



# The cloud complexity storm and the changing organizational dynamics of IT – Highlights from VotE: Cloud, Hosting & Managed Services

Analysts - Melanie Posey

Publication date: Wednesday, September 15 2021

## Introduction

Organizations continue to take advantage of public cloud to address changing business conditions brought on by the accelerated shift to the digital economy. However, data from 451 Research's Voice of the Enterprise: Organizational Dynamics 2021 survey suggests that expanded IaaS/PaaS public cloud adoption and implementation brings challenges and growing pains along for the ride, including increasingly complex IT environments, IT management issues, skills shortages and difficulties in hiring and retaining cloud-skilled IT personnel.

## The 451 Take

As organizations move along the cloud maturity spectrum and transform their IT environments to serve the shifting requirements of digital businesses, increasing IT complexity and changing organizational dynamics are the inevitable result. Weathering the complexity storm will require enhanced IT skill sets, specialized cloud personas and coordination across IT and business roles within organizations.

## Summary of Findings

**Public cloud, digital transformation and IT complexity are a package deal.** Shifting IT consumption models and increasingly digital business operations inevitably introduce complexity into enterprise IT environments. Just over 30% of organizations surveyed characterize their IT environments as being 'highly complex' (i.e., 8-10 on a 0 to 10 scale). Digital transformation leaders and cloud-mature organizations, as well as those in the manufacturing and finance sectors, post the highest levels of

cloud IT complexity. Technical debt, application modernization challenges and regulatory compliance issues are key factors contributing to IT complexity, along with issues related to managing multiple cloud vendors and the sheer volume of public cloud platform services and features.

**Public cloud and on-premises IT environments continue to coexist.** Nearly 60% of organizations surveyed characterize their current IT environments as mostly/all on-premises (including third-party colocation), and just over 40% point to mostly/all public cloud as the best description of their organization's current IT estate. These extremes underscore the heterogeneous nature of modern IT: Only 13% of organizations are all-in on public cloud, while 7% are all-in on on-premises. To further illustrate the increasingly hybridity of enterprise IT, approximately 30% of organizations in both the mostly/all public cloud and mostly/all on-premises camps indicate intent to significantly increase spending on public cloud during the coming year.

**Public cloud champions emerge across organizational silos.** IT roles have long been the key primary decision-makers and influencers for IaaS/PaaS-related matters. The same is true for driving IaaS/PaaS usage overall: 64% of organizations point to IT leadership (CIO/CTO) and 52% call out IT operations as groups moving the public cloud ball down the field. However, public cloud advocates also exist outside the IT department, including the digital strategy group (34% of organizations) and application developers (34%). Digital leaders, cloud-mature organizations and those with high complexity IT environments have broader ranges of organizational functions involved in driving IaaS/PaaS usage.

**Cloud skills gaps persist, presenting obstacles to optimal cloud execution.** Among the 88% of organizations currently facing a lack of cloud-related expertise, the top skills gaps include operation/management of the various public cloud platforms (41%), cloud-native engineering (33%) and security (32%). On the cloud-native front, microservices architecture (i.e., the entire cloud-native way of doing things) emerges as the major focus of concern, with 53% of organizations reporting challenges in this space. Only 12% of organizations report having no shortage of expertise when it comes managing cloud environments

**Organizations look to retraining existing IT staff as a remedy to cloud skills shortages because hiring is easier said than done.** It is not surprising that redeployment of existing personnel is the go-to remedy for nearly two-thirds of organizations with cloud skills gaps, given that more than half report recruiting staff with cloud expertise has been somewhat or very difficult during the past few years. Staff retention also presents challenges, with 40% of organizations reporting that holding on to IT staff with cloud expertise has been somewhat or very difficult.

**Cloud/digital transformation requirements spur interest in new IT personas.** Increasingly complex IT environments require both new skill sets and new IT roles to manage and operate cloud operations at scale. During the past year, we've seen an uptick in organizations' use of specialized cloud personas: cloud architects (54% in 2021 compared to 37% in 2020); DevOps engineers (53% in 2021, up from 40% in 2020); and cloud security architects (42% in 2021 versus 30% in 2020). Organizations with highly complex IT environments are especially keen on specialized cloud personas, with 91% of this group having at least one specialized cloud role in place compared to 79% of the total survey sample.