

## **Tech Trends 2020**

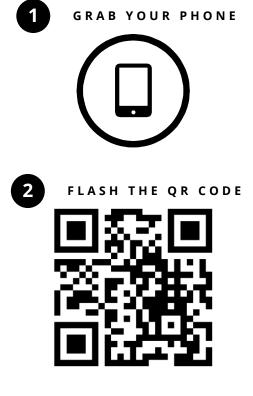
BREAKFAST E-ROUNDTABLE, 28<sup>TH</sup> MAY 2020



### **Tech Trends 2020**

BREAKFAST E-ROUNDTABLE, 28<sup>TH</sup> MAY 2020





YOU'RE GOOD TO GO!

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### Your Host Today



## **Daniel Schlegel**

Technology Strategy & Transformation Partner Deloitte Switzerland, Consulting

### **Your Moderator Today**



### **Peter Sany**

Executive CIO Advisor Deloitte Switzerland, Consulting

### Welcome and Introduction

08:30	Welcome and Introduction	Daniel Schlegel & Peter Sany	Deloitte
08:40	COVID-19 & its impact	Achim Baumstark Alexander Bockelmann Wolfgang Eger Peter Sany	Helvetia Baloise Swiss Post Deloitte
09:00	Introduction to Tech Trends 2020	Hans Van Grieken	Deloitte
09:20	Panel discussion and Q&A	Achim Baumstark Alexander Bockelmann Wolfgang Eger Hans Van Grieken Peter Sany	Helvetia Baloise Swiss Post Deloitte Deloitte

### Panellists & Presenters



Achim Baumstark CTO Helvetia Insurance



Alexander Bockelmann Group CIO Baloise



Wolfgang Eger CIO Swiss Post



Hans Van Grieken Author Tech Trends Deloitte



**Peter Sany** Executive CIO Advisor Deloitte



Daniel Schlegel TS&T Partner Deloitte



### Achim Baumstark CTO Helvetia

Achim studied computer science and computer engineering at University of Karlsruhe in the 1980s. He has been Chief Technology Officer for Helvetia since 1st of April 2017.

Before that he worked in various managerial positions for Helsana und Zurich Insurance and Daimler AG. He started his career with Andersen Consulting in the early 1990s.

In total, Achim has 30 years of experience in IT functions across a wide variety of industries.



### **Alexander Bockelmann** Group CIO Baloise

Alexander Bockelmann is a German national and has a PhD in geosciences. After studying in Germany and the UK, he completed a doctorate at the University of Tübingen's faculty of geosciences.

Dr Bockelmann is a proven expert in digitalisation and transformation, and has many years of experience in the industry. He previously worked as an IT strategy and transformation consultant at the Boston Consulting Group and in various senior roles at Allianz SE in Germany and the USA.

At the end of 2013, he moved to UNIQA Insurance Group AG in Austria in the role of Group CIO and ultimately became Chief Digital Officer on the Management Board.



### **Wolfgang Eger** CIO Swiss Post

Wolfgang Eger is a computer scientist and graduated from McKinsey's MBA programme in Williamstown (USA) as well as completed the Leadership and Organizational Change course at Harvard Business School, Boston (USA).

Mr. Eger has been Chief Information Officer at the Swiss Post since 1st of February 2019. Prior to this role, he spent 15 years in multiple managerial positions at Swisscom and he worked for companies such as Lufthansa, EDS and McKinsey.

He has many years of experience in managing and developing large ICT organisations and has broad knowledge of the various IT functions from consulting, architecture, software engineering, security to operations.



### **COVID-19 & its impact**

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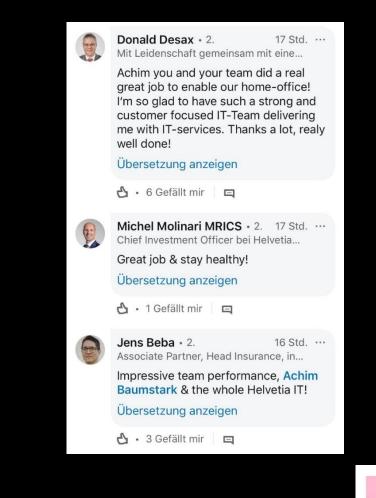
### CIO Statement two Weeks after 'Shutdown' order

