



2022 OUTLOOK REPORT

Future Forward:

12 megatrends to transform
your business in 2022



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Introduction

Are we there yet?

For the last two years, that's the question that's been on the tip of the collective tongue of businesses as they searched for a sign that the Covid-19 crisis was over. In 2021, companies across every industry were forced to pivot, reconsidering assumptions and readjusting expectations. They needed to embrace a new way of working, of living and of moving forward.

When it came to digital transformation, their level of success in addressing change meant that implementation plans either stalled or soared. Despite the fact that the pandemic is still around and supply chain issues have not been resolved, we're seeing a slow return to optimism.

As we move headlong into 2022, we're seeing light at the end of the tunnel, prompting an opportunity to refine and redefine a brand-new world. Signs are pointing to new investment, increased budgets and the aggressive and proactive pursuit of technical and business innovation. In fact, according to International Data Corporation's recent report, in 2022

more than half the global economy will be based on or influenced by digital. It's predicted that direct digital transformation investments will accelerate to a compound annual growth rate (CAGR) of 16.5% in 2022-2024, up from 15.4% in 2019-2024, representing 55% of all information and communications technology investments by the end of 2024.

In 2022, people, processes and technology take center stage as Gartner predicts that digital transformation is expected to take twice as long and cost 2X more than anticipated. As businesses look to innovate and differentiate as they emerge from the pandemic, they'll need to get serious about implementing the level of change management needed to drive deeper digital transformation.

In this 2022 Outlook Report, HGS identifies and explores 12 key megatrends that will impact the Future of the Enterprise, Future of Technology and Future of the CIO in the year ahead. Leveraging these trends will require businesses to think and act more boldly and will center around key themes of optimization, innovation and organizational change.

Moving from emergence to convergence

AI, IoT and super-fast 5G networks all are serving to augment capabilities that weren't possible just a few short years ago. Driven by increasing volumes of data, faster network and processor speeds and the "democratization" of data, these technologies will converge to impact businesses and their customers in ways that result in much more than the sum of their parts.

Transitioning from experimentation to prioritization based on ROI

While the last two years may have allowed enterprises to experiment with new technologies or digital transformation approaches, 2022 will be the year to measure the value of those investments and prioritize next steps based on those results. Consider that by 2023, 1 in 2 companies will generate more than 40% of their revenues from digital products and services, as compared to 1 in 3 in 2020.

Enhancing customer and employee experience via personalization and customization

Work-at-home and hybrid work models combined with increasing demands from customers for more personalized experiences will require businesses to think strategically to provide tools and technologies that will address both of these challenges. Hyper-personalization, product customization and tools that facilitate collaboration and communication in changing workplace models will be critical.

Digital transformation strategies centered around the Cloud and cybersecurity

With the rise of hybrid and multi-cloud environments, businesses will need to grapple with more complex distributed ecosystems. Integrating and managing these environments will be critical to digital transformation in 2022, made even more challenging by an increased need to do so with an eye on security.

Significant investments in automation technologies

The robots just aren't just coming....they're here. In response to supply chain challenges, labor shifts and the need for speed, businesses will be accelerating their investment in all things automation to drive performance and change fundamentally how they are managing themselves, from the back office to front-line customer interactions.

Building digital dream teams

CEOs and CIOs recognize that to effectively make strides in their digital transformation journey, they will need to rethink their talent and build a new digital dream team. Those that invest in cross-functional leadership and specialized pools of talent will enjoy faster rates of innovation, higher market share and greater operational efficiencies.

The megatrends of 2022 are issuing a call to enterprises across every industry to reimagine their future. They will influence the world of work, the world of business and society at large for years to come. Future-forward companies must act now to respond to them and adapt their strategies accordingly.

The next normal is here. As enterprises transition from a period of surviving to thriving, the time is now to commit to change, thinking differently and acting boldly.





Future of the Enterprise:

Agility, culture change and hyper-automation

As the pandemic took hold, many enterprises were hunkering down trying to survive massive workplace shifts and pivot where necessary. With most of that behind us, the year ahead will find businesses laser focused on preparing for change. That will mean a strategic approach to cultural readiness. Enterprises will be putting a stake in the ground and defining if their priority goal centers around optimization or transformation, designing an action plan and identifying which leaders and teams need to be involved.

Our megatrends for the Future of the Enterprise in 2022 focus on agility, culture change and a new way of thinking about the customer and employee experience.

