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AMS metrics: Changing the value paradigm

Metrics associated with application management services (AMS)—like the services themselves—often focus on cost reduction and improvement of back-office services. Especially when it comes to outsourced AMS, metrics often emphasize compliance with service level agreements (SLAs) that govern the outsourcing relationship and tactical support outcomes.

Now, as organizations undergo technology-driven transformations of business and operating models, IT departments have the opportunity to elevate the role of AMS through a more strategic approach to using metrics. In fact, effectively designed and executed metrics can enable transformational shifts, helping CIOs not only manage overall system stability but also free up valuable bandwidth for IT initiatives aimed at increasing business value.

This point of view takes a closer look at the rationale for and potential benefits of this enhanced approach to AMS metrics.

> Many organizations seem to employ metrics just for compliance and not commitment. Metrics must be used rigorously for review as drivers of positive change, and as indicators that help identify deviations from an AMS plan before becoming execution failures.
>
> Ashish Mehta, Director Enterprise Applications
> Dolby Laboratories, Inc.

A shift in how and why metrics are applied

According to Gartner, annual application development and support investment is roughly 43 percent of total IT spending. Half (50 percent) of that is for new development projects while the remaining half is for maintenance of existing systems. By 2023, 40 percent of application modernization work will be contracted under a multiyear AMS outsourcing arrangement, up from 20 percent in 2019.
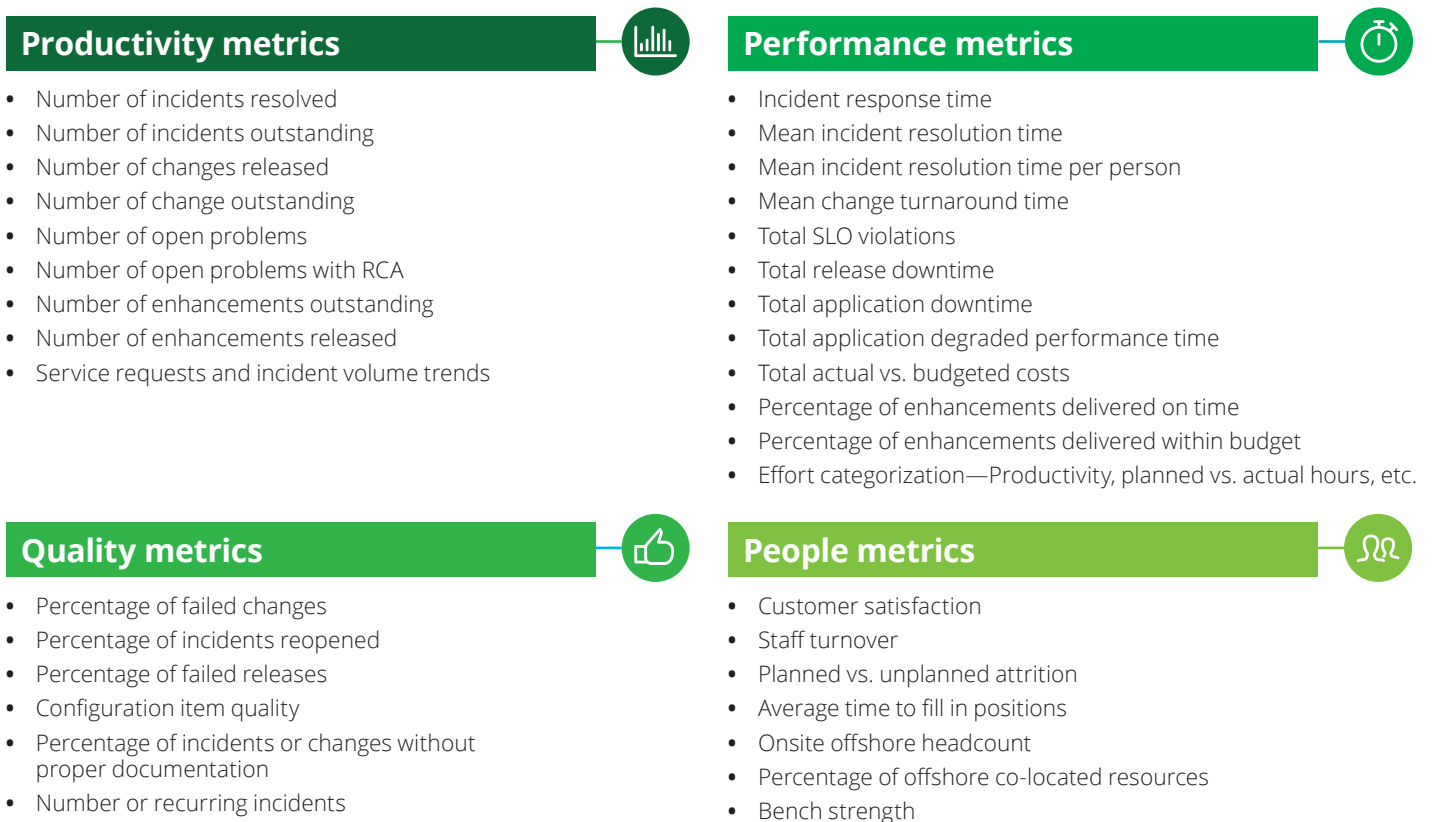
Why are these numbers significant? Because while managing and measuring AMS operations has always been important to the success of CIOs and their teams, it will only grow more so in the future. By reducing the number of IT resources required for maintenance activities, CIOs can increase emphasis on application enhancements and enabling new technologies that drive value across the enterprise. Enhanced AMS metrics can provide guideposts to help an IT organization achieve those objectives.

