



for the Built Environment



74<sup>th</sup> Annual Convention  
March 15-19, 2019

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Utility Construction Industry Overview

# Good Morning!

W. Chris Daum  
President and Chief Executive Officer  
FMI Corporation



W. Chris Daum  
FMI Corporation  
223 South West St  
12<sup>th</sup> Floor  
Raleigh, NC 27603

Tel: 919.785.9264  
Cell: 919.931.0444  
E-mail: [cdaum@fminet.com](mailto:cdaum@fminet.com)  
Website: [www.fminet.com](http://www.fminet.com)

As president and chief executive officer of FMI Corporation, Chris oversees the management of all FMI businesses and services and leads the firm's strategic growth efforts. Previously, Chris served as president and senior managing director of FMI Capital Advisors, the firm's investment banking subsidiary, where he also led the firm's utility infrastructure practice.

He works with owners, boards and management teams on strategic issues involving industry trends, management, ownership transfer, and mergers and acquisitions. He is a frequent contributor to industry publications and media outlets and is an energetic and entertaining speaker on the current and future impact of economic, technology and competitive trends on the industry.

Prior to joining FMI, Chris served as global financial services leader for an industrial company with operations throughout North and South America and Europe, and he began his career in public accounting.

Chris has a Bachelor of Science in Business with a Major in Accounting from Virginia Tech. He is a licensed certified public accountant (inactive) in the state of North Carolina and holds FINRA securities licenses 24, 79 and 63. Chris and his wife Sharon have been married 32 years and have three adult children, Matt, Audrey and Michael.

# FMI Corporation

FMI provides consulting, investment banking and private equity services for clients across the **Built Environment**. We leverage unrivaled industry access and decades of exclusive industry focus to achieve transformational outcomes for our clients.

6

U.S. Offices  
Canada (new)

66

Years in  
Business

200+

Professionals

600+

Annual Client  
Engagements

25+

Annual M&A  
Transactions

## FMI Consulting

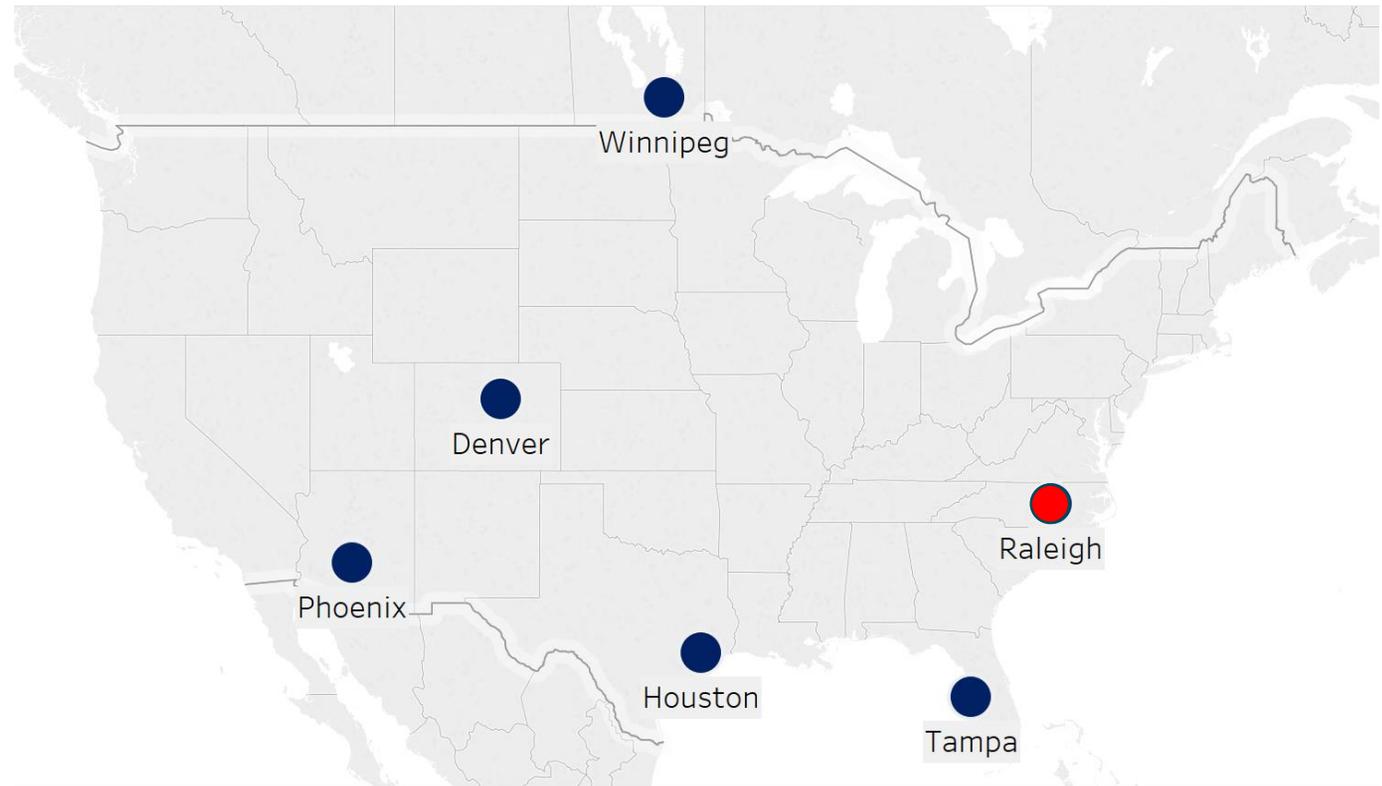
- Strategy and Research
- Performance
- Leadership & Organizational Development
- Technology & Innovation

## FMI Capital Advisors

- M&A Representation
- ESOP
- Valuation
- Financial Advisory

## FMI Investment Partners

- Private Equity Fund



Contractors ♦ Building Products Manufacturers ♦ A/E and Environmental ♦ Utility T&D ♦ Energy Services & Equipment ♦ Energy Solutions & Cleantech ♦ Construction Materials

# Themes from Last Year's Conference....March 2018

1. Concentration of construction spending .... implications of urbanization
2. Contrast of the aftermath of the Great Recession vs. the last 7 years ... a 'golden age'
3. Preview of 5G enablers and what it will mean for future fiber demand ... multiples of X
4. Outlook for electric transmission, electric distribution, gas distribution and communications spending 2018 to 2020
5. Factors favorable vs. unfavorable impacting utility construction

# Today's Discussion Agenda

1. At or near the top of the market - prospects for a recession and the impact on construction
2. FMI outlook for utility construction through 2021
3. M&A activity and areas of interest
4. Cautiously optimistic or optimistically paranoid? .... the 'paradox of plenty'
  - Power
  - Communications
5. Digital Transformation Arrives in Construction

Are there Recession Signals in the General Economy?

