STRATEGIC PROJECT SOLUTIONS®

Conceptual Frameworks Underpinning Project Delivery and Implications for Optimizing Project Outcomes

PPI 2015 Symposium

09 December 2015

2016-100

Conceptual Frameworks Underpinning Project Delivery and Implications for Optimizing Project Outcomes

Scope:

Optimizing project outcomes requires that current conceptual thinking and frameworks associated with project delivery be understood. This research proposes that delivery of projects can be best understood through three primary historic eras: Era 1 - Productivity, Era 2 - Predictability and Era 3 - Profitability.

These eras, which directly correlate to the development of modern operations management thinking, have had significant influence on how projects are delivered today, and form the basis of current trends in thinking about how to improve performance. Once this research is concluded, PPI envisions the development of a maturity model, which can be used to understand current and future state of a project delivery approach.

Dinner with Joe

Lots of reading

Learning (so far)

Forbes / Investing

The Little Black Bo

APR 1, 2014 @ 08:35 AM 1,631 VIEWS

Costly Delays In Bringing Up Kashagan Weighing On Oil Companies' Returns

Special Report $68-billion California bullet train project likely to overshoot budget and deadline targets

Ralph Vartabedian • Contact Reporter

OCTOBER 24, 2015, 1:40 PM

Leaky Locks May Further Delay $5.3 Billion Panama Canal Widening

by Michael D McDonald

October 30, 2015 — 4:00 AM PDT

Apple fires Campus 2 contractors as 'spaceship' faces delays, spiraling costs

By AppleInsider Staff
Wednesday, June 10, 2015, 06:45 am PT (09:45 am ET)

