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Introducing:





18 - 21 FEBRUARY 2023

RIYADH FRONT EXHIBITION AND CONFERENCE CENTER (RFECC)

Opportunity Calls: Lean Construction in KSA

Dr. Luai M. El-Sabek, PE, PEng, PMP, CM-Lean Program Manager, QPM Executive Director – Operations, LCI-Qatar





February 21, 2023

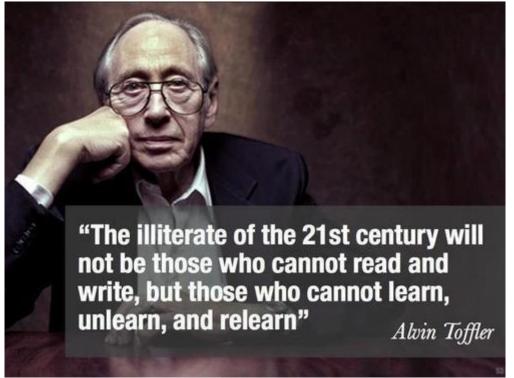
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Inspiring Quote









Agenda / Objectives





Agenda	Objectives
 Acknowledge our problems in Construction Industry 	Think Differently (Lean Thinking)Identify the gap
Introduce Lean Construction	The Solution
Invitation to continue / Start Lean JourneyWhy Lean? Why now?ConclusionQ&A	 Create an incentive to initiate / continue a Lean journey in your project(s) or organization Establish a demand for Lean education and research



What's your role?

Contractor / Subcontractor

Consultant (designer, supervision, and PM/CM)

19%

Academic / Researcher

15%

Supplier

12%

Client - Private

8%

Client - Government

4%

Student



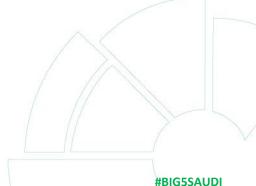
26 왕

38%



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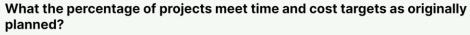


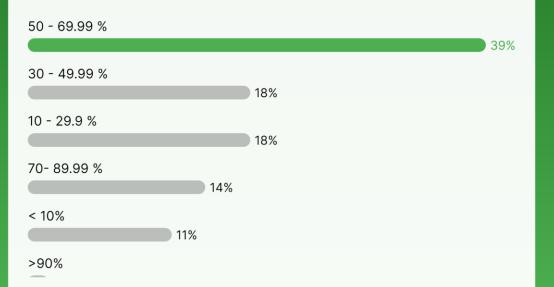


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What the percentage of projects meet time and cost targets as originally





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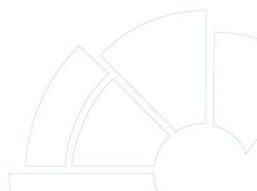






28 음







Are you satisfied with the available tools and techniques to manage and execute projects?

No

Yes

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21%



29 용

79%





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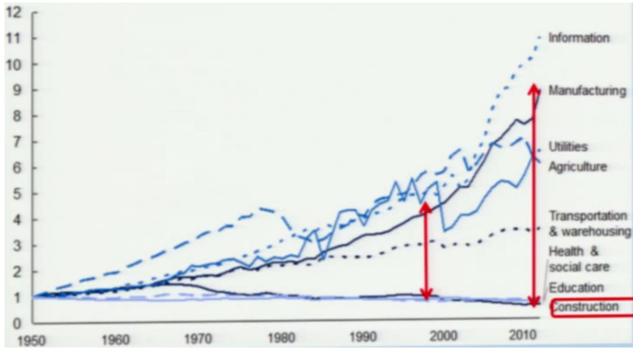


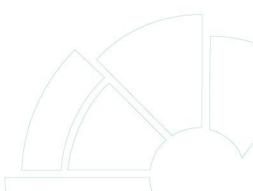


The Problem – 1) Poor Productivity













Productivity by industry in the US (indexed; 1.0 = 1950)

The Problem – 1) Poor Productivity

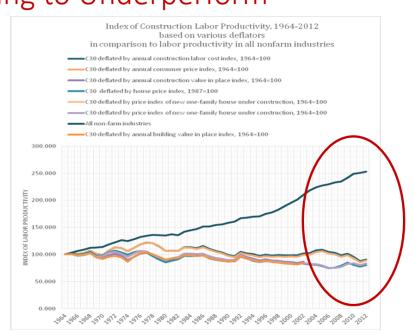




Continuing to Underperform



Paul <u>Teicholz</u> article updated, March 14, 2013







Labor-Productivity Declines in the Construction Industry: Causes and Remedies (Teicholz, 2013)

