MCKINSEY GLOBAL INSTITUTE

REINVENTING CONSTRUCTION THROUGH A PRODUCTIVITY REVOLUTION

RICE E&C ROUNDTABLE

Houston | Sep. 8, 2017
CONTENTS

The Size of the Prize: A $1.6 Trillion Opportunity

The Seven Areas of Impact

A Production System for Construction
Construction matters: Construction related spending accounts for 13 percent of global GDP

$ trillion

Global GDP

Construction industry spending

$74 trillion

SOURCE: World Bank; IHS; ISSA
Globally, labor-productivity growth lags behind that of manufacturing and the total economy.

**Global productivity growth trends**
Real gross value added per hour worked by persons engaged

- **Construction**
- **Total economy**
- **Manufacturing**

### $1.6 trillion opportunity from moving to economy average

- **$25/hour**
- **$37/hour**
- **$39/hour**

- **-2.6 p.p.**
- **2.8%**
- **1.0%**
- **3.6%**

**Source:** OECD; World Input-Output Database (WIOD); GGCD-10; World Bank; US Bureau of Economic Analysis (BEA); US Bureau of Labor Statistics (BLS); Turkish National Statistics Bureau; Singapore National Statistics Agency; Malaysian Statistics Agency; Rosstat; McKinsey Global Institute analysis
A small number of countries has achieved healthy productivity levels and growth rates

SOURCE: OECD Stat; EU KLEMS; World KLEMS; KSA CDSI; KSA MoL; WIOD Socioeconomic accounts, GGDC-10; Oanda; IHS; ITF; GWI; McKinsey Global Institute analysis

Construction labor Productivity (2015) - 2005 $ per hour worked by persons employed, not PPP adjusted

Construction Labor-productivity Growth - Annual growth in real gross value added per hour worked by persons employed, 1995-2015
A sector of two halves

UNITED STATES EXAMPLE

Productivity (2012)
$’000 per person employed, 2015$

Economic value added in 2012 represented by bubble size, in 2015$

SOURCE: US Economic Census; McKinsey Global Institute analysis

1 Manufacturing plants and warehouses.
2 Using overall construction sector deflator for all sub-sectors
Macro Factors that impact Productivity

• Increased size & complexity of mega-projects and project sites

• Complex & time-consuming regulations

• Dependence on public sector demand

• Cyclical nature of the construction business

• Increase in proportion of brownfield projects – could impact productivity ~45% in some cases
Some correlation between productivity and profitability: Productivity matters for the individual firm

Construction companies can achieve ~1 point higher margins on average by increasing productivity by 25%.

SOURCE: Bureau van Dijk, McKinsey Global Institute Analysis; 100 largest construction companies by revenue with publicly available data for FY 2005-2015
# The 10 Root-causes of Poor Productivity – from McKinsey survey

## Rankings (1 highest, 10 lowest)

<table>
<thead>
<tr>
<th>Root cause</th>
<th>Rankings (1 highest, 10 lowest)</th>
<th>Overall</th>
<th>Contractor</th>
<th>Owner</th>
<th>Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Forces</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Project and site complexities</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>▪ Regulation and cyclical public investment</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>▪ Informality and potential for corruption</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td><strong>Industry dynamics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Misaligned contractual structures</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>▪ Bespoke owner requirements</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>▪ Industry fragmentation</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>Firm-level operational factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Inadequate Design processes</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>▪ Poor project execution basics</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>▪ Insufficiently skilled labor</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>▪ Underinvestment in digitization, innovation</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**: Number of respondents = 210

**SOURCE**: MGI Construction Productivity Insights Survey
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The Size of the Prize: A $1.6 Trillion Opportunity

The Seven Areas of Impact

A Production System for Construction
The 7 Levers for a ~50% increase in Productivity

Potential global productivity improvement\(^1\) from implementation of best practice

\% impact on productivity

1 The impact numbers have been scaled down from a best case project number to reflect current levels of adoption and applicability across projects, based on respondents to the McKinsey & Co Global Construction Industry Productivity survey who responded agree or strongly agree to the questions around implementation of the solutions.

SOURCE: McKinsey Global Institute analysis
There is a lot of room for firms to raise adoption of leading practice.

Adoption rate of best practices¹
% of survey respondents who “agree” and “strongly agree”

- **Collaboration and contracting**: 48%
- **Design and engineering**: 69%
- **Supply-chain management**: 61%
- **On-site execution**: 65%
- **Technology²**: 43%
- **Capability building**: 66%

¹ Share of best practices marked as "agree" or "strongly agree" out of total number of best practices listed in survey.
² Current adoption; does not include anticipated adoption.