THE WALL STREET JOURNAL.
U.S. EDITION

Pre-Fab Nuclear Plants Prove Just as Expensive

By Rebecca Smith

More delays for Chevron's $74bn Gorgon project

THE AUSTRALIAN | AUGUST 3, 2015 12:00AM

Last updated: July 17, 2015 8:53 am

South Korean shipbuilders shaken by loss fears

(LEAD) Daewoo Shipbuilding dips to 7-year low on loss woes

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KBR INC KBR : NYSE

Industry: Heavy Construction

AMEC FOSTER WHEELER PLC AMFW : NYSE

FLUOR CORP FLR : NYSE

Industry: Heavy Construction

JACOBS ENGINEERING GROUP INC JEC : NYSE

Industry: Heavy Construction

CHICAGO BRIDGE & IRON COMPANY NV CBI : NYSE

Industry: Heavy Construction

MCDERMOTT INTERNATIONAL INC MDR : NYSE

Industry: Oil Equipment & Services

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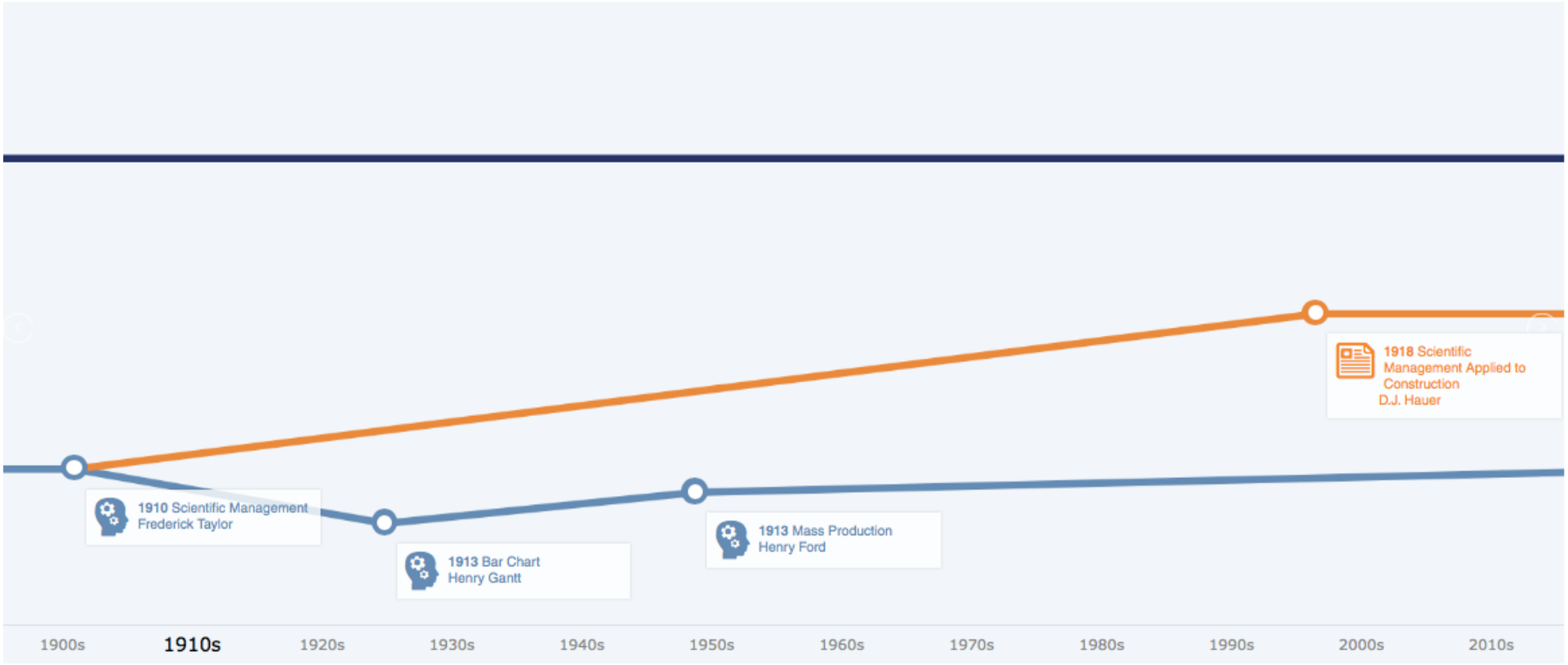
“How did we get here”

