ANALYST PERSPECTIVE

DIGITAL TRANSFORMATION:
BEST PRACTICES FOR MANAGING NEW TECHNOLOGY

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TABLE OF CONTENTS

INTRODUCTION

Every new technology addition requires management – procurement, inventory, auditing, changes, monitoring and so on. As more enterprises shift to digital assets and services that replace their old analog counterparts, the need for monitoring and administration is as imperative as ever. Enterprises will want to follow several recommended best practices to make this

happen well, including collaborating with their communications lifecycle, telecom expense and technology expense management vendors. This Analyst Perspective report guides organizations through best practices to ensure successful digital transformation outcomes. Vendors may use this report to showcase their capabilities that align to those best practices.

WHERE ENTERPRISE RESPONDENTS STAND WITH DIGITAL TRANSFORMATION

As AOTMP Research & Advisory noted in its previous report, *5 Challenges to Digital Transformation*, "digital transformation" has once again become a popular catchphrase, first cropping up in the 1990s, then reviving in the early 2000s. Put most simply, digital transformation means applying next-generation capabilities to processes, products and assets to improve business efficiency or enhance the customer experience. Therefore, when describing their digital transformation strategies, enterprises often cite the following technologies as core:

> Cloud
> Mobility
> Big Data/Analytics/KPIs
> Internet of Things (IoT)
> Artificial Intelligence (AI)

To that point, here are the technologies enterprise respondents tell AOTMP Research & Advisory they are implementing this year (see Figure 1).

Figure 1: Technology Deployments Planned for 2019

- **71%** Cloud Services
- **39%** Cybersecurity Technology
- **37%** Machine Learning/Artificial Intelligence (AI)
- **34%** SD-WAN
- **32%** Unified Communications Software
- **24%** MPLS
- **24%** Machine-to-Machine (M2M)/IoT Endpoints
- **15%** Other Deployments
- **5%** Augmented Reality/Virtual Reality
- **5%** No New Technology Deployments

Source: AOTMP Research & Advisory, 2019

Each of these responses aligns with digital transformation efforts – even MPLS, especially in the context of SD-WAN. Despite its higher costs, MPLS brings benefits including reliability and quality of service that the internet cannot yet offer.

The rest of the answers come as no surprise, and that is particularly true with the dominance of cloud services. Organizations see value in moving away from premises-based solutions to support remote and mobile workers, and to pay for technology from the opex budget rather than the harder-to-justify capex counterpart.

And while it is a positive to see enterprises upgrading their infrastructure and processes, they need to work on effectively managing all that new technology. Analysts spoke with enterprises and found that few respondents feel "extremely" prepared for this task; less than half reported being "somewhat" prepared – results that underscore the need for this report. As for why respondents indicated varying levels of preparedness, here are some trends identified by analysts:

> Not enough staff/not enough experienced staff
> Budget constraints
> Speed of technology change/evolution
> Lack of action among decision-makers
> Poor communication among departments
> Old architecture that does not support new technologies

Here are some additional insights into respondents' struggles:

"We understand the direction, but technology changes so quickly that it is difficult to stay ahead of the change and to have the SMEs available at that moment."

"There is not the communication between the departments that would give us an advantage and the level of preparedness we need. It is very disorganized."

"There has been no decision made on how to proceed, even though the current servers are 10 years old. There is no money available to move to a new system."

Conversely, respondents who said they are prepared to effectively manage digital transformation cited these key reasons:

> Large and well-trained IT departments
> Forward-thinking organizations that encourage digital transformation, not just through design and implementation but also through cultural support of change

With that in mind, the remainder of this report guides enterprises through the best practices that, when followed, make the most of digital transformation efforts for the benefit of the entire organization.