SOURCE: MGI Construction Productivity Survey, August 2016
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The Size of the Prize: A $1.6 Trillion Opportunity

The Seven Areas of Impact:

Collaboration in Contracting

A Production System for Construction
Projects that use lump-sum contracting methods have higher productivity on several measures

<table>
<thead>
<tr>
<th>Productivity Category</th>
<th>Lump sum</th>
<th>Cost reimbursable</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural steel productivity</td>
<td>0.033</td>
<td>0.018</td>
<td>17</td>
</tr>
<tr>
<td>Tons erected per hour</td>
<td>+88.2%</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>Poured concrete productivity</td>
<td>0.137</td>
<td>0.087</td>
<td>17</td>
</tr>
<tr>
<td>Cubic yards poured per hour</td>
<td>+56.8%</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Piping/mechanical productivity</td>
<td>0.344</td>
<td>0.255</td>
<td>11</td>
</tr>
<tr>
<td>Linear feet installed per hour</td>
<td>+34.9%</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Electrical productivity</td>
<td>1.754</td>
<td>1.205</td>
<td>15</td>
</tr>
<tr>
<td>Linear feet installed per hour</td>
<td>+45.6%</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

SOURCE: Construction Industry Institute Performance Assessment System, McKinsey Global Institute Analysis
The negative impact of misaligned contractual structures weighs heaviest on contractors

**Impact of misaligned contracts**

<table>
<thead>
<tr>
<th>% naming this as top three driver</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>31</td>
</tr>
<tr>
<td>Contractor</td>
<td>59</td>
</tr>
</tbody>
</table>

**Relative importance of drivers of misaligned contractual structures**

1. Competitive contracting leads to hostile environment, litigious culture, risk aversion, and lack of transparency and trust - Impact score 1.7
2. Contract structure does not effectively account for project uncertainty - Impact score 1.0
3. Lack of effective risk allocation among stakeholders, including subcontractors - Impact score 1.0
4. Emphasis on low-cost contracts over best-value bids based on past performance - Impact score 0.9
5. Bidding process does not effectively account for total cost of ownership of the asset over its lifetime - Impact score 0.8
6. Change orders are poorly managed and communicated - Impact score 0.6

1 Respondents were asked to rank the top three most important drivers. A score of 3 was given to the driver ranked first, a score of 2 to the second, and a score of 1 to the third. Drivers not ranked in the top three were scored as zero.

SOURCE: MGI Construction Productivity Insights Survey
Rewire the contractual framework

Universally shape the basics…

1. Contract **beyond cost for value**
2. Establish a **single source of truth**
3. Add **incentives** to traditional contracts
4. Prioritize **interface management**

… and then push for advanced solutions

5. Move to **collaborative strategies**, e.g. IPD

6. Invest in **upfront planning**, w/ early contractor input

7. Contract **based on robust estimates** triangulated via multiple inputs

5. **Example:** Contracting strategies based on collaboration can maximize value for all parties

- **Lump Sum Turnkey**
- **Design-Build (DB)**
- **FEED open book + PC**

**LOWER** Level of collaboration and risk sharing between parties ** HIGHER**

- **Owner Integrated**
- **Design-Bid-Build (DBB)**
- **Alliance / Integrated Project Delivery (IPD)**

IPD in practice

- **Whole team contractually bound** to collaborate (jointly defined KPIs)
- **Conditions for implementation:**
  1) **Multiple projects** for knowledge transfer
  2) **Strong financial position** to make up-front investments
  3) **Commitment to lean construction**
  4) **Certain but not standardized scope and design**

1 Cost overrun <25 percent / schedule slippage <25 percent

Who are Sutter Health?

- **A not-for-profit health system** with more than 24 acute-care hospitals, and dozens of outpatient surgery and specialty centers,

- Serves over **100 communities** in Northern California.

- In 2000 it set out **to replace and upgrade its hospitals** in response to state-mandated seismic requirements via a $7 billion capital program.

