Idencia

Smart Infrastructure Market Report

2017

Infrastructure Asset Networking Solutions

Table of Contents

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What is Smart Infrastructure?

"Infrastructure that conveys information about its manufacture, construction, depreciation and use to its stakeholders."

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Idencia's Vision for Smart Infrastructure

"Smart infrastructure will redefine the utility of physical infrastructure and eliminate billions of dollars from the cost of manufacture, construction and maintenance."

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Part 1

Manufacture & Construction

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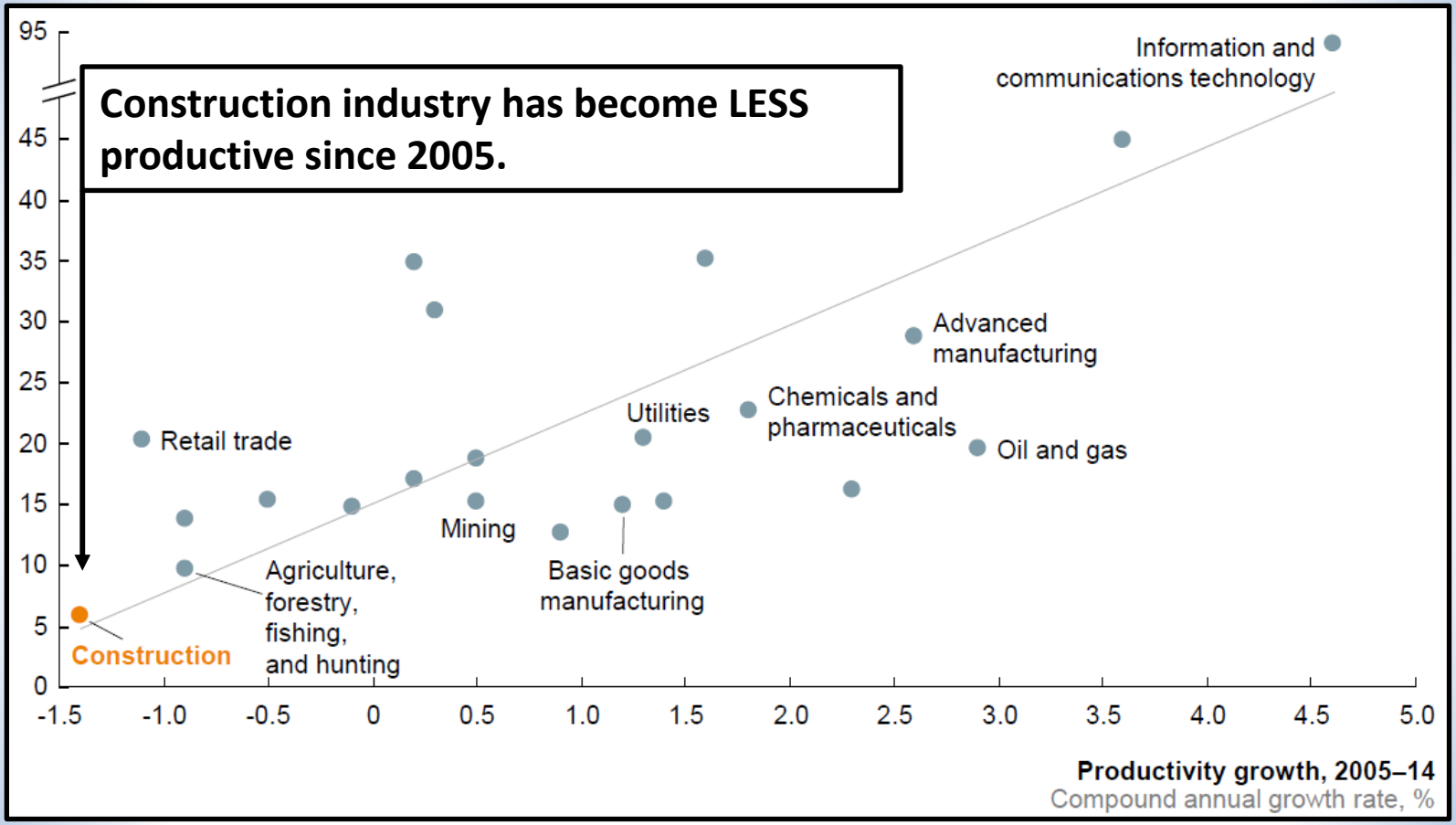
Problem



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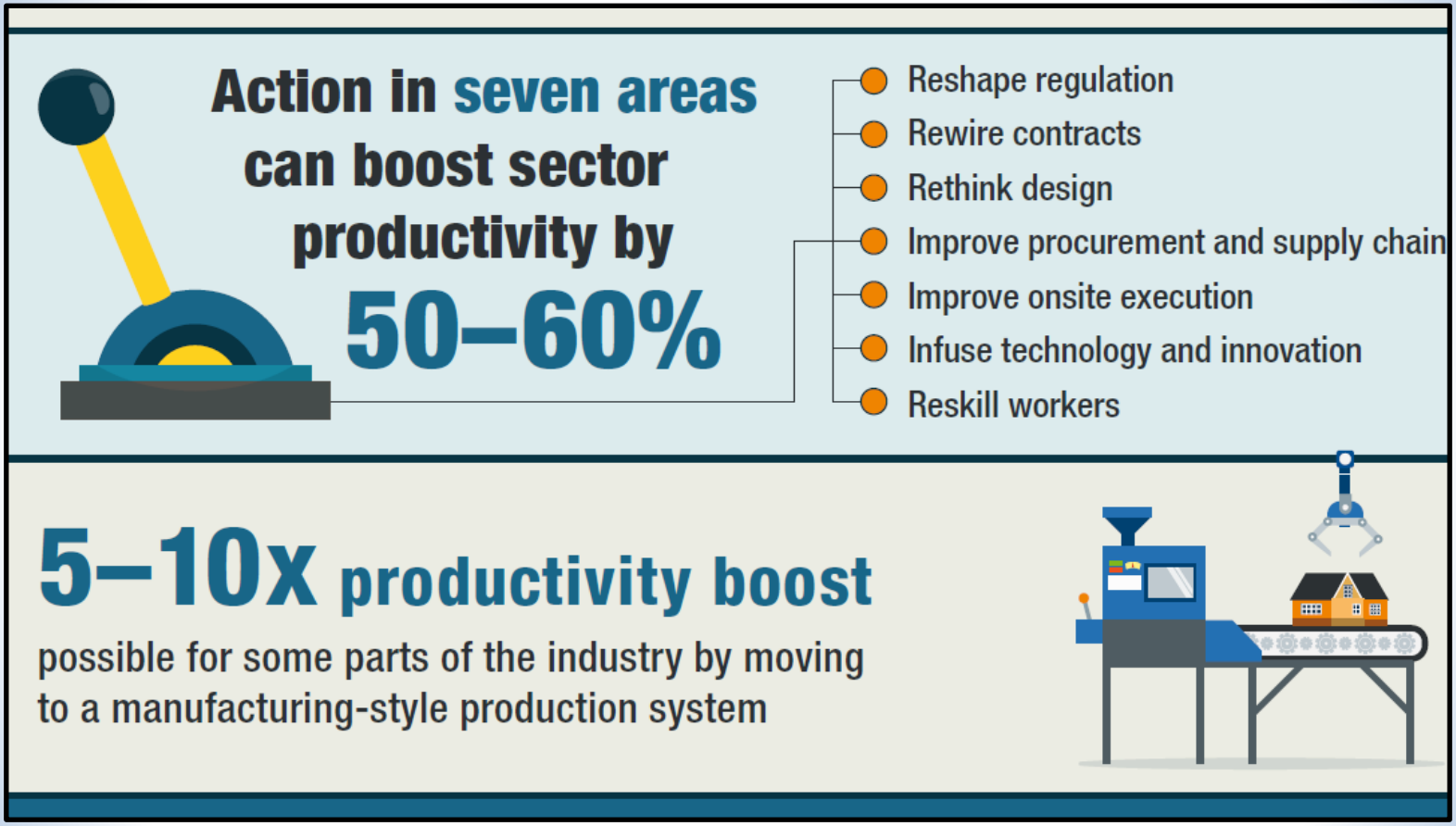
Source: *Reinventing Construction: A Route to Higher Productivity*; McKinsey Global Institute; Feb 2017.