AMS metrics traditionally have been designed for and consumed by the CIO's office for decision making. That's important, of course, but in an enhanced metrics framework the monitoring of metrics can be shifted to middle management and tactical teams—the frontline of AMS—so they can interpret the data and directly initiate actions focused on meeting the transformation objectives established by the business and IT leadership.

A new approach to AMS performance measurement

An enhanced metrics framework aimed at both improving application maintenance and driving development of enabling new capabilities has four key levers—productivity, performance, quality, and people (Figure 1).
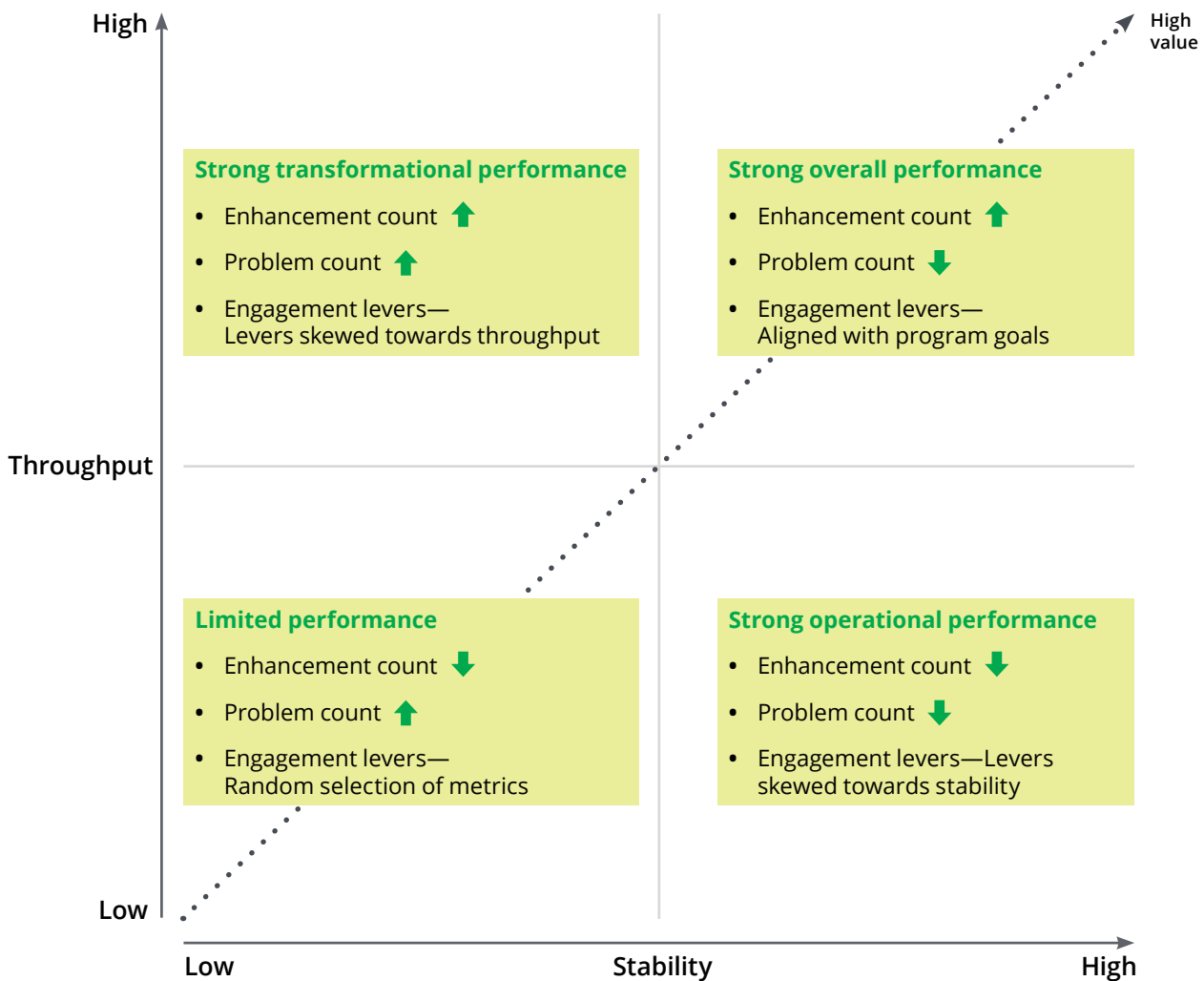
Figure 1. Levers of enhanced AMS measurement

Productivity metrics

- Number of incidents resolved
- Number of incidents outstanding
- Number of changes released
- Number of change outstanding
- Number of open problems
- Number of open problems with RCA
- Number of enhancements outstanding
- Number of enhancements released
- Service requests and incident volume trends

Performance metrics

- Incident response time
- Mean incident resolution time
- Mean incident resolution time per person
- Mean change turnaround time
- Total SLO violations
- Total release downtime
- Total application downtime
- Total application degraded performance time
- Total actual vs. budgeted costs
- Percentage of enhancements delivered on time
- Percentage of enhancements delivered within budget
- Effort categorization—Productivity, planned vs. actual hours, etc.

Quality metrics

- Percentage of failed changes
- Percentage of incidents reopened
- Percentage of failed releases
- Configuration item quality
- Percentage of incidents or changes without proper documentation
- Number or recurring incidents

People metrics

- Customer satisfaction
- Staff turnover
- Planned vs. unplanned attrition
- Average time to fill in positions
- Onsite offshore headcount
- Percentage of offshore co-located resources
- Bench strength

In this construct, value to the enterprise increases as attention and resources are shifted from tactical support metrics, such as the "Number of incidents outstanding" and "Incident response time" in the Productivity Metrics box of Figure 1, toward activities that have relatable business impact, such as "Number of enhancements outstanding" and "Number of enhancements released" in that same box.

While it's important to track performance with individual metrics, their impact as a whole is a real measure of AMS maturity. That maturity can be evaluated across two other dimensions—throughput and stability (Figure 2).

