Rethinking applications management
A best practices approach to managing your portfolio
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Unfortunately, poor visibility often prevents most CIOs from seeing and understanding the total cost of ownership (TCO) and value of their applications, as all applications are not equal. Businesses are demanding that IT do more with less and allocate resources toward growth and innovation. The reality is many IT units spend from 65% to 80% of their budgets just keeping the lights on.

The good news: By rethinking how they manage portfolios and replacing traditional “one-and-done” methods with a systematic approach that balances the maintenance-to-innovation ratio mix, organizations can create and sustain a healthier set of applications.

Balancing that crucial mix can benefit organizations whether they have completed a transformation journey or not. In fact, unless they change how their applications portfolio is managed, viewed, and controlled, that mix invariably slips away from a much-needed growth and innovation investment. And that tendency can rob even the best organization of the full benefits of a portfolio modernization effort.

**Enabling intelligent application alignment**

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Managing applications after transformation

Applications transformation is necessary for organizations to gain control of their aging applications and inflexible processes, gain responsiveness, and fit with business changes. With a newly transformed applications portfolio, CIOs begin to see better alignment between the business and IT. They also see increased agility, improved security, improved business continuity, and decreased IT maintenance spend of 50% or less. By rethinking the approach, and by better managing transformed applications, organizations can continue to realize the full benefits of their modernization efforts. And they can purposefully adjust their portfolio as the business changes, minimizing or eliminating the need for future big-bang transformations.

Retaining transformational benefits

With a good understanding of transformation under their belts, companies need to look at how to best manage the application portfolio. They need to maintain the metrics of each application by continually measuring cost and performance, and should leverage the best sourcing strategy for each application type—whether sourced internally, outsourced, cloud-based, or elsewhere.

They must focus on systematically balancing the newly optimized maintenance-to-innovation ratio they’ve achieved through the transformation in order to sustain it, and continuously improve it. We find that effectively managing the transformed applications environment yields ongoing efficiency improvements and opportunities to eliminate unnecessary costs and increase effectiveness well into the future.

Many organizations struggle with the management phase following an applications transformation initiative because they seem to be stuck in a rut of doing things the same way. They tend to go back to managing and maintaining their applications the way they did before the transformation because they simply do not have the right level of visibility, flexibility, or control to effectively manage over time. IT still has a tendency to treat all applications equally—servicing and supporting them at the same level.

The ongoing manage phase, following the applications transformation, calls for companies to rethink the way they manage their applications. Organizations must address the people aspect of these changes, because with new applications and the growth of mobility, they will need new ways to develop and support those systems.

Without a change in the way applications are managed, the maintenance-to-innovation ratio will almost invariably creep back up on the maintenance side if left unchecked and ultimately diminish the transformation’s return on investment.
Leveraging proven techniques

There are two fundamental techniques that occur—one before and the other after the transformation effort.

The first technique is what we call **dynamic service delivery**, and it includes underlying methods and tools to optimize costs and enable business change. This technique incorporates a scalable delivery model. It enables services to be assigned by applications, based on business need, and provides flexibility to change the service level as business needs change.

Dynamic service delivery also provides application-specific cost transparency, so IT and business units can better understand and control expenses and investments.

The second technique is **data-driven portfolio management**, which implements an ongoing process for collecting data, analyzing metrics, and identifying improvement opportunities. Leveraging this technique, organizations can maintain an inventory of applications and their individual support metrics. They can score and classify each application, which provides the necessary structure for analysis. This approach also supports the close monitoring of application data to spot developing trends and perform root cause analysis.

Using this systematic approach—leveraging proven techniques and applying them at strategic and tactical levels—is what we mean by “rethinking” applications management. It really is the key to creating and maintaining a healthier applications portfolio.

Realizing the benefits

CIOs naturally want to realize the full benefits of a modernization program, and the success of that effort depends on keeping the maintenance-to-innovation ratio in optimal balance.

The techniques we’ve discussed keep the application portfolio optimized, and the underlying application-level and portfolio-level methods help to systematically sustain the benefits derived from an application transformation. Plus, the consolidated portfolio view and individual applications provide insight and agility needed to optimize investments for the greatest business impact.
Using best practices

In an increasingly always-on world, organizations really need to rethink how they manage their applications. Gartner research confirms this observation in an October 2011 report on Applications Overhaul, which found that “Lack of a deliberate process for managing the application portfolio makes the application hole deeper.”

To support that new approach, there are two portfolio management techniques—implementation of a dynamic service delivery structure and use of data-driven portfolio management methods. Figure 1 illustrates these two key techniques and how they can be applied at the tactical application level and a more strategic portfolio level.

When used correctly, these techniques and methods enable organizations to effectively and continually balance the maintenance-to-innovation ratio. By doing that, CIOs better control their portfolios, optimize costs, and accelerate positive change.

