TRANSFORMING OPERATIONS SUPPORT SYSTEMS: TRENDS, ISSUES AND PRIORITIES OF COMMUNICATIONS SERVICE PROVIDERS

CONTENTS

1. INTRODUCTION

The global communications industry is undergoing profound change. Recently, infrastructure development has been the driving force behind network and service initiatives in fixed-mobile convergence, Next-Generation Networks (NGN), Service Delivery Platforms (SDP) and IP Multimedia Subsystems (IMS). However, many communications service providers are now coming to terms with the fact that existing Operations Support Systems (OSS) are an obstacle, rather than a catalyst for change.

The focus on next-generation initiatives has forced service providers to look at critical factors affecting how new services are delivered, the time frames in which they are delivered and the systems that support them. Addressing these issues through OSS Transformation projects aims to reduce the cost of new service introduction, network complexity and generate true agility to maintain margins. Service providers must have systems in place enabling them to cost-effectively create, fulfill and retire thousands of services in short time frames.

Amdocs, a leading software vendor, commissioned research firm Coleman Parkes to conduct a global survey to learn more about the issues service providers face with regard to OSS Transformation and the obstacles associated with meeting the needs of their customers. This paper outlines the survey's results and provides an overview of the industry's concerns around OSS, its current challenges, and those of the future.

2. SUMMARY OF KEY FINDINGS

The survey revealed that service providers continue to face significant challenges when attempting to roll out new services such as VPN (Virtual Private Networks), IPTV (Internet Protocol Television) and VoIP (Voice over Internet Protocol). There were several contributors to these challenges, including a lack of visibility into business process and systems, the shortfalls of legacy systems, data management and data integrity issues. The survey also measured the time required to deploy new services and the current fallout in service fulfillment processes that providers are experiencing.

From this survey, several key themes emerge:

> COST OF INTRODUCING NEW SERVICES INCREASING, NOT DECREASING

While service providers are trying to squeeze new revenue out of new services, the cost of deployment continues to rise. Additionally, the systems to support these complex new services are struggling to keep up. 77% of service providers said that legacy systems are unsuitable for meeting the needs of today's customers and are not equipped to quickly introduce new services.

> FALLOUT RATES CONTINUE TO IMPACT MARGINS

Fallout occurs when there is an exception in the service fulfillment process that needs to be processed manually, ultimately resulting in increased costs. Only 18% of respondents said that fallout rates were decreasing, leaving a massive 82% stating that fallout rates are not moving or are increasing.

> SPEED TO MARKET AND COMPLEXITY

Rapid introduction of new services is a key challenge to carriers now and will continue to be over the next two years. Despite the fact that reducing time to market is currently a high priority for most service providers, a mere 34% of carriers can introduce new services in less than six months, with most new service introduction ranging from six to eighteen months.

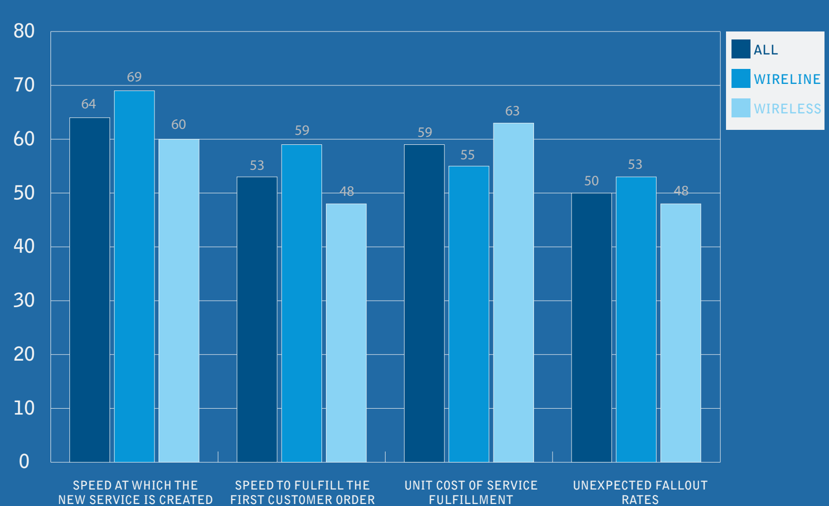
> DATA ACCURACY AND A SINGLE VIEW OF THE NETWORK, SERVICE AND CUSTOMER

73% of respondents stated that data is insufficiently available to roll out new services. Additionally, more than 70% of respondents cited that a single view of the network, service and customer is a key requirement for OSS.

