Virtual interfaces and human inspiration will shape the IT experience for leading organizations.
IT Operations

Virtual interfaces and human inspiration are among the factors that will shape the IT experience for leading organizations.

Technology changes constantly, creating new opportunities and challenges every day. Information technology professionals have a unique responsibility to keep their organizations running smoothly, delivering results to their users while evolving and advancing to meet new requirements and anticipate future growth.

But as expectations placed on the IT department continue to rise, IT leaders face a broader set of challenges, many of which have less to do with the technology itself and more with how it’s applied, and its ramifications for the entire organization. Whether it’s to empower innovation, improve user experience or investigate forgotten data assets, enterprise IT in 2020 will turn its attention to forces of fundamental change in the technology world.

In 2020, we’ll see virtual reality (VR) and augmented reality (AR) expand beyond gaming headsets and the design lab. Organizations from governments to healthcare providers are using AR and VR in compelling ways that will pave the way for better mass-market applications. In 2020, AR and VR will grow in the enterprise market, setting the stage for a consumer explosion.

The entire VR/AR market is expected to reach $210 billion by 2022, with AR a significant portion. In 2020, we’ll see continued adoption of AR across manufacturing, search and rescue, healthcare and retail. It is increasingly common for workers in the field to use AR technology to access instructional and metric overlays that color their environments. Search and rescue missions will become less dangerous as teams start preparing with 3D maps and overlays of dangerous environments and scenarios.

Speaking of 3D, medical imaging will be widely enhanced with 3D models of patients for more precise clinical knowledge. Johns Hopkins has already developed an AR solution to train brain surgeons for delicate procedures.

Splunk Chief Technology Officer Tim Tully sees several factors holding back consumer applications of AR, including the infrastructure. He expects that only with widespread rollout of 5G will AR come into its own, much as smartphones and 4G enabled on-the-go video streaming and instant-order apps like Uber and Lyft.

Another major limiting factor, Tully says, is the lack of consumer-focused design. Even as enterprise and industrial applications evolve, they’re not yet consumer-friendly enough for daily users. Tim champions consumer-centric design that truly works for the user.
"Existing AR applications aren’t created with much empathy for the consumer and the tasks they’re out to accomplish in their everyday lives," he says. The AR devices that provide a better user experience across everyday tasks have massive potential.

Empathy for the consumer also requires an understanding of what value they get from a product. As augmented reality matures, we’ll see more and more applications that make work and play more engaging and more rewarding. Ultimately, the goal with AR for application developers should be to blend important data with the physical world.

Access — in terms of both tech and money — will be key in this process. Technologically, today’s mobile phones might not be immersive enough to provide a true AR experience; actual wearables where the AR experience can be seamlessly blended with the real world will perfect the experience. As will reduction in cost, which can price out the average consumer. As with most technology, prices will go down with rising competition and the availability of cheaper, newer components.

A lot of this is here already, or just around the corner. Soon, more compelling AR Cloud applications could play a large part in enabling the mirrorworld: Imagine walking down the street, wearing your smart contacts (Samsung has a patent), and getting a constant feed of context and information about the real world around you. We already have a primitive version of that via Yelp’s monocle feature and Google Lens. Expect it to more thoroughly permeate our reality in the next five years.

Automation

**Companies using automation to replace employees will lose to companies using automation to empower them**

**Efficiency will only take you so far. Use automation to drive innovation.**

Companies that race headlong to embrace new technologies — especially technologies that automate jobs previously held by people — may actually be sabotaging their long-term success rather than enhancing it.

Deloitte’s *State of AI in the Enterprise* report concludes that enterprise software is the easiest and most popular path to artificial intelligence, with 59% of respondents saying their company uses it. The survey also presents a troubling dichotomy; while 79% of respondents say AI technologies empower people to make better decisions, 63% say their company wants to cut costs by automating as many jobs as possible.

The efficiencies offered by automation are attractive, but companies that prioritize cost reduction above all else are only seeing half the potential. Doing the same work you’re doing today faster and cheaper may make sense on a spreadsheet, but not if it keeps you from evolving and growing in a marketplace driven by innovation and disruption.

AI-powered automation can take over repetitive tasks that demand less creativity and insight. AI-powered analytical tools can derive new insights from vast amounts of data, in everything from IT operations and cybersecurity to business operations and supply chain management. The companies that will get the most value out of AI are the ones that consider the whole opportunity: delivering new insight while freeing up your best minds.
to make new contributions that raise the top line, as well as reduce overhead.