This approach can be used successfully by organizations that have undergone transformation and by those who have not. Enterprises that have undertaken the transformational journey can leverage these techniques to keep their applications in optimized balance. Others can use these methods to gain visibility and control, reduce costs, and stabilize a challenging applications environment to ready their organizations for a more efficient and successful applications transformation.

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*Figure 1. Portfolio management levels and techniques*
Dynamic service delivery

Dynamic service delivery incorporates a scalable delivery model—enabling services to be assigned by applications, based on business need—and offers flexibility to change the service level as business conditions evolve. This approach also provides application-specific cost transparency, so IT and the business have clarity into, and control over, expenses and investments.

At the tactical application level, dynamic service delivery uses three key methods to optimize costs and support innovation.

**Method 1**—A scalable delivery model creates a tiered work structure that enables higher volume, straightforward support activities to be aligned with lower-cost resources, and more complex, strategic-value work to be aligned with higher-cost resources. This tiered delivery model supports more rapid addition and removal of applications—a key capability in a changing business environment.

**Method 2**—Services are assigned at the application level based on measurable business value, and the service level can be adjusted as business needs change. This approach provides additional service flexibility.

**Method 3**—Costs are transparent by application, enabling IT and business units to better understand application-level costs and investments. When applied at the more strategic portfolio level, the dynamic service delivery model supports a governance process needed to ensure true enterprise-class alignment. This requires a governance model that actively manages applications and projects based on opportunities identified by IT and the broader business demands. Requests should be filtered and conceptualized from two perspectives.
Perspective 1—The application portfolio management view assesses demands and opportunities based on a strategic priority assigned to each application. Gartner recommends using its TIME methodology to characterize the strategic intent of an application. Each application is classified as a target for transformation—tolerate (T), investment (I), migration (M), or elimination (E). As new demand for work on an application is received, it is evaluated against this strategic intent designation. Applications in the investment (I) category get high priority attention. Applications in the elimination (E) category have to demonstrate a very strong reason why any new investment should be directed their way.

Perspective 2—The project portfolio management view assesses demands and opportunities based on project charters, schedules, skills, risks, and cost. This ensures that even proposals to work on an investment (I) category application are assessed to ensure they meet standard business case requirements before funding is approved. This governance approach provides comprehensive visibility, data-driven knowledge, and a strategic perspective of the applications portfolio. It also enables forward-looking organizations to harness the resulting insights to better manage risk, reduce costs associated with applications that do not add value to the business, and tilt the spending ratio toward innovation and growth.

Data-driven portfolio management

This second crucial technique provides a clearer view and greater understanding of business applications. The activity provides the original strategic intent classification for each application, and is reviewed periodically to ensure the designation keeps pace with changing application and business conditions.

DXC Technology employs four methods to gain insight into and develop strategic intent for these enterprise applications.

1. **Inventory**—Maintain an inventory of applications and their attributes

2. **Classify**—Classify applications to provide structure for further analysis

3. **Assess**—Assess all applications for optimization opportunities

4. **Business case**—Create a business case for investment consideration

**Inventory**—Portfolio-level dashboards provide summary views of applications, the business processes they support, organizations using them, their owners, and the servers they reside on. Measures are defined for business value, cost, risk, and quality.

**Classify**—Application classifications can be based on distributed, mainframe, or other architectural types, or on transactional, informational, or other operational profiles. This method can be used to identify enterprise software for sunset or decommission, to be sustained, or as a candidate for strategic investment. Classifications should be reviewed and modified as architectural standards or business conditions evolve.
Assess—It’s essential to use an assessment method that views applications within the context of the systems or activities they support to manage a complex application portfolio environment. Visualizations may include heat maps to identify process areas that require excessive support, are overloaded with applications, high cost, or some other measure to suggest opportunities for portfolio improvement.

Business case—A business case can be developed to capitalize on improvement opportunities. That business case becomes a source of demand to be vetted through the project review process described earlier.

Gain new visibility levels

The best practice techniques for portfolio management apply equally to a tactical, application level view of the portfolio and the strategic or overall portfolio view previously discussed. For the application-level view, visibility into the cost drivers enables organizations to understand what those costs are. That information is then used to build a business case to determine if there is an overall cost benefit to making a change.

Several preparation and management steps are needed to gain the necessary insight as shown in Figure 4. At the application level, an inventory is taken of the applications to periodically gather their attributes. For example, all applications that make up a payroll system are inventoried, and the number of lines of code changes that have been implemented is also gathered.

One problem with those attributes is how to manage them. The applications are grouped with a scientific algorithm that arranges the applications into classifications. This aids deeper understanding by consolidating the information so you can better assess it.
Using a dashboard as an overview to the classified applications provides the insight necessary to begin understanding why an application costs what it does and how trends over time affect the cost of supporting the applications. For example, if an application in the dashboard is showing some significant change in its classification, the attributes can be investigated to determine which aspects of the support are changing.