Megatrend 1: Redefining the DNA of the organization

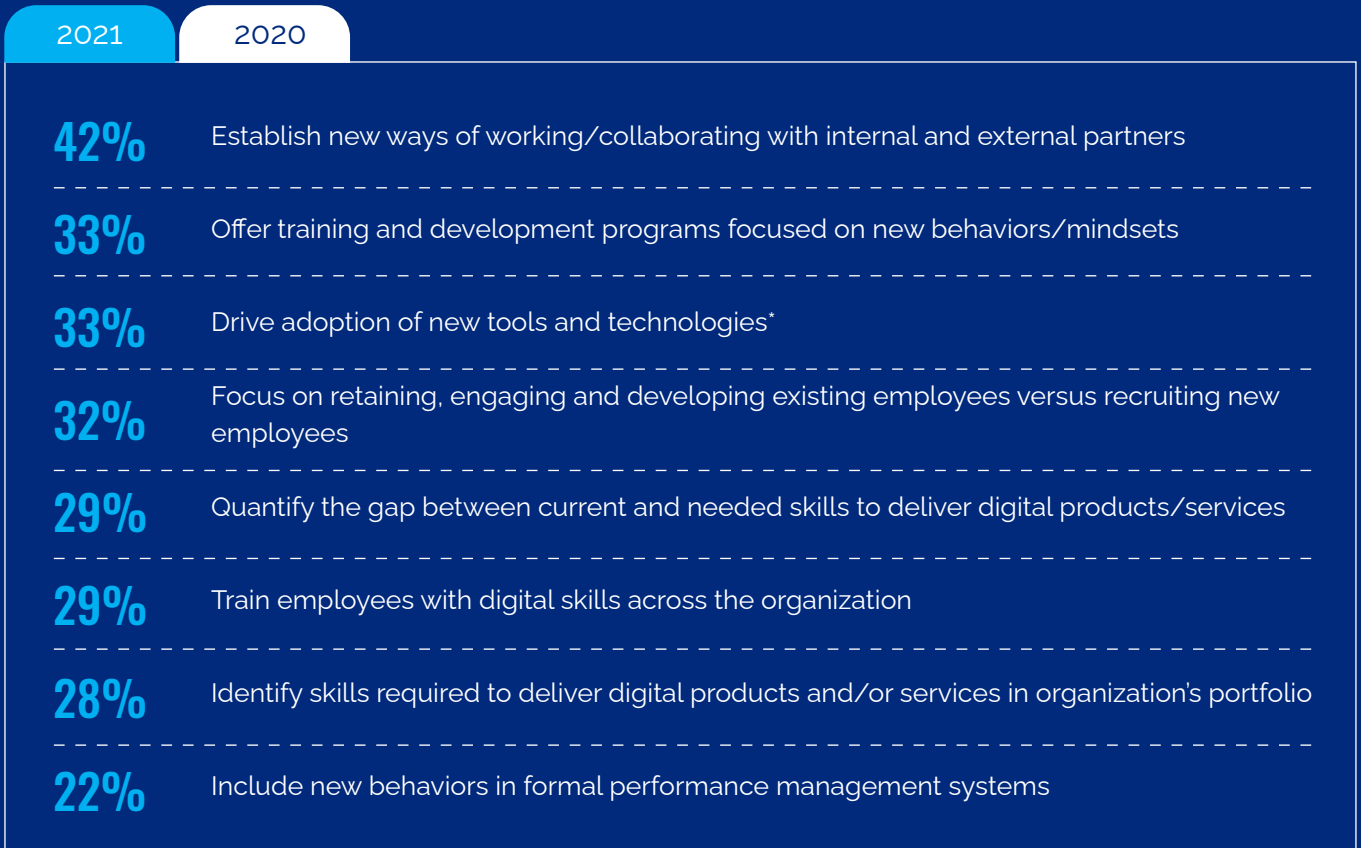
While AI, cloud, edge computing and RPA may grab all the sexy headlines, digital leaders understand they are just vehicles to move the organization forward. The hard work is centered around adoption strategy and that often requires a shift in mindsets and creating new ways of working. In 2022, organizations eager to move the needle on digital transformation will need to align their vision, culture and structure.

Culture readiness assessments will be key in 2022 for organizations interested in getting serious about ensuring they are preparing people for change. Evaluating your organization's level of adaptability and

resilience is the first step in identifying and addressing gaps. Doing so can head off problems such as resistance to change, slower adoption and increased iterations. And as companies continue to grapple with outcomes of the Great Resignation, the capacity for change becomes increasingly important to both current and prospective employees.

A renewed focus on culture readiness will result in organizations providing heightened levels of information, support and education. Leveraging technology tools that allow for enhanced communication and collaboration will be key.

Actions for people



* Not included in 2020 survey

Source: 2021 State of Digital Transformation Report, TEKsystems



Megatrend 2: Accelerating adoption of agility

By 2024, it's estimated that 30% of corporate teams will be without a boss due to the agile and hybrid nature of work. The pandemic has driven increased need for organizational resilience, driving more embedded agility within businesses. The increase in hybrid workforces reveals that many managers lack the skill set necessary to manage employees in remote or hybrid situations, and only 47% percent of employees believe that their [manager can lead the team to success](#) in the future.

The turbulent times of the last two years have created a heightened sense of uncertainty and insecurity among both customers and employees. As a result, in 2022, brands will be reviewing their customer and employee experiences to ensure they have the ability to deliver on their promises. With the pandemic

accelerating the speed at which companies have needed to adapt to survive and grow, creating customer experiences that deliver proof points of agility, adaptability and customization will be at the forefront in the coming year.

This increased focus on agility will also manifest a new approach and mindset that focuses on the Total Experience (TX), as defined by Gartner. It is an emerging business strategy that combines the disciplines of customer experience, employee experience, user experience and multi-experience. The result is an ability to better drive customer and employee confidence, satisfaction, loyalty and advocacy. Organizations that can effectively execute adaptive and resilient TX outcomes will reap the benefits of increased revenue and profit.

Megatrend 3:

Connecting with customers through customization

With a reported one in every four customers ready to pay more for a customized product, businesses in every sector will look for ways to leverage digital technology to enable customers to customize products. Combined with an increased focus on hyper-personalization, the customization of products and services will be supported by a boost in data and analytics capabilities. Customer insights collected from multiple data points will aid companies in ramping up their personalization efforts for improved customer experiences. From pop-up customer care chat boxes to “also bought” suggestions to personalized email drip campaigns, AI and other technologies will be leveraged to create more personalized customer experiences.

“Businesses will need to hire the right data analysts, individuals who have experience in performing this kind of hyper-personalization,” said [Venu Gooty](#), VP, HGS Digital Strategy and Transformation. “Additionally, 2022 will be the year businesses will need to identify the right solutions to bring together all data to streamline the end user experience by providing the right amount of personalization.”

Gooty added that businesses will also need to weigh the cost of providing customers with customization with the ROI. “Businesses will really need to get a good grasp of what is going to add the most value to customers.”

“As we move into 2022 and 2023, personalization self-help, potentially via a mobile device, is going to make a very prominent play,” suggested [Venkata Jagan Saka](#), HGS Director, Intelligent Automation. “Businesses will need to harness all the data housed in data warehouses to better understand how customers are interacting with their products or services and to identify their core needs.”

That could prove easier said than done amid changes in mobile device privacy settings. In 2022, it may be challenging to navigate personalization as key customer touchpoints, such as the iPhone, control what information is shared with apps. Depending on the policies, they can either help or hinder personalization efforts.



2022 will be the year businesses will identify the right solutions to bring together all data to streamline the end user experience through the right amount of personalization.

Venu Gooty

VP, HGS Digital Strategy and Transformation



Megatrend 4:

Building the future of work on connected, hybrid experiences

With some employees working from the office and others still working from home, organizations are going to need technologies that seamlessly enable collaboration regardless of location. In the last two years, the workplace has rapidly evolved, forcing organizations to deliver digital-first and connected experiences to drive productivity and retain talent. Gartner expects that by 2023, 75% of organizations that exploit distributed enterprise benefits will realize revenue growth 25% faster than competitors.

