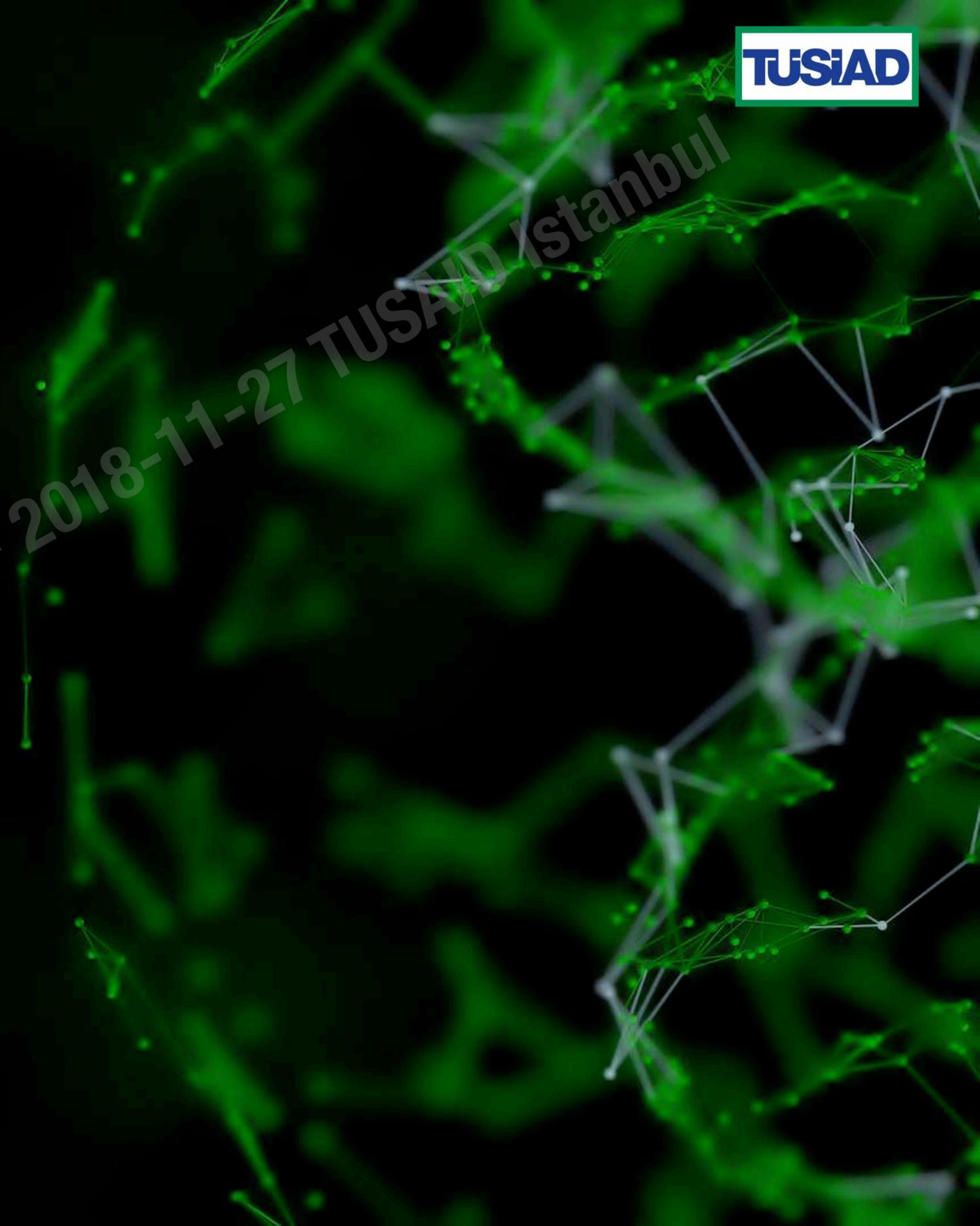


AUDIO TEST MOVIE



© Deloitte - hvangrieken@deloitte.nl 2018-11-27 TUSAID Istanbul

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul



Allow me to shortly introduce myself ...



Hans van Grieken
Fellow Center for the Edge
EMEA Technology Research Leader
Executive Lecturer Nyenrode Business School

twitter: hvangrie
mail: hvangrieken@deloitte.nl

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul



dekoratie - hysangrieken - 2018-11-27 TUSAID Istanbul

I have also been a Supervisory Boardmember since 2007, currently at Priva



Courtesy of

Priva is the world market Leader in Green-House Climate Controls ...



The company - for instance - also delivered the Digital Building Management System Technology for St Paul's Cathedral

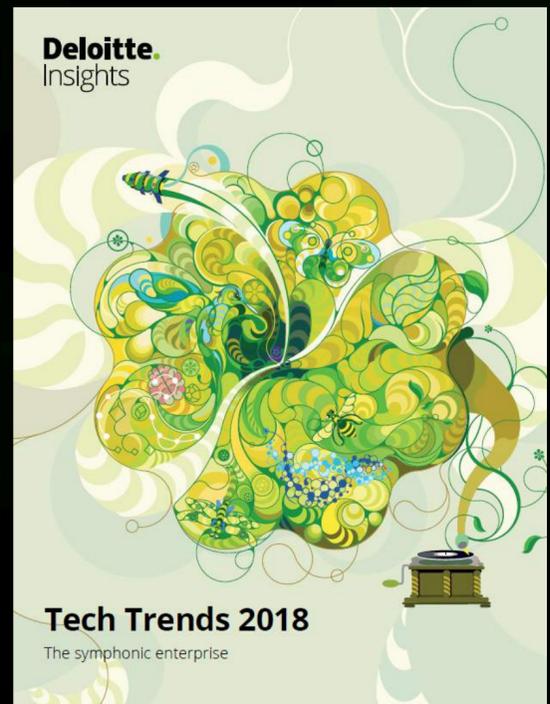
The screenshot shows a website page for PRIVA. At the top left is the PRIVA logo with the tagline 'CREATING A CLIMATE FOR GROWTH'. The navigation bar includes 'DISCOVER PRIVA', 'MARKETS', and 'SOLUTIONS'. On the right, there are links for 'SELECT YOUR COUNTRY', 'CONTACT', 'FIND A PRIVA PARTNER', and 'MY PRIVA', along with a search bar labeled 'Search this site'. The main content area features a breadcrumb trail: 'Home > Discover priva > News and stories > St pauls cathedral upgrade'. Below this is the main headline 'ST PAUL'S CATHEDRAL UTILISES PRIVA UK BMS UPGRADE' and a sub-headline 'St Paul's Cathedral relies on Priva UK BMS as part of major plant upgrade'. A large image of St Paul's Cathedral is shown at the bottom. A watermark '© Deloitte - Iwan Grieken@deloitte.nl' is visible across the page.

Supervising their Digital Transformation from a Product into a Software and Services Company

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

@ Deloitte we annually produce a number of Global "flagship Eminence Publications" geared at our clients to help them better understand the implications of Digital Transformation ...

Global Technology Trends



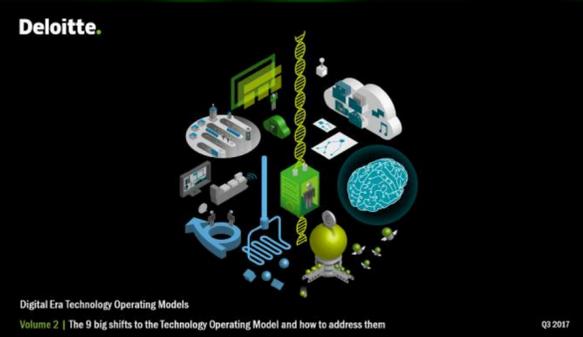
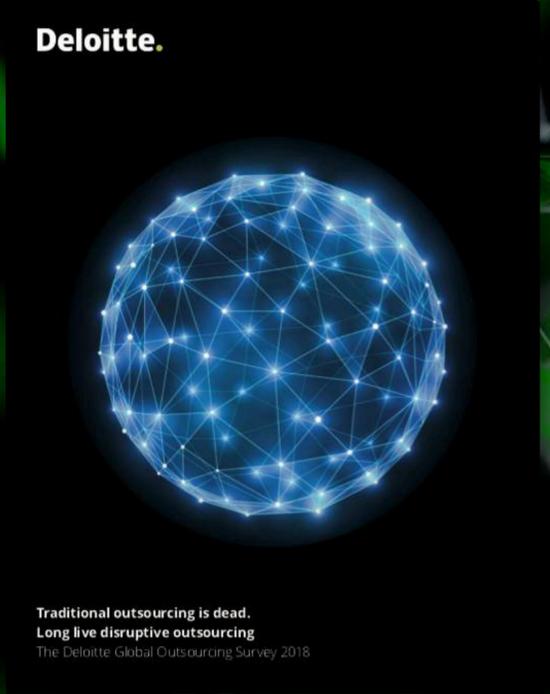
Digital DNA/MIT Sloan



Global CIO Survey



Outsourcing Survey



Digital Technology Operating Models

©Deloitte - hvangriekel - 2018-11-27 TUSIAD Istanbul

30 years ago I made a very modest contribution to the introduction "Carin",
the first car-navigation system in the world ...



In 2000 I had a piece of software on my "Psion" from a Software Company with a strange logo ...



In 2005 that company had transformed from a Software into a Products Company: TomTom



©Deloitte

After their initial success, this quickly became their worst dream



Hence their focus needed to change again ...



7:00 AM Setting off



9:00 AM First appointment



12:00 PM Lunch time



2:00 PM Getting late



5:00 PM Need to refuel?



6:00 PM What a day!

Forcing them into a continuous proces of digital transformation

7:00 AM Setting off

2:00 PM Getting late

5:00 PM Need to refuel?

6:00 PM What a day!

CREATE A STORY

00:37 01:24

TomTom, Mapping Software, Cars, Citroen, Peugeot, GPS

Peugeot and Citroën cars to feature TomTom mapping services

By Danny Brogan | 24 July 2012

Peugeot and Citroën cars' infotainment systems will feature TomTom maps and traffic services after PSA Peugeot Citroën agreed a deal with the navigation provider.

ROAD ANGLE

WIDE ANGLE

10sec 7sec

Share

£

First appoin

POCKETINT

Here's a recent development with a bit of a personal touch involving a "Platform-Play" ...

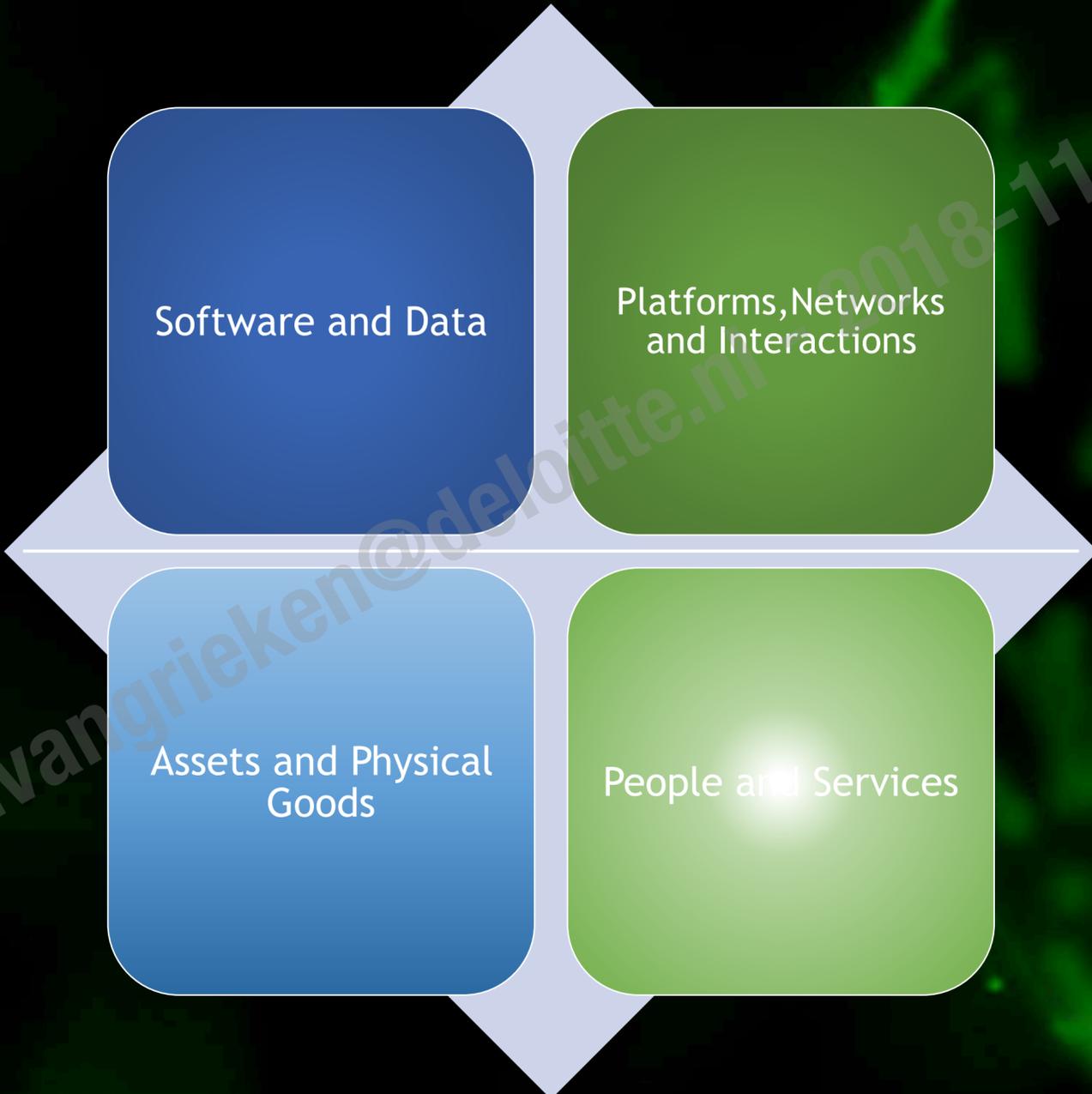


- The Alliance will utilise **Android**, world's most popular operating system, to offer customers a new array of services including Google Maps, the Google Assistant and the Google Play Store
- These services will be combined with Alliance Intelligent Cloud based remote software upgrades and vehicle diagnostics

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

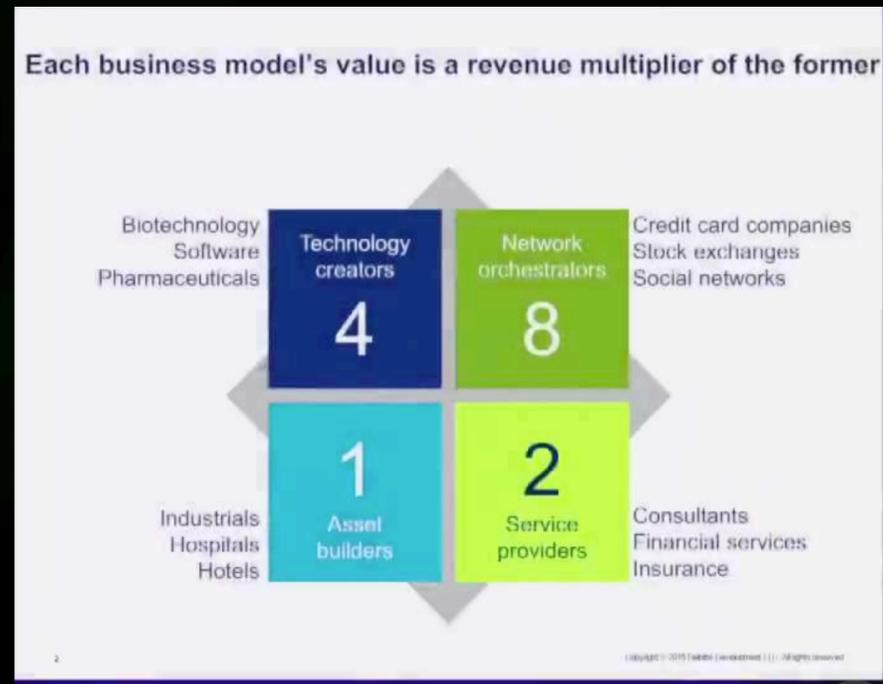
It is not by accident that a lot of companies are interested in creating Platforms...

Digital Devide



©Deloitte - hvangrieken@deloitte.nl 2018-11-27 TUSIAD Istanbul

Here's what William Ribaudo had to say about this ...



FiRe
2015

So let that sink in for a moment:

"The Value Wall Street is willing to pay ranges from 8 to 15 times of your Revenue ..."

Digital Divide

Biotechnology
Software
Pharmaceuticals

4
Software and Data

8
Platforms, Networks
and Interactions

Credit Card Comp
Social Networks
Stock Exchange

Industrials
Hospitals
Hotels

1
Assets and Physical
Goods

2
People and Services

Consultants
Financial Services
Insurance



©Deloitte

grieken@deloitte

2018-11-27 TUSIAD Istanbul

Digital Disruption is all over the place. So how can you anticipate ... ?



... and we identified nine patterns of disruption that - in most cases - are Digitally Enabled

Deloitte Insights Industries Topics Economics Multimedia Deloitte Review Regions

PATTERNS OF DISRUPTION

Patterns Case Studies

I AM INTERESTED IN PATTERNS THAT:

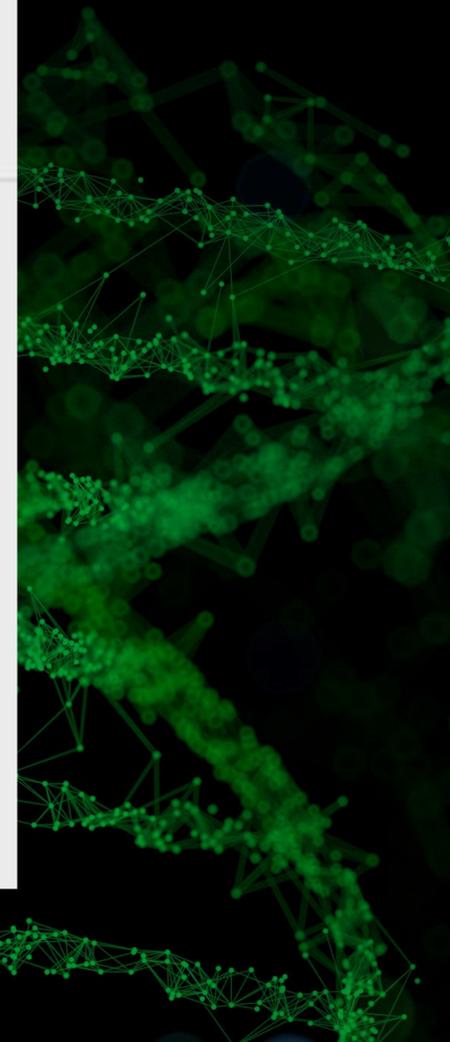
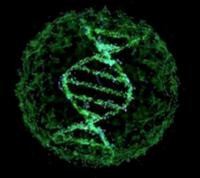
- Make it easier to make things
- Make it easier to get to market
- Drive network effects

Explore nine patterns of disruption

Understand the underlying trends and strategies to turn threats into opportunities

[READ FULL REPORT ON DISRUPTION](#)

	Unlock assets from adjacent markets		Align price with use		Turn products into product platforms
	Shorten the value chain		Unbundle products and services		Expand market reach
	Converge products		Distribute product development		Connect peers



Disruptive Pattern 4: Align Price with Use: *Power by the Hour*



© Deloitte

A service to provide the effective use of aircraft engines – from any manufacturer – Priced per hour, with guaranteed uptime ...

GE revolutionised the aircraft engine field with OnPoint, integrating maintenance, material and asset management into an offer that guarantees engine uptime priced by the flight hour.

This required **SEVEN TYPES OF INNOVATION:**



Guaranteed pricing and integrated financing by predictable maintenance needs

Saves customers up to 15% over traditional engine ownership and service models

Worldwide system of rapid response and 24/7 service teams guarantee uptime

Planes spend more time flying and less in unscheduled repairs

Data monitoring and predictive analytics allows GE to know when an engine needs service

Engine trade-in programs, line maintenance, and technology upgrades are all bundled

GE Aviation is a trusted flight partner instead of an engine manufacturer



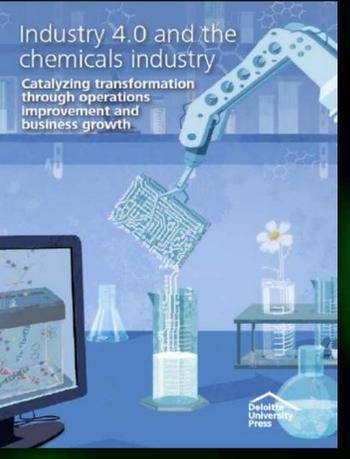
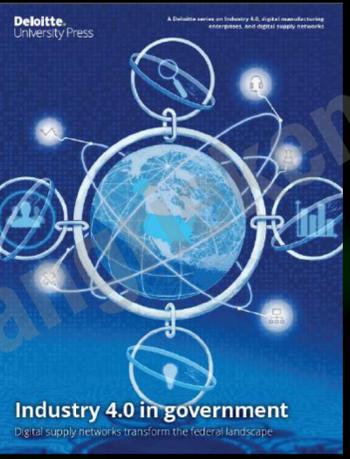
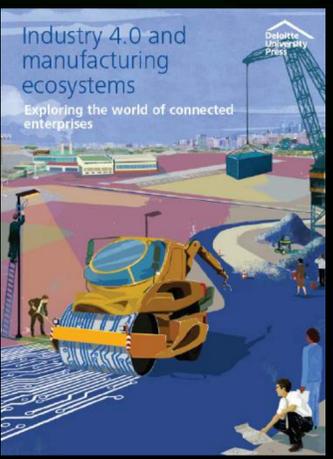
© Deloitte

hvan@deloitte.nl - 2018-1

Soon, the competition followed suit ...



Deloitte - as have others - has published considerably: Industry 4.0 Published Insights ...



©Deloitte

Deloitte - as have others - has published considerably: Additive Manufacturing published Insights

The collage consists of 30 individual publication covers and reports, organized as follows:

- Row 1:** 3D opportunity for electronics; The 3D opportunity primer; 3D opportunity for life cycle assessments; 3D opportunity for product design; 3D opportunity for the supply chain; 3D opportunity for quality assurance and parts qualification; 3D opportunity for intellectual property risk; 3D opportunity for blockchain.
- Row 2:** 3D opportunity in tooling; 3D opportunity in aerospace and defense; 3D opportunity in the Department of Defense; 3D opportunity in the automotive industry; 3D opportunity for the talent gap; 3D opportunity for technology, media, and telecommunications; 3D opportunity for scan, design, and analyze; 3D opportunity and cyber risk management.
- Row 3:** 3D opportunity and the digital thread; 3D opportunity for end-use products; 3D opportunity in medical technology; 3D opportunity serves it up; 3D opportunity for business capabilities; 3D opportunity for health care; Deloitte Review (Issue 19); Deloitte Review (Issue 18).
- Row 4:** Deloitte Review (Issue 17); Deloitte Review (Issue 16); Deloitte Review (Issue 15); Additive Manufacturing: A 3D Opportunity video player; 3D opportunity: The course on additive manufacturing for business leaders; (podcast) 3D opportunity for the supply chain: Additive manufacturing delivers.

