

REPORT REPRINT

# Tech Mahindra harnesses resources, accelerates cloud-native re-platforming and extends CMP

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### Introduction

To accelerate its cloud migration opportunity around the re-platforming to cloud and cloud native, Tech Mahindra has created a cloud-native Centre of Excellence to coordinate resources from across its portfolio, and recently introduced version 3.0 of its mPAC (Managed Platform for Adaptive Cloud) cloud management platform for enterprises.

### 451 TAKE

We believe there will be a big role for suppliers that can manage complexity, identify the right environments in which to run workloads, and provide migration support and ongoing management and optimization. While cloud migration and new application deployments have been underway for some years, the most complex workloads are still ahead. Moreover, the cloud-native market is crowded and there is lots of confusion. This is Tech Mahindra's wheelhouse, and it has taken advantage of the opportunity with its Center of Excellence and the integration of cloud management to adjacent development and operation methodologies.

### Strategy

Tech Mahindra's corporate '3-4-3' strategy is focused on what it believes are three industry megatrends: the explosion of intelligent devices, the power of new technologies and the exponentiality of content consumption; four technology bets: AI, 5G, blockchain and cybersecurity; and three objectives: to run better, change faster and grow greater. TechMNxT is the company's transformation approach – designed to enable and deliver '3-4-3' – and is implemented across all the industries it operates in.

Revenue at Mahindra Group's Tech Mahindra IT services businesses grew 4.3% to \$5.2bn in its fiscal 2020 (to March 31) over 2019; EBITDA fell 11% to \$803m in the same period. Digital revenue is now 44% of total revenue, just shy of the 50% it had hoped to achieve by 2020 back in 2017. It has 125,236 employees and claims 973 customers.

### Details

Tech Mahindra uses what it calls its CloudNxT methodology to deliver hybrid multicloud services – within it, mPAC 3.0 enables it to support a range of technology stacks across hyperscale cloud platforms. Its mPAC 3.0 is positioned as a management platform for multicloud and hybrid enterprise environments that automates infrastructure deployment on cloud and provides a unified view across IT operations. It uses cloud-native capabilities and a microservices-based architecture.

With the 3.0 release, mPAC features can now be integrated with Tech Mahindra's infrastructure operations platform – the TACTiX AI ops and cloud operations platform – as well as iCOPS (intelligent cloud subscription and operation services) and NetOps.ai (its 5G network automation and managed services framework). In addition to managing their cloud deployments, customers can now access a portfolio of development and operations methodologies.

The company has a number of horizontal and vertical platforms – mPAC is one of two point solutions and is positioned as one of the company's nine 'accelerators.' It provides a single-pane view across private, public cloud and on-premises environments, and supports AWS, Azure, Google Cloud, OpenStack, Oracle Cloud, IBM Cloud and VMware. It also provides a service catalog with customization, access permissions and metering managed through a policy-based engine; management of cloud-native and microservices-based application architectures; automated orchestration and analytics on resource utilization patterns;

centralized management and governance; metering, chargeback and show back; cloud brokering; and budget management. The company says customers typically begin cloud migrations by lifting and shifting obvious application candidates, refactoring others and developing new applications.

### Application modernization, microservices

Overall, Tech Mahindra claims to have served some 350 customers via its Application Development & Maintenance Services with more than 6,000 applications. It claims to be supporting more than 1,000 SAP instances and to have 300 solution architects, 8,500 SAP professionals and 10,000 digital consultants. It also claims to have multiple \$100m-plus multi-year transformation and modernization engagements ongoing with Fortune 500 companies. Within its migration and modernization programs, it claims to be managing more than 100,000 instances in over 120 engagements. It says it has more than 5,000 cloud professionals, and has assessed 15,000 applications for cloud readiness and migrated 7,500 applications to cloud.

Modernizing mainframe applications remains a core capability. There are a number of options here. The most basic is webifying mainframe applications using presentation layer integration (emulation). Rehosting to Unix/Windows/Linux enables business logic and data to remain intact and reduces TCO (serverless Cobol via Micro Focus is also an option here). Re-platforming (re-write/re-engineer) converts legacy code to J2EE or .NET. It can also transform legacy apps into n-tiered apps using SOA-based integration, retaining core business functionality of the legacy system.

It has a range of accelerators for use in modernization projects, including an LCaaS reverse engineering tool, a legacy transition framework, a microservices refactoring framework and a component-based framework for mapping business processes to application services.

Cloud-native application development and legacy application modernization are key cloud offerings. So vital is this that Tech Mahindra operates a center of excellence (CoE) for cloud native/microservices that reports to the COO. It claims to have some 5,000 professionals trained to deliver these capabilities, as well as a rapid application development kit to support this, and to have over 70 customers engagements for it. The CoE consolidates all aspects of cloud-native conversion – assessment and planning, development, containers and orchestration, refactoring, and deployment. It uses the refactoring framework (above) to transform legacy code into microservices, with containerization being the major deployment activity. It operates a multi-vendor microservices technology stack with partnerships with the major IaaS, PaaS and developer tools; uses a DevOps pipeline; and operates a capacity planning framework. Tech Mahindra's Blue Marble platform includes a repository of microservices products, architecture patterns, lifecycle management, user interface components and consulting aimed at supporting its core telco customers modernizing OSS and BSS systems.