PEER TIPS FOR DIGITAL TRANSFORMATION

Insight from AOTMP Research & Advisory Enterprise Respondents

" We have a formal review process for new technologies that has to be approved by a panel of SMEs across the organization." *- Anonymous*

" We've adopted multi-cloud, hybrid architectures, design thinking, digital transformation-appropriateness testing methodologies and culture change, all of which make digital transformation feasible." *- Anonymous*

" Make sure everyone is aware of what is planned to avoid redundancy and wasteful spending." *- Anonymous*

" Ensure that there are enough resources to handle the tasks during the transformation." *- Amar Bains, Telecommunications Manager, California Association of Realtors*

" Start now, move quickly, enact strong change management, be unapologetic about changing for the future." *- Senior Manager, End User Technology, Pharmaceutical Company*

" Don't ignore the importance of culture change. Doing so can wreck the best-planned initiatives." *- Anonymous*

" Strategize, plan, procure the resources adequately and execute with periodic reviews and learned lessons and other exercises to feed back the processes in order to make them more robust, solid and scalable." *- Anonymous*

" Have an operations support model roadmap for each new technology you are planning to bring in. Do trials to find the optimal solution." *- Walt Willard, Manager, Telecom Vendor Management, Kaiser Permanente*

BEST PRACTICES FOR MANAGING NEW TECHNOLOGY

Set Goals, Measure Progress

Organizations must know what they want from technology before deploying it. Therefore, first, set goals for each component of the digital transformation and then prepare to measure progress. These two efforts combined will go far in capitalizing on the investment the organization is making in its telecom, mobility and IT assets and services.

In terms of goals, deployments should be deliberate, all with the aim of helping the organization achieve objectives that may include reducing expenses and increasing:

> Profit
> Revenue
> Competitive Advantage
> Market Share
> Customers (Additions and Retention)

These are just some examples of the ways enterprises can use technology to create outcomes for the business. In addition, though, the telecom/mobility/IT management department must have metrics in place to track how the digital transformation is proceeding. AOTMP Research & Advisory maintains it is impossible to manage any technology that is not understood. Business analytics correct this potential problem by identifying the relationship between the telecom/mobility/IT environment and business results. The general categories to track are:

> Technical – infrastructure, software, services
> Financial – service, delivery, support costs
> Operational – business practices, processes, delivery

AOTMP Research & Advisory has written about specific key performance indicators (KPIs) at length in other reports and will not review them all here. However, here are two examples of what to measure amid digital transformation and why:

Annual Telecom/Mobility/IT Spend Per Employee. Establishes service-to-cost baseline for evaluating technology enablement. Helps determine performance targets.

Annual Telecom/Mobility/IT Spend as a Percentage of Revenue. Establishes baseline for evaluating costs against business financial performance.

Above all, enterprises must know what they want out of their new technology. This eliminates the risk of taking a scattershot approach and deploying something just for the sake of doing so. New additions to infrastructure and services should serve strategic interests of the business, which means having a plan.

Track All Technologies in One Repository

As much as possible, monitor all telecom, mobility and IT technologies in one communications lifecycle management platform that interoperates with other systems, including, but not limited to, EMM, ITSM, human resources, procurement and finance. The need for such holistic insight becomes even more critical as digital transformation technologies take hold. For instance, the telecom/mobility/IT management group will want to be able to issue chargebacks for IoT sensors and their services to specific business units while still being able to provide organization-wide reporting for the CIO and CFO.

Not all CLM platforms can accommodate integrations with external systems, so choose wisely. However, AOTMP Research & Advisory has found that many vendors do offer such proficiencies and many will add custom automation as requested (and as they are able). Refer to the *2019 Telecom Expense Management Market Landscape* report, as well as the AOTMP® directory of Efficiency First® Certified vendors, for more detail.

In the meantime, take it from enterprise peers: those who have tied their CLM platforms with ITSM and other sources (HR, procurement, operations, etc.) tell AOTMP Research & Advisory they are experiencing "very beneficial" results.