LinkedIn March 30, 2020



Achim Baumstark • 1. CTO at Helvetia Insurance 18 Std. • 🕲

Helvetia successfully shifted most of its workforce to home office. All aspects of our business, including customer support, even project work - all delivered from a decentral workforce working from home. Enabled by technology. I'm very proud of our teams at IT&FM@Helvetia. Just wanted to say "thank you"! #HelvetiaIT #workreallysmart



### **Introduction to Tech Trends 2020**

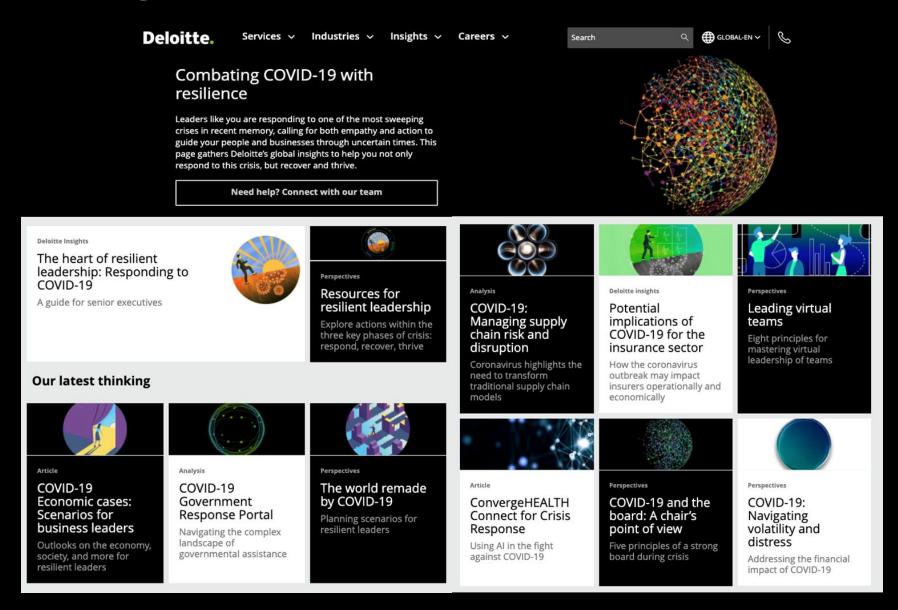
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### Hans Van Grieken EMEA Technology Research & Insights Leader Deloitte Center for the Edge

Hans van Grieken is an associate to Deloitte's global CIO program and part of Deloitte's global Emerging Tech Executive Council. He is the lead or co-author of a number of recent Deloitte global and regional digital transformation research papers, amongst them 9 shifts that are changing the Digital Technology Operating Model of the Future.

### **Deloitte Insights on COVID-19**





### **Tech Trends 2020**



### Trending the trends: Eleven years of research

	CORE	RISK	BUSINESS	5 OF TECHNOLO	GΥ	CLO Block	UD & (CHAIN	COGNITIVE & ANALYTICS		AL EXPERIENCE	
2020		Ethical technology & trust	Horizon next	Finance & the future of IT	Architecture awakens			Digital twins	/ expe	ıman erience forms	
2019		DevSecOp & the cybe imperativ	er the digital		Connectivity of tomorrow	NoOps in a serverless world		Al-fueled organizations	Intelligent Beyon interfaces market	d ing	
2018		ne new Risk core implicati	Exponentials CIC ions watch list Ma	O survey: No-collar mifesting workforce legacy	Reengineering technology	API Blo imperative bl	lockchains da	rprise ata eignty	Digital reality		/
2017			sk Exponentials C ations watch list N	IO survey: IT lavigating unbounded legacy	Inevitable l architecture	Everything- as-a-service eo	Trust Darl conomy analyt		Mixed reality		
2016		Reimagining core systems imp	Social Risk impact of Dications exponentials	CIO survey: Creating legacy Speed IT	Autonomic platforms		ocratized Industria rust analyti	lized Internet cs of Thin	et AR & VR gs go to work		
2015		Core renaissance i	Risk Exponentials	CIO as chief IT worke integration of the officer future	defined	API economy		Amplified Ambient intelligence computing	Dimensional marketing		
2014		Fechnical In-memor debt revolution reversal		ls ClO as venture capitalist	Real-time DevOps or	Cloud chestration		Cognitive Wearables analytics eng	Digital Social Inc agement activation crow	/ lustrial dsourcing /	
2013		Reinver the E engi	RP thing as a discipli		IPv6 (and this time we mean it)		Finding the face of your data	Mobile only— and beyond	Social Gamificati reengineering goes to work		
2012		Outside-in architecture	Digital Measu identities innova		Нуј	per-hybrid clouds		/ / / batial Enterprise User zation mobility empowermer / /	Social Gamification it business		
2011		Almost- enterprise applications		ClOs as revolutionaries		pability clouds	/ / Real Visualizati analytics /	ion Applied User So mobility engagement com	ocial Iputing		
2010		Servi think	ices Best-of-breed Cyber enterprise Cyber king applications security	CIO Value- operational applio excellence manag	ation Virtual-		formation Information Itomation management	/ / / / / / / / / / / / / / / / / / /	ice		
	© 2020 Deloitte Poland   Webcast: Shapi	ing the future through digit	tal business								