[According to a recent report](#), only 8% of conference rooms around the globe are equipped to handle video conferencing. Companies like Zoom, Poly, Cisco, Microsoft, Google and Salesforce are stepping up with software and hardware tools that improve meeting equity and collaboration. Hybrid work advancements will also be supported with improved cloud PC offerings and VDI experiences to make it easier to work from anywhere. Layered within improved meeting and collaboration tools will be technology solutions that empower an organization's workforce through self-service.

Moving into 2022, companies will increasingly turn to AI, ML and other advanced technologies in their HR operations to capture employee sentiment, talent analytics, continuous learning and redeploying talent. As more people join the Great Resignation (and subsequent Great Onboarding), IT teams will need to find more effective ways to manage departures and arrivals. As a result, in 2022, IT organizations will rely more on software to manage their software. They will leverage software tools that make it easy to identify all the applications that employees can access. The pain of the Great Resignation won't go away in 2022, but it will drive many IT teams to rethink their tool stack.

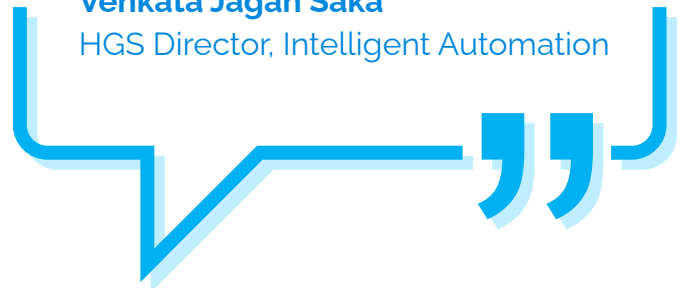
"With an increase in the use of shared collaboration tools and applications, businesses will need to ramp up their focus on security," said Gooty. "It will be important to establish a governance framework with certain parameters so that teams can leverage the tools remotely in an effective and safe way."

As businesses look to increase use of hybrid, connected tools to manage workplace shifts, they will also need to focus on organizational change management. As HGS's Saka noted, "Organizational change management will be very, very important so that every employee will embrace the digital workers created through automation. It starts with a comprehensive [LeanOps](#) assessment to help identify the right processes and tools needed".



As businesses look to increase the use of hybrid, connected tools to manage workplace shifts, they'll need to focus on organizational change management.

Venkata Jagan Saka
HGS Director, Intelligent Automation





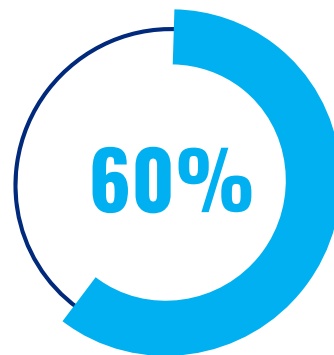
Megatrend 5: Balancing compelling customer experiences with data privacy

Organizations will need to be thoughtful about data collection and usage while building best-of-breed customer experiences. Organizations that rely on data collection through apps and third parties will need to augment their data collection policies. CDPs will aid in the effort to make the customer view more extensible. Ultimately, organizations will need to find new sources of data and determine how to collect and manage it in an open and transparent manner that will enable stellar customer experience.

As businesses continue to deal with maturing international privacy and data protection legislation, CIOs and their teams will need to take proactive steps to avoid any loss of customer trust resulting from privacy incidents. Gartner expects 60% of large organizations to use one or more privacy-enhancing computation techniques by 2025.

While data collection will take center stage in 2022 as businesses look to leverage advanced analytics to drive everything from personalization to customization to prioritization of digital investments, consumers will continue to question data collection. By 2024, it's

estimated that 40% of consumers will trick behavior tracking metrics to intentionally devalue the personal data collected about them. Consumers are acutely aware of the amount of data that organizations collect, and to avoid becoming “the product,” they are actively trying to devalue and manipulate data being collected. As a result, consumers are increasingly using tactics like VPNs, false information or opting out of data collection altogether.



**of organizations to leverage
privacy-enhancing computation by 2025**

Future of the Enterprise 2022 Action Plan

The year 2022 will be a year for enterprises to pivot from a survival to growth mindset. Innovation and differentiation are more important than ever to remain competitive. Here are some key action steps to take to prepare to thrive in 2022.



Invest in a digital readiness audit.

Understanding your organization's current state of readiness when it comes to adoption of a specific technology or an entire digital transformation strategy is critical to success. A formal digital readiness audit will allow you to define the level of behavioral competencies, cognitive skills and digital proficiency of your organization's employees. The results of the audit will better help you address gaps and next steps in your change management journey.



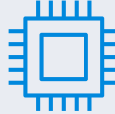
Build an IT infrastructure to support a hybrid environment.

While 2021 may have been the year of quick fixes, 2022 is the year to design an IT and security infrastructure to adapt to a hybrid work environment for the long haul. Evaluate collaboration and communication tools as well as governance and permission controls for all tools to allow for anywhere, anytime work.



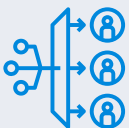
Develop and socialize a governance framework related to remote use of tools.

As work-at-home and hybrid workplace models continue to take hold relying on the use of shared collaboration tools and applications, it will be important to manage and monitor security and privacy issues closely.



Tackle technical debt with long-term redesigns.

Many enterprises are currently dealing with the consequences of technical debt born out of short-term investments in point solutions that helped them through the pandemic. Take steps to resolve technical debt in order to achieve faster service delivery times for the business and shift from a strategy that leverages technology to facilitate work to solutions that optimize it. Rather than big-bang investments, allocate spend for technology infrastructure upgrades that help reduce technical debt.



Step up your personalization strategy with a Customer Data Platform.

Leverage robust customer data contained in a Customer Data Platform (CDP) to craft truly hyper-personalized experiences for customers. Use the data to identify what elements of personalization are working and which need iterative improvements. Implement customization of products and services based on learnings from customer data.

A hand in a blue suit sleeve points towards a glowing digital network structure composed of white lines and nodes against a dark blue background. The network structure is partially obscured by a white wireframe mesh on the left side.

