# 5 Key Digital Trends for 2018 and Beyond

Introduction

We love looking forward, and trying to help Centric and our clients prepare for the future.

Rather than just list off a few hot trends, we wanted to dig deeper in the areas where our clients have the most need - and explore how those needs intersect with current and emerging digital trends.

Investing in shiny new technology just because everyone else is talking about it is not the smart play. A must: Having an informed perspective about enablement across the organization, your ecosystem of business partners, and the broader industry landscape.

With this in mind, several of our digital thought leaders shared what they envision for the future in areas such as strategy, design, marketing and technology. We arrived at six digital trends we see as growth levers and innovation engines for 2018 and beyond. Some of these are new, while others are evolutionary. Let's take a closer look:
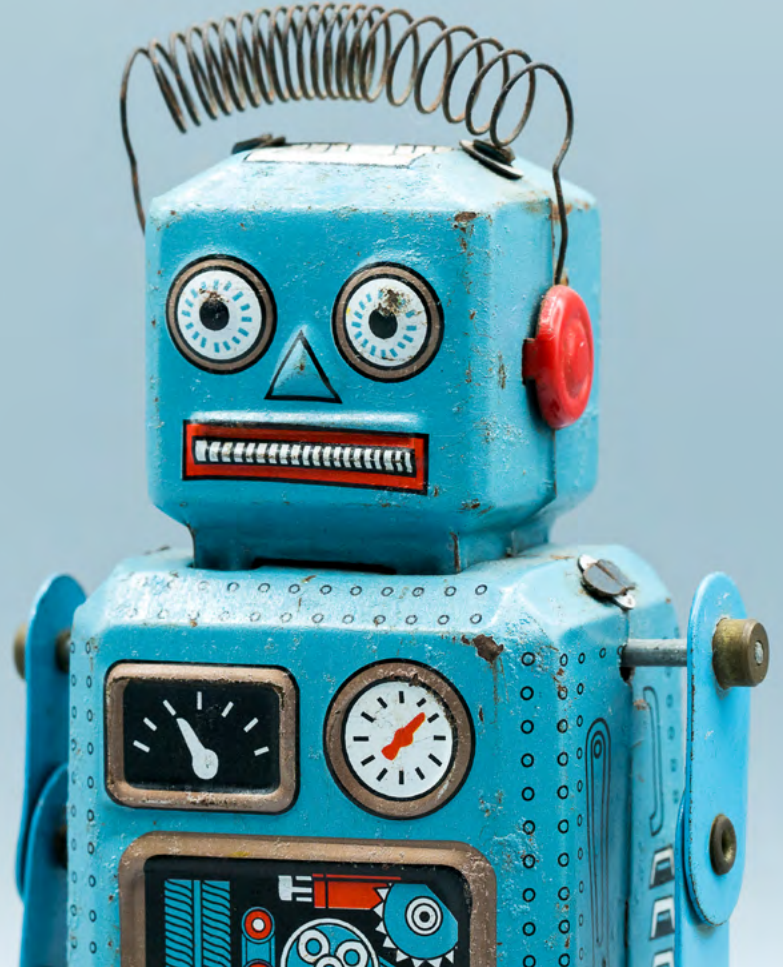
1 | AI is No Longer Just Hype

Artificial Intelligence will be a big deal in 2018 and beyond. But for those of us who aren't PhDs or data scientists, how do you separate hype from reality? Why is AI important, and how can we articulate this importance within different industries and organizations?

I'm neither a PhD or data scientist, yet I know AI is important for three simple reasons:

AI Requires a Product Mindset

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Even with all the advances in natural language processing and machine learning algorithms, AI isn't something you can buy off-the-shelf. Why? Because AI is rather primitive when compared with the human brain's ability for contextual learning and predictive inference.

To be successful with artificial intelligence requires us to have a

product mindset. Unlike projects, products have a longer life-cycle. Products require fixed teams that focus on outcomes instead of outputs. This fosters innovation, leading to greater freedom and responsibility to deliver AI-enabled "products" that provide the best possible experience for customers, employees and business partners.