There’s also the hit companies take when they make their workers feel disposable. Strong culture and high employee engagement are essential to high-performing organizations. People can understand a company’s evolution, even painful ones, if they feel that the workforce is still valued in the new reality.

Deepak Giridharagopal, CTO of Puppet, predicts that 2020 will kick off a new era of introspection when it comes to the balance between people and technology, especially when it comes to automation.

“One camp sees a human being and says, ‘That human being should be replaced with a Roomba,’” Giridharagopal says. “The humanity inherent in that job is not important.”

That can be a very seductive mindset for companies that see digital transformation solely in dollars and cents. “Roombas are cheaper than humans, so why not replace the latter with the former?” Giridharagopal adds. “I see this ‘substitution bias’ in cost-obsessed and scale-obsessed companies. They fixate on supplanting employees with automation, when in reality humans are rarely fungible.”

“No matter how far technology has advanced,” says Splunk Chief Product Officer Sendur Sellakumar, “organizations are still built and grown by people. Leaders who don’t understand the fundamental humanity of the enterprise are doomed to fail.”

Giridharagopal and Sellakumar agree that automation is a way to enhance the working experience for employees and allow each to contribute at a higher level, and should not be used to drive efficiency at the cost of innovation.

“I don’t want to replace you with a Roomba,” Giridharagopal says. “I want to build you an Iron Man suit.”

**UX/Consumerization**

*2020 will be the year of the indulgent user experience*

**Enterprise software doesn’t have to be a boring slog. There. We said it.**

Ever since “consumerization of the enterprise” became a trending topic, enterprise software companies have been saying they place a high value on design and user experience (UX). But the fact is that many of them don’t. Enterprise employees spend their days jumping back and forth from modern, design-forward apps to dull, monolithic programs with fundamentally unfriendly UXs that haven’t changed for years.

Splunk CTO Tim Tully is passionate about design and the potential it has to enhance the lives of enterprise employees. He has elevated the focus on design at Splunk to drive a completely new user experience — one so focused on providing a rich and rewarding UX that he calls it indulgent.

According to Tully, 2020 will be the year of the “indulgent user experience.” And that doesn’t bode well for the holdouts.

“For decades, enterprise software users have been beaten down by the monotony and tedium of the software they are forced by their teams to use,” Tully says. “But enterprise software companies had little incentive to do anything different.”

Their priority was selling as many seats as possible and keeping the user experience consistent in favor of functionality, he says. But that attitude led
to stagnation. Users accepted a dull or awkward experience — and the poor outcomes that resulted — because they had no alternative.

“Enterprise customers become so reliant upon bad, yet functional, software that they’ll buy it no matter what its user experience is like,” Tully says.

But enterprise users have more choices now. They may still find themselves spending a lot of time bogged down in dull or difficult interfaces, but they also have a growing list of exciting, engaging apps in their tech stack — apps like Slack.

It’s hard for users to accept poorly designed apps once they’ve experienced well-designed ones. For one thing, an app built with the user experience in mind is easier to use.

“Design should communicate function,” Tully says. A well-designed product, physical or digital, tells the user how to use it, without an instruction manual. In that way, design provides a measurable, practical benefit to users: better outcomes.

Tully also believes that quality design, mixing function with elegance, gives users confidence.

“Elegant design pulls you forward,” he says. “It gives you an edge to tackle whatever action is in front of you. Using a well-designed product feels more like a motivation than a chore.”

Enterprise software companies who are still producing dull user experiences will find it harder to keep their users loyal, Tully says, and will be even more vulnerable to disruption. He points to startups in financial and HR software categories that have made significant inroads against more monolithic legacy competitors.

“This is about improving something fundamental,” Tully says, “Splunk is improving the way people act on information.”

“When it comes to enterprise UX,” Tully says, “the companies that will succeed are the visionaries that design software to make people’s entire experience better.”

**The human impact**

When trying to predict the future of IT, the easiest path is to single out particular technologies and trends that are on the rise, and to predict that their rise will continue. That approach has value for IT decision-makers who need to plan for headcount, for instance, or infrastructure. The bigger challenge is to identify the macro trends that will shape the way IT departments address their fundamental business challenges.

In 2020 (and beyond), the IT leaders who will have the biggest impact on their organizations are the ones who focus on how their technology decisions intersect with their people decisions. For many, the best practice would be to seek a balance between the two.