



## Training Future Leaders in the Industrialized Construction Era

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*MCA Inc.*

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2 Continuing Education  
and 2 Contact Hours.**



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## The Event Horizon of the Industry

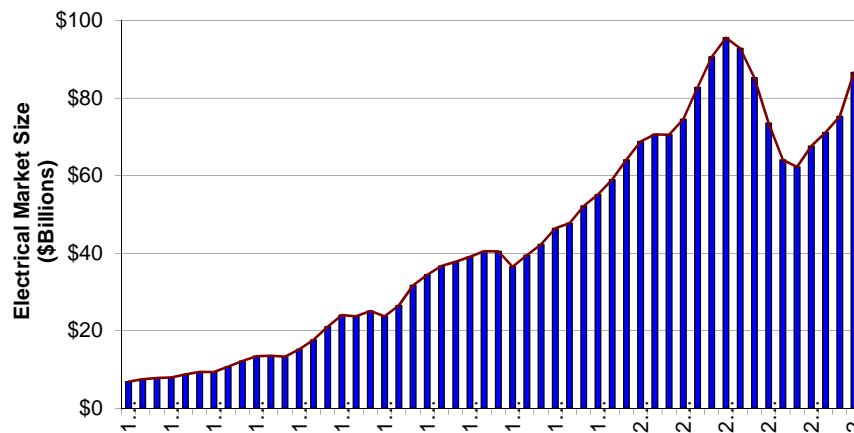
- When these three shifts happen:
  - Industrialization
  - Disruption
  - Market shift
- The industry is at an inflection point, which then requires:
  - Business model change
  - Culture change
  - Transformation
  - .....to compete and survive
- Historical success no longer guarantees the future



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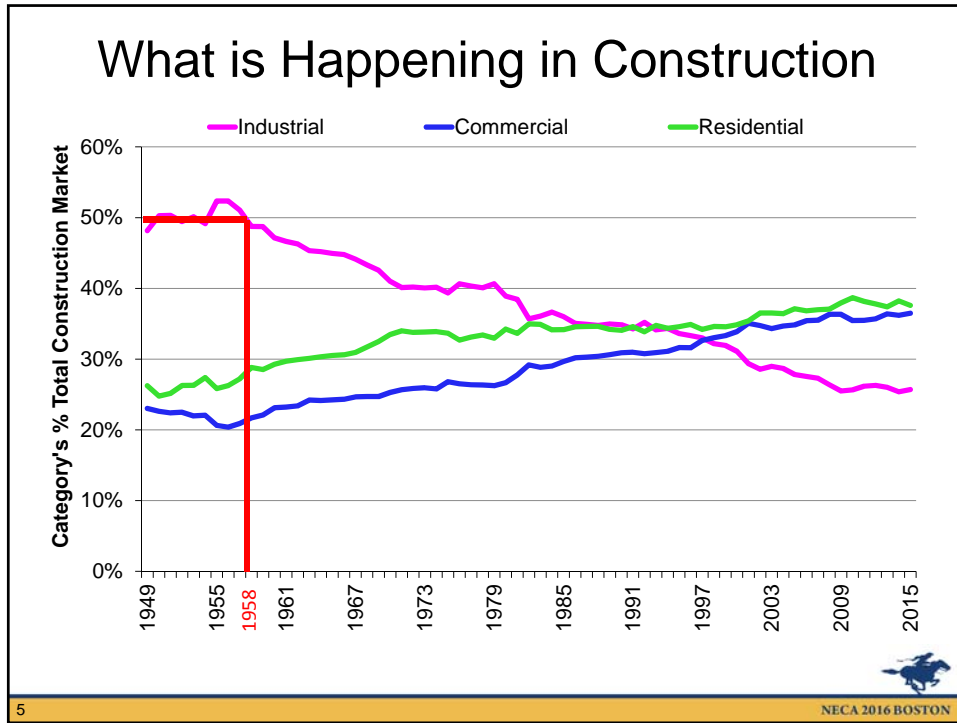
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## U.S. Electrical Market Size