> FUTURE OSS REQUIREMENTS

The survey revealed that the number one OSS requirement over the next two years is the integration of OSS and BSS (Business Support Systems) to create a more holistic and collaborative business. This integration will enable greater agility and customer focus in cross-organizational processes so that a truly *intentional customer experience*™ can be delivered.

KEY ISSUES FACED WITH NEW SERVICE ROLLOUT
BASE: TOTAL RESPONDENTS



2. SUMMARY OF KEY FINDINGS (CONT.)

2.1 NEW SERVICE INTRODUCTION — NOW AND IN THE FUTURE

The survey polled service providers to gauge the types of services they plan to introduce over the next five years:

- 62% of respondents plan to introduce VoIP services to market over the next five years.
- 61% will introduce broadband/IPTV services over the next five years.
- More than 50% of all respondents plan to introduce at least one of the following services over the next five years: mobile music services, iPod and mobile synchronization.

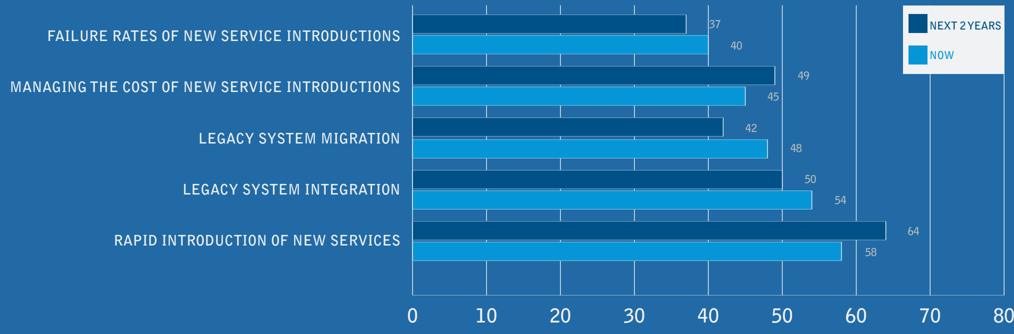
As this market continues to evolve, service providers must have the business agility to respond quickly and efficiently to transform and adapt their businesses, and the operational systems in place to support new revenue models such as multi-media content services and digital advertising. Providers must have the ability to cost-effectively deliver services quickly and accurately to meet market demands and ensure superior customer experience.

The survey examined the challenges of bringing these new services to market:

- Nearly 70% of wireline providers said that the speed of service creation was the biggest challenge.
- 59% of wireline providers (48% of wireless providers) said that the speed of service fulfillment was a key challenge.
- Around half of those surveyed (both wireline and wireless carriers) said that unexpected fallout rates are a key issue associated with new service rollouts.

With demand for complex new services increasing, 77% of service providers said that legacy systems are insufficient to deploy new services.

CORE CHALLENGES FACED WITH OSS ACTIVITIES
BASE: TOTAL RESPONDENTS



2. SUMMARY OF KEY FINDINGS (CONT.)

2.2 TIME-TO-MARKET ISSUES AND COST OF INTRODUCING NEW SERVICES

The survey also examined key cost drivers, such as fallout rates and the time required to introduce new services. It was established in the survey that 66% of service providers (both wireline and wireless) require more than six months to introduce a new service to market.

Only 38% of companies report declining costs of new service introductions.

2.3 FALLOUT RATES CONTINUE TO IMPACT MARGINS

New services generally mean tight margins, and fallout or failure of services can have significant impact on profitability. Where services are price-sensitive, control over costs is essential to profitability.

Fallout has three major impacts on cost:

> The cost of manual handling of fallout

> Introduction of errors through manual introduction, which in turn increases fallout rates

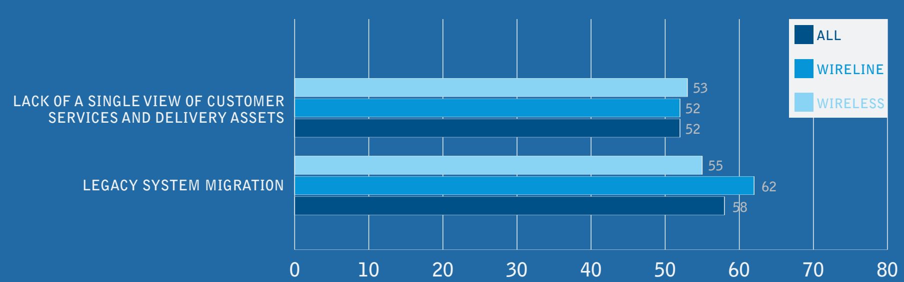
> Delays in service delivery due to fallout resulting in reduced customer satisfaction and churn – which means immediate loss of revenue and necessitates costly new customer acquisition

The survey indicates that fallout rates of up to 10% are common in the industry with 50% of those surveyed citing fallout rates of 6% or above as the norm. In the past, fallout costs could be absorbed, but as competitive pressure increases, prices are reduced, and margins become tighter, the impact of fallout costs can make the difference between profit and loss.