Start with Inventory

AOTMP Research & Advisory cannot emphasize enough the power of inventory. If an enterprise does not establish accurate inventory from the beginning of any implementation, it will face recurring, unnecessary overcharges and inefficiencies. Avoid these problems by tagging all new assets and services to their respective projects – say, a new SD-WAN router at a branch location, identified as part of the overall SD-WAN implementation, or a new cloud license for a certain user, labeled as part of the overall application deployment. This allows the telecom/mobility/IT management department to monitor every component, physical or virtual, throughout its lifecycle.

Optimize All Contracts

According to AOTMP Analytics, organizations in their initial baseline assessment have an average Efficiency First® Contract Management Efficiency rating of 24 percent. In other words, enterprises face big challenges when it comes to telecom/mobility/IT vendor contract management. This report provides high-level guidance for fixing the issue; AOTMP Research & Advisory recommends reading other reports in the subscription portal to boost contract management efficacy.

Begin with an invoice-to-contract analysis. This will establish an optimization baseline, showing the enterprise how much it is paying compared to how much it should pay. Once that is done, make sure that, where applicable, employees are assigned to the correct plans. From there, telecom/mobility/IT managers can pinpoint where they may be able to cut or optimize costs.

Regular contract optimization is important, especially with wireless (including IoT) and cloud services because usage fluctuates.

Fortify Security

As more enterprises deploy new technologies, it comes as no surprise that they also must tighten their security practices. To that end, 67 percent of enterprise respondents recently told AOTMP Research & Advisory that "improving security practices" ranks as their top telecom/mobility/IT management activity for the year. Analysts support this sharp focus on security due not just to the number and intensity of breaches, but

to the devastating impacts these hacks have on businesses. And the more next-generation technology at play, the greater the security risks.

Here are some general tips for strengthening security for the technologies germane to digital transformation:

1. Identify all systems that contain confidential – and, when relevant, regulated – data.
2. Develop and implement a security plan that complies with all regulations in all geographies where the enterprise operates.
3. Plan for all potential financial, regulatory and reputation risks.
4. Adopt and enforce transparent, reasonable policies by which every department can abide.

Rely, and Act, on Reports

The success, or not, of any digital transformation effort will show in the data. Remember not just to set goals and measure progress, as noted previously, but also to use the CLM system's reporting capabilities to track the performance of a new deployment.

Here is a checklist for making the most of reporting amid digital transformation:

> Does the report contain all necessary information?
> Does the report distribution list include the right people?
> Is the report automated? If not, can it be?
> Can the organization act on information in the report?
> Does the organization follow up on the report's findings, reviewing effective strategies and sharing best practices?

When the enterprise telecom/mobility/IT management group can answer each of the above questions in the affirmative, it will be well on the path to using reporting for the organization's highest benefit.

Gather User Feedback

The last best practice to employ when managing new technology is to check whether employees are happy with the changes. If they are not, find out why so the telecom/mobility/IT management group can do its best to address any problems. Organizations do not want to invest in assets and services their workers will actively try not to use. At the same time, while staff may have little to no choice in adopting the technologies associated with digital transformation, the enterprise can, and should, provide as much training and help desk support as possible to encourage positive experiences and outcomes.
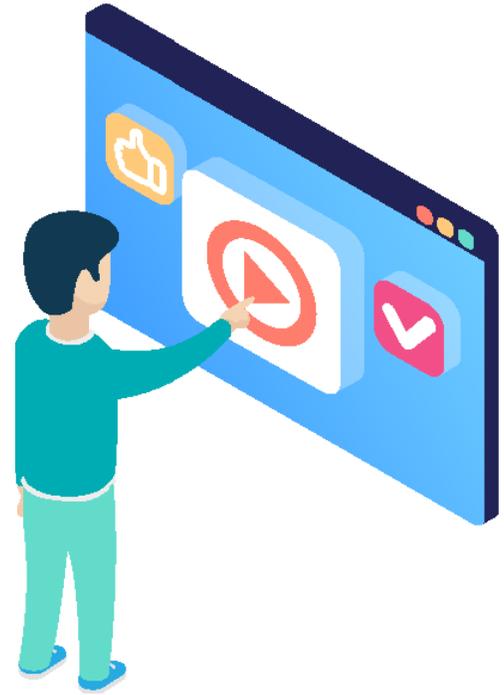
CLM VENDORS SHARE ADVICE FOR MANAGING NEW TECHNOLOGY

To add perspective to this report, AOTMP Research & Advisory solicited some advice from three CLM vendors that help enterprises to manage the assets and services that comprise digital transformation.