AI Rationalizes Big Data Investments

②

For years, we've been spending big dollars on big data. We've got data lakes which are fed by raw data from websites, mobile apps, social media, marketing campaigns, back-office systems and third party vendors. However, the typical human brain – and our busy lives – doesn't permit us the time and energy to extract insights in this real-time, always-connected digital world.

So now what? Artificial Intelligence has a limitless appetite for data. AI is built on expectations and probability that inform underlying predictive models and associations between raw data and likely intent. By combining big data and artificial intelligence with human-centered design thinking practices, we can begin to finally demonstrate return on investment of big data investments.

AI Improves Collaboration Between Marketers, Technologists and Operations

③

At Centric, we've been fortunate to work with clients on their AI journey. While every organization is different, we have observed some initial best practices:

Product, IT, Marketing and Operations teams are building and executing plans together. Getting to success with AI requires

a digital ecosystem approach. You can use platforms like Facebook Wit.ai, Microsoft Luis.ai or Amazon Sagemaker, but you'll need technical staff to code for the platform, software vendors who are flexible, and consultants who keep everyone honest and the product development life-cycle from getting bogged down.

2 | Design Systems Have Escaped Silicon Valley

Unless you are a designer, you may have not have heard a lot about design systems. Design systems are a product to make your product development process easier. Unlike style guides, design systems are "living documents." They are not a .pdf file that gets created and referenced occasionally. Most are usually documented using a website that is continuously updated and maintained with the latest design and code components.

Many large organizations that use design systems have one or more product managers whose primary role is managing the development and maintenance of the design system. Enterprise-level design systems are not just for consumer-facing websites applications coming out of Silicon Valley. They are being used by some of the most innovative companies in the world, including Salesforce, GE, IBM and Atlassian, among others.

With these public successes, the need for design systems is starting to creep outside the valley and into the enterprise clients we work with. As internal systems become more and more complex, we see a need to decrease the complexity and time to develop these applications

and reduce user confusion. For example, we recently helped a large multinational insurance firm with numerous complex internal applications by creating a new design language and system that will allow them to build a consistent and easier experience for their users. It will also speed up the development process.

Design Systems help organizations:

Design Smarter and Faster
Your organization may have a small, overworked design team. By utilizing a design system, your design team can focus on strategic design challenges instead of tactical one-off design solutions. Even if your organization does not have a dedicated design team, a design system can help streamline the design process and produce more work with less staff.

Reduce Design and Technical Debt
As applications age and go through iterations, they acquire debt. Technical debt with larger and more bloated code bases and design debt. When strategic design decisions are deferred, this leads to one-off creative solutions and designing for the short-term. This debt manifests itself in inconsistent styles and interactions, interfaces disconnected from design principles, and scope creep, among many others.

Design systems help keep design and technical debt in check by eliminating short-term design decisions and decreasing design and development overhead, allowing your teams to focus on innovation instead of maintenance.

Reduce Confusion and Inconsistency
Inconsistent user experiences lead to confused users. By creating standardized components and workflows, we can create more predictable and easier-to-understand experiences for users as they move from one application to another within your application portfolio. This consistency leads to increased user success and satisfaction.

Prototype Faster
Instead of creating new features and experiences from scratch, designers can pull components from a design system and more rapidly create and test new features. Having all the LEGOs available doesn't make you less creative. It allows you to quickly build many things. It allows you to more quickly try, fail, learn and repeat.

Iterate Faster
Teams can move faster when they have the code already available and the design components easily accessible with a few lines of code. This makes iteration and experimentation simple and pain-free.

Improve Usability
Applications using design systems benefit from improved usability because they have a consistent experience throughout. This consistency leads to decreased problems, friction points and cognitive overload when using complex applications. The consistency of experience driven by using a set of tested and validated components means less complexity and less problems further down the development process.

Building a design system that will benefit your entire organization is a lot of work, and we did not even talk about the politics and governance of doing so. However, the rewards outweigh the organizational challenges.

You just have to remember: the best strategy is a crawl, walk, run. Do not try to change the world immediately. Focus on what is right in front of you and solve for that, while considering the future needs.