# Predicting the next US recession

## Predictive indicators

Source(s): FMI analysis of multiple sources

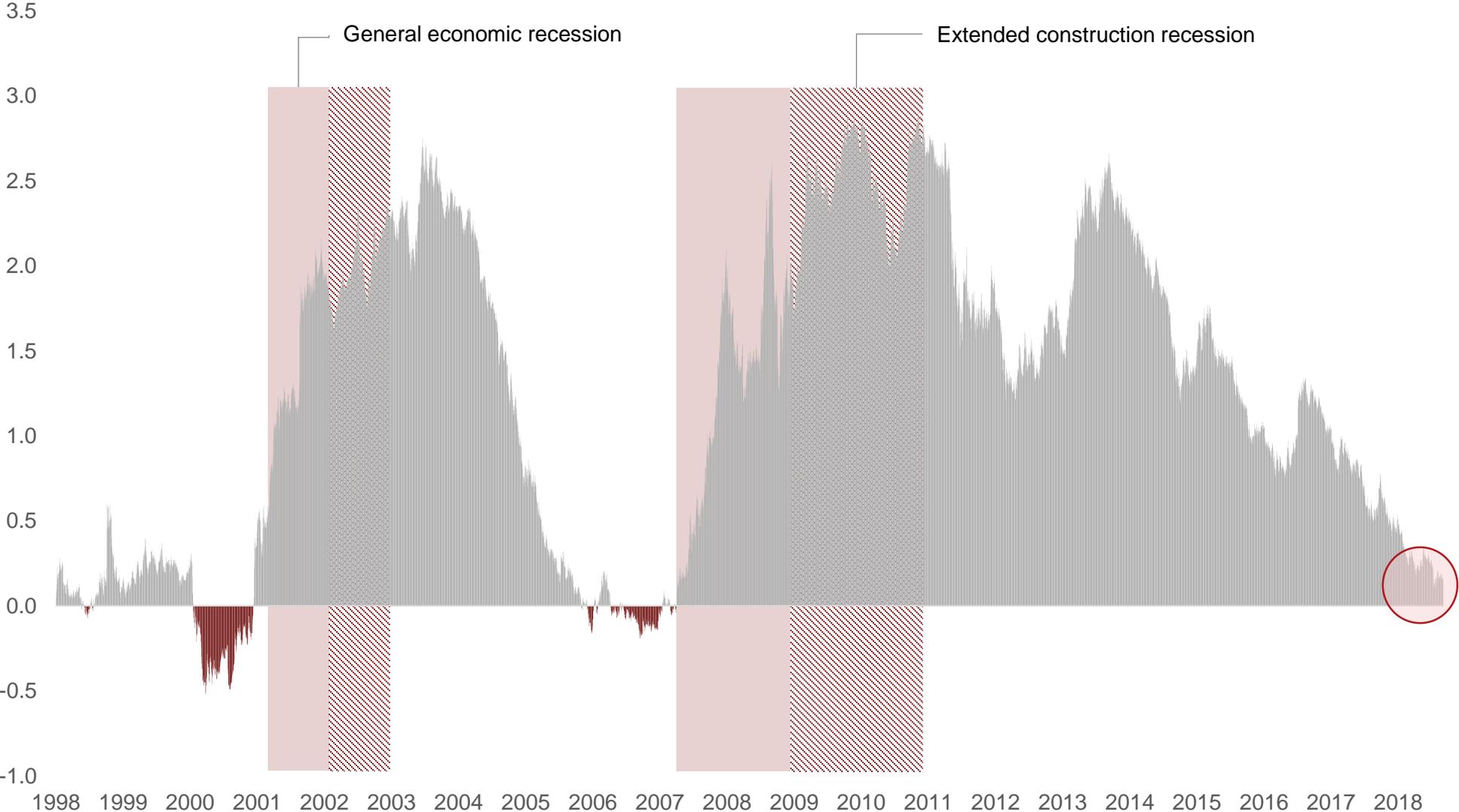
Indicators / Metrics	Recessions Considered	Correct Predictions	False Positives	Prediction Strength*	Flag/ Warning Timing	Risk Assessment/ Trending
Yield Curve Inversion	5	5	-	High (100%)	~2-3 year	MODERATE 
New Home Sales	6	5	1	High (67%)	~1-4 year	LOW/MODERATE 
Unemployment Rate	6	4	-	High (67%)	~1 year	LOW 
US Trade Balance (BOP % change)	6	6	2	High (67%)	~1 year	MODERATE 
Money Supply	7	5	1	High (57%)	~1-3 year	MODERATE 
Lumber Sales	2	2	1	High (50%)	~1-2 year	MODERATE 
MBS Held by Banks	2	2	1	High (50%)	~1-2 year	MODERATE 
Rental Vacancy Rates	9	4	-	(44%)	~1-4 year	LOW 
Residential CPIP	6	3	1	(33%)	~1-3 year	LOW 
Stock Market Performance	3	2	1	(33%)	<1 year	LOW 
Copper Price (Doctor Copper)	7	4	2	(29%)	~2-5 year	MODERATE 
Consumer Confidence (OECD)	8	5	4	Low (13%)	~1 year	MODERATE 
Heavy Duty Truck Sales	7	4	4	Low (0%)	~1-2 year	LOW 
Manufactured Goods, New orders	2	1	1	Low (0%)	~1 year	LOW 
US Trade Balance (values)	6	1	1	Low (0%)	~1 year	MODERATE 
Unemployment Claims	7	4	5	Low (-14%)	~1 year	LOW 

# An uncannily accurate predictor of a recession coming... eventually

## Yield Curve

10-2 Year Treasury Yield Spread (January 1998- January 2019)

Source: Department of the Treasury



# Too much uncertainty, for too long, leads to inaction.....

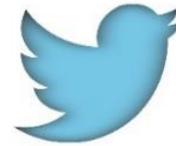
China



Democrats take House



The Fed



Russia



Federal Debt

North Korea



Infrastructure

Iran

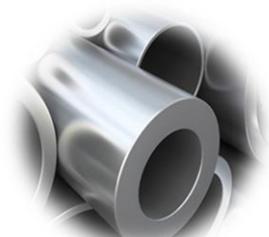


USMCA – will it be ratified?

Venezuela



Trans Pacific Partnership – U.S. out forever?



Tariffs – how many for how long?

# The Construction Industry

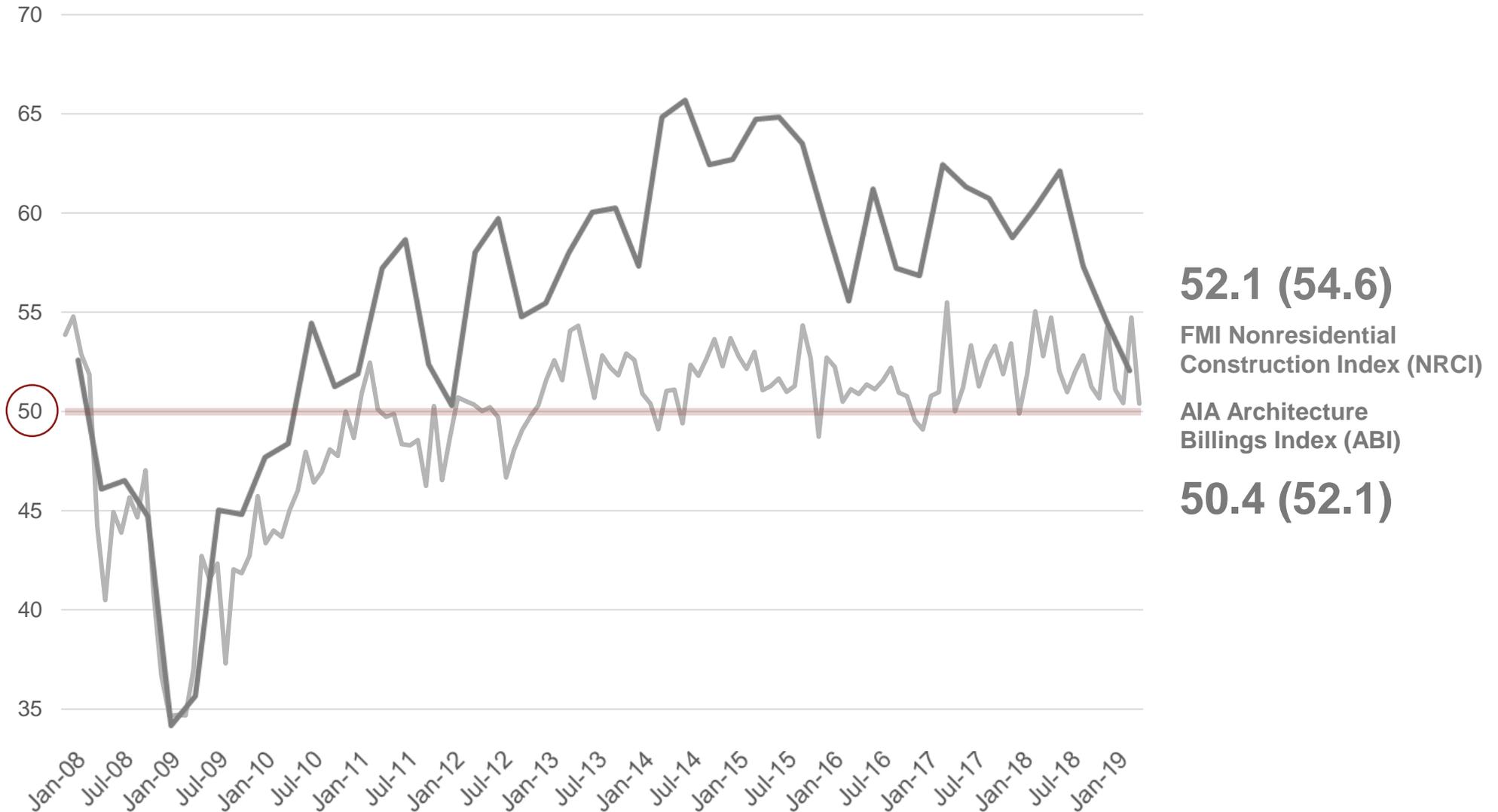


# Modest industry optimism or cause for concern?

## AEC-specific economic indicators

AIA Architecture Billings Index (AIA) and FMI Nonresidential Construction Index (NRCI); October 2007- January 2019