# **Tech Trends 2020**



#### **MACRO TECHNOLOGY** FORCES

Exploring technology trends individually is no longer enough to stay ahead—organizations are deploying them in concert to create a foundation for innovation that can propel their business into the future.

#### **ENABLERS**

Digital experience, analytics, cloud

#### FOUNDATION

Business of technology, risk, core modernization

#### DISRUPTORS Digital reality, cognitive, blockchain

**HORIZON NEXT** Ambient experience, exponential intelligence, quantum



#### **ETHICAL TECHNOLOGY** AND TRUST

Leaders who align tech ethics with organizational values—and apply them across the investment lifecycle—are demonstrating a commitment to "doing good" that can build a long-term foundation of trust with stakeholders.

**PLATFORMS** 

#### **FINANCE AND THE FUTURE OF IT**

As enterprises become more agile, companies are exploring new approaches to budgeting, contracting, and capital planning to fuel innovation and usher in a new, flexible approach to funding technology investments.

#### **DIGITAL TWINS: BRIDGING THE** PHYSICAL AND DIGITAL

High fidelity digital simulations combined with IoT sensors and machine learning are presenting a host of new opportunities ranging from optimization to autonomous decision-making to new business models.

### **HUMAN EXPERIENCE**

Leading organizations are using affective computing to create systems that recognize a user's emotional state and the context behind it, and then respond appropriately-adding an emotional quotient (EQ) to technology's IQ.



#### ARCHITECTURE **AWAKENS**

Established companies with legacy systems have begun moving architects out of their silos and into the trenches. The goal? Create the kind of architectural agility that is a competitive differentiator in the digital economy.

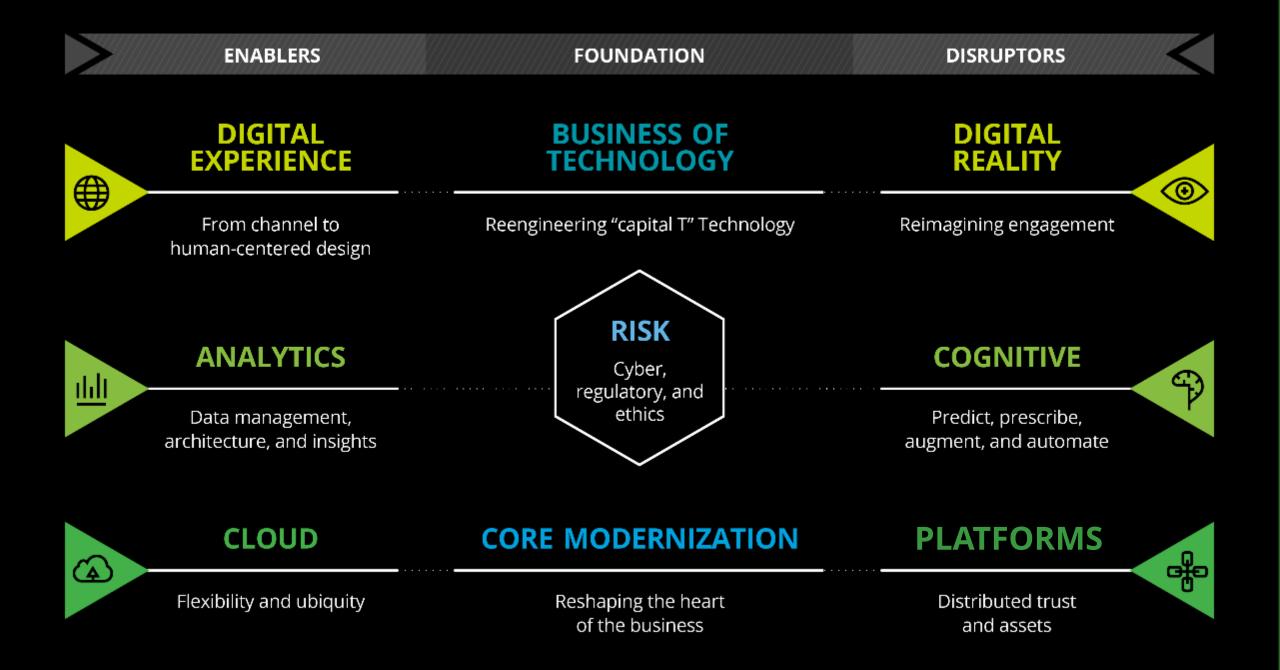
#### **HORIZON NEXT: A FUTURE LOOK AT** THE TRENDS