To illustrate, consider fallout in a typical service fulfillment scenario for IP-based services. When delivering 10,000 service orders per month, 10% is 1,000 orders. If manual handling requires just one hour, assuming an industry average full-time equivalent (FTE) rate of $55 per hour, the cost is $55,000 per month or $660,000 per year. If the volume is 30,000 orders a month, the cost rises to $1.98 million per year.

If 25% of manual fallout requires a site visit, a reasonable estimate for some services, and a site visit costs $500, add an additional $125,000 per month or $1.5 million per year. Again, if volume increases, the cost increases. The economics of service fallout are clearly significant.

TOP ISSUES FACED WITH NEW SERVICE INTRODUCTIONS
BASE: TOTAL RESPONDENTS BY SECTOR



2.4 DATA ACCURACY AND DATA INTEGRITY

As the volume of service orders increases, the importance of accurate data becomes crucial. Accurate data ensures that processes can be automated and this means that the service provider can process higher volumes and a greater variety of services without incurring higher costs; meaning that dual goals of innovation and customer focus can be met.

Surprisingly, despite the fact that more than 70% of service providers want a single view of the networks, customers and services, this is yet to be achieved, with more than 70% of respondents stating that data is insufficiently available to roll out new services. 56% cited inaccuracy of data as an impediment to rolling out new services.

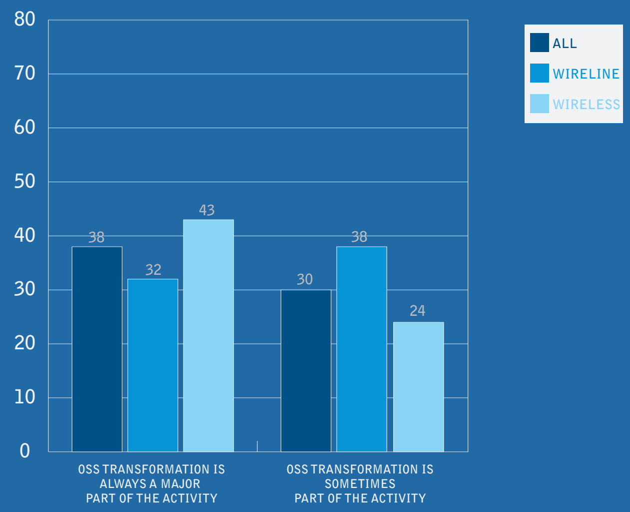
Over half of respondents said that they have a poor understanding of network performance and lack visibility into end-to-end processes. As a result, manual intervention is required, fallout rates increase and customer service is impacted.

2.5 FUTURE REQUIREMENTS OF THE OSS

More than 70% of respondents (both wireline and wireless carriers) stated that OSS Transformation is essential for new service introduction. However, just 38% of all companies, 43% of those in the wireless market, agree that OSS Transformation is always associated with new service introduction. So while service providers are acknowledging that OSS is essential, many are taking a 'service-by-service' approach to fulfillment to meet the demands of today's market. As the market evolves and as service complexity increases, it is clear that service providers need joined-up systems that support their strategic goals, rather than proliferating the fragmentation of data in the OSS.

When asked about the future requirements for OSS, the number one response was to call for more integration with the BSS, indicating that the operators understand the relationship between seamless end-to-end processes from the customer through to the network – and its importance to achieving an *intentional customer experience*™. 66% of participants cited that integration of billing systems with the OSS is a key requirement over the next two years. Additionally, a further 69% want to move to a totally integrated solution – but they are not there yet.

PROCESS FOR NEW SERVICE INTRODUCTIONS
BASE: TOTAL RESPONDENTS



3. CONCLUSION: POOR OPERATIONS SUPPORT AND COMPLEX FULFILLMENT REQUIREMENTS ARE IMPACTING TIME TO MARKET

Despite all the hype around next-generation networks and investment in IP technology, the industry is struggling to gear up to transform from a slower-moving, utility business model to a fast-moving, fast-changing and customer-focused industry. As business models change, they must sustain the rapid introduction of new services and products must be tightly focused on delivering an unbeatable customer experience.

