Forecasts, trends and what “Strategic” Leaders are doing to gain the upper-hand

2015 TAUC Leadership Conference
May 13, 2015
60 years
one industry

Position for Growth

Optimize Performance

Build Capacity

Transition Successfully
“...U.S. Federal Reserve pressed ahead at its last policy-setting meeting with plans to begin raising interest rates later this year despite an apparently vigorous debate over how to communicate its intentions.”

*Reuters – January 7, 2015*
Reasons for optimism

INTEREST RATES

EMPLOYMENT

OIL
And, reasons for caution...

GLOBAL INSTABILITY
“The combination of rapidly rising employment, good prospects for 2015, and a depleted pool of unemployed workers with construction experience means contractors may have a hard time filling jobs with the workers they need in coming months,"

- Ken Simonson, AGC's chief economist
NRCI First Quarter 2015

FMI Nonresidential Construction Index (NRCI)
Scores | Q1 2010 to Q1 2015

(Scores higher than 50 indicate expansion, below 50 indicate contraction.)

[Bar chart showing NRCI scores from Q1 2010 to Q1 2015, with scores ranging from 48.4 to 64.8.]

FIRST QUARTER 2015 64.8
Construction Spending Outlook

Estimated Construction Put in Place

FMI Construction Put in Place, Estimated for the United States

© 2014 FMI Corporation
Total Residential Construction

- We expect solid growth of 9% for 2015 and just a bit lower through 2019. The fast pace of multifamily construction is expected to slow to 9% in 2015 and 7% to 8% through 2019.

- Factors impacting residential activity:
  - Foreclosure rates slowing
  - Improving property values
  - Affordability is lower
  - Mortgage rates still low
  - Demographics
  - Household formation low
  - Job picture improving
  - Multifamily rents are up; vacancy rates are climbing again

Source: FMI First Quarter Outlook 2015
Multifamily Housing Construction

- Construction put in place rose 29.0% in 2014 and will rise another 11.0% in 2015 to $55.9 billion.

- Rents rising as population shifts to the city and forgoes homeownership for now.

- Market drivers:
  - Children of baby boomers forming fewer households
  - Immigration
  - Foreclosure rates down
  - Potential homebuyers deferring purchasing decisions
  - Hard to get credit even for highly creditworthy borrowers
  - Vacancies were up slightly in the fourth quarter 2014, suggesting multifamily unit growth is getting ahead of need.

Source: FMI First Quarter Outlook 2015
Lodging Construction

- Our latest forecast shows **18% growth in 2014 will slow to 16% growth in 2015**. Solid growth will continue through 2016 and slow to just 6% through 2019.

- **Market Drivers**
  - Baby boomers are the largest group of nonbusiness travelers.
  - Room starts are increasing.
  - Occupancy rates and RevPar are up.
  - Most hotels in the planning phase are upscale and large luxury properties.

Source: FMI First Quarter Outlook 2015
Office Construction

- Dropping unemployment rates and rising GDP have provided a lift for our office forecast to 19% growth in 2014 and a **forecast of 11% growth for 2015** to $49.5 billion.

- Market Drivers
  - New office space absorbed at a faster rate than existing office space; rent increases falling back.
  - Completion levels of new office space to improve in 2016.
  - According to JLL, “Rental growth is accelerating, with the annual rate of growth on prime office assets increasing from 1.7% in 2013 to 3.1% in 2014 and another 4% rise projected for 2015.”

Source: FMI  First Quarter Outlook 2015
Commercial Construction

- Commercial construction ended up 12% at year-end 2014, moderate growth forecasted through 2019, after a **15% improvement in 2015** to $65.8 billion.

- **Market Drivers:**
  - Vacant big-box stores renovated and repurposed.
  - Upscale urban power centers with name-brand anchor stores show continued strength.
  - Grocery-anchored malls become competitive.
  - Continued growth in residential construction will help retail stores.
  - Online retail sales are increasing. According to the U.S. Census Bureau, non-store retail sales were up just 2.6% from last February 2014.