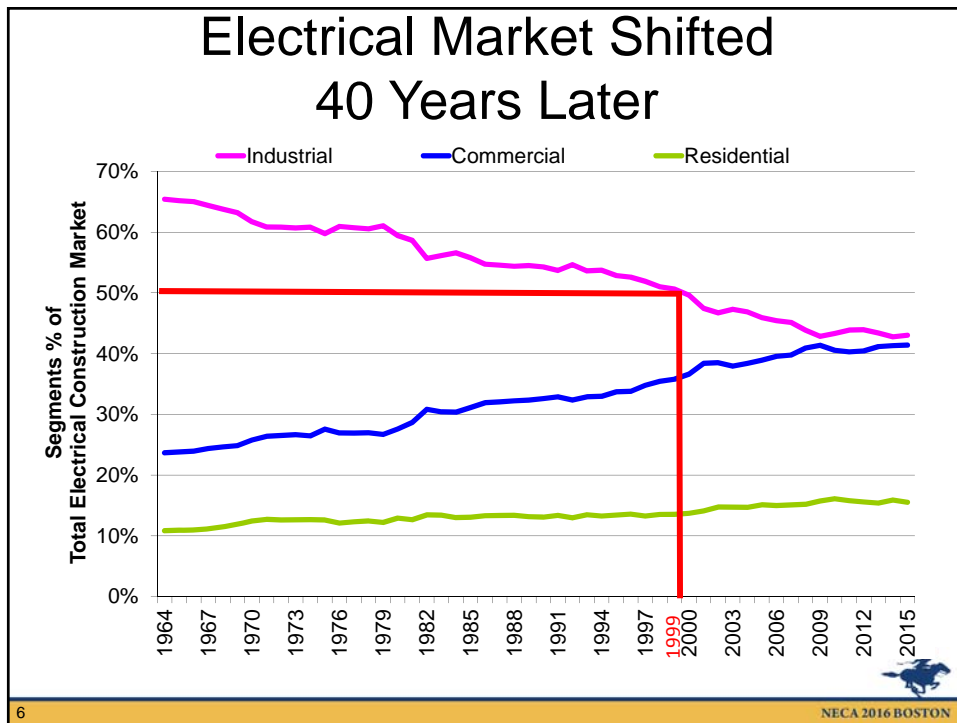


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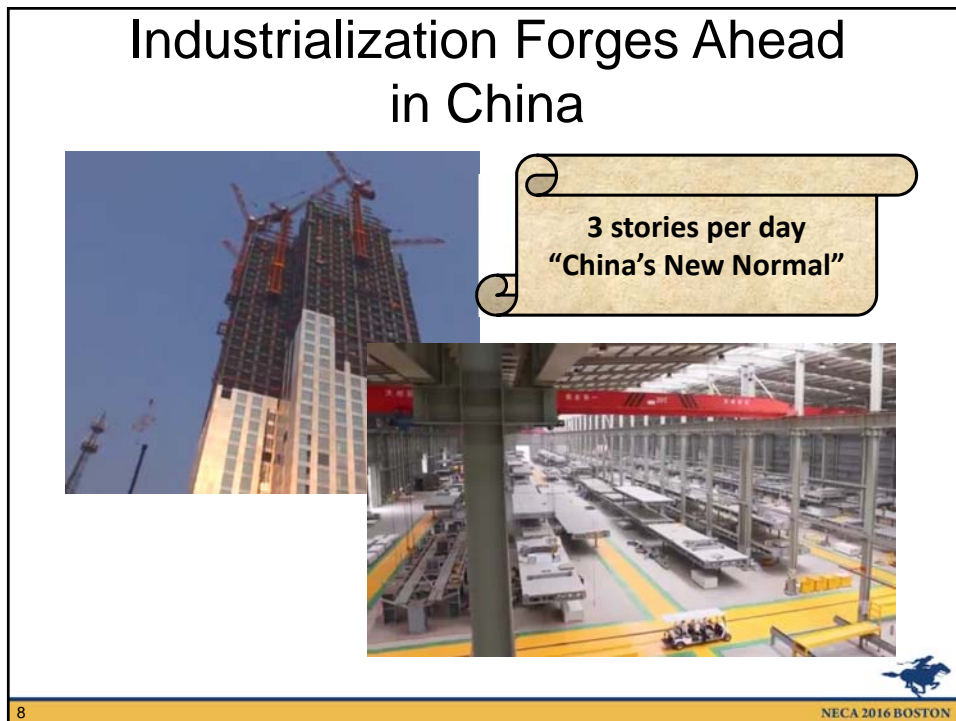
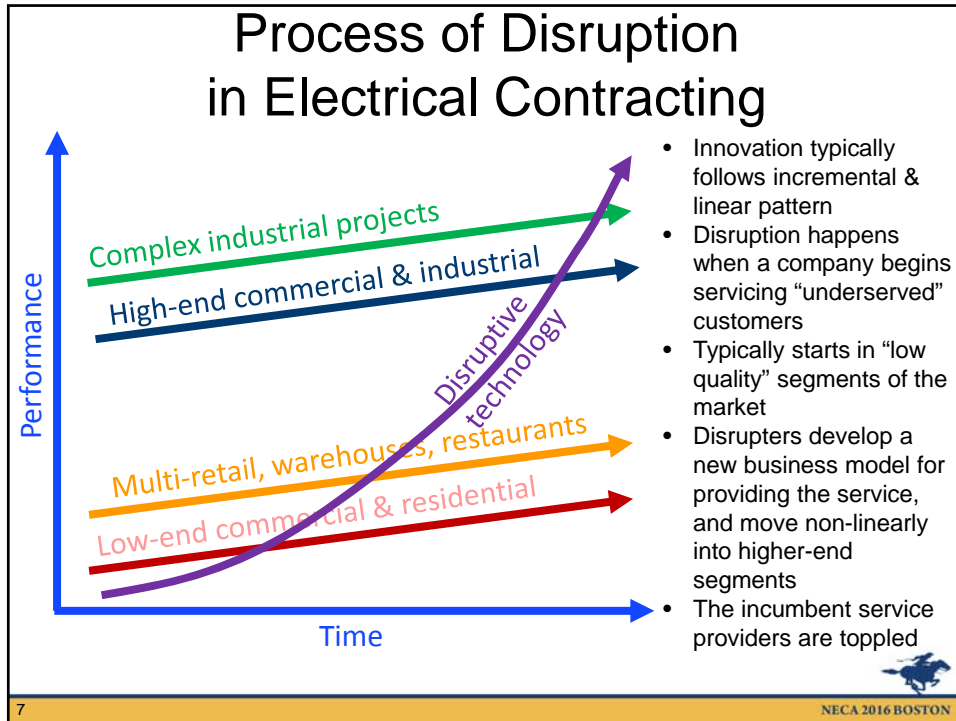
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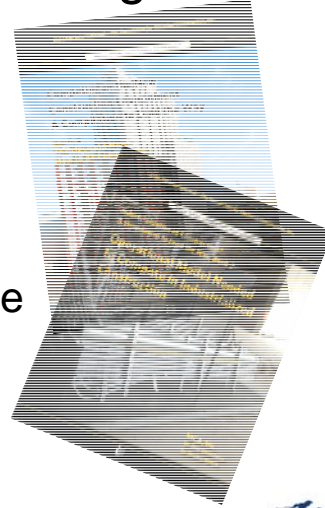