Joe Gregory - President, Chevron PRC



Project Management
Project Production Management
Manufacturing

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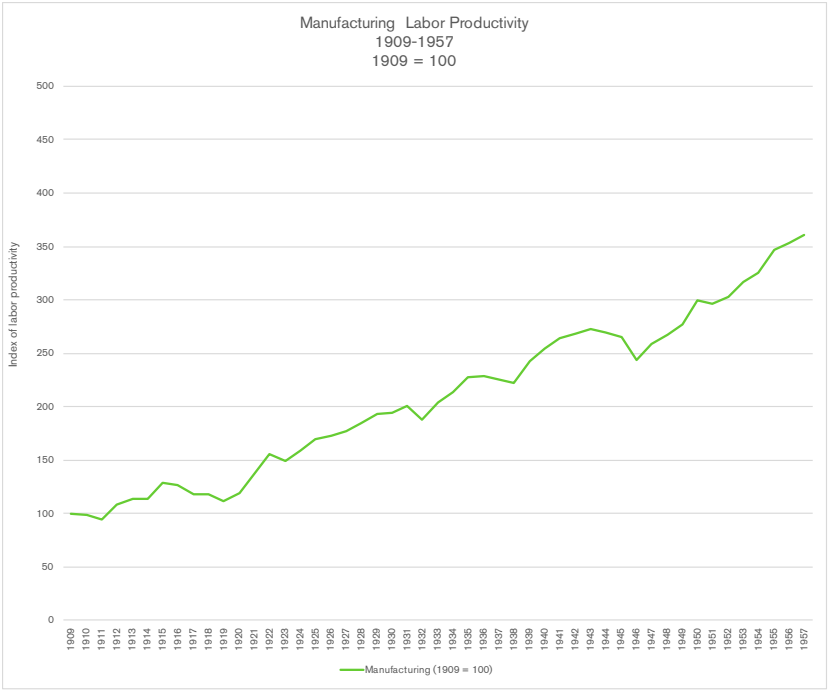
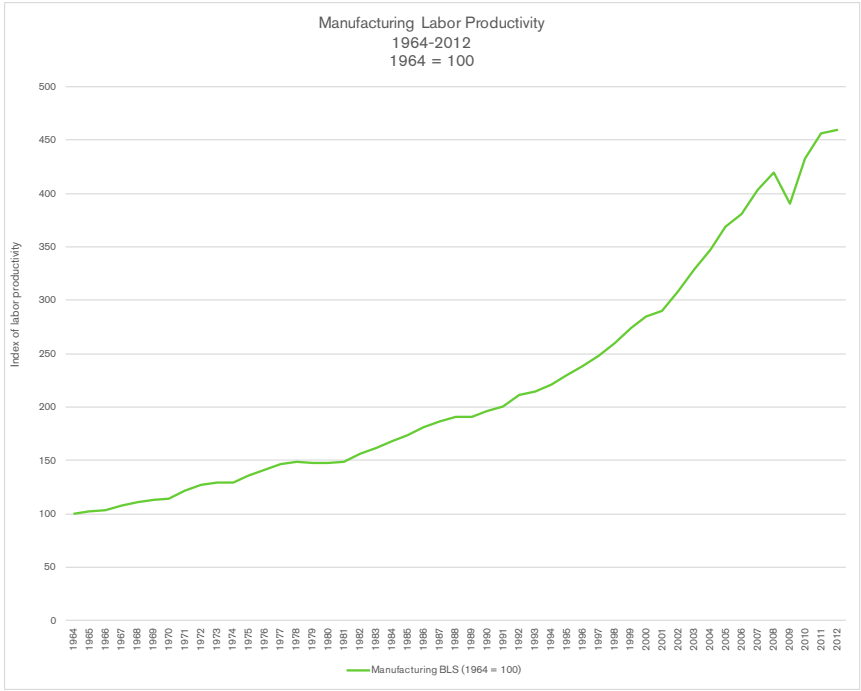
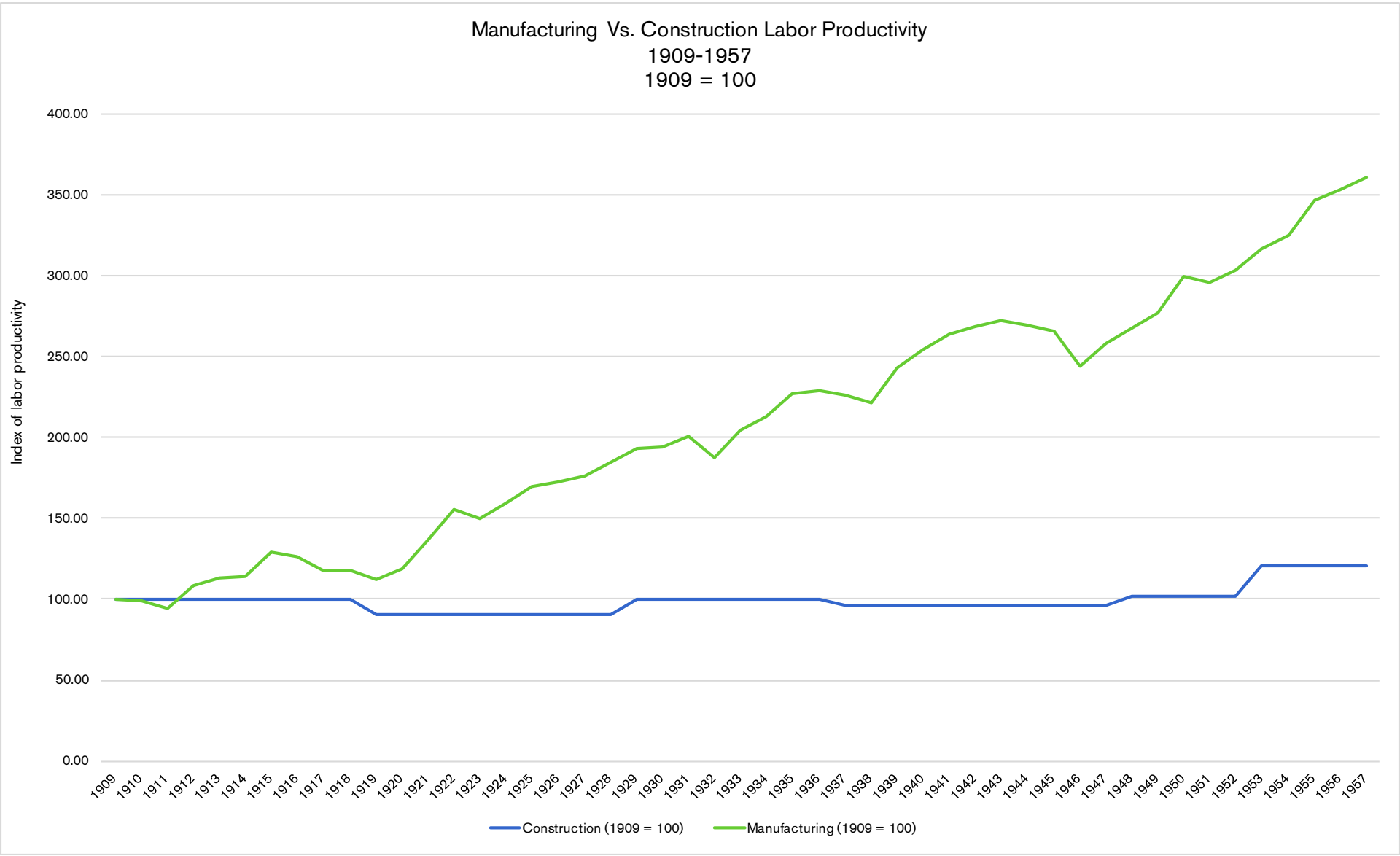