Need



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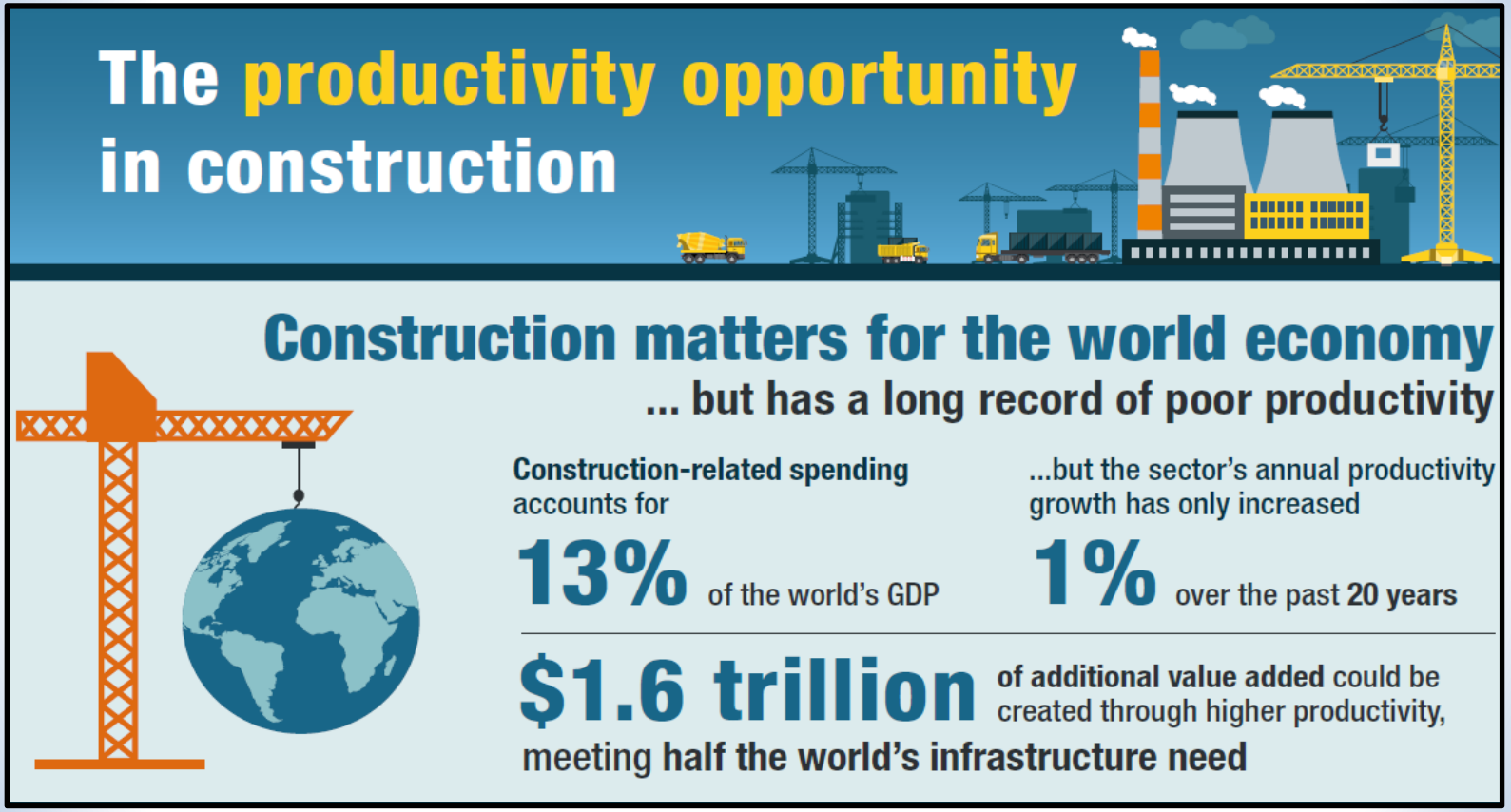
Source: *Reinventing Construction: A Route to Higher Productivity*; McKinsey Global Institute; Feb 2017.

