

**Lean Construction  
Institute - Qatar**

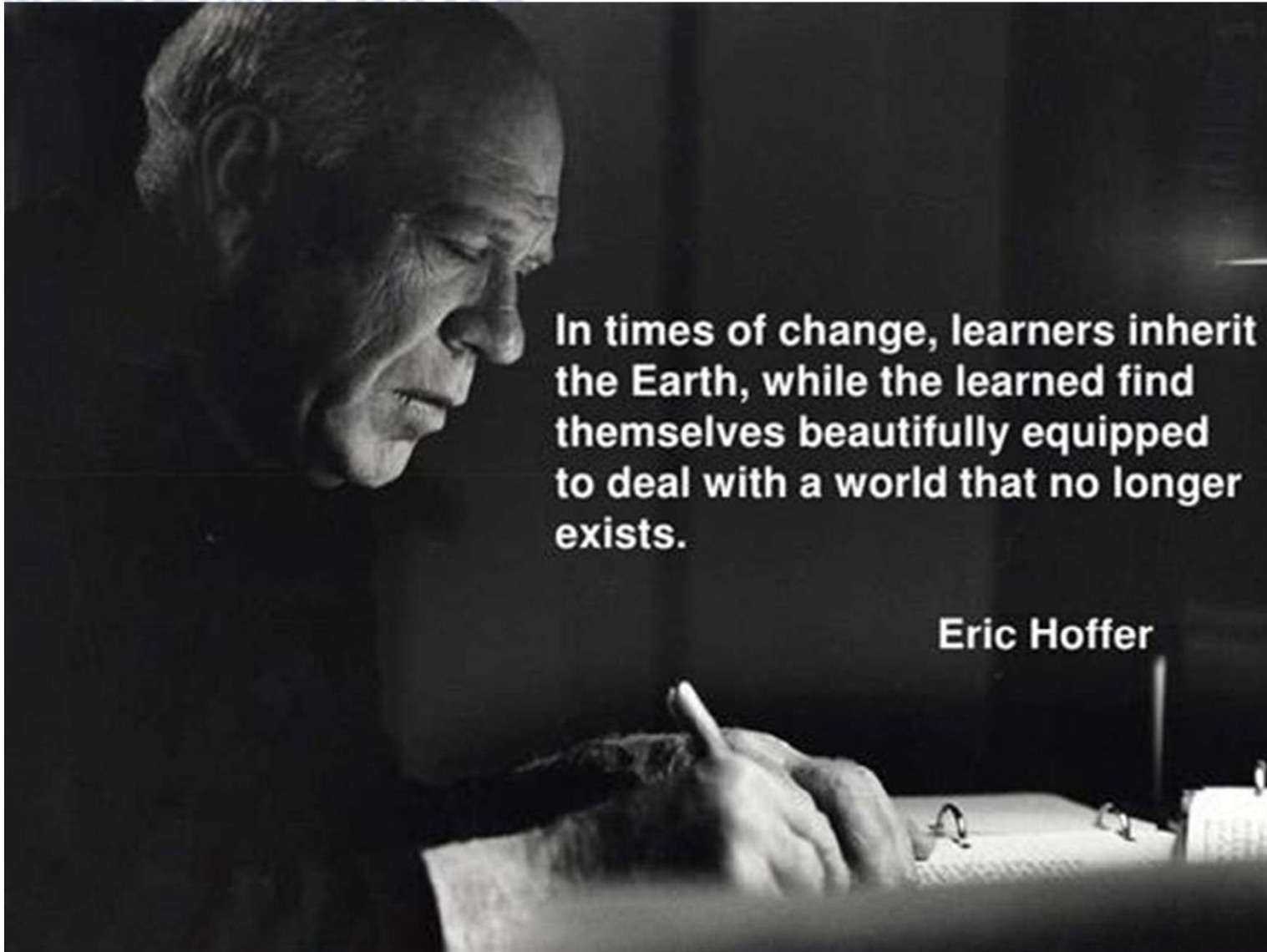
Transforming the Built Environment

# “DOMAINS OF PROJECT DELIVERY”

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# INSPIRING QUOTE



**In times of change, learners inherit the Earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.**

**Eric Hoffer**

# THE PROBLEM WITH CONSTRUCTION TODAY...



Injuries are too high.