Future of Technology:

Simplicity, scalability and security

Whether it was a cloud migration or leveraging AI to accelerate automation, many enterprises invested in technology in the past two years as they worked to navigate their way through the pandemic to a new normal. In 2022, the focus will be on measuring the value of these investments and ramping up optimization efforts.

Organizations will spend much of next year maximizing their investments to deliver better productivity and value while seeking to simplify their IT infrastructure and ecosystem. Accelerating automation, ensuring adoption among employees and stakeholders and scaling up critical AI and ML solutions will be at the top of organizations' tech agenda for 2022.

Our tech megatrends for 2022 center around key themes of simplicity, scalability and security. Both short-term and long-term strategies will be key as IT organizations prioritize solutions that will add value for the long haul.

Megatrend 6:

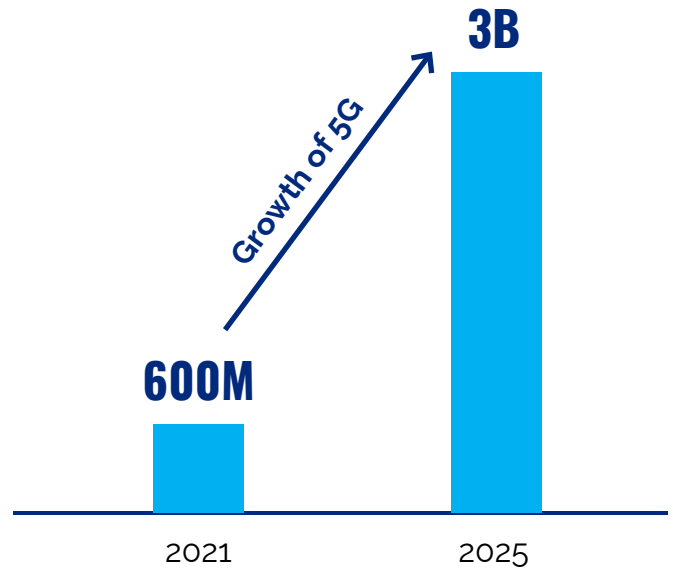
Preparing for the growth of 5G

With more electronic devices and attractive Wi-Fi packages in the market, the demand for a high-speed, state-of-the-art connection will also grow. 5G offers an increased bandwidth and has a lower latency. This means that a 5G connection can process very high volumes of data without delay. According to [Omdia and 5G Americas](#), the number of 5G connections will grow from around 600 million in 2021 to 3 billion by 2025. 5G will not only provide a trustworthy and high-speed connection to customers, but it will also provide many business opportunities. In its IoT forecast, Gartner also predicts the 5G endpoint-installed base will grow 14 times between 2020 and 2023, from 3.5 million to 48.6 million units.

However, the current state of global infrastructure will likely continue to inhibit implementation of 5G for key uses such as with supply chain. According to [Lalit Desiraju](#), HGS Vice President, Digital Innovation Lab, "In the last few years, there has been significant progress around supply chain using blockchain but almost all of it is restricted to pilots. With the advent of 5G-enabled IoT products, there is a distinct possibility of scaling it to real-time applications."

In addition to helping to address supply chain issues, the adoption of 5G will also serve to make an impact in the industries of banking, manufacturing and retail in 2022. Fraud detection and prevention is a critical but time-consuming exercise for banks but 5G may help them manage these areas in real time. With a decentralized data sharing of fraud data along with merchant identification, geolocation and biometric identification, Desiraju noted that fraud detection can be determined in milliseconds. Additionally, 5G will also enable true real-time translations which would allow banks to reach the most remote corners of the world and improve financial inclusion.

Similarly, fifth-generation technology will help manufacturers manage real-time control of distributed production lines through remote surveillance and allow for predictive and preventive maintenance including remote shutdown of critical systems due to system failures.



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Lalit Desiraju
HGS Vice President, Digital Innovation Lab

Megatrend 7:

A call for simplicity as cloud usage soars

In the last two years, organizations have begun migrating to the [cloud](#), a journey which will be completed for many in 2022. It is a key reason why public cloud spending is forecasted at \$700B by 2024. But as organizations continue to move from on-prem data centers to the cloud, they will be aiming for architecture simplification without the unpredictability of costs, services and complex layers of tech at scale. Additionally, as cloud undergoes more rigorous scrutiny, many organizations will need to navigate multi-cloud environments. IT organizations will seek ways to leverage applications interchangeably so that data is located in one location and the application stack accessing it can change as needed. The ability to use the same data for various purposes without having to transfer in and out of different locations would result in cost savings and a frictionless experience.

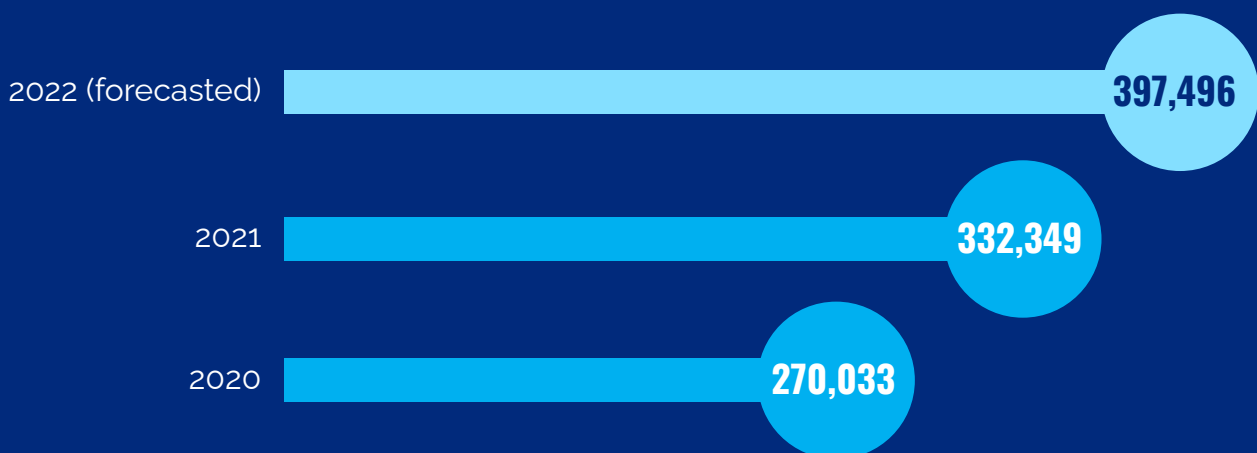
In order to achieve true interoperability, organizations will need to focus on strategic architecting and maintenance. Whether choosing to leverage one vendor for public and private cloud needs or opting for a multi-cloud strategy, companies need to invest

time and resources in 2022 to ensure their technology environment gains the full advantages of hybrid cloud.