Looking at AMS through this lens enables and IT organization to effectively run and evolve its applications portfolio while maximizing the overall business value. To this extent, the "run" component of an AMS outsourcing engagement is reflected by program "Stability" on the X axis in Figure 2, and business value is reflected by "Throughput" on the Y axis. A key decision for CIOs is what outcomes they want to achieve and then where to target their AMS team efforts to move from their current level of maturity to their desired level.

Figure 2. Value increases with enhanced metrics maturity

Strong transformational performance
- Enhancement count ⬆
- Problem count ⬆
- Engagement levers— Levers skewed towards throughput

Strong overall performance
- Enhancement count ⬆
- Problem count ⬇
- Engagement levers— Aligned with program goals

Limited performance
- Enhancement count ⬇
- Problem count ⬆
- Engagement levers— Random selection of metrics

Strong operational performance
- Enhancement count ⬇
- Problem count ⬇
- Engagement levers—Levers skewed towards stability
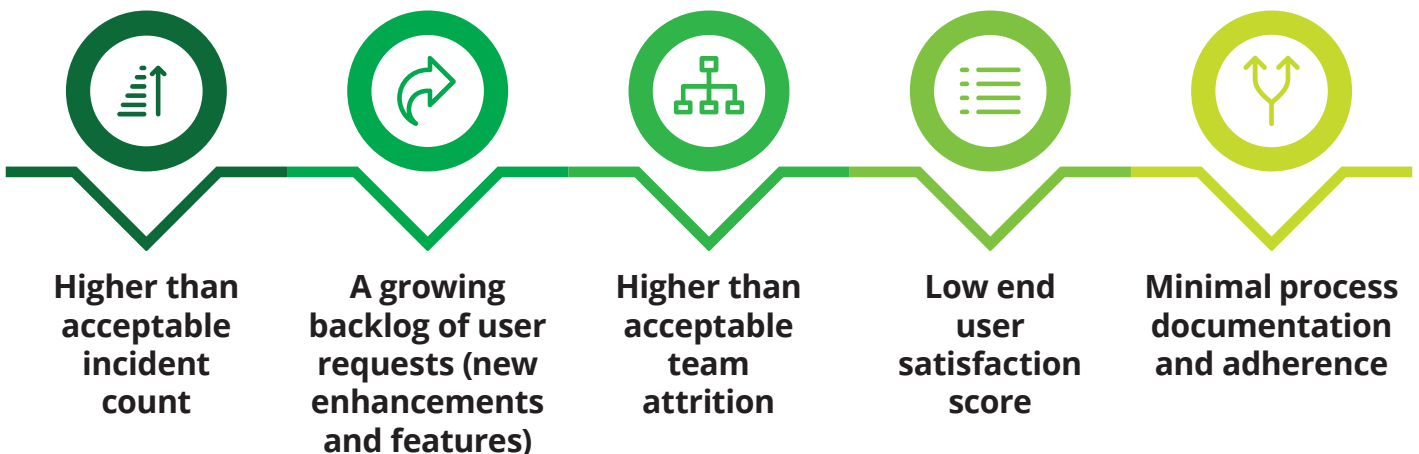
Enhanced metrics framework implementation

