Facility

Dmitry Pankin, Chairman of the Management Board, Eurasian Development Bank

Fahd al-Rasheed, Group Chief Executive Officer, King Abdullah Economic City

Moderator: **Charlie Taylor**, Senior Partner, McKinsey & Company

BUILD: IMAGINING CONSTRUCTION'S DIGITAL FUTURE

The construction industry is ripe for disruption, but the adoption of digital solutions has been slow. Technologies from five proven digital approaches have offered the potential to transform the industry at scale: higher-definition surveying and geolocation, next-generation 5-D BIM, digital collaboration and mobility, the Internet of Things, and advanced analytics, and future-proof design and construction. Why is the adoption rate so low? What can we do to increase the use of these technologies?

Discussion leaders:

Leigh Jasper, Chief Executive Officer, Aconex

Abhishek Lodha, Managing Director, Lodha Developers

César Ramirez Martinell, Chairman, Barcelona Housing System

Thomas Wolf, Chairman and CEO, RIB Software

Moderator: **Mukund Sridhar**, Partner, McKinsey & Company

OPERATE: DESIGNING ASSETS TO MAXIMIZE VALUE OVER THE FULL LIFE CYCLE

In manufacturing, 80 percent of product costs are fixed when the design is complete. As a result, customers are increasingly factoring total life-cycle cost into their procurement decisions. Optimizing the design of infrastructure assets for operational use and the best customer experience over the full life cycle presents a big opportunity to increase the value of an asset. What methods and technologies should infrastructure owners and operators consider when tapping into the hidden value of new projects?

Discussion leaders:

Mark Elliott, Chief Executive Officer, Northwest Rapid Transit

Andrés Kuhlmann, Chief Executive Officer, Transelec

Gianluca Racana, Managing Director, Zaha Hadid Architects

Wouter Van Wersch, President and CEO, GE Asean

Moderator: **Gernot Strube**, Senior Partner, McKinsey & Company

15:25–16:25 DISCUSSION SESSIONS

Participants select one of four concurrent pillar discussion sessions:

PLAN: INTRODUCING PERFORMANCE-BASED REGULATIONS AND PROCUREMENT

Worldwide, regulations and regulatory systems are established to improve operational management, promote good practice in safety and environmental management, and encourage private investment through transparent and predictable decision making. Despite these good intentions, regulations and procurement often get in the way of infrastructure and urban development, and fail to deliver on the promise of better performance. What principles facilitate best-practice urban infrastructure development? How do we get rid of unnecessary regulations that stifle productivity and infrastructure delivery?

Discussion leaders:

Adil Anwar, Chief Executive Officer, Infrastructure Project Development Facility, Pakistan Ministry of Finance

Nick Merritt, Global Head of Infrastructure, Mining & Commodities, Norton Rose Fulbright

Lyndon Rowe, Chairman, Synergy

Jim Stamatis, Chief Executive Officer, Louis Berger

Moderator: **Stuart Shilson**, Senior Partner, McKinsey & Company

FINANCE: MOBILIZING CAPITAL TO FINANCE SUSTAINABLE INFRASTRUCTURE

Over the next 15 years, the world needs to mobilize trillions of dollars of financing per year to pay for sustainable infrastructure that can withstand changing environments, without contributing to carbon emissions. This presents a significant opportunity for private-sector investors willing to engage in innovative investment strategies and partnership models. How do we get started when political leaders are not always supportive? Is there a role for carbon taxes or cap-and-trade programs?

Discussion leaders:

Tas Anvaripour, Partner, Energy Infrastructure, The Abraaj Group

Andrew Day, Chief Executive Officer, Hastings Fund Management

Omar Shahzad, Group Chief Executive Officer, Meinhardt Global

Werner Von Guionneau, Chief Executive Officer, InfraRed Capital Partners

Moderator: Roberto Fantoni, Senior Partner, McKinsey & Company; Co-chair, GII

BUILD: IMPROVING CONSTRUCTION PRODUCTIVITY AND PROJECT PERFORMANCE

Construction-sector productivity has flatlined in most advanced economies for decades—a tremendous missed opportunity at both a corporate and economic level. Proven management techniques, such as lean construction and integrated project delivery, have demonstrated how to dramatically improve outcomes. Using recent case studies, participants will delve into the how and why certain management techniques make a big difference.

Discussion leaders:

Clorivaldo Bisinoto, Chief Executive Officer, Andrade Gutierrez Engenharia

Heinz Ehrbar, Head Management Major Projects, Deutsche Bahn

Brad Knight, President and COO, Katerra

Rick Ness, Commissioner, PT Indika Energy

Moderator: Olivier Legrand, Senior Partner, McKinsey & Company

OPERATE: CREATING THE TRANSPORTATION AUTHORITY OF THE FUTURE

In response to the wave of new technologies, funding pressures, and shifting mobility requirements, departments of transportation (DoTs) have to evolve. As we look ahead, these pressures will only escalate, as will the complexity of projects and the public's desire for transparency into the performance of their DoT. What are the biggest external and internal issues that DoTs will need to deal with? What new business plans will be required to tackle these issues? How can DoTs be structured and managed to catalyze the next generation of innovation and improve the user experience?

Discussion leaders:

Rotimi Amaechi, Minister of Transportation, Federal Republic of Nigeria

Rosemarie Andolino, President & CEO, Manchester Airports Group USA

Pete Rahn, Secretary of Transportation, State of Maryland

Vladimir Yakunin, Chairman of the Supervisory Board, Dialogue of Civilizations Research Institute

Moderator: Tyler Duvall, Partner, McKinsey & Company

16:25–16:40 SWITCH BREAK

- 16:40–16:50 INSPIRING IDEAS: USING SOCIOECONOMIC PLANNING TO CREATE VIBRANT CITIES**
Over the next 20 years, \$40 trillion is likely to be invested in urban infrastructure across 4,400+ cities around the world. To attract and retain people, cities need to compete on economic and lifestyle factors. How do we create the most livable, socially vibrant, and dynamic cities? What can cities do to build thriving economies with ample employment opportunities? How do governance, smart technologies, and infrastructure investment fit into the picture?
Speaker: Ankit Gupta, Partner, McKinsey & Company
- 16:50–17:10 ENGAGING WITH THE BELT AND ROAD INITIATIVE**
The Belt and Road Initiative (BRI) is an economic and diplomatic strategy to transform world trade and create regional collaboration. In terms of its size, scale and geographic spread, it is arguably the most ambitious economic project of the 21st century—intended to connect 65 countries, 65% of the world’s population, and one third of global GDP. Successfully implemented, BRI may be a core driver to re-ignite global growth. What opportunities exist for companies and countries to engage?
Speaker: Liew Mun Leong, Chairman, Changi Airport Group and Surbana Jurong
Moderator: Guangyu Li, Senior Partner, McKinsey & Company
- 17:10–17:30 THE BEST IDEAS**
Recap of the best ideas, insights, and actions from the Global Infrastructure Initiative
Facilitators:
Roberto Fantoni, Senior Partner, McKinsey & Company; Co-chair, GII
Rob Palter, Senior Partner, McKinsey & Company
- 17:30–19:00 BREAK**
- 19:00–21:30 DINNER AND ENTERTAINMENT**
- 21:30 NIGHTCAP**

Friday, May 26

09:00–12:00 SECTOR-SPECIFIC ROUNDTABLES

GII will be hosting three concurrent sector-specific roundtables covering Engineering & Construction, Energy & Resources, and Real Estate. The roundtables are an evolution of GII, based on requests from participants to have the opportunity to go deeper into specific sectors on some of the most exciting topics.

ENGINEERING AND CONSTRUCTION: USING PREDICTIVE ANALYTICS TO IMPROVE PROJECT PLANNING, DESIGN, AND DELIVERY

Today's low-performing construction and capital-projects ecosystem is ripe for overhaul. Many industries are making huge advances by applying advanced analytics to help improve productivity, reduce risk, and monitor performance. How can the industry better collaborate and use advanced analytics to mitigate repetitive problems experienced in megaprojects? What steps should all leading engineering and construction companies be taking now?

ENERGY AND RESOURCES: DELIVERING NEXT-GENERATION RESOURCE PROJECTS FASTER AND CHEAPER TO COMPETE IN THE NEW NORMAL

With increased volatility in resource and commodity prices, stakeholders from across the value chain are having to adapt to a sustained low-price environment. Given this context, this roundtable will tackle two core topics:

- **Building faster and cheaper in an era of lower resource prices.** What are companies doing in the resource industries to adapt their capital outlay, strategy, and execution to low commodity prices? What lessons and breakthrough ideas can companies learn from other industries who have improved their capital productivity to deliver resources to market on time and below budget, thereby creating value in this challenging environment?
- **Reimagining design and construction in a world of digital disruption.** How will the advent of digital technologies change the way resource projects have been designed and constructed? What could be the project organization and supply chain of the future? What value can be unlocked and what capabilities will be required to capture this potential?

Friday, May 26

09:00–12:00 SECTOR-SPECIFIC ROUNDTABLES (CONTINUED)

REAL ESTATE: EMBRACING CUSTOMER CENTRICITY AND FAST-DELIVERY TECHNIQUES

This roundtable will take place from 10:00 to 15:00 and tackle two core topics:

- **Tapping into customer centricity in real estate.** With global real estate markets becoming increasingly competitive and regulated, winning over customers is paramount. Historical differentiators like location, trust, reliable delivery, and price appreciation are now table stakes. Customer centricity is the new differentiator but the sector has significant room for improvement. This industry has not attracted the best marketing and sales talent, and many decisions are based on owner instinct. All this is set to change. This session will apply the lessons from other industries on how to win the customer battle in real estate.
- **A new paradigm for construction.** For the past century, construction in real estate has not changed much. Property companies, design firms, contractors, and consumers have come to accept the reality that it takes years for buildings to be designed and delivered. However, technology is positioned to change the status quo. The application of high-speed construction and digital technologies not only reduces the time and cost of construction, but also changes the entire real estate business model. This session will evaluate the proven trends and determine how real estate companies need to adapt to these disruptions.

12:00–13:00 NETWORKING LUNCHEON