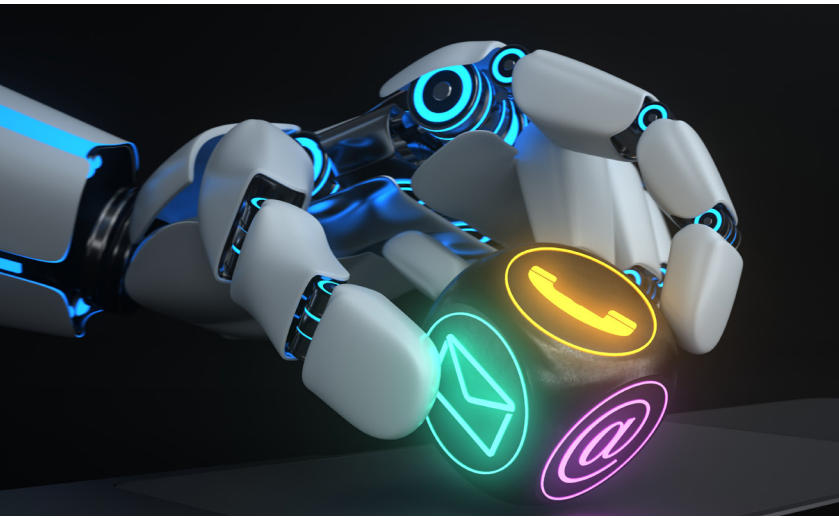
Additionally, as more organizations heed the call to the cloud, they'll also need to think strategically about addressing cybersecurity. With ransomware attacks increasing 10.7x from just a year ago, cloud and cybersecurity specialists will need to work hand in hand in accelerating digital transformation.

As a result of all of these cloud-related challenges, 2022 will be the year organizations turn to critical and neutral tech business partners including analysts, system integrators and consultants. It will be especially important to connect with the right partners as IT organizations focus more on business outcomes than IT requirements in the coming year. Cloud service providers and related partners will increasingly be leveraged as sources of innovation to help digitally transform operations, not just manage a cloud migration.

Worldwide public cloud services end-user spending forecasts \$ millions



Source: BlackRock, Gartner, "Gartner Forecasts Worldwide Public Cloud End-User Spending to Grow to 23% in 2021", April 2021.



Megatrend 8: Scaling up ML and AI

In the coming year, organizations will fully buy into AI not only as a means to process vast volumes of data accurately and in real time, but to deliver experiences their customers expect. In 2022, enterprises will not only start to see the true benefits of their AI and ML models but will also push them to scale. IT organizations will be integrating AI and ML into services, infrastructures and applications that will help to supercharge data processing.

As AI becomes more ubiquitous in the everyday lives of workers and consumers, conversational AI will make interactions more robust and human-like. In order to make the mass of data meaningful and timely, the move to this next innovation stage of AI will be dependent on advancements in GPU technology, specialty accelerators, and easier-to-deploy software.

In the year ahead, enterprises will leverage machine vision and natural language processing to facilitate the structuring of unstructured data including images and emails in order to create data that RPA technology can readily use to automate transactional activity.

Additionally, 2022 will be the year that more AI becomes explainable and transparent. That will require IT team members to be able to clearly articulate to stakeholders how each individual data point contributes to the end result of the model. As the number of data regulations continue to increase, AI trust will become absolutely critical. Look for 2022

Look for 2022 to advance the need for AI regulation with innovation that is needed for businesses to leverage the technology to address key challenges.

to advance the important discussion of balancing the need for AI regulation with innovation that is needed for businesses to leverage the technology to address key challenges.

Additionally, as organizations look to fight fire with fire in cybersecurity, they'll be leveraging a multitude of AI applications in cybersecurity and threat intelligence. Machine learning methods can be applied to detect anomalies in email, pattern recognition technology can identify regulated personal data in need of protection, and unsupervised machine learning can identify near-duplicates in phishing and spam attempts.

AI advancements will also fuel self-directed IT in 2022. These solutions can self-correct and self-heal malfunctions or issues proactively, reducing the downtime of a system or use of a critical application.

Lastly, look for AI ethics to be added to the board agenda in 2022. Organizations will be charged with not only adopting and implementing AI solutions to drive better business outcomes, but also to own the responsibility of establishing guidelines and transparency. Ethics will continue to become an important aspect of leveraging AI, including addressing built-in and inadvertent bias into algorithms. Bringing in oversight independent of the AI project will be key to reducing unintended bias and designing for inclusion and comprehensiveness.

Megatrend 9: Chatbots get smarter to engage customers and employees

Thanks, in part, to advancements in NLP and ML, conversational chatbots will step up their game in 2022. Major providers are facilitating improvements to empower bots to keep up with more complicated discussions and make customer experiences richer and more dynamic. For example, Microsoft Conversational AI is developing a platform that allows bots to [“hear” more accurately](#). It also aims to improve chatbots to the point where they can identify and adjust to the nuances of emotions. Combining chatbots with NLP and rich customer behavior data provides organizations the opportunity to transform customer contact and support, often without any human involvement. Indeed, the International Data Corporation (IDC) determined that the deployment of automated customer service agents was the top AI use case based on worldwide spending in 2020.

As 2022 continues to see major workplace shifts, chatbots will also be leveraged for employees. As HGS's Gooty noted, chatbots are being leveraged for internal employee operations. “Rather than building and employing different applications for employees to perform different activities, you can leverage chatbots to get those responses within the system of your

choice,” he said. “If you're using Teams or Slack, you can integrate the chatbot within those systems to get responses directly within those platforms.”