Opportunity



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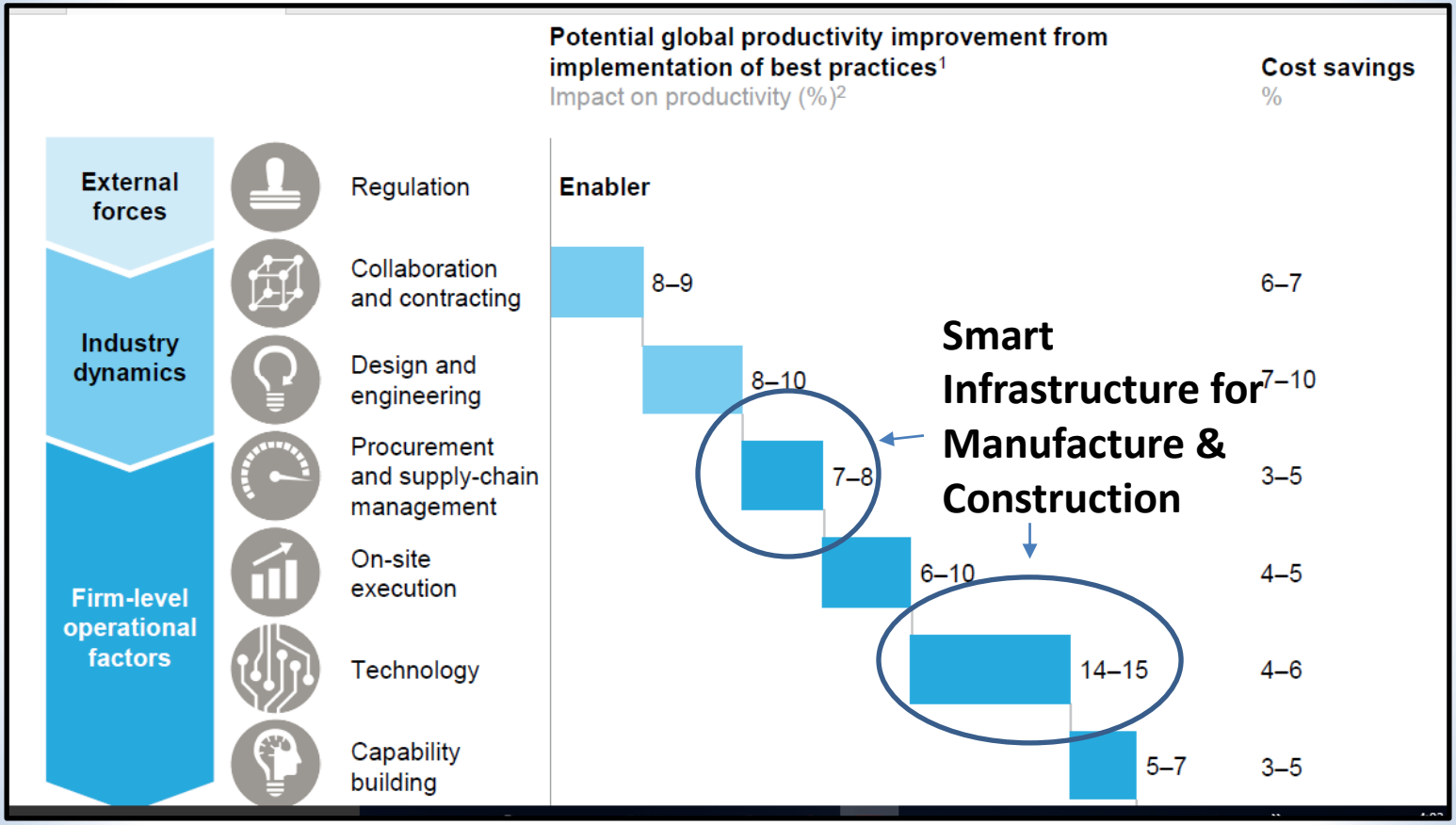
Source: *Reinventing Construction: A Route to Higher Productivity*; McKinsey Global Institute; Feb 2017.

Solutions



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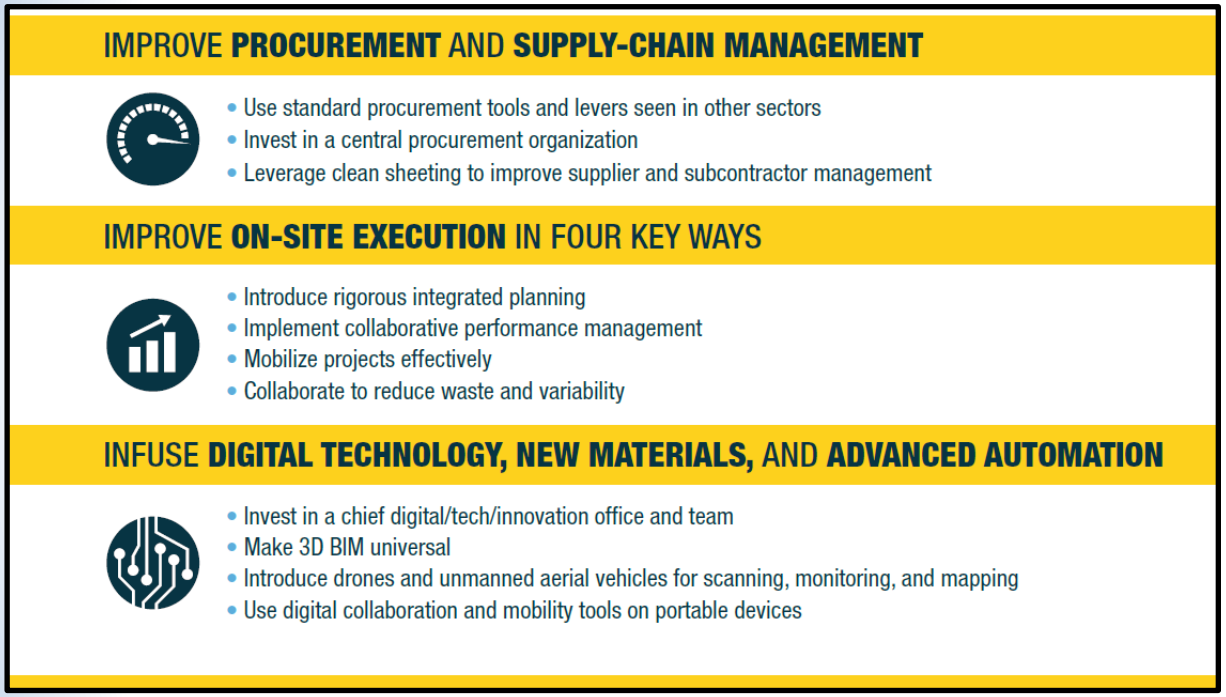
Solutions



Source: *Reinventing Construction: A Route to Higher Productivity;* McKinsey Global Institute; Feb 2017.

Smart Infrastructure

- Web-hosted product information platform using RFID
- Web-hosted supply chain integration
- As-Built information – BIM integration

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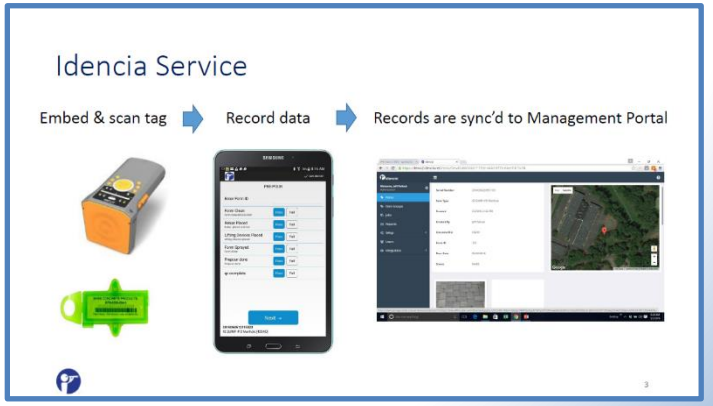
Procurement & Supply Chain

"Too often, there is no tracking of inventory and no system that organizes where materials should go, which have been used, and how soon they are likely to be out of stock…"

Source: *Reinventing Construction: A Route to Higher Productivity;* McKinsey Global Institute; Feb 2017.

Smart Infrastructure

- Web-hosted product information platform using RFID



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On-Site Execution

"Managing a supply chain well and thereby reducing costs, reducing inventory rotation days, and performing to schedule requires an integrated approach."

Source: *Reinventing Construction: A Route to Higher Productivity*; McKinsey Global Institute; Feb 2017.

