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**Franklin Equity Group Industrial Technology**  
**Venture Capital**

**Cross, James**

Monterey, California. Naval Postgraduate School

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# FRANKLIN EQUITY GROUP INDUSTRIAL TECHNOLOGY VENTURE CAPITAL

April 2017

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Presented By

**James Cross**

Vice President

Portfolio Manager/Research Analyst

Franklin Equity Group

**Robert Stevenson**

Vice President

Portfolio Manager/Research Analyst

Franklin Equity Group

# Partner with Industrial Tech Veterans

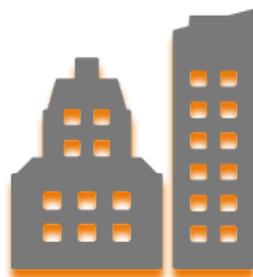
and Leverage Franklin's Silicon Valley Presence

**The Industrials sector is at an inflection point, and our team is seeking to:**



## Connect the Industrial World to Silicon Valley

- We provide our partners an avenue to innovation hubs across the country
- Silicon Valley is one area we're seeing innovative companies pioneering industrial technologies of the future



## Find Target Companies that Value Our Team

- We seek founders that value our:
  - Strategic corporate partnerships
  - Nexus of networks
  - Long-term “life-cycle” investment philosophy
  - Expert ability to unlock federal opportunities



## Enable Industrial Transformation in an Increasingly Digitized World

- Leading elements of the digitization value chain can be found in early stage venture-backed companies
- We identify opportunities to close the “digitization gap” between military and commercial technologies

# Why Franklin Templeton for Industrial Tech Venture Capital?



FRANKLIN TEMPLETON  
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## 60+

years of total team experience in the Industrials sector; investing since 2000

## \$10B

in AUM within the Industrials sector

## \$300M

deployed in private deals since 2014 within TMT, Industrials, Fintech and Biotech

- We work and live in Silicon Valley, the nucleus of industrial tech innovation
- We actively identify and invest in companies that others may overlook
- Gain access to our nexus of networks
- We are backed by the strength of Franklin Templeton's global platform, brand and strong in-house legal team

1. Data as of March 31, 2017.

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# Access Our Nexus of Networks



# Leverage the Expertise of a Team Based in Silicon Valley

Have confidence in a seasoned management team with hands-on access to innovative local companies.

**5**  
Investment Professionals

**60+**  
Years of Total Industry Experience

**\$10B**  
in AUM within Industrials sector

## Franklin Industrials Sector Team



**James Cross**

Sector Team Leader  
Portfolio Mgr. / Analyst



**Robert Stevenson**

Portfolio Mgr. / Analyst



**Robert Rendler**

Portfolio Mgr. / Analyst



**Kim Strand**

Portfolio Mgr. / Analyst



**Ryan Biggs**

Analyst

Industry Experience

19+ Years

14+ Years

12+ Years

12+ Years

6+ Years

Sector Responsibility

Aerospace & Defense

Transportation

Chemicals & Steel

Capital Goods

Technology

## Franklin Equity Group

Portfolio managers/analysts

**38**

Research analysts

**32**

Managing over

**\$180 billion**

Supported by the Franklin Templeton Global Platform

1. Data as of March 31, 2017.

# Why Industrial Technology Now?

# Why Industrial Technology Now?

**Our team seeks to identify opportunities from the most significant themes in industrial technology today:**



## **Digitization of the Industrial World**

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The industrials sector spent last 15 years building new capacity to support growth. In our view, that capacity needs to now be optimized through digitization.



## **Dual-Use Military/Commercial Tech**

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We believe there's a clear need to close the gap between military and commercial technologies.

# Digitization of the Industrial World



## Industrial Internet of Things

### 1. The Need to Digitize<sup>1</sup>

- Developed economies are in a productivity slump
- Global Productivity: +0.5% per year from 2011 – 2015 vs. +3% per year from 1996 – 2005
- Only 54% of global manufacturing is automated

### 2. The Industry's Digital Maturity

- Industrial Internet has emerged as a ~\$225B market vs. the Consumer Internet ~\$170B<sup>2</sup>
- Executive's believe digital transformation will drive the next industrial revolution
- 75% of manufacturing companies believe that Digital Transformation is a necessary competitive advantage

### 3. Business Models Evolving

- GE's "Brilliant Factory" and Predix software platform
- Honeywell Connected Plant/Home/Buildings and Sentience software platform
- Rockwell Automation Connected Manufacturing Enterprise and FactoryTalk software applications

"If you can say we can reduce your downtime by 50%, an industrial company says "That's worth \$50 million, I'm going to invest in that. I know what the payback is." I remember in 1984 being in a sales office at GE the first time we installed Windows, and nobody had any idea what that would mean. Was it productivity, was it communications? When you walk in with an industrial customer, you know exactly what you're selling, and they know exactly they're buying."<sup>1</sup>