However, Gooty also predicted that organizations will be investing more in chatbot strategy upfront in order to plan for ongoing maintenance and customer support as well as overall customer experience. “Chatbots are not just a mechanism to serve customers and reduce costs, but also to humanize the experience for customers,” he explained. “You need to identify those contact drivers for chatbot use and customize that experience for those customers.”

Delivering a human-centered chatbot experience requires organizations to define an analytics strategy as part of the chatbot implementation. HGS's Saka noted that “The short-term and long-term vision of implementing and adopting conversation chatbots is very important. Running analytics regularly to determine whether customers are engaging with chatbots, whether their problem is effectively resolved during the chatbot conversation and what mode of channel they're using to access the chatbot is critical to an effective chatbot strategy.”



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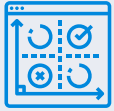
Venu Gooty

VP, HGS Digital Strategy and Transformation



Future of Technology 2022 Action Plan

Emerging from the pandemic, organizations will need to prioritize their tech investments and focus on people and processes to optimize solutions and ensure adoption. With a full IT agenda, here are a few action steps to take to drive impactful business outcomes in 2022.



Accelerate your automation journey with a LeanOps assessment.

Ensure you maximize cost efficiencies of your 2022 automation initiatives by first performing a LeanOps assessment. Conducting a current state analysis and applying the principles of Lean program design will help ensure you can deliver the highest ROI possible for automation initiatives.



Make responsible AI part of your organization's DNA.

Mitigate risk and the cost of model governance in AI development by advancing an Explainable AI strategy to address fairness, transparency and outcomes in AI-powered decision making.



Contain cloud costs with a Cloud-Native Platform (CNP).

Avoid lift-and-shift migrations and leverage instead the flexibility of a Cloud-Native Platform to provide more scalable and elastic IT-related capabilities "as a service". Gartner predicts that CNPs will serve as the foundation for more than 95% of new digital initiatives by 2025.



Step up cloud cybersecurity.

Cloud will become a bigger target for cyber and ransomware actors as companies continue to migrate their data. Harden cloud and data center workload security and employ access control via automated security solutions. Apply a Zero Trust approach to ensure any device or user that attempts to connect with your organization's applications and systems is vetted. Prioritize comprehensive visibility by leveraging solutions with automation and customizable APIs to continually scan for misconfigurations across all cloud providers, accounts and services.



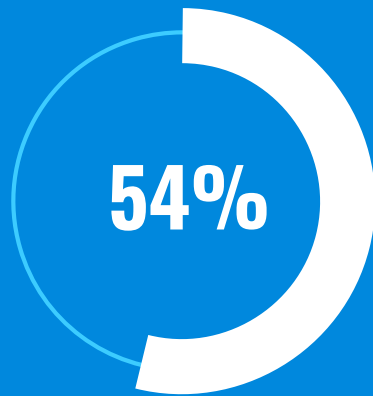
Future of the CIO:

Driving prioritization and optimization

In 2022, IT leaders will find that the “C” in CIO stands for “courageous”. CIOs will need to take bold action to not only digitally transform their enterprises but also their own IT organizations. They will have a front seat to drive organizational change and accelerate growth.

In fact, according to the [IDC FutureScape](#) report, by 2026, 54% of CIOs will drive business transformation, creating strategic technology roadmaps and re-platforming to enable an agile, data-driven, collaborative workforce.

The result is that the CIO's job in 2022 will be as much about human-centered transformation as it is digital with a particular focus on merging traditional customer experience with employee experience. CIOs will continue to be challenged to drive productivity, facilitate innovation and increase efficiencies. They'll address these challenges with a combination of approaches and resources.



By 2026, 54% of CIOs will drive business transformation, creating strategic technology roadmaps and re-platforming to enable an agile, data-driven, collaborative workforce.

- IDC FutureScape

The transition from CIOs managing what organizations typically thought of as a cost center to become a true revenue center will be firmly in place in 2022. As [Nat Radhakrishnan](#), HGS Chief Innovation Officer, noted, "Today's CIOs are true 'Zen Masters', charged with creating and managing a true revenue center for the organization," he explained. "In large organizations, the function itself has been rebranded as 'Chief Transformation Officer,' 'Chief Innovation Officer' or 'Chief Digital Officer'. They are now managing strategic, decision-making units charged with driving internal change and digital adoption. The good news is that translates to bigger budgets for internal transformation for CIOs. However, it also means faster results are expected."

Charged with driving differentiation within the enterprise, the CIO is focused on innovation which can be incremental, Radhakrishnan explained. "But anything that's created today must differentiate at the individual customer level through personalization, not at the market level."

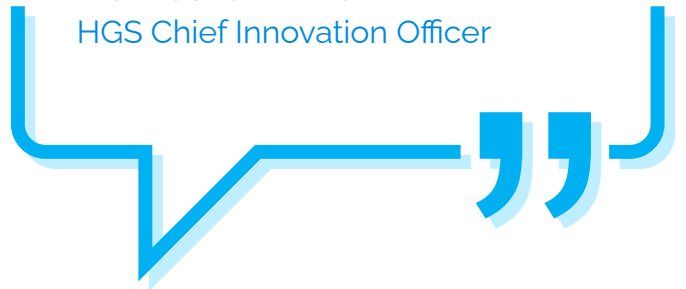
As CIOs own a far more strategic role in the coming year, they will need to address automation initiatives by evaluating the trade-off between the "value with it" and the "value without it" in order to effectively cater to business and customer needs at scale. CIOs will increasingly be charged with investing in tools and technologies that empower people for the long term. That will require modernizing aging legacy systems to meet the needs of new ways of working, especially remote work environments.

HGS's 2022 megatrends for the future of the CIO centers on four key trends that emphasize strategic investment prioritization and change management.



Today's CIOs are true Zen Masters, charged with creating and managing a critical revenue center for the organization.

Nat Radhakrishnan
HGS Chief Innovation Officer



Megatrend 10:

Reorienting and reskilling the workforce

Recent IDC research found that 77% of enterprises believe that rethinking the IT organization – starting by assessing its adequacy and maturity in a new business environment – is a priority for their organization. CIOs will need to carefully evaluate the strength of their organizations and make necessary changes to reorient and reskill the IT workforce in order to keep up with the organization's digital transformation needs. This includes which tasks get automated and what gaps in skillsets need to be filled.