MDSL

As enterprises start to undergo transformational technology change at their organization, the one piece of advice we'd share is to make sure they first understand their current vendor landscape. Though new technologies can disrupt or transform industries, category managers are often playing catch-up to gain the clarity and control they need to support the business. For example, with the rise of public cloud as a transformative enabler to the business comes the challenges of shadow IT, cost allocation and bill shock that mirror the challenges of managing mobility before it. Properly understanding the enterprise vendor set creates opportunities to streamline and automate processes from provisioning (through ebonding for example) through optimization and billing (through APIs or EDI feeds), allowing an organization to realize the full benefit of these better, faster and, if managed correctly, more cost-effective technology options.
–Simon Mendoza, CTO

Analysts asked, "What's the one, key piece of advice or insight you share with enterprises when they are starting to manage new technology?" Here are the responses by alphabetical order of company name:

One Source Communications

Secure, cloud-based solutions are preferable to building infrastructure for speed to value. Remember that every new system must have a disaster recovery plan for business continuity, which makes self-hosted solutions impractical in many cases. While this approach increases dependence on the network, SD-WAN can provide flexibility to build diversity and redundancy over low-cost data services. With careful attention to connectivity requirements, a proper design can create a seamless user experience that disguises the necessarily complex technology underneath. Maintenance and support require a qualified partner who can reduce risk by managing the solutions through organizational change and emerging threats.
–Chris Cooley, Director of IT Service Delivery

Tangoe

This is going to be a cliché, but a key piece of advice when managing new technology is setting expectations correctly. Because expectation setting seems like trite advice, let me touch on why expectations tend to get out of line. Most technology projects are fighting for budget alongside all the other priorities of an enterprise. In order to capture budget, the benefits of an IT project have to be outlined. These benefits can usually be described along a possible range of results. The range is made up of a reasonable set of outcomes. Oftentimes, a project is rejected when the anticipated benefit is from the middle of the range. When the project is projected to yield a benefit at the top of the range, it is approved for budget. It is a good news/bad news situation. The good news is the project is funded. The bad news is elevated expectations have been set.

The other source for inflated expectations comes from popular reading. An article will appear about the tremendous benefits an enterprise realized from, say, an IoT project, but the article rarely describes the budget behind that project.

My advice is to manage expectations, but how can that be done effectively? Here's how. When securing budget, specify a range of likely results or benefits. Cite some examples of the project that have been featured in articles and estimate the budget for those similar projects. These two simple steps in the budget cycle will help to control expectations.
–Chris Koeneman, Vice President, Strategy and Customer Success

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CONCLUSION: AIM FOR EXCELLENCE

Enacting digital transformation goes beyond deploying new technology. Digital transformation in itself aims to shift how the enterprise approaches its business and takes activities, practices and goals to new heights. The telecom/mobility/IT management is core to helping this happen. Achieve that by establishing a Telecom/Mobility/IT Management Center of Excellence. Read *Enterprise Trends in Telecom Management Center of Excellence* for in-depth guidance.

In the meantime, know that AOTMP Research & Advisory constantly emphasizes building a Center of Excellence for a specific reason. A properly structured Center of Excellence creates organization-wide outcomes that include:

> Strategic business results
> Functional leadership
> Innovation
> Technology management, alignment
> Financial and risk management
> Operational management
> Improved collaboration

A Center of Excellence practice is essential to helping the business and elevating the perception of technology to that of a strategic asset. This will prove especially true as enterprises enact the digital transformation that will provide the foundation for new growth over the coming years.