Source: FMI First Quarter Outlook 2015
Health Care Construction

- Health care construction decreased 6% in 2014, and forecasted to grow just 4% in 2015 to $40.6 billion.

- Market Drivers
  - Health care construction using more modern construction techniques such as prefabrication, BIM and IPD (integrated project delivery).
  - ACA uncertainty remains
  - Trending toward more ambulatory care centers.
  - Trend toward rebuilding existing facilities to use modern hospital design and allow for greater use of technology.

Source: FMI First Quarter Outlook 2015
Education Construction

- **Education construction grew just 1% in 2014 to $78.5 billion and expected to grow just 3% in 2015.**

- **Market Drivers:**
  - Rapidly increasing student populations, widespread overcrowding and antiquated school facilities keep demand high, but funding difficulties continue.
  
  - New trends include increased green building practices, an emphasis on security considerations and increased federal funding.
  
  - Use of prefabricated/modular school construction increasing.
  
  - Distance learning and online courses are on the rise.

Source: FMI First Quarter Outlook 2015
Transportation Construction

- Transportation construction continues at a solid pace, registering 5% growth in 2014, and is expected to add 7% for 2015 to $44.7 billion.

- Market Drivers:
  - Congress will need to pass a new or renewed transportation bill in 2015 to add some stability as well as funds to the transportation sector.
  - According to the American Association of Railroads rail traffic continues to grow.
  - Record sales for Boeing are indicative of a strong aviation market.
  - Growth in container ports is recovering from the recession.
  - Intermodal transportation will be the focus of new projects.

Source: FMI First Quarter Outlook 2015
After a flat 2013, our forecast for manufacturing construction calls for **2014** to end up 6% and grow 8% in **2015** to $55.0 billion.

**Market Drivers:**

- Improving energy supplies, a ready labor force and deteriorating geopolitical situations around the globe make returning to U.S. a more desirable option.

- Capacity utilization for manufacturing improved in July to 79.2. (Federal Reserve)

- Production for utilities has seen gains, especially for natural gas.

- Lower natural gas prices will help manufacturing energy inputs.

- The Manufacturing ISM® Report On Business® reports the ISM index rose to 57.1 in July. That represents 14 months of growth.
Low cost energy and resource proximity creating a boom for petro-chemical manufacturing expansion...
Non-building Construction

Highway and street construction managed to grow 1% in 2013 and should manage to grow 2% in 2014 to reach $83.1 billion.

Forecast pulled back from 5% to 3% growth for power industry construction put in place for 2014 with slower growth to continue through 2018 to $86.7 billion.

Source: FMI Third Quarter Outlook 2014

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“History doesn’t repeat itself, but it rhymes…”

Total Construction Activity by Cycle

Cyclical Trough (T)=100, Based on Constant Dollars

Source: Robert Murray, Chief Economist
Dodge Data and Analytics, 2015 Outlook
“Everything that can be invented has been invented.”

- Director - US Patent Office, 1899
• Better
• Faster
• Cheaper
Productivity Enablers

BIM and Virtual Imaging

Pre-Fabrication & Modularization

Alternative Project Delivery

3-D Printing & ???

Current

Future

Market Impact

Mobility & Real-Time Connectivity
BIM and Virtual Imaging

BIM and Virtual Imaging

Creates

Collaboration
Ensured Constructability
Schedule Precision
Waste Elimination
Pre-Fab
Pre-Fabrication

Pre-Fab & Modularization

Creates

Job-site Efficiency
Quality
Skilled Labor Alternative
Waste Elimination
Greener Construction
Alternative Delivery Methods

P3 / Integrated Project Delivery

Creates

Greater Collaboration
Project Funding
DBOM Options
Improved Schedules
Reduced Litigation
3-D Printing and...