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## Industrialization in Construction Can Only Happen Through:

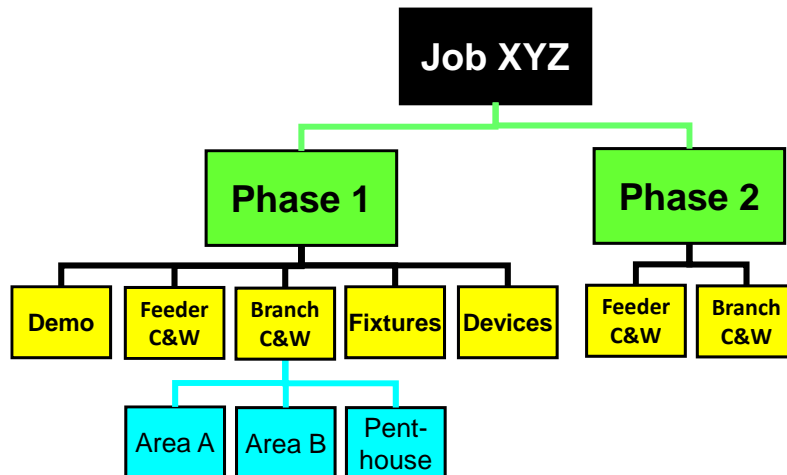
1. Management of Labor
2. Management of work
3. Lean Operations
4. Modeling and Simulation
5. Feedback from the Source