Source: "Productivity Trends in the United States" (1909 = 100)



Source: U.S. Bureau of Labor Statistics (1964 = 100)



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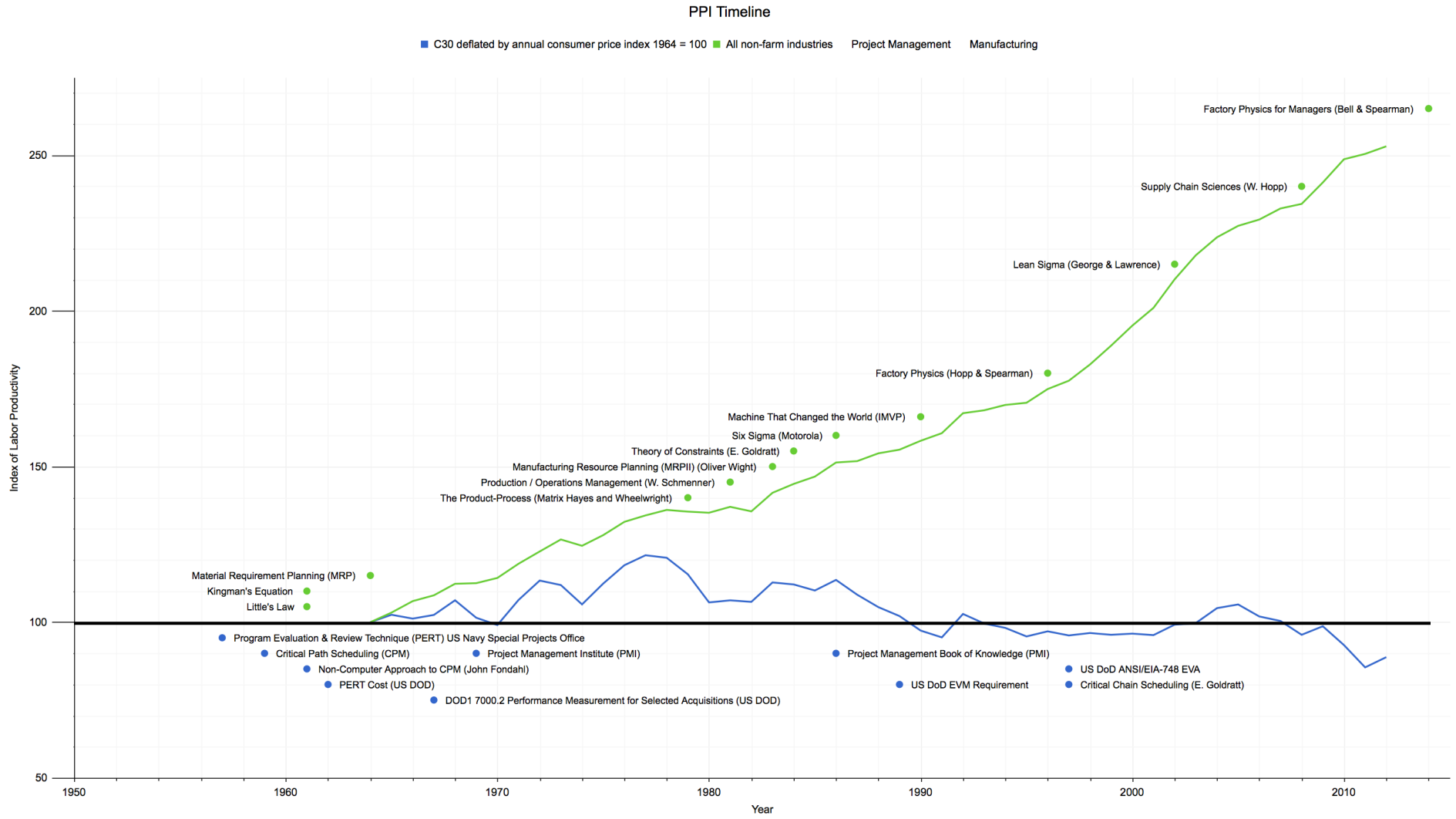