Deployment of an enhanced metrics framework is a multistep process. Once the appropriate metrics for a specific AMS environment are selected, they should be implemented first across the IT organization, then extended to the AMS partner ecosystem. Of course, with an initiative of this scope, an effective change management program can help address implementation challenges and adoption of the changes among all affected stakeholders.
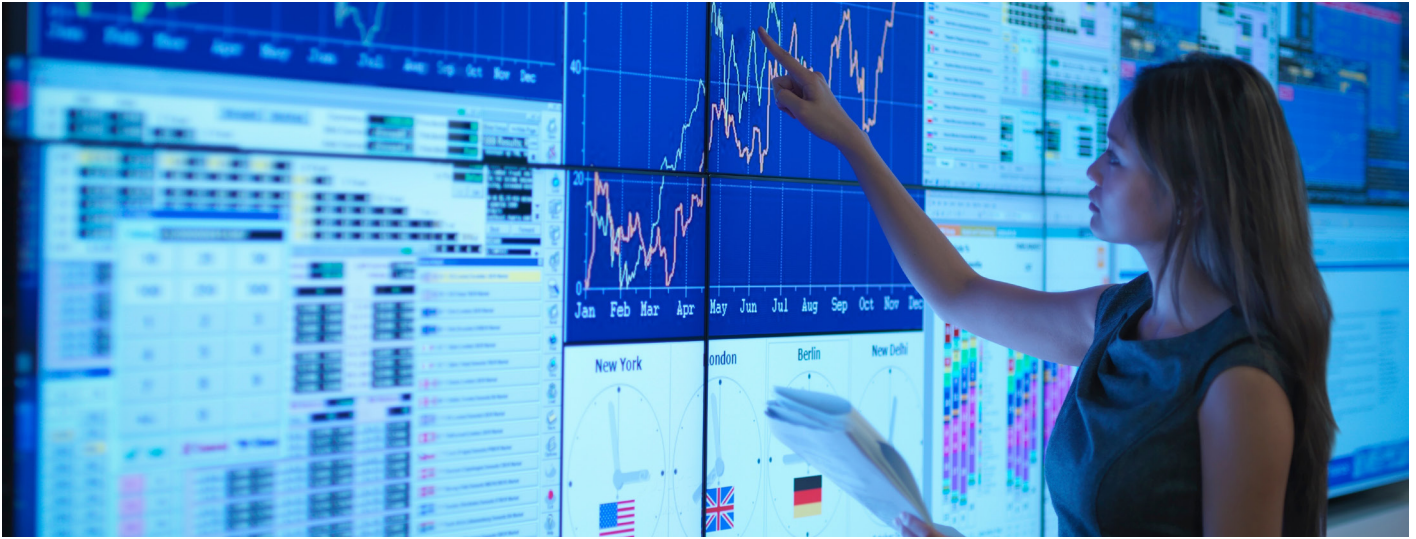
Enhanced metrics in action: Multinational audio and imaging technology company

The client is based in San Francisco, CA, with offices in more than 20 countries. The company's innovative research and engineering creates breakthrough experiences for billions of people worldwide through collaborations that span businesses, and consumers.

The client's IT footprint includes 10 primary technologies and more than 80 different applications. It extends to 35 countries and includes cloud applications hosted by a service provider, software as a service (SaaS), and custom applications developed in house. The client's IT department provides support for business use of IT applications, development of new applications, enhancement of existing applications, and day-to-day application support.

Since 2010, the client had outsourced application management and development to a service provider. Performance was measured using sophisticated metrics that the client developed. However, results indicated subpar performance by the service provider, including:

