Trendlines: Make smarter bets

Emerging trends that will impact the design, innovation and technology choices of large organizations

Introduction

"If you always do what you've always done, you will always get what you've always got."

- Albert Einstein

Welcome to Avanade Trendlines, a new way to share our insights about the future with you. Trendlines are not predictions about individual technologies, but our research and thinking on their potential business impact, based on early signals we see across people, culture and technology.

In this inaugural report, you'll get a preview of trendlines we foresee over the next 18 months. Throughout the year we'll follow up with in-depth perspectives on each of these trends. It's reading that's meant to provoke discussion and debate for the executives, strategists, designers and architects creating the experiences that will shape all our lives.

Making a human impact

Over the past few years, we've watched, read and talked with colleagues, friends and family about the impact technology is having on society. This is not a new phenomenon, but the consequences for society keep climbing, especially as technology is increasingly ingrained into our professional and personal lives.

Of course, businesses aren't passive participants in technology change. If you're like most companies, you're either embarking on or are already underway with some sort of business transformation, made possible by the democratization of advanced technology. It's a complex journey, especially when you're developing or implementing strategy while riding waves of change in social, mobile, cloud and data – and, now, artificial intelligence, blockchain and, potentially, quantum computing. This evolution is not going to end.

Large organizations need to consider the impact that their transformations will have on their employees, their customers and society at large. They need to develop guidelines to act responsibly. These principles should inform how you think about design, innovation and technology too. We foresee three trendlines where these considerations may be most important over the next year or so: taking action on digital ethics, combining intelligence and design, and preparing for experiences without boundaries.

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Trendline #1: Take action on digital ethics

It's not good enough anymore to just talk about ethics. A new combination of technologies can cause unintended consequences that raise ethical questions. You need to be prepared as ethics becomes a board and C-suite topic. Leading organizations will show others how it's done and provide their people with guiding principles to build ethics-by-design into their work.

The impact of unintended consequences is greater than ever

Business ethics has long made for good conversation and learning, but today is different. More organizations have easy access to a broader set of technologies that will affect more people through automation, AI, IoT, the continued proliferation of data collection and global networks. That expands the number and type of ethical challenges for today's enterprise. These developments also increase the speed and scale with which challenges can affect a company's employees, customers and partners. As a result, the impact of unintended consequences is greater than ever before.

For example, will you automate without empathy and inadvertently miss your social responsibilities, amplify inherent biases in data or make unauthorized use of data? These challenges will proliferate, requiring consideration not just for the impact on your employees and customers, but on society.

Companies have a societal responsibility to get things right from the start. That requires a comprehensive definition of ethics and an accompanying system of values and moral principles for the control of digital interactions among people, business and things. Designers and engineers should guide their work according to company ethical frameworks and playbooks that explicitly define these values and principles. Organizations need to think through all the ways that the technologies they use should act to fit their customer and employee beliefs of what's right and wrong.

This is not a compliance issue; it encompasses areas such as risk management, product development, marketing, corporate citizenship and brand reputation. Developing responsible products and services is risky but has benefits beyond profit by creating a sustainable value to society.

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What to do now

- **Make hard choices** and be transparent about the ethical principles that resonate with your employees and customers.

- **Don't be silent**; join a forum in the community to share and learn about best practices to implement in your organization.

- **Publish an ethics playbook** to give employees a common ethical direction as they design and build new products, services and experiences.

What to do next

- **Launch an ethics change program** to educate employees about their evolving roles, such as an ethics reviewer who works with designers and software engineers to test and validate algorithms and data sources for bias.

- **Provide the tools employees need** to ensure they're making the right ethical choices. You already have compliance and risk management tools – include them and build out a toolset beyond them, such as one that reviews and keeps track of AI algorithms with data bias.