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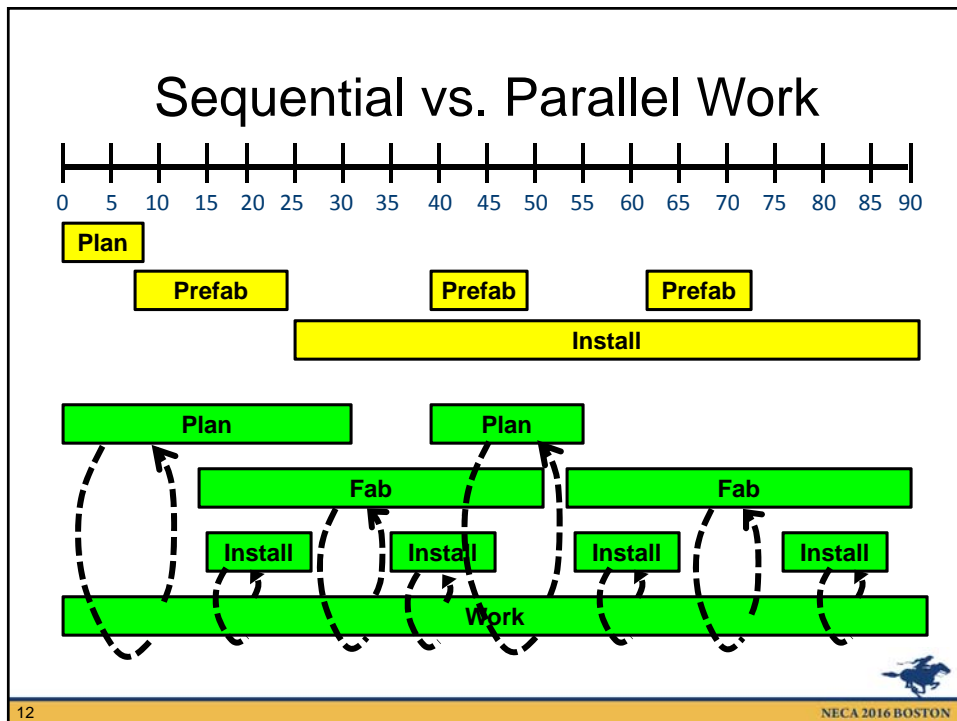
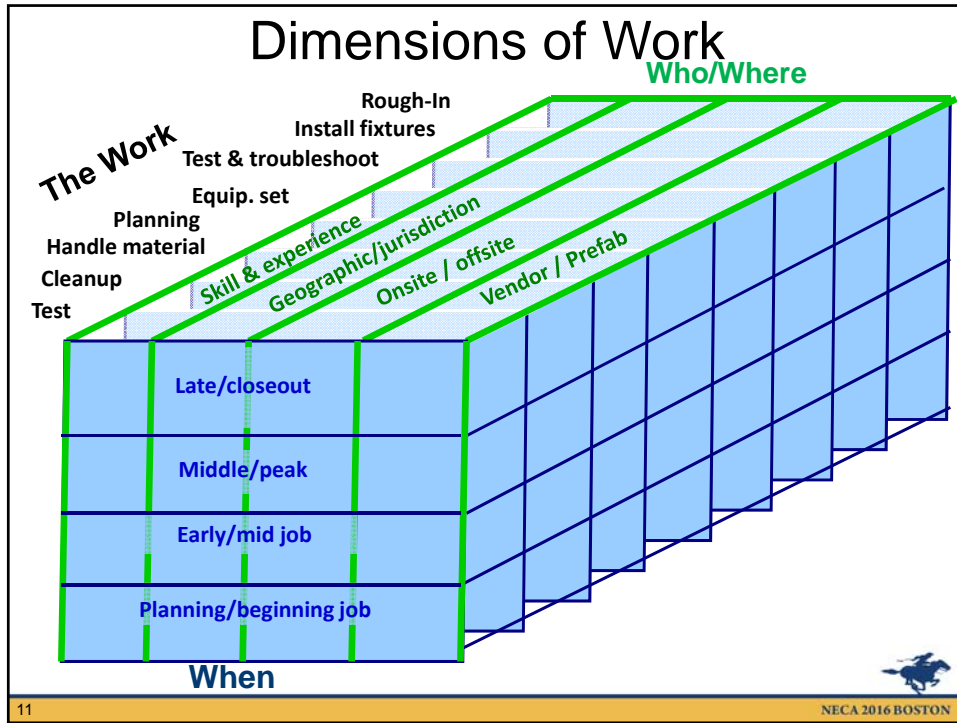
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## Job Work Breakdown Structure