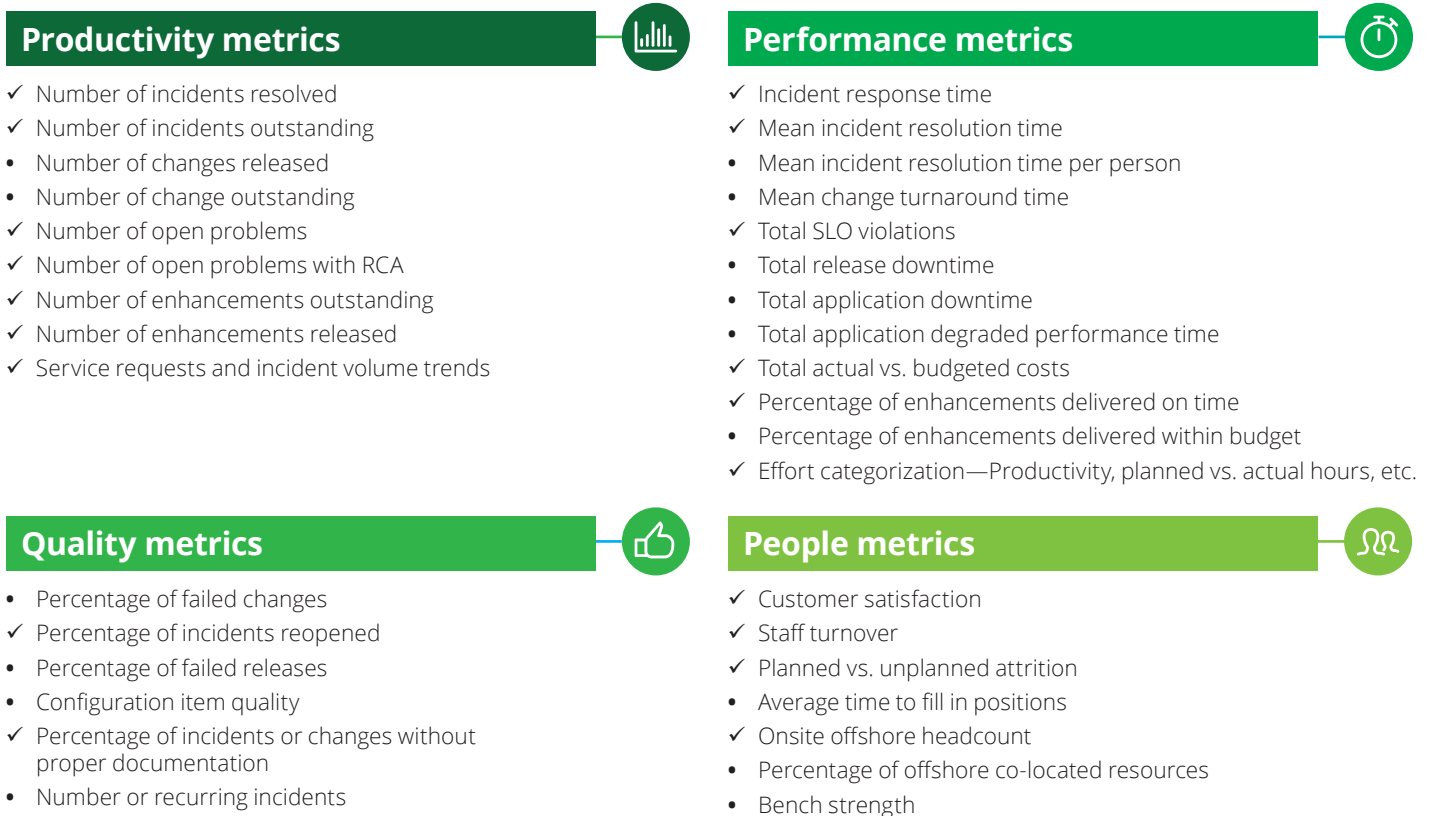| **Higher than acceptable incident count** | **A growing backlog of user requests (new enhancements and features)** | **Higher than acceptable team attrition** | **Low end user satisfaction score** | **Minimal process documentation and adherence** |

In 2013, the client engaged Deloitte as its new AMS provider for support across all its software applications, either onsite or through one of Deloitte's global delivery centers. Additionally, the engagement included development support services using a mix of functional, technical, system administration, and testing personnel who work hand in hand with the client to develop, enhance, and support applications. Altogether, Deloitte assists with three or four major application management and development projects annually, as well as 10 to 15 other projects of varying scope and duration.

The client's vision for the program was to optimize day-to-day application maintenance and support so that more resources could be applied to application development and enhancement as part of the company's ongoing digital transformation. The client and Deloitte established a governance program driven by a set of enhanced metrics (Figure 3, checked items) designed to monitor the day-to-day system performance issues that the client had previously experienced. These metrics were determined in part by the maturity of the client's IT organization and tools to capture and report these metrics.