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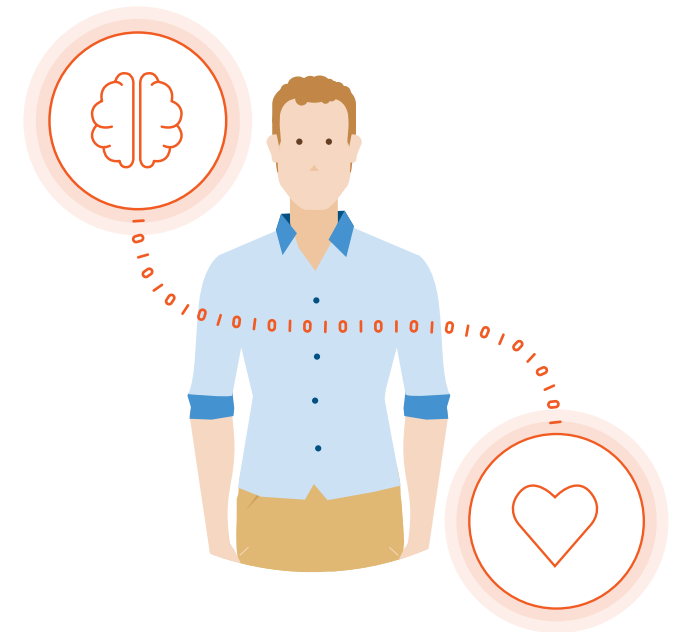
Trendline #2: Intelligence meets design

We're in the year, if not the decade, of the algorithm, when data models can optimize virtually every aspect of a company's operations. Model-driven companies bring design and data science together to create more personalized products and services to better engage and retain their customers. It's time to apply these same practices for employees. Innovative companies prioritize both disciplines as primary functions, leveraging design and analytics talent at the earliest stages, with a goal of improving both the employee and customer experiences.

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Elevate the employee experience

Most executives will tell you they believe in using data to solve business problems, but they continue to take a siloed or legacy-data approach to finding new insights in pursuit of the ultimate customer experience. Forward-thinking executives are moving beyond this. They're putting their data scientists and creatives side-by-side on cross-discipline teams. The objective is to elevate the employee experience to be on par with the customer experience in order to address business challenges and create new products and services.

But success isn't inevitable. Design and data science are thought of as individual skillsets and neither is considered a core capability in an enterprise context. The evolution to data- and algorithm-led organizations may not work if companies don't infuse the model-driven approach into their organizational DNA. We see early signs of success for this type of collaboration within marketing teams and startup companies, where marketing and sales focus on data, personalization and customer service experiences.

Traditionally, the employee experiences are a secondary priority. But the importance of the workplace environment cannot be overestimated for the financial success of your business. Research from the Center for Information Systems Research (CISR) at MIT Sloan School of Management shows that organizations with the best employee experience achieve business benefits, including double the customer satisfaction, twice the innovation and 25% greater profitability, compared with competitors.[1]

Getting data scientists and creatives to work together requires organizations to integrate intelligence and design capabilities and toolsets, eventually extending to employees working with AI design and data tools. The collaboration will foster an environment in which designers and data scientists can be successful – one that opens the door for curiosity, creativity and the desire to make an impact on people's lives.

1 "Building Business Value with Employee Experience," MIT CISR Research Briefing, Vol. XVII, No. 6, June 2017

What to do now

- Prioritize and re-engineer end-to-end **employee experiences** to be on par with your customer experiences.

- Form **design, data and business development squads** to change the way of working – where people and ideas are connected, systems are integrated, and you balance new customer and employee experiences with privacy and other concerns.

What to do next

- **Examine your business model** for ways to foster greater creativity and a focus on data science across all systems and business functions. Ensure that experimentation and algorithm development are deeply ingrained in everything your business does.

- **Prepare for the future enterprise app model** in which enterprise technology will be AI-supported, model-driven and built by empowered citizen designers and developers.