Once assessed, the impacted cost drivers are reviewed; then there is a focus to do real root cause analysis. And by finding the real root causes for support costs, there is now the unique ability to change them. For example, if an application has 30 changes in a month, which is costing significant release time and higher levels of operational incidents, one cost-reduction method would be to provide only monthly releases. This stabilizes the application and significantly reduces the change and release support costs.

With that root cause in hand and potential solutions in mind, and in conjunction with the known application costs, companies can now objectively estimate the application-level return on investment, or business case, for implementing changes.

The tactical application-level inventory and assessment activities described here are related to ongoing operations, and serve to identify, diagnose, and develop specific recommendations for improvements.

Visibility is also crucial at the strategic portfolio-level perspective. To gain higher-order insights, specific portfolio-oriented methods designed to leverage information and recommendations gathered at the tactical, application level should be applied. For example, strategic planning filters identify the best course of action from various alternative solutions. An application portfolio repository, combining application-specific attributes with a portfolio-wide perspective, provides a comprehensive view of tactical and strategic options.
Converging the tactical application-level details with the strategic portfolio-level considerations—supporting those views with proven techniques—provides a truly deliberate approach to applications management.

Results-oriented organizations can leverage tools to answer critical application-related questions, including:

- How are applications performing over time?
- Does the application cost align with the true business value of that asset?
- Are some application assets degrading, while others improve?
- Is the applications portfolio evolving to meet changing conditions?
- Which application investments will yield maximum returns?

By considering portfolio- and application-level perspectives, and applying proven techniques across both levels, organizations can at last fully realize the potential of their applications investment. Best practice-based portfolio management is a key aspect of any successful applications transformation journey.

**Reviewing real-world examples**

By “rethinking” how applications are managed, organizations can realize real and measurable benefits. Companies are already leveraging the techniques and tools cited here to generate the greatest business impact at the best possible value.

Those impacts often begin with insights. By controlling and exploiting information, CIOs gain powerful visibility into their portfolios. They bring new transparency into costs and sources of spend. And they can more accurately assess levels of service and support.

That knowledge enables them to create and manage change. Well-managed applications enable organizations to scale up or down quickly, and adapt smoothly to dynamic market conditions. Predictive pricing and adjustable contracting lets them continually realign to meet changing business needs.

Astute CIOs can then translate those qualities into competitive agility, a more balanced maintenance to innovation ratio, and optimized business value.

One company was experiencing significant growth and leadership changes with three CIOs in five years and stringent limits on its IT budget. This dynamic environment coupled with associated IT philosophy changes presented the challenge of rapidly adjusting IT spend without impacting service. Our applications management model enabled the organization to quickly and easily reprioritize dollars to preserve current spending levels, while realizing improved quality performance and business service levels.
To prepare for implementation of dynamic application service delivery, another company worked with DXC to analyze, inventory, and classify all enterprise applications. This DXC evaluation process revealed previously unrecognized business applications, which were driving hidden IT costs. This discovery led to business value discussions and new rationalization strategies, a process that ultimately reduced the company’s overall maintenance spend.

Another organization modernized two core business systems by upgrading and updating outdated technologies. Those changes resulted in simplified processing methods, a reduction in associated incidents, and lowered classification metrics. As a result, the DXC data-driven portfolio management approach supported an applications cost model where application prices for each system were significantly reduced.

After implementing the dynamic service delivery model, a rapidly growing company gained transparency into the true cost drivers for each of its business-critical systems. That knowledge, coupled with the ability to execute “what-if scenarios” using the DXC tool set, provided accurate estimates for the cost of future system maintenance. Those projections enabled the company to develop end-to-end return-on-investment studies of critical changes needed to drive continued growth.

Yet, another organization sought to lower overall applications costs as part of its transformation. A tiered services approach, assigned by application, enabled this organization to reach its savings target. Based on the concept that “all applications are not created equal,” the DXC applications cost model enabled matching of appropriate support services to the application’s business value and reduced spend in the appropriate areas.

### Getting started

We agree with Gartner—“when you are in a hole, stop digging.” Get out of the rut of doing things the same way and rethink the way you manage your applications. Expand your applications management strategy to stay out of the hole.

The techniques and capabilities described here can work for organizations that choose to “manage, then transform,” and for those that elect to “transform, then manage.”

For portfolios that have not undergone transformation activity, these techniques provide the insight, control, and flexibility needed to identify areas that are ripe for change, while providing a mechanism to adapt to evolving business demands.
For portfolios that have already undergone transformation, this approach enables IT to proactively monitor the portfolio’s health, and easily align and adjust support levels to meet changing business requirements.

By IT organizations rethinking the way they manage their applications, they can balance the maintenance-to-innovation ratio to fund and support current and future business priorities.

About the authors

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Chris Alexander, consultant, has 20 years of experience in IT applications management services as a consultant and in corporate management. His experience includes application support, development, transformation, and vendor management. Prior to joining DXC, Alexander was responsible for the applications management organization at a large multinational company.

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