

CIO Trend Report

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Introduction

How can the business identify and seize relevant technology at the height of its promise?

Make no mistake; in 2018 the CIO is a business partner. The pressure is on to move beyond supporting operations to become a driving force behind business growth. In the sea of emerging tech, you are the business' navigator. Do you know where your business needs to go?

Let business enablers be your compass.

A strategic direction is essential to making the right technological investments. Not every trend is worth pursuing, but missing the ones that are can be costly. An enablers-focused approach gives you a framework to strategically evaluate emerging technology's alignment with your business' direction. Use a business-enablers-centered outlook to effectively separate opportunities from distractions.

Go from browsing to doing.

Learn what is driving each trend and how it has evolved from previous years. Most importantly, use the business enablers framework presented in this report to create the foundation for your adoption strategy. Determine which trends are worth your attention, chart an adoption course, and build a business case for your stakeholders.

*A recent survey of over 20,000 IT and business executives concluded that innovation leadership is **three times** as important as it is perceived to be, in determining overall satisfaction with IT.*

— Info-Tech Business Vision Survey

2018 Trends

This year introduces **four key trends** that draw their impact from both technological innovation and an alignment with key **business enablers**.

Each trend represents the convergence of several previously trending technologies to enable new advances that are greater than the sum of their parts. Assessing these transformative technologies with an eye to their ability to drive business enablers reveals their unprecedented opportunities for business impact.

01

**User-Facing
AI**

02

Robotics

03

**Digital
Twin**

04

**Blockchain
2.0**

2018 Opportunities for Business Impact

In 2018, your priority is to drive business enablers through emerging technology.

**2018 Trends
Opportunities to
Drive Business
Enablers**

Blockchain 2.0

Digital Twin

Robotics

User-Facing AI



**2017 Trends
Strategic
Priorities**

Decentralized
Making

Everything-
as-a-Platform

Distributed
Validation

Automated
Cognition

Autonomous
Machines

Immersive UX

The Digital
Ecosystem

2018 Trend Summaries

01

User-Facing AI

Communication barriers between humans and machines are coming down. Businesses can leverage this emerging connection to automate basic customer service tasks, improving experiences for customers and users alike.

02

Robotics

Increasing robotic sophistication is allowing machines to work with humans, but not replace them. Emerging opportunities to *augment* human performance means businesses can use technology to make the most of their human capital.

03

Digital Twin

The boom of IoT and Industry 4.0 has created an abundance of data. So much so that an entire system can be characterized, and the collected data used to create a real-time, living model – its digital twin. The opportunities for decentralized monitoring and predictive analytics are truly extraordinary.

04

Blockchain 2.0

The blockchain has outgrown bitcoin. Innovations are being developed to tailor distributed ledger technology to specific use cases outside of cryptocurrency, creating possibilities for scale, contract enforcement, and returning data ownership to the individual.

User-Facing AI

"27% of consumers weren't sure if their last customer service interaction was with a human or a chatbot."

— PwC, "Bot.Me: A revolutionary partnership"

Robotics

47% of jobs in the US could be replaced by robotics and other computerisation by 2034. 58% of CEOs intend to reduce headcount over the next 5 years as a result of robotics.

— PwC, "Pulse on robotics"

Digital Twin

Using digital twin technology to monitor and optimize wind turbine operation can boost energy production up to 20%, resulting in around \$100 million in extra revenue over the life of a turbine.

— GE Renewable Energy, "A Breakdown of the Digital Wind Farm"

Blockchain 2.0

28% of CEOs in major US companies have spent \$5 million or more in blockchain technology. An additional 25% of CEOs in major US companies expect to spend \$5 million or more in blockchain technology in the coming calendar year.

— Deloitte US, "Blockchain survey 2017"

Five Key Business Enablers

All of these trends have the potential to transform not just the bottom line, but the business itself, changing its internal processes and external positioning within industry and society.