Rework and wastes are high.



Construction productivity is declining.



Construction costs are skyrocketing  
→ Profit margins are shrinking.



# WHAT IS LEAN CONSTRUCTION?

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- × Creating ideal state of designing and constructing a facility using standard processes to:
  - + Provide / generate value
  - + Eliminate waste
  - + Continuously improve

# WHAT IS NOT LEAN CONSTRUCTION?

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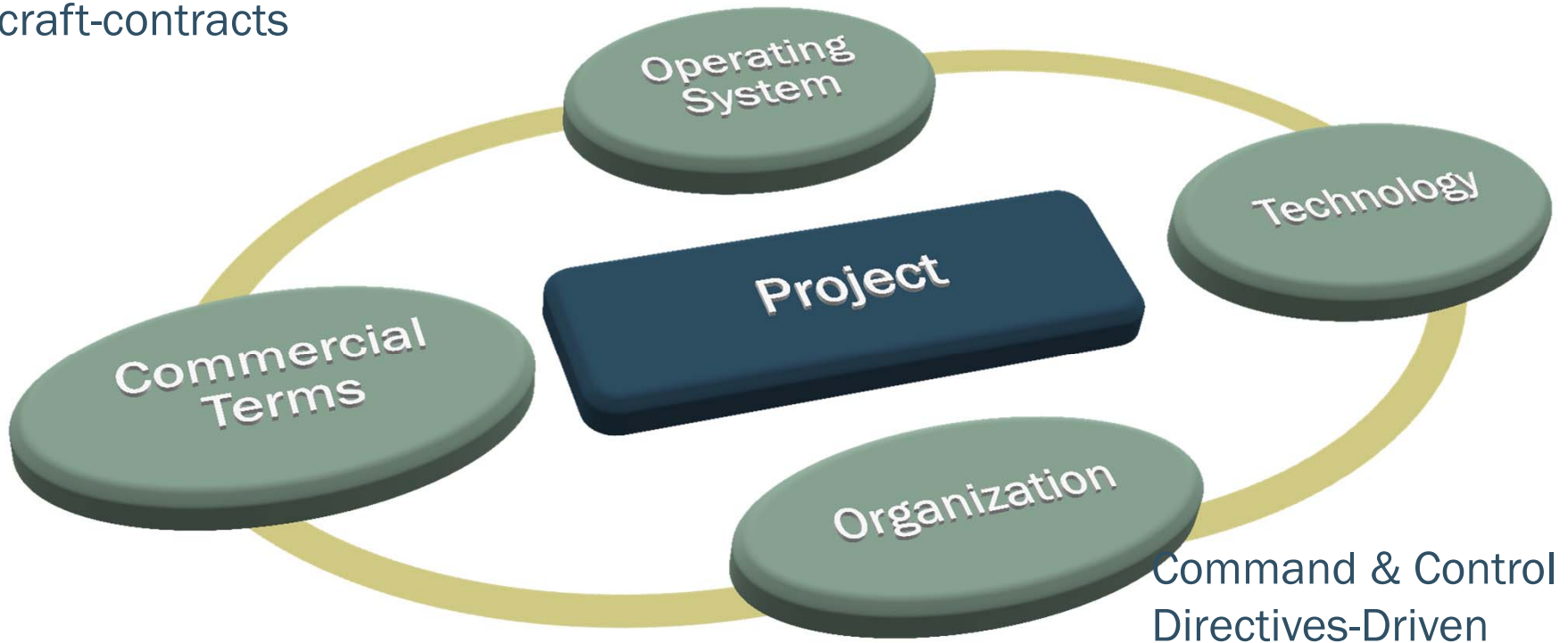
- + Lean Production grafted onto construction
- + Cost Cutting
- + Eliminating Jobs
- + Beating up suppliers and subcontractors
- + Doing Value Engineering During Construction
- + Being Stingy

# DOMAINS OF PROJECT DELIVERY

CPM-based; Activity-Centered;  
Management by Exception

Individual  
craft-contracts

2D/3D



(Abdelhamid 2014)