3 | Voice UI Expands into the Enterprise

It's a good time to be a computer scientist. In the last 25 years, our field has seen unimaginable growth. Think about the innovations that have been introduced during this time:

- Graphical user interfaces
- World Wide Web
- Smart phones
- Cloud computing

The pace of innovation continues at break-neck speed, with each new innovation coming to market faster and disrupting industries that have been around for decades. I believe that we are at an inflection point with one such disruptive technology: Voice.

Voice recognition has existed for years, with varying levels of success. By now, we've all had the frustrating experience of interacting with interactive voice response (IVR) systems on the telephone. More recently, voice technologies like Amazon Alexa, Apple Siri, and Google Home

have made their way into our personal lives, helping us find directions, turning on the lights in our home, and playing our favorite music simply by using our voice.

The success of voice-enabled personal assistants is ushering in the next disruption in business computing: Voice User Interface or VUI.

The graphic below shows the progression in user interfaces starting in the 1970s to the present (2017):

- **Character Mode (using a keyboard)**
- **Graphical User Interface (using a mouse and keyboard)**
- **Web (using a browser and a mouse)**
- **Mobile (using a smart phone and your finger)**
- **Voice User Interface (using your voice)**

VUI

Mobile

Web

GUI

Character Mode

1970s   1980s   1990s   2000s   PRESENT
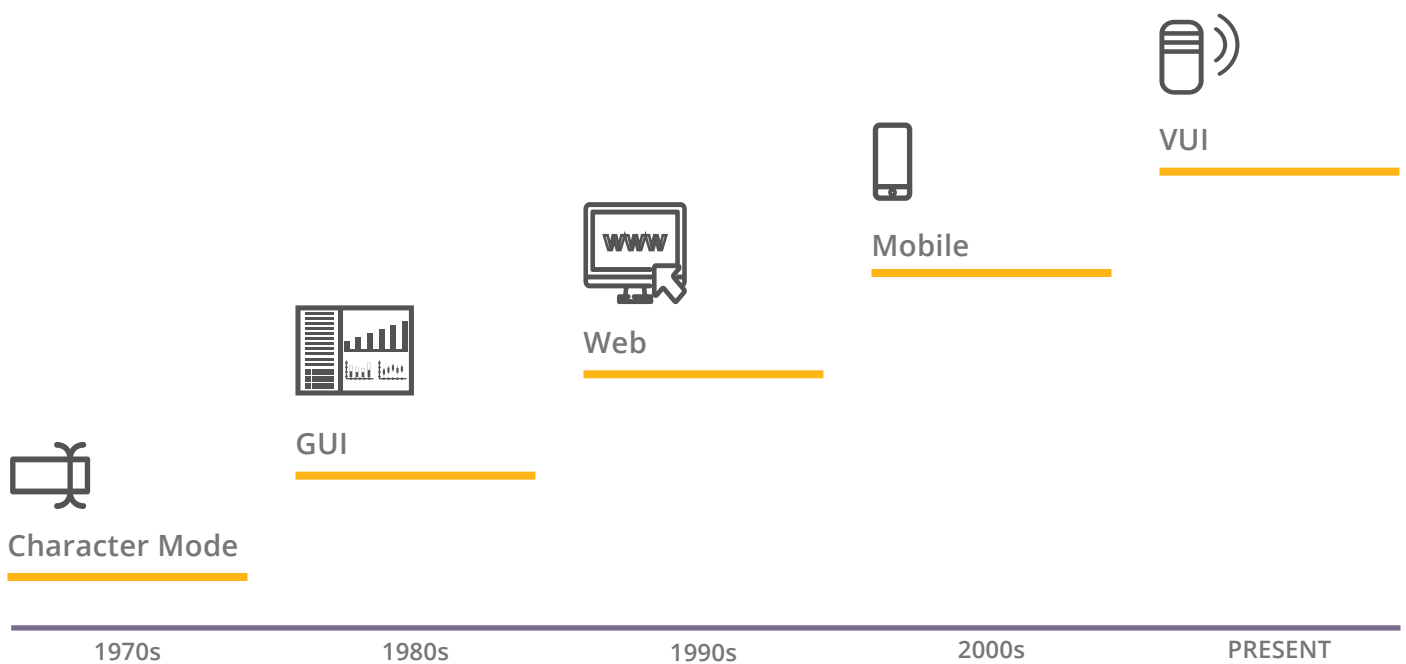
The progression of user interfaces from keyboard, mouse, touch and voice has made the process of interacting with computers much simpler and intuitive. Voice is no different: allowing users to initiate simple conversations with a computer as if he or she was speaking with a friend or family member.