Source: AIA, FMI

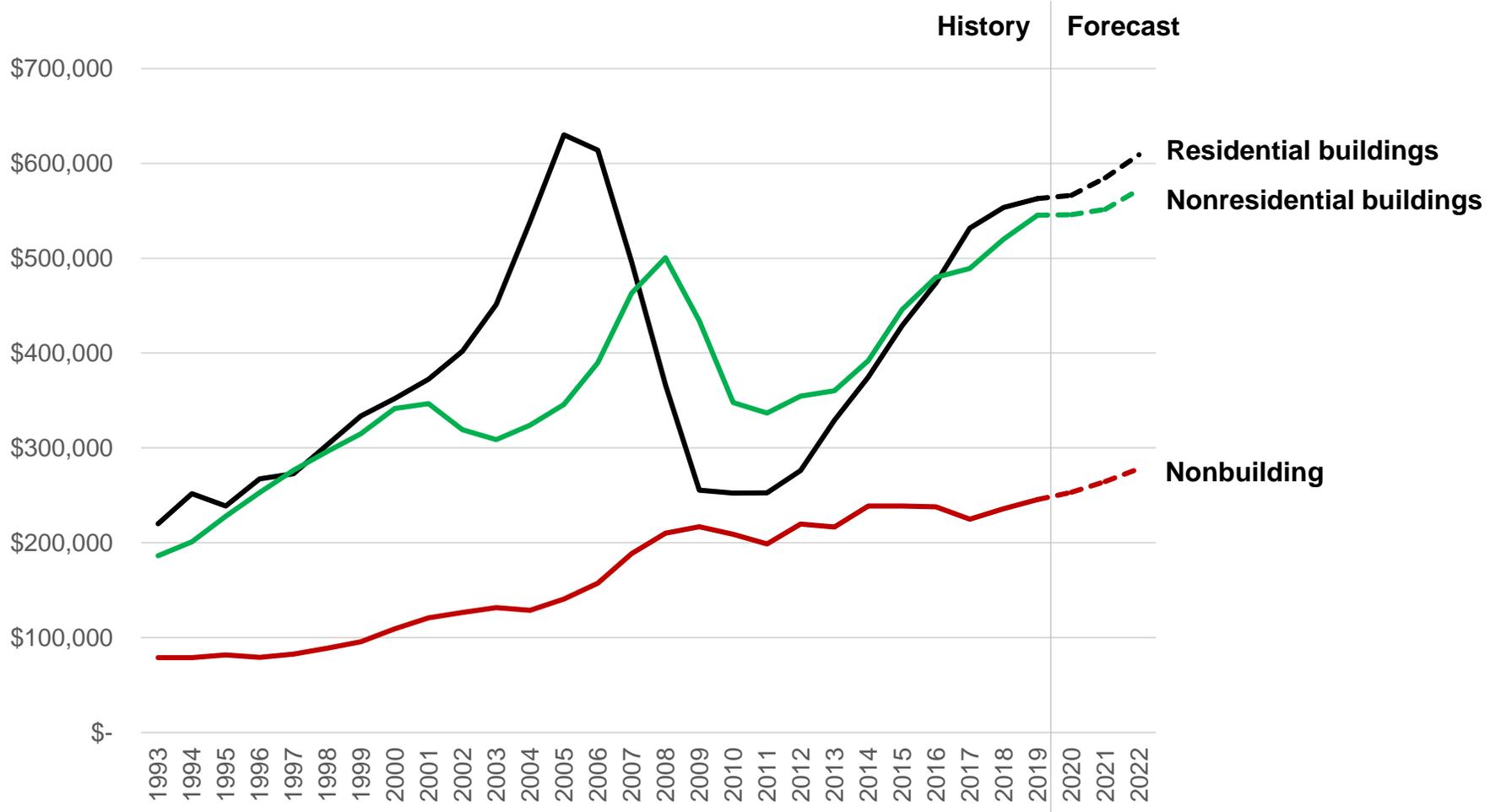


# Vertical Growth Slows, Horizontal Sustains

## U.S. construction spending put in place

Millions of dollars

Source(s): FMI

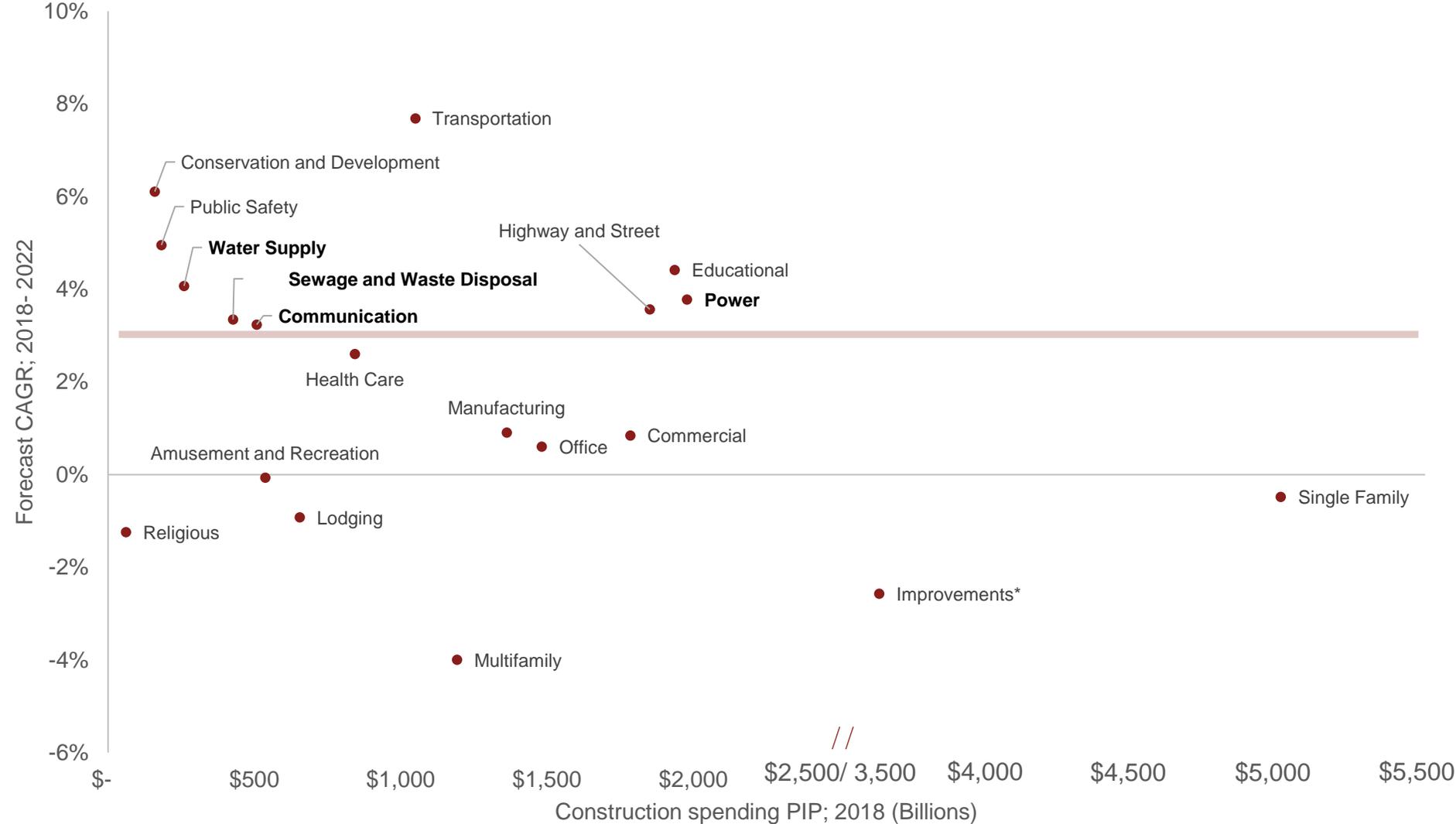


# Horizontal overtakes vertical (and the world falls flat)

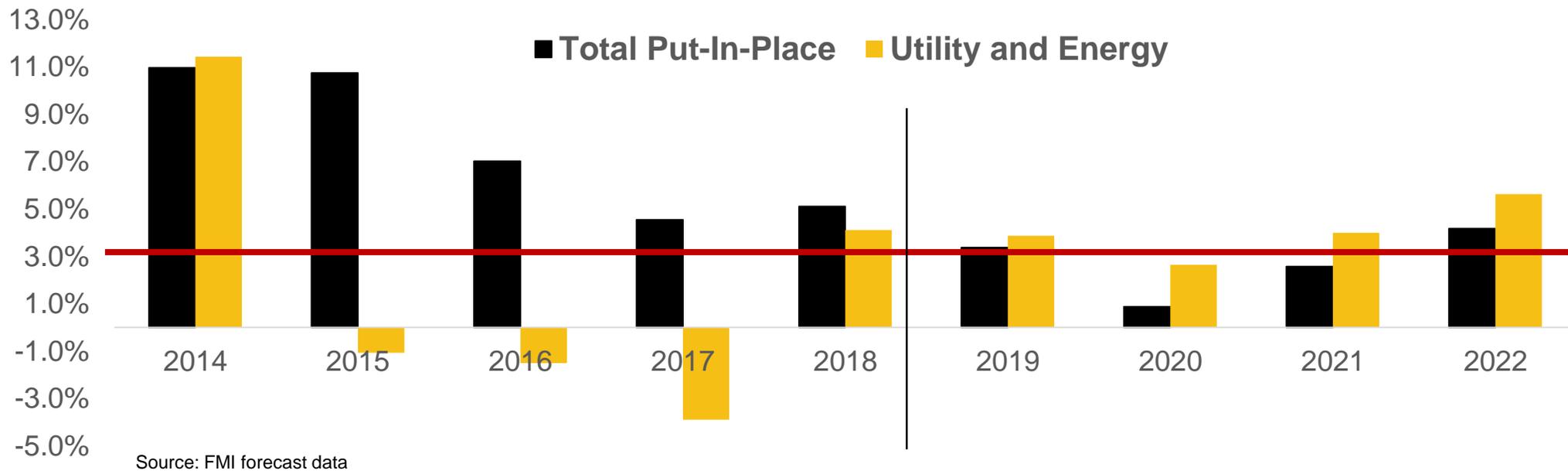
## Current and forecast construction spending by segment

US; Billions of dollars