- Early projects were **beset by late delivery and significant budget overruns**

Approach – five big ideas

- Focused on improving **reliability** by assembling integrated teams of designers, consultants and builders from project opening

- Companies put on **integrated teams** collectively rather than individually with **five big ideas**
  - Optimize the whole project, not the parts
  - Manage projects as a network of commitments
  - Collaborate – really collaborate
  - Tightly couple learning with action
  - Increase relatedness

Impact

- Since 2004, under this model, Sutter Health has completed more than **$1.5 billion** of capital work **on schedule and on budget**

- An additional **$3 billion** is under construction using the same principles

SOURCE: Sutter Health interview
The Size of the Prize: A $1.6 Trillion Opportunity

The Seven Areas of Impact:

Capability Building

A Production System for Construction
Reskill the workforce to address organizational challenges and improve efficiency

Universally shape the basics...

1. Build an apprenticeship model
2. Develop front line training
3. Ensure knowledge retention and management

... and then push for advanced solutions

4. Introduce E-enabled micro-training for frontline workers
5. Run Field and forum—mix of classroom & field training
6. Create internal academies to institutionalize best practices and roll out across sites

Example: Construction companies provide 30 percent less training than the economy average

Average training hours received in the EU
Per 1000h worked, 2010

<table>
<thead>
<tr>
<th></th>
<th>All industries</th>
<th>Construction</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.0</td>
<td>4.1</td>
<td>4.7</td>
<td>10.8</td>
<td>6.8</td>
</tr>
</tbody>
</table>

Increasing the proportion of employees receiving training by one percentage point is associated with an increase in productivity between 1 and 1.6 percent

SOURCE: Eurostat NACE Rev. 2; BIS Research Paper No. 72

1 Wholesale and retail trade, transport, accomodation and food service activities
2 Information and communication; financial and insurance activities
3 Real estate activities; professional, scientific and technical activities; administrative and support service activities; arts, entertainment and recreation; other service activities
## Sizing logic and assumptions

### Project Impact
What is the project level cost/productivity impact of this solution?

<table>
<thead>
<tr>
<th></th>
<th>Developed markets</th>
<th>Emerging markets</th>
<th>Developed markets</th>
<th>Emerging markets</th>
<th>Developed markets</th>
<th>Emerging markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prod. Cost</td>
<td>20% 12%</td>
<td>25% 6%</td>
<td>65% 20%</td>
<td>60% 15%</td>
<td>10% 5%</td>
<td>10% 5%</td>
</tr>
<tr>
<td></td>
<td>15% 10%</td>
<td>25% 15%</td>
<td>75% 30%</td>
<td>70% 25%</td>
<td>15% 15%</td>
<td>15% 15%</td>
</tr>
<tr>
<td></td>
<td>25% 10%</td>
<td>35% 15%</td>
<td>80% 30%</td>
<td>80% 30%</td>
<td>15% 15%</td>
<td>15% 15%</td>
</tr>
</tbody>
</table>

### Applicability
What portion of all projects could apply solution by 2030?

<table>
<thead>
<tr>
<th></th>
<th>Developed markets</th>
<th>Emerging markets</th>
<th>Developed markets</th>
<th>Emerging markets</th>
<th>Developed markets</th>
<th>Emerging markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prod. Cost</td>
<td>60%</td>
<td>50%</td>
<td>40%</td>
<td>25%</td>
<td>70%</td>
<td>40%</td>
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<tr>
<td></td>
<td>70%</td>
<td>60%</td>
<td>50%</td>
<td>40%</td>
<td>80%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>70%</td>
<td>60%</td>
<td>50%</td>
<td>50%</td>
<td>80%</td>
<td>50%</td>
</tr>
</tbody>
</table>

### Current Adoption
What portion of all projects are already using this solution?

<table>
<thead>
<tr>
<th></th>
<th>Developed markets</th>
<th>Emerging markets</th>
<th>Developed markets</th>
<th>Emerging markets</th>
<th>Developed markets</th>
<th>Emerging markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prod. Cost</td>
<td>35%</td>
<td>20%</td>
<td>25%</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
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<td></td>
<td>30%</td>
<td>15%</td>
<td>25%</td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>15%</td>
<td>25%</td>
<td>25%</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

### Total Impact
What is the total productivity/cost impact?

<table>
<thead>
<tr>
<th></th>
<th>Total productivity improvement:</th>
<th>Total cost improvement:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6-10%</td>
<td>4-5%</td>
</tr>
<tr>
<td></td>
<td>14-15%</td>
<td>4-6%</td>
</tr>
<tr>
<td></td>
<td>5-7%</td>
<td>4-6%</td>
</tr>
</tbody>
</table>

### SOURCE: McKinsey Global Institute analysis
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The Size of the Prize: A $1.6 Trillion Opportunity