ABOUT METOVA

Founded in 2006, Metova is a leading strategic technology partner, providing a turnkey solution to research, initiate and complete a meaningful digital transformation. Metova's unique culture of teamwork, creativity, and personal development has attracted the world's leading engineering, strategy and design talent. Specializing in mobile solutions, connected home and vehicles and the Internet of Things, Metova provides decades of expertise to companies in need of software solutions and strategic consulting. From startups to Fortune 100 companies, Metova provides the right solutions to help organizations both disrupt and respond to disruptions effectively. Metova is the 2019 winner of the "IoT Partner Enablement Company of the Year" award from IoT Breakthrough, an independent organization that recognizes the top companies, technologies, and products in the global Internet-of-Things market. In addition, Metova is an Advanced Amazon Web Services (AWS) Partner, enabling Metova to leverage AWS resources, including advanced technical, sales, and marketing resources to support customers.

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Kelly Teal authors many of AOTMP Research & Advisory's reports, from Analyst Perspectives and Market Landscapes to vendor whitepapers, Anatomy of a Decision insights and more. Thanks to a background diverse in technology journalism, Kelly is able to write with versatility across AOTMP Research & Advisory's practice areas. This has cultivated a skillset that allows her to speak to the range of issues enterprises and vendors face amid the ever-changing telecom, mobility and IT management climate.

ABOUT AOTMP® RESEARCH

AOTMP® Research support enterprise and vendor telecom, mobility and technology management initiatives and objectives with actionable data and insight. To that end, AOTMP® Research & Advisory focuses on the management of multiple practice areas, including IoT, cybersecurity, enterprise mobility, telecom expense, mobile application development, BI/data analytics, enterprise telecom/mobility/technology environments, telecom/mobility/technology ecosystem and IT services.

Enterprises take advantage of AOTMP® Research's targeted research, analysis and advisory services to boost telecom/mobility/technology management efficiency, performance and productivity. This brings greater value and impact to the overall business – including reducing costs. For vendors that impact the performance, productivity and efficiency of an enterprise's telecom, mobility or technology environment, following AOTMP® Research's proven approach leads to higher revenue, more market share, competitive differentiation and happier customers.

One key distinction about AOTMP® Research stems from our extensive reach and relationships with telecom, mobility and technology management business professionals. Thanks to a variety of sources and advanced statistical methods, we extract information from end users that helps enterprises measure themselves against their peers and gives vendors unprecedented views into their clients' and prospects' business pains and goals.

Overall, AOTMP® Research sets the standard for telecom/mobility/technology management expertise, guiding enterprises and vendors alike to positive, measurable outcomes.

ABOUT AOTMP®

Telecom/Mobility/IT Management Best Practices and Industry Standards

AOTMP® is a leading global information, services and advisory firm for next generation Telecom/Mobility/IT Management best practices and industry standards for organizations and the vendors who support them. Best practices cover network services, carrier services, mobility and IoT solutions, cloud solutions, software, hardware, and emerging technologies that impact the performance and business value of technology. Using information, data and compiled analytics from thousands of enterprise environments worldwide, AOTMP® solutions help enterprises drive performance, efficiency and productivity while significantly reducing costs and help vendors provide a new level of value to their customers. AOTMP's solutions are based on its patented Efficiency First® Framework methodology and are the foundation for Telecom/Mobility/IT Management Centers of Excellence being built across the globe.

AOTMP® Business Units include:
> AOTMP® University – courses, certifications, and assessments
> AOTMP® Tools – tools portal and certified vendor directory
> AOTMP® Research – research portal, custom research and analyst advisory sessions
> Efficiency First® Analytics – scoring, measurements, analytics and recommendations
> AOTMP® Services – services for enterprises and vendors
> AOTMP® Events & Programs – annual conferences, webinars and the AOTMP Industry Council