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## What is Coming Next

- Applying science to externalizing work®:
  - How to bid and manage projects with fabrication?
  - How does fab impact job productivity and profitability?
  - What data is needed for estimating and modeling?
  - How to measure and manage the productivity of fabrication as a production process?
  - How to manage logistics?
  - How to manage information and quality?

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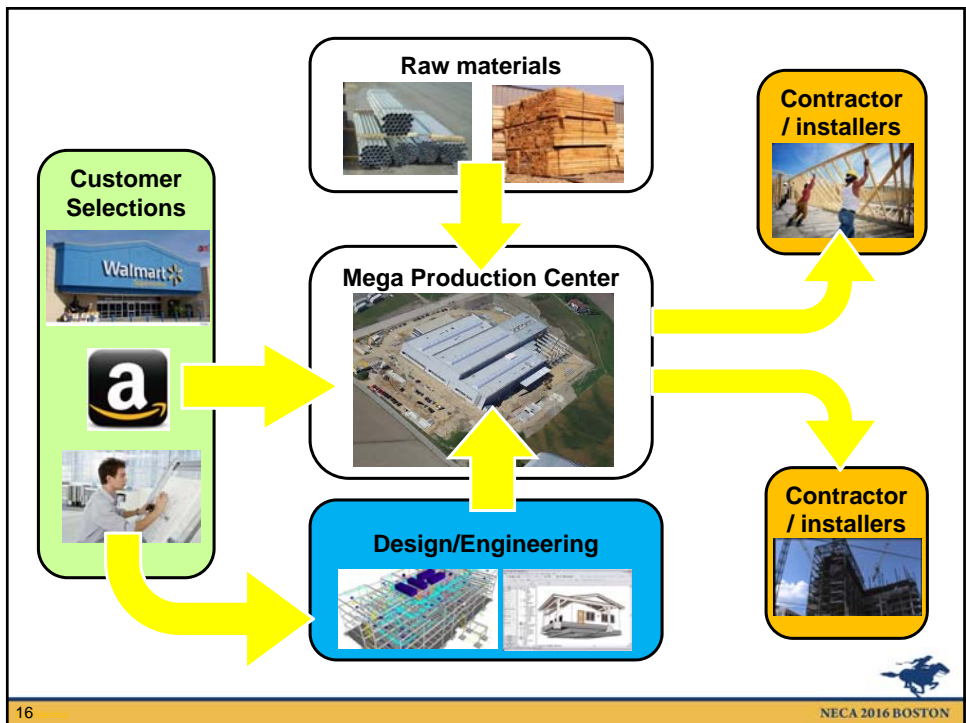
## What Is Coming Next Information Management



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## Profile of Future Leaders Leading the Transformation

- Translate tacit to explicit knowledge
- Manage labor and manage work in Industrialized environment
- Manage information
- Manage data quality
- May not be the best electricians or even technicians
- Ability to adapt and anticipate (agility)



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## Methods & Tools to Transition in the Industrialized Construction Environment

- Agile Construction<sup>®</sup> approach
- Short Interval Scheduling (SIS<sup>®</sup>)
- Work Breakdown Structure
- Productivity Measurement using ASTM E2691
- Externalizing Work<sup>®</sup>
  - Prefabrication
  - Agile Procurement<sup>™</sup>
- Big Data
- Data quality management
- Information management



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## The Winds of Change and the Future Landscape

- Industrialization & Disruption will lead to lower costs of construction
- Commercial & Residential owners/end users will be able to get buildings cheaper
- The Commercial & Residential markets will continue to expand, or maybe expand faster



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## Questions?

*Don't forget...*

- 10:15 - 11:30 am – Opening General Session *with Doris Kearns Goodwin*
- 11:30 am - 5:00 pm – NECA Show Hours



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