However, making this interaction natural and intuitive is NOT simple! Users can quickly become frustrated with poorly designed voice user interfaces (think about IVR telephone systems). Designing and implementing VUI requires new ways of thinking about how your organization interacts with customers, employees and business partners.

VUI technologies have reached a point where understanding the user's words is a given. But understanding intent (what the user wants the computer to do) is what makes or breaks the user experience. The technologies that succeed in this new frontier will be the ones that can quickly and correctly understand a user's intent and carry out the action(s) appropriately. I can't wait for the day when I can ask Alexa to write my next blog!

4 | If You Can't Cloud, You Can't 2018

Cloud is the foundation for everywhere you want to be in 2018, and 2019, and 2020…

For many organizations, the months of 2017 were spent the same way as the months of the previous five years: hand-wringing and worrying about whether they should dip their toes in cloud, if they should dive in, or if they should eschew cloud altogether because of whatever good reason they manufactured. Kicking the can down the road is not a sustainable strategy.

But, we were energized and inspired by working with organizations that were re-inventing hybrid models that consisted of data-here/data-there, compute-here/compute-there, and lift-this, but don't shift that (and so many more that you can think of). Cloud adoption isn't easy, and all organizations have some degree of hem-hawing and second-guessing.

The good news for 2018 and beyond; It no longer matters.

It no longer matters because the tools and techniques that are increasingly required to do your job are cloud-based. And to use them, a 'cloud first' mindset is a necessity:

The data and processing needs from Internet of Things (IoT) products and devices are massive and constant. Sure, you can buy-and-build data collectors, but there is also all the sifting, processing, analyzing, and storage dependencies. Even if you're focused on only 1 of 100 attributes you are collecting today, eventually you will want to correlate the other 99, right? You don't have (and should not have) the infrastructure for that. But the cloud does.

The scope and breadth of data needed to feed the engines of AI (artificial intelligence) and ML (machine learning) makes it cost-prohibitive to manage yourself. Simply copying data to an AI process that lives in the cloud will no longer be viable using ad hoc processes. Your data needs to live in the cloud.

To churn all this collected data, you could conceivably build your own AI clusters and run it on local servers - but now you have idle compute capacity sitting around when you don't need it. Whatever Total Cost of Ownership model you used to justify buying and building instead of leasing may not be seeing the big picture.

Servers are dead.
Both in physical and virtual forms. A bold statement, but accurate because the flexibility gained from freeing your applications from the confines of physical and virtual machines by breaking them down at the functional level not only gives you the ability to leverage code across silos - it enables you to reduce your costs by nearly two orders of magnitude.

What's the likelihood of business continuity or disaster recovery, availability, security, and performance needs being less - or even the same - next year than they were this year?
Wouldn't it be nice to test the resiliency of your corporate digital assets daily or hourly or even constantly rather than annually, sporadically, or never?

It comes down to this: is your organization in a good position to embrace these changes and capitalize on digital disruption, or will you struggle to move forward to the head of the class?

5 Start with Journey Mapping in Mind

Across the business sectors we serve, clients are asking us how they can adapt to the digital world and differentiate their business. They seek to build more digital capabilities, create more digital offerings, and become "digital first" organizations to create competitive advantage and achieve their business goals.

To create this competitive edge, digitally savvy companies understand where to be when their customers needs and expect service. B2B and B2C customers are demanding a digital customer experience that affords easy maneuvering across an omni-channel and platform environment.