The Problem – 1) Poor Productivity







@Getty Images/Mel Melcon

Executive summary

Construction, which encompasses real estate, infrastructure, and industrial structures, is the largest industry in the global economy, accounting for 13 percent of the world's GDP. A closer look at its underlying performance highlights the industry's challenges in good economic times, let alone in times of crisis. We expect a set of nine shifts to radically change the way construction is done. Companies that can adjust their business models stand to benefit handsomely, while others may struggle to survive.

Historically, the construction industry has underperformed

Construction is responsible for a wide range of impressive accomplishments, from stunning cityscapes and foundational infrastructure on a massive scale to sustained innovation. However, in the past couple of decades, it also has been plagued by dismal performance.

Annual productivity growth over the past 20 years was only a third of total economy averages. Risk aversion and fragmentation as well as difficulties in attracting digital talent slow down innovation. Digitalization is lower than in nearly any other industry. Profitability is low, at around 5 percent EBIT margin, despite high risks and many insolvencies. Customer satisfaction is hampered by regular time and budget overruns and lengthy claims procedures.



1 Historically, the construction industry has underperformed



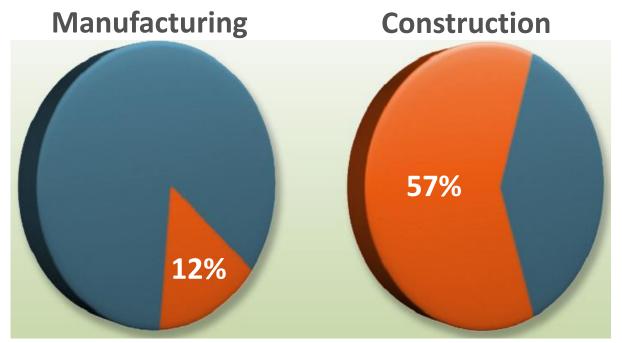


The Next Normal in Construction (McKinsey & Company, 2020)

The Problem – 2) Waste









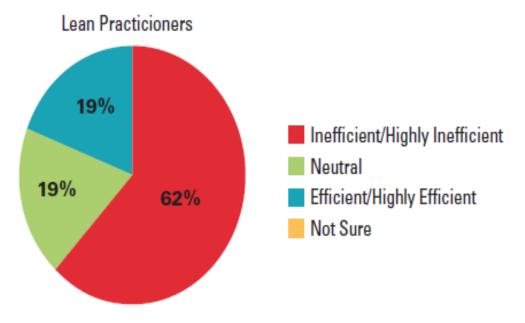


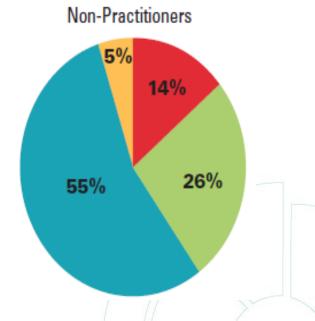
Application of Lean Manufacturing Principles to Construction (Construction Industry Institute, 2004)

The Problem – 3) Inefficiency













Lean Construction: Leveraging Collaboration and Advanced Practices to Increase Project Efficiency (McGraw Hill, 2013)

The Problem With Construction Today







Injuries are too high



Rework and wastes are high



productivity is declining



Construction costs are skyrocketing → Profit margins are shrinking







The solution – Different Thinking

Lean Thinking

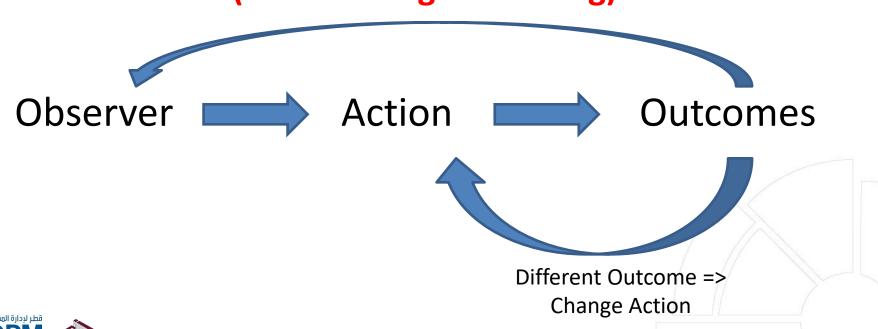


(Incremental Learning)



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(Breakthrough Learning)



The solution – What is Lean Construction?