What big technology shifts could emerge over the next decade? Deliberately sensing and evaluating emerging technologies can help guide today's business and technology decisions and create a strong foundation for the future.

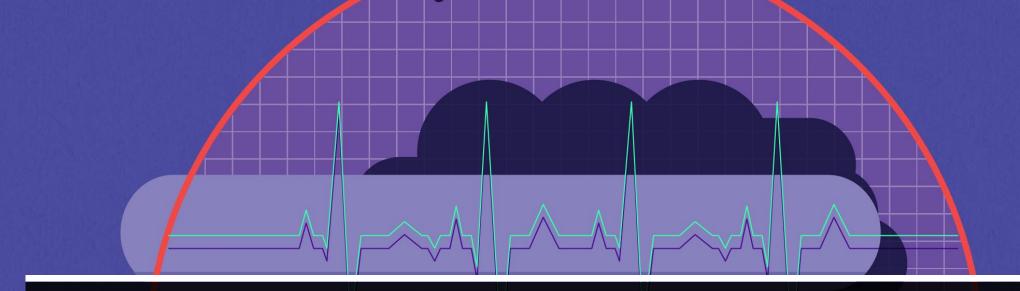


### **Macro technology forces**

Exploring technology trends individually is no longer enough to stay ahead—organizations are deploying them in concert to create a foundation for innovation that can propel their business into the future.



ENABLERS FOUNDATION		DISRUPTORS	HORIZON NEXT	
DIGITAL EXPERIENCE	BUSINESS OF TECHNOLOGY	DIGITAL REALITY	AMBIENT EXPERIENCE	
From channel to human-centered design	Reengineering "capital T" Technology	Reimagining engagement	Transparent, ubiquitous interfaces	
ANALYTICS	<b>RISK</b> Cyber,	COGNITIVE	EXPONENTIAL INTELLIGENCE	
Data management, architecture, and insights	regulatory, and ethics	Predict, prescribe, augment, and automate	Symbolic, deep, and broad reasoning	
CLOUD	CORE MODERNIZATION	PLATFORMS	QUANTUM	
Flexibility and ubiquity	Reshaping the heart of the business	Distributed trust and assets	Exponential computation	



### Human experience platforms

Leading organizations are using affective computing to create systems that recognize a user's emotional state and the context behind it, and then respond appropriately—adding an emotional quotient (EQ) to technology's IQ. **Reshaping human-machine connections** through AI, neuroscience, and humancentred design. We've reached a point in the digital revolution at which everyone's connected to technology but not necessarily to each other...

Consumers crave what they are rapidly losing: meaningful connections

In response, we increasingly expect technology to treat us in more human and humane—ways.

Create customised, emotionally intelligent experiences using technologies like machine learning, voice response, and image recognition.