Source(s): FMI



# Comparison: Year-Over-Year % Change in Construction Spending



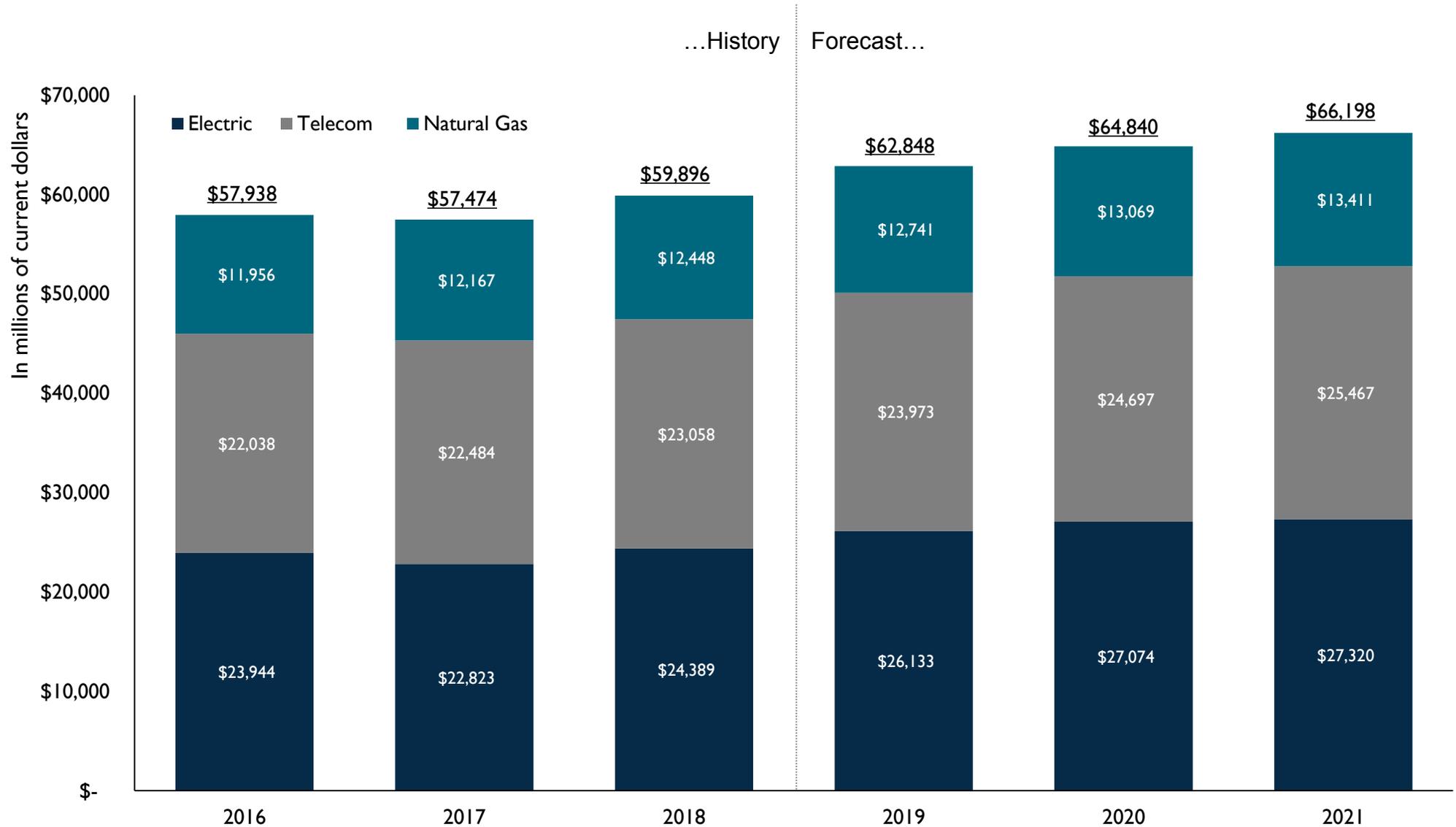
- Growth rate of total construction spending is decelerating – we are at the top of industry cycle
- 3% annual growth required to keep place with inflation
- Utility and energy sectors are forecast to [slightly] outperform broader construction industry