Productivity Data Source: P. Teicholz

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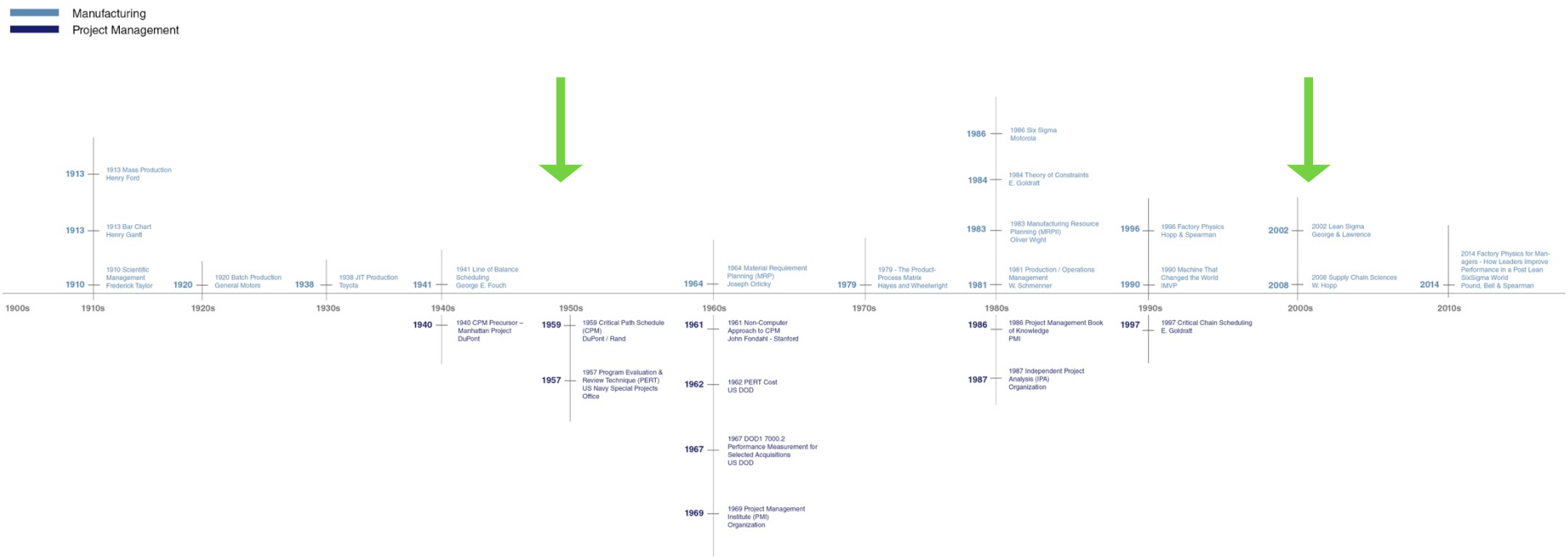
PPI Timeline