The Seven Areas of Impact:

Digitization and Technology

A Production System for Construction
E&C technology solutions are proliferating, driven by substantial funding from the VC industry…

**YoY Funding in Construction Tech (2008-15)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Funding amount (USD millions)</th>
<th>No. of rounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>2009</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2010</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>2011</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>2012</td>
<td>93</td>
<td>10</td>
</tr>
<tr>
<td>2013</td>
<td>109</td>
<td>35</td>
</tr>
<tr>
<td>2014</td>
<td>91</td>
<td>33</td>
</tr>
<tr>
<td>2015</td>
<td>382</td>
<td>52</td>
</tr>
</tbody>
</table>

**SOURCE:** Tracxn Construction Tech Startups Report, February 2016
...however it is not yet clear to most owners and E&C companies which tools are worth implementing (and which will best improve productivity)
Our comprehensive mapping of the Construction Tech landscape indicates three interconnected clusters:

1. **On-site and mobility cluster (“Field”)**
   - Safety (294)
   - Quality Control (25)
   - Field Productivity (168)
   - Matl’s Mgmt. (197)

2. **Digital collaboration cluster (“Team”)**
   - Performance Management (118)
   - Design Mgmt. (169)
   - Doc. Mgmt. (277)

3. **Back-office and relatively isolated tasks cluster (“Office”)**
   - Ops & Mgmt. (309)
   - Scheduling (153)
   - Equip. Mgmt. (226)
   - Preconstruction (322)
   - Contract Management (53)

N=1863 unique companies

Size of the bubble indicates the number of companies addressing the particular use case.

Key insights from the SILA analyses:

- Three key clusters organically emerge from the analyses:
  - On-site and mobility: use-cases that require mobile deployment
  - Digital collaboration: use-cases that require engagement across multiple stakeholders
  - Back-office and relatively isolated tasks: use-case with simpler flow path activities (e.g. estimating) or ERP functions

- Many companies trying to bridge across use-cases across the clusters (e.g. operations and management with construction back-office or doc management with construction back-office)

**SOURCE**: McKinsey Startup and Investment Landscape Analytics
Playing these 3 clusters forward, the capital project of the future will operate very differently from today…

**Advanced analytics**
Advanced analytics optimizes facility run settings to maximize profitability. Predictive maintenance minimizes downtime.

**Digitized commissioning and handover**
Construction completion, commissioning and handover are completed electronically.

**3D printing**
3D printing removes construction delays due to missing parts, reduces freight costs, and simplifies supply chain and warehousing.

**Autonomous vehicles**
Autonomous vehicles transport personnel, equipment and materials across site.

**Automated construction**
Robots complete activities more productively, accurately and safely than humans.

**LiDAR as built verification**
Frequent LiDAR drone scans capture precise quantities and identify as built errors.

**Customer co-creation**
Design tools are crowd sourced and employ agile methodologies during design development.

**Capital portfolio management**
Specialized software, and advanced analytics, optimize capital investment and portfolio management.

**Virtual reality**
Operations staff review facilities and identify hazards during design.

**Automated design**
Designs are produced within days for complex facilities, enabling rapid option comparison and assessment.

**5D BIM and beyond**
5D BIM is used to unify the 3D model with schedule and budget, ultimately adding additional dimensions to support operations.

**Digital performance management**
Project leadership and site managers assess performance, anticipate issues, and develop action plans.
…and will deliver significant cost reductions (up to 45% of TIC)

- On-site construction & fabrication
- Equipment operation
- Workforce management
- Asset operation & maintenance

5-20%

- Material & equipment scheduling & delivery
- Material & equipment on-site management
- On-site contractor management
- Claims management

5-20%

- Organizational structure & development
- Learning & development
- Functional capabilities

3-5%

- Capital strategy
- Project & portfolio planning & selection
- Risk analysis
- Scheduling & project controls

10-20%

- Performance requirements
- Initial design
- Material specifications
- Purchasing materials & equipment
- Resolution of as-built challenges
- Aligned contract incentives

5-15%

- Knowledge capture / lessons learned
- Common source of truth
- Stakeholder alignment

5-15%

1 Expected savings range based on 80 projected or actual savings from digital application use. Cases identified through client work, internal research, and publications. Savings are not additive and are specific to cost categories.