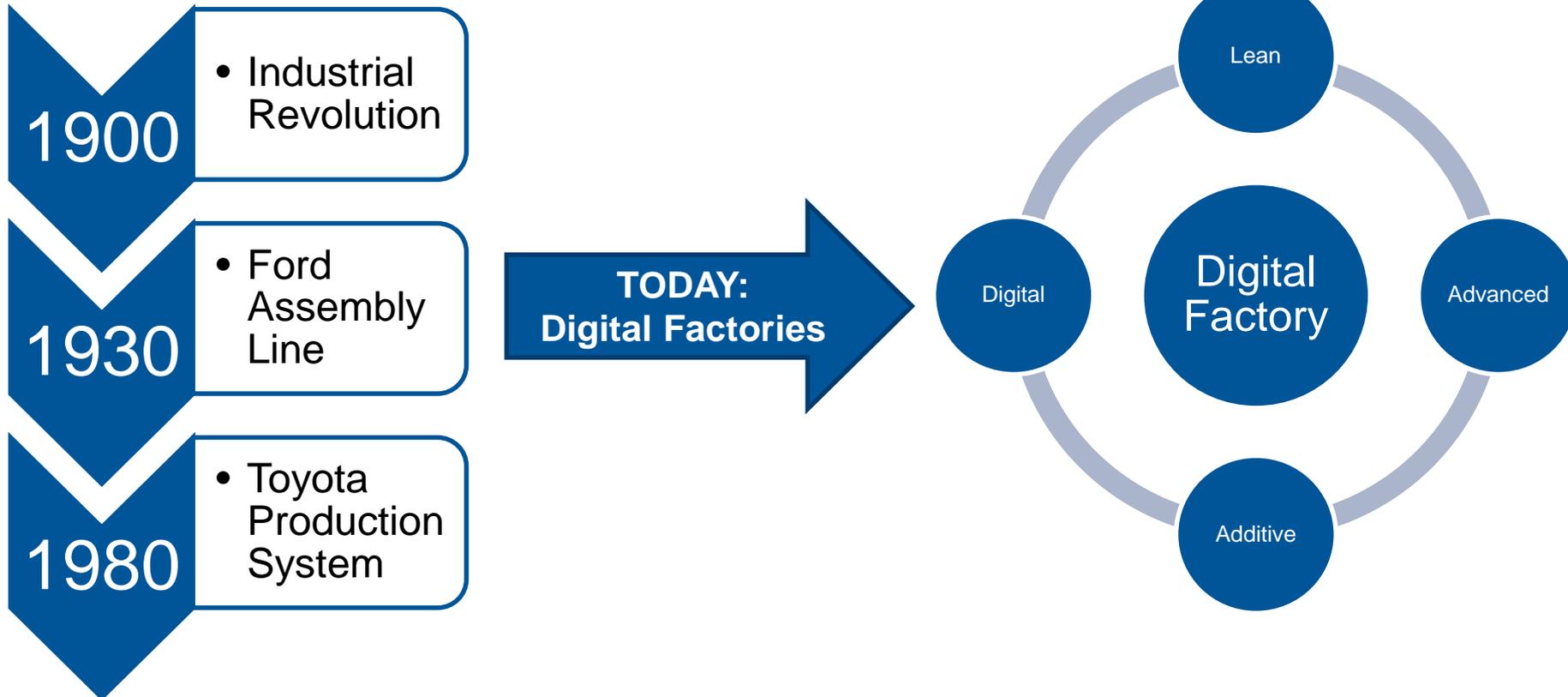
**Jeff Immelt**, Chairman & CEO, General Electric

1. Capgemini Consulting: Operational Excellence Through Digital in Manufacturing Industries.

2. Terdiman, D. (2015). *GE CEO Jeff Immelt On How The Industrial Internet Is Helping Slash Downtime*. Retrieved from <https://www.fastcompany.com/3051721/ge-ceo-jeff-immelt-on-how-industrial-internet-is-helping-slash-downtime>

# Digitization of the Industrial World

The market is ready for the rise of digital factories.



# Dual-Use Military/Commercial Technologies



## 1. Need for Dual-Use Technologies

Combining the research and development (R&D) spend of the top 5 U.S. Department of Defense (DoD) Prime Contractors would not put them in the top 20 industrial sector R&D spenders worldwide.<sup>1</sup>

## 2. Who is Driving Dual-Use Technology Advancements?

Office of the Secretary of Defense: founded DIUx, which is meant to bridge the Valley and DoD through identifying commercial tech that can be applied for military use.

## 3. Examples

- Satellite imaging
- Robotics/autonomous mobility
- Information security and encryption technology
- AI-enabled sensor fusion platforms
- Machine vision and multi-spectrum sensors

“More and more of the technologies that the U.S. military will need to remain dominant are being developed by commercial firms, including those that traditionally have been deterred from doing business with the Department of Defense. If the United States does not adjust to this new reality, we will fall further behind.”<sup>2</sup>

**Senator John McCain**

Chairman, Senate Armed Services Committee

1. Source: Strategy &, “The Global Innovation 1000: Top 20 R&D Spenders 2005-2013,” Strategyand.com, <http://www.strategyand.pwc.com/global/home/what-we-think/global-innovation-1000/top-20-rd-spenders-2013>, Accessed May 20, 2014.