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ERA-1 PRODUCTIVITY 1900 - 1950	ERA-2 PREDICTABILITY 1950 –	ERA-3 PROFITABILITY 2000 –
CLASSICAL MANAGEMENT How to get more out of workers? Scientific Management: (Babbage, Taylor, F&L Gilbreth, Hauer, Gantt): Increase productivity through focus on the worker – How to get more out of workers Behavioral Approach: (Follet, Owen, Rothlisberger & Disckson): How to motivate workers through connecting inborn needs with business objectives (Hawthorne Study, Theory X & Theory Y and Maslow) Administrative Management: (Fayol, Weber & Chandler): How to scale the organization (GM, Standard Oil and Sears)	PROJECT MANAGEMENT How to achieve predictable outcomes through measurement/compliance? Quantitative Approach: Linear Programming: Kantorovich & Dantzig, CPM: (Kelley – DuPont & Walker - Remington Rand UNIVAC), PERT: (Malcolm & Roseboom – Booz Allen & Fazar – USN), US DoD 7000.2, C/SCSC – McNamara (SECDEF), Monte Carlo in PERT: (Van Slyke – Rand Corp), Earned Value Management (EVM) Legal Action: Attorneys, Delay / Acceleration Claims, Eichleay Formula, Claims Consultants, Primavera Claim Digger, Data Analytics / Big Data Analysis Construction Management: Divest Construction Equipment, Shift Risk to Specialty Contractors, Leverage Outsourcing Movement,	PROJECT AS PRODUCTION SYSTEM How to achieve business objectives with minimal use of resources? 1995 Cost Reduction in the New Era (CRINE) 1998 Rethinking Construction (Egan) 2000 Aera Energy 2003 BAA Heathrow T5 2005 Stora Enso Rebuilds 2005 BP Whiting ULSD 2006 XOM Joliet 2010 Hess Unconventionals
Bureaucracy Resulting from Functions Batch Production / Inventory & WIP Build-up	Lack of transparency Limited accountability and control Excessive use of resources	Effective control of resource allocation Less Bureaucracy (indirect cost)
Localized optimization Industrial action	Cost and schedule overruns, claims and unnecessary stress	Reliable project outcomes More collaborative / less stressful environment