Smart Infrastructure

- Web-hosted supply chain integration.

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Digital Technology

"Nearly two thirds [of BIM users] believe that they are seeing a positive ROI from their use of BIM, with about half of those reporting an ROI of 25% or more."

Source: *The Business Value of BIM for Infrastructure 2017*; Dodge Data & Analytics; 2017

Smart Infrastructure

- As-Built information – BIM integration

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Part 2

Asset Management

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Problem

1. US infrastructure requires **$4.6 Trillion** of investment by 2025

2. Operating budgets for state departments of transportation are **shrinking**.

Source: *2017 Infrastructure Report Card*;
American Society of Civil Engineers; March 2017

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Need

Improved productivity in management of required infrastructure investments.

Source: *Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future*; American Society of Civil Engineers; March 2017

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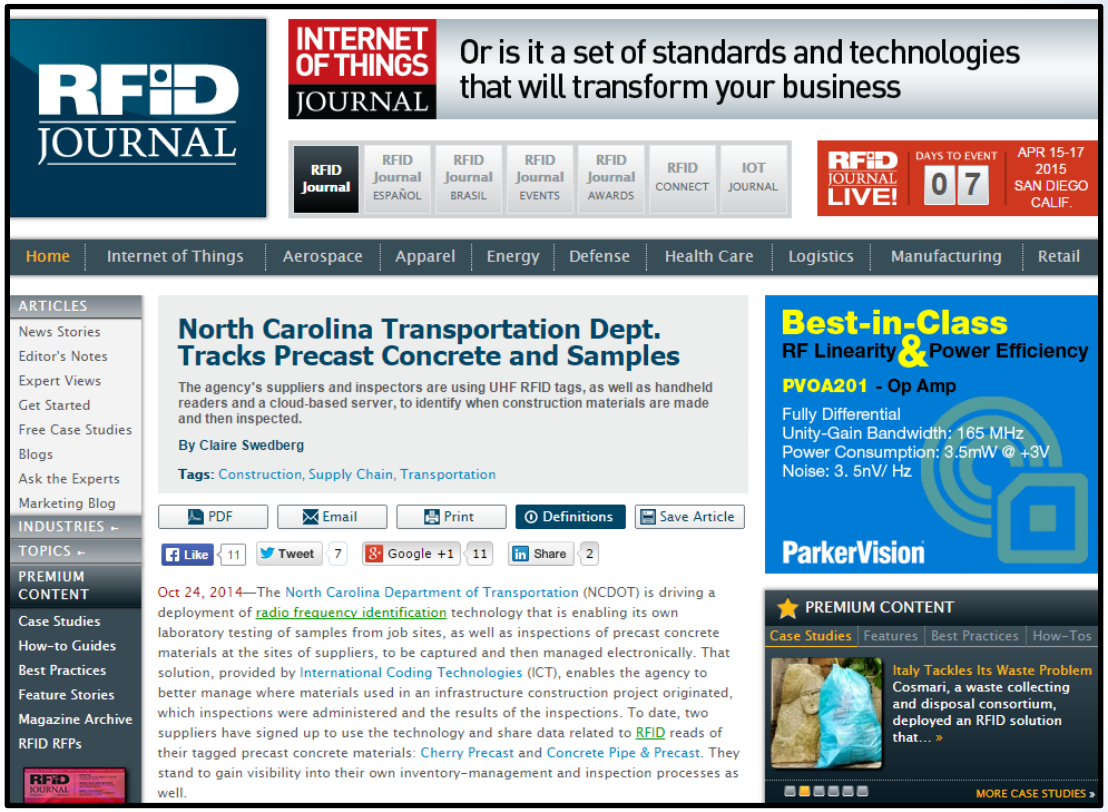
Opportunity

Provide DOTs with a solution for managing more assets with fewer resources.



"...the [DOT] expects to achieve **$1.2 million in savings** within the first year, based on a reduction in labor, vehicle and fuel costs..." Source: *North Carolina Transportation Dept. Tracks Precast Concrete and Samples*; RFID Journal; Oct 24, 2014.

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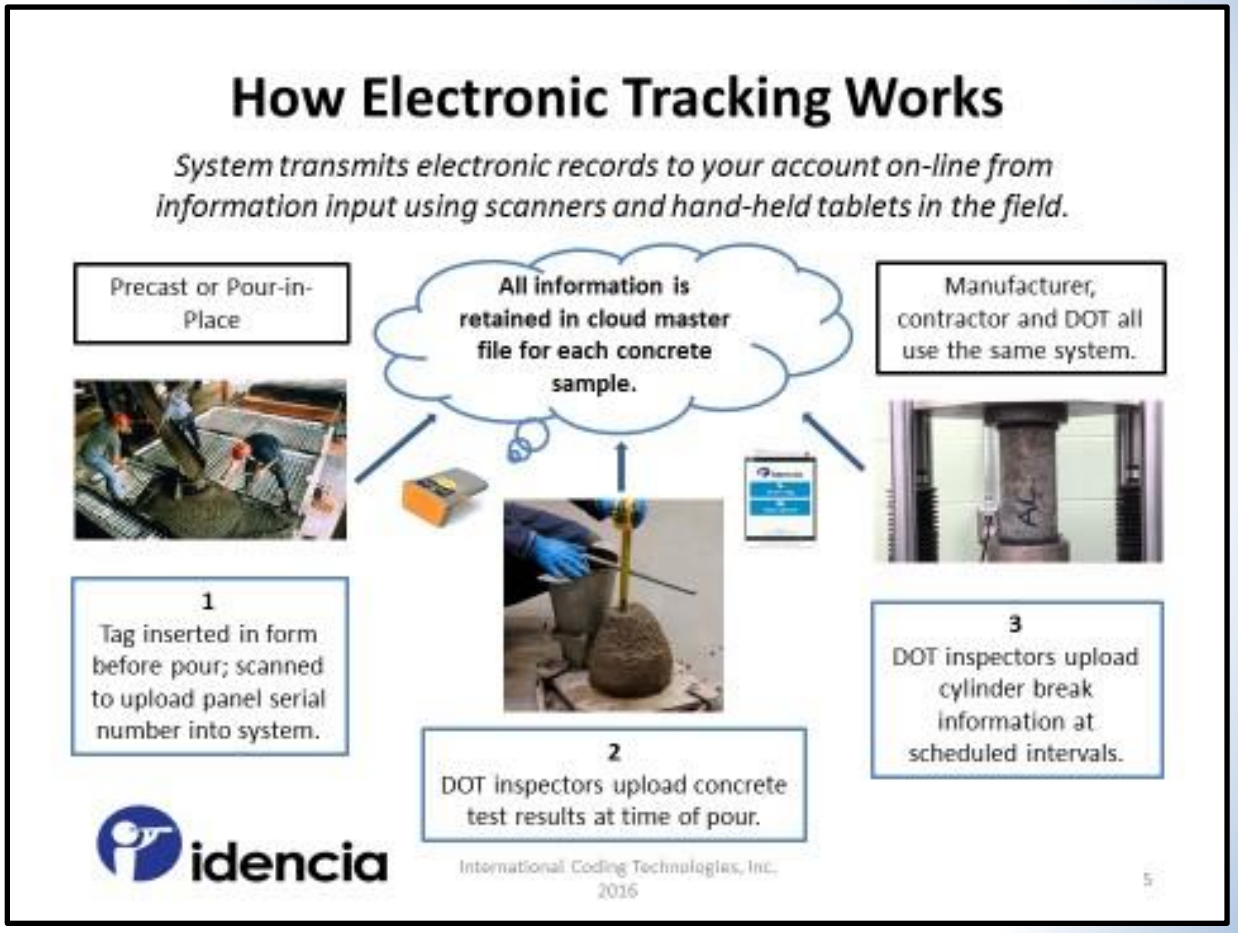
Solution

Replace manual data entry with the Idencia **electronic information platform**.