©Deloitte

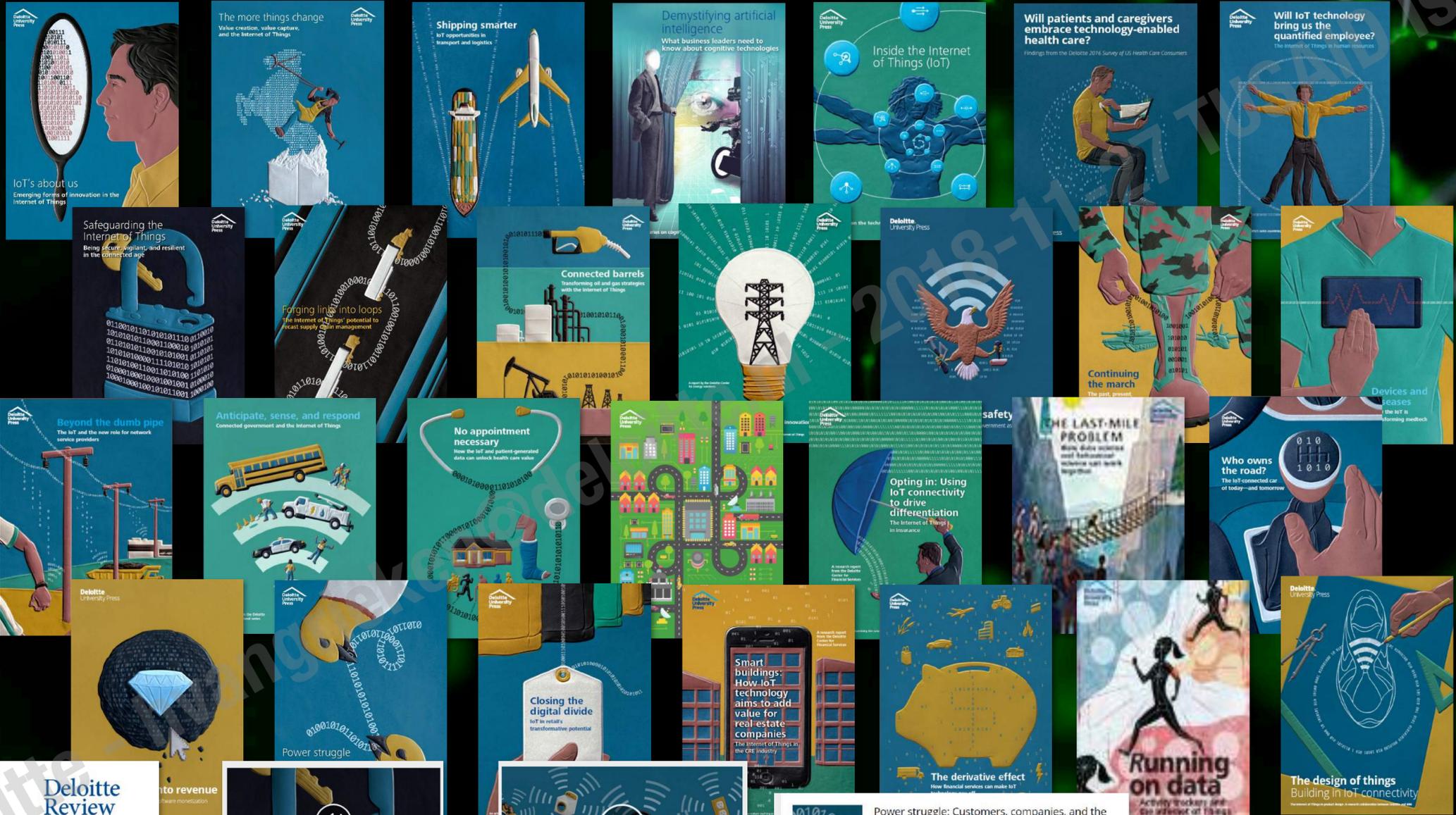
3D opportunity: The course on additive manufacturing for business leaders

Our online course is designed to help expand your knowledge of the business implications of additive manufacturing and inform your choices about how and...

(podcast) 3D opportunity for the supply chain: Additive manufacturing delivers

Additive manufacturing, or 3D printing, is poised to revolutionize industries such as health care and defense. Kelly Marchese of Deloitte Consulting LLP..

Deloitte - as have others - has published considerably: Internet of Things Published Insights



Deloitte Review
Complementary article reprint
FROM DIRT TO DATA
The road goes on forever and the Internet of Things
Deloitte

Podcast
Safeguarding the Internet of Things: Being secure, vigilant, and resilient in the connected age
(17:11)
[Listen/Read transcript](#)

Video
What is the Internet of Things?
(02:11)
[Watch](#)

Podcast
Power struggle: Customers, companies, and the Internet of Things
(20:21)
[Listen/Read transcript](#)

Video
Data Security and the Internet of Things: Being secure, vigilant, and resilient in the connected age
(03:04)
[Watch](#)

Yet Industry 4.0 is taking its time to get deployed. We wanted to know why and created The Industry 4.0 Paradox ...



... As you as an Industry Platform have done together with BCG



Industry 4.0 Paradox

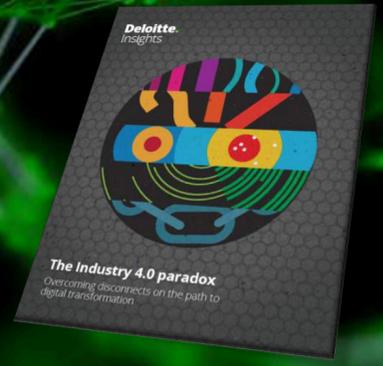
A global survey of how companies are investing in Industry 4.0-driven capabilities to enable digital transformation

The era known as Industry 4.0 has opened up new opportunities to drive innovation and growth in business operations, processes, and production. But how are organisations planning to invest in digital transformation? Where and how do they plan to use digital technologies?

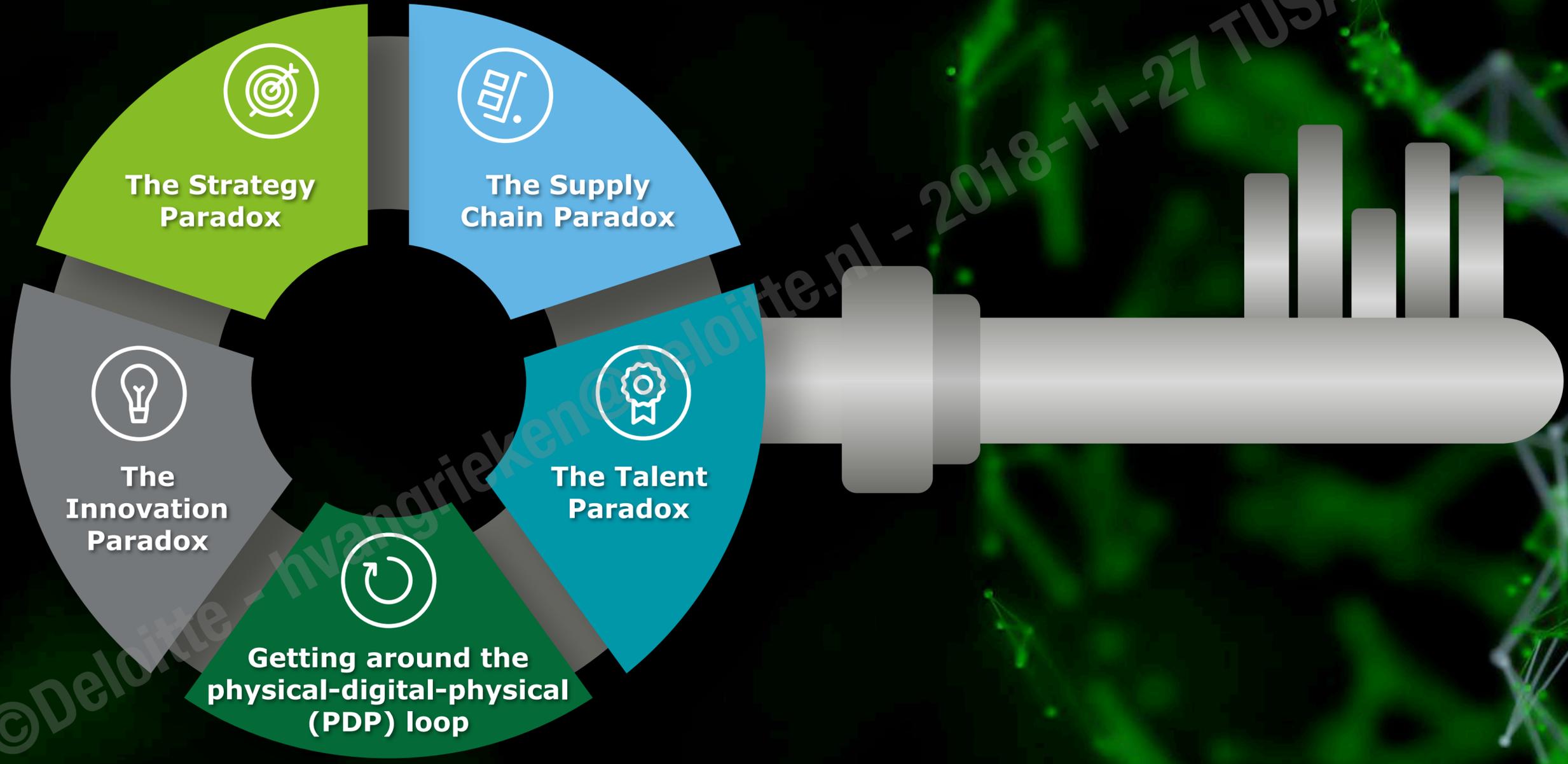


UNDERSTAND

- How and where they are investing -- or planning to invest -- in digital transformation
 - Key challenges they face in making such investments
 - How they are forming their technical and organizational strategy around digital transformation.
- 



As digital transformation is taking shape in nearly every organisation, our study reveals five key states of play:



©Deloitte - Invangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul

The Strategy paradox – Digital transformation prioritised, but not necessarily perceived as profitable

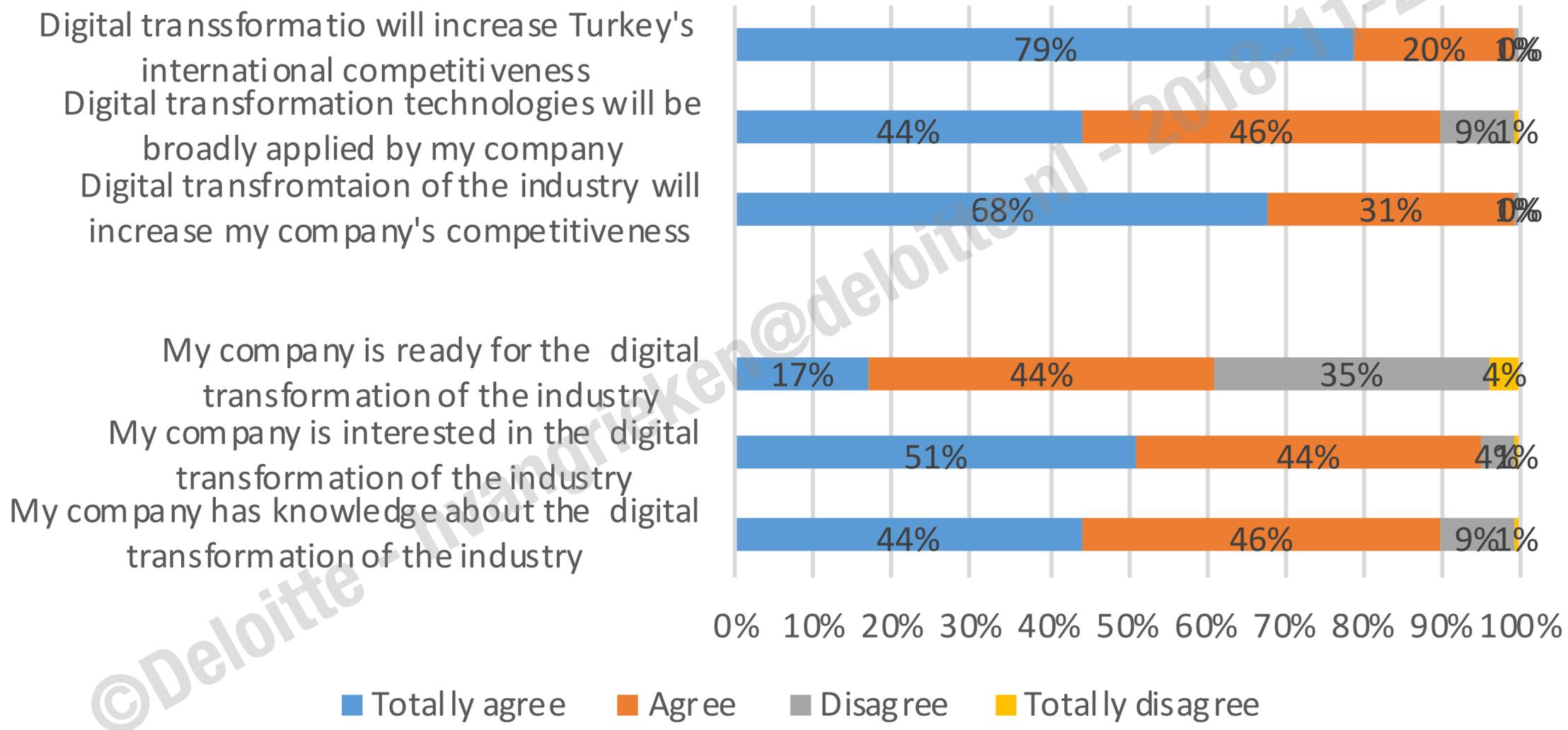


Key Findings

- **94 percent** of all respondents indicate digital transformation as a top strategic objective for their organisation.
- **But only 68 percent of all respondents and just 50 percent of CEOs** indicated that these transformations are critical to maintaining profitability.
- Digital transformations may be viewed as “**defensive**”
- **investments** to protect, rather than grow their business.
- On average, companies plan to invest a **median of 30 percent of their operational/IT budget** on digital transformation initiatives -- but **only 11 percent of their R&D budgets** on the same.

For an outsider - as I am - definitely an interesting read

Digital transformation awareness levels of companies



©Deloitte



The Strategy paradox – Digital transformation prioritised, but not necessarily perceived as profitable



Key Findings

- **94 percent** of all respondents indicate digital transformation as a top strategic objective for their organization.
- **But only 68 percent of all respondents and just 50 percent of CEOs** indicated that these transformations are critical to maintaining profitability.
- Digital transformations may be viewed as “**defensive**” **investments** to protect, rather than grow their business.
- On average, companies plan to invest a **median of 30 percent of their operational/IT budget** on digital transformation initiatives -- but **only 11 percent of their R&D budgets** on the same.



Recommendations

- **Incrementally move beyond operational upgrades:** Digital transformation can lead to revenue growth in the form of improved products or services.
- **Invest in the long run:** Transformative benefits often take time to accrue and require mindset shift. Don't neglect longer-term opportunities in pursuit of shorter-term objectives.
- **Consider increasing time and financial investments in digital transformation R&D efforts,** focusing on supply chain -- especially as it offers opportunities to pilot a number of digital technologies.

The Innovation paradox – A balance between optimisation and uncharted waters

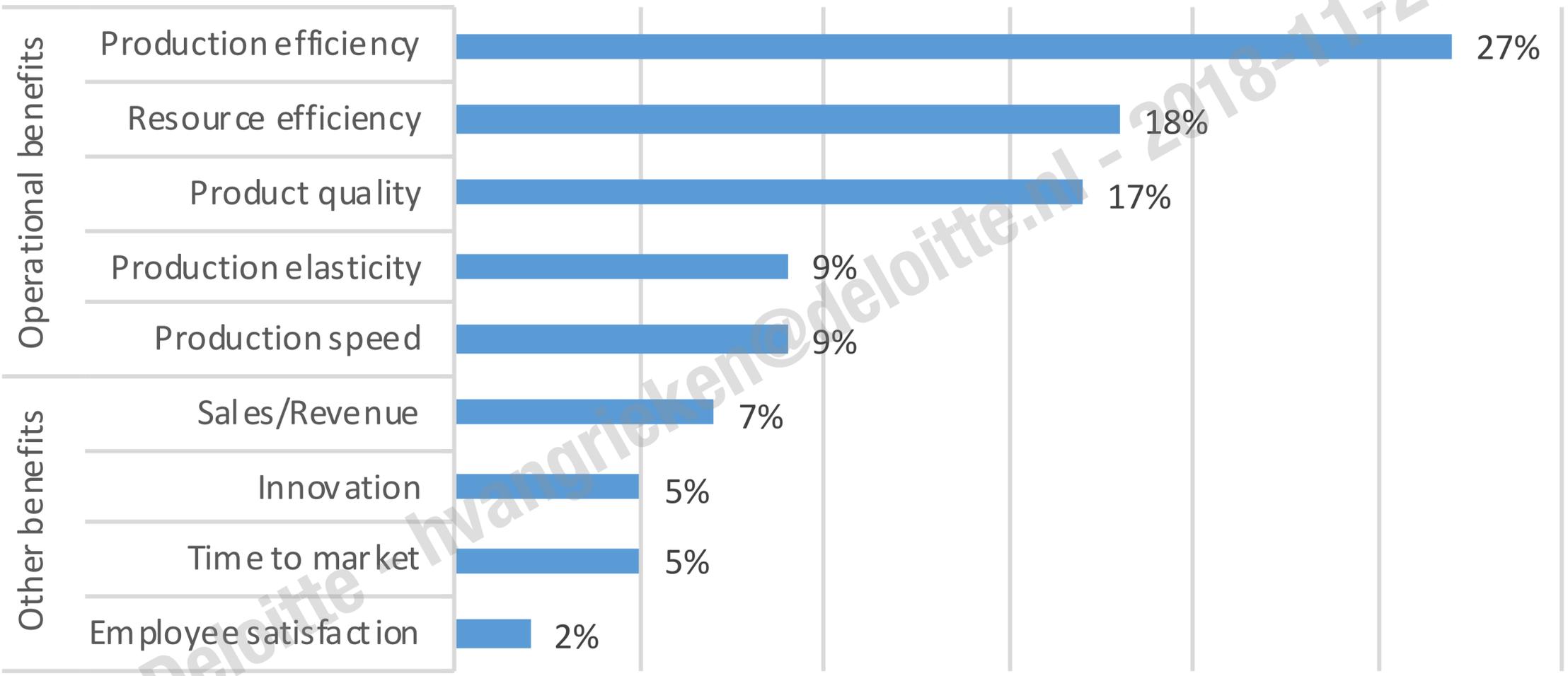


Key Findings

- The top 2 factors driving digital transformation, as cited by respondents to our survey, are **Productivity improvement and Operational goals** - mostly doing the same things better - help generate positive ROIs.
- However, the survey data suggests that **equally positive ROIs** can be realized when organizations are driven by an **increased desire for innovation**.

For an outsider - as I am - definitely an interesting read

In which of the following areas the digital technologies will bring more benefit?



The Innovation paradox – A balance between optimisation and uncharted waters



Key Findings

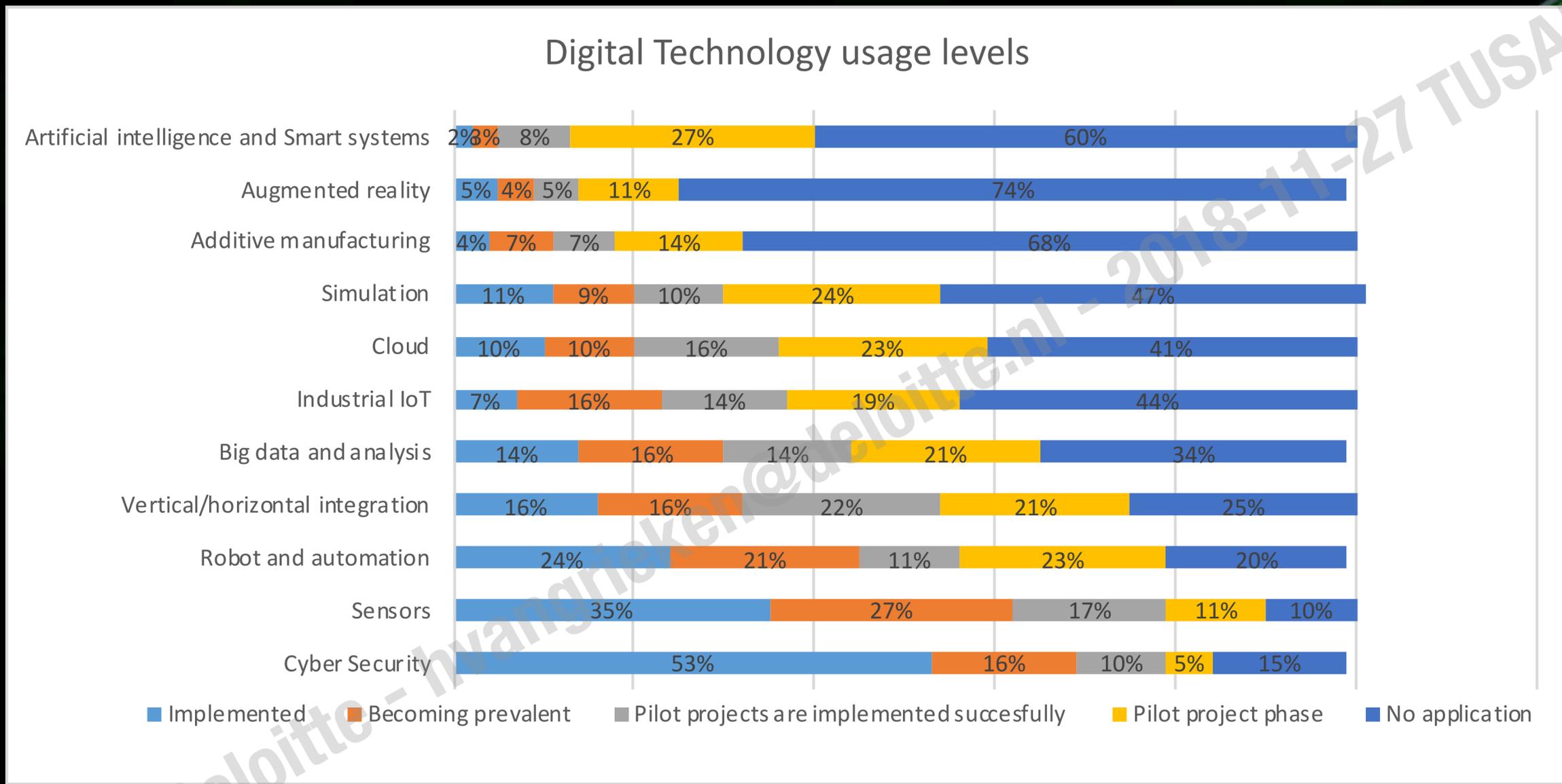
- The top 2 factors driving digital transformation, as cited by respondents to our survey, are **Productivity improvement and Operational goals** - mostly doing the same things better - help generate positive ROIs.
- However, the survey data suggests that **equally positive ROIs** can be realized when organizations are driven by an **increased desire for innovation**.