# DOMAINS OF PROJECT DELIVERY

↓ CPM-based; Activity-Centered;  
Management by Exception

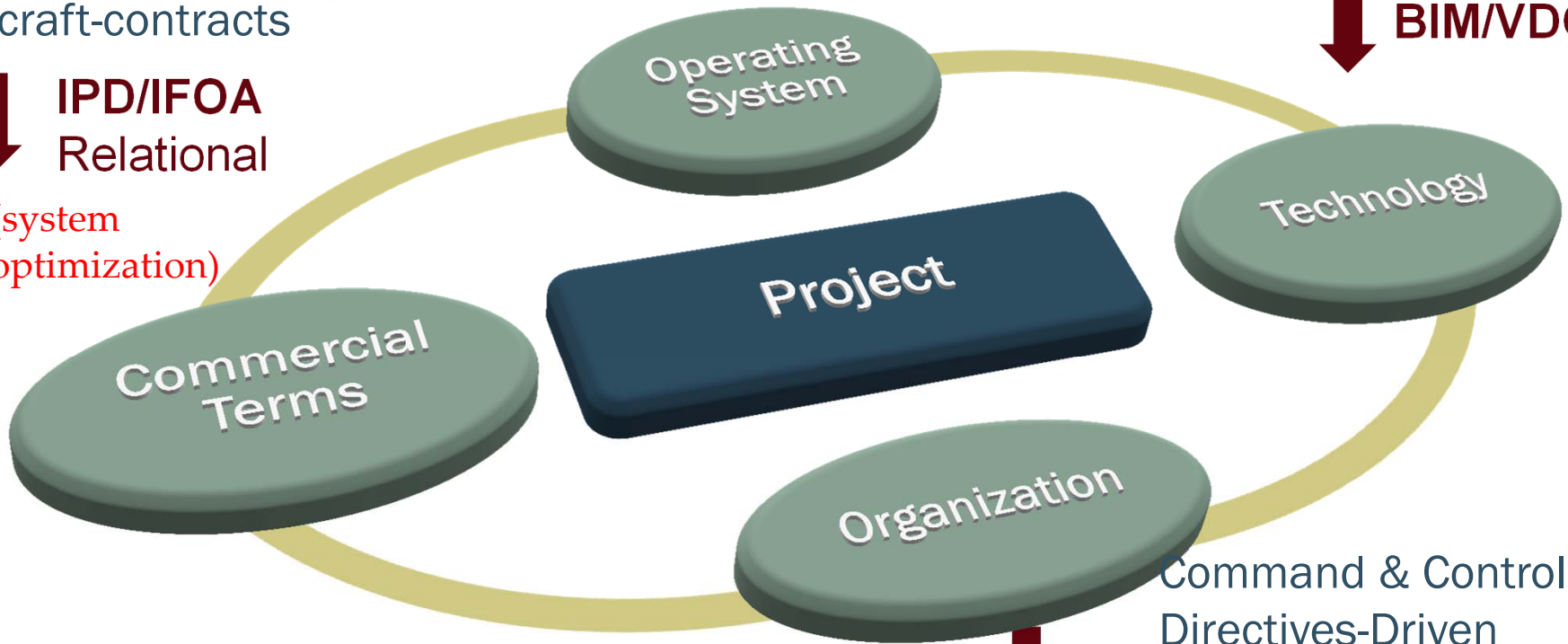
**Lean-based; Management by Means**  
(planning inclusive of execution party; fire prevention)

2D/3D  
↓ **BIM/VDC**

Individual  
craft-contracts

↓ **IPD/IFOA**  
Relational

(system  
optimization)