# Market Opportunity for Utility Construction

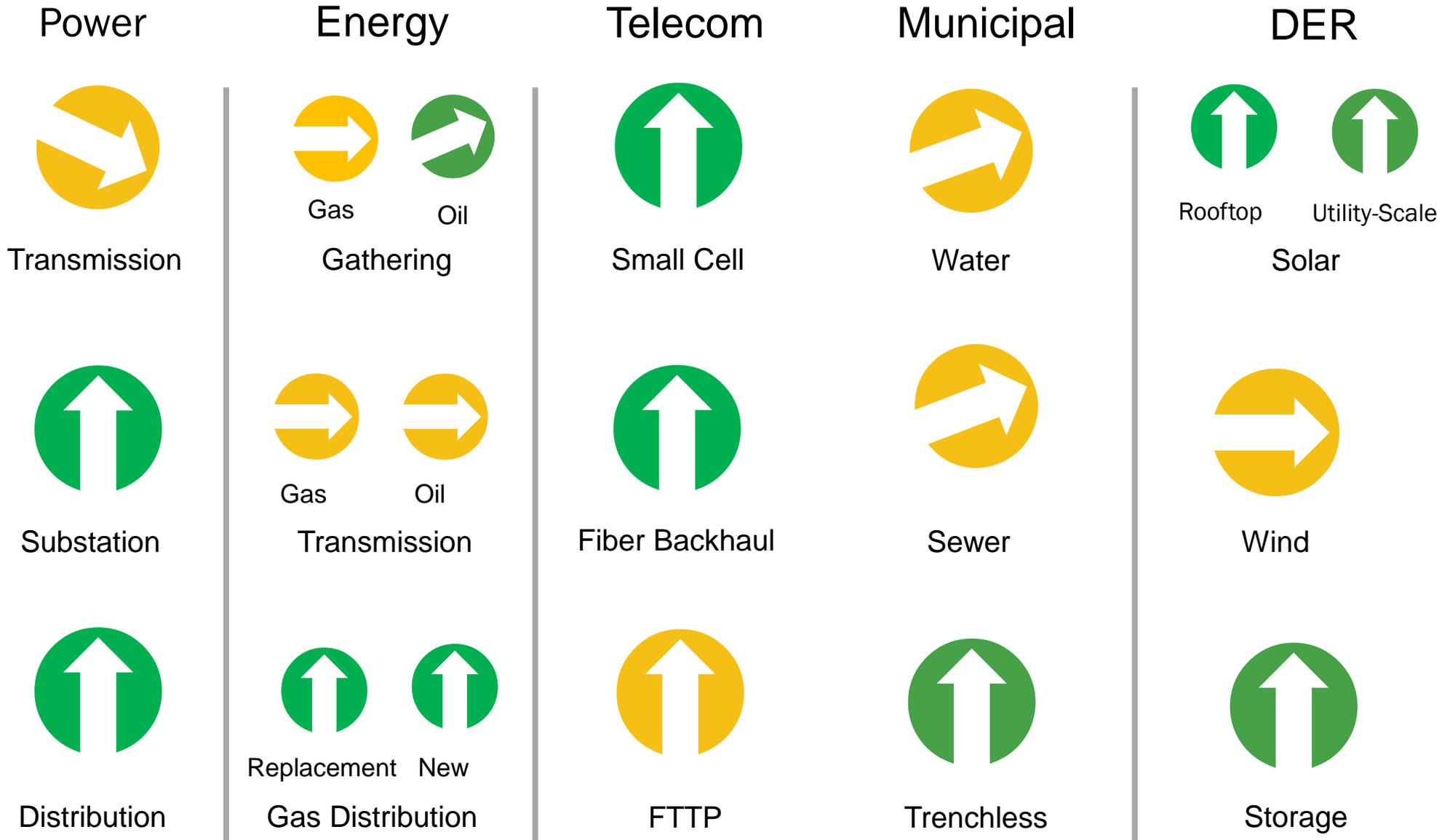
## Estimated market opportunity – Electric, Telecom and Natural Gas

Millions of current dollars, Total U.S.

Source(s): FMI



# FMI Utility Construction Sentiment (1 to 3 years)



Source: FMI Utility T&D team

# M&A Environment

# Public Comps (Trading Statistics and Operating Metrics)

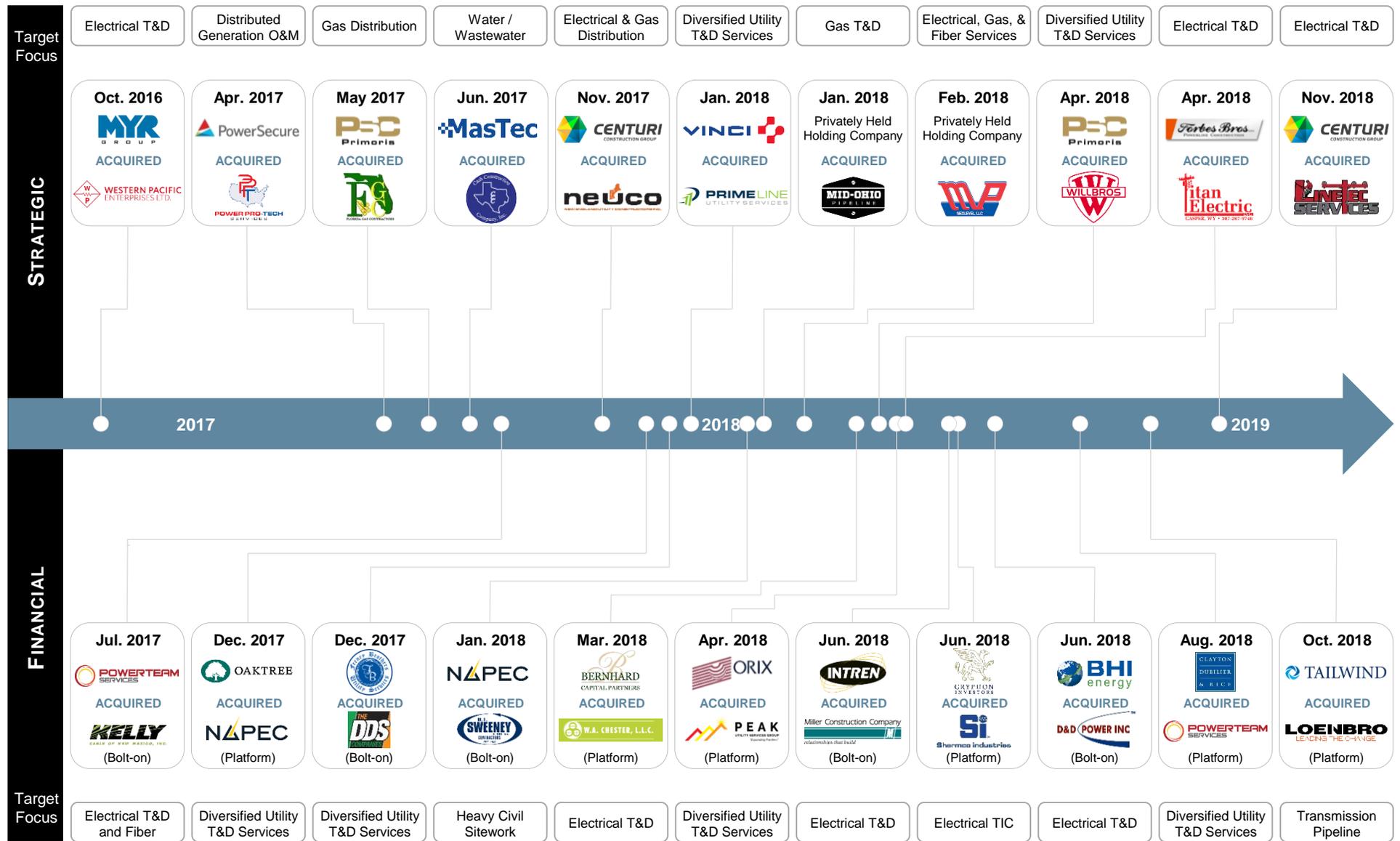
(\$ in millions, except per share) as of 1/16/2019	Stock Performance									
	TEV Current	Stock Price		Change from		TEV / LTM EBITDA as of			Avg. EBITDA Margin	
		Dec-18	Jan-19	Prior Month	Prior Year	Jun-17	Dec-17	Current	'14-16	'16-18P
<b>Infrastructure Services</b>										
Utility Services										
MDU Resources Group, Inc.	\$6,635	\$26.01	\$24.42	(6.5%)	(5.9%)	10.8x	11.1x	10.6x	13.9%	14.5%
Quanta Services, Inc.	5,539	31.33	31.91	1.8%	(20.7%)	9.2x	10.0x	7.9x	7.4%	7.0%
MasTec, Inc.	5,167	40.86	44.83	8.9%	(16.1%)	8.6x	8.4x	8.2x	7.7%	8.9%
Dycom Industries, Inc.	2,654	56.18	58.22	3.5%	(101.0%)	8.3x	10.7x	11.2x	12.4%	11.7%
Primoris Services Corp.	1,340	22.71	20.02	(13.4%)	(30.7%)	10.2x	8.5x	7.2x	7.1%	6.9%
MYR Group, Inc.	596	28.42	30.36	6.4%	(14.2%)	7.5x	9.0x	6.9x	7.9%	5.9%
	<b>Median</b>					<b>8.6x</b>	<b>9.0x</b>	<b>7.9x</b>	<b>8.2%</b>	<b>8.2%</b>
Large and Mid-Cap Construction Services										
VINCI SA	\$67,922	\$82.84	\$84.17	1.6%	(27.2%)	9.4x	10.2x	8.5x	14.9%	15.9%
ACS Group	22,401	36.59	38.93	6.0%	(6.2%)	6.8x	6.3x	7.9x	5.4%	6.0%
Ferrovial, S.A.	21,796	20.38	21.51	5.3%	(8.5%)	NM	16.2x	NM	10.2%	7.0%
Bouygues SA	20,528	37.60	34.07	(10.4%)	(64.5%)	6.0x	6.6x	5.5x	6.6%	8.5%
SNC-Lavalin Group Inc.	8,282	35.39	35.66	0.8%	(28.4%)	14.4x	17.7x	10.9x	7.1%	8.3%
Obayashi Corporation	7,856	9.66	9.33	(3.5%)	(33.9%)	7.2x	7.4x	5.5x	5.8%	8.0%
Skanska AB (publ)	7,174	15.24	17.16	11.2%	(17.4%)	7.7x	9.5x	11.7x	4.3%	3.3%
John Wood Group Plc	6,467	8.00	7.30	(9.6%)	(27.9%)	10.7x	NM	14.7x	7.9%	6.0%
Kajima Corporation	6,182	13.45	13.79	2.5%	(44.4%)	5.6x	5.8x	4.0x	5.6%	9.5%
LendLease Group	5,704	8.85	8.67	(2.2%)	(43.5%)	11.0x	10.7x	10.3x	6.3%	4.6%
Fluor Corporation	5,093	36.53	36.50	(0.1%)	(64.5%)	7.7x	9.6x	6.7x	5.8%	4.0%
KBR, Inc.	2,984	16.73	16.84	0.7%	(21.8%)	NM	16.2x	8.2x	(0.2%)	3.9%
Salini Impregilo S.p.A.	2,646	1.97	1.87	(5.5%)	(116.9%)	4.6x	5.3x	8.3x	9.4%	5.2%
Balfour Beatty plc	2,563	3.01	3.49	13.9%	(17.7%)	NM	NM	13.6x	(2.6%)	0.7%
Granite Construction Incorporated	1,940	45.49	42.69	(6.6%)	(54.9%)	12.9x	15.9x	8.4x	5.9%	6.0%
	<b>Median</b>					<b>7.7x</b>	<b>9.6x</b>	<b>8.3x</b>	<b>7.3%</b>	<b>8.0%</b>
Small-Cap Construction Services										
Tutor Perini Corp.	\$1,552	\$17.24	\$17.92	3.8%	(49.3%)	7.7x	8.3x	7.5x	5.0%	5.0%
Aecon Group, Inc.	913	13.53	14.03	3.5%	(13.9%)	8.3x	10.1x	6.3x	4.2%	5.3%
Great Lakes Dredge & Dock Corp.	762	7.05	6.91	(2.0%)	26.9%	9.0x	11.6x	8.4x	9.6%	10.5%
Construction Partners, Inc.	504	9.00	10.50	14.3%	100.0%	NM	NM	7.1x	NM	10.6%
Infrastructure and Energy Alternatives	444	8.61	8.82	2.4%	100.0%	NM	NM	12.5x	1.5%	8.1%
Sterling Construction Company, Inc.	343	11.30	12.69	11.0%	(20.6%)	NM	13.5x	5.6x	0.8%	2.9%
Orion Group Holdings, Inc.	234	4.22	4.78	11.7%	(71.3%)	8.7x	NM	6.6x	6.5%	5.9%
	<b>Median</b>					<b>8.5x</b>	<b>10.9x</b>	<b>7.1x</b>	<b>5.0%</b>	<b>5.8%</b>