3-D Printing

Creates

Job-site Efficiency
Quality
Skilled Labor Alternative
Waste Elimination

?????
Disruptive Technologies...shift is happening.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Internet</td>
<td>Increasingly inexpensive and capable mobile computing devices and Internet connectivity</td>
</tr>
<tr>
<td>Automation of knowledge work</td>
<td>Intelligent software systems that can perform knowledge work tasks involving unstructured commands and subtle judgments</td>
</tr>
<tr>
<td>The Internet of Things</td>
<td>Networks of low-cost sensors and actuators for data collection, monitoring, decision making, and process optimization</td>
</tr>
<tr>
<td>Cloud technology</td>
<td>Use of computer hardware and software resources delivered over a network or the Internet, often as a service</td>
</tr>
<tr>
<td>Advanced robotics</td>
<td>Increasingly capable robots with enhanced senses, dexterity, and intelligence used to automate tasks or augment humans</td>
</tr>
<tr>
<td>Autonomous and near-autonomous vehicles</td>
<td>Vehicles that can navigate and operate with reduced or no human intervention</td>
</tr>
</tbody>
</table>

Source: Mckinsey Global Insitute Analysis
Disruptive Technologies...shift is happening.

- Next-generation genomics
  - Fast, low-cost gene sequencing, advanced big data analytics, and synthetic biology (“writing” DNA)
- Energy storage
  - Devices or systems that store energy for later use, including batteries
- 3D printing
  - Additive manufacturing techniques to create objects by printing layers of material based on digital models
- Advanced materials
  - Materials designed to have superior characteristics (e.g., strength, weight)

- Advanced oil and gas exploration and recovery
  - Exploration and recovery techniques that make extraction of unconventional oil and gas economical
- Renewable energy
  - Generation of electricity from renewable sources with reduced harmful climate impact

Source: Mckinsey Global Institute Analysis
"Downstream" - Unprecedented North America Investment

Downstream industrial construction dwarfs all other energy sectors by 10x.....

- LNG Export Terminals
- Ethylene and other petrochemical plants
- Refinery expansion
- Port and rail terminal expansion

Midstream $30B

Downstream $300B+
ENR 400 Share of Total Construction Put in Place

Source: ENR, FMI
Ten megapolitan areas will have populations of at least 10 million each by 2040.

Source: Metropolitan Institute at Virginia Tech
Supply and Demand – number of live births, 1920 - 2005

Source: National Center for Health Statistics, Center for Disease Control and Prevention
Mitra Toossi, Monthly Labor Review, November 2006
Talent shortages...top growth impediment?

If you cannot reasonably meet the need for skilled labor and tradespeople in the next few years, what do you think will be the impact for your business?

61% believe the lack of skilled labor will impact competitiveness and / or slow ability to grow

Source: FMI - Craft Labor Recruiting & Retention 2015 Survey Report
Talent shortages...top growth impediment?

Top Five Trade workers in Demand for the next Five Years

- Craft helpers
- Laborers
- Operators (heavy equipment)
- Carpenters
- Ironworkers (reinforcing)

Top Five Trade workers expected to be the Hardest to Find in the next Five years

- Operator (heavy equipment)
- Welders (boilermaker)
- Carpenter
- Pipefitter (all including plumbing)
- Ironworker (reinforcing)

Source: FMI - Craft Labor Recruiting & Retention 2015 Survey Report
October 15, 2008
And if that wasn’t enough, it’s a VUCA world out there...

Volatile
Uncertain
Complex
Ambiguous
“Grant me the serenity to accept the people I cannot change, the courage to change the person I can and the wisdom to know it is me.”

- Anonymous
Leadership Response

To provide vision and direction for the enduring growth and success of an organization.

To overcome change and ambiguity by creating common purpose and alignment across workgroups supported by sound strategy, and an organization-wide will to adapt.
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Enduring

Success = V(ision) * T(alent) * C(ulture)
Vision
The Golden Circle

And, The Power of Why
Visionary organizations significantly outperform their closest rivals

by over 7x’s in return on shareholder value over the course of 5 decades...