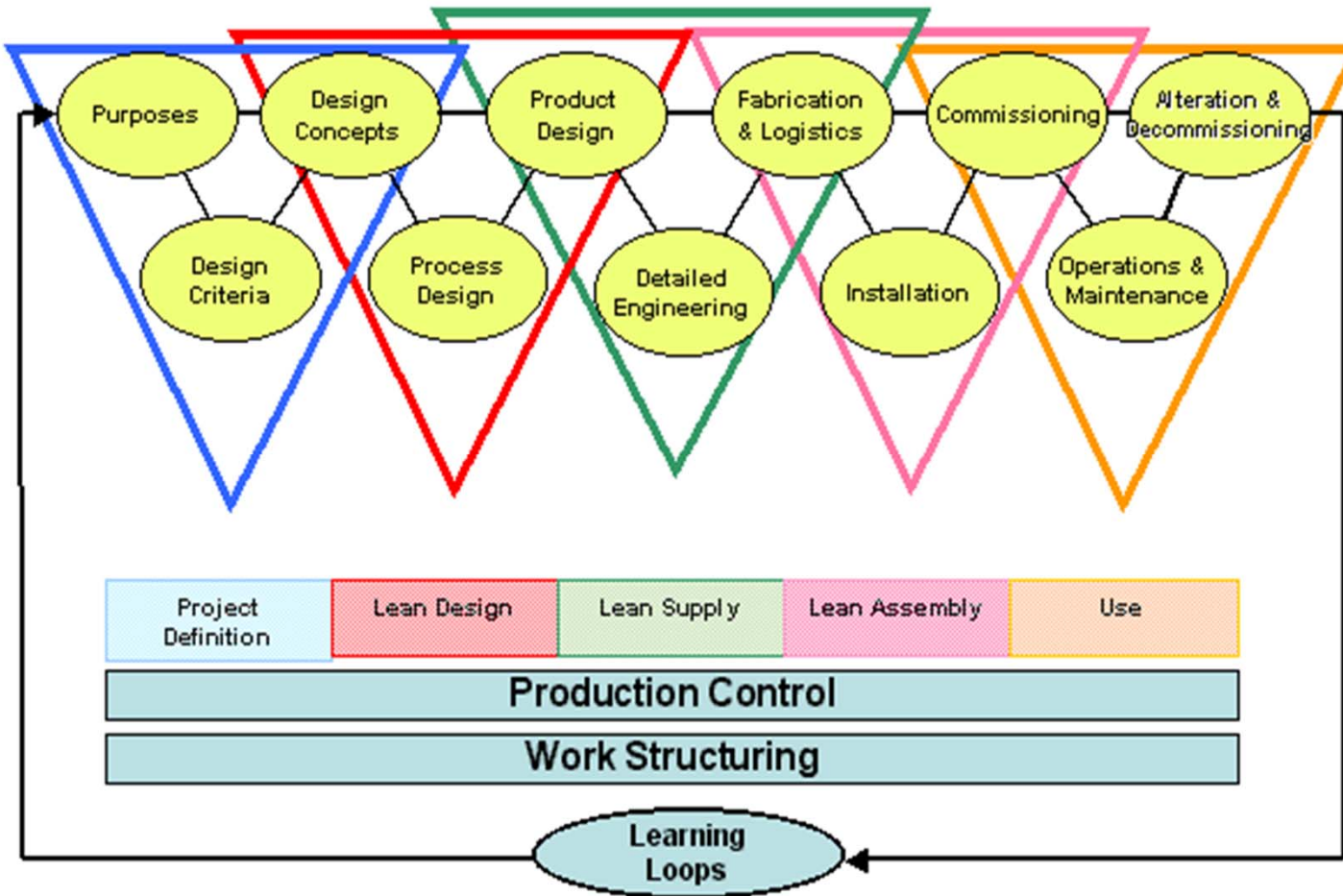


Command & Control  
Directives-Driven

↓ **Dialogue & Collaboration**  
(planning is an ongoing conversations)



# LEAN PROJECT DELIVERY SYSTEM (LPDS)



Lean Project Delivery System (Ballard, 2006)



# CULTURE OF LEAN CONSTRUCTION

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- × Problems are recognized as opportunities
- × It's okay to make legitimate mistakes
- × Problems are exposed because of increased trust
- × People are not problems – they are problem solvers
- × Emphasis is placed on finding solutions instead of “who did it”

# THE TRANSFORMATION

	Non-Lean	Lean
Planning	Knowledge	Learning
Scheduling	“Start Early” Activities are performed as soon as possible	“Finish Early” Activities are performed at the last responsible moment
Control	Tracking & Reacting	Peering, Clearing, Steering
Focus	Acceleration	Reliability
Organizational Behavior	Managers are empowered	Executers are the planners Collaboration, Respect, and Trust
Coordination	Follow Orders	Making & Keeping Promises
Site Management	Point Speed & 100% Utilization	Manage workflow
Management	Trades Cost for Speed	Reduce Cost and Increase Speed
Design	Project Design	Process Design