### #NewAgeDELIVERY

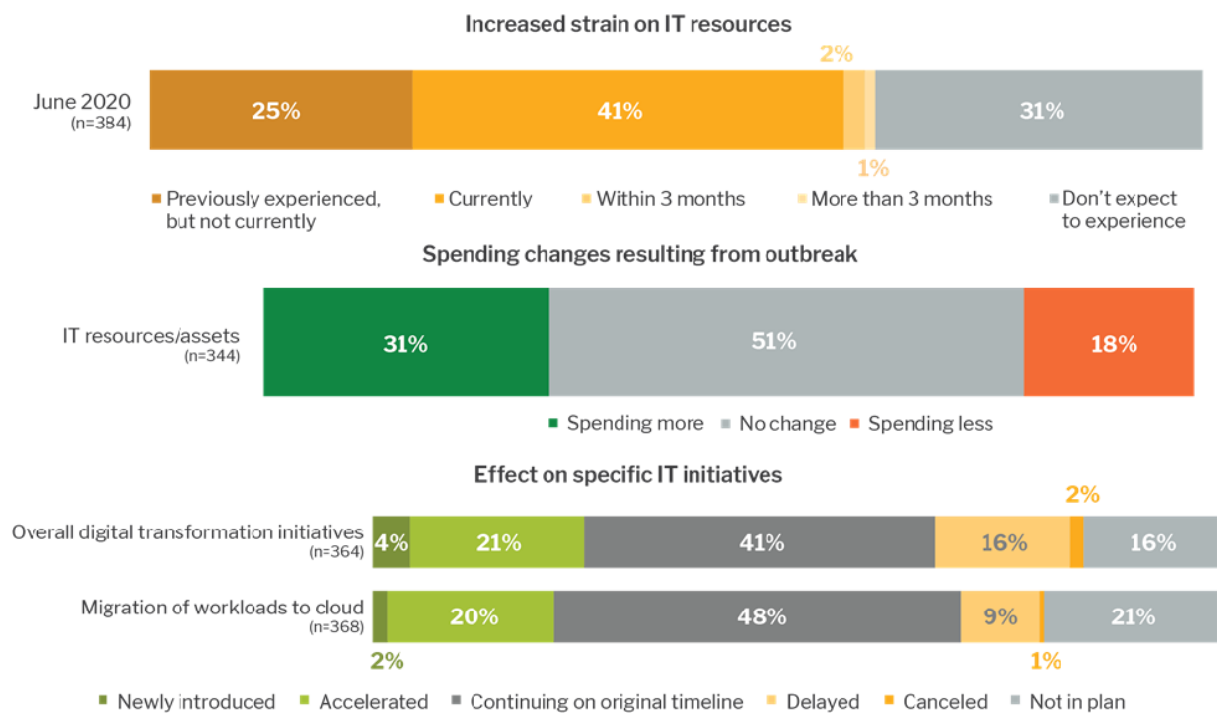
Cloud-native technologies are also the underpinning of Tech Mahindra's #NewAgeDELIVERY engine, which is designed to take advantage of advanced technologies in the delivery of digital services. The engine is built on the MEAN stack of MongoDB, Express.js, AngularJS and Node.js. The engine enables developer, partner and customer teams to right-skill on demand and ensure full-stack commandos, thus ensuring a significant increase in productivity of each member of the delivery team. At the core of the engine is MePS (microservices-enabled portfolio as a service), which acts as a repository for all the assets created, ensuring that they are tagged and curated, taking advantage of machine learning and AI technologies to map and label assets.

## Serverless

Tech Mahindra says it is seeing a rise of ‘serverless first’ approaches among its customers, and that these are accelerating during COVID-19. Increasingly, if the focus of a project is only cost and performance, then it says the project will likely go serverless, especially if the purchasing decision is made in the C-suite. To ease some of the difficulty when it comes to maintaining state when deploying to serverless, Tech Mahindra has developed a global caching mechanism that it says captures and maintains the state of local microservice functions and can restore them after execution. However, while the use of serverless is increasing, Tech Mahindra says the majority of its customers are still currently pursuing cloud-agnostic approaches, with many using Red Hat OpenShift to achieve this. It doesn’t use a service mesh in large-scale monolithic application migrations; instead, it uses an enterprise service bus (usually an OSS tool) unless the customer already has something like Dell Boomi.

## COVID-19 Is Increasing IT Spending, Accelerating Digital Transformation and Cloud Migration

Source: 451 Research’s Voice of the Enterprise: Cloud, Hosting & Managed Services, Budgets & Outlook



## Competition

All of Tech Mahindra’s competitors, which include Accenture, Atos, Capgemini, DXC Technology, Genpact, HCL, IBM, Infosys, TCS and Wipro, have well-developed cloud transformation practices supported by new cloud-native platforms. However, many of these tend to be only focused on support services and infrastructure management. Tech Mahindra’s is a comprehensive approach toward cloud transformation, including a well-developed cloud-native software development capability.

SWOT Analysis

**STRENGTHS**

As the shift to public cloud accelerates, organizations seek trusted partners to help them design, deploy, manage and optimize the services needed to run their businesses on public clouds. The key will be finding the right combinations and operationalizing them to deliver the benefits advertised by their suppliers. The key question is which applications in what sequence are going into which venues over what time period, which is where Tech Mahindra's effort is focused.

**WEAKNESSES**

Tech Mahindra's key challenge is returning the company to profitable growth and transforming itself in order to be able to help customers in the post-COVID-19 world.

**OPPORTUNITIES**

COVID-19 is increasing IT spending and accelerating digital transformation and cloud migration. Increasingly, enterprises are looking at prebuilt integrations like workflow and building blocks that have the ability to support various technology stacks and toolsets. This reduces complexity, the need for expensive developers and lock-in.

**THREATS**

The market is fragmented, and customers now face a massive amount of vendor options as re-platforming to cloud and cloud-native have gone mainstream.