



Digital Transformation

Critical Success Factors

Lorenzo Tanganelli

CIO, Turbomachinery Services

Baker & Hughes, a GE Company

Digital Industrial Transformation

1.0 1784... WATER & STEAM POWER

2.0 1870... MASS PRODUCTION

3.0 1969... AUTOMATION

4.0 TODAY... CYBER MEETS PHYSICAL

Technology Enablers

IOT

BIG DATA ANALYTICS

AUGMENTED REALITY

3D PRINTING

ARTIFICIAL INTELLIGENCE



+1B

Growth in the installed
Base of Smart Meters



10B

Internet connected
light bulbs



152M

Cars connect to the
internet...6 fold increase

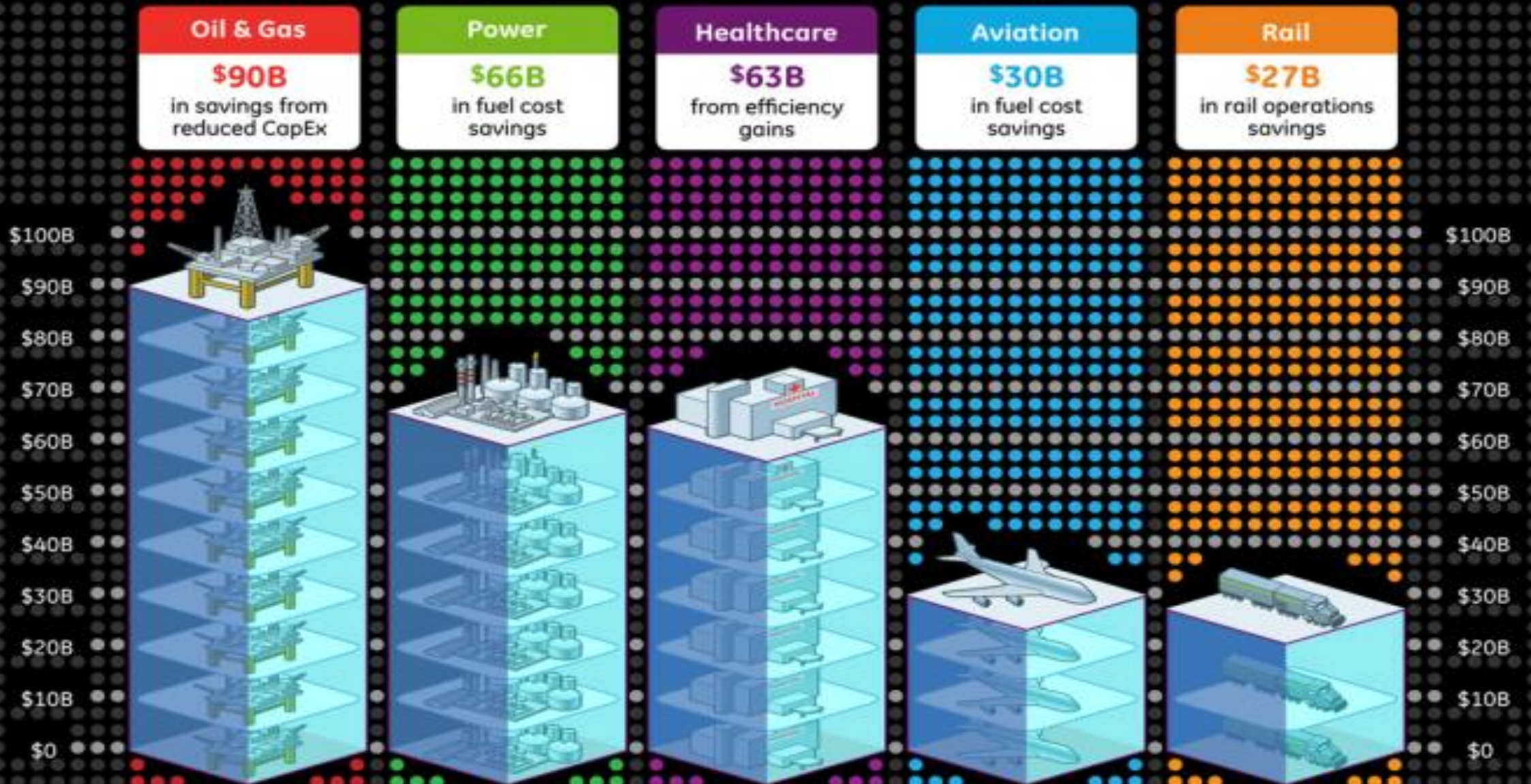


10B

Terabytes a day from
industrial machines

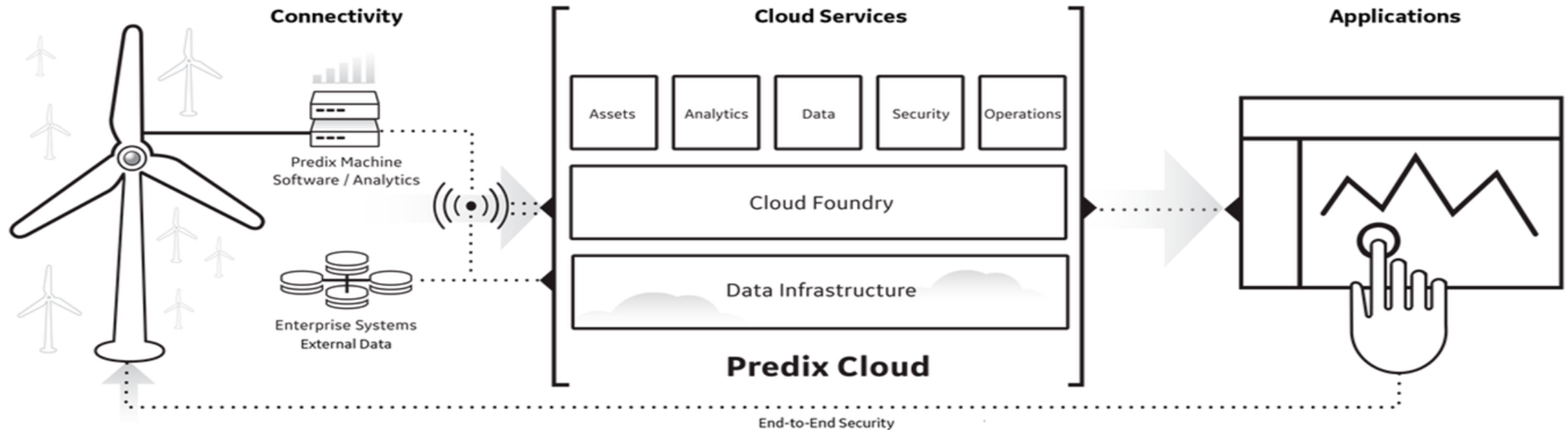
Winners will master data and insights ... at speed & scale

The why... effects of 1% productivity gain across the industry



Pick your digital transformation platform

Key enabler of speed & scale... built for digital industrial



- Solve recurrent problems once & for all: secure connectivity, data ingestion, asset modeling
- Focus where you differentiating value add is... physics, analytics & applications
- Drive the ecosystem effects... employees, customers, partners

Technology is important... but the “people” factor even more

Organization

- Flexible... the transformational mission is more important than the function
- Assign your best talent to attack the most important problem
- Empower a small team to succeed

MISSION BASED TEAMS









Culture

- Collaborating without boundaries
- Clear strategy but flexible short term priority... fail fast & pivot
- Continuous feedback & learning

SPEED & ADAPTABILITY

PD@GE Example

- Insight from peers... continue & consider... focus on behaviors
- Priorities... frequently set & adjusted... push-pull
- Rewards... points based... from anybody around you
- No more annual performance review... frequent touchpoints
- Equity based compensation ↑ ... fosters collaboration