Figure 3. Enhanced metrics chosen by the client (checked items)

Productivity metrics

- ✓ Number of incidents resolved
- ✓ Number of incidents outstanding
- • Number of changes released
- • Number of change outstanding
- ✓ Number of open problems
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Performance metrics

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- • Bench strength

In less than three years, the client saw significant results across several dimensions:

System stability improvements, including:

- **Incident backlog** (incidents awaiting action) fell by 96 percent and ticket aging was reduced by 98 days
- **Service level objectives** (adherence to incident response and resolution times) increased to 98 percent adherence

Throughput (resource effort going toward delivery of business enhancements) increased to a consistent 60 percent of total resource allocation (Figure 4)

Team stability improved to the point that the client now plans for rotation of team members across a 12- to 18-month timeframe.

Cost efficiency—Operate engagement services were delivered 23 percent under planned budget for the first three years of engagement.

Figure 4. Throughput improvement
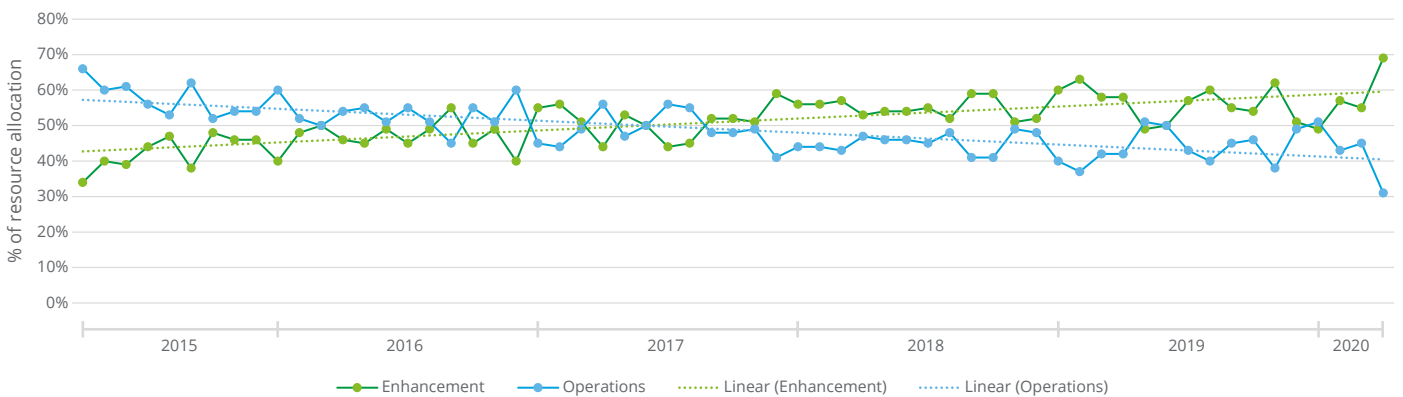
By deploying enhanced metrics, the client was able not only to stabilize its application management and development program, but it was also able to begin delivering much greater value to the organization (Figure 5).

