CIO Futures: The IT Organization in 2030

The IT domain in 2030 will evolve out of today's agile practices and professional services models. CIOs will organize a fluid arrangement of teams charged with turning ideas into reality.

Key Findings

- The CIO of 2030 will be a seasoned global executive who is able to attract, inspire and enable a pluralistic workforce of multitalented, independent thinkers.
- The IT domain's culture and organizational design will embed evolved agile practices and the principles of holacracy that are being tested in IT today.
- The IT domain will be organized in a highly flexible arrangement of clusters or pods of teams that switch between assignments as ideas flow, priorities rebalance and demand surges.
- The IT workforce will be capable of, and prefer to, form and reform small, autonomous, self-organizing teams to work on a fast-flowing pipeline of ideas, opportunities and improvements.

Recommendations

The future of IT leadership will require CIOs to:

- Embrace the agile "servant-leadership" practice of "leading from behind" to enable greater autonomy, creativity and self-management across the IT workforce.
- Continuously find opportunities for cross-domain collaboration and risk-tolerant exploration of ideas to rapidly accelerate "experimentation to delivered value" cycles for the enterprise.
- Create clusters, or pods, of agile teams today that will enable and encourage self-organizing behaviors working toward IT's guiding principles.
Encourage your IT workforce to experiment with different ways of forming and working in small teams, continually observing, reflecting, learning and adapting through these endeavors.

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Analysis

This report forms part of a series examining the evolving role of the CIO, as represented by an "artifact from the future" that showcases a facet of the CIO’s world in 2030. This report explores a scenario for the structure, roles and requisite capabilities of the IT domain in a hypothetical organization in 2030 (the "IT org chart" in 2016 parlance). The IT domain in 2030 will deliver business products and services, adding value to an enterprise operating in a hyperdigital environment. The CIO of 2030 will shape, lead, synchronize and populate the IT domain with ideas, talent and technology.

Artifact From the Future: Jiaying’s IT Organization for 2030

Jiaying is the global CIO for a Nasdaq-listed digital enterprise, Poppy, headquartered in Shanghai, China. After graduating from secondary college in Melbourne, Australia, in 2005, she studied design thinking and artificial intelligence at MIT in Cambridge, Massachusetts, and then international management at Tsinghua University in Beijing. She gained her professional experience working for a major global consultancy, three digital startups, and as a CIO for two international companies. After living in Berlin, Rio de Janeiro and Singapore, where she had two children, she returned in 2028 to her family’s hometown of Shanghai after being headhunted by Poppy.
Poppy was a maverick venture capital (VC)-funded startup in 2016, loosely modeled on the digital giant Alibaba but initially focused on education services. It has grown exponentially over the past 14 years to capture the global youth market hungry for smarter learning environments that accelerate their education, qualifications and knowledge. Poppy is currently ranked in the top three in its market by social media polling and revenue. It has achieved this by using smart machines and algorithms to dynamically interpret billions of datapoints collected via a plethora of devices and sources in the Poppy Internet of Everything. The company understands each of its customer’s individual learning preferences, environmental and emotional variables, and their optimal knowledge absorption pace. Poppy is now poised to dominate the personalized learning services market, and to expand rapidly into related horizontal and vertical markets through acquisitions planned for 2030. Poppy is big and growing, and needs to be able to flex and extend as quickly as the market expands and innovation flows.

In 2028, Jiaying said "yes" to the opportunity to work with Poppy’s CEO as a member of the C-level executive team. Poppy is known as "the place to work" for smart creative people from all over the globe, encouraging diversity in ethnicity, gender, age and style. This is considered a unique value proposition and key to its reputation for being first to market with compelling new concepts, and for moving quickly to pivot when the market shifts. Technology — or IT — is one of Poppy’s major organizational domains alongside areas led by her C-level team peers — such as customer insights, learning efficacy, branding, and "Exo-Ops" (aka externally sourced functions supporting financial, legal and regulatory processes).

The people and processes in the IT domain cover a broad and deep set of expertise, personalities, work styles, and disciplines. This domain designs, builds and supports both the externally facing, revenue-generating, digital ecosystem and Poppy products, and the internal digital workspace for Poppy’s distributed global workforce.

The IT culture aspires to be creative, open and entrepreneurial — particularly on the customer side. The capacity to freely and quickly change and innovate is enabled by the scalable, secure, reliable, enterprise foundational services.

These foundational IT services keep Poppy’s people productive and connected 24/7 anywhere they are in the world. IT’s greatest value to the enterprise has been shifting over the past decade from provisioning technologies and definable services to the more abstract role of matching, connecting, translating, and smoothing the diverse Poppy workforce and the digital marketplace of customers and suppliers, which includes both human and nonhuman agents.

