TATA CONSULTANCY SERVICES

Building on belief

Whitepaper

Democratization – A Necessary Disruption in Enterprise IT

Abstract

Every business today faces change and disruption at an unprecedented rate. Organizations need to continuously innovate in order to bring in new revenue generating streams, and enhance customer experience. The ability to respond to unexpected events determines whether a business will prosper or perish. However, with technologies confined in the hands of a select group of experts, how can organizations trigger innovation across all levels and functions? How can they meet the growing and frequent demands for new products with limited IT resources? What is the right approach to continuously foster innovation?

The answers to these questions that determine the survival of organizations lie in the democratization of IT resources. Making technology accessible to users so that they can proactively respond to market demands is the key to survive in the fast-changing business environment. Business users do not have the time or luxury to wait for the IT departments to deliver applications. In the wake of this changing dynamic, IT departments will become mentors and enablers to guide business users in selecting and using the right technology platforms. To meet the joint business goals, they will be responsible for putting policies and guidelines in place to make democratization an effective venture.

Democratization of IT: The key to innovation, resilience

Traditionally, software development has been the forte of IT departments within organizations. With boundaries and roles clearly defined, business users had little involvement in building software products. They would usually outline a set of requirements to the IT department and wait for applications to be delivered.

However, the new generation of tech-savvy employees is demanding agility in product development, in line with the easy-to-use consumer applications they are now accustomed to and take for granted. For example, they don't think twice about creating personal websites on their own with the help of commercially available services. With simple drag and drop options and visual user interfaces, anyone can build web pages, even full-fledged e-commerce sites.

It is imperative that application development within organizations becomes equally agile and flexible as IT functions get gradually democratized. According to Gartner, broadly, democratization of technology focuses on four key areas – application development, data and analytics, design, and knowledge – and is often referred to as 'citizen access'[1]. This has led to the rise of a new breed of citizen developers and citizen data scientists within organizations.

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[1] Gartner Top Strategic Technology Trends for 2020, *https://www.gartner.com/smarterwithgartner/gartner-top-10-strategic-technology-trends-for-2020/*

The rise of citizen developers

Citizen developers are users who create new business applications for consumption by others using development and runtime environments sanctioned by corporate IT. In the past, end-user application development was limited to single-user or workgroup solutions built using tools such as Microsoft Excel and Access. However, today, end users can build departmental, enterprise and even public applications using shared services, 4GL-style (fourth generation language) development platforms and cloud computing[2]. Here are few areas in which business users are likely to lead application development in the coming years.

Composable ERP for a composable enterprise

In its traditional form, irrespective of its robustness, ERP is a hindrance to agility. It has undergone many transformations including adapting to two-speed IT (the sprint mode of application development), and providing flexibility and loose coupling. However, the pace at which organizations need to bring in changes is faster than ever before. This demands business functions to be provisioned through modular and packaged capabilities, which can be composed and assembled together to create new applications. Such modular capabilities would require a solid core, which will be the newly-found responsibility of the ERP in a composable enterprise. Business users as citizen developers will lead this transformation, to have quickest possible turn-around against any disruption.

Multi-experience development platforms (MXDPs) and micro-app architecture

MXDPs are low-code/no-code platforms used to create tactical, fit-for-purpose applications. They can provide a consistent customer experience across multiple channels such as web, mobile and Virtual Personal Assistants (VPAs). This helps in rapid application development and faster rollout. With little training, business users can build applications according to their own requirements and timelines. On the other hand, using the micro-app architecture, they can create strategic apps that can act as building blocks of a composable architecture.

Self-service integration platforms and API economy

Cloud-based integration platforms are another area in which business users will leverage the low-code/no-code approach. iPaaS solutions (Integration Platform as a Service) empower business users to build integrations by connecting multiple enterprise applications through application programming interfaces (APIs). With the ownership of APIs, and by utilizing API marketplaces, business users can stimulate cross-departmental collaboration to create connected business processes and new revenue earning opportunities for the organization.

Headless SaaS

Headless SaaS provides well-defined business capabilities in the form of APIs. Rather than providing a whole application with a fixed user interface, Headless SaaS offers modular business applications with API input/output data definitions that business users can easily understand. Business users can leverage SaaS APIs to create their own applications. They don't have to subscribe to whole applications but can choose only the required modules or features. Headless SaaS thus becomes a very important component for a composable enterprise.

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[2] Gartner Glossary, *https://www.gartner.com/en/information-technology/glossary/citizen-developer#:~:text=A%20citizen%20developer%20is%20a, environments%20sanctioned%20by%20corporate%20IT*

Changing role of IT departments

Given the flexibility and functionalities that democratization offers, business users are at liberty to create their own applications. However, what happens when users build random applications that don't align with organizations' IT guidelines and policies? Is application development focused only on business features sustainable? IT departments have always guided business users to select technologies that best fit requirements. Moving forward, IT will have to take the responsibility to train users on the scope and limitations of democratization. The role of IT would gradually change from provider to enabler of technologies within organizations. The main agenda would be to provide the technology platform on top of which business users can create innovative applications without compromising on security.

Seamless IT democratization: A three-step approach

Democratization is essential for the survival of organizations in the future but like any other technology disruption, it has downsides. Unless carefully controlled, the chances of mistakes are high as usage is widespread. Here is a three-step approach for companies to enable seamless democratization:

Establish a firm technology foundation

A solid technology foundation is essential to democratize access to data, intelligence and software throughout the organization. Leaders should make strategic investments in democratized toolsets such as low-code/no-code platforms and human-AI collaborative systems. But most importantly, they have to invest resources to redevelop enterprise architecture keeping the increasing participation of business stakeholders in mind. The architecture needs to be flexible and easy to use to encourage innovation, and at the same time have enough restraints in place to minimize risks.

Embrace and encourage adoption

Leaders should strive towards creating borderless teams that are a blend between the business and IT divisions. The teams should have common goals that are driven by business priorities. Business users should be elevated to job roles with clear targets and responsibilities for increased participation in IT initiatives. The reporting hierarchy and delivery models need to change in a way that empowers business users in their new roles as IT developers.

Establish strong governance

Every democracy needs to be governed. Business and IT leaders need to make sure they have enough processes and tools in place to enforce governance policies. A seemingly minor mistake may cost the company dearly and/or hurt its reputation. So far, IT applications were carefully controlled by keeping them within expert groups. Moving forward, IT departments will have to lay out comprehensive governance policies to rein in democratization efforts.

Step on the gas with democratization of IT

Today, modern enterprises are banking on their technology skills to become digital-first organizations. With democratized toolsets and technologies in place, they will not only increase collaboration between tech-savvy business users and IT departments, but also enhance decision-making processes. Democratization will provide the individual departments with speed and flexibility to develop customized applications that improve operational processes and customer experience. It will become the fundamental lever to get ahead of competition.

In a fast-changing business environment, imperatives that control organizations today may not even be a cause for concern in the future. As a case in point, data scientists are in high demand now, and organizations are not able to find the right specialists for their requirements. However, in the near future, the scarcity of data scientists would not hinder organizational growth because, with the help of democratized tool sets, business users would fill in those roles. They will be able to create machine learning models and perform advanced diagnostic analysis. For similar changes to happen across various departments, business users need to be ready to seize the opportunities. They have to take proactive steps to understand, vet and implement technologies to realize proper benefits.

About The Author

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Nirmalya Roy Chowdhury is a Senior Research Analyst with over 15 years of experience in delivering front, mid and back-office software solutions. His current focus is on technology innovations and their impact on large enterprises. He is a thought leader and a strategic consultant who helps customers build technology foundations for the future.

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