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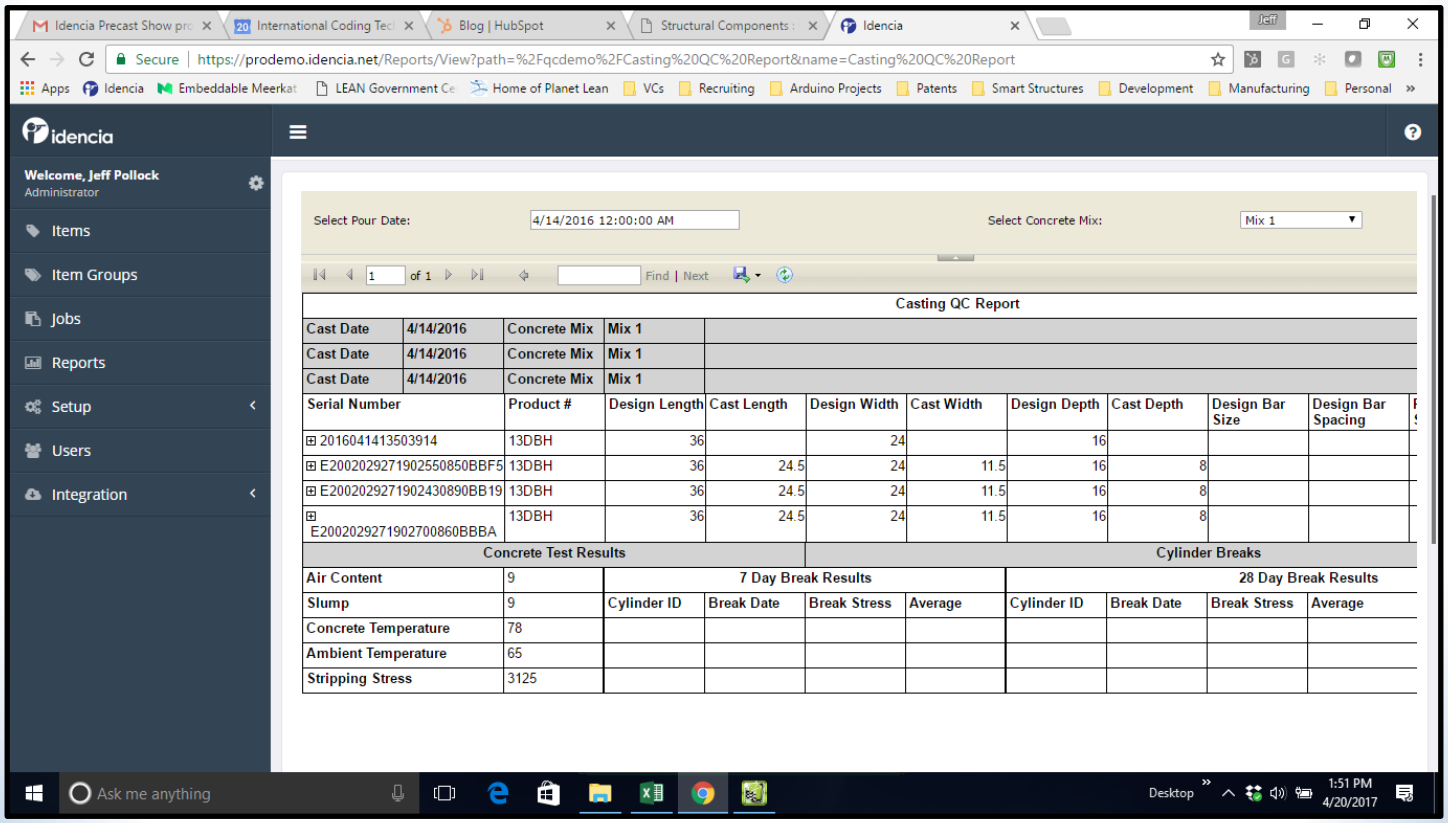
Part 3

Idencia's Role In Smart Infrastructure



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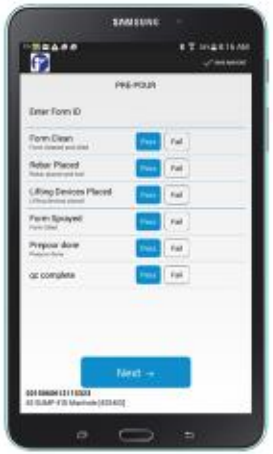
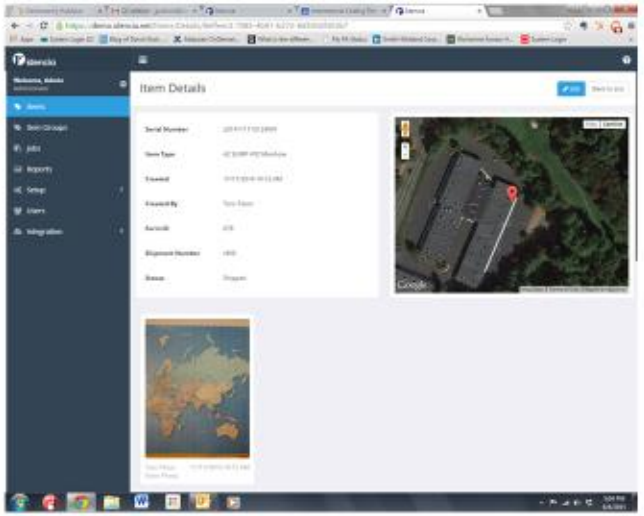
Idencia Currently

Idencia Solution: Web-hosted Product Records

Embed & scan tag → Record data → Records are sync'd to web hosted account





Consumer technology; easy to use.