2022 tech talent strategies

- Leverage cloud-first, platform-based architectures
- Adopt low-code/no-code solutions
- Focus on implementing diversity/inclusion strategy
- Explore third-party partnerships
- Step up training and development programs
- Offer coding boot camps

Reimagining a digital workforce is a priority exacerbated by labor shifts in the year of the Great Resignation. Forrester, for example, believes “a tech talent panic will create broad gaps until new sourcing models go mainstream.” IT organizations face a 13.8% attrition rate, reflecting a slow move to “future fit” talent strategies, according to Forrester. Forward-thinking organizations will use cloud-first and platform-based architectures and adopt low-code/no-code solutions to reduce their need for the most advanced technical skills. Additionally, CIOs will look to fortify their teams with a multi-pronged approach, one that focuses on a strong diversity and inclusion strategy, higher education partnerships, training and development programs and even coding boot camps.

The talent crunch is good news for consultants and third-party providers who will benefit as organizations seek to shore up in-house skills gaps. Co-innovation and co-creation, processes where service providers collaborate with a technology vendor to create a customer offering, will gain momentum in 2022.

Software accelerators will continue to be embraced by organizations eager to jumpstart application development, particularly as they struggle to recruit and retain needed talent. Additionally, discovery engagements – small pieces of work to evaluate the customer's problem statement in advance of a larger project – will become more common as co-innovation takes hold as a viable approach for enterprises.

CIOs will also need to fully embrace business technologists (employees outside the IT department leading technology projects) in order to drive faster delivery of services and products. Gartner reports businesses that support these teams are 2.6 times more likely to accelerate business outcomes. Model Ops and Machine Learning Ops teams are two examples of this approach.

HGS's Saka suggested that with a critical shortage of technical resources, organizations need to focus on empowering existing employees to drive automations. “There are a lot of tools that empower existing employees to automate their own processes so that they feel part of the organization and can help fast-track digital transformation,” he said.

Leveraging low-code/no-code tools as well as data utilization capabilities allows employees to help lead transformation and embrace digital resiliency in 2022. Additionally, building and leveraging comprehensive knowledge bases is one way to foster and enable business technologists within an organization.



Increase in business outcomes for organizations supporting business technologists

Megatrend 11:

Setting IT spending priorities to focus on competitive differentiation

In 2022, prioritization will become the new innovation. Over the next four years, for the first time, digital transformation is expected to account for the majority of IT spending – a huge 53% of budgets. Today's organizations have a long and varied post-pandemic recovery agenda. CIOs will be challenged with helping the enterprise focus on priorities and ensure investments are informed and yield the best ROI. With the CIO's role shifting to one of strategic tech leader and advisor, the focus will be on promoting an innovation culture that can pivot to the next best thing and shifting innovation spending from foundational to transformational initiatives.

IT leaders understand only too well that focusing on too many initiatives at once ties up resources and slows down innovation. How successfully organizations compete in the marketplace will depend on how well they can focus and invest in the areas that will make the biggest impact where it matters most. By effectively leveraging data, businesses can better understand which areas to prioritize to generate the greatest impact. CIOs will need to ask tough questions

as they seek to create digital strategies based on core priorities. Does the organization have analytics that demonstrate what's currently happening and why there is a need to invest? Is there a sense of urgency to change? Does the enterprise have well-established feedback channels that help inform when it is succeeding or failing?

During the last two years as organizations were working to survive in a pandemic environment, there was a lot of digital experimentation. There was patience on the part of executive management and boards. But as HGS's Radhakrishnan noted, that will no longer be the case in the year ahead. He explained, "Organizations are going to be looking very closely at value and ROI and asking tough questions of the CIO. Will the initiative differentiate ourselves in the marketplace? Can it improve productivity? Increase customer satisfaction? Automation initiatives will need to tie directly to the customer and employee journey, not just to the vision and strategy of the company."



Organizations are going to be looking very closely at value and ROI and will be asking tough questions of the CIO.