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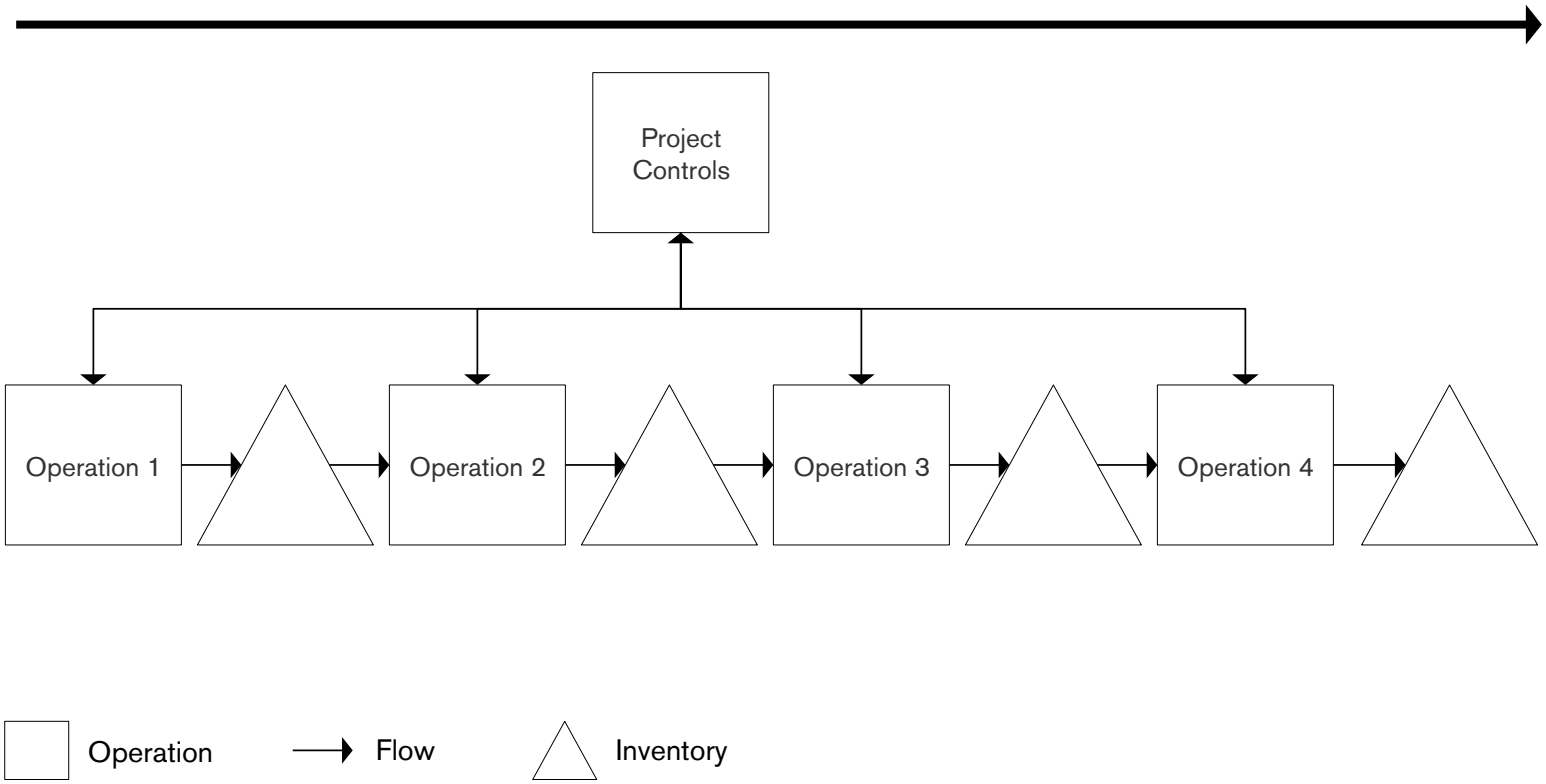

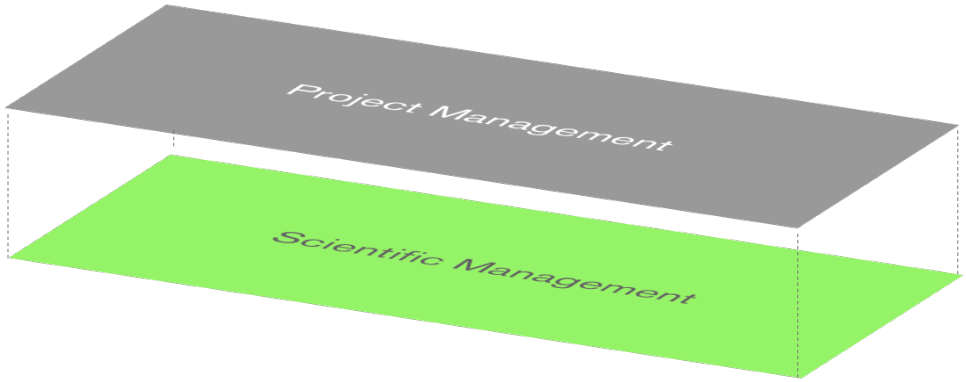

Era 2 - Predictability

Era 1 - Productivity

Next Steps

Stanford CEM 2 Unit Seminar-Research Class

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