Recommendations

- Continue to invest in **productivity and operations**; however, sticking mostly with tried-and-true can leave opportunities untapped.
- Consider focusing not only on building a strong foundation of technologies, but also truly **innovative new approaches**.
- **Get moving – because others are likely planning to or already are moving along the digital transformation maturity curve.**

For an outsider - as I am - definitely an interesting read



Getting around the physical-digital-physical loop – A look at current Industry 4.0 capabilities



Key Findings

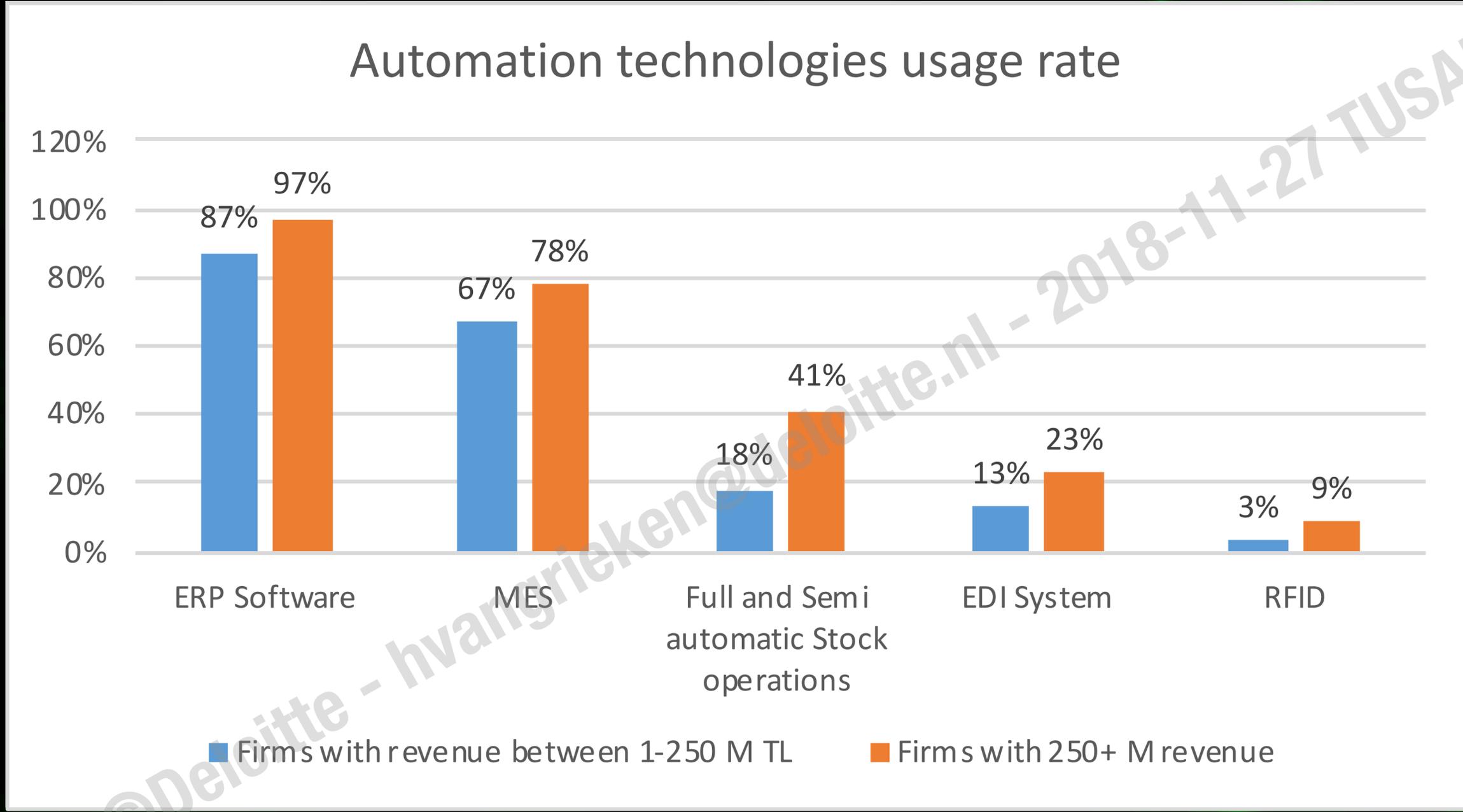
- **Harnessing each stage of the PDP loop is important** to the full realization of Industry 4.0 and a challenge that many organisations face.
- **More than 90 percent** of respondents report **gathering some data** from the physical world. But fewer are able to analyze the data and **only about half report being able to act on it in real time.**

PDP: physical-digital-physical loop

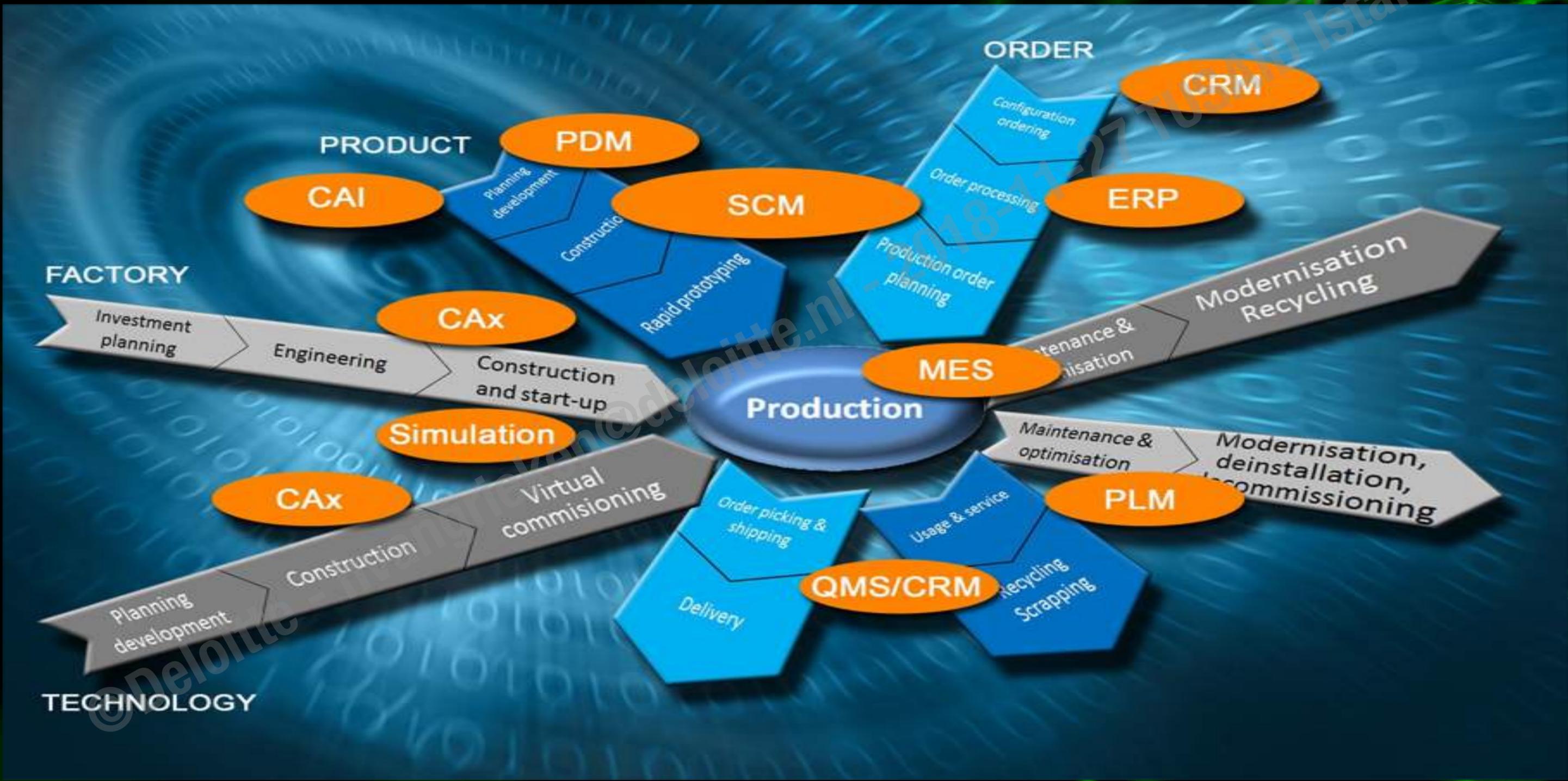


©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul

For an outsider - as I am - definitely an interesting read



PDP requires both modernisation as well as Systems Integration of existing Legacy Systems



Getting around the physical-digital-physical loop – A look at current Industry 4.0 capabilities



Key Findings

- **Harnessing each stage of the PDP loop is important** to the full realization of Industry 4.0 and a challenge that many organizations face.
- **More than 90 percent** of respondents report **gathering some data** from the physical world. But fewer are able to analyze the data and **only about half report being able to act on it in real time.**



Recommendations

- **Generating and analyzing data is valuable, but focus should be on completing the PDP loop as a roadmap for technology investments.**
- Recognize that **investment leads to Industry 4.0 success**, and increases the risk that those who haven't gotten started could be left behind.
- Organizations should **start building their technology capabilities by using the tools they already have.**
- Subsequently organizations could identify and make more **targeted investments in what they actually need.**

The Talent paradox – Technically advanced, intuitively limited

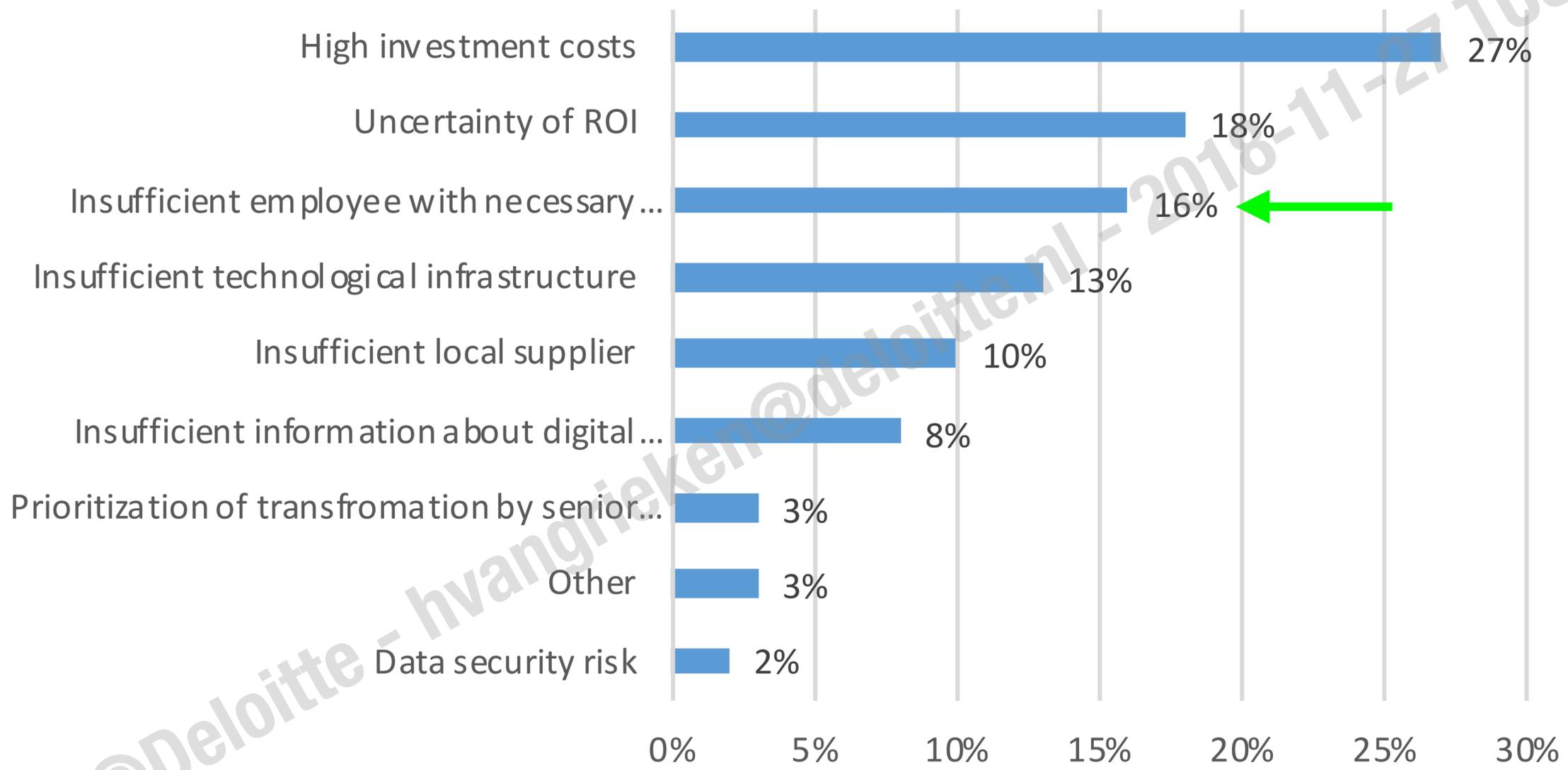


Key Findings

- **Only 15 percent** of respondents indicated they need to dramatically alter the composition and skill sets to support digital transformations.
- **Yet the #1** organisational and cultural related challenge cited is finding, training, and retaining the right talent (35 percent).
- Respondents cite their biggest talent need is for **user interface design, but it is not budgeted for.**

For an outsider - as I am - definitely an interesting read

Major Obstacles



©Deloitte - hvangi@deloitte.com.tr - 2018-11-27 TUSAAD Istanbul



The Talent paradox – Technically advanced, intuitively limited



Key Findings

- **Only 15 percent** of respondents indicated they need to dramatically alter the composition and skill sets to support digital transformations.
- **Yet the #1** organisational and cultural related challenge cited is finding, training, and retaining the right talent (35 percent).
- Respondents cite their biggest talent need is for **user interface design, but it is not budgeted for.**



Recommendations

- Consider building technologies collaboratively by involving employees in the digital integration process.
- **Make upfront investments in talent development which can help ensure that employees have the right skills and tools.**
- Build a more intuitive user interface design which can improve employee engagement with these digital technologies.

The Supply Chain paradox – High priority, low stakeholder engagement



Key Findings

- Respondents' **most planned future investment** area identified is supply chain (**62 percent**).
- But **only 22 percent** of Chief Supply Chain Officers (CSCOs) were either a key decision maker or highly-involved in the decision-making process.
- Also **only 34 percent** of overall respondents **see supply chain as a driver of innovation**.

The Supply Chain paradox – High priority, low stakeholder engagement



Key Findings

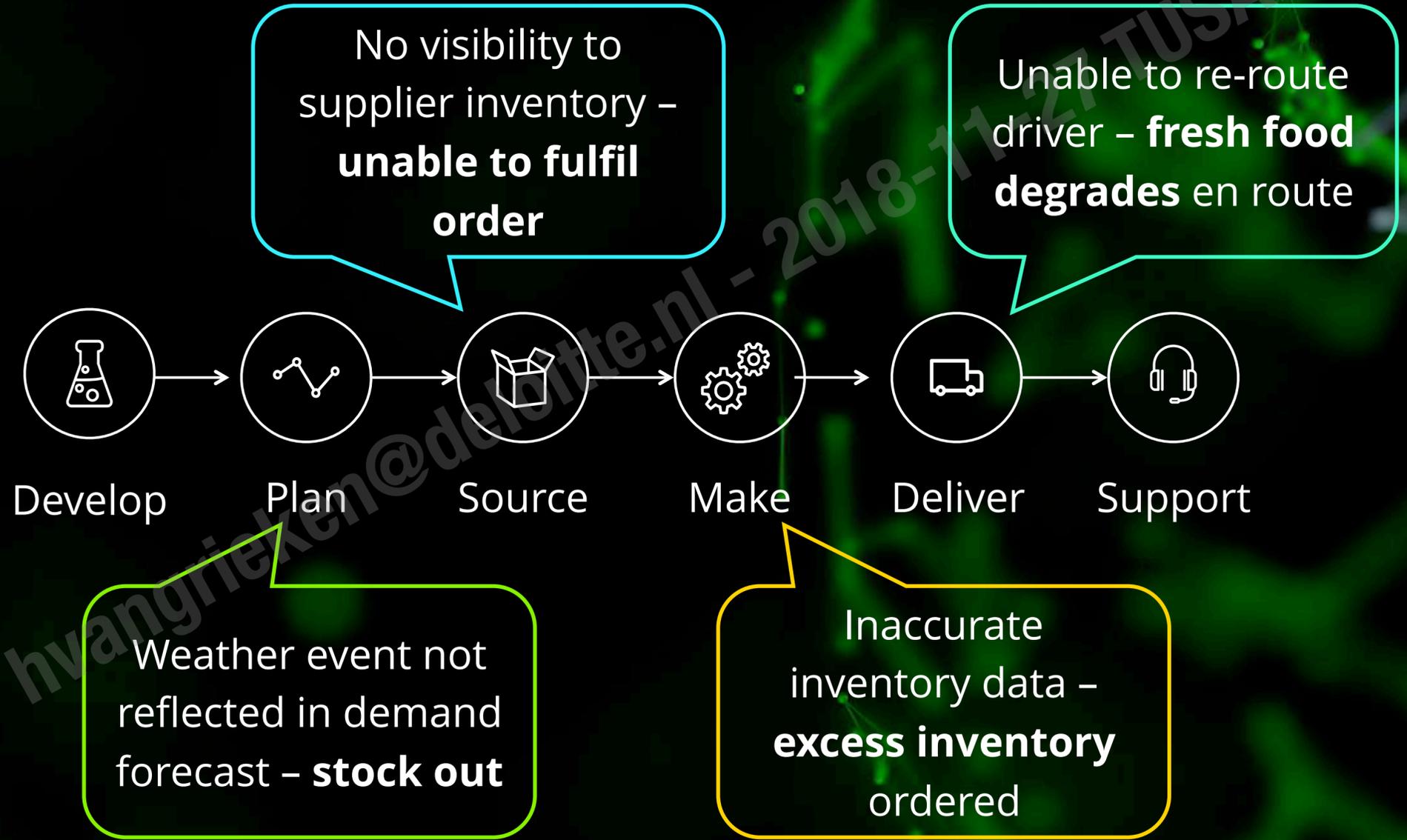
- Respondents' **most planned future investment** area identified is supply chain (**62 percent**).
- But **only 22 percent** of Chief Supply Chain Officers (CSCOs) were either a key decision maker or highly-involved in the decision-making process.
- Also **only 34 percent** of overall respondents **see supply chain as a driver of innovation**.



Recommendations

- **Status of the CSCO** should be elevated and provided a seat at the decision-making table.
- Organisations should train its supply chain function **to align with the broader strategic objectives** of the organisation.
- **Leverage DSN for new innovative and transformative uses of technology,** which can drive end-to-end supply chain transparency and intelligent decision making.

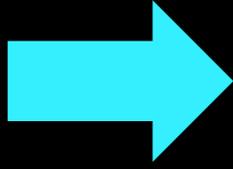
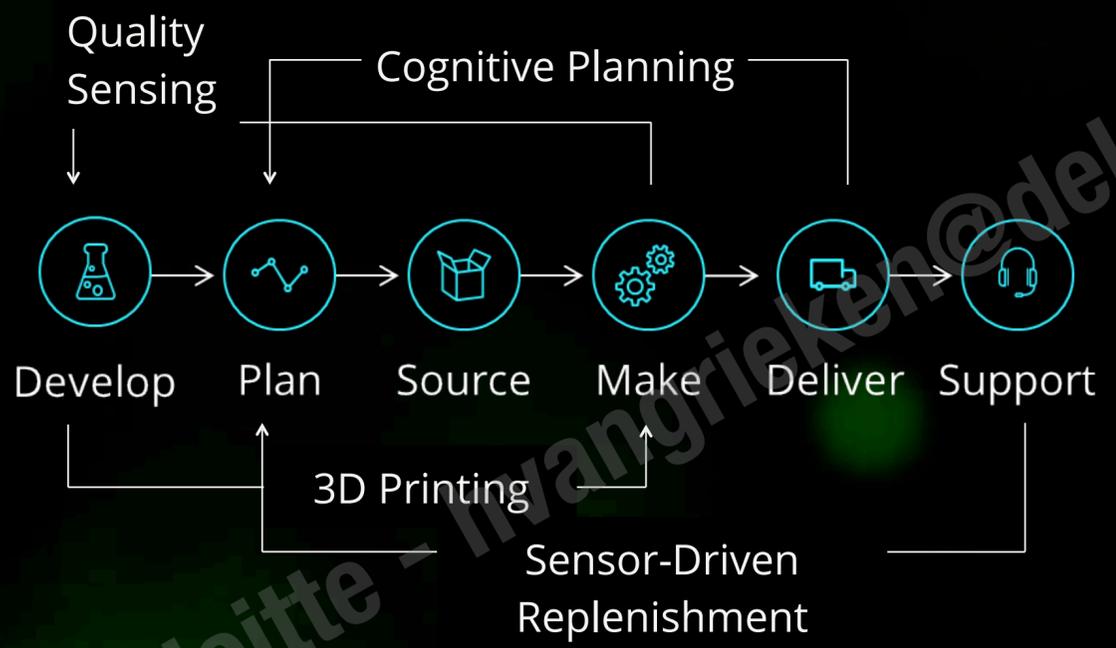
“Day in the Life” of a traditional Supply Chain



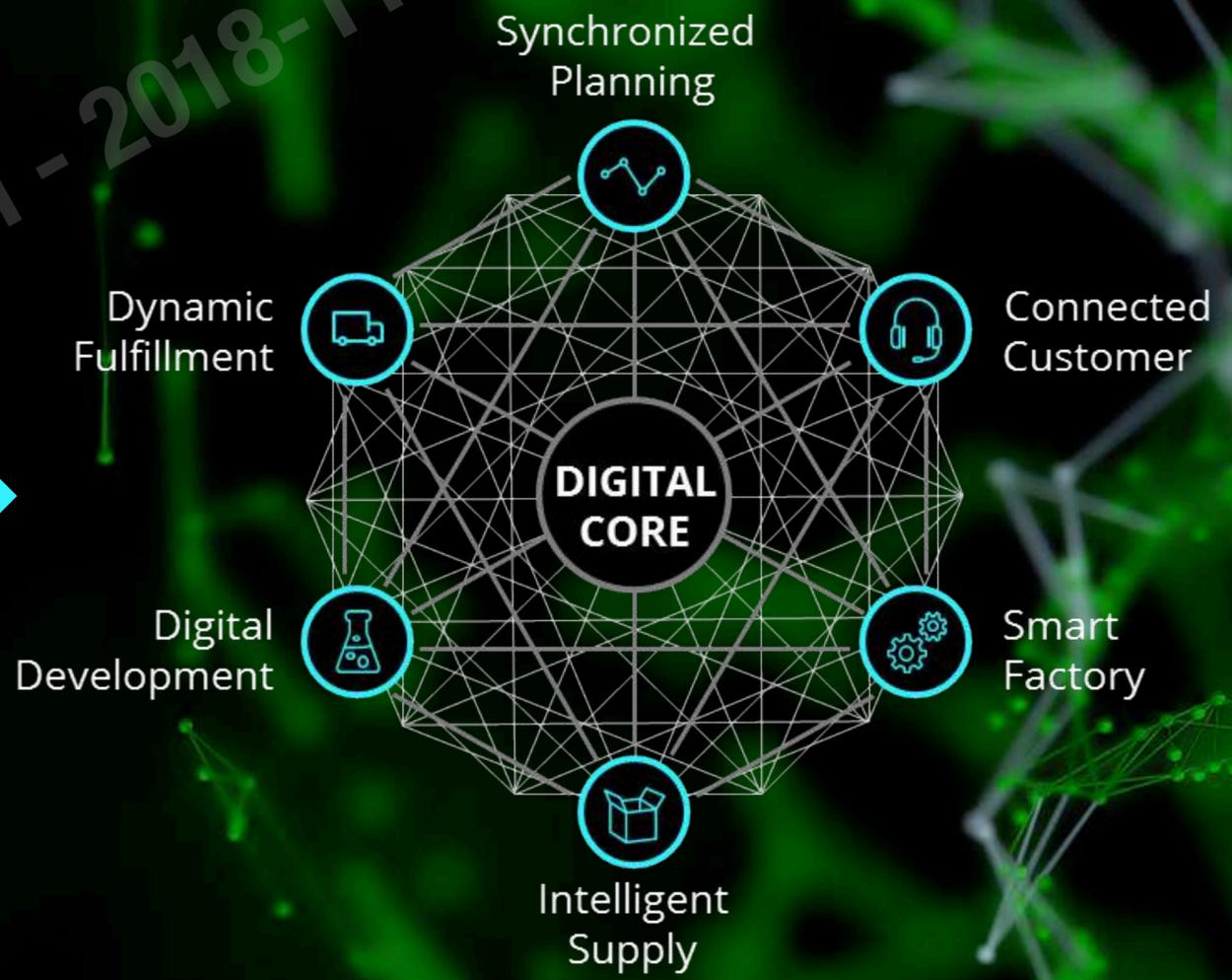
©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul

Digital Supply Network (DSN) transformation

Traditional Supply Chain



Digital Supply Networks



Digital Supply Networks drive enterprise value

Enterprise Value

Revenue 

Margins 

Asset Efficiency 

Stakeholder Expectations 

Opportunities

Protect Market Share
Supports omnichannel execution

Improve Working Capital Performance
Reduces inventory levels across network

Improve Return on Assets
Enables Supply Chain integration across divisions and BUs

Availability
Enables use of "big data" insights (e.g. right inventory in the right place)

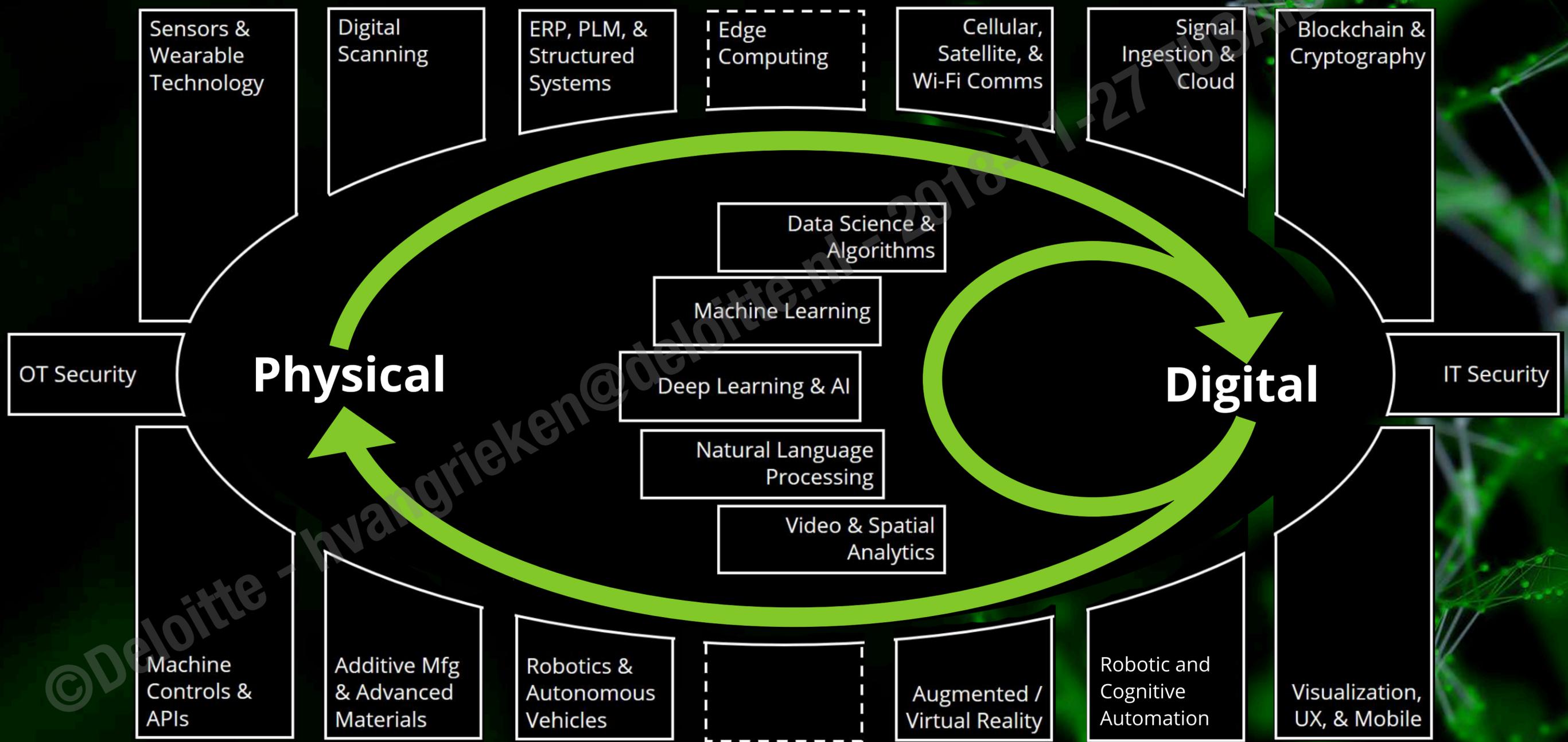
Increase Sales
Improves e-commerce performance

Improve Workforce Efficiency
Prioritizes the right task at the right time

Enhance Asset Visibility
Enables visibility of asset efficiency

Delivery
Enables faster, lower-cost delivery

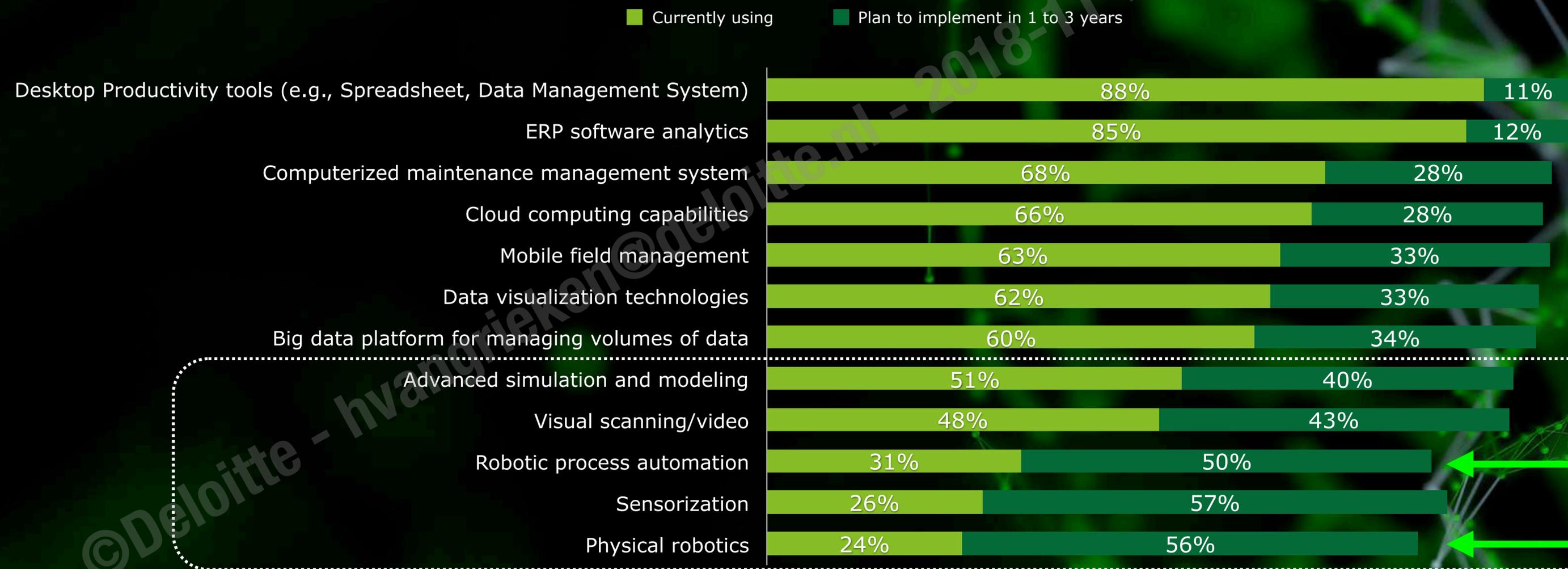
DNS involves the integration of a lot of Digital Technologies ...



Investment in more advanced, **connected** capabilities may increase in the future

Executives' reported plans to invest in advanced technologies such as visual scanning and physical robotics suggests a move toward innovation is on the horizon - as part of a continued evolution, rather than a revolution

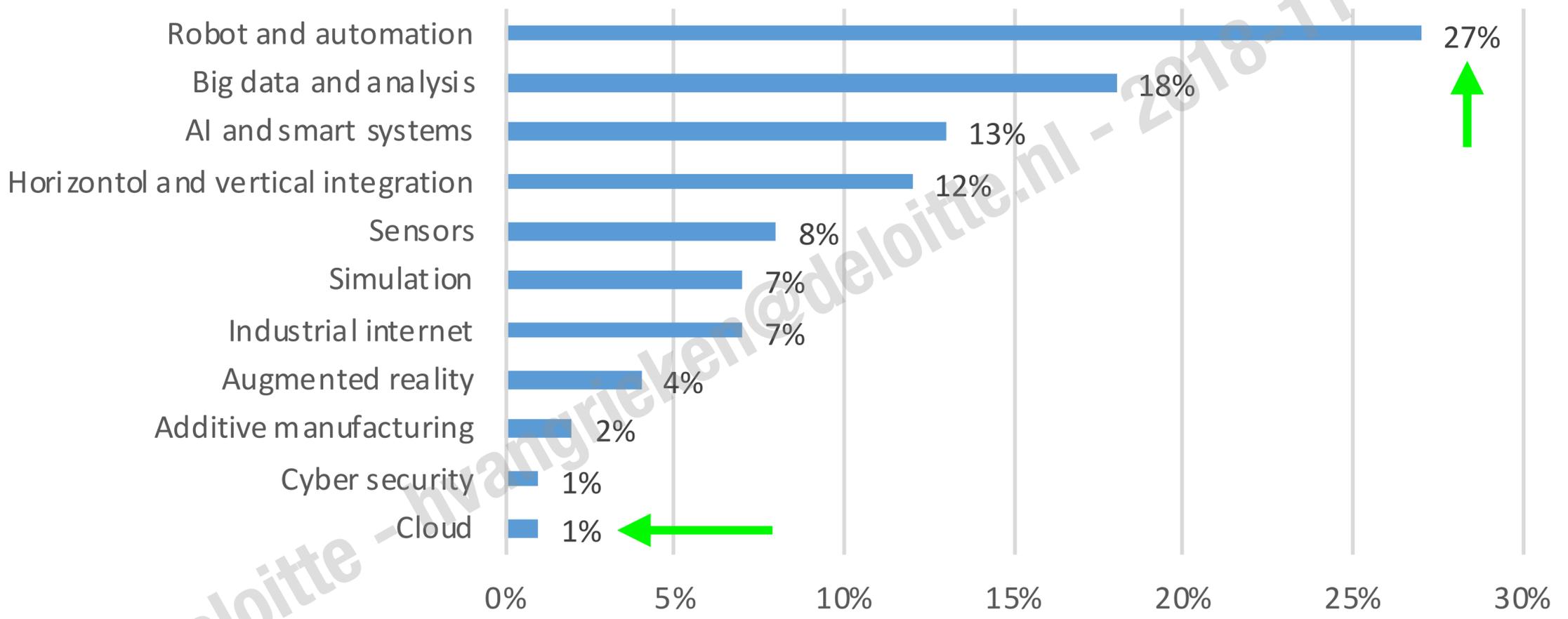
Use of tools and technologies to access, analyze and leverage data from assets



Q19. What tools and technologies are you currently using to access, analyze, and leverage the data from your assets? Which do you plan to implement in the next 1 to 3 years?

For an outsider - as I am - definitely an interesting read

In which technologies should Turkish industry focus? (Technology using firms)

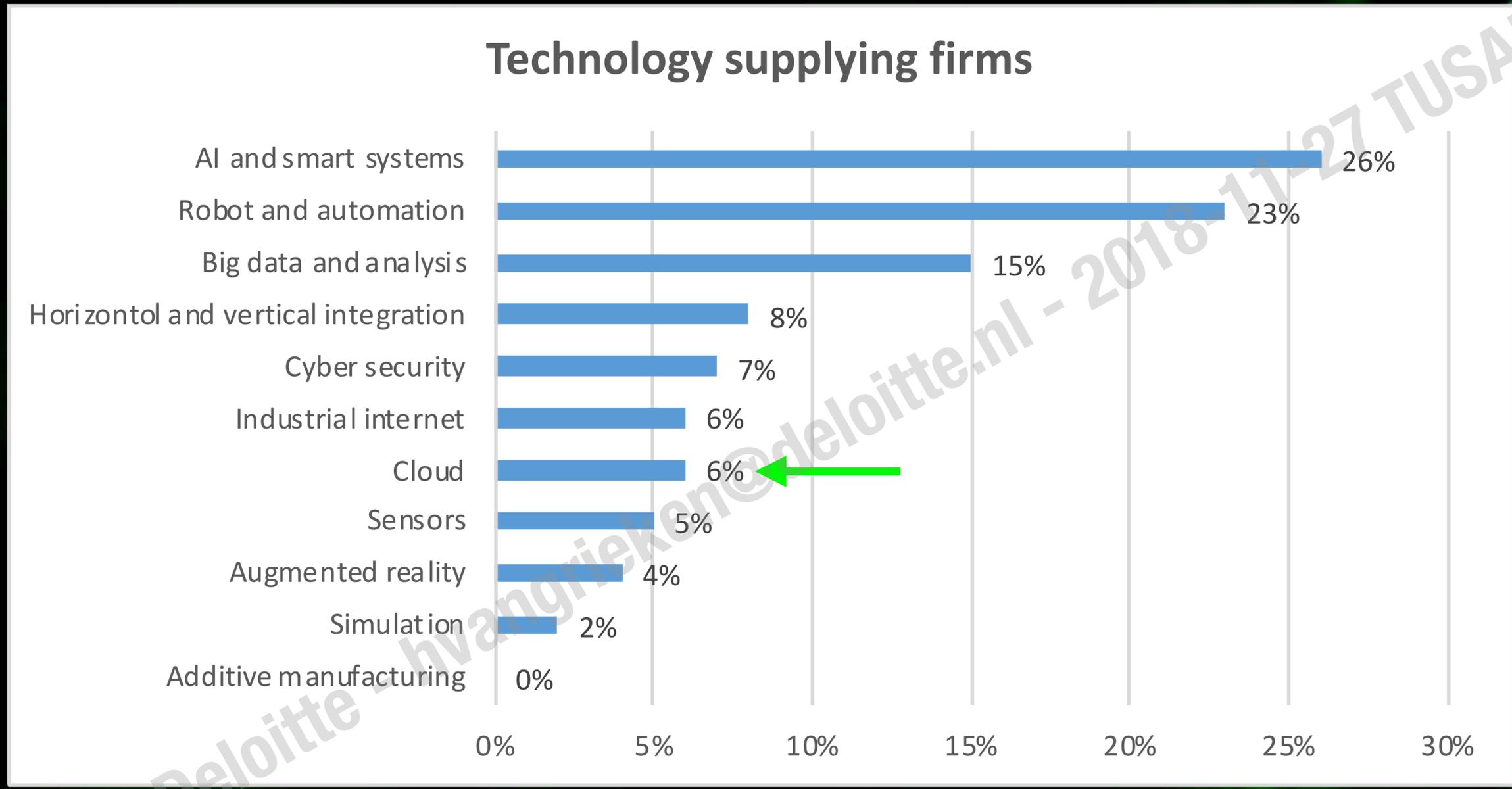


There isn't any one single path to digitally-transformative innovation; organisations can adopt the technologies that best suit the complex needs of their industry

Use of these technologies is perhaps reflective of each industry's various complexities, whether the distributed nature of manufacturing or the remote monitoring needs of mining and oil and gas

Tools and technologies currently used to access, analyze, and leverage the data from assets	Mining	Manufacturing	Power and Utilities	Oil and Gas
Desktop Productivity tools (e.g., Spreadsheet, Data Management System)	94%	81%	89%	95%
ERP software analytics	86%	83%	86%	89%
Cloud computing capabilities	68%	64%	72%	65%
Data visualization technologies	62%	60%	67%	59%
Mobile field management	58%	61%	72%	60%
Computerized maintenance management system	80%	61%	75%	67%
Big data platform for managing volumes of data	56%	54%	68%	65%
Sensorization	16%	32%	30%	19%
Physical robotics	18%	25%	20%	31%
Robotic process automation	28%	32%	24%	40%
Advanced simulation and modeling	50%	47%	62%	48%
Visual scanning/video	52%	47%	48%	48%

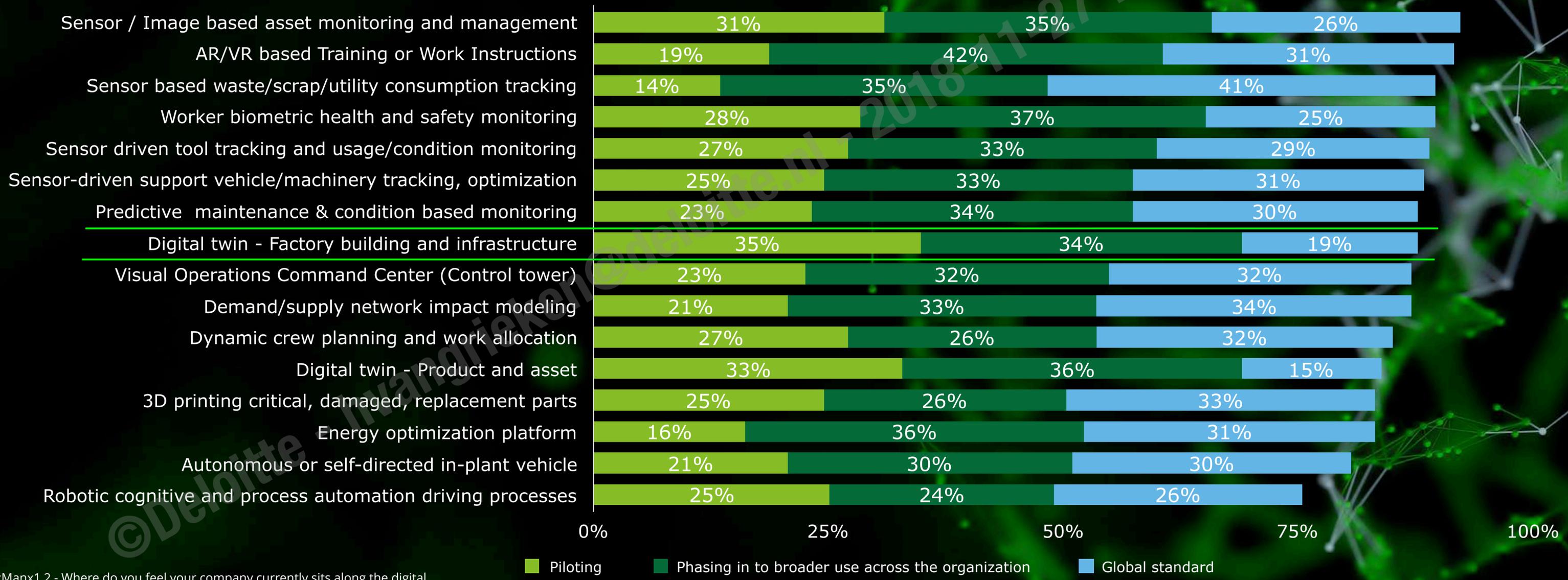
For an outsider - as I am - definitely an interesting read



Use cases for Industry 4.0 will continue to evolve

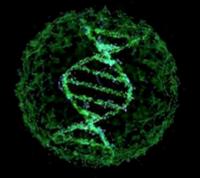
Reported plans suggest many industrial organisations plan to pilot and scale multiple capabilities on the path to the smart factory and the digital supply network

Current maturity across various Industry 4.0 use cases



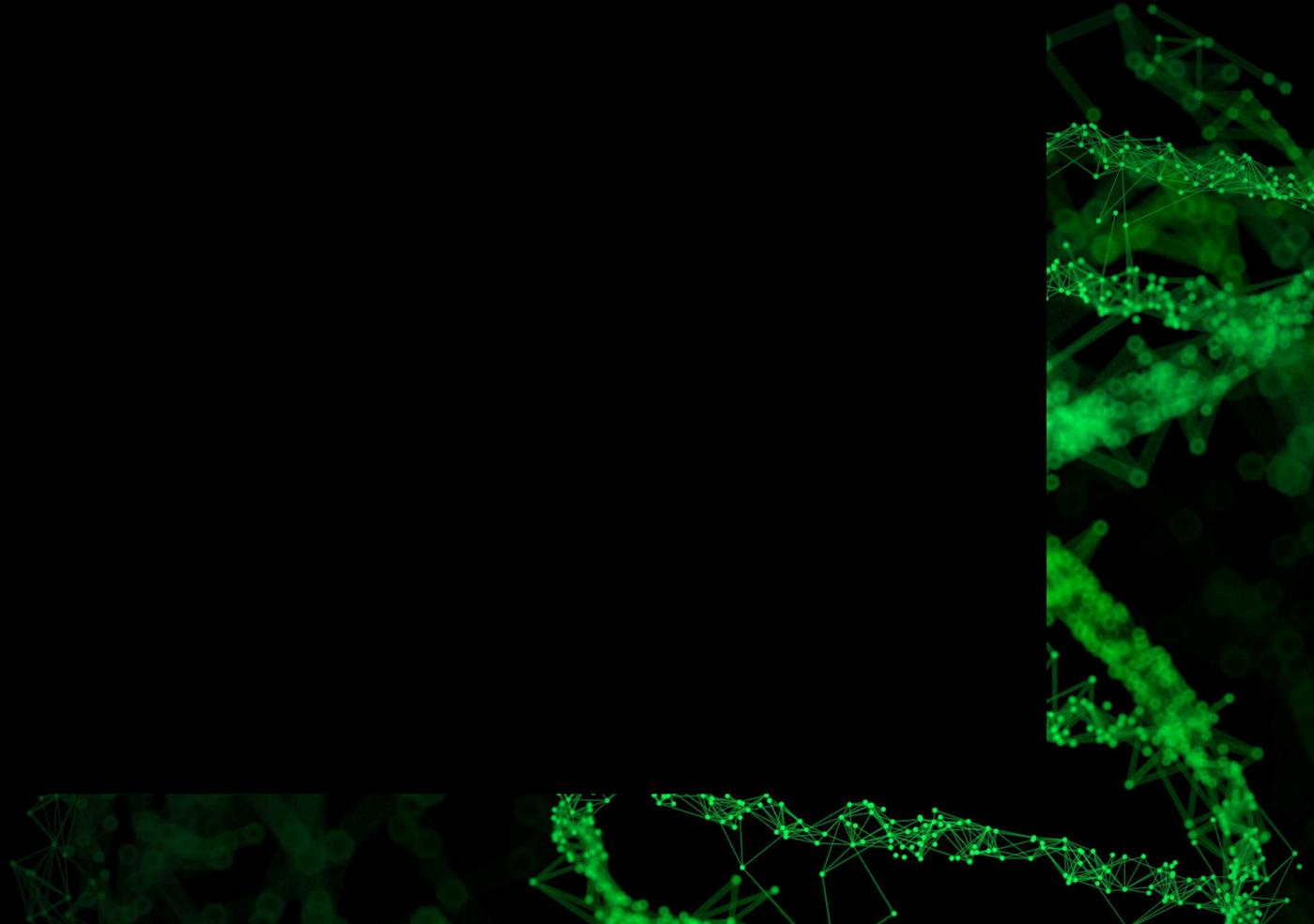
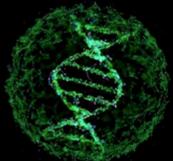
Q1xManx1,2 - Where do you feel your company currently sits along the digital transformation curve for each of the following technologies? N=155

Here's some examples: transforming all these data into Digital Twins ...