The nucleus of Jiaying’s organization is her high-performing team of talented leaders. Each leader has a deep specialization demonstrating their capacity to learn and apply knowledge, yet each was recruited into the team primarily for their aligned values, intellectual curiosity, optimism and adaptability as a cross-functional team player. Leaders in Jiaying’s domain must be able to maintain their personal balance while embracing and flowing with the fast speed, uncertainty and ambiguity of the business environment of 2030. The team regularly and deliberately swaps roles, both within and outside the IT domain, with external partners, and vertically within and across their teams. This is a tactic proven by Poppy’s own smart learning systems to accelerate efficacy in personal development. Jiaying adopted this practice in 2029 and has tracked the outcomes as an
organizational behavior experiment. She tested the theory that leaders need to be challenged, and try new roles and experiences frequently, to stave off stasis and rigidity of thinking. As part of Poppy’s strategy of leading by example, the findings have already been incorporated into new Poppy management training products, which exercise brain plasticity to help trigger unexpected new ideas.

**The IT Organization in 2030 Is Composed of Self-Managing, Largely Autonomous Pods**

The Poppy IT organization is structured into pods of up to 30 people that are self-managing, loosely coupled and 90% autonomous, drawing on external expertise as needed. Each pod has a nominal leader who is part of Jiaying’s core leadership team. Each pod forms itself into between three and six teams at any time, of five to ten members, to undertake tasks, projects or functions. As pods become too large, lose their excitement or performance lags, new pods can sprout, and old pods can divide and reform. The decision to change can be initiated by Jiaying’s team, by changes in the demand pipeline, or by autonomous team self-assessment and decisions. Poppy IT effectiveness and culture is rooted in trust.

The core IT leadership team concentrates on two day-to-day lenses: pipeline and people. It constantly considers prioritization of the high-level backlog of IT’s diverse portfolio of work. Regularly — weekly, or as frequently as changing circumstances may require — the team reviews and rebalances its investment of resources and focus. The information and guidance that underpins these portfolio-balancing decisions flows from the CEO’s team, as well as from analysis derived from a complex, multilayered field of information ranging from customer activities and communications, to market trends, revenue, and internal indicators of technology performance and usage.

The core leadership team also constantly considers its talent and capability pool. This includes people within Poppy hailing from any functional area across the enterprise, as well as people and capabilities sourced from external partners and suppliers, including universities, incubators, and emerging and established enterprises. IT capability covers customer experience design through a cycle of product and service creation to technology infrastructure operations and vendor ecosystem management.

**The IT Organization in 2030 IT Is an Innovation and Enablement Hub for External and Internal Products and Services**

Poppy’s perspective of the IT domain’s most important value-adding function for the enterprise is as an innovation and business enablement hub. Supporting services and infrastructure are, as much as possible, externally sourced. Poppy’s applications and data are all hosted in cloud environments provided by externally managed services. Networks and devices are also provided as a service sourced from external providers. Poppy’s IT domain includes a pod that, as a microinstance of Poppy’s macro Exo-Ops approach, sources and directs service providers. Their service providers deliver to a mutually understood set of performance parameters that can be adjusted easily and dynamically, and linked to transparent financial variables negotiated in advance with their service partners.
To innovate products and enable Poppy, Jiaying engages people from the arts through to the sciences. IT domains in 2030 need anthropologists to interpret behaviors and psychology. They need designers to imagine and create products and services to optimize customer experiences. Architects and digital urban planners model and shepherd the digital environment. Engineers build components of external and internal IT products and services connected in a mesh across the Poppy Internet of Everything. Data scientists craft ever-smarter machine algorithms and attend to the availability and quality of data that feeds the systems' learning.

Diplomatic and savvy negotiators construct, navigate and govern ecosystems of suppliers and partners, and financial and legal experts interpret the commercial environment. The IT domain doesn’t need to call on traditional enterprise people support services such as corporate strategy, HR and administrative assistants — as leaders assume accountability for their people and nurture a shared team vision, and Poppy’s internal administrative systems are fully automated and only require human interaction for exceptions.

Orchestrating the workforce is enabled by a blockchain-based people ledger, which identifies and tracks people’s characteristics, aspirations, movements, development, and acquired knowledge and experience across the life of their relationships with Poppy. It is designed specifically for Poppy to enable visualization of people assignment underpinned by a raft of datapoints about individuals and teams, including skills, capacity, social styles and preferences, past performance, and future desires. Leaders can model new teams against required outcomes until they find a balanced, available team option. People, including external "virtual" talent pools that Poppy utilizes, have visibility of the whole IT domain's work in progress and planned assignments, and can bid for their ideal roles, tasks, teams and new learning experiences.

Jiaying’s organization nurtures talented people to gather in high-performing teams and produce great outcomes for Poppy customers and peers (see Figure 1).
Differences in the CIO Organization 2030 Compared With 2016

- In 2030, team is the primary organizing structure compared to hierarchies of functional or product-centric groupings in 2016. The CIO is embedded in the CEO's team. She in turn leads a team of pod leaders. Each pod leader forms a self-organizing, autonomous team of up to 30 people. Individuals participate in teams or pods, and can also join groups of specialists to extend their expertise. The digital natives and millennials of 2016 who dominate the 2030 workforce are already in 2016 comfortable with a highly malleable organization, expecting and welcoming frequent changes and challenges.