Source: Built to Last
Porras & Collins
Strategic Leaders
(who drive growth regardless of forecasts)

✓ Establish an organization’s **why**
  ✓ that points to true purpose, reinvention and innovation

✓ Challenge the status quo...
  ✓ *How well do we understand implications of broad industry trends and less visible undercurrents to our long-range plans and strategic choices?*

✓ Create alignment between
  ✓ Long term vision
  ✓ Strategic priorities
  ✓ Productivity initiatives
  ✓ Talent & leader requirements
Talent
The first most important decisions are people decisions. The corporate leaders we studied who ignited transitions from good to great practiced the discipline of "First Who": first get the right people on the bus, the wrong people off the bus, and the right people into the right seats and then figure out where to drive the bus. To be clear, the First Who principle is not the only requirement for building a great company. But until you have 90% to 100% of your seats filled with the right people, there is no more important priority.

"First get the right people on the bus, the wrong people off the bus, and the right people in the right seats, then figure out where to drive the bus."

Jim Collins
Attracting Millennials

According to the Brookings Institute,

“Almost two-thirds (64 percent) of millennials said they would rather make $40,000 a year at a job they love than $100,000 a year at a job they think is boring....Millennials overwhelmingly responded with increased trust (91 percent) and loyalty (89 percent), as well as a stronger likelihood to buy from those companies that supported solutions to specific social issues (89 percent).”
Talent essential... Developing future leaders

Peak Leaders

- Do more SAM, less POC
- Understand what drives great engagement and results through others
Talent essential... Strategic Thinkers at all levels

Think Strategically

Business Impact

- Productivity
- New Markets
- Better Processes
- Innovative Services
Strategic Leaders
(who drive growth regardless of forecasts)

- Get and keep the right people on the bus
- Build a “deep bench” of future strategic leaders
- Create and reinforce the willingness and ability for teams to effectively collaborate and think strategically

- Focus on building consistent...
  - Mutual Trust
  - Respect
  - Constructive Debate
  - Results Bias
Adaptable Culture
“The way we do things around here.”
Adaptability

The power to detect and respond to change in the world, no matter how surprising or inconvenient it may be.
Obstacles to Increasing Organizational Agility (top 6)

- Conflicting goals/priorities of different departments: 64.60%
- Decision-making can take too long: 57.60%
- Necessary information resides in silos: 50.30%
- Difficulty in measuring the business impact of learning: 42.40%
- Lack of budget flexibility: 41.40%

“Culture is risk adverse and slow to adopt innovation”

Source: HCM Advisory Group, Saba
Strategic Leaders (who drive growth regardless of forecasts)

- Put the right rewards in place to shift / reinforce behaviors

- Only recognize success based on exceeding expectations within the intended values and culture of organization / company

- Create an atmosphere of collective genius

- Create cultures that embrace VUCA

Culture

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1 Idea

Bring together a cross-section of current and future leaders...

- Determine what TAUC member organizations must do to become more VUCA adaptive & attractive to the next generation
- Identify the top three cultural impediments that prevent this from happening
- Enlist a consortium of senior leaders and “rising-stars” to eliminate these impediments
Connecting the wires...

- Lumpy recovery continues
- Stage is set for long-term growth in industrial & demographic driven segments
- Opportunities exist but showing up in new ways
- Trends creating opportunities or obstacles depending on understanding and ability to adapt
- Strategic Leaders are setting direction, better aligning limited resources to drive sustained growth and adjusting motivators to attract and retain a diverse cross section of talent and future leaders

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Developing Exceptional Leaders One at a Time

About FMI

FMI is the largest provider of management consulting, investment banking and research to the engineering and construction industry. We work in all segments of the industry providing clients with value-added business solutions, including:

- Strategy Development
- Market Research and Business Development
- Leadership and Talent Development
- Project and Process Improvement
- Mergers, Acquisitions and Financial Consulting

Founded by Dr. Emol A. Fails in 1953, FMI has professionals in offices across the U.S. FMI delivers innovative, customized solutions to contractors; construction materials producers; manufacturers and suppliers of building materials and equipment; owners and developers; engineers and architects; utilities; and construction industry trade associations. FMI is an advisor you can count on to build and maintain a successful business, from your leadership to your site managers.

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Thank You