Journey mapping is a great place to start if you already know where your critical experience problems are across your business.

Journey Mapping is a Tool, not a Strategy

Journey mapping is a powerful tool. It guides decision-making and understanding, empathy of the customer experience within each touch point, and context as the customer forms relationships with your business. Leaders and stakeholders use journey maps to tell the story of a customer over a period of time by highlighting the moments that matter and moments of truth as well as gaps in service where a customer's experience is unmet or underserved.

Journey mapping draws attention to the pain points. This allows business leaders to identify key areas to focus investment and resources. It helps them decide whether to make improvements or begin innovating when markets shift, threats emerge or interests arise. Leaders may choose to try something different that creates new revenue for your business.

Journey mapping also illustrates organizational silos formed in the business value chain. When a company is siloed, information is not shared - and customer experience breakdowns and barriers are revealed. This can make the digital or omni-channel experience for your customers feel more fragmented, confusing and painful. Their frustration can be detrimental to your business. Why? Because frustrated customers are more likely to take their business to your competitors, which puts revenue at risk and weakens your bottom line. Journey mapping can reveal those key insights that matter most to you.

Design Thinking and Journey Mapping

Design thinkers target end-to-end experiences, customer goals, or other known high-value problem areas for the business.

For example, consider different types of customers interacting with a bank's mortgage division. A journey map visualizes all the steps, and the hoops and hurdles someone must clear to reach their goal - from intent to discovery, through funding the loan. If a bank consumer starts their journey on a phone, then desires to complete the application at a branch because they need reassurance they are making the right financial choices, a journey map will illustrate each moment that matters and where friction occurs. Friction might be due to silos - for example, if the mortgage application process started on a mobile device, but doesn't appear on the loan officer's system during the customer meeting at the branch office. This might force the potential customer to recreate the application, or abandon the application process to return later. All of which creates risk for the bank's potential revenue.

Journey Mapping is People First

With all of this in mind, the most important benefit point is that journey mapping fosters the critical people-first "mind shift" that companies are quickly realizing as a key to their overall growth. Because this fundamental shift must begin with leadership, this tool is a fantastic mechanism to help companies visualize quick win opportunities, guide strategy building, and grow ROI and Customer Lifetime Value (CLTV). A journey map, paired with a few concepts (screens, customer interactions, etc.) provides the narrative you need to communicate, make decisions and take appropriate action.

Conclusion

With digital transformation continuing to evolve and disrupt industries, it becomes increasingly important to consider how to incorporate the right mix of digital capabilities into your business strategy.

Digital strategies have traditionally focused on one or more of the following:

1   **Deliver an unmatched customer experience**

2   **Apply digital technologies to deliver new or differentiated capabilities, products, services**

3   **Evolve internal systems and operations to leverage digital**

4   **Transform the organization's practices and culture to operate and think digitally**

5   **Grow and retain customers through application of digital marketing channels and solutions**

Looking ahead to future yeards, many organizations are ready to evolve their strategy to the next level. Depending on [where your organization is in its digital journey](#), this evolution might take the form of:

1   **Combine several digital technologies for greater impact.**
Example: Apply AI and Voice User Interface to an app.

2   **Broaden digital marketing capabilities from acquisition to the end-to-end customer lifecycle.**
Example: Build a 360-degree customer profile to use across post-sales support and service organizations and touchpoints.

3   **Expand digital pilots so they turn into how you do business**
Example: Replace legacy customer service processes with integrated, omni-channel customer engagement models based on insights from a successful pilot of a new product line.

4   **Reorganize internal teams and grow skill sets to better manage digital experiences.**
Example: Create a digital product organization to manage end-to-end strategy, design, marketing, technology and analytics. Hire data scientists and digital innovators to seed the new organization.

5   **Adjust operational and vendor management processes to realize the value of new digital technologies.**
Example: Adjust business processes to optimize recently implemented supply chain technology.

We know the years to come will be full of exciting advancements both large and small. Seize the opportunities that will bring your organization and customers the greatest value. That's the essential foundation of a successful digital strategy.

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