- All wrapped in a mobile friendly app... intensity and everyday usage

	Priorities
	Touchpoints (0)
	Insights (6)
	Impact Awards
	Summary
	Team
	Settings
	Tips and Help

Other obstacles to watch: new competitors



airbnb

20_{BN}

Hotel Service

Owns no
real-estate



Alibaba

23_{BN}

Retail

Has no
inventory



UBER

50_{BN}

Taxi Service

Owns no
vehicles

Impact of all this on the workforce & employment

Myth or reality?

First time the term “technological unemployment” is used

Keynes, ≈1930

“the major domestic challenge [...] is to maintain full employment at a time when automation [...] is replacing men”

J.F. Kennedy, ≈1960

The danger of a revolution triggered by “the combination of the computer and the automated self-regulating machine” leading to a new era of production “which requires progressively less human labour”

Group of Nobel prizewinners to President Lyndon Johnson, 1964

Previous industrial revolution have sparkeded very similar concerns... focus on learning & differences

So who's right? Is this time different or just another wave?

Similar to the past

- New jobs type will be created to support the technology
- Some jobs will always be better done by humans
- As some industries decline, new ones will emerge

New vs the past

- The speed at which we will go through this revolution is unprecedented
- Impact of automation this time around is broader-based... every industry

Truth lies somewhere in between... but your transformation will impact the workforce in a way on in another... **plan ahead**

Final Remarks

Leaders are more important than ever in this transformation

- Technology is important, but is not the primary success factor
- The right culture & organization are at least equally important
- Digital transformation is a company wide journey, not just the CIO job
- A platform is what will enable speed & scale
- New friends & foes as you execute through the journey