An Integrated Approach to Application Portfolio Rationalization

To improve customer service, reduce COGS and deliver shareholder value, enterprises need a well-planned and executed application portfolio rationalization program that visualizes the current state, identifies high potential optimization opportunities and defines an actionable roadmap to support growth and achieve operational efficiency objectives.

Executive Summary

“Doing more with less” has been the norm for CIOs and IT executives since the beginning of digital time. The prolonged economic downturn, however, has put even greater pressure on IT budgets. With the global economy slowly stabilizing, IT organizations face unprecedented demands from the business side for a wide array of IT services to sustain growth and impact the bottom line.

These demands come as application management costs continue to edge upward due to aging and highly complex IT environments, as well as obsolete and redundant applications that have been sporadically enhanced through patchwork updates. To make matters worse, organizational silos, as well as mergers and acquisitions, have added to application proliferation.

As a result, some organizations are spending too much of their scarce resources on the “run” portion of the IT budget. In such cases, the inherent complexity and baseline costs of their application portfolios limits their ability to build new capability to support business or reduce prohibitively high implementation costs.

Our approach to application portfolio rationalization (APR) provides a structured approach to help IT organizations clearly visualize the current state of their application portfolios, identify high potential opportunities to better support the business and define an actionable roadmap to support it.

An effective APR should address two key areas:

• Where to start and focus efforts to enable business to achieve IT excellence.
• And, importantly, where to invest for better returns and long-term business and IT value.

This white paper highlights a proven and methodical approach to address these questions. For starters, it illuminates APR investment decision focal points and provides a clearly defined rationale and roadmap for achieving optimal returns on investments.
The outcomes of an APR assessment, such as the application inventory, business case and roadmap (including quick wins and multiyear transformation initiatives) provide a blueprint for the next three to five years as a reference point for IT initiatives that will better support the business.

A Framework for Transforming Application Portfolios

IT executives are realizing that a wide array of applications in their portfolios are outdated or redundant, or that some functions are no longer needed and consume precious maintenance budget. Their business counterparts contend that these applications provide little business value or do not support evolving enterprise objectives. Moreover, as the portfolio has become more complex over time, due to short-term fixes, many application change requests take longer and longer to fulfill. The result: The basic IT application portfolio is unable to meet the business’s targeted time-to-market or regulatory deadlines (see Figure 1).

Business and IT leaders understand that costly and overgrown application portfolios must be cleansed – but the big question is where to start or to focus their efforts. Evaluating applications and making disposition decisions provides direction regarding opportunities to enhance applications that deliver business value or improve technical health to address current challenges. Our framework provides answers to which applications, or clusters of applications, have the largest gaps in terms of business functions or technical architecture and present opportunities for rationalization (see Figure 2 for suggestions).

Once organizations find the “focus areas” or opportunities, these are turned into a list of projects that support business goals to “run better” and “run different.” Then, the next question is where to invest? Budget constraints prevent most IT organizations from executing every project in the pipeline. It is imperative, therefore, to establish a proper risk/return framework to inform funding allocation decisions.

Projects with high anticipated business value and low risk are usually the highest priority, while those with low business value and high risk are obvious “no-go” decisions. Investment opportunities that have high business value but high risk require more scrutiny before including them in the roadmap with other short-, mid- or long-term initiatives (see Figure 2 for suggestions).

Our approach to APR methodically addresses the aforementioned two questions through several phases including baseline, analysis, opportunities identification and roadmap.

In the initial phase of the assessment – as-is analysis and data collection – there are predefined key data collection parameters such as business criticality, risk to business, technical health, IT operations, total cost of ownership, risk, resource

Key Drivers of Application Portfolio Rationalization

<table>
<thead>
<tr>
<th>Key Drivers</th>
<th>Description</th>
</tr>
</thead>
</table>
| Aging Portfolio | • Applications may be meeting current needs but are becoming increasingly expensive to operate.  
• Significant constraints to update/change systems to meet business/regulatory needs.  
• Legacy applications that are suboptimal to enable new business imperatives, hampering business agility and creating IT support risks. |
| Inorganic Growth | • Corporate events such as mergers, acquisitions, partnerships and changes in product portfolio lead to proliferation of applications in the portfolio.  
• Multiple, potentially duplicate and poorly-integrated IT assets arising from mergers and acquisitions. |
| Organic Growth | • Global footprint combined with pressure to reduce time-to-market, resulting in local application portfolio misaligned with organization-wide IT strategy.  
• Business units drive development of independent application portfolios, leading to siloed and disconnected business processes. |
| Lack of Business-IT Alignment | • Lack of measurement of the business value that an application produces with respect to the investment.  
• Lack of IT alignment with business priorities, resulting in IT focusing on potentially noncore areas. |

Figure 1
Where to Start vs. Where to Invest

![Application Disposition Evaluation](image)

![IT Investment Evaluation](image)

Figure 2

allocation, etc. to be used as input for further analysis (see Figure 4). Important considerations during the initial phase are:

- Surveying and establishing the baseline for the strategic, functional, technical and financial aspects of the applications in scope.
- Understanding the business context of the applications and evaluating them against required future capabilities to provide guidance on where the application portfolio should be heading.
- Using the perspectives, based on current and future gaps, to establish the basis for developing recommendations for both short- and long-term direction.

The next phase of the assessment – multidimensional analysis – can be structured in multiple ways based on the outcome of the initial phase. For example, applications can be clustered by business function, technology such as databases or platforms, etc. A multitude of analytical techniques can be used from statistical analysis to more qualitative functionality mapping or more technical architecture-based analysis.