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Idencia Next Bring Infrastructure On-line

Embed sensors in Manufacturing

Bridge Elements

Build Smart Bridges

Infrastructure Network

Server

Bridges communicate to asset manager through Idencia

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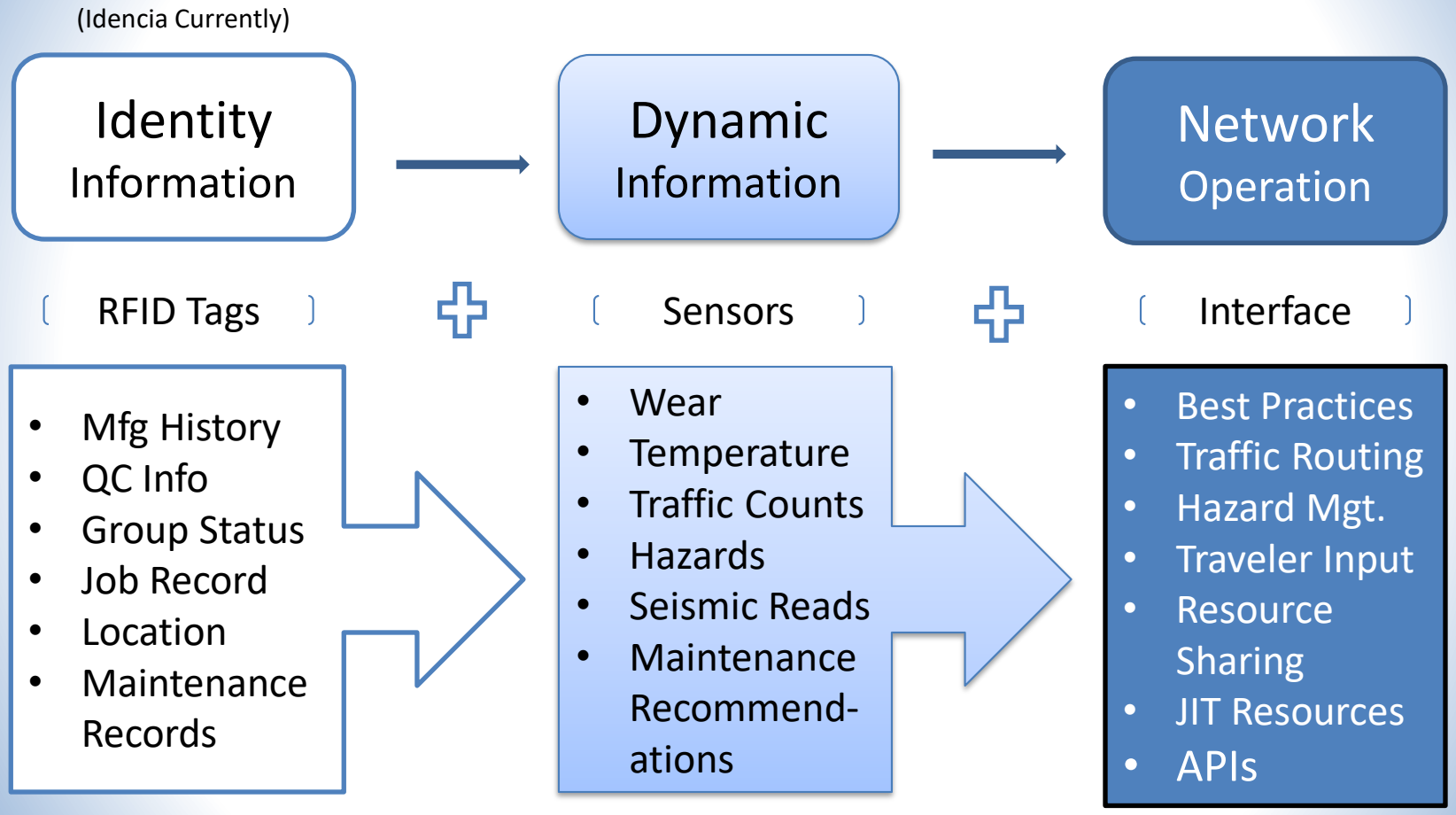
Idencia Future Evolve into Interactive Network



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Idencia Smart Infrastructure

Infrastructure Becomes a Network Platform

Each bridge, tunnel, sewer pipe, etc. becomes a node on the network.

Manufacturers embed identifiers and sensors to create network frame.

True potential of the platform is realized by the services provided on it by developers.

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Idencia Smart Infrastructure

Produces Efficiencies For Asset Managers

- Eliminates cost of paper records
- Enables asset search efficiencies
- Enhances safety with advanced warnings from sensor reports
- Enables networked communication for better public service

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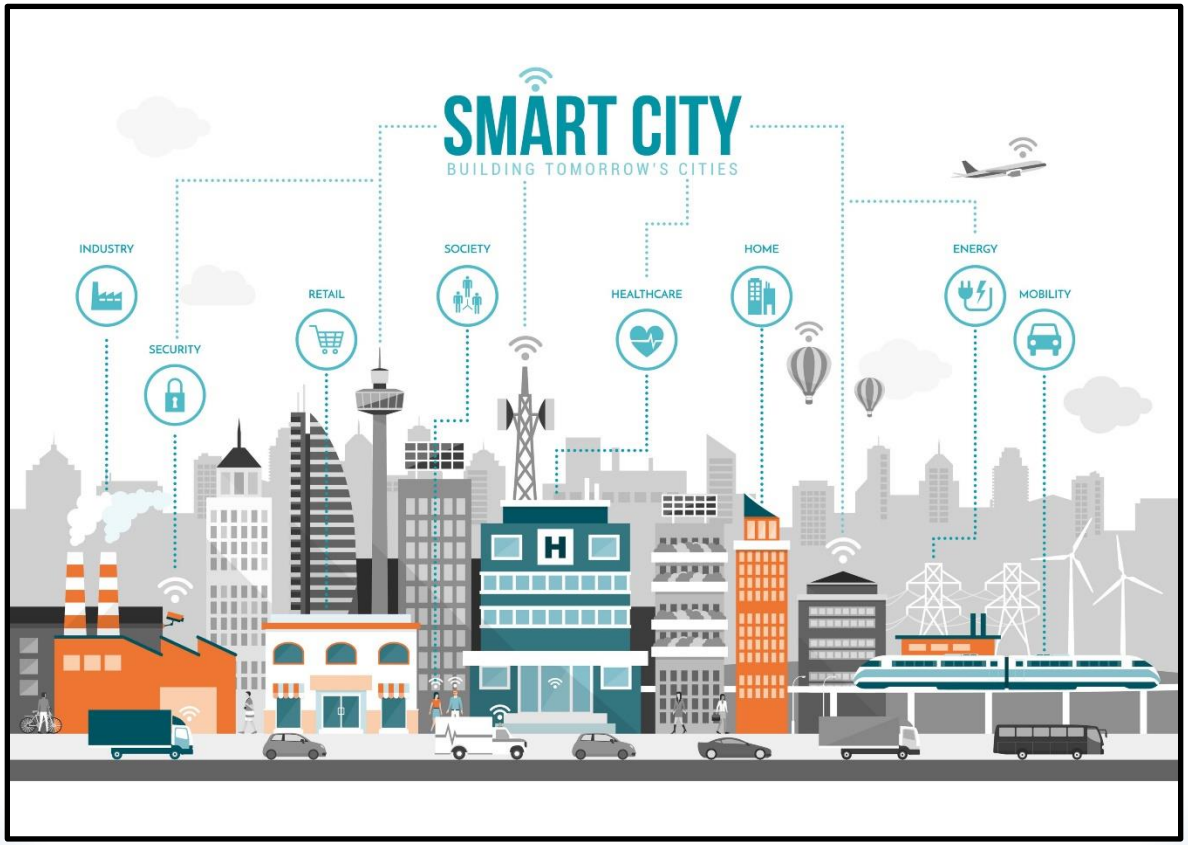
Part 4