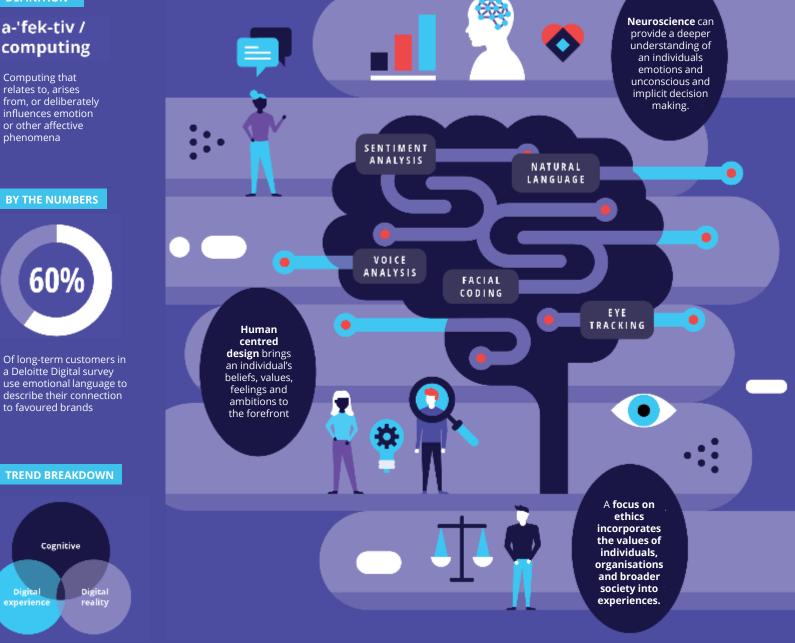
#### EMOTIONALLY INTELLIGENT EXPERIENCES

- Authenticity
- Personally relatable
- Storylines that resonate
- Trustworthiness
- Intuits user wants and needs in the moment

#### DEFINITION

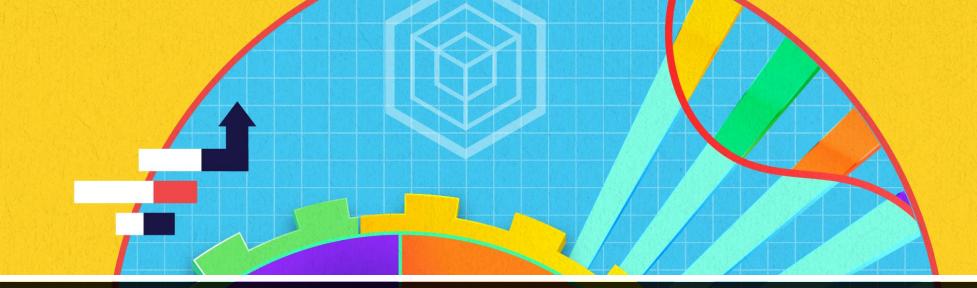
a-'fek-tiv / computing

Computing that relates to, arises from, or deliberately influences emotion or other affective phenomena



### The trend in action





## **Ethical technology and trust**

Leaders who align tech ethics with organizational values—and apply them across the investment lifecycle—are demonstrating a commitment to "doing good" that can build a long-term foundation of trust with stakeholders. Every aspect of an organization disrupted by technology represents an opportunity to gain or lose stakeholders' trust. Leaders are approaching trust not as a compliance or PR issue but as a business-critical goal.

#### IN PURSUIT OF TRUST

- Encode your company's values
- Build a strong data foundation
- Harden your defenses
- Respect privacy and be transparent
- Respect differing cultural norms

#### ONE MORE THING

#### Empower your people.

Since technology is arguably used by most if not all individuals within an organization, ethical technology and trust is a topic that touches everyone.

#### TREND SUMMARY

In a time of constant tech disruption, earning trust is a 360-degree challenge—and opportunity.



#### DEFINITION

#### e-thi-kəl / technology

An overarching set of values that direct an organization's approach to its use of technologies as a whole and the ways in which they are deployed to drive business.

#### **BY THE NUMBERS**



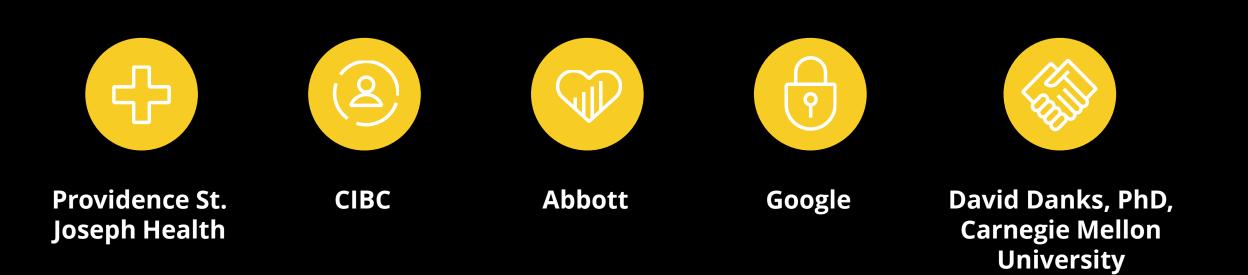
of respondents in a Deloitte study from high-growth companies are highly concerned about the ethical ramifications of technologies, compared to only 27% of low-growth companies.<sup>1</sup>