Nat Radhakrishnan
HGS Chief Innovation Officer

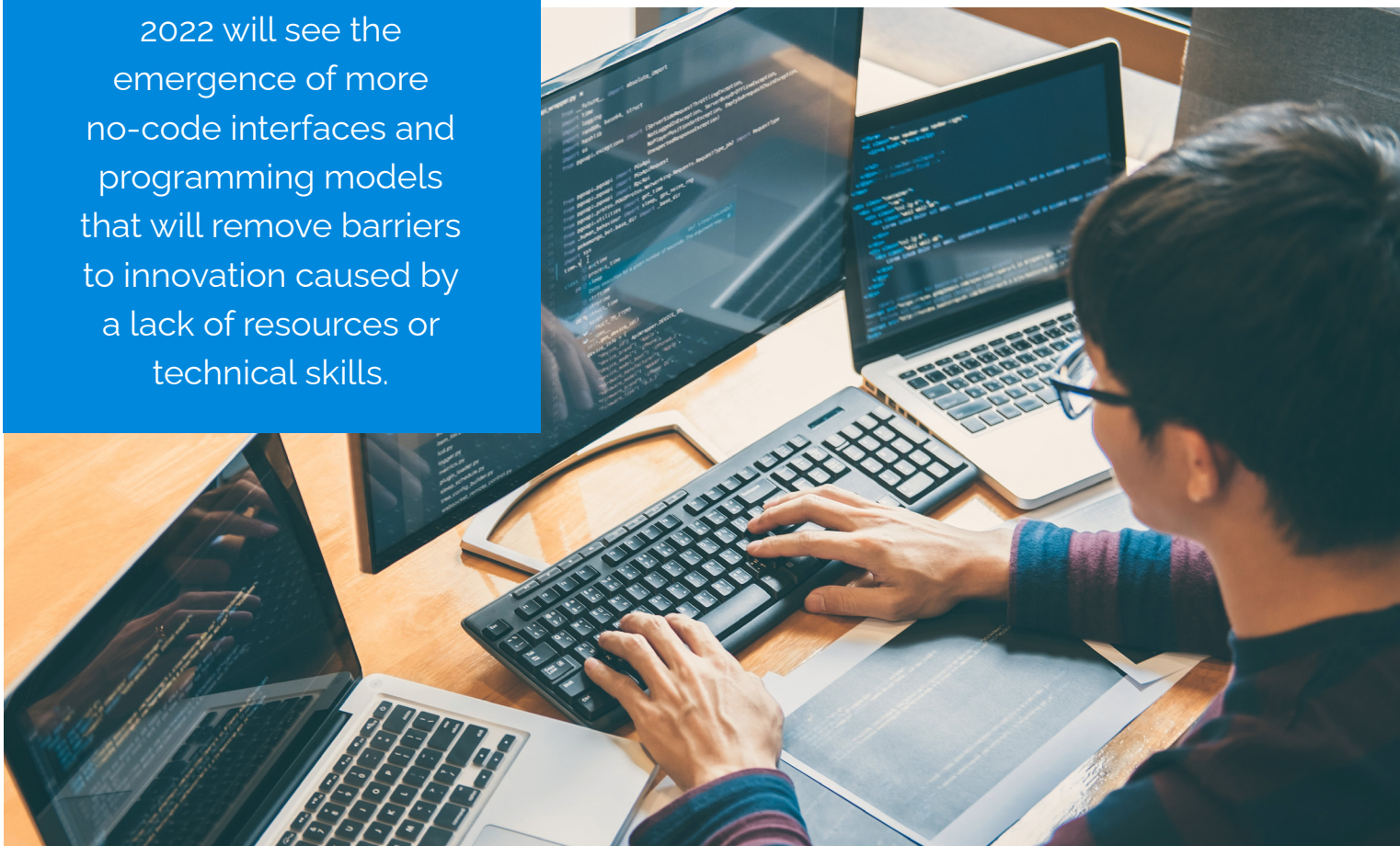


Megatrend 12: Integrated bundles drive Everything-as-a-Service

Organizations are laser focused on innovation and collaboration as their businesses are changing more rapidly, requiring them to develop and adapt their technology more quickly. They can't afford to run out of capacity or resources for anything which could spell disaster from both a monetary and reputation standpoint. Organizations will continue to trade their one-time capital expenditures for software and infrastructure with subscription and OpEx-based technologies that can be procured on a consumption basis. In 2022, we'll see peak Everything-as-a-Service with pay-as-you-go models becoming increasingly popular, creating a shift from traditional buying cycles. As a result, IT organizations will need to contain the app sprawl this might lead to in the workplace (a small price to pay for the convenience that as-a-service can deliver).

For CIOs, 2022 will be the year to consolidate software-as-a-service plans to favor integrated bundles. Doing so will allow them to optimize services and avoid paying multiple companies for related services. As a tech skills crisis continues to plague organizations next year, ready-built, AI self-service solutions can be the answer. Similarly, 2022 will see the emergence of more no-code interfaces and programming models that will remove barriers to innovation caused by a lack of resources or technical skills. For example, OpenAI—a research group founded by Elon Musk and funded by Microsoft, among others, launched Codex, a programming model that can generate code from natural, spoken human language.

2022 will see the emergence of more no-code interfaces and programming models that will remove barriers to innovation caused by a lack of resources or technical skills.



Future of the CIO 2022 Action Plan

In an effort to strategically drive revenue and business impact in 2022, the CIO's agenda will be focused on balancing innovation with optimized operations. To accomplish both key priorities, CIOs can kick off the new year by taking these critical action steps.



Maximize value with optimization.

Develop an optimization plan for your 2020-21 digital investments. Think through the expected value of 2022 digital investments and specific ways to optimize them post-implementation.



Plan for a co-creation project.

Test the co-creation waters and identify a product or solution to be developed jointly with a startup or third-party provider. Define scope of work, guidelines, roles and responsibilities and expected outcomes.



Map out an analytics framework to “measure what you got.”

Evaluate user experience to ensure maximum digital adoption of tech investments. Document which investments are proving productive and where iterative improvements can be made.



Test out different operating models to attract and retain top talent.

Design shorter-cycle projects, engage start-up talent or explore the concept of indie commerce by providing tech talent a stake or percentage of what they produce.



Prepare to balance innovation with operations.

To foster true agility, ensure that both innovation and development teams work closely with the business and are involved in new product development, testing and validation. Bake performance and regression testing and securing scanning throughout and in real time to shorten the development cycle for maximum efficiency.



Take ownership of training hybrid workforces for the digital future of work.

To maintain a competitive advantage, it will be critical to train hybrid workforces in new competencies including digital and cognitive capabilities, strategy, social responsibility, adaptability and creative thinking. Work collaboratively with HR to deliver training and development programs that allow employees to work where and when they want. Design on-demand, self-service training centers accessible to all users.



Conclusion

From entrenched work-at-home and hybrid work models to cloud migrations to acceleration of automation, 2022 will look similar in many ways to the year that came before. But it will also be a time for enterprises and CIOs to act bolder and more strategically as they move out of a Covid survival mindset to focus on innovation, prioritization, optimization and value.

Aligning digital transformation priorities with business vision and the customer journey requires an agile strategy and flexible solutions that grow and evolves with enterprises. In 2022, more than ever, successful digital transformation will be as much about people and processes as it is about technology. Enterprises will be charged with readying their workforces for the next normal and embracing adoption of automation and a new way of working.

In the coming year, organizations will need to be laser focused on executing the Total Experience with comprehensive strategies that connect multi-experience with customers, employees and user experience disciplines.

The year ahead will be an important and exciting one for future-forward companies seeking to differentiate and make a real impact with their digital transformation strategies.

[Get in touch with an HGS expert](#) today to learn how your organization can leverage these emerging megatrends in 2022.

HGS Practice Leaders



Nat Radhakrishnan

HGS Chief Innovation Officer



Venu Gooty

HGS Vice President, Digital Strategy
& Transformation



Lalit Desiraju

HGS Vice President, Digital Innovation Lab



Yasim Kolathayil

HGS Vice President, Data & Insights



Venkata Jagan Sata

HGS Director, Intelligent Automation



Ravi Guntuku

HGS Solution Architect



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