Figure 5. The client's value improvement through enhanced metrics
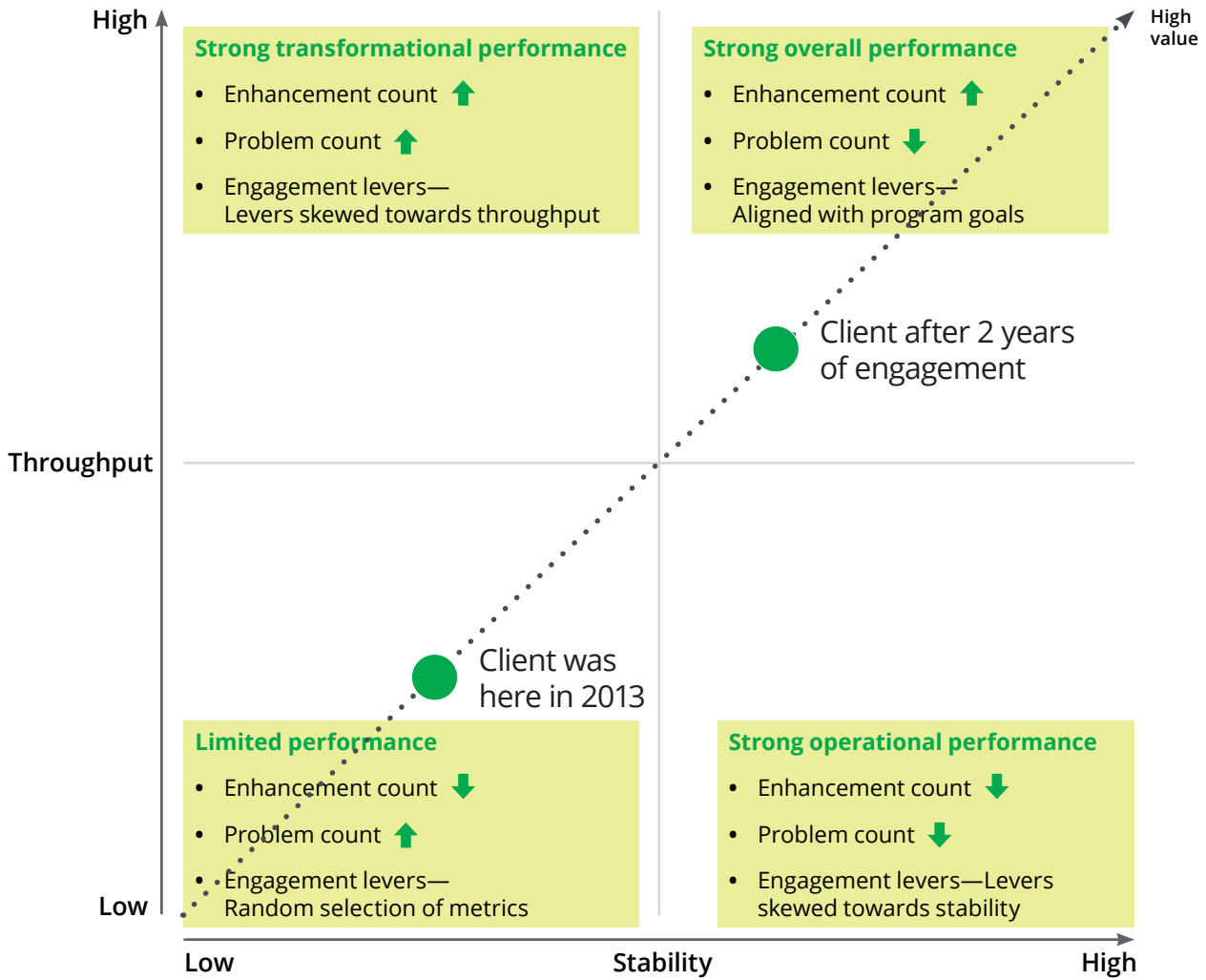
> **66 99**
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> Instead of driving change from the top and reviewing the metrics at the leadership level, we make sure that each individual in the organization has visibility into those metrics. Then they are empowered to make application management and development decisions that help drive the metrics in a positive way. Once the people on the ground become responsible for the metrics, they understand how every action or every change they make to support the application will drive the positive turn of those metrics.
>
> Ashish Mehta, Director Enterprise Applications
> Dolby Laboratories, Inc.

A new way forward for AMS programs

While AMS is not new, a focus on enhanced metrics can enable CIOs and those managing IT portfolios to delivery broader enterprise value through improved application performance and cost-efficiency. Certainly, new tools and technologies contribute to this transformational change. But enhanced metrics, if strategically chosen and effectively applied can provide significant clarity about the performance of an AMS program. Carefully managed, the four levers of productivity, performance, quality, and people can enable AMS programs to deliver transformative value above and beyond tactical support services.

Contact us:

Ramit Dayal
Senior Manager
Deloitte Consulting LLP
radayal@deloitte.com

Ashish Mehta
Director Enterprise Applications
Dolby Laboratories, Inc.
ameht@dolby.com
www.linkedin.com/in/ashmehta/