Sources: CapIQ

Note: Some firms excluded from mean and median calculations due to outliers:

# M&A Trends – Select Utility T&D Transactions

Numerous PE-backed platforms are executing consolidation strategies across T&D end markets to capitalize on favorable industry tailwinds while established, diversified strategics continue to utilize M&A to expand geographic reach / capabilities to better serve existing customers / acquire new ones



# M&A Trends – Segments of Interest

1. Natural gas distribution
2. Power distribution
3. Energy solutions & cleantech
4. Substation construction and maintenance
5. Power transmission
6. Certification, test and inspection
7. Communications

# A few life lessons from the utility contractor perspective

Historically...

1. When a third party gets in between the utility/owner and the contractor, things go “\_\_\_\_\_”
2. When the utility contractor’s customer builds on speculation, things go “\_\_\_\_\_”
3. When regulated utilities get an entrepreneurial idea, things go “\_\_\_\_\_”

Answer Key: “bad”

# Thoughts on the Power Market

# Power Construction Spending Drivers

## Existing Drivers (last 10 years)

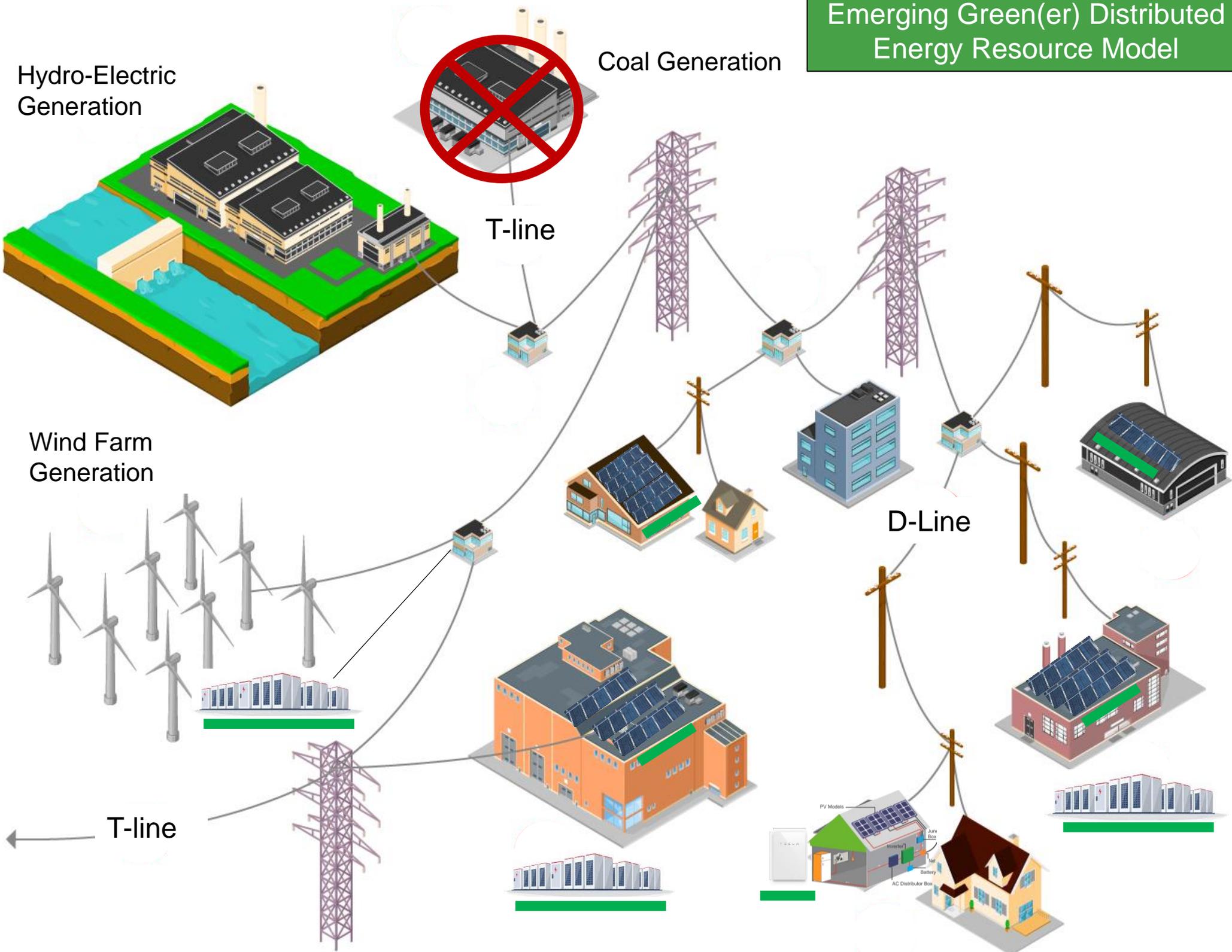
- Competitive Generation – FERC 888, 889 and 890
- Aged Infrastructure
- Interconnection – FERC 1000
- Reliability (Outages)
- Hardening

## New (Additional) Drivers

- Storage Accommodation – FERC 841, 845
- Distributed Energy Resources – FERC 841
- Reliability (Cyber Security) – FERC 850



# Emerging Green(er) Distributed Energy Resource Model



Hydro-Electric Generation

Coal Generation

T-line

Wind Farm Generation

D-Line

T-line



# The Emerging Investor Owned Electric Utility's Dilemma



vs.