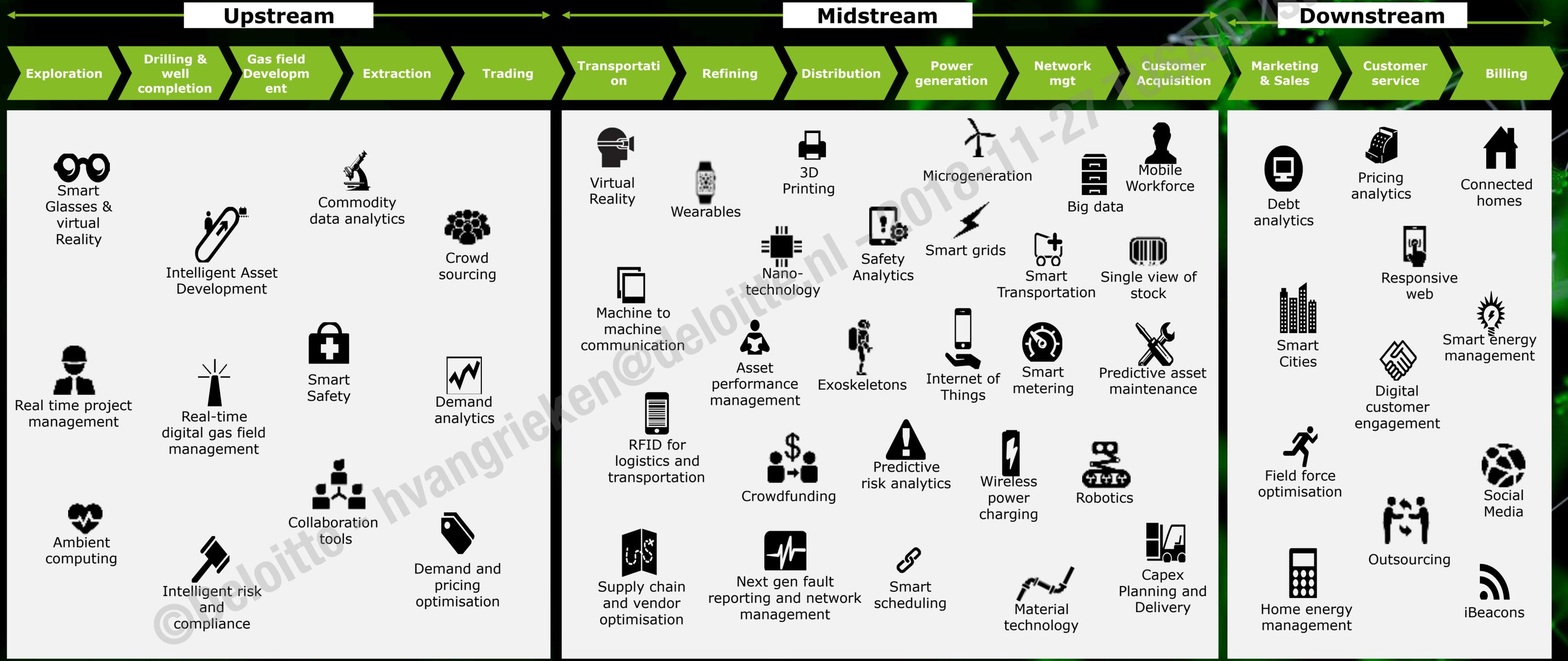


... also in field-engineering and training ...

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul



We see it in every value chain within the Energy Sector: ... "Digital" is "all over the place" ...



Digital Disruption is - most of the time - a smart combination of New Technologies.
The Technology Push is simply not going to go away for the coming 15 years ...



Yet a lot of organisations struggle since there is a mismatch between their Digital Strategy & their existing Legacy Landscape and Technology Operating Model

Digital Strategy

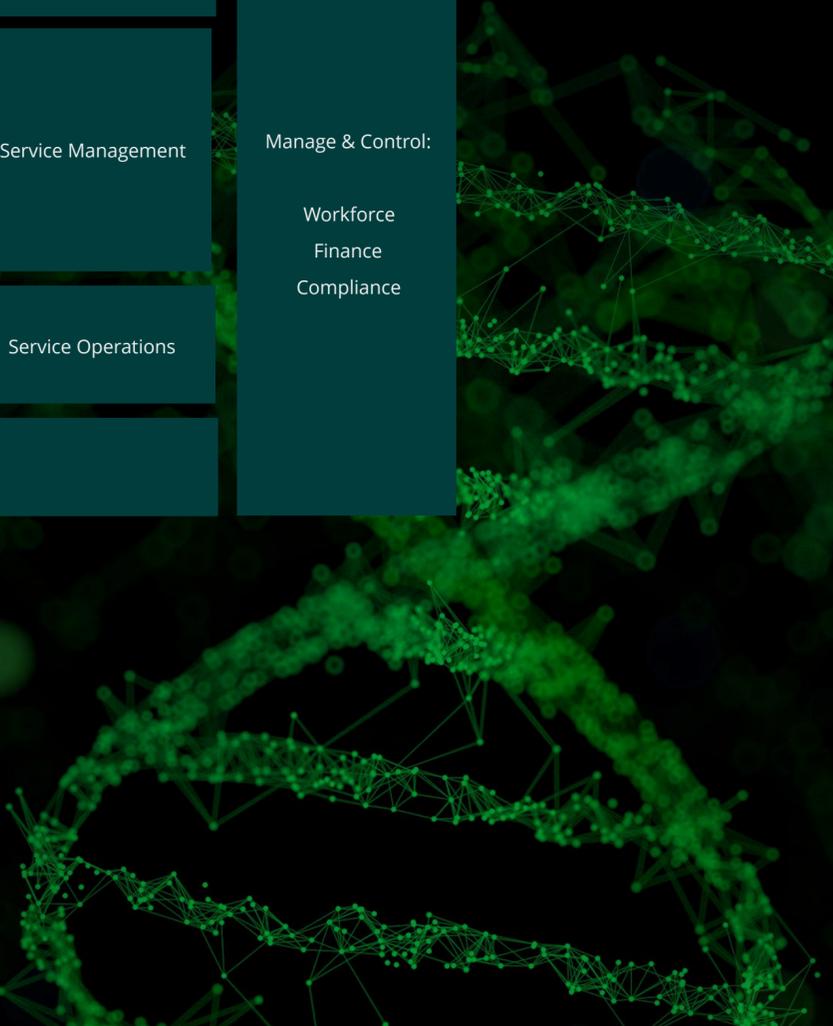
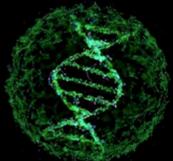
Existing (traditional) Technology Operating Model



Mismatch



©Deloitte - hval@deloitte.nl - 2018-11-27 TUSAID Istanbul



Allow me to use the metaphor of an Aircraft Carrier ...



1. Most companies have a Technical Debt and need to “decommission” old legacy



2. Meanwhile the Business expects them to launch new - Digital - Initiatives ...
from that same (old) Platform



3. ... a Platform that used to serve them well for years ...
but does not really support Next Generation Core Business Processes and Technologies



4. ... and whilst all of this is taking place, Tech Management is expected to change the rudder, the propulsion & the configuration of their teams - whilst in flight!



Wouldn't life be much easier if our clients could just launch New Digital Speedboats at will and - above all - at a much faster and flexible pace ...

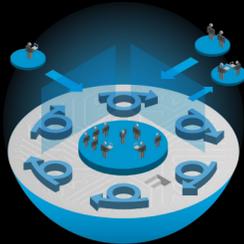


The focus and interdependencies between these 9 Big Shifts will determine your "future Digital Aircraft Carrier" ...

3 Big Shifts in 'Ways of working'

3 Big Shifts in 'Resources'

3 Big Shifts in 'Technology'



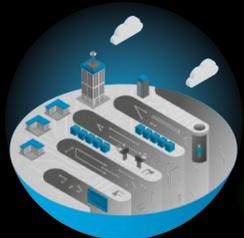
1.
Agility and speed become the new norm. Organizations learn and adapt by experimenting and fast deployment.



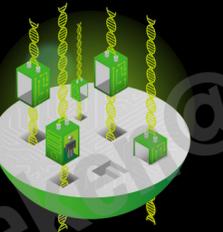
4.
The workforce transitions as digital, data, AI, and robotics create new jobs and cause existing jobs to disappear.



7.
Cloud becomes the dominant IT delivery model, with highly **automated** IT processes.



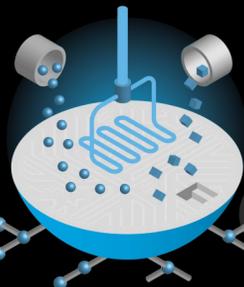
2.
The **boundaries** between business and IT blur, business-led IT increases, and tech fluency is vital for all.



5.
Organizations adopt the vision, values, culture, and leadership required to build digital DNA.



8.
Competitive advantage shifts in favor of **data and algorithms** fueling algorithmic business.



3.
The rise of **innovation ecosystems** with joint risk taking, and value creation among quickly engaging and disengaging partners.

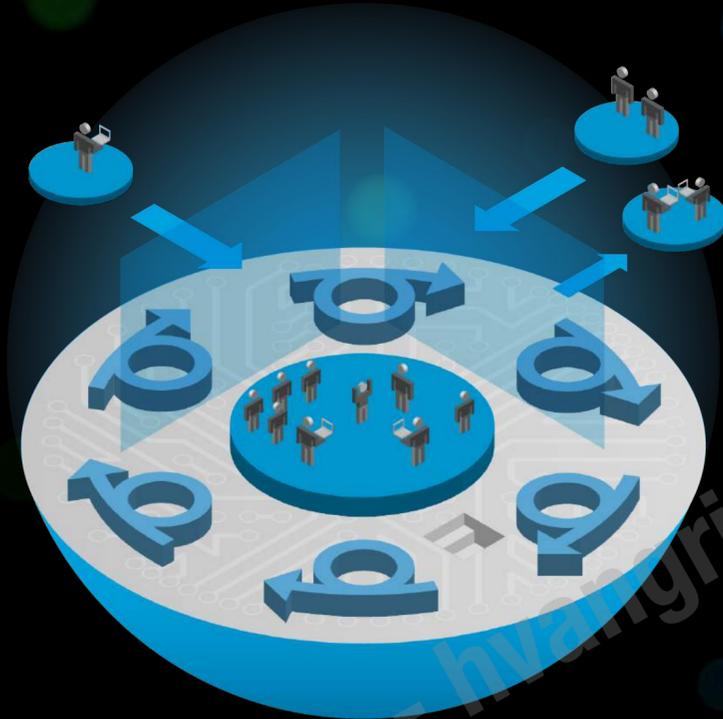


6.
Innovation and experimentation require a larger share of resources, with fit-for-purpose funding mechanisms and governance.



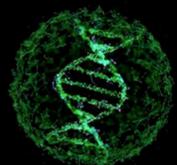
9.
Convergence of Information Technology (IT) and Operational Technology (OT) in the enterprise.

Shift 1 - Agility and Speed

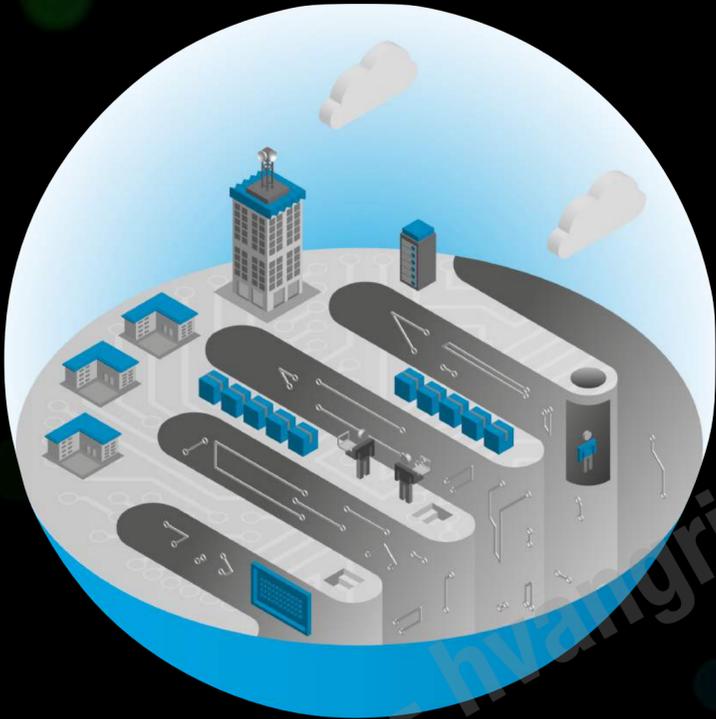


Agility and speed becomes the new value proposition. Organisations learn and adapt by experimenting (Agile, DevOps, Lean startup)

- Basic agile (few scrum teams)
- Scaling to enterprise agile
- Extending to DevOps
- Extending with Lean Startup

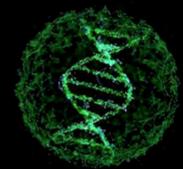


Shift 2 - Blurring Boundaries

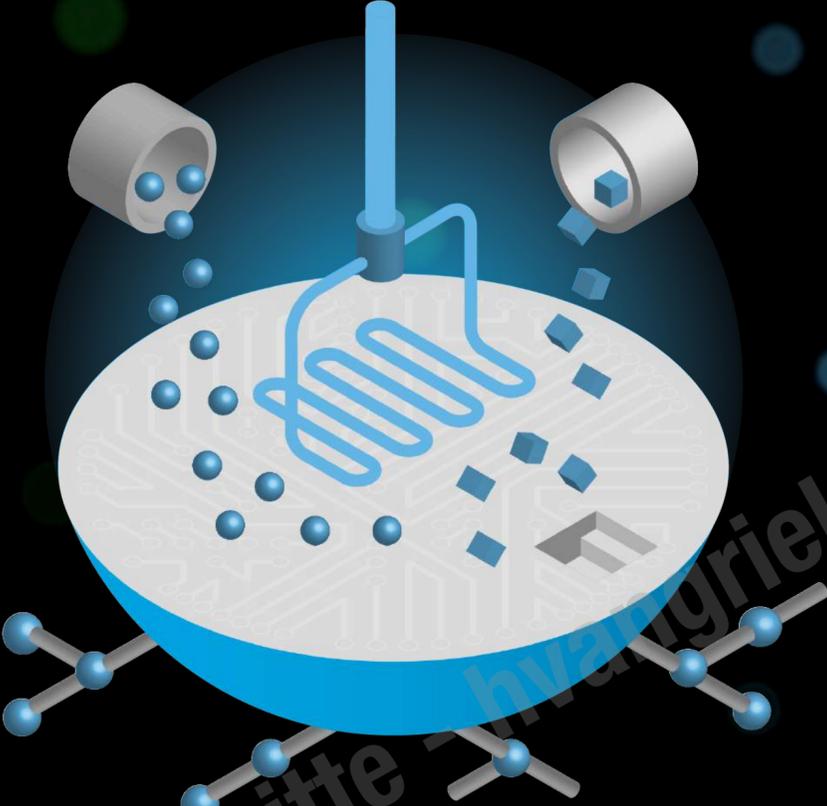


Blurring boundaries between business and IT. The distinction between 'IT jobs' and 'business jobs' fades, business-led IT increases and tech fluency is vital for all

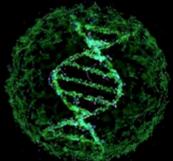
©Deloitte



Shift 3 - Platforms and Dynamic Ecosystems



New ways of **connecting to external partners**, forming dynamic innovation ecosystems and platforms, focused on joint risk taking and value creation



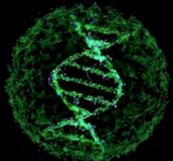
©Deloitte hvalangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

Shift 4 - Workforce Transition

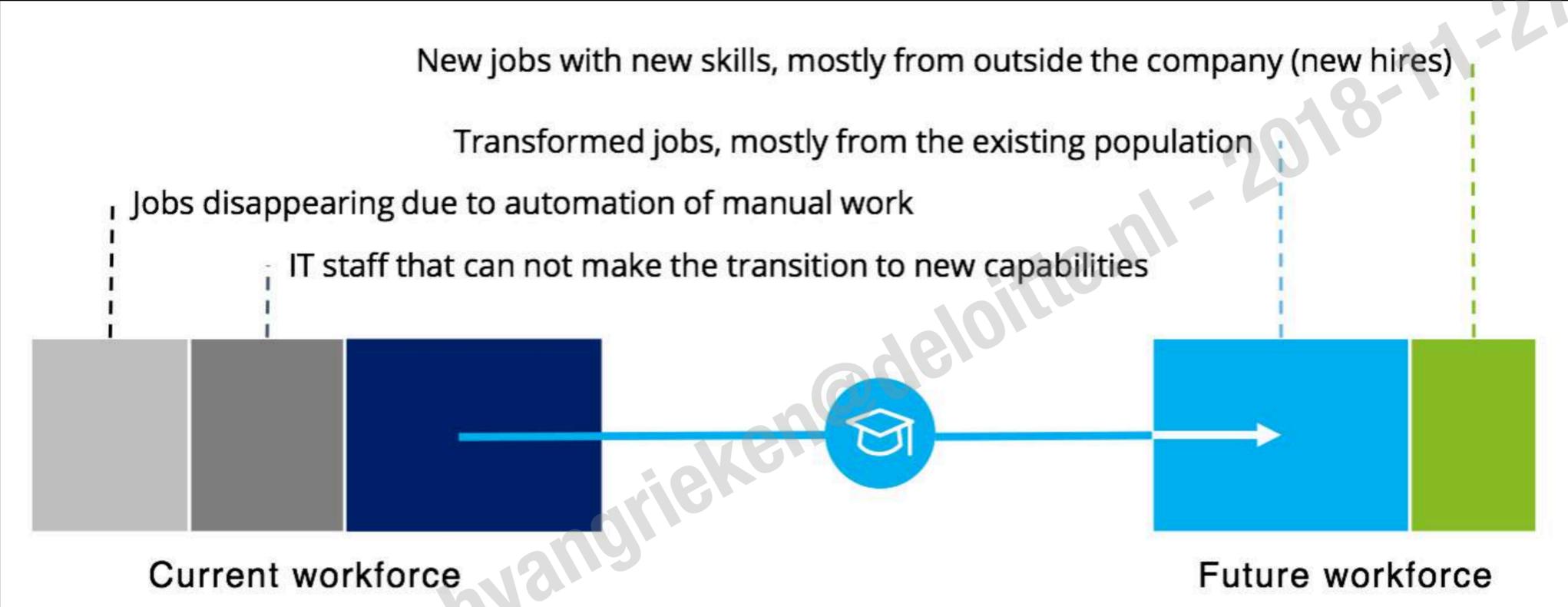


The workforce transitions as Digital, Data, AI and Robotics create new jobs with new skills while existing jobs with traditional skills disappear

©Deloitte - hvanagrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul



The IT work force experiences huge HR challenges



Agile / DevOps

- Scrum Master
- Agile Coach
- Product Owner
- DevOps Engineer

Cloud

- Cloud Architect
- Cloud Service broker
- Cloud Security specialist
- Cloud Vendor manager

B2C / Digital

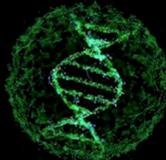
- Chief Digital Officer
- Digital Product Manager
- UX Designer
- Customer Experience Specialist
- Social Software Specialist

Data

- Chief Data Officer
- Data Scientist
- Data Integration specialist
- Data Architect

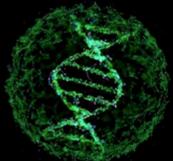
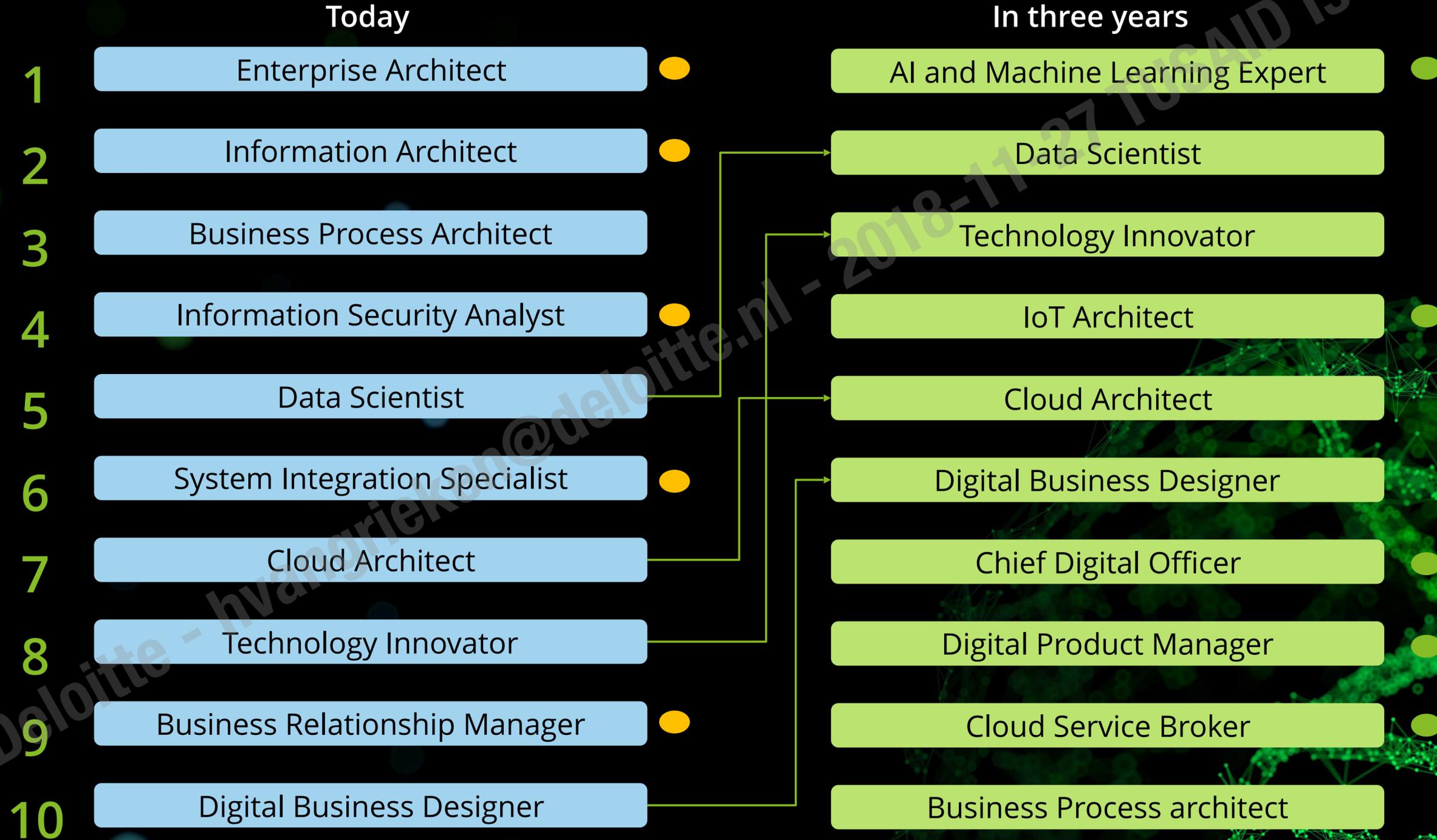
AI / IoT / Robotics

- AI / Machine Learning Specialist
- IoT Architect
- Robotics Engineer
- Technology Innovator



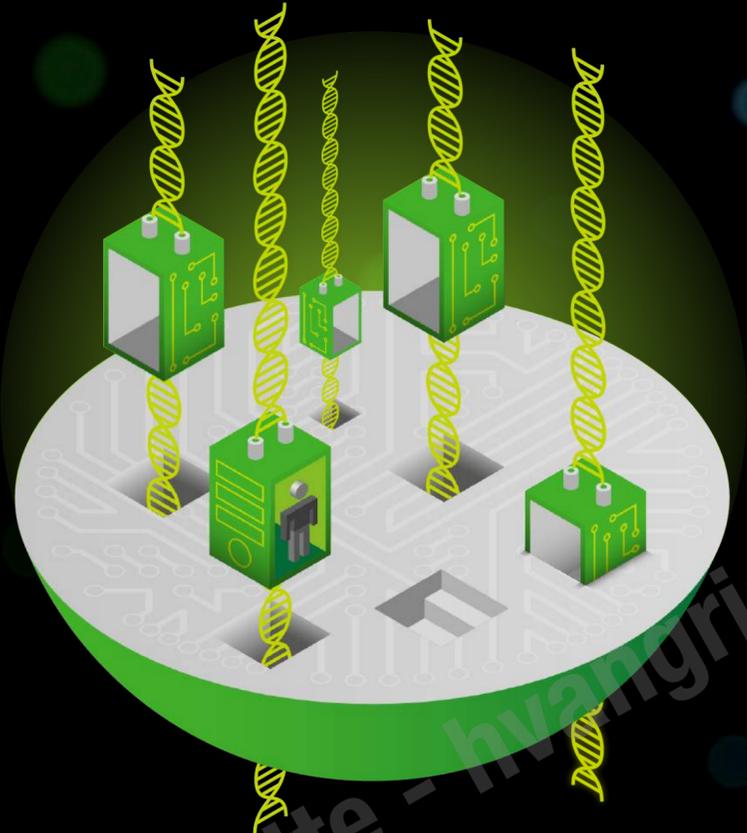
©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul

Companies will be hunting for different types of experts ...