Smart Infrastructure Opportunity



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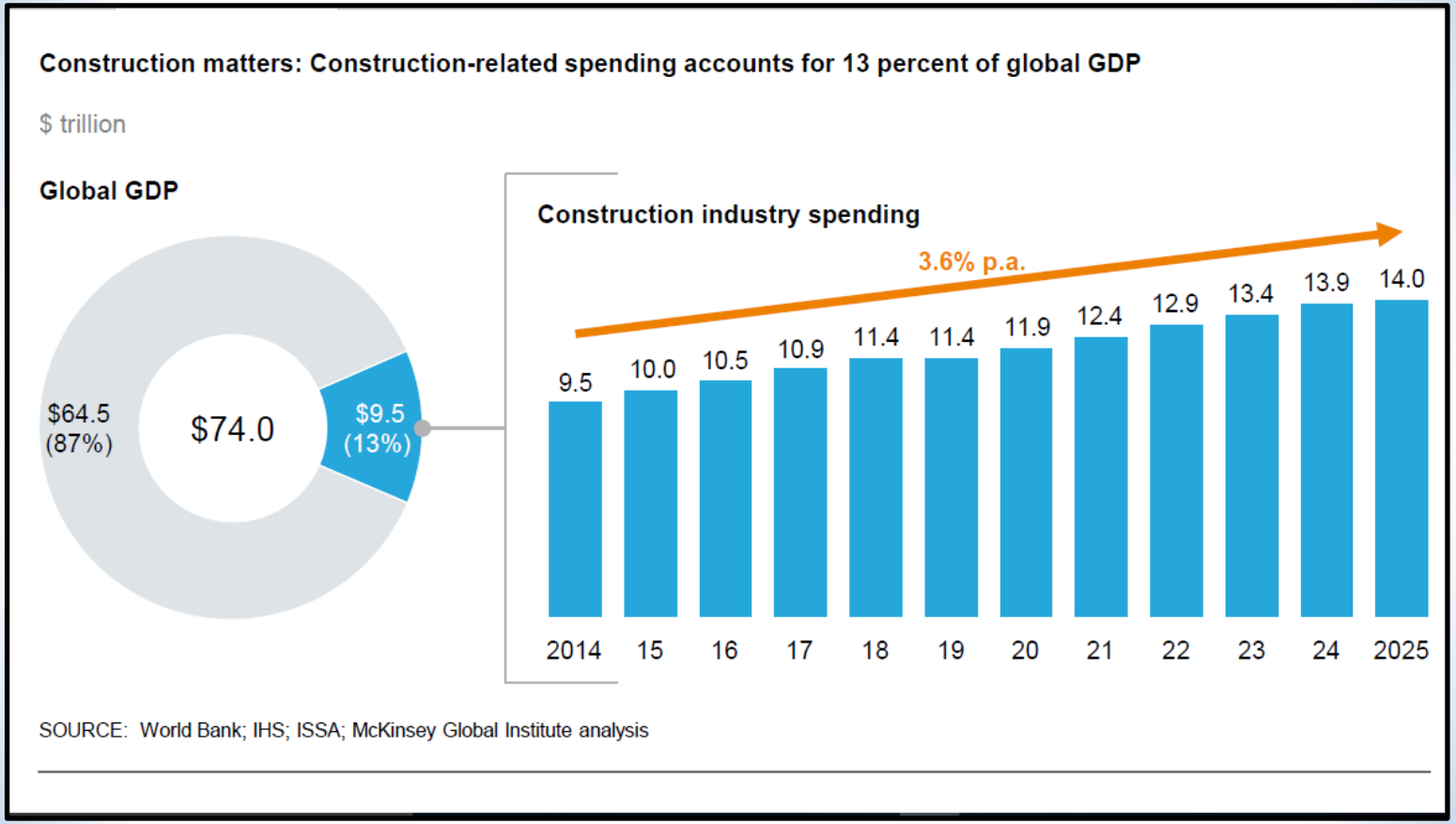
Market $9.5T (2014) growing at 3.6% per annum



Source: *Reinventing Construction: A Route to Higher Productivity;* McKinsey Global Institute; Feb 2017.

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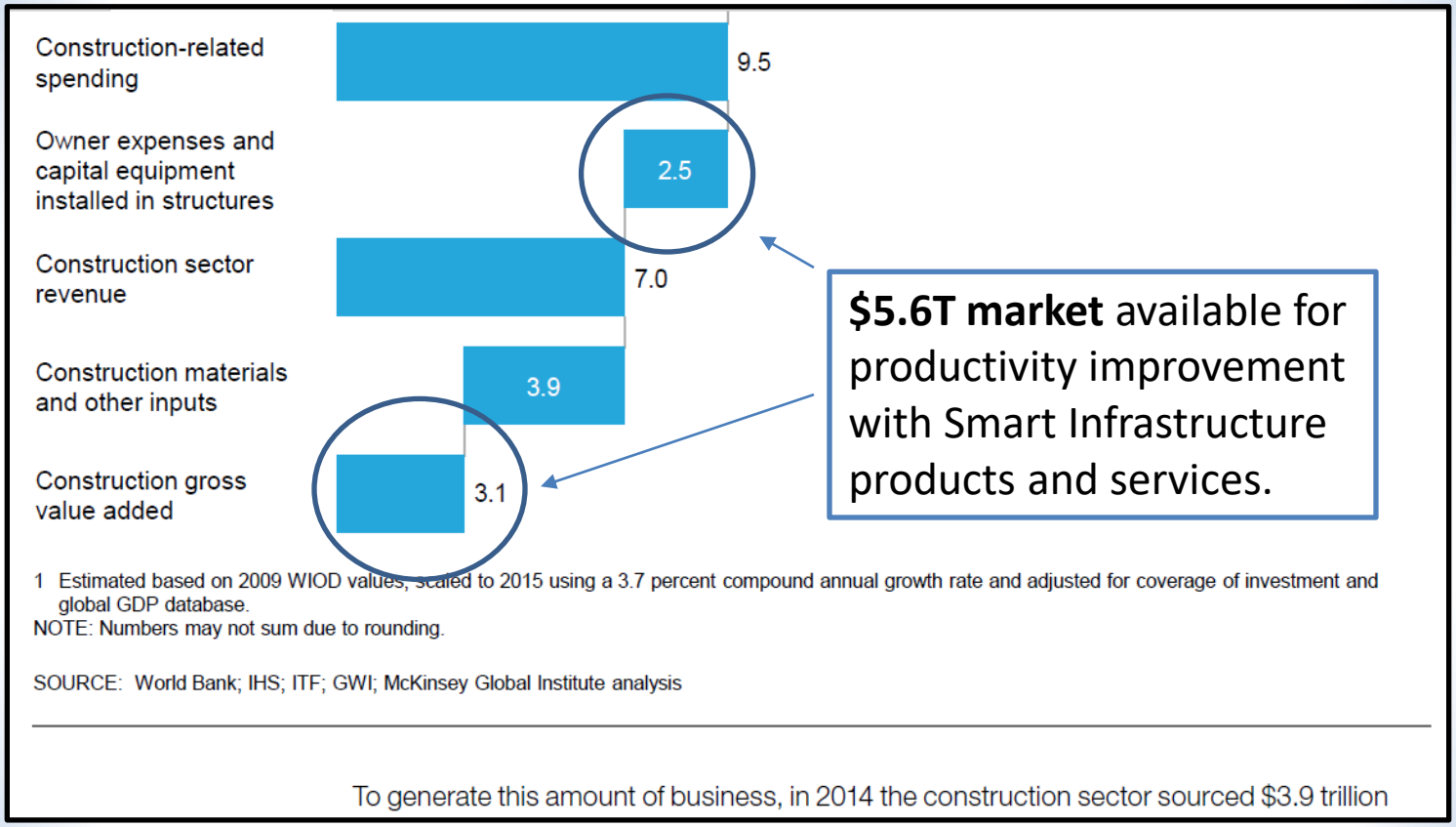
Market $5.6T market needs more productivity