# A Growing List of Questions Facing the Power Market

1. How can utilities provide equal access to safe, reliable and affordable power....and also innovate and compete?
2. Will regulators allow IOUs to invest in new projects aimed at innovation and flexibility?
3. Who is going to pay for critical base load as rate base declines?
4. How do we navigate the path to green distributed energy that is inherently uncertain and variable?
5. How fast will EVs, storage and renewables become completely main stream?
6. Can utilities upgrade distribution networks fast enough to avoid chaos?
7. How fast will C&I customers develop microgrids behind the meter?
8. How do we protect our transmission and distribution infrastructure from cyber threats?
9. Will we end up with a smarter and more resilient grid that is also LESS reliable?
10. What happens to rural utility markets where none of this transformation makes economic sense?

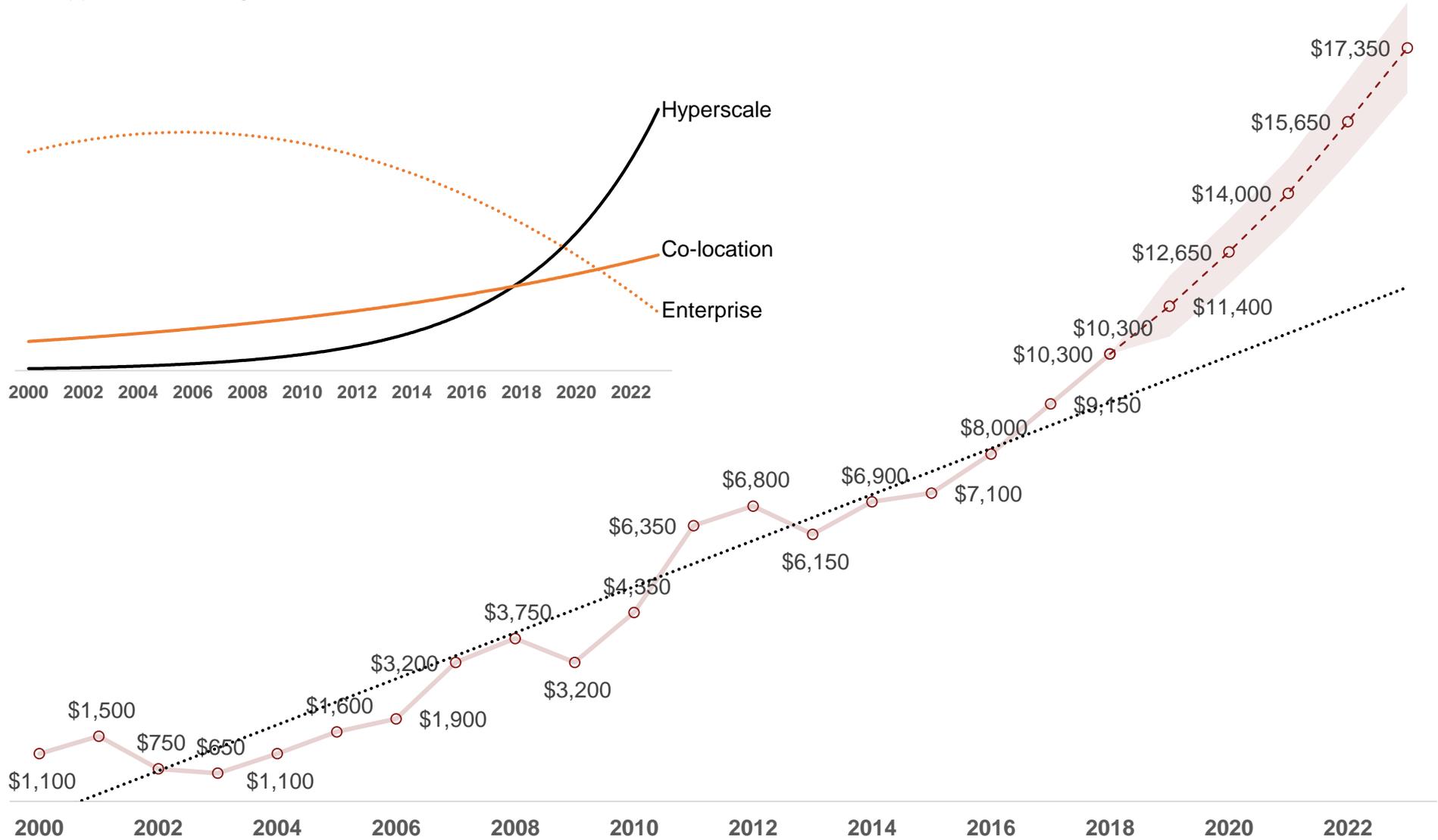
# Thoughts on 5G

# Hyperscale of new data center construction correlates to fiber build

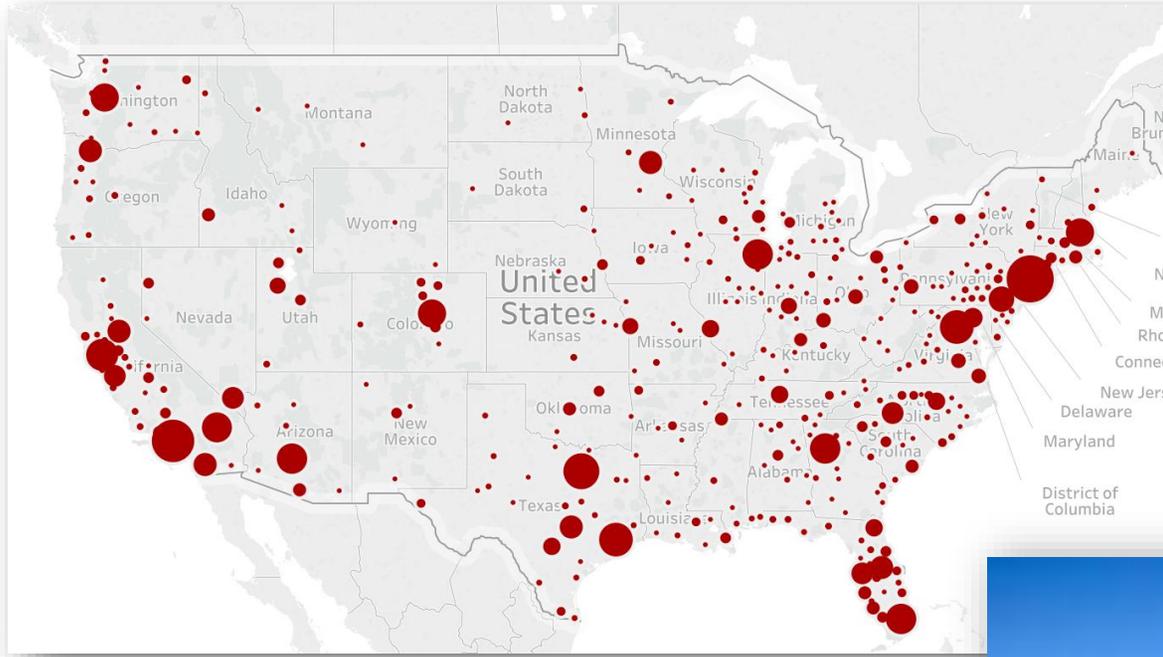
## Data center construction spending in the US

Millions

Source(s): FMI, Global Insight, US Census Bureau



# Activity concentrates in fewer markets – accelerates the digital divide





from this....

.... to this



# A Dozen Enabling Technologies Driving Innovation and Transformation



Smart Mobile Devices



IoT / Wireless Sensors



Smart Wearables



Augmented Reality



Robotics



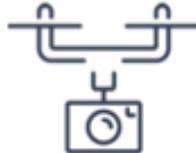
Artificial Intelligence



Cloud Computing



Remote Connectivity



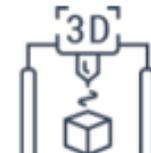
Scanning/Reality Capture



Virtual Reality



Worker Augmentation



Additive/Subtractive Manufacturing

Entrepreneurs and innovators from both inside and outside a given industry are leveraging combinations of these enabling technologies to create new business models and transform existing processes

# New competitors will NOT adhere to your legacy practices

## *Artificial Intelligence*

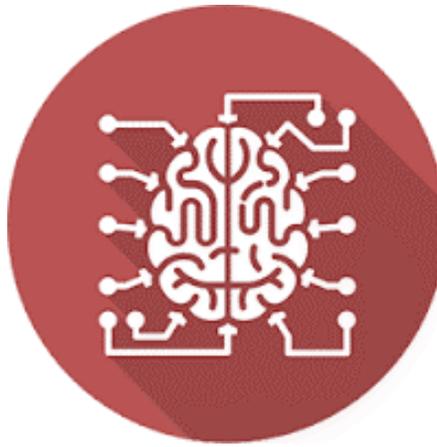
Replicating or replacing knowledge-work tasks

## *Internet of Things*

Process optimization via a network of sensors and other devices for data collection, monitoring, etc.