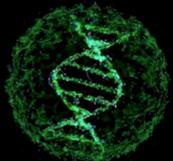


© Deloitte - hvan@deloitte.nl - 2018-11-27 TUSIAD Istanbul

Shift 5 - Digital DNA



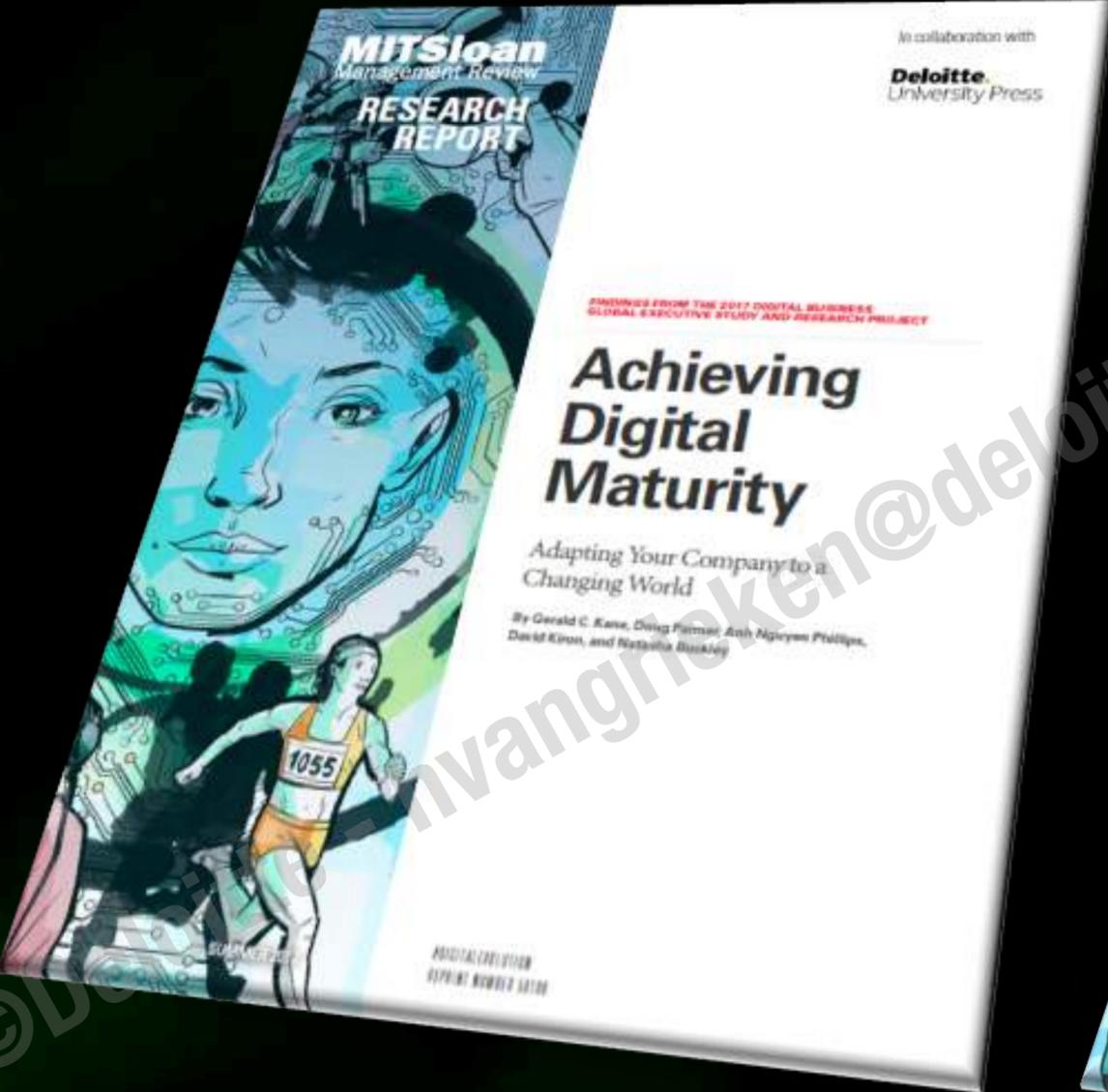
Digital DNA becomes deeply embedded in the entire organisation, with the vision, values, culture and leadership fit for a digital leader



©Deloitte - hvanngrieken@deloitte.nl 2019-11-27 TUSAID Istanbul



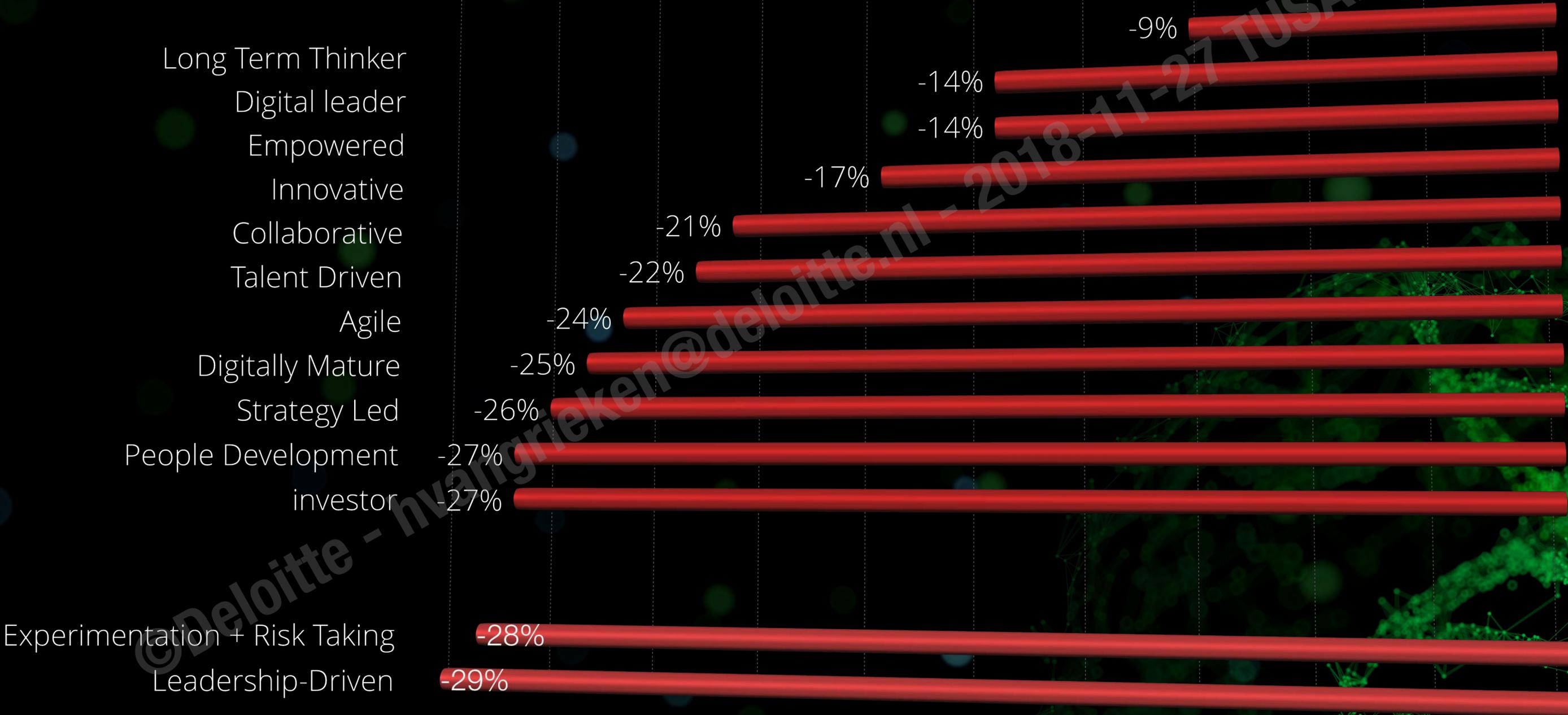
MIT Sloan/DU Press: 6 years of Global Research



What Digital DNA Archetypes did we find based on 13 DNA characteristics?

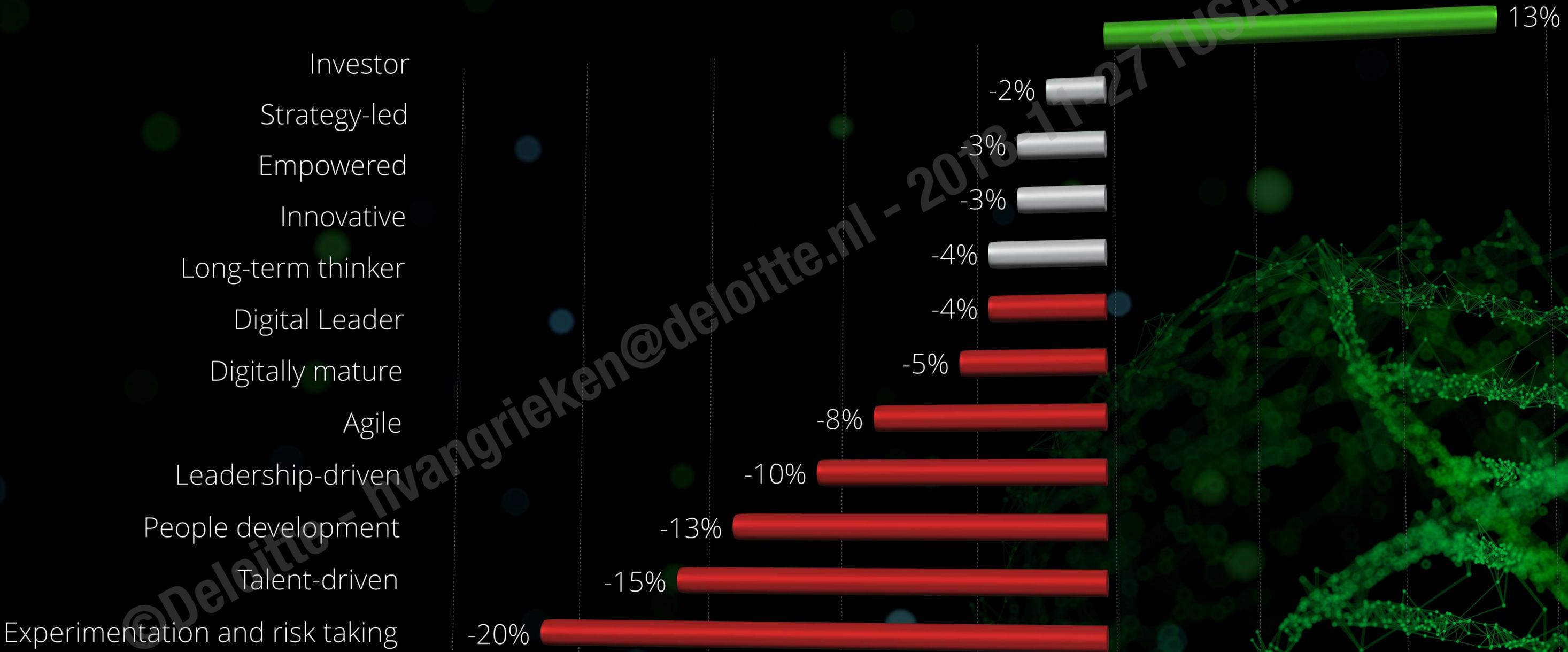
Strategy-led	Digitally mature
Talent-driven	Empowered
Long-term thinker	People development
Collaborative	Leadership-driven
Innovative	Agile
Investor	Experimentation and Risk taking
Digital leader	

Characteristics of Laggards

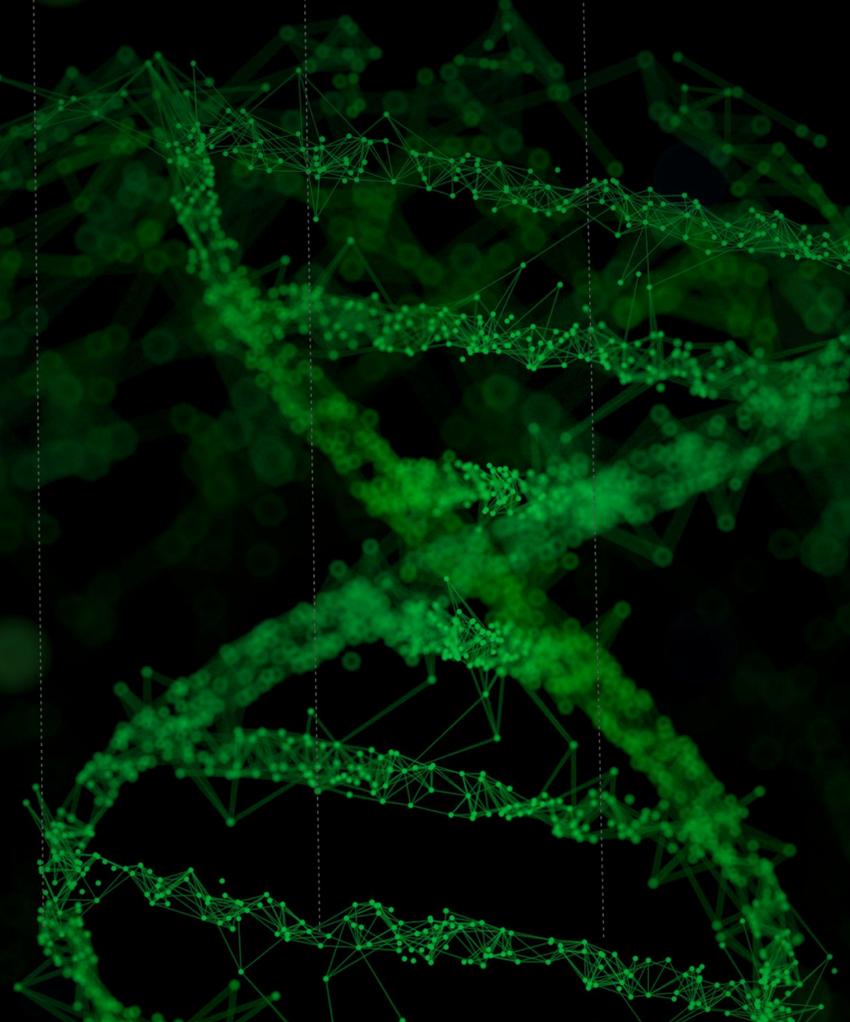


© Deloitte - hıvanıgıneken@deloitte.nl - 2018-11-27 TUSAİD İstanbul

Characteristics of chasers



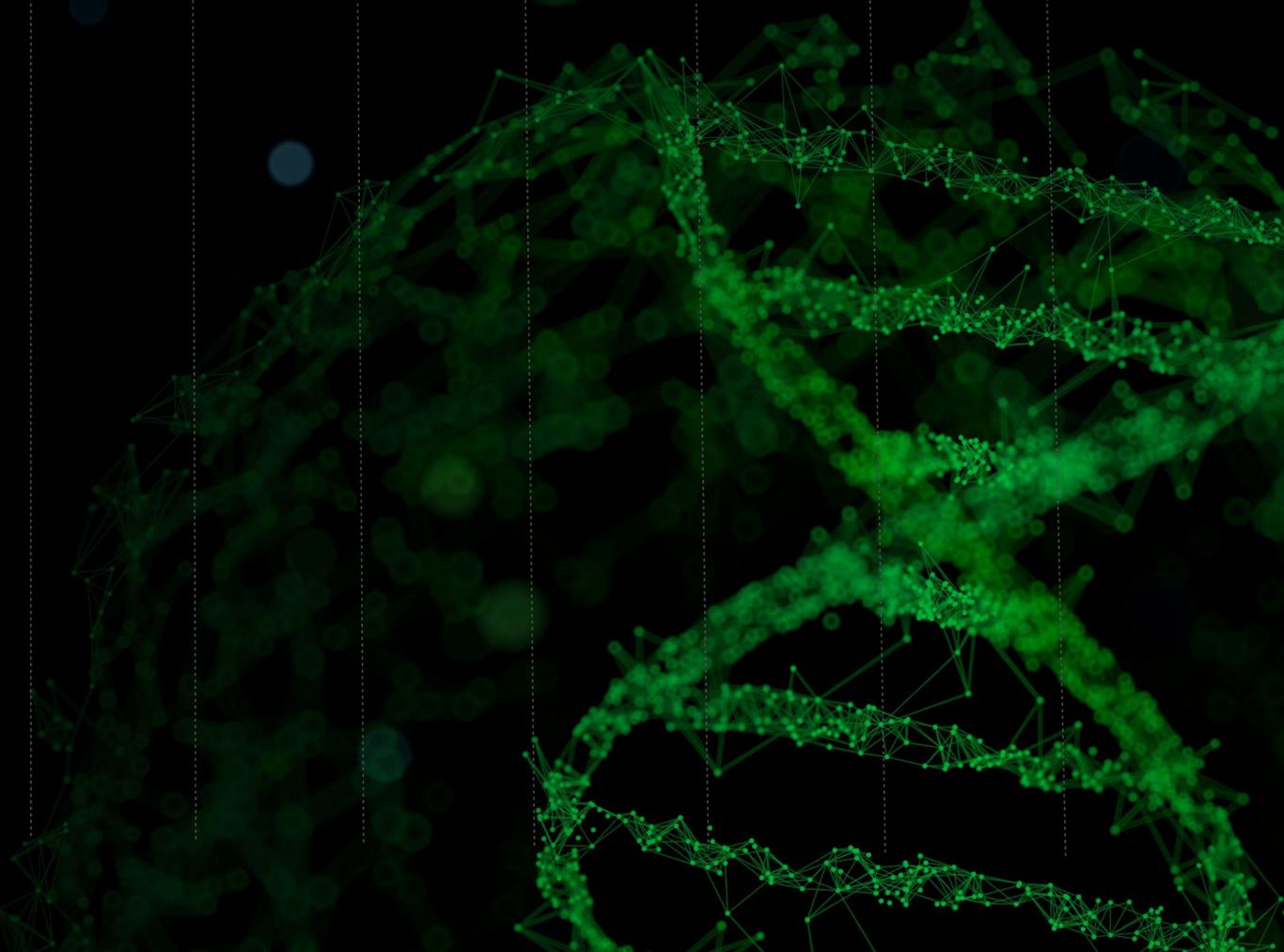
©Deloitte - Iivangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul



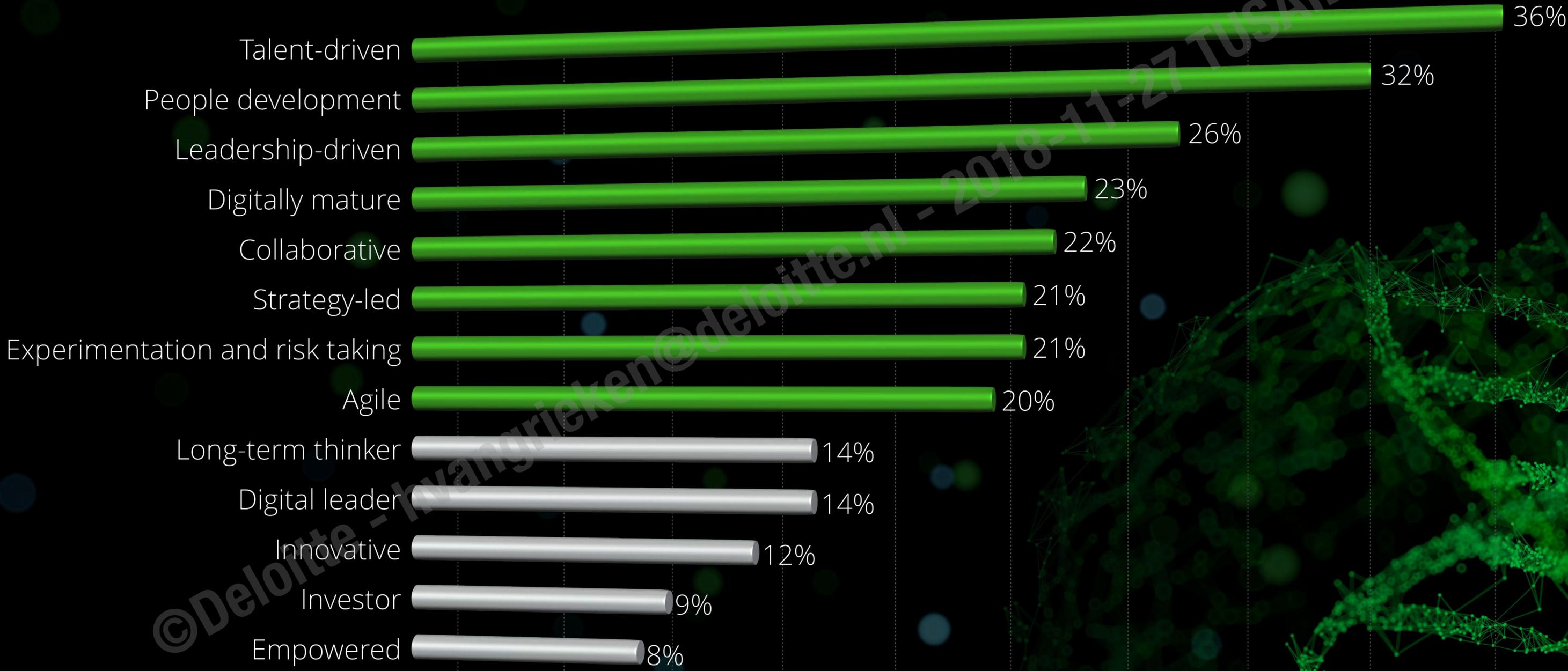
Characteristics of Fast Moving Experimenters



© Deloitte | hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul



Characteristics of Talent & Strategy Leaders



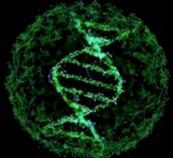
©Deloitte - Kuvansrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul

Shift 6 - Funding and Governance



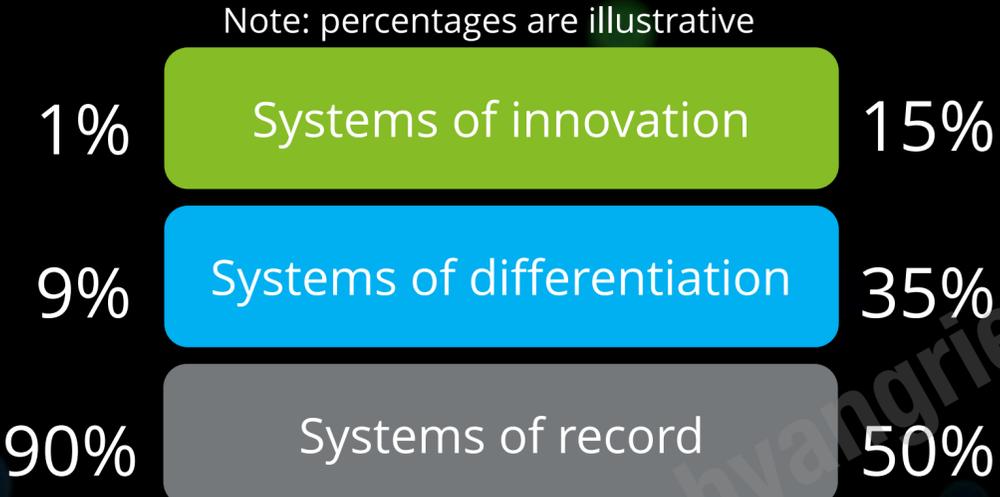
Innovation and experimentation requires an increasing share of resources (budget, talent) with fit-for-purpose **funding mechanisms and governance.**