Source: *Reinventing Construction: A Route to Higher Productivity*; McKinsey Global Institute; Feb 2017.

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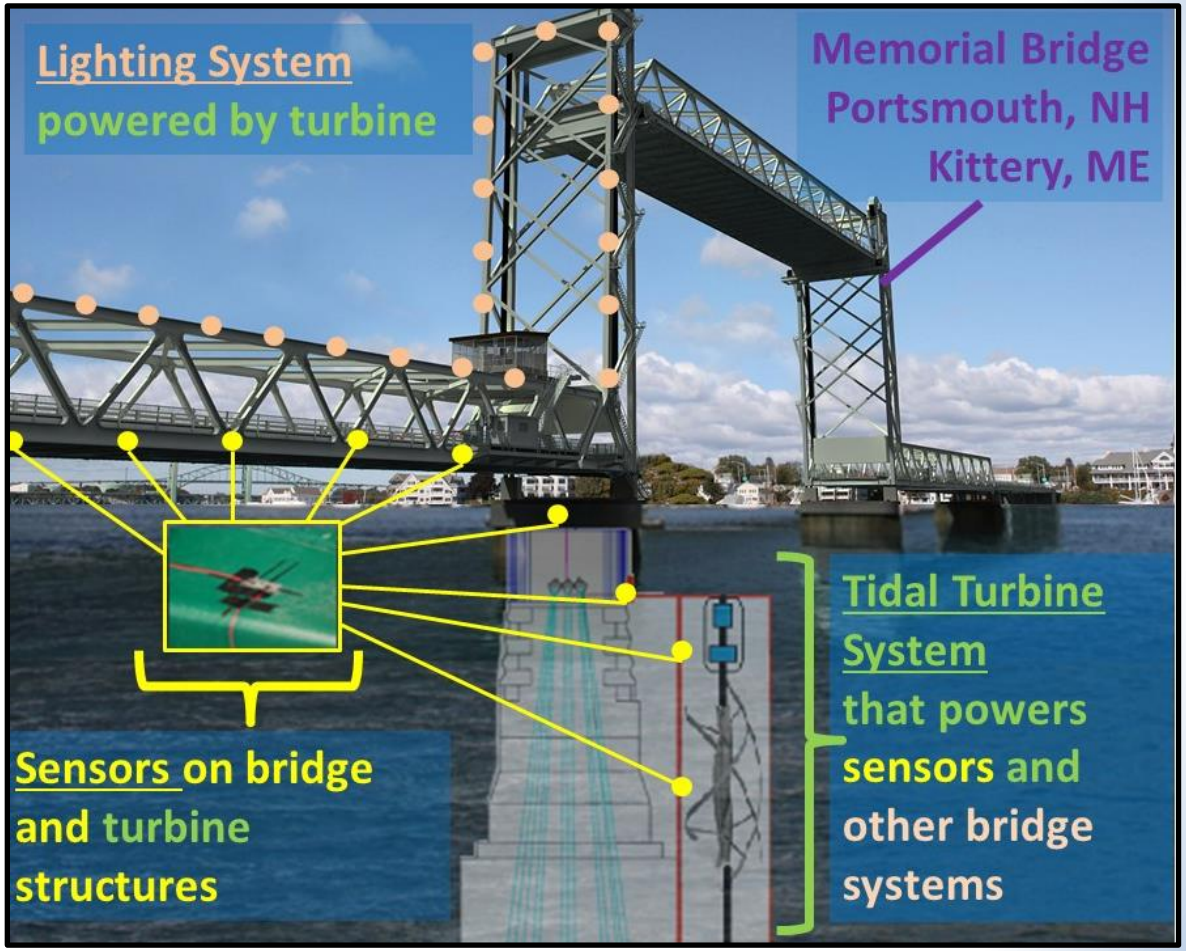
A Peak Into The Future

'Living Bridge' created by University of NH researchers and NH DOT.



Click Image for Video

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Conclusion

"Smart Infrastructure is essential to fulfilling the construction & maintenance needs facing the US and the world over the next 10 years."

1. $4.6T **infrastructure required** in US by 2025
2. Construction: **$9.5T of global GDP**
3. Construction **least productive** industry
4. Productivity gains **require technology**
   a) Supply chain integration
   b) Universal technology adoption
5. State DOTs need to do **more with less**
6. $5.6T **global productivity opportunity**

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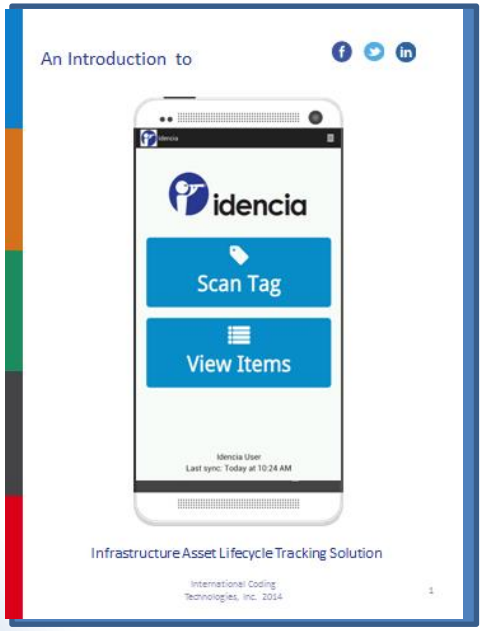
Would you like to see how your business can participate in Smart Infrastructure?

Download
Idencia Primer



Yes, I would like to:

Schedule an Idencia Consultation

Please click on either to learn how

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