Several axes have emerged along which this transformation can take place. These axes are represented by **five key business enablers**.

1

Automation

The ability to be lean through the replacement of aspects of human-based organizational processes and activities with technology.

2

Integration

The ability of the technology in the trend to integrate with the technology of customers, partners, and suppliers.

3

Scale

The ability for the product and/or service offering in the trend to quickly increase capacity.

4

Intelligence

The ability for the trend technology to leverage organizational outputs to make processes smarter and more efficient.

5

Impact

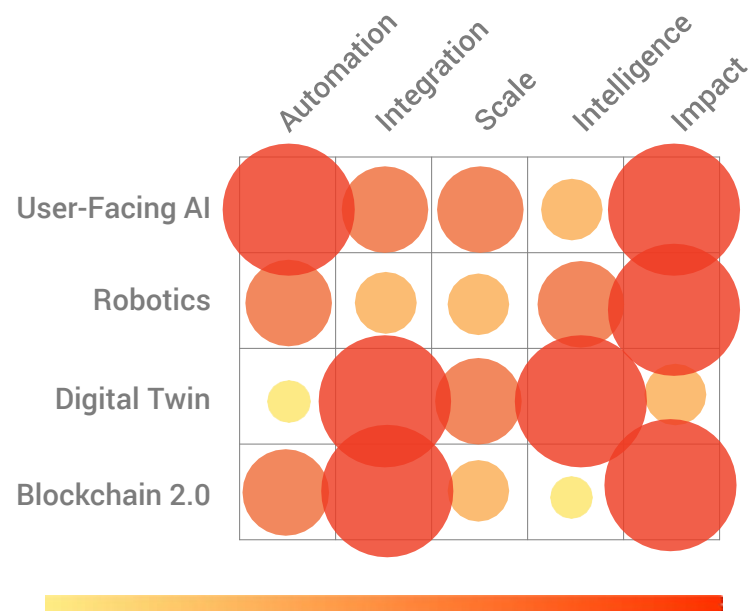
The ability of the trend to deliver a positive or negative social impact on user and customer experience.

Innovate Purposefully

What business enablers is your business hoping to build? Which trends have the most impact potential in these domains? Focus your efforts for the biggest return on investment.

Use enablers-based thinking to zero-in on the trends that matter to your business. We scored each trend according to its potential for impact on each of the five key business enablers. The resulting table should be your first strategic touchpoint.

Identify at a glance which trends are most relevant to your business' current direction. Cut through the deluge of information and get to action sooner.



How to read this report

Get current information

Description:

- Each trend is introduced with a key point summary and statistic, highlighting its growth and impact.
- ✓ In 2018, technology is an opportunity to create lasting business impact.

Evolution:

- For each trend, we highlight the cutting edge of what is new for 2018.
- ✓ Technology doesn't stay still. Keep abreast of the latest developments to give yourself an edge in selecting the best tool for your purpose.

Evaluate strategically

Signals & Drivers:

- We analyze the driving forces behind each trend, and the way it is manifesting in different scenarios.
- ✓ Understand the technological and societal changes that are driving each trend to determine whether they are relevant to your business.

Business Enablers:

- We present five key domains of business impact, and each trend's relevance to those domains.
- ✓ Viewing trends through an enablers-focused lens allows you to align innovative initiatives with key business objectives.

Put theory into practice

Risk & Uncertainty:

- We list the key risks and critical unknowns that result from technological advancement.
- ✓ No matter your organization's risk tolerance, awareness of the risk is always the first step. Learn what questions you should be asking.

Case Study:

- Each trend is illustrated by a case study that examines how the trend was leveraged to achieve the desired business enablers.
- ✓ Every organization will approach the business enablers in its own way. What does success look like for *your* business?

Resources & Recommendations:

- We provide links to relevant Info-Tech resources for each trend.
- ✓ We are constantly growing our toolkit so that you can grow yours.

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