- The IT domain is porous, changing as teams form and reform, including people from other parts of the enterprise and fostering diversity of thought and expertise. Pods and teams may include people from across the enterprise as well as external "virtual" resources from commercial partners — institutions like universities and research bodies — and the broader local and global community (which includes the business's customers).
Organization is fluid, comprising a set of connected individuals with the flexibility to meet changing supply and demand or market conditions. New pods can form and existing pods can disband in response to demand and supply elasticity. Acquisitions of new businesses and capabilities, or surges in demand, can be serviced by creating a situation-specific pod, drawing from the whole breadth of the IT domain’s internal and external resources.

External vendors, partners and individual experts can be engaged for specific tasks or projects, joining teams or pods for limited periods, similar to agile team formation and contracts being used in 2016.

The IT domain is autonomous, and their leaders rely less (or not at all) on a human resource (HR) domain for people management and development support. The concept of Exo-Ops provides specialist expertise sourced from external providers if traditional support functions like HR, legal and regulatory services are needed.

A smart system of people capacity, growth and allocation is central to the orchestration of the IT organization rather than 2016’s hierarchical structure and firm reporting lines. Authority for hiring and other staffing and resourcing decisions lies at the team level.

IT is an innovation and enablement hub for both external and internal products and services, rather than a principally internal technology function in 2016. The domain is largely concerned with an appropriate balance of inventing, experimenting and optimizing/tuning.

Smart systems, powered by algorithms, support flexible yet productive organizational and team modeling. Smarter systems mostly eliminate unproductive overheads (errors, rework, handoffs and so on) in administration tasks.

CIOs and their leadership team can use their encyclopedic, real-time data and their advanced (2030 version) smart machines to analyze and adjust the effective distribution of work between humans, algorithms, robots and various other types of automation, taking into consideration both the effectiveness for the company and customers, and the quality of the work experience for the people. The balance is constantly changing.

A majority of the CIO’s teams spend most of their time formulating hypotheses and experimenting — the evolution of the bimodal journey that started around 2016. In 2030, most organizations operate in this manner due to the rapid pace of technology change and information opportunities.

Potential Inhibitors to This Scenario

Jiaying’s scenario represents one potential future world, driven by technology and management trends. However, this evolution could be waylaid in a number of ways:

Emerging management approaches such as holacracy may not scale or prove effective in a broader range of organizations. For example, asset-intensive industries and companies with mission-critical demands may be slower to change, or may need to develop alternate or hybrid approaches evolved from bimodal. Any early negative lessons from agile or holacracy could deflate the bubble before it takes hold.
Individual leaders may fail: Not every command leader will become a coach/leader able to work with new degrees of freedom, fluidity and uncertainties. Companies may pay lip service to the approach but not really promote autonomy in the pods.

There may be no CIO or technology/IT organization at all by 2030, as all knowledge and responsibility is fully dispersed across the business.

Recommendations to CIOs in 2016

- The CIO of 2016 should think like the millennial who will become the CIO of 2030, to imagine and evolve your own and your IT leaders' ethos and style. Embrace the agile "servant-leadership" practice of "leading from behind" to enable greater autonomy, creativity and self-management across IT.

- Extend the capabilities of the IT domain to organize and work autonomously. Develop and recruit people who are "T-shaped" — flexible, curious, "eclectic specialists."

- Start now to find opportunities to challenge people, take them out of their comfort zones to work in teams they may never have thought of, and explore their boundaries as an experiment and an innovation stimulus.

- Demonstrate and strongly support cross-domain collaboration and risk-tolerant exploration to rapidly accelerate "ideation to delivered value" cycles for the enterprise.

- Encourage your IT workforce to experiment with different ways of organizing and working, continually observing, reflecting, learning and adapting through these endeavors. Help emerging IT pod leaders to be creative in how they monitor, understand and support their people as individuals with extreme flexibility in forming and reforming groupings or teams.

- Develop alternate scenarios for the IT organization that extend the principles of agile teams. Beginning with a bimodal organizational design, start to form clusters or pods with teams of between five and seven cross-functional people, maintaining small team sizes and allowing them the time and space to develop into high-performing strongly bonded teams. Progressively extend the pod and team design across the whole of IT.

- Plan a potential IT domain organizational roadmap to 2030. See Figure 2 for an example.
Figure 2. IT Domain Organizational Roadmap to 2030

Source: Gartner (October 2016)

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Maverick* Research: The Future of Talent; Stop Hiring People, Start Hiring Clusters"

"Leading From the Heart: You Don't Become a Digital Humanist by Fixing Problems"

"Digital Business Demands an Agile Culture"

"Maverick* Research: Smaller and Human, Not Bigger and Automated, Will Define the Future and Re-employ People"

"Organizing for Success"

"Competing for Top Talent: Build the Talent Platform"

"Survey Analysis: What Leading Enterprises Do Differently With Talent and Organization"

"CIO Futures: A Day in the Life of a CIO in 2030"

"CIO Futures: CIO Executive Relationships in 2030"

Evidence

This research is based on multiple analyst perspectives on the future of the CIO role and IT organizations, gained through discussions with active CIOs and an analysis of technology and organizational trends.
More on This Topic

This is part of an in-depth collection of research. See the collection:

- 'CIO Futures' Prepare CIOs for Their Role in 2030
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