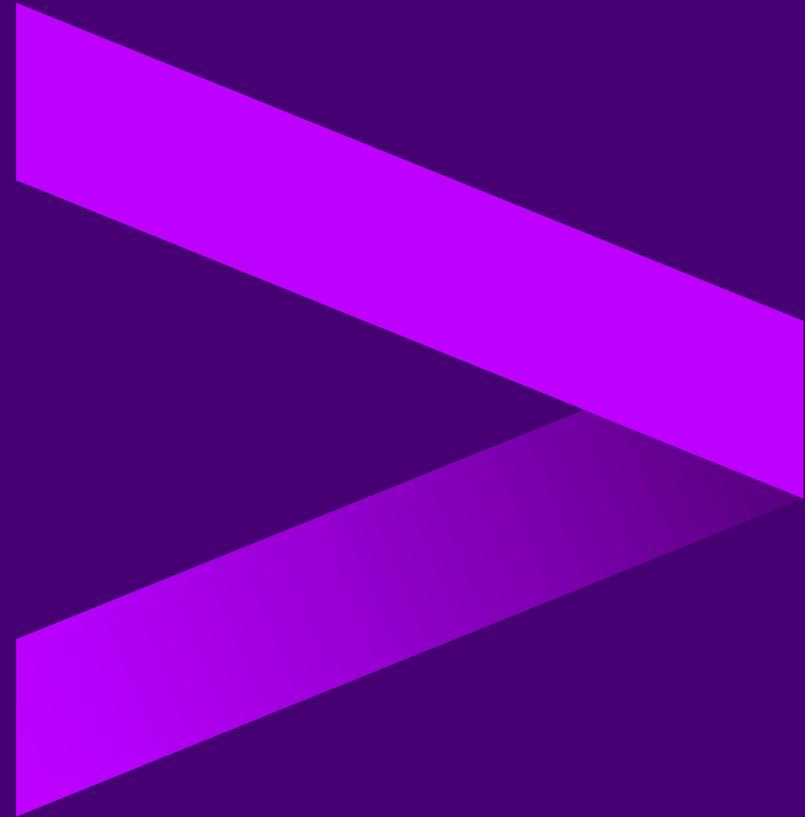accenture >

FUTURE SYSTEMS

**Thriving in a world
of constant change**

We invite you to explore Future Systems—our view of how enterprise technology will evolve over the next three years and the practical steps companies can take now to scale tomorrow's innovations and thrive in the era of boundaryless, adaptable, radically human systems.

When we envisioned the **Future of Applications** back in 2014[1], we defined three groundbreaking strategies for applications in a world in which technology-driven disruption had become the norm.

Centered around the concepts of liquid, intelligent, and connected applications, we predicted these strategies would power the high-velocity, software-driven businesses of today.

We now see these strategies adopted widely. Companies have implemented new architectures and approaches to improve agility, manage technical debt, and harness technology innovation. And they've seen their applications spur new growth, shape new markets, and reach new customers.

Today, the ground is shifting once more. Machine learning and other forms of artificial intelligence are rapidly being commercialized, powered by vast amounts of data. Computing power is now virtually limitless. The Internet of Things is gaining ever greater traction across industries.

Boundaries between applications and infrastructure are blurring to the point they're now indistinguishable. Immersive technologies are creating new possibilities for customers and employees alike. And data is being shared within and between organizations with ever greater levels of trust and security.

CHALLENGES AND OPPORTUNITIES

THE INNOVATION
ACHIEVEMENT GAP

As technology evolves at a breakneck pace, companies face significant challenges in reaping the benefits. Many are held back by patchwork ways of working and applications built for another era, limiting their ability to innovate at scale. Companies are increasingly dependent on technology that may not be dependable in helping them achieve business goals.

Today's defacto human-machine interface—the keyboard—was invented in

1874

97%

97% of business decisions are made using low quality data.[2]

85% of business and IT leaders say the strength and impact of strategic business partnerships depends on technology.[3]

85%

3

These profound changes create new opportunities and new challenges for today's companies.

How can they unlock the value still trapped in their organizations by old systems and processes? How can they build bridges from core systems to new systems? And how can they best scale the innovations necessary for success in a world of constant change?

First and foremost, by recognizing how today's systems are already evolving, becoming ever more pervasive and embedded in businesses and daily lives. It's a seismic shift—both technologically and culturally. It means it no longer makes sense to think of applications, infrastructure, and employees as discrete, standalone entities. Instead, companies need to see them as core components of **complex interconnected living systems of technologies, applications, and people.**

As they continuously morph to meet new market opportunities and challenges, these systems will create new and more interesting connections between businesses and consumers, between competitors, and between entire communities.