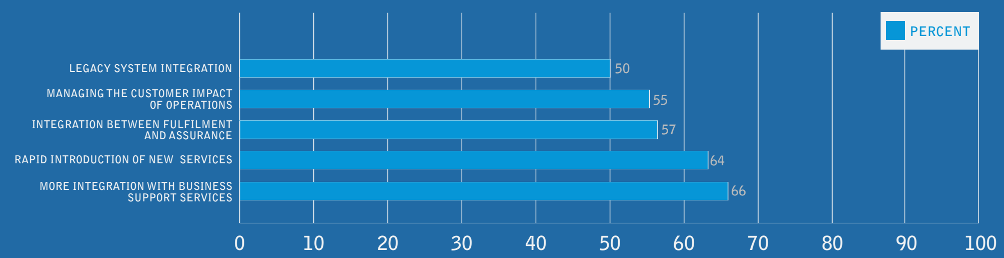
Transformation is taking longer than expected, with service providers still grappling to harness or retire legacy systems, preventing the rapid and cost-effective new service introductions. While service providers face increasing competitive pressure from new entrants, many service providers admit that the cost of introducing a new service is increasing; too many also admit to increasing fallout rates which will erode margins, add cost and impact customer satisfaction. As a result, it is perhaps not surprising that although service providers are trying to bring a wider range of more innovative products to market, the time to market for new services is increasing not decreasing. Given the level of investment in next-generation services, why is this still the case?

Fundamentally, the complexities of the existing operational systems are having an adverse impact for many global service providers. Legacy systems are costly and in many cases are not integrated. Solutions are still considered in isolation, rather than as part of 'the big picture'. Data integrity is an issue that has to be overcome before service providers can achieve true process automation that can reduce costly manual intervention. Fallout rates are having an increasing effect on costs and therefore margin is under threat. The desire for rapid and frequent new service introductions is driving the business, but the appropriate systems and processes to support the successful delivery of those services are yet to be implemented.

This survey suggests that the importance of operations in supporting providers' most important aims is still not being translated as an organization-wide, holistic approach. Instead, many service providers continue to think about OSS in the context of individual services, with a resulting proliferation of system complexity. And as network technology is transformed, without accompanying OSS Transformation, the problem is becoming worse not better.

The survey demonstrates that OSS Transformation is widely acknowledged as necessary; however, many service providers continue to address operational issues tactically, causing a fundamental disconnect between the aims of the company, and its ability to execute. Recognizing that this is a strategic and operational undertaking, service providers must elevate OSS Transformation as a key enabler for innovation, customer focus and competitive strategy. Now, more than ever, service providers need to think about operational issues up front, rather than relegating them to a follow-up activity. OSS must be considered as a key initiative in order for promised benefits to be achieved.

TOP 5 OSS REQUIREMENTS FOR NEXT TWO YEARS
BASE: TOTAL RESPONDENTS



4. HOW THE SURVEY WAS CONDUCTED

100 major wireless and wireline companies across the globe took part in the survey, which was undertaken in December 2006 and January 2007. Directors of OSS, CTOs and CIOs took part in the study in a telephone-based discussion in their respective native language. Major organizations in the Americas, Western Europe, Eastern Europe, Asia Pacific, Africa and the Middle East provided input for the survey. The survey was independently conducted by Coleman Parkes Research.

ABOUT COLEMAN PARKES

Coleman Parkes Research Ltd, formed in 2000, provides action-focused marketing research on a global scale. The Company offers a full research and consultancy service across all markets while specializing in business-to-business research with a focus on IT, technology and communications research. For more information visit www.coleman-parkes.co.uk

ABOUT AMDOCS

Amdocs combines innovative software and services with deep business knowledge to accelerate implementation of integrated customer management by the world's leading service providers. By delivering a comprehensive portfolio of software and services that spans the customer lifecycle, Amdocs enables service companies to deliver an *intentional customer experience™*, which results in stronger, more profitable customer relationships. Service providers also benefit from a rapid return on investment, lower total cost of ownership and improved operational efficiencies.

Cramer, Amdocs OSS Division, enables service providers to manage the transformation of their OSS and profit from the convergence of business support systems (BSS) and OSS systems. Service providers benefit from the automation of critical customer-centric processes – such as fulfillment and assurance – from the customer to the network, which allows them to accelerate revenues from new service offerings.

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