Domains of Project Delivery Talks SAUDI CPM-based; Activity-Centered **Lean-based; Management by Means** Management (inclusive of execution team) Operating 2D/3D System BIM/VDC Individual **Technology** craft-contracts IPD/IFOA **Project** Relational Commercial Terms Organization Command & Control (system



optimization)



(planning is an ongoing conversations)

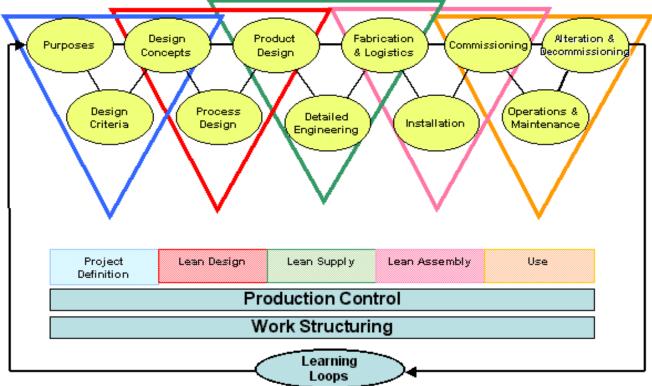
Directives-Driven

Dialogue & Collaboration

LEAN PROJECT DELIVERY SYSTEM (LPDS)











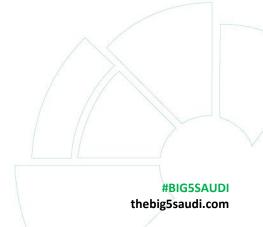
Why Do we need Lean?





- Deliver Reliably
- Improve Productivity
- Increase Efficiency
- Work Safer
- Achieve Client's Satisfaction





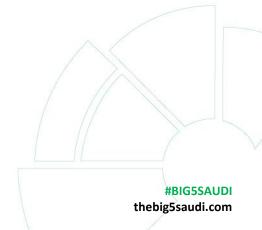
How?





- Acknowledge the problem
- Think Differently
- Modern Techniques
- Accept the Change





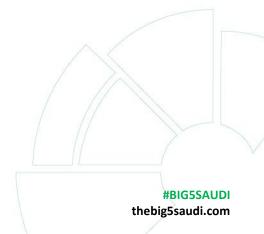
Why Now?





• \$1.1 Trillion





Conclusion



Project Management

We have to change what we do to get different results





Upcoming Events





















UPCOMING EVENTS

Target Value Delivery of Building Projects



Dr. Glenn Ballard
Research Director, P2SL
University of California, Berkeley

March 1, 2023 | 7:00 - 8:30 pm via **ZOOM**

Join LCI-Qatar at www.lci.qa/membership



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Upcoming Events



















UPCOMING EVENTS

LEAN CONSTRUCTION EDUCATION PROGRAM

Improving the Project Delivery Process



Ben Shideler P.Eng, CM Lean

CER	A-LEAN TIFICATE OF NAGEMENT CONSTRUCTION	
	Lean Construction	

Unit	Date	Time	CEUs
1-2	Mar 6 & 7	1:30 - 5:30 PM	8
3-4	Mar 8 & 9	1:30 - 5:30 PM	8
5	Mar 13 & 14	1:30 - 5:30 PM	8
6	Mar 15	1:30 - 5:30 PM	4
7	Mar 16	1:30 - 8:30 PM	7

The price includes printed book

Obtain CM-Lean Credential Exams are offered regularly at Qatar University and PWA

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MEMBERS

5,000 QR

NON MEMBERS

via **ZOOM**









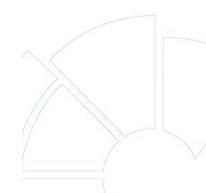


المعمــد القطــري للتصميم والتشـييد الفِعّال

تغييـر بيـنة تصويـم وتشيـيـد الوشــاريــع

JOIN THE TRANSFORMATION JOURNEY!





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