Disposition decisions/recommendations are made at the individual application level or at the

Application Portfolio Rationalization Phases

![Application Portfolio Rationalization Phases](image)

Figure 3
cluster level, as appropriate, which is generally based on business value vs. technology health. For those applications that fall under the “retain” or “enhance” categories, further analysis can be done depending on the situation or preference.

For example, legacy modernization or cloud suitability analysis can be conducted when the application portfolio is heavy on legacy platforms or the organization is looking to consider cloud as a potential alternative. In addition, when IT management wants to review the current development/maintenance resource composition or location, “offshorability analysis” can be added to the analysis. The data for these additional analyses should be identified and collected upfront to avoid any rework.

The outcome of the analysis phase is a list of opportunities to address a range of business and technology challenges. To acquire buy-in and approval for funding, the next step is to build a business case and roadmap. Steps to be considered before moving to the final stage include a review of APR opportunities and then their rationalizing into projects. This means identifying similar business and technology components of each opportunity so that the final listed opportunities are mutually exclusive and have minimal duplicate investments.

In addition, alignment with in-flight or planned enterprise initiatives that could have dependencies or synergies is also necessary. The list will then be developed into projects or grouped into programs or initiatives with proper assignment of ownership.

To arrive at the business case and roadmap, different scenarios must be considered. The objectives are to understand implementation costs and business and technical risks, as well as the opportunity costs associated with the business and IT benefits for the portfolio of potential initiatives. These scenarios are reviewed with the key stakeholders to ensure a holistic view, and are then narrowed down to a meaningful subset. Typically, IT benefits alone cannot cover the implementation costs, and therefore IT leaders must develop hypotheses and engage with business and process owners to quantify the benefits through interviews and impact workshops. Qualitative benefits such as customer satisfaction, quality and time-to-market are more difficult to quantify but, in many cases, critical for CXO-level commitment.

Building a Successful APR Program

Many APR program outputs risk becoming shelf-ware and are not executed, or they lack sufficient funding to take full advantage of the recommendations. While a large part of the APR assessment is conducted scientifically, there are soft sides of the process that can make or break success. Key success factors include:

- **Strong commitment from top management.** Sometimes, an APR program is initiated by IT alone, without full buy-in from the business. The reason being that IT simply does not want to interrupt business owners or does not want to reveal that IT is trying something that may affect the business – hoping that the outcome will be attractive enough to get the business
onboard afterwards. However, in many situations, IT hits a roadblock when it enters the funding stage.

- **Clear goals and objectives of the assessment.** Defining and communicating clear goals and objectives — for example, reducing overall total cost of ownership (TCO) by 20% over the next three years — helps align the assessment outcome with management expectations. This needs to be tracked against impacting business goals in the long run. Deriving findings from the bottom up is necessary; however, setting boundaries and direction from the top down drives the focus of the analysis and aligns the outcome with management’s expectations.

- **Identification of business context and future state.** Formulating the desired future state business and IT capabilities, which many companies do not have clearly defined, as the input for an APR assessment facilitates the discussion of the “so what,” by which the connection between recommendations and the final target is established. This will help immensely when communicating with top management and business owners regarding the value of an APR program.

- **Assignment of champions to coordinate SMEs.** It is not unusual to see organizational fatigue with numerous cost-cutting and business transformation initiatives. As such, this makes business leaders somewhat leery of yet another rationalization exercise. In addition, when individuals foresee where and how APR recommendations could impact their daily lives and jobs, they tend to passively resist. It is crucial, therefore, to have APR champions to provide oversight and change management communication to ensure proper involvement, data collection and findings/recommendation validation activities are executed on time.

- **Establishment of solid baseline 80-20 rule.** Since the APR assessment is not intended to be a detailed planning exercise, business and IT leaders must understand that not all of the baseline data needs to be collected for a proper analysis. Rather, a solid good-enough baseline is needed for effective decision-making. These decisions will then be refined in subsequent phases. For example, usually 20% of the applications consume 80% of the resources — so identifying critical applications and putting more focus on them yields better returns than trying to collect 100% data for all, even small, applications.

### Tools and Supplemental Analyses: Offshoring, Legacy Modernization and Cloud Suitability

An APR assessment can be accelerated by leveraging proven tools and accelerators. As a result of leading successful APR engagements, we have a wide array of tools and approaches that can be leveraged to ramp up quickly. In addition, supplemental analyses are offered to the clients that are interested in furthering their APR assessment into relevant topics such as offshoring, legacy modernization and cloud suitability.

### Discovery and Data Collection Tools

The size of the application portfolio that an APR assessment can cover varies. Typically, it ranges...
from less than 100 to several hundred, and sometimes thousands of applications. Another variable that affects the complexity of data collection is the number of application owners, business units and processes, the number of geographies, etc. In smaller APRs, spreadsheets can suffice as a data collection tool. However, when the number grows, it is very difficult to monitor progress and manage follow-ups and validation. We have developed a Web-based data collection tool that facilitates the process (see Figure 6). This tool contains standard questionnaires that can be customized to meet most APR requirements. In addition, since the tool runs on a relational database, the data can easily be downloaded to a spreadsheet for analysis, or the database itself can be migrated to another database, such as Access, for long-term maintenance. The tool also provides for real-time progress checks and an audit trail.

Supplemental Analyses

For situations where management is interested in reviewing sourcing options for application management, the portfolio is loaded with heavy legacy platforms or management is looking to take advantage of the cloud technology, we have a methodology that provides an extended APR assessment of these areas. While these extensions are not always full-scale deep-dive analyses, they provide the data points that are sufficient for developing the recommendations and roadmap, with additional data collection for each area.

Offshