

Industry Agenda

# Infrastructure & Urban Development Industry Vision 2015

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# Foreword

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Under the leadership of the Governors, the World Economic Forum's Infrastructure & Urban Development Industries community can report another year of important achievement. In 2014, the community grew sustainably, with several new Partners joining. It now consists of 50 Partners covering a broad range of professional interests across the entire value chain, from real estate to construction and heavy industry engineering services and equipment. The strategic objective remains to leverage the strengths of this integrated value chain approach while ensuring the highest level of servicing of specific sector priorities.

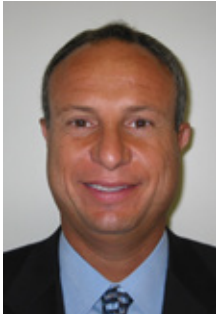
Today's global infrastructure demand is estimated at approximately \$4 trillion in annual expenditure, with a gap – or missed opportunity – of at least \$1 trillion every year. Countries often face the paradox of a dry pipeline of projects, even though about \$60 trillion sits in pension funds, insurance firms, sovereign wealth funds, and private equity funds. While government leaders must appropriately select and prioritize their infrastructure needs beyond the constrained logic of political cycles, they are nevertheless partly incapable of closing the financing gap, which the private sector must fill. It will not be possible to meet the demand without innovative financing models, new models of collaboration and the creation of private companies best suited to execute the much-needed infrastructure and resultant urban development.

Global economic prospects are improving in a number of markets. Notably, the US construction sector has stabilized and is expected to turn around within three or four years. Gross Domestic Product (GDP) in many parts of the world is increasing, according to the International Monetary Fund, and this is certainly a good proxy for the future of the real estate, design engineering and construction sectors. The World Bank estimates that global annual economic growth will reach 3.4% in 2015, opening up opportunities for the industry immediately and bringing a sense of market confidence in the long run. Although traditionally important markets such as the European Union still appear fatigued, with a declining GDP at the end of 2014 and little prospect for accelerated growth, emerging markets are likely to represent roughly 55% of world GDP by 2019 – an inviting scenario for strategic investment. However, the perceived political and regulatory issues in these markets and a lack of financial instruments to mitigate their investments often deter financiers.

In coming years, the construction market is expected to continue to grow in emerging economies, where rising populations and migration to cities, alongside faster urbanization, will drive the construction of infrastructure and underlying services, housing and commercial real estate. These markets in Eastern Europe, Asia, Turkey, the Middle East, North Africa and sub-Saharan Africa will develop at an economic growth rate above the global average. By contrast, many developed (or mature) economies will not grow, given their constraints of excessive government debt and austerity programmes that are not yet over. Cities will continue to be the motor of economic development and competitiveness.

This year's Governors Programme will address the most pressing issues on the global, industry and regional agendas related to engineering and construction, real estate and urban development, and oilfield services and equipment. The Forum's Infrastructure & Urban Development Industries team will strive to make 2015 even more successful than 2014, bringing to fruition a number of results directly related to Forum initiatives while using the vast experience of new Partners. The team looks forward to working with all members of the community in 2015 to advance the industries' agendas in accordance with the Governors mandate set at the World Economic Forum Annual Meeting 2015 in Davos-Klosters, Switzerland. The Infrastructure & Urban Development Industries team aims to serve as a forward-thinking, valuable and internationally recognized partner for all stakeholders in infrastructure and urban development. In addition, it seeks opportunities to convene leaders, raise global awareness, conceive frameworks and prepare actionable recommendations to change the state of the world.

# Message from the Co-Chairs of the Infrastructure & Urban Development Industries Community



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President and  
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Dear Governors:

It is with great pleasure that we welcome you to the World Economic Forum Annual Meeting 2015 in Davos-Klosters while providing a full overview of what has been achieved during 2014. Our tenure as Co-Chairs of the Infrastructure & Urban Development Industries substantiated our aspirations to serve and guide our community of partners while ensuring that its accomplishments remain absolutely pertinent and in line with the most recent sector's developments. We further emphasize and recognize the importance of your commitment as a Governor: Our joint work is the intrinsic result of your thought leadership in fostering public-private cooperation as global corporate citizens.

While infrastructure development should be booming based on the world's actual demand, the reality is that a persistent gap of US\$ 1 trillion accumulates every year. It is simply impossible to close such a gap effectively without exploring new business approaches together with government and civil society. Undeniably, such new models of public-private cooperation will become the engines of economic development and will transform our sector in the short to medium term. The recent recommendations of the G20 in Australia clearly position the infrastructure sector as an answer to deliver better living standards and quality jobs. However, market distortions may well happen -- given the low oil prices, volatility in commodities and uncertain recovery of bailed-out economies that significantly impact our sector. Uncertainty, though, also means that a wealth of opportunities may be tapped in our sector, whether in real estate, engineering and construction, or the built environment.

In retrospect, we would like to highlight the extremely high quality of work produced in 2014 and the consistent dedication and support you have all provided in building each one of the deliverables. Among these, we would like to underline the Strategic Infrastructure Knowledge Series (now in its fourth and last year); Regional Infrastructure Acceleration (focusing in Africa, now in its third and last year); the Future of Urban Development (focusing in India); the Emerging Horizons on Real Estate (focusing on asset dynamics and regulation); Oilfield Services: Unlocking the Full Potential (focusing on performance of capital projects); Building Foundations Against Corruption and the Disaster Resource Partnership (hosted at the rotating secretariat, currently Fluor Corporation). Furthermore, we also acknowledge the forward looking work carried out by the three Global or Industry Agenda Councils under the broad thematic umbrella of our sector, namely Infrastructure, the Future of Real Estate & Urbanization and the Future of Cities.

The Annual Meeting 2015 in Davos-Klosters will further enable us to continue our strategic dialogues and delineate with precision our community mandate for the coming year. We would anticipate that this mandate reflects important trends but also some of the disruptive drivers of change that range from accelerated demographics, use of land, affordable housing and infrastructure, to big data, the Internet of things and other emerging technologies, to name only a few. Indeed, we would also anticipate that key global trends such as the ones recently identified by the Global Agenda Survey would impact our sector to a large extent. Among these global trends, income inequality, persistent jobless growth, lack of leadership and rising geostrategic competition rank at the very top.

We would also like to call your attention to a new and comprehensive knowledge system designed to map global transformations that the World Economic Forum recently introduced at the inaugural Industry Strategy Meeting in New York in October 2014. This system consists of a series of interlinked Transformation Maps to help us navigate through and better frame global, industry and regional issues to capture the knowledge and insights emerging from our activities. Hence, we invite you to familiarize yourself with this at the Annual Meeting 2015 in Davos-Klosters and use it as a tool to further generate insights that can serve as stepping stones to support and guide our discussions going forward.

As we prepare our journey for the World Economic Forum Annual Meeting 2015 in Davos-Klosters, under the theme of "The New Global Context," we encourage you all to invest your time in the numerous discussions that will certainly provide you with a fertile ground to reflect on some of the most pressing economic challenges related to our sector and on aligning the community's goals for the future. In so doing, your commitment will ensure that the Infrastructure & Urban Development community remains a cradle of unparalleled opportunities to shape the sector's agenda in view of the new global context, where situation awareness and contextual intelligence are paramount.

# I The Global Agenda

The World Economic Forum strives continuously to identify what matters to and intrigues our constituents. This year, we surveyed leaders from business (43%), academia (22%), civil society (19%), government (9%) and international organizations (7%) across industries and regions to gather insights on the most important global issues. The 2014 survey on the Global Agenda received valid replies from 1,767 respondents, a 10% increase from last year's survey. The findings of the top 10 global trends can be clustered around the main topics:

- **Geopolitical and governance issues** (3,628 respondents on Top 10 Global Trends Nos.3, 4, 7 and 9)
- **Social, health and employment issues** (2,993 respondents on Top 10 Global Trends Nos.1, 2 and 10)
- **Climate change and sustainability** (2,725 respondents on Top 10 Global Trends Nos.5, 6 and 8)

Survey participants identified and selected the following Top 10 Global Trends:

1. Deepening income inequality (1,224 responses)
2. Persistent jobless growth (1,031)
3. Lack of leadership (967)
4. Rising geostrategic competition (956)
5. Rising pollution in the developing world (951)
6. Increasing water stress (901)
7. Weakening of representative democracy (876)
8. Increasing occurrence of severe weather events (873)
9. Intensifying nationalism (832)
10. Growing importance of health in the economy (738)

What are the **top 10 trends** for 2015?

1. Deepening income inequality
2. Persistent jobless growth
3. Lack of leadership
4. Rising geostrategic competition
5. The weakening of representative democracy
6. Rising pollution in the developing world
7. Increasing occurrence of severe weather events
8. Intensifying nationalism
9. Increasing water stress
10. Growing importance of health in the economy

Source: Survey on the Global Agenda 2014

<http://reports.weforum.org/outlook-global-agenda-2015/>

WORLD ECONOMIC FORUM

# Industry Transformations

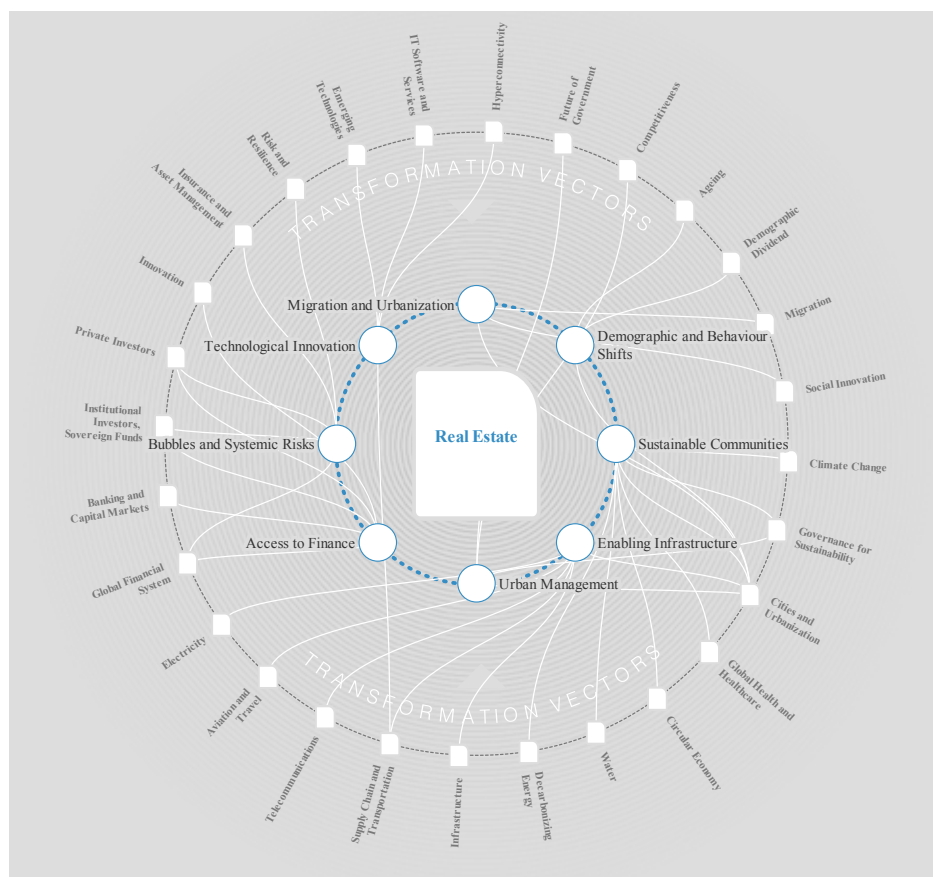
A new and comprehensive knowledge system designed to map global transformations will be introduced at the World Economic Forum Annual Meeting 2015. Transformation maps frame global, industry and regional issues, and provide Forum communities a system to continuously capture the knowledge and insights emerging from Forum activities.

The framework is designed to access the collective intelligence of the Forum network, including 1,000 of the world's leading experts represented in the Network of Global Agenda Councils. In future, the knowledge system will encompass a continuous flow of insights from all Forum activities, set against the strategic priorities identified in the various industry, regional and global issues.

As a result of comprehensive discussions in the Industry Strategy Meeting in New York in October, as well as at the 2014 Summit of the Global Agenda in Dubai in November, the Global Agenda Council on the Future of Real Estate & Urbanization proposed to update and prioritize the Real Estate Transformation Map as follows:

1. **Sustainable Communities:** The Growing Impact of Climate Change and Sustainability Issues on Urban Development
2. **Enabling Infrastructure:** New Requirements for Enabling Infrastructure for Real Estate
3. **Urban Management:** Lack of Alignment in Governance and Urban Management

## Transformation map for real estate



4. **Migration and Urbanization:** Growing Impact of Migration on Urbanization
5. **Access to Finance:** Shifting Investor Landscape and Innovation in Real Estate Finance
6. **Technological Innovation:** Disruptive Impact of Digital and Technological Innovation
7. **Bubbles and Systemic Risks:** Reoccurrence of Real Estate Bubbles and Systemic Risks
8. **Demographic and Consumer Behaviour Shifts**

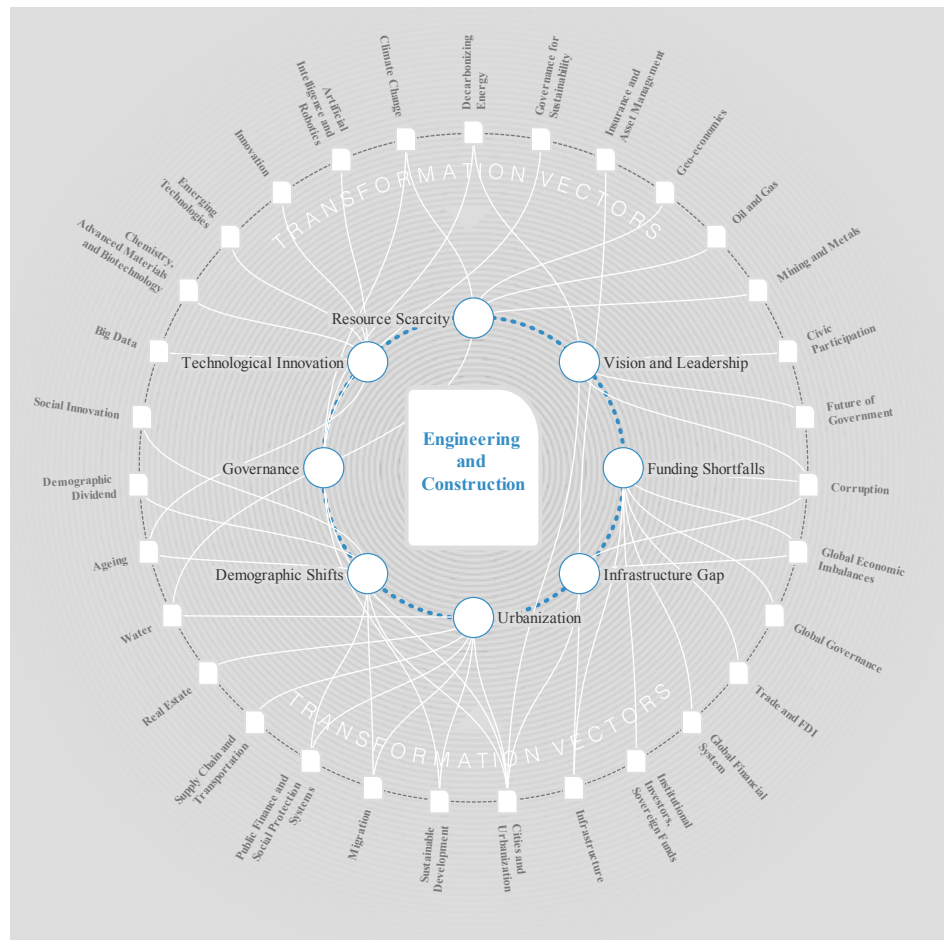
Similarly, the Engineering & Construction Transformation Map was updated as follows:

- **Demographic Shifts:** More people means an increasing demand for infrastructure
- **Funding Shortfalls:** Increasing need for a new funding model to close the financing gap
- **Geopolitics:** Civil society is finding its voice and disrupting the status quo
- **Governance:** Robust governance models and best practices are

- needed to ensure sustainability
- **Infrastructure:** Global repository of best practices and bankable projects is needed to close infrastructure gap
- **Resource Scarcity:** Competition increases on projects as firms seek to secure natural resources
- **Technological Innovation:** New technology can cut costs, facilitate maintenance, and improve monitoring and project management
- **Urbanization:** Effects of urbanization will transform business models beyond physical infrastructure needs
- **Vision and Leadership:** Visionary leadership is needed to advance infrastructure investment

The transformation maps will help the Forum community to better understand and plot industry transformations, and decision-makers' opportunities and challenges, as the structure of the Infrastructure & Urban Development Industries changes profoundly. Through the maps, it will be possible to identify systematically significant transformational trends, as well as the drivers of and impacts on industries, while highlighting intersecting areas of mutual interest between sectors. Further development of these maps will bring greater focus to shaping of the industry agenda, including defining opportunities and challenges, finding common solutions, and engaging in appropriate initiatives to fulfil the Forum's mission of improving the state of the world.

### Transformation map for engineering and construction





## Infrastructure & Urban Development Industry Vision 2015

# Overview of Infrastructure & Urban Development Initiatives

### The Strategic Infrastructure Initiative

The Global Strategic Infrastructure Initiative and its Knowledge Series Reports have been providing governments and major stakeholders with comprehensive frameworks and actionable best practices that cover the infrastructure life cycle — from start to preparation and implementation of physical assets.

### Advancing Infrastructure Financing – Private Session – World Bank Group Annual Meeting – World Economic Forum, Washington DC, 9 October 2014

Infrastructure, the building of physical assets such as roads, ports and

airports, is vital to employment and economic growth. Challenges exist in unlocking for infrastructure the estimated \$60 trillion lying in pension funds, insurance firms, sovereign wealth funds and private equity funds. The High Level Roundtable on Advancing Infrastructure Financing that took place in Washington DC discussed finding consensus on the following issues:

- How can governments and multilateral development banks move towards aligning global and national regulations with evidence-based characteristics of long-term infrastructure/project finance investment?

- How can a better understanding be developed of market-based, risk mitigation systems, and how can these be used to progress towards a sustainable uplift in financing?
- Which main institutions should create a distinct asset class of infrastructure investment? How can these organizations collaborate to make infrastructure an accessible investment/security?
- What should be the immediate commitments and next steps to ensure setting-up of a “Knowledge & Collaboration Platform” in line with recent B20/G20 recommendations, encourage application of best practices and standards, and increase the productivity of infrastructure investments?





### Global/National Regulatory Issues

The most important take-outs were:

1. Dialogue is needed with the regulatory authorities that influence long-term financing, an inherent part of infrastructure investment. Different perceptions exist of risk in infrastructure, as do different risk profiles of financing institutions.
2. Infrastructure investors are trying to identify, manage and mitigate the risks in certain capital projects. A more thorough qualitative and quantitative analysis is required of the risks in the underlying assets and investment vehicles. New ways are needed to learn more about the risk-return profile of infrastructure investments.
3. In their search to allocate more resources to infrastructure projects, institutional investors are seeking ways to streamline a broader database that will provide reassurance of the credit quality of global infrastructure investments.

### Risk Mitigation

The breakout discussion threw up the following points:

1. Risk mitigation is essential for a project to go ahead in developing countries. Constrained by internal rules and mandates, international financial institutions (especially multilateral development banks) can take on only a limited percentage of the risk in a project.
2. If a project is structured correctly – meaning, the contracts and documentation are sound – and has a strong underlying business case, then the evidence suggests that capital investors will finance such projects in developing and emerging markets.
3. A clear distinction should be made between what is considered “insurable” and “non-insurable” risk. The insurance industry knows well the conditions that make a risk “insurable”. But some, such as political and regulatory risk and natural disaster risk, evidently do not fall in this category.



### Infrastructure as an Asset Class

Participants recognized that the following topics should be highlighted in any new discussion about identifying infrastructure as a distinct asset class:

1. A financial asset class is conventionally defined as a set of assets with similar risk-return characteristics and subject to similar regulatory structures. The proposition of infrastructure as a separate asset class must be revisited to accommodate the sector's variety of projects, each with its own characteristics. The crucial question is: should infrastructure be regarded as a single asset class or as comprising many different ones?
2. Infrastructure projects, particularly public-private partnerships, are closely linked to the development of project finance, a technique based on lending against the cash flow of a project that is legally and economically self-contained. Project finance arrangements are highly leveraged and lenders receive no guarantees beyond the right to be paid from the cash flow. The project's assets are specific to its economic activity, and may be illiquid in the sense that a mature secondary market is lacking, and the assets would have little value if the project fails. Investigating the liquidity of infrastructure investments is necessary.
3. Islamic finance tools can be involved in funding infrastructure. Islamic finance refers to the raising

of capital according to Sharia, or Islamic law, by corporations, including banks and other lending institutions. Central to Islamic finance is a requirement that the lender not charge interest from the borrower.

### Knowledge & Collaboration Platform

The main outcomes of the discussion included:

1. Infrastructure initiatives around the world must be collated and aligned.
2. Steps should be taken to create a Global Infrastructure Centre.
3. More model documentation and standardization needs to be procured for quality projects.

### Phase IV Report

The fourth phase report is on the political (and regulatory) risk landscape in 2014-2015. The report analyses risk-mitigation measures in two stages:

- Risk landscape – the different facets of political and regulatory risk along a project's life cycle are clarified.
- Framework of risk-mitigation measures – the steps that might be taken by the public and private sectors, and jointly by multiple stakeholders are discussed; international best practices are presented; and a final chapter describes how to holistically implement recommended risk-mitigation measures.
- The report is being finalized and will be launched in the first quarter of 2015.

### African Strategic Infrastructure Initiative

The World Economic Forum leads the African Strategic Infrastructure Initiative in partnership with the African Development Bank (AfDB). The initiative is supported and guided by the African Union Commission and the NEPAD Planning and Coordinating Agency, which are the coordinating agencies for implementing the Programme for Infrastructure Development in Africa Priority Action Plan (PIDA PAP). PIDA PAP constitutes a subset of 51 Infrastructure programmes to be implemented by 2040. It focuses on four sectors across Africa – energy, transportation, water and information communication technology or ICT – and represents more than \$67 billion of investment needs. The current phase of the initiative focuses on:

- Individual project acceleration via a pilot PIDA project, the Central Corridor
- Revision of a model infrastructure facility for Early Stage Project Financing
- Capacity-building in governments, institutions and local organizations to bridge the infrastructure gap

The 4th Business Working Group meeting provided an overview of the main milestones achieved and planned engagements, as well as a platform for participants to share best practices, concerns and lessons learned. The proceedings included presentations from members with the objective of advancing infrastructure development in Africa.

As the initiative currently focuses on a replicable acceleration process for infrastructure programmes in Africa, the Central Corridor was selected in April 2014 to serve as a pilot. (The corridor is a port, rail and road programme connecting Tanzania, Burundi, Uganda, Rwanda and Democratic Republic of Congo.) The World Economic Forum provided updates on the methodology developed to select the Central Corridor from 51 PIDA programmes, and on the pilot's current status. Significant progress has been achieved

in partnership with the Central Corridor Transit Transport Facilitation Agency (TTFA). Rukia D. Shamte, Executive Secretary, Central Corridor-TTFA, and other participants had the opportunity to review current shortlisted projects to be showcased at a planned investors forum.

The initiative's second module focuses on Early Stage Project Financing. Project preparation needs in Africa are significant and require innovation. The AfDB's investment vehicle, Africa50 fund, takes such a proactive step. The Forum's concept note outlines a model for project preparation based on public-private cooperation. The report is currently being revised to incorporate findings and case studies of established project preparation facilities.

### Global Agenda Council on Infrastructure

After the publication last year of two reports, *Infrastructure Investment Blueprint* and *Accelerating Infrastructure Delivery*, a new Global Agenda Council on Infrastructure was created for a two-year term (July 2014-June 2016) with 21 high-level Members.

This year, Thomas Maier, Managing Director, Infrastructure, at EBRD, and Rashad Kaldany, Executive Vice-President, Emerging Markets, Caisse de dépôt et placement du Québec, will act as Chair and Vice-Chair. Council Members met at the Summit on the Global Agenda in Dubai on 9-11 November 2014 and identified potential workstreams for focus in 2014-2015.

The direction of the Global Agenda Council on Infrastructure is based on the premise that a wealth of best practice information and support is available globally. However, the current landscape needs to be improved:

- A highly fragmented knowledge landscape makes it extremely difficult to find the right information or access it in digestible blocks.
- Information and advice are seldom practical and lack the project

context useful in making informed decisions.

- Limited data are available for tracking or benchmarking project performances, regulatory environments, and national and international agencies.
- Infrastructure players have not yet embraced the concepts of collaboration and self-interested sharing that propelled the information technology industry, leading to its growth and win-win opportunities for companies, consumers and the public sector.
- A systemic asymmetry of information is available to the private and the public sectors, resulting in unacceptable levels of delay and resource misallocation during project preparation. The private sector should take leadership in opening up the infrastructure knowledge system.

The Global Agenda Council's contribution to a knowledge platform will assist the public sector to develop institutional capacity, and understand the process of project preparation – improving pipelines, enabling the enlargement of a pool of “bankable” projects and shortening project delivery times.

The Council will focus on the following areas:

1. Define a risk framework covering political and regulatory threats that will build on the World Economic Forum Global Strategic Infrastructure Initiative.
2. Assess the results of infrastructure investments. Define clear and uniform metrics to measure the returns from infrastructure investments from the perspectives of both the public sector (development achievements and net benefits to GDP) and the private sector (financial returns to investors, both debt and equity). The metrics can then be used by government and private-sector decision-makers to understand, evaluate and prioritize investment in projects. The Council will review this work and

propose measures to dispense it more widely. Work on this stream will begin after the Annual Meetings.

3. Create the overall architecture, principles and incentives of an online global knowledge exchange system. An initial structure envisages four pillars of knowledge focused on enhancing project delivery and reducing the infrastructure gap.
  - a. A data archive comprising information on standardized documentation, previous transactions, case studies and previous business cases. (Such data can be used for benchmarking and creating indices supporting infrastructure as a separate asset class.)
  - b. A repository of “expert systems” providing examples for project development, templates, “worked through cases” and general guidance for projects. The latter includes template-style approaches such as the International Infrastructure Support System, a new online cloud-based project development tool for project sponsors, and a reporting site for project preparation facilities.
  - c. Training through an “online” academy, with significant resources to instruct individuals on infrastructure, both public and private sector, and links to academic and other providers.
  - d. A community-based resource for expert interaction, based on individual and institutional contact, peer-to-peer review, and an “infra-blog” service that links dedicated professionals and allows online exchange of issues and outcomes.

The main directives of the Global Strategic Infrastructure Initiative will be to accelerate infrastructure delivery and disseminate best practices in Latin America (Colombia, Mexico and Brazil) and South-East Asia.

### The Future of Urban Development Initiative

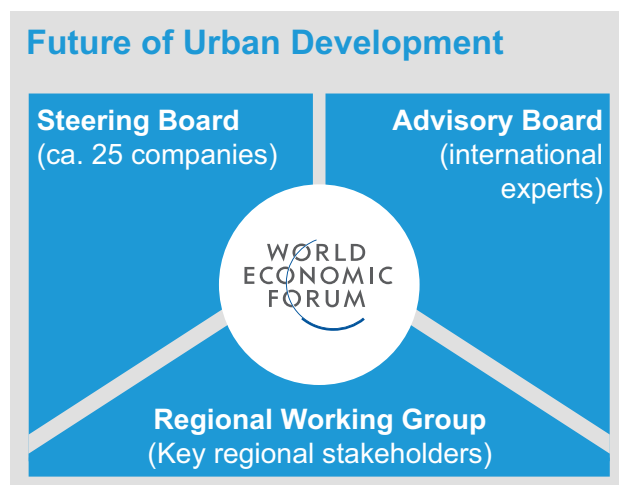
Launched in 2012, the Future of Urban Development (FUD) initiative serves as a partner in the worldwide transformation of cities as they address major urban challenges. It aims to make innovation accessible to city and business leaders in a mutually beneficial setting.

The initiative convenes Steering and Advisory Boards of industry and city leaders, and urban experts. The Steering Board specifically includes chief executive officers and senior executives from around 25 global companies. The Advisory Board consists of approximately 25 global experts in urban development. As support, specific Regional Working Groups of local business executives and urbanization experts will be formed based on need. Together, this community of experts will rethink urban development problems through a suite of activities.

#### Core Activities

- Global Dialogue on New Models for Urban Problem-Solving
- Champion City Activity
- Global Agenda Council on the Future of Cities

Multiple organizations and communities both inside and outside the World Economic Forum continuously express strong interest in collaborating with the FUD initiative. The Forum recognizes that initiatives abound, involving mayors, organizations, foundations and the private sector, and these programmes are keen to partner with the Forum. In 2015, the Steering Board will conduct an analysis of these opportunities in an effort to enhance cross-sector collaboration and engagement, and decide how the FUD project will proceed. Collaboration may require the FUD initiative to be restructured to execute its mission more effectively, while also exploring the various initiatives inside and outside the Forum.





01: Preeti Kumar, Managing Partner and Global Board Member, Amrop, India (right)

## 2014 Highlights

- **Community update:** The Steering Board and the Advisory Board have recently been reformed. The Steering Board now comprises about 25 Industry Partners, including the World Bank and new senior executives from RMZ Corp and Qualcomm Technologies. The Advisory Board now comprises about 25 global urban development experts, including representatives from innovative start-ups, cities, public organizations, academia, non-governmental organizations, and the urban designer and architect community. The changes to the boards reinforce the importance of keeping cities on the global agenda, and of the Forum’s role as a convener and catalyst for multistakeholder action.
- **Creating impact:** 2014 saw the completion of Champion City activity in China with Dalian and Zhangjiakou. In August 2014, the final report on the strategic recommendations for the two Champion Cities was successfully launched in association with the China Center for Urban Development (CCUD) in Beijing.
- **Global Agenda Council on Urbanization:** In the first half of 2014, the Council published a third volume of *Urban Anthologies*, available in hard copy and online via <http://senseable.mit.edu/wef>. The book focuses on how cities can cultivate innovation in a time of crisis (fiscal, natural disaster, displaced people, or other) and was supported by a grant from the Bill & Melinda Gates Foundation. In June 2014, the Council showcased the main findings of the *Urban Anthologies* series at the World Cities Summit in Singapore.
- **Global Agenda Council on the Future of Cities:** During the Summit on the Global Agenda 2014 in Dubai in November, the Forum established this new Global Agenda Council, which will run until the end of 2016. The aim is to develop architecture that will allow cities to evaluate, select and integrate innovative urban-services solutions, along with the governance and financial structures to enable this transition.

## 1.1 Core Activities:

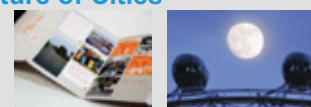
### I: Global Dialogue on New Models for Urban Problem Solving



### II: Champion City Activity



### III: Global Agenda Council “Future of Cities”



## I. Global Dialogue on New Models for Urban Problem Solving

Steering and Advisory Board members share information on innovative models for addressing urban challenges, which range from technology-enabled solutions to new governance structures. Sessions are held at the Forum’s major annual and regional meetings.

### Highlights

- At the Annual Meeting of the New Champions 2014 in Tianjin in September, the Forum and the CCUD co-hosted a private session on urbanization in China that was attended by mayors from China and abroad, Industry Partners and global experts, including the World Bank. Participants in particular discussed the urban challenges facing Chinese cities, as well as potential strategies to help to overcome them.
- At the Industry Strategy Meeting 2014 held in New York in October, the theme was “Urban Innovators: Cities as Drivers of Business Transformation”. The session looked at the impact on urban development and business models, of faster migration, unprecedented demographic changes, shifting consumer preferences and growing low-cost global digital infrastructure with interconnected devices and Big Data analytics.

- At the India Economic Summit 2014 in New Delhi in November, the community addressed the challenges for urban development in India. Industry Partners and other participants met with senior representatives from the World Bank and India's Ministry of Urban Development to discuss the new Indian government's strategy, including the proposed creation of "100 smart cities".

**Next Steps**

- The concept of "100 smart cities" is one of many urban development initiatives from the new Indian government. The FUD initiative currently is exploring how it might engage in Indian urban development. First opportunities have been identified. The Steering Board will take a decision in early 2015.
- The FUD initiative is assessing closer engagement with mayors from leading cities, as well as modes of collaboration with architects and urban designers. Concepts are currently being developed and aligned with other Forum activities. In this context, the FUD initiative is reviewing urban development plans globally, mapping them against major global urban development issues.
- At the World Economic Forum Annual Meeting 2015, the FUD initiative will host a private "Urban Innovation" session to enable members of its Steering Board to further interact and engage with mayors and thought leaders on this theme. Similar dialogues may be held during the Forum's annual and regional events in 2015.

**II. Champion City Activity**

Board members can turn dialogue into action by working directly with the mayor of a selected Champion City to test a new Seven-Step stakeholder-engagement model. Between 2012 and 2014, the activity has focused on China, addressing challenges around traffic congestion, urban energy management, and the services economy. During this time,



01: Venugopal A. N., Managing Director, RMZ, India (left); Ichiro Iino, Managing Director, Hitachi, India (right)

the FUD initiative cooperated with the World Bank and the CCUD, which has the mandate of China's National Development and Reform Commission.

**Highlights**

- The inaugural Champion City of Tianjin endorsed a six-point Champion City strategy, which was published in January 2013 in a report, *The Future of Urban Development Initiative: Tianjin Champion City Strategy*. An implementation plan was shared at the China International Urbanization Forum on 31 March 2013.
- In the second term, two Champion Cities, Dalian and Zhangjiakou, worked with the Steering Board to develop strategic recommendations, and presented their findings at the 2014 China International Urbanization Forum on 18 April 2014. The results were published in August 2014 in a report, *The Future of Urban Development Initiative: Dalian and Zhangjiakou Champion City Strategy*. Both cities are currently planning to implement these strategic recommendations with the help of Steering Board members.

**Next Steps**

- A Champion City Toolkit will be published in 2015, summarizing the lessons learned, so that the successes of the Champion City Model can be scaled and replicated in other cities worldwide.

- In China, the FUD initiative and its Steering Board will hand over the Champion City Activity to a selected partner in 2015.

**III. Global Agenda Council on the Future of Cities**

As cities increasingly face complex urban problems, smart and sustainable solutions will be needed to enhance liveability, efficiency and productivity. At the same time, the emergence of an affordable global digital infrastructure will inspire the urban services industry to find innovative, cross-industry answers. These will have the potential to fundamentally transform the way urban services are delivered and consumed, and, ultimately, how cities will be managed. However, these solutions also will pose difficulties related to integration, governance and finance.

**Objective**

- The objective of the Global Agenda Council on the Future of Cities is to develop the architecture that will allow cities to evaluate, select and integrate innovative urban services solutions, along with the governance and financial structures to enable this transition.

## Emerging Horizons in Real Estate Initiative

Since the financial crisis of 2007-2008, economists have paid attention to what is really known about real asset bubbles, because purely rational choice models cannot explain such bubbles. Policy-makers currently are reconsidering whether bubbles can, or should, be managed in the public interest.

Real estate markets have become more international – particularly commercial real estate, which accounts for 60-70% of the total market. The global flows of foreign investment make local markets more susceptible to real estate bubbles. Even though speculative bubbles show certain commonalities, no single definition and no unanimously accepted single-root-cause of their development exist. However, it is commonly agreed that underlying mechanisms such as self-reinforcing feedback loops and groupthink dynamics lead to property prices rising well above economically justified levels. The development of a speculative bubble can be described as a “social epidemic of enthusiasm” in which rising property prices generate further excitement, which in turn attracts more investors.

During the World Economic Forum Annual Meeting 2014 in Davos-Klosters, Switzerland, the Forum was mandated to launch a real estate initiative that would initially focus on Asset Price Volatility. A month earlier, the Emerging Horizons in Real Estate initiative had been proposed and approved, on the Governors Steering Committee’s call of 9 December 2013. The initiative aims to address the complexity of the real estate sector, focusing on regulatory issues, finance, demographics and technology. Previously, dedicated roundtables had been held in Washington DC and New York in 2012, in Hong Kong SAR in March 2013, Dubai in June 2014, and most recently in New York in December 2014.

In its first year, the initiative has tried to better understand the underlying mechanisms of asset pricing and the root-causes of asset bubbles, and to investigate leading theories on identification and detection of emerging bubbles. Supported by case studies and lessons from history, the impact of highly volatile markets with boom-and-bust cycles was assessed. Facilitated by the World Economic Forum, the Advisory Committee of the Emerging Horizons initiative, in multistakeholder discussions with central bankers, academia and business participants, focused on preventing asset bubbles and controlling their consequences.

Based on findings from discussions, interviews and research, industry advice on strategies to mitigate asset-price volatility has been presented in a comprehensive report. The main recommendations based on the initiative’s first year of work can be summarized as follows:

1. Market data: Regulatory authorities will work with the real estate industry to deliver robust and timely market data, analysis and information, including data on financing of real estate investment and development. Global and national initiatives are already under way.
2. Transparency: National and international authorities should adopt targets for delivering enhanced transparency, broadly defined, across real estate and related markets for securities and derivatives.
3. External policy impact: The real estate industry should communicate to governments and policy-makers the impact of public policies on the real estate sector at global, national and local levels.
4. Information Clearing House (“Hub”): A platform should be established to track and communicate significant new policies and research to public-sector policy-makers and senior decision-makers in the sectors of real estate and banking and finance.
5. Emerging markets: Emerging Market Economies (EMEs) require

specific policy options; the World Economic Forum should provide a convening platform to address particular issues of asset-price volatility in EMEs.

In the next phase, the plan is to increase the commitment and collaboration of Chief Executive Officer (CEO) leadership to set priorities and create a long-term strategy for transforming the real estate industry.

### Industry Agenda Council on the Future of Real Estate & Urbanization

The global financial crisis is a forceful reminder of the need for a more comprehensive understanding of the real estate sector. When the world’s equity and real estate markets plunged in March 2009, \$34.4 trillion of wealth was destroyed. Several years later, many countries – both developed and developing – continue to struggle to provide adequate housing for their citizens, and informal housing settlements continue to be a hotbed for pandemics and social instability. Ever since the crisis, real estate trends have become harder to predict. To safely navigate this challenging environment, therefore, it is vital to understand the long-term perspective. To obtain a holistic view of the transformation, the Council on the Future of Real Estate & Urbanization seeks to identify the drivers of change in the real estate industry and the intersection with other sectors.

Recognizing the insufficiently shared vision and alignment among key stakeholders, the Industry Agenda Council on the Future of Real Estate & Urbanization has refined the mandate in its 2014-2016 term to include collaboratively designing and delivering a set of principles for real estate to contribute towards sustainable, resilient urban development. The Council will achieve an explicit commitment by users, investors and cities to embed measurable practices.

## Foundations Against Corruption Initiative

Corruption is among the greatest barriers to stability, growth and competitiveness in many countries, with the sectors of engineering, construction and real estate being particularly susceptible. The risks of corruption include governments, suppliers, contractors and other third parties delivering infrastructure and urban services. Organizations need to understand the importance of addressing corruption as a strategic business and societal threat.

The United Nations Global Compact and the Organisation for Economic Co-operation and Development are among the agencies that support initiatives to address corruption by extending legal frameworks. To create a level playing field through industry engagement, the Forum's Urban

Development & Infrastructure Industries team and Partner companies from the engineering, construction and real estate industries launched a Collective Action project on Building Foundations Against Corruption, in collaboration with the Forum's Partnering Against Corruption Initiative.

The overall objective of the Building Foundations against Corruption project is to achieve CEO-level commitment, in collaboration with interested governments, to a mutually developed framework for open, more transparent practices. Although corruption confronts every industry, businesses in engineering, construction and real estate are uniquely vulnerable. This initiative aims to understand the processes within the value chains that create the highest level of opacity. Based on a broad industry survey, the Task Force of this project identified several industry-specific corruption risks.

The corruption risks heat map, which provides an overview of selected phases of the life cycle of an industry-specific capital project, involved stakeholders, and key corruption risks. The map is aimed at managers and employees from operations to provide a basis for discussion, highlighting these risk areas.

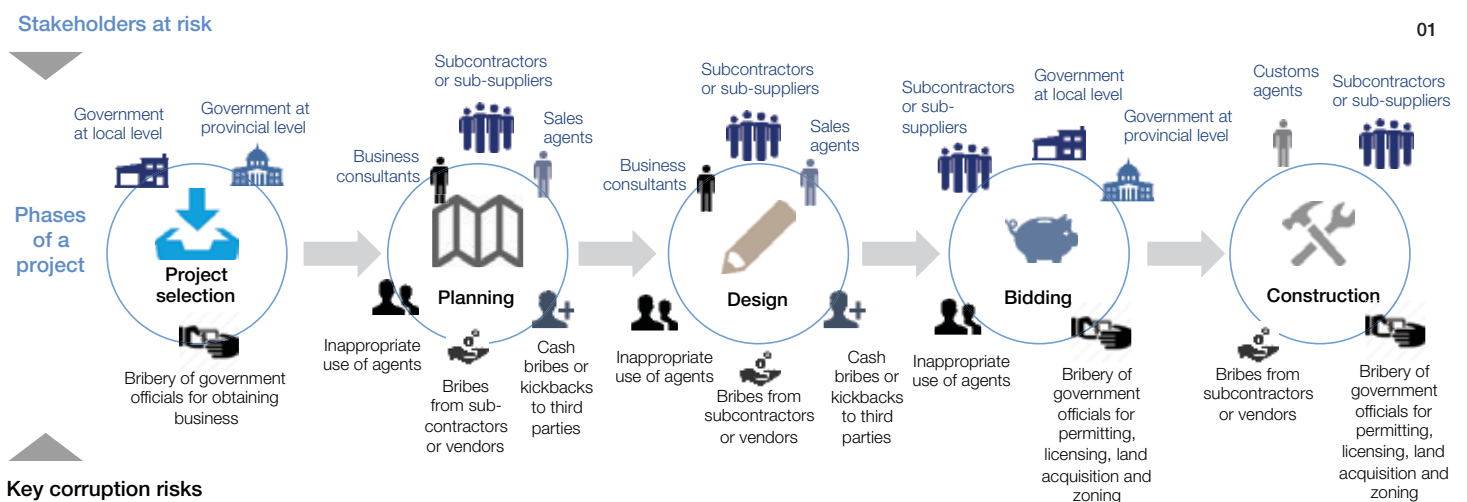
The Task Force developed industry-specific recommendations to guide organizations committed to acting against corruption. These include:

Recommendation 1: Promote Collective Action on Transparency in Permitting and Licensing Processes

Recommendation 2: Increase Government Interaction, on topics such as permitting and licensing, technical solutions for transparency, public procurement

Recommendation 3: Share Insights on Corruption Risks and Good Practices More Broadly, with supply chain partners and other stakeholders

## Key corruption risks in selected phases of an infrastructure project



01: Corruption risks heat map to provide an overview on selected phases of the lifecycle of an industry-specific capital project, involved stakeholders, and key corruption risks. The map is aimed at managers and employees from operations to provide a basis for discussion, highlighting these risk areas.

## Oilfield Services and Equipment: Unlocking the Full Potential

Mandated at the “New Models in Oilfield Services” session at the World Economic Forum Annual Meeting 2014, this initiative is a cross-industry reflection on the multiple challenges to the sector. In spite of the “energy revolution” that has already begun in the United States, service providers and the oil & gas industry as a whole face critical new challenges in securing energy resources for the coming decades. The difficulties include: an increase in size and complexity of projects, with escalating costs; a shortage of skilled staff; a decline

in industry performance, with most large capital oil & gas projects running over time and over budget; stricter environmental standards; and the need to engage communities.

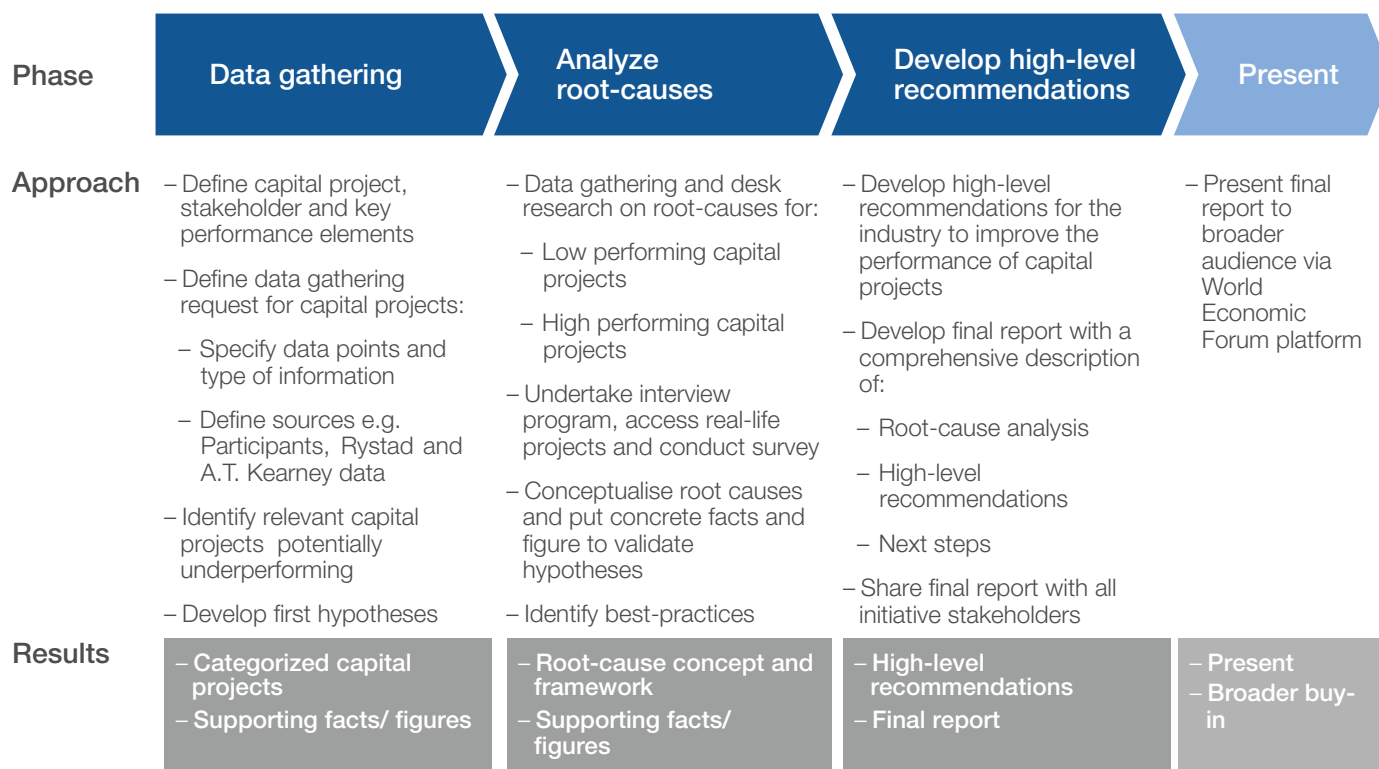
To advance the industry’s role in the value chain, oilfield services and equipment companies must upgrade to the next level of operational excellence, pioneer new contracting models, improve their project management practices, use technology and innovation more systematically, benchmark against other capital-intensive sectors, and cooperate more freely with one another as well as with national oil companies (or NOCs), international oil companies (or IOCs) and local governments.

The initiative has involved prominent players from the entire value chain in analysing, diagnosing and identifying areas for coordinated cooperation, including:

- Surveying and mapping of challenges in project delivery
- Identifying root-causes of performance deviation
- Recommending potential solutions and areas for multistakeholder cooperation

The initiative’s approach can be summarized as follows:

### Approach of initiative



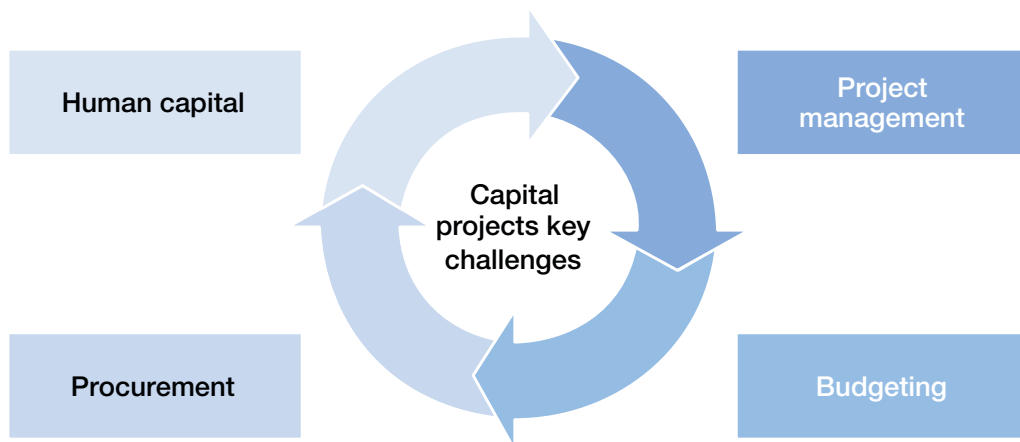
Source: World Economic Forum



As a result, initiative participants recognized that most of today's challenges are intertwined, and as individual industry players, they had limited means to coordinate solutions. Since capital projects are affected by numerous factors, internal and external, participants identified four main root-causes for capital project underperformance:

During the workshop participants recognized that today's challenges are mostly intertwined...

*Priority root-causes for capital project underperformance*



**...and are the outcome of an industry experiencing dramatic growth but without means to coordinate efforts**

Source: World Economic Forum

At this year's World Economic Forum Annual Meeting, leaders from the industries of oilfield services and oil & gas will have the opportunity to discuss the above issues, and the initiative's conclusions and recommendations will be presented. The participants will:

- Review the root-causes identified for capital project underperformance
- Discuss challenges arising from current project management practices, and models for governance and risk ownership
- Set strategies to address the challenges identified in procurement, supply chain, technology and information management

# World Economic Forum Annual Meeting 2015

## Governors Meeting for Infrastructure & Urban Development Industries

This year's programme for the Governors for Infrastructure & Urban Development Industries will comprise a number of sessions, including a joint Governors session on "New Models in Oilfield Services" together with the Oil & Gas Industries, the Infrastructure & Urban Development Governors networking lunch, and the Infrastructure & Urban Development Governors Meeting.

The latter meeting will be split into parallel sessions: one focusing on real estate/urban development, and the other on engineering and construction/infrastructure. In each session, Governors and experts from outside the industry will exchange perspectives on disruptive trends, and will map potential major drivers of change in their industry in coming years. The captured session output will be used to shape the initiatives and activities of the Infrastructure & Urban Development community in 2014.

Tues 20 January	Wed 21 January	Thurs 22 January	Fri 23 January	Sat 24 January
<b>Monday 20 January</b> <b>08:00</b> Registration Opens	<b>08:00-10:00</b> <b>Joint MM and IU IP Session</b> Driving sustainable growth through shared infrastructure models in Mining & Metals Sheraton Waldhaus Dachau	<b>08:00 - 10:00</b> IU IP Session Future of Urban Development Session part I <b>08:00 - 10:00</b> Future of Urban Development Session part II Senate Hotel Rooms 1-2-3	<b>07:30-08:15</b> Africa Infrastructure Africa Infrastructure Breakfast High Level Breakfast Congress Center Rheinhorn Terrace	
<b>18:00 - 18:30</b> Welcome Address and Crystal Awards <b>18:30 - 19:30</b> Special Concert <b>19:30 - 20:30</b> Welcome Reception	<b>11:30 - 12:00 Opening Plenary</b> <b>12:30 - 13:45 Opening Buffet</b>	<b>10:30 - 12:00 Annual Meeting Plenaries</b>	<b>12:00 - 13:30</b> IU GOV Lunch Monasani Schweizerhof Dining room	<b>12:00-13:30 Buffet Lunch</b>
<b>17:30 - 19:00 Annual Meeting Plenary</b> <b>19:30- 21:30</b> Basics Industries Welcome Reception and Dinner Sheraton Waldhaus Hotel Jakobshaus A, B, C	<b>13:30 - 15:30</b> Transformations in RE IU GOV Breakout 1 Monasani Schweizerhof Dining room <b>15:30 - 15:30</b> Transformations in EC IU GOV Breakout 2 Monasani Schweizerhof Dining room	<b>14:00 - 15:15 Plenary Session</b>	<b>16:45 - 18:00 Closing Plenary</b> <b>19:00 - 23:00 Schatzalp</b>	

Annual Meeting Sessions open to all participants

Governors Sessions open to top person from industry partner company or special guest invite (CEO/ Chair and/or appointed company executive)

Industry Partnership Sessions

Infrastructure & Urban Development Industries

Mining & Metal Industry

Industry Partners of the World Economic Forum will also be able to participate in a range of cross-industry sessions hosted by the Investors, Financial Services, Energy, Chemicals, Mining & Metals, Mobility and Environment industries.

# Industry Partnership for Infrastructure & Urban Development Industries 2015

## Calendar of Events for 2015

World Economic Forum Meetings		Annual Meeting 2015	World Economic Forum on East Asia	World Economic Forum on Latin America	World Economic Forum on Middle East	World Economic Forum on Africa	Annual Meeting of the New Champion	Industry Strategy Meeting	World Economic Forum on India	Summit on the Global Agenda 2014
		Davos-Klosters, Switzerland 22-25 Jan	Nusa Dua, Indonesia 21-23 April	Riviera Maya, Mexico 06-08 May	Dead sea TBC, Jordan 22-24 May	Cape Town, South Africa 03-05 June	Dalian, china 09-11 Sept	London, UK 13.sept	New Delhi, India 28-30 Oct	Dubai, UAE TBC
		JANUARY	APRIL	MAY	JUNE	SEPTEMBER	SEPTEMBER	OCTOBER	OCTOBER	NOVEMBER
Strategic Infrastructure		✓	✓		✓			✓	✓	✓
	Infrastructure & Urban Development Industries	✓		✓				✓	✓	
		Real Estate Investment & Development	✓			✓				
Interaction with Mining & Metals Community		✓	✓				✓	✓	✓	✓
Interaction with Chemical Community		✓		✓	✓		✓		✓	
Interaction with Energy Community		✓	✓	✓	✓		✓		✓	
Sessions Reponsibles / Support Staff		Michael/Pablo Alice/Vangelis	Vangelis Pablo	Vangelis / Alice Pablo /Michael	Michael Pablo	Vangelis Pablo		Michael Alice	Vangelis Pablo	Alice Michael
Admission Policy			Board Level/ Local Mgmt (no participation fee )	Board Level/ Local Mgmt (no participation fee )	Board Level/ Local Mgmt (no participation fee )	Board Level/ Local Mgmt (no participation fee )	Board Level/ Local Mgmt (no participation fee )	Heads of Strategy /Board Level/ Local Mgmt (no participation fee )	Board Level/ Local Mgmt (no participation fee )	Council Members

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## Foundations Against Corruption Initiative

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