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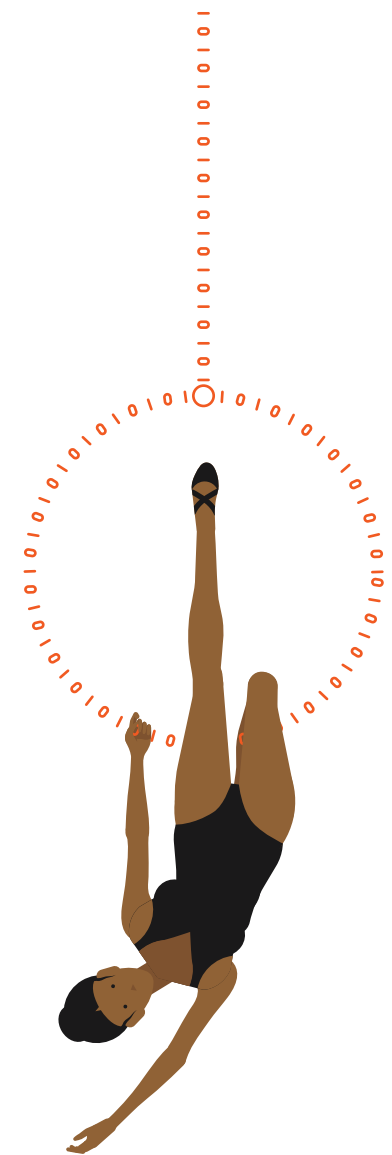
Trendline #3:
Experiences without
boundaries

We're at the dawn of new types of consumer and employee experiences. Mobile will no longer be defined as just your phone – it is you and your connections to any object or device, bridging the digital and real and using physical touchpoints to mediate the continual exchange of data and services. Interactions no longer need to be fixed to a device. They are boundaryless and frictionless. Creating these new experiences requires a new mindset and an IT architecture intervention.

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Creating new experiences requires an IT architecture intervention

A few years ago, there was a mantra in modern application design and development about mobile-first, cloud-first, the idea being that creating new experiences would be prioritized on a mobile device. Fast forward to today and we're still stuck trying to manage design across a desktop and mobile world. Future experiences will be based on a mobile-only mindset, in which mobile does not mean your phone. It means your wearables, car, smart clothing, second screens, connected home devices and more – it's individual.

Instead of using a mobile device simply to access the virtual world from the real (as with online buying), think about how individuals and their associated devices mediate a continual two-way exchange between both worlds. You and your devices act as your ID, your wallet, your remote control. Consumers and employees can enjoy frictionless experiences that augment their lives with relevant information presented across any form.

The current legacy mindset must shift because future applications will not look like today's. In fact, don't even think about the desktop. The interactions you have today with your data and services won't resemble the interactions possible with the interfaces of tomorrow. You will move seamlessly from touchscreens to conversations through voice and back, aided by a hidden exchange of data and services across devices on the street, in your car, at the store, in your office and at your home.

This requires a new technology approach that takes advantage of screens, augmented reality, Bluetooth, mesh networks, IoT, computing power on the edge, advanced analytics, intelligent automation, blockchain and more. It requires new architectures, new design principles, new ways to exchange data, and even new business models and partnerships.

If you think this is fanciful, think again. It's real today in emerging markets that leapfrogged mobile-first to begin as mobile-only. And nothing's holding back these markets except the speed with which humans can adapt to change.

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What to do now

- **Start with the why**, then the wow to ensure you aren't using new technology just for technology's sake.

- **Think of data as talent** and train your entire organization to ensure they understand the power of data and algorithms and how to work with them just like they do with their colleagues today.

- **Unite with your business frenemies** to create frictionless experiences that have no boundaries.

What to do next

- **Forget today's devices and interaction models** and ready your designers, data scientists, developers and infrastructure to support new design paradigms and connected experiences for consumers and employees always on the move.

- **Prepare for new relationships with customers**, ones in which they have more control and more choices over whether, when and how they interact with you.

- **Think beyond the cloud.** Applications at the core of an organization's business transformation no longer need to run in the cloud. They can run at the edge, on local devices, where they can drive business results in real time.

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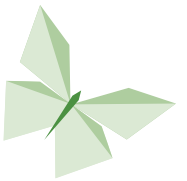
Join the conversation

Implementing ethics, integrating intelligence and design, and breaking boundaries are among the big trends we see affecting large organizations. We'll explore these topics in depth, including both their business and technology impacts, in the Trendlines reports and perspectives we issue over the coming year.

Want to know more? Subscribe to make sure you receive updates on our latest Trendlines reports and perspectives. Visit www.avanade.com/blogs and click the subscribe button. And look for related content at www.avanade.com/trendlines.

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