## *Advanced Robotics*

Human augmentation and/or task automation that enhances precision and speed of delivery



## *Iterative Manufacturing*

Increased customization, creation of unique products, and reduction of waste

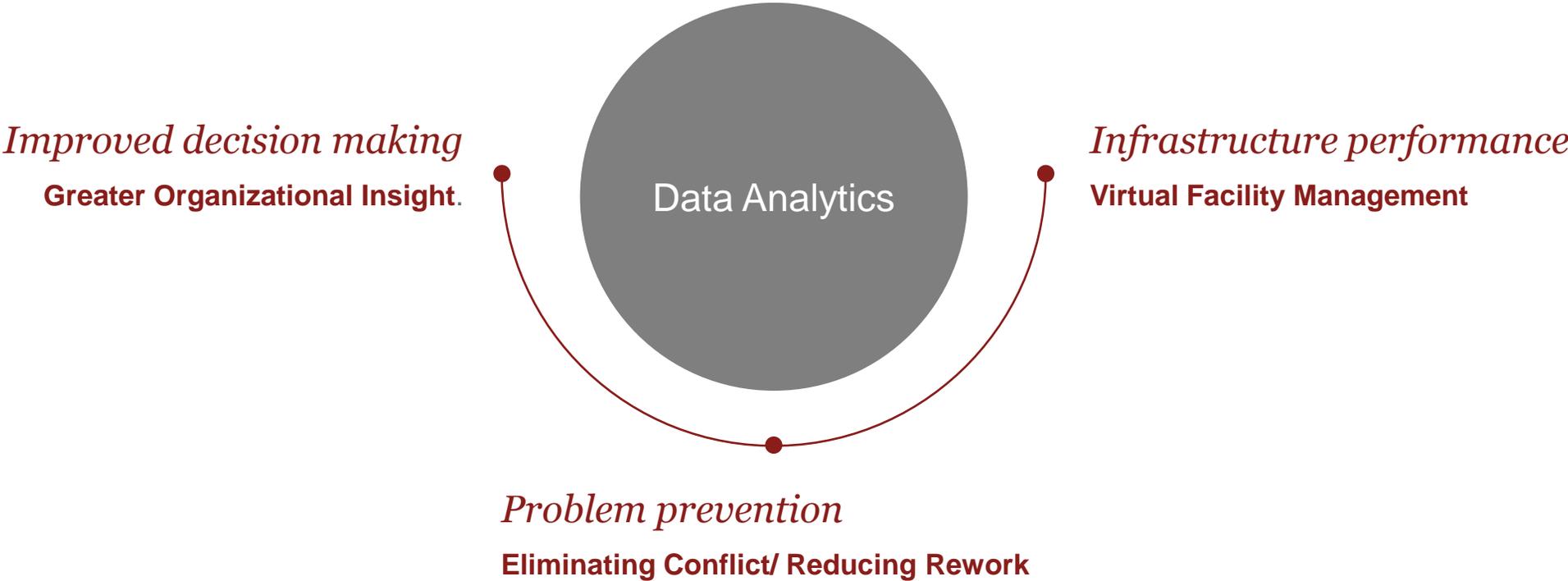
## *Autonomous Vehicles*

Machine-to-machine communication and elimination of human operation

## *Modularization/ Prefabrication*

Off-site fabrication and kitting services

# Profiting from data and real-time analytics



# The Digital Transformation of the Built Environment

**Increasing Complexity due to:**

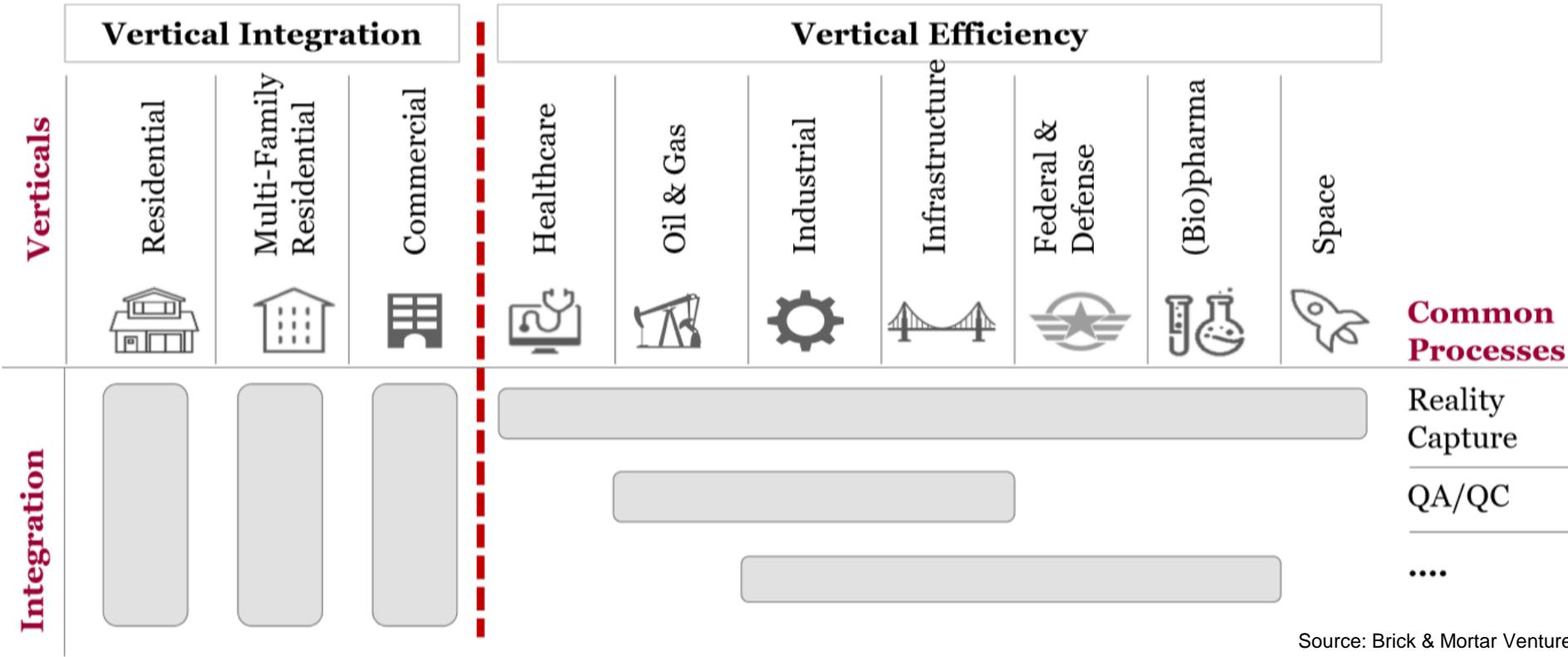
Contract Type

Human Occupancy

Logistical Complexity

Dimensional Accuracy

Architectural Freedom



Source: Brick & Mortar Ventures

# The Digital Transformation of the Built Environment



Batter-free Bluetooth beacons and tags



Autonomous robotics in complex environments

Indoor and outdoor flight



AI to optimize jobsite safety for manned and autonomous operations, fleet optimization, and remote operations



the app and web interface to collect, analyze and optimize field labor productivity



Virtual Reality (VR) Solutions for Training and Operations



Giving worksite personnel the ability to locate materials, tools, and people across the site in real time – putting the supply chain in the hands of the field

A few examples relevant to utility infrastructure owners and contractors

# Summary Thoughts

- We are at or near the top of the economic cycle.... with the industry to follow to some degree
- Has your good performance been a result of permanent operational improvement and/or innovation ....or merely a byproduct of a strong market and favorable supply/demand?
- How are you leveraging lessons learned from the Great Recession and coaching your next generation?
- Your customers have to make large capital decisions at a time when their business model and regulatory environment is de-stabilizing....
- Utility contractors don't go broke due to lack of work ....
- You need to be thinking differently about your strategy, business model, people and processes ....
- What's your strategy, general readiness and experience with digital transformation in the areas of real-time reality capture, QA/QC and process optimization?
- It's GREAT to be part of the PCCA and here in St. Kitts!