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

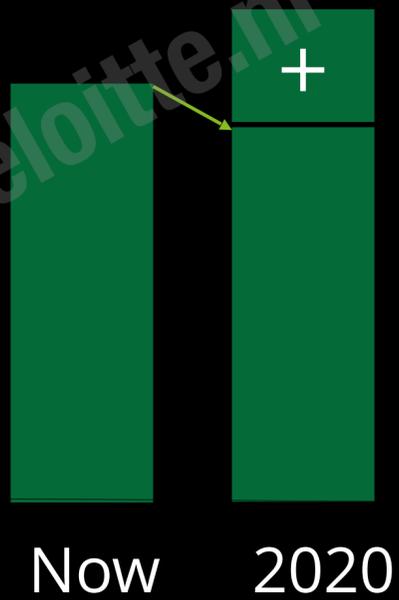


New funding mechanisms are required

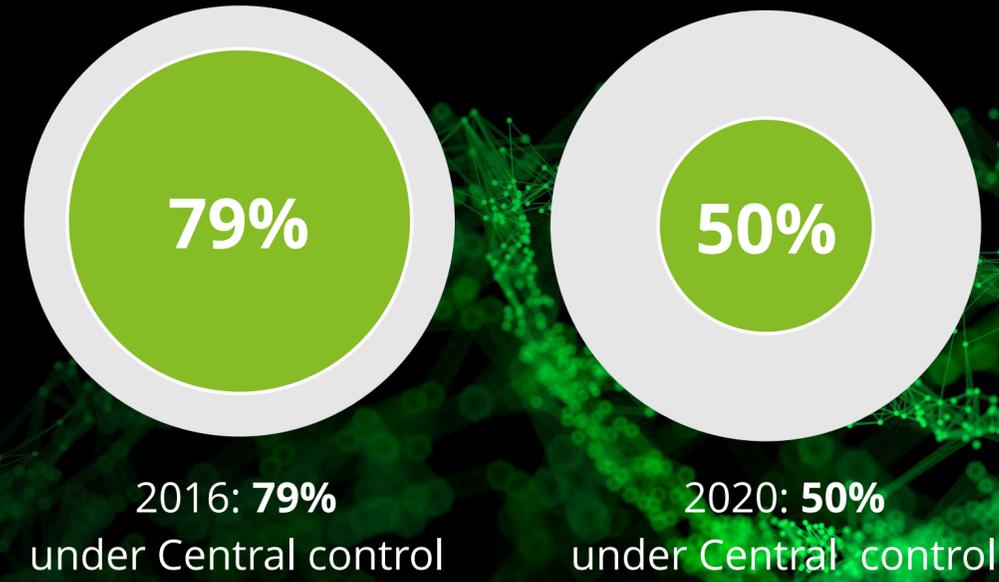
Budget shifts in favour of systems of differentiation and innovation



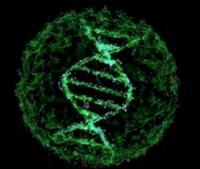
Total technology spending increases (but still requiring 'save to invest')



Technology budgets becomes more decentralised



Source: Gartner

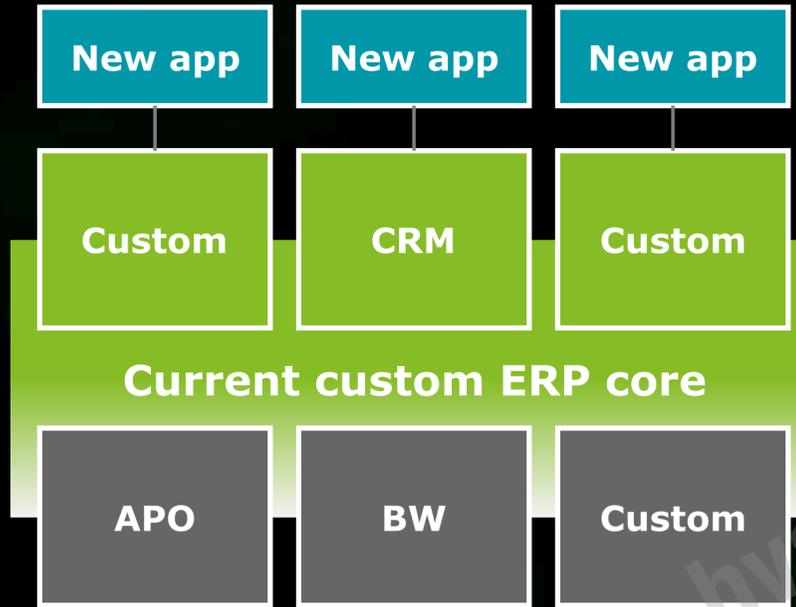


©Deloitte - hvanagrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

Reinvestment possibilities are explored

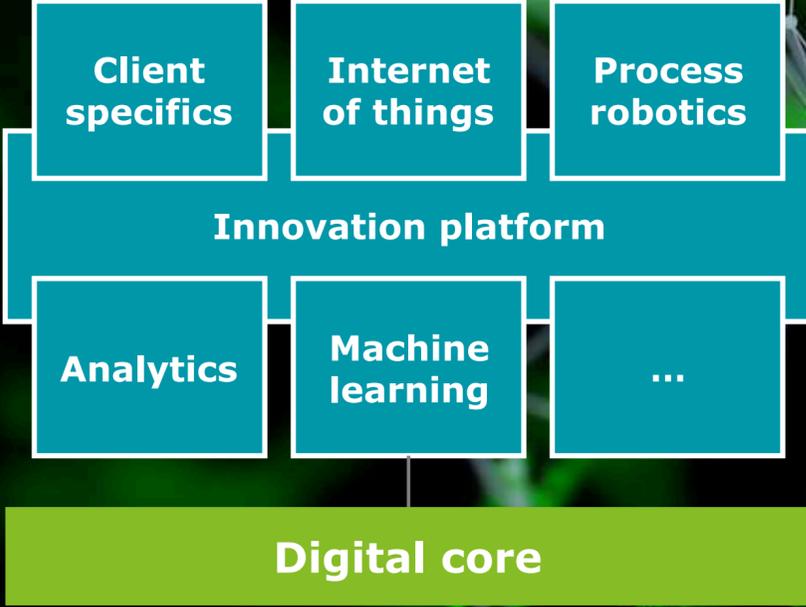
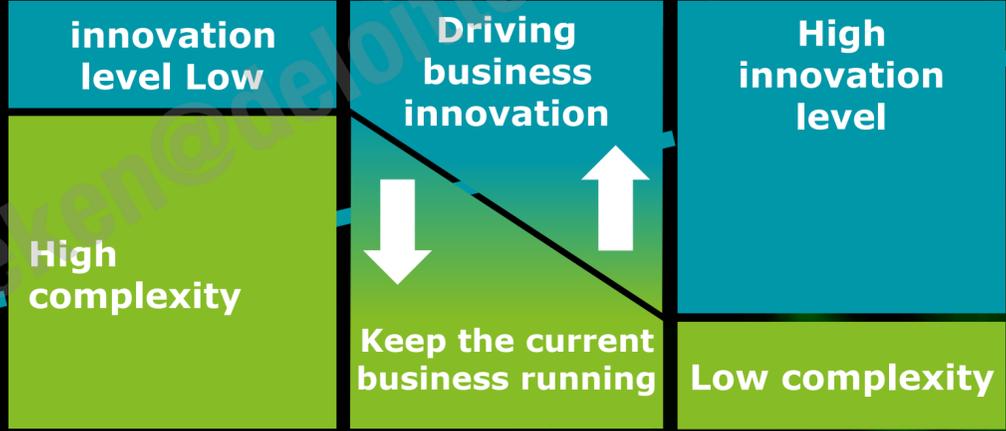
Modernisation of the core can also redefine existing sourcing relations

Legacy IT Platform



TCO reduction resulting from consolidation, automation and migration to cloud

Digital IT Platform

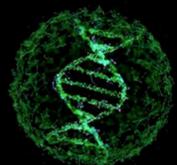


Reinvestment of funds into exploratory and innovative digital IT initiatives

Shift 7 - Cloud Delivery Models and Automated Operations



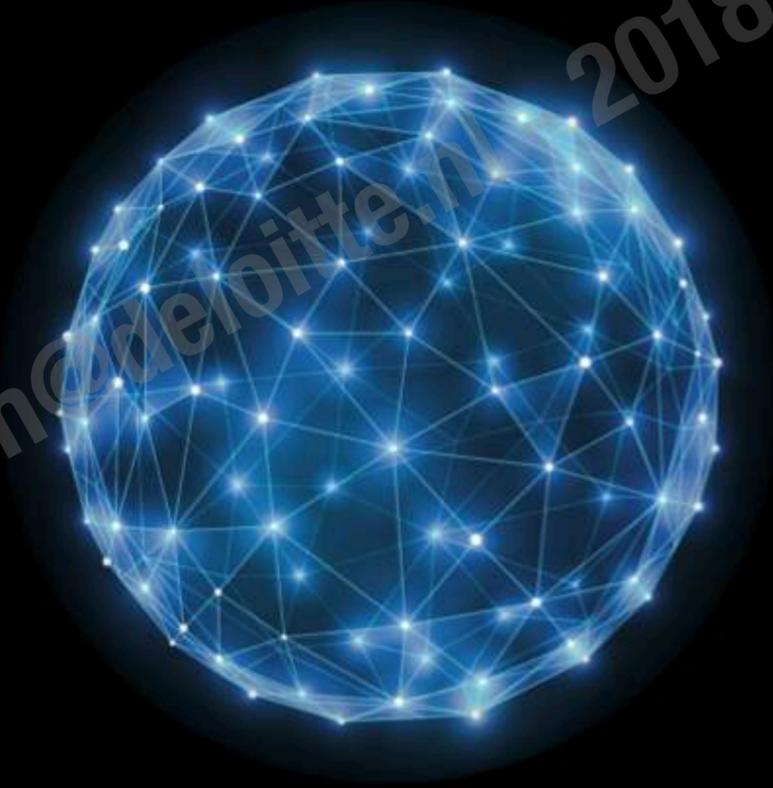
Cloud becomes the dominant IT delivery model. IT Processes become highly **automated**, further driving out manual work from Operations.



©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

Deloitte 2018 Global Outsourcing Survey published 1 month ago: Traditional Outsourcing is dead. *Long live Disruptive Outsourcing*

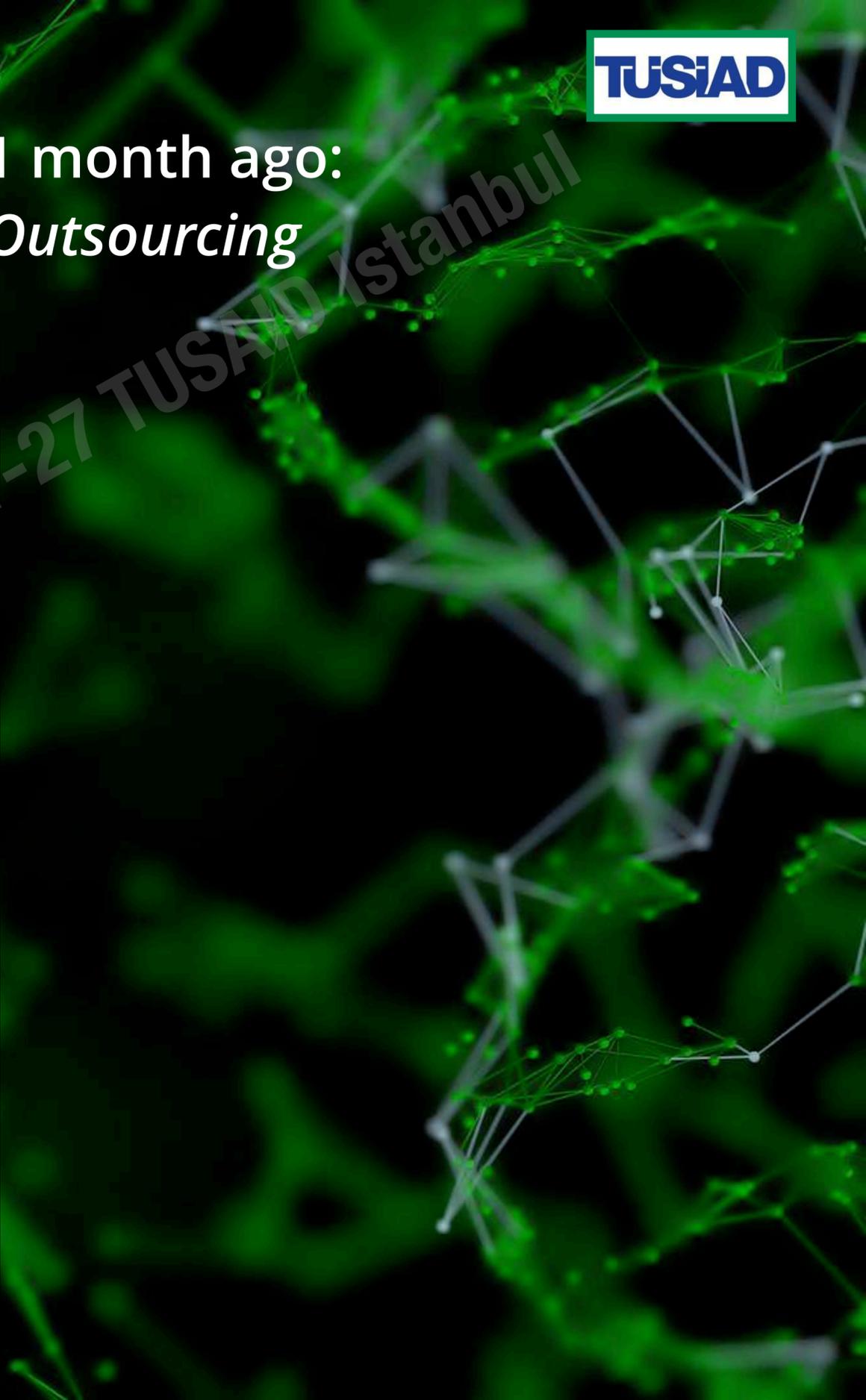
Deloitte.



**Traditional outsourcing is dead.
Long live disruptive outsourcing**
The Deloitte Global Outsourcing Survey 2018

©Deloitte - hvangrieken@deloitte.nl

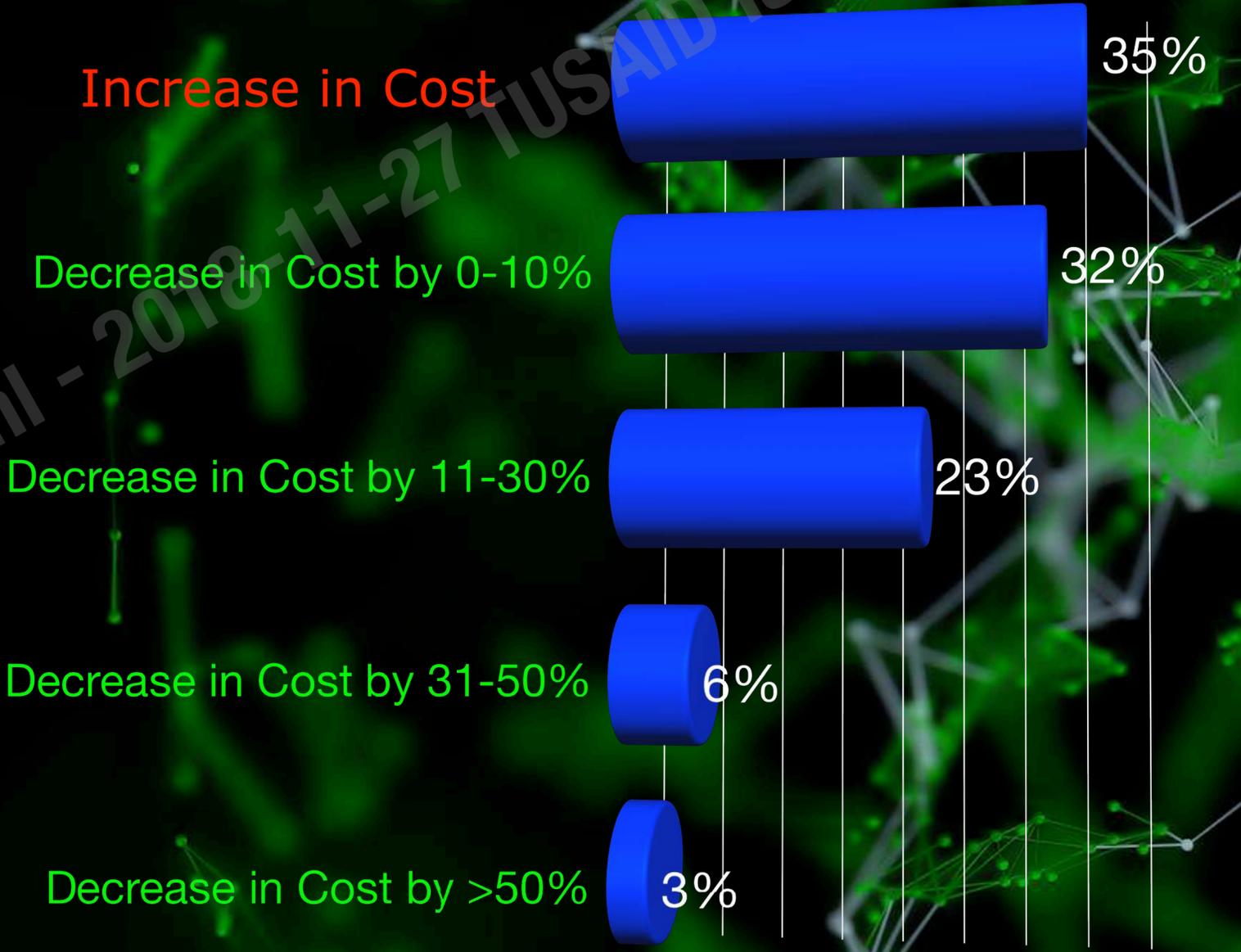
2018-11-27 TUSIAD Istanbul



Some highlights from the report: Cloud Adoption Objectives and Cost Expectations ...



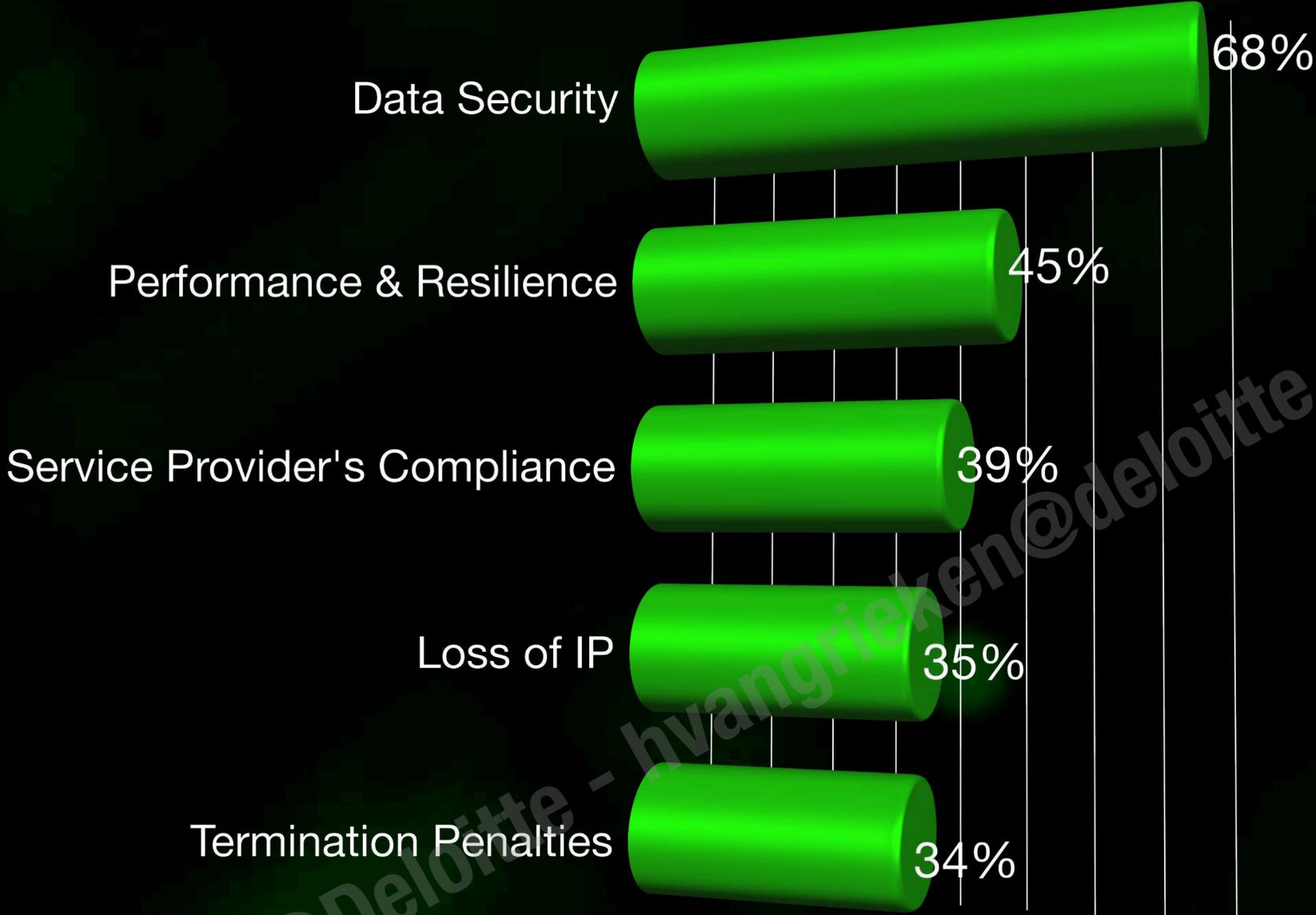
Objectives for Cloud Adoption



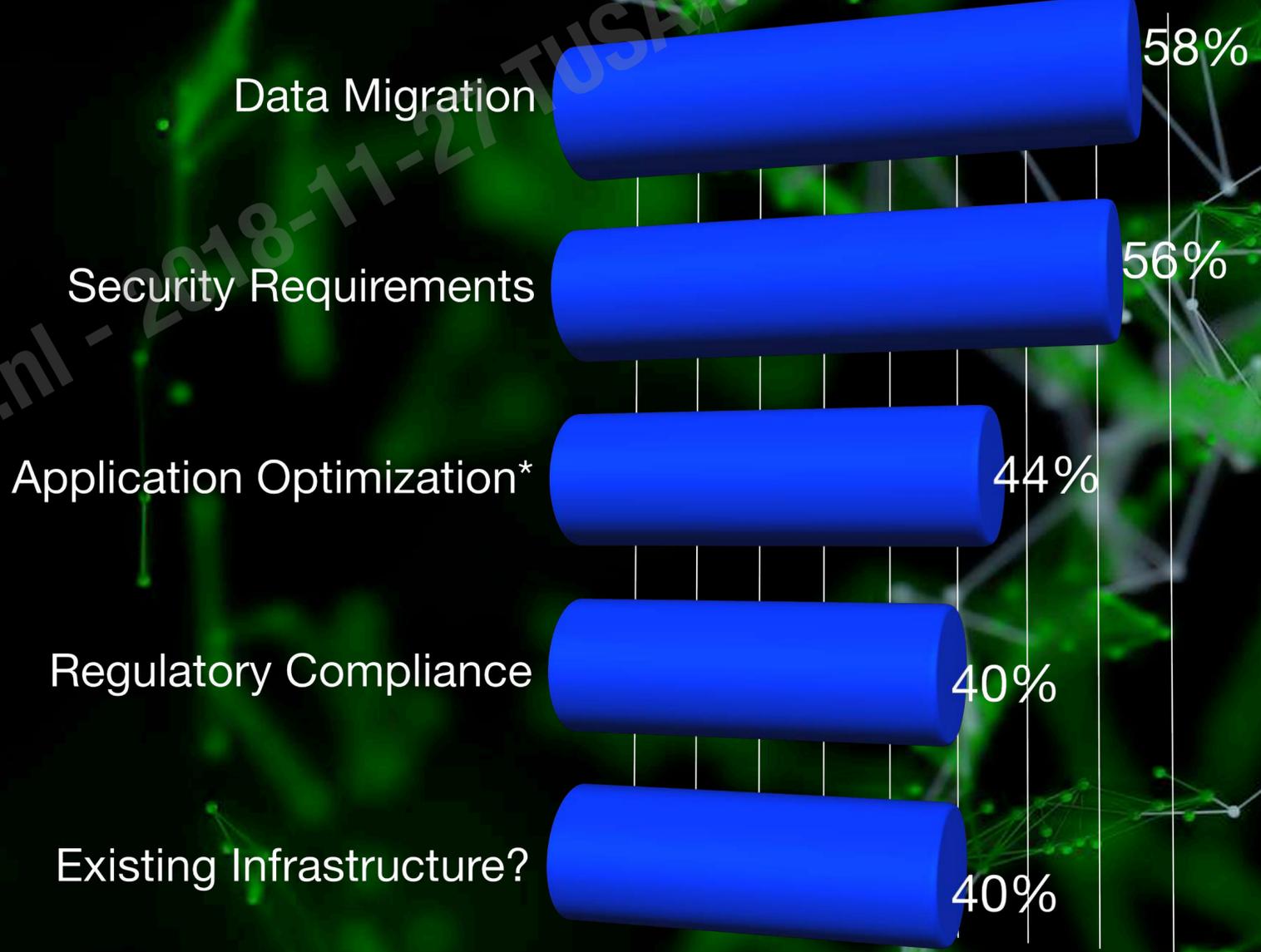
Expectations for annual Operational Costs by moving to the Cloud

Source: Deloitte 2018 Global Sourcing Survey

Some highlights from the report: Cloud Adoption Concerns and Challenges ...



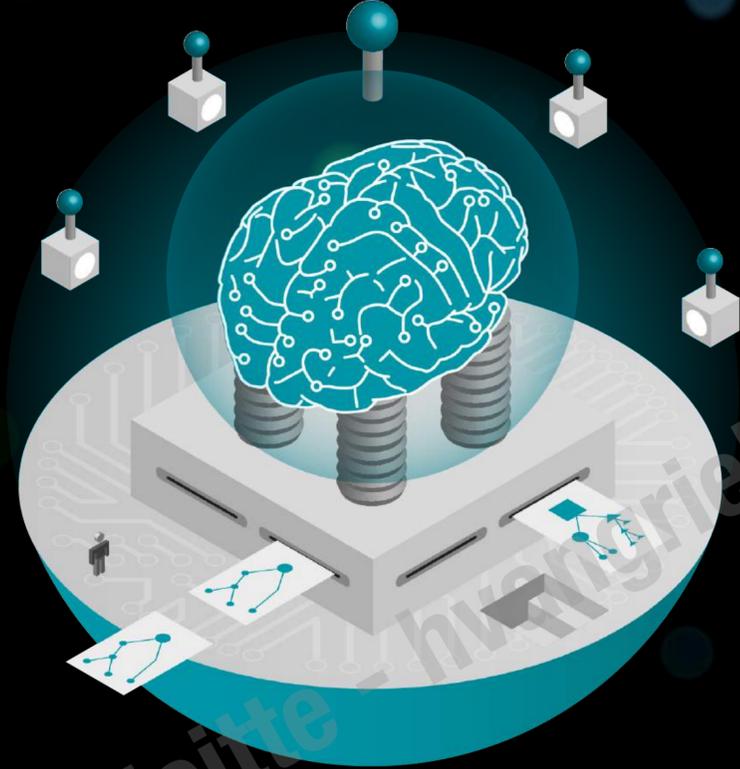
Top 5 Concerns with Cloud Services Contracting



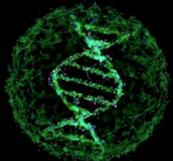
Top 5 Challenges in implementing a Cloud Solution

Source: Deloitte 2018 Global Sourcing Survey

Shift 8 - Algorithmic Business



The center of gravity of competitive advantage shifts in favour of **(big) data and algorithms** fuelling algorithmic business, also in IT itself



©Deloitte

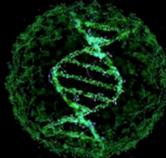
hvan@gricken@deloitte.nl - 2018-11-27 TUSAID Istanbul



Shift 9 - Convergence of IT and OT



Convergence of two worlds that were separated for decades: Information Technology (IT) and Operational Technology (OT)

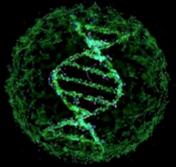
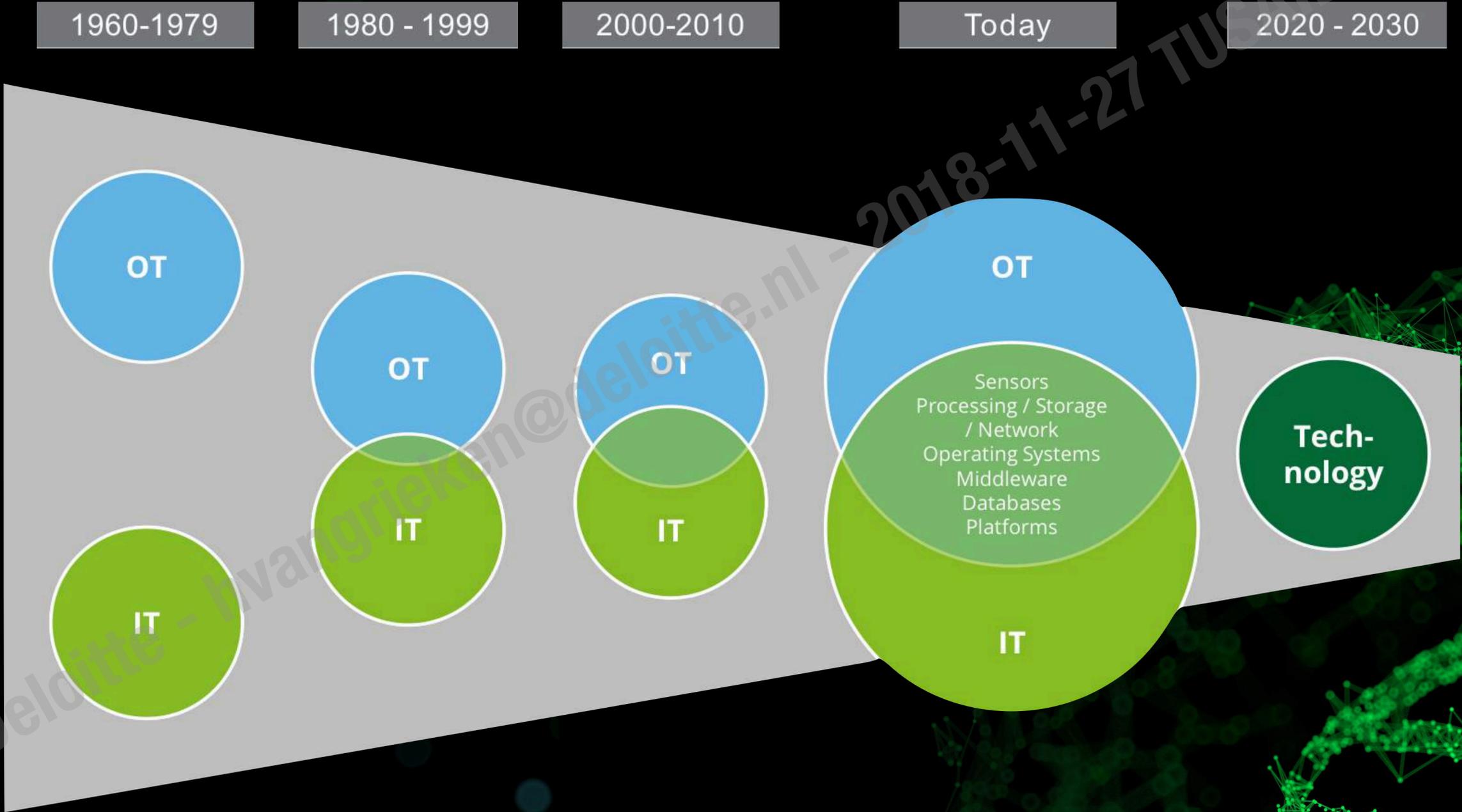


©Deloitte

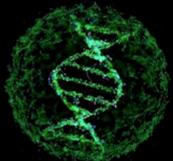
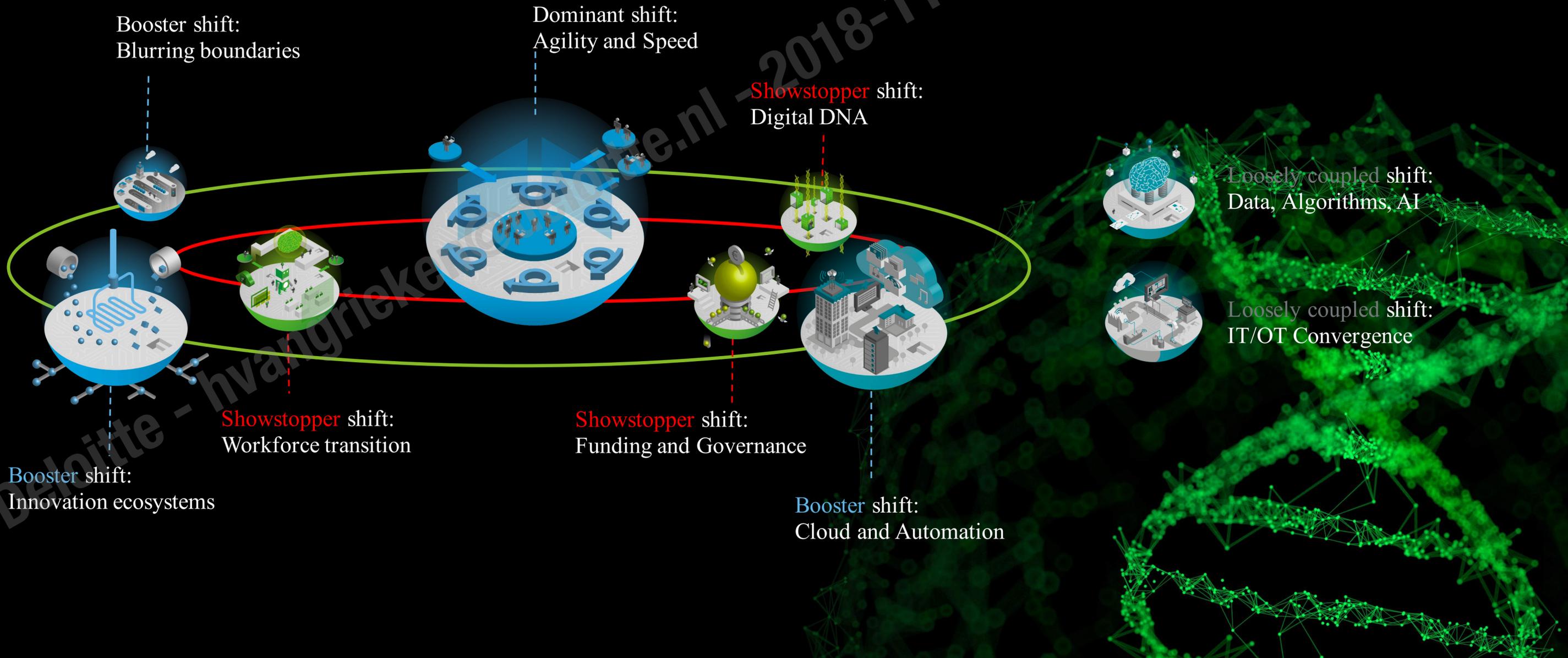
Van Grieken@deloitte.nl - 2018-11-27 TUSAID Istanbul



IT and OT merge into just 'Technology'



But the value of this Framework is not in the individual Shifts. It is in YOU & your Team prioritising them for YOUR organisation by understanding their Interdependencies ...



Here's a Example on how these Shifts frequently interlink with in a particular company ...

1.
Agility and speed become the new norm. Organizations learn and adapt by experimenting and fast deployment.

8.
Competitive advantage shifts in favor of data and algorithms fueling algorithmic business.

7.
Cloud becomes the dominant IT delivery model, with highly automated IT processes.

3.
The rise of innovation ecosystems with joint risk taking, and value creation among quickly engaging and disengaging partners.

9.
Information technology (IT) and operational technology (OT) converge.

2.
The boundaries between business and IT blur, business-led IT increases, and tech fluency is vital for all.

4.
The workforce transitions as digital, data, AI, and robotics create new jobs and cause existing jobs to disappear.

6. Innovation & experimentation require a larger share of resources, with fit-for-purpose funding mechanisms and governance.

Dominant Shift(-s)

Booster Shift(-s)

Showstopper Shift(-s)

Remember the Google Car Example ...



- The Alliance will utilise **Android**, world's most popular operating system, to offer customers a new array of services including Google Maps, the Google Assistant and the Google Play Store
- These services will be combined with Alliance Intelligent Cloud based remote software upgrades and vehicle diagnostics

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSAID Istanbul

Dominant Shift(-s)



Booster Shift(-s)

ALLIANCE INTELLIGENT CLOUD

1.
Agility and speed become the new norm. Organizations learn and adapt by experimenting and fast deployment.

8.
Competitive advantage shifts in favor of data and algorithms fueling algorithmic business.

7.
Cloud becomes the dominant IT delivery model, with highly automated IT processes.

3.
The rise of innovation ecosystems with joint risk taking, and value creation among quickly engaging and disengaging partners.

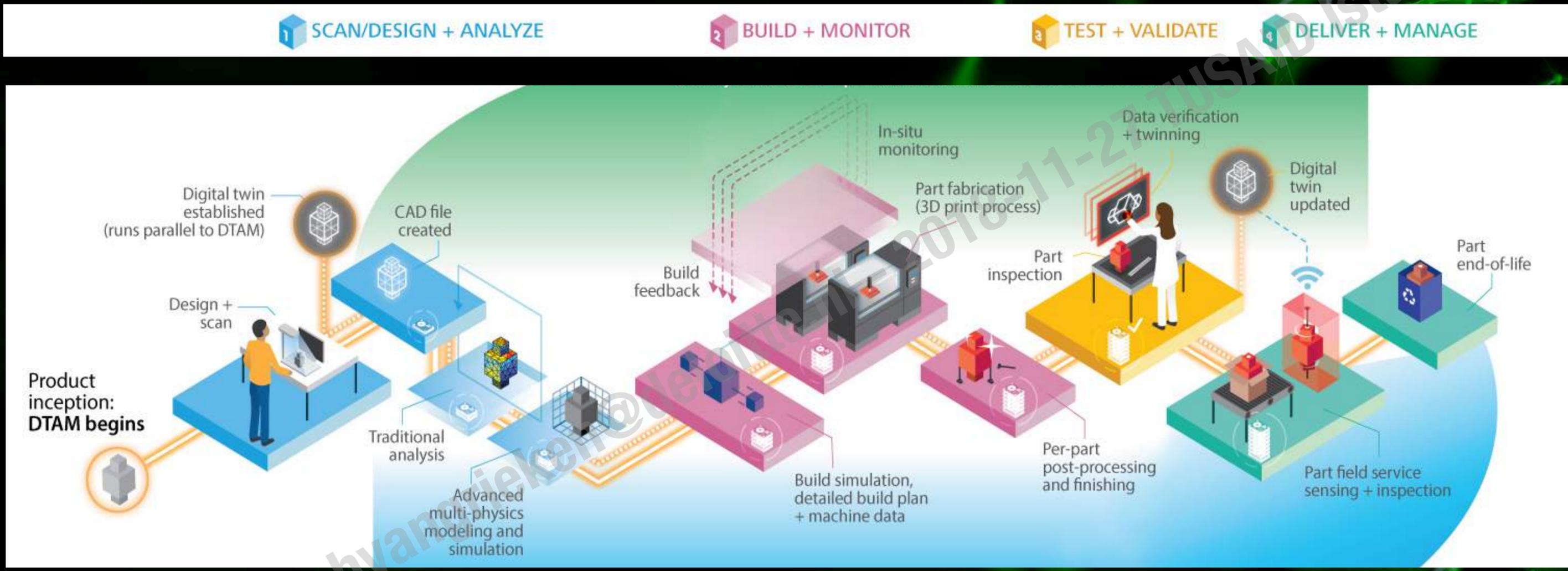
9.
Information technology (IT) and operational technology (OT) converge.



The Alliance Intelligent Cloud will provide a secure, connected foundation for next-generation infotainment systems, facilitating over-the-air software upgrades and remote diagnostics

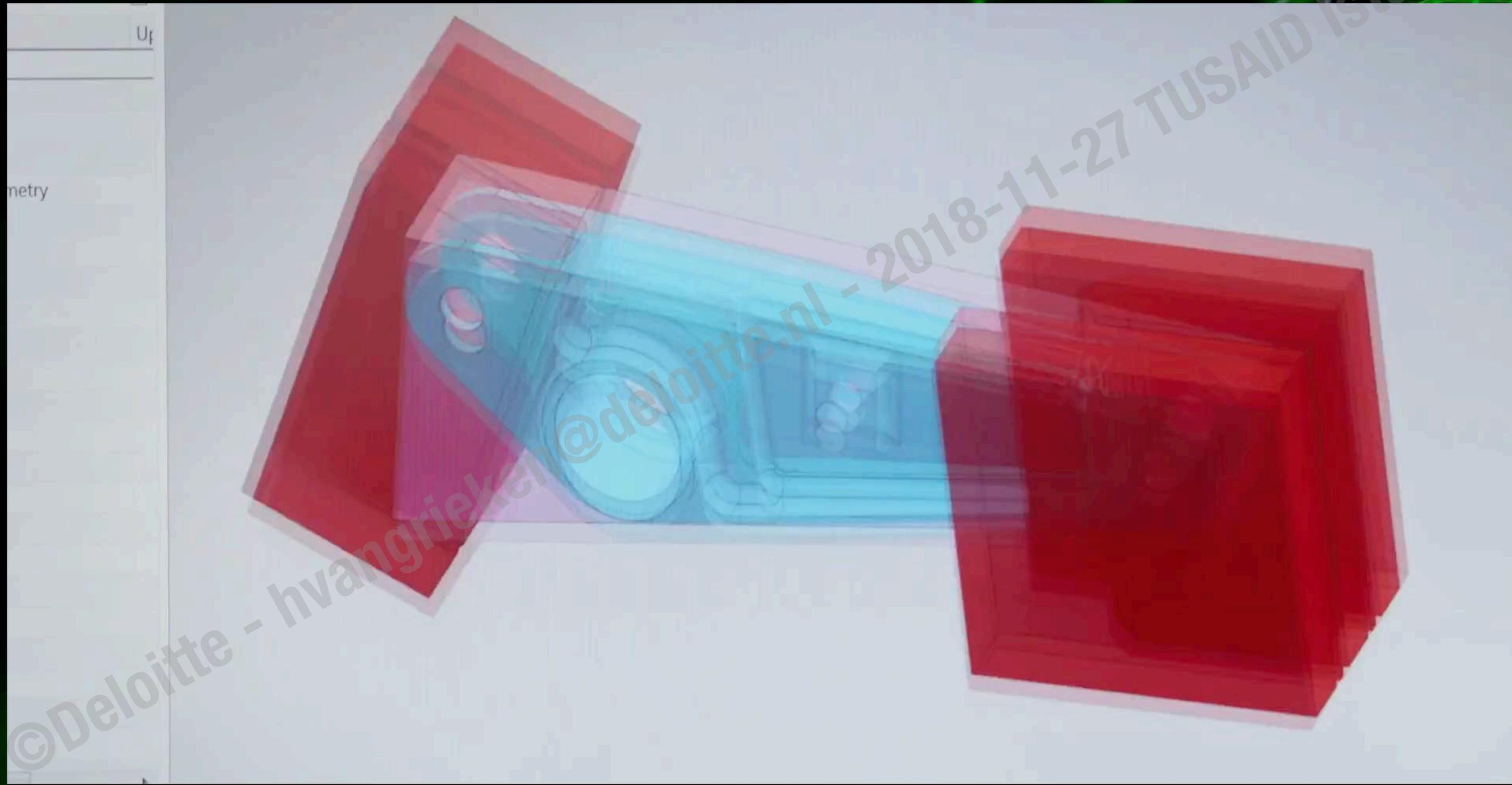
©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul

Deloitte created on Youtube the Digital Thread video series that you might find interesting



The digital thread enables organisations to **design anywhere and build anywhere** at scale while unlocking insights into rapid product and process optimisation

Introducing the Digital Thread ...



Digital Thread and Digital Twin ...

**Digital Thread
Demonstration
October 5th, 2016**

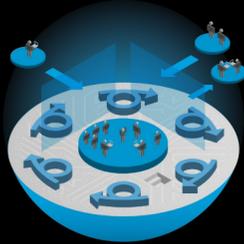


The Focus and Interdependencies identified within these Nine Big Shifts will determine the Effectiveness, Speed and Business Relevance of that “future Digital Battle Ship(-s)” ...

3 Big Shifts in ‘Ways of working’

3 Big Shifts in ‘Resources’

3 Big Shifts in ‘Technology’



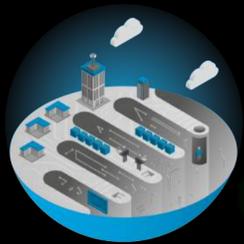
1.
Agility and speed become the new norm. Organizations learn and adapt by experimenting and fast deployment.



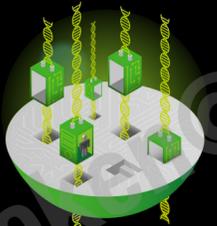
4.
The workforce transitions as digital, data, AI, and robotics create new jobs and cause existing jobs to disappear.



7.
Cloud becomes the dominant IT delivery model, with highly **automated** IT processes.



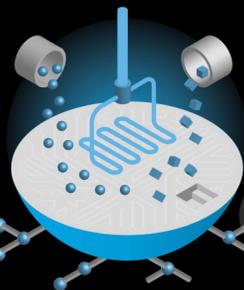
2.
The **boundaries** between business and IT blur, business-led IT increases, and tech fluency is vital for all.



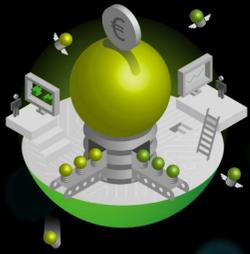
5.
Organizations adopt the vision, values, culture, and leadership required to build digital DNA.



8.
Competitive advantage shifts in favor of **data and algorithms** fueling algorithmic business.



3.
The rise of **innovation ecosystems** with joint risk taking, and value creation among quickly engaging and disengaging partners.



6.
Innovation and experimentation require a larger share of resources, with fit-for-purpose funding mechanisms and governance.



9.
Convergence of Information Technology (IT) and Operational Technology (OT) in the enterprise.

Bottomline: Determine your Dominant Digital Shift(-s), Invest in your Boosters and Solve your Showstoppers, Redesigning you digital Aircraft Carrier to make it "Future Proof" ...



“If you cannot brew a decent cup of Coffee,
DO NOT get me started on a 3 course Dinner ...”



2018-11-27 TUSAID Istanbul



Thank You for your Interest
and let's go for a drink!

twitter: [hvangrie](#)
mail: hvangrieken@deloitte.nl

Hans van Grieken
Fellow Center for the Edge
EMEA Technology Research Leader
Executive Lecturer Nyenrode Business School

©Deloitte - hvangrieken@deloitte.nl - 2018-11-27 TUSIAD Istanbul