SOURCE: McKinsey Capital Projects & Infrastructure digital and innovation service line
...and will deliver significant cost reductions (up to 45% of TIC)

- On-site construction & fabrication
- Equipment operation
- Workforce management
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- Material & equipment scheduling & delivery
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1 Expected savings range based on 80 projected or actual savings from digital application use. Cases identified through client work, internal research, and publications. Savings are not additive and are specific to cost categories.

SOURCE: McKinsey Capital Projects & Infrastructure digital and innovation service line
Case study:
Cutting costs for a large solar power developer

**Situation**

- Client looking to manage portfolio and reduce costs for >15 projects in various states of construction (pre-construction to commissioning)
- Responsible for managing E&Cs with multiple contracts and structures. Need to drive down construction costs to meet cost targets
- Lack of transparency into project level performance. E&Cs and PMs often provide anecdotal data on project performance without fact-based discussions

**Consolidating data**

- Defined metrics for pre-construction, execution (cost, schedule, quality, and safety), and end-to-end materials management
- Gathered data not available at the site level (cost reports, purchase orders, shipment data, etc.)
- Ensure consistent collection from E&Cs across sites

**Implementation**

- Developed a dashboard using client-specific cost systems
- Conducted a CCT workshop with key stakeholders
-Benchmarked execution performance across projects
- Identified and shared best practices across sites and E&Cs
- Deployed teams in the field in response to issues identified

**Results**

- 60% reduced committed contingency
- 18% decrease in labor hours required for installation
- 21% cost savings from bid
Case study: Improving engineering productivity for an Oil & Gas OEM

Context
- Leading global OEM, employing over 5,000 engineers
- Delivers EPC-like turnkey projects globally
- Engineering costs as a percent of spend have been rising, while a shortage of engineering talent has constrained growth and investment in other business priorities (e.g., new product development)
- Client asked McKinsey to identify drivers of productivity loss in engineering teams spanning 6 product lines and 100+ geographical locations, pilot key improvement levers, and then launch a transformation to improve productivity by 10% across the organization

Approach
- Leveraged 4 complementary approaches to identify opportunities to improve productivity
  - Nerve interfaced with engineers’ systems to identify drivers of efficiency loss
  - Organizational Health Index to identify cultural performance drivers
  - Benchmarks from other engineering organizations
  - Project “tear-downs” to tie analytical results to on the ground observations
- Conducted pilots to prove concept, then rolled productivity playbook out across organization

Results…
- 20% Productivity savings potential identified
- 15-25% Productivity improvements during on-going mega-project pilots
- 10% engineering savings across the organization

SOURCE: QuantumBlack
Case study: Institutionalizing 5D BIM at a leading real estate client

**Situation**

- Client looking to institutionalize 5D BIM for all high value, flagship projects and for use as project management
- Seeking to capture cost savings in current $500M project for two high rise towers through:
  - Pro-active clash resolution across stakeholder designs
  - Quantity variations between existing estimates and 5D BIM generated estimates

**Changes made**

- Converted all project specifications into 5D BIM tool and established a single database of data
- Restructured project team structure to ensure project design teams, costing teams, planning and reporting, IT, and 5D BIM software teams were in place and well supported

**Implementation**

- Created ready to use dashboards for project leadership review
- Established a project cost database for utilization in future projects
- Utilized scheduling feature and monitored progress to ensure project was on track

**Results...**

- 5% cost savings from original estimate in just two floors
- 1,000+ line item cost database created
- 20+ clients trained in 5D BIM
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A Production System for Construction
A production system in construction would look radically different from the current project-based approach.

Large-scale manufacturers of components and work packages

Collaborative working team

1. Design and procurement
   - Components selected on digital marketplace with full transparency on life time costs

2. Approvals and testing
   - Streamlined approvals process and testing at production facility

3. Manufacture
   - High-quality offsite manufacture facilitated through automation and new lightweight materials

4. Supply-chain coordination
   - Supply chain, with tools such as just-in-time and just-in-sequence, replaces project management as the predominant coordination challenge

5. Site work
   - Site work is minimized to assembly of components and packages facilitated through universal interfaces supported by technology

6. Post construction
   - Lifetime guarantees on components and packages
Example production system: Barcelona Housing Systems

**Illustration of finished buildings**

**Illustration of construction process**

SOURCE: Barcelona Housing Systems
Example production system: Segmental bridge launching machine in China

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Conclusions & Recommendations

• Improved productivity – a key differentiator & source of profitability: should be part of your strategic plan

• Take the initiative in collaborative contracting

• Invest in design, procurement & lean execution capabilities

• Make strategic investments in technology

• Invest in upskilling your people
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