2. McCain, J. (2017). *Restoring American Power*. Retrieved from [https://www.mccain.senate.gov/public/\\_cache/files/25bff0ec-481e-466a-843f-68ba5619e6d8/restoring-american-power-7.pdf](https://www.mccain.senate.gov/public/_cache/files/25bff0ec-481e-466a-843f-68ba5619e6d8/restoring-american-power-7.pdf)

# Dual-Use Military/Commercial Technologies

## A Case Study in Innovation: Earth Observation by Satellite

### The Opportunity

- The \$2.8B commercial satellite imaging market is expected to double over the next 5 years
- New companies are disrupting traditional pricing models and imaging every corner of the earth daily



### Dual-Use Capabilities

- Governments purchase the majority of imagery today
- Military: Geo-political tension intensifies the demand for imagery



### Commercial Uses

- Agriculture, Crop Health, Intelligent Farming
- Improved visibility of global commodity production and economic activity
  - Oil
  - Mining
  - Building and construction
  - Shipping and trade
- Environmental detection
  - Rainforest
  - Ice caps
  - Avalanche warnings
  - Rainfall

# Investment Strategy and Deal Flow Advantage



**“Many leading elements of the digitization value chain can only be found in early stage venture-backed companies.”**

– James Cross, Industrials Sector Team Leader

## The Franklin Industrials Sector Team seeks to:

- Identify and invest in early stage companies at the forefront of industrial technology
- Fully commit and partner with these companies throughout their entire life-cycle.





## We Favor Companies with Compelling Characteristics

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- Platform strategy
- Primarily focused on commercial strategy with government market upside
- Management open to having government customers
- Artificial Intelligence/Analytics capability
- End-to-end connectivity
- Embedded cyber security
- Minimum Viable Product complete
- 2-5 minimum early reference customers
- Revenue visibility
- Opportunity to expand market share
- Long-term new total addressable market expansion
- Founder-developed intellectual property with strong barriers to entry
- Developed and growing patent portfolio
- Area of partner interest

## We Monitor Potential Risk Factors

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- Concerns regarding business model assumptions
- Inflated valuation
- Undifferentiated technology
- Inexperienced founding team
- Significant existing strategic investor presence
- Competing directly with a partner's core business
- Lack of sales and business development capability
- Underestimating investment costs to scale business
- Concerns with management team integrity
- Lack of strong reference customer support
- Governance concerns
- Complicated capital structure
- Prioritizing government customers at expense of commercial strategy

# Franklin Templeton's Deal Flow Advantage

## Utilizing Our Nexus of Networks

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- Accelerators and incubators
- Venture capital firms across Silicon Valley
- Entrepreneurs
- Investment banks
- Trade shows/conferences
- Public sector network
- Portfolio company referrals
- Silicon Valley-based government offices
- Start-up pitch events
- Silicon Valley defense working groups

## Deal Execution and Reviews<sup>1</sup>

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- The Industrials team oversees approximately \$10 billion in investments across the sector
- Since 2014, Franklin Equity Group deployed over \$300 million across 25 private deals primarily in:
  - Industrials
  - TMT
  - Fintech
  - Biotech
- Over 50 private industrial technology deals have been reviewed over the past year

1. Data as of March 31, 2017.

# Investment Strategy In Action

## Proterra: Revolutionizing Transit

### Company Profile

Proterra makes zero-emission, battery-electric buses.



#### Investment Thesis

- Electrification of the transportation industry
- Fits the dual-use theme (applying constant voltage technology to other heavy duty and military applications)
- Quality industrial company overlooked by many VCs that are looking for asset light companies

#### Value Creation

- Active partnership
- Management coaching
- Board search assistance
- Board level input on how to think about being a public company
- Connecting them with public companies to discuss partnerships

#### Investment Summary

- Initiated relationship in June 2016
- First close was September 2016
- Final close of the deal (which we also participated in) was January 2017
- \$42.6 million was invested for ~9% ownership
- We led the deal, which totaled \$143 million

This is not a complete analysis of every material fact regarding an industry, security or investment and should not be viewed as an investment recommendation. It is, however, intended to provide insight into the investment management process of the Franklin Industrials Sector Team. The actions taken with respect to these investments and their performance, may not be representative of other advice or investments. Factual statements are taken from sources considered reliable, but have not been independently verified for completeness or accuracy by the funds' manager or its affiliates. These opinions may not be relied upon as investment advice or an offer for a particular security or as an indication of trading intent for any Franklin Templeton fund. In addition, it should not be assumed that any securities transactions discussed were or will prove to be profitable. All portfolio holdings are subject to change. Logos are trademarks of their respective owners. They are used for illustrative purposes to identify the respective company and should not be construed as an endorsement of, or affiliation with Franklin Templeton Investments or its funds. **Past performance is not an indicator or a guarantee of future performance.**

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