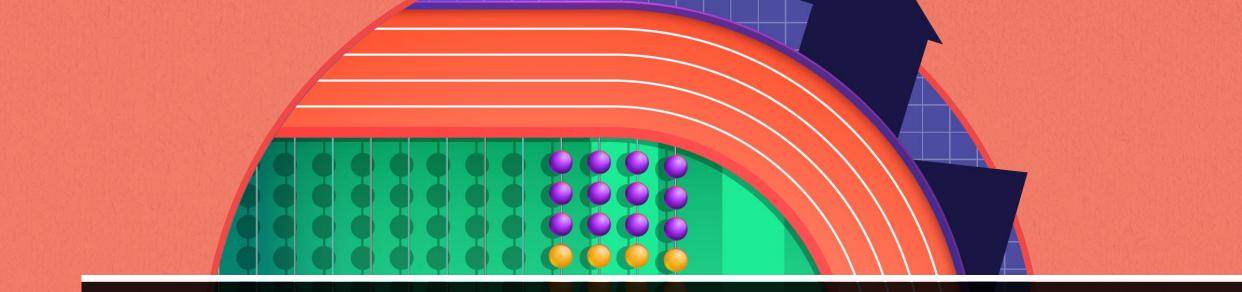
#### TREND BREAKDOWN



Timothy Murphy et al., Ethical technology use in the Fourth Industrial Revolution, Deloitte Insights, July 15, 2019.

### The trend in action





### Finance and the future of IT

As enterprises become more agile, companies are exploring new approaches to budgeting, contracting, and capital planning to fuel innovation and usher in a new, flexible approach to funding technology investments. This does not mean replace annual budgeting cycles with a shiny, unproven alternative. **Balancing fiscal control and appropriate spending with value creation and financial results** is a nonnegotiable requirement. There are **multiple approaches** that can help maintain the balance:

- Change within finance
- Change within IT
- Creative funding

#### **POTENTIAL PROBLEMS**

- 1. Shifting from Capex to Opex
- 2. Measuring elusive ROI
- 3. Calculating Value delivered

#### **OPTIMISE IMPACT?**

- Risk-based portfolio Mindset
- Capex versus Opex strategy
- Capacity-based funding
- Digital Foundations

#### DEFINITIONS

#### 'a-jəl

A synonym for "nimble" the ability to respond gracefully to a need to change and adapt

#### 'A-jəl

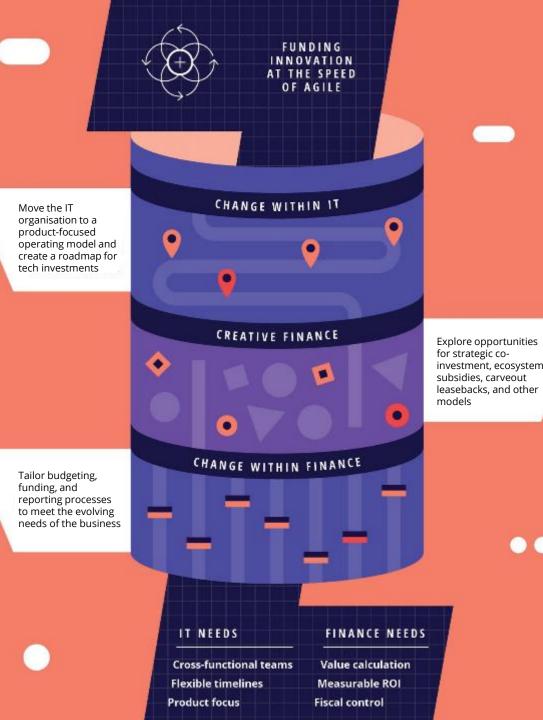
An iterative, incrementa software delivery methodology