That's why companies now need to reorient to future systems, rather than applications.

"It no longer makes sense to think of your applications, infrastructure, and employees as discrete, standalone entities. Instead, companies need to see them as core components of complex interconnected living systems of technologies, applications, and people."

Paul Daugherty Chief Technology & Innovation Officer

SCALING THE NEW

To scale tomorrow's innovations and maximize value in an era of constant change, companies need new ways of thinking and new ways of working. Traditional IT is simply no longer suited to the ever-changing reality of today's business landscape. Companies need to adopt approaches to IT which are much more experimental, agile, and resilient.

"A good idea you can't scale is a bad idea."

Pierre Nanterme Accenture CEO

There are three fundamental characteristics of thriving future systems that will change forever the way we work and live:

1 BOUNDARYLESS SYSTEMS

The conventional IT stack has reached its practical limit for fueling business innovation. Now, systems are breaking down barriers—within the IT stack, between companies, and between humans and machines—giving businesses near-infinite opportunities to improve how they operate. Companies must design for a world of constant disruption by decoupling the entire IT stack and moving to dynamic, 'everything-as-code' systems. They must also ensure interoperability through a uniform approach to data, security, and governance, while leveraging a blend of cloud and edge computing.

2 ADAPTABLE SYSTEMS

To minimize friction and scale innovation, companies need systems that seamlessly adapt to business and technology change. Advances in trusted data and intelligent technologies are powering systems that can learn, improve and adapt by themselves. But this is not a vision of a world without people—humans are an equally critical component of adaptable systems, collaborating with machines to make reliable decisions and take confident action exponentially faster. Making systems adaptable requires flexible, living architectures, new ways to protect and nurture valuable data, and responsible approaches to AI.

3 RADICALLY HUMAN SYSTEMS

Technology interfaces are becoming invisible. Elegant and simple experiences are the new normal. Finally, machines can adapt to humans, rather than the other way around. Natural language processing, computer vision, voice recognition, and machine learning are equipping systems with the ability to talk, listen, see, and understand the way people do. Companies can now reimagine systems to empower new human–machine relationships with natural conversation, simple touches, and abundant personalization. To do so requires a culture of end-to-end ownership, exploiting human-centric development processes and a frontier spirit of experimentation.

"By understanding the characteristics of thriving Future Systems—boundaryless, adaptable & radically human—companies can scale tomorrow's innovations and maximize value in an era of constant change."

Bhaskar Ghosh Group Chief Executive
Accenture Technology Services

PREPARE TO THRIVE

On the journey to future systems, we must all be prepared to upend conventional thinking about how we build and deploy technology and embed it in our businesses and our daily lives

And, just as important, we must be prepared to reimagine approaches to IT talent. In fact, a workforce tied to the technologies of yesterday is one of the biggest obstacles to creating the expansive, flexible, human-centric systems necessary for future success.

It's time for every business to start scaling innovation in the new by building the future systems that can truly meet the needs of markets, customers, and communities. **That's how organizations can thrive in a world where change is the only constant.**

	BOUNDARYLESS	ADAPTABLE	RADICALLY HUMAN
WHY:	The conventional IT stack spanning infrastructure, data, and applications—has reached it's practical limit for fueling business innovation.	To minimize friction and scale innovation, companies need systems that seamlessly adapt to business and technology change.	More human-like interactions with technology will create radically new and elegantly simple experiences for people.
WHAT:	Distinct boundaries are blurring—within the IT stack, between companies, and between humans and machines—giving businesses infinite new opportunities to improve how they operate.	Advances in trusted data and intelligent technologies are powering systems that can learn, improve and adapt by themselves, helping people make reliable decisions and take confident action, exponentially faster.	Natural language processing, computer vision, voice recognition, and machine learning are making technology interfaces invisible and equipping systems with the ability to talk, listen, see and understand the way people do.
HOW:	Open up new space for business innovation by designing for interoperability and decoupling the entire IT stack, while blending cloud and edge computing.	Eliminate the greatest points of friction in business by introducing flexible, living architectures; new ways to protect and nurture valuable data; and responsible approaches to AI.	Deliver more personalized experiences with human-centric development processes, an end-to-end ownership culture and early experimentation with commercially-promising technologies.

References

1 The Future of Applications: Three Strategies for the High-velocity, Software-driven Business, Accenture

https://accenture.com/futureofapplications

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3 Accenture Technology Vision 2018 Survey, February 14, 2018

https://www.accenture.com/us-en/insight-technology-trends-2018

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