#### **BY THE NUMBERS**



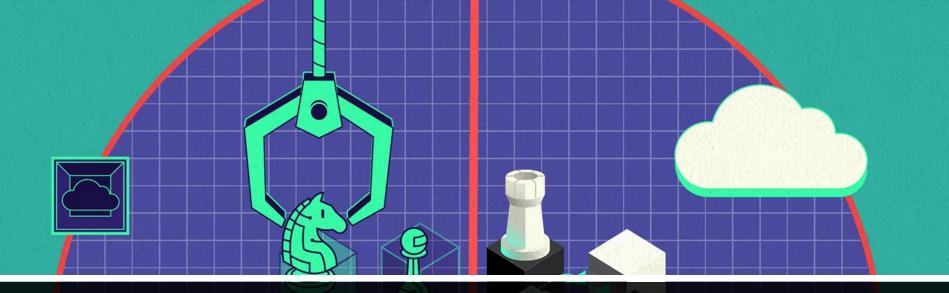
Of CIOs expect to implement Agile, DevOps or a similar flexible IT delivery model to help spur broader innovation ambitions





### The trend in action





## Digital twins: Bridging the physical and digital

High fidelity digital simulations combined with IoT sensors and machine learning are presenting a host of new opportunities ranging from optimization to autonomous decision-making to new business models. **Imagine that you had a perfect digital copy of the physical world: a digital twin.** This twin would enable you to collaborate virtually, intake sensor data and simulate conditions quickly, understand what-if scenarios clearly, predict results more accurately, and output instructions to manipulate the physical world

#### EXAMPLES



Automotive & Aircraft

Used to optimise entire manufacturing value chains and innovating new products

### Energy

Oil field service operators are capturing and analysing massive amounts of in-hole data that they use to build digital models that guide drilling efforts in real time

### Health Care

Cardiovascular researchers are creating highly accurate digital twins of the human heart for clinical diagnoses, education, and training

### **Smart Cities**

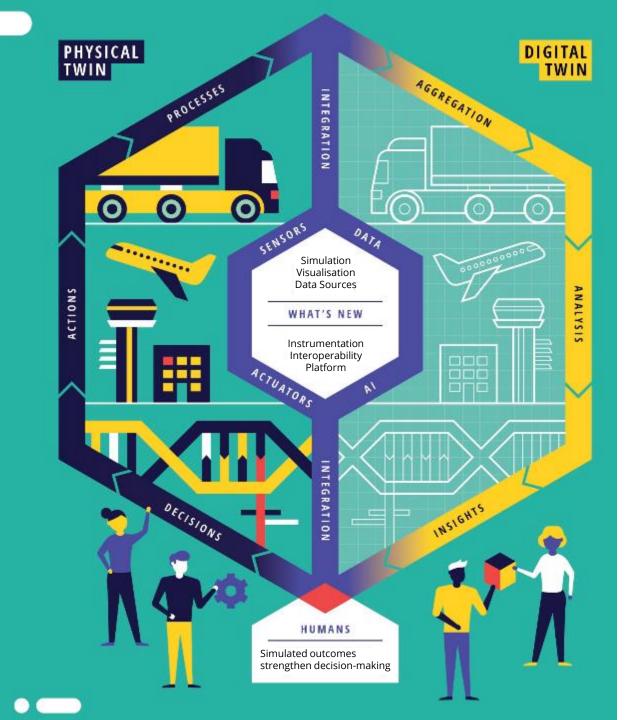
Singapore uses a detailed virtual model of itself in urban planning, maintenance, and disaster readiness projects

Cp2020t Deloitte Polande PWebcasterShaping the future through digital business









## The trend in action





### **Architecture awakens**

Established companies with legacy systems have begun moving architects out of their silos and into the trenches. The goal? Create the kind of architectural agility that is a competitive differentiator in the digital economy. With technology architecture growing in strategic importance, we expect to see more **architects playing a large role in system operations**—and joining software development teams that are designing complex technology

- Architecture a strategic priority setting new standards for agility, availability, functionality, and scalability.
- **The architect redefining the role** to be more collaborative, creative, and responsive to stakeholder needs.

#### **ARCHITECTS GO BIG**



A big metric of success for architects is that enterprise teams **want** to work with them.

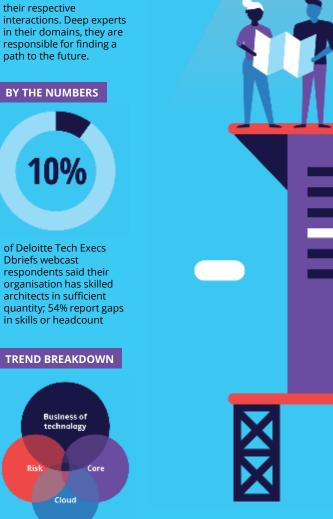
Unfortunately, in some IT organisations architects **rarely work shoulder to shoulder** with their business or even IT peers.



#### DEFINITION

#### är-kə-tekt

Individuals responsible for the design, implementation and oversight of technology components, applications and infrastructure and their respective interactions. Deep experts in their domains, they are responsible for finding a path to the future.







### The trend in action





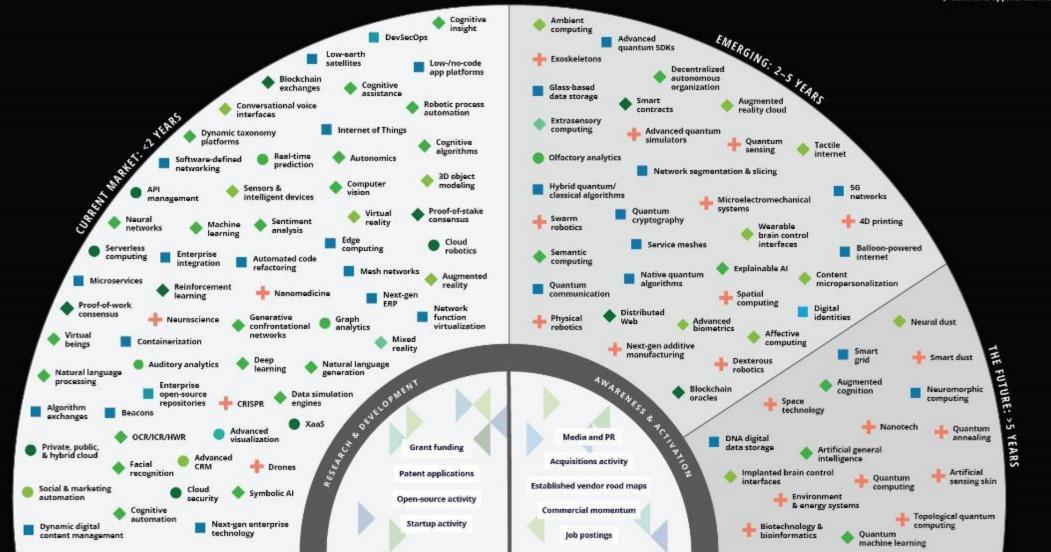
### Horizon next: A future look at the trends

What big technology shifts could emerge over the next decade? Deliberately sensing and evaluating emerging technologies can help guide today's business and technology decisions and create a strong foundation for the future.

### Horizon next

#### MACRO FORCES

Digital experience
Digital experience
Analytics
Cognitive
Cognitive
Core modernization





### Panel discussion and Q&A

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### **Panellists & Presenters**







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Wolfgang Eger CIO Swiss Post



Hans Van Grieken Author Tech Trends Deloitte



**Peter Sany** Executive CIO Advisor Deloitte



## **Tech Trends 2020**

Keeping pace with the emerging technology landscape can be difficult for even the most tech-savvy leaders.

### Find out more

- Read the **Executive Summary** for an overview of the report (8 minutes)
- Watch the Tech Trends 2020 <u>video</u> (2 minutes)
- Download the <u>full report</u>

### **Questions? Or a deeper dive?**

Contact the team at **<u>TechTrends@deloitte.com</u>**.



### **End of the Session**

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# **The kinetic leader: Boldly reinventing the enterprise** 2020 Global Technology Leadership Study

#### FORESEEN ON JUNE 25<sup>TH</sup> 2020

Deloitte's biennial tech leadership study shows how, faced with unprecedented uncertainty, businesses now more than ever need their technology leaders to be *kinetic*—resilient, agile, and future-focused.

www.deloitte.com/tech-leader-study



# Thank you!

TECH TRENDS 2020 - BREAKFAST E-ROUNDTABLE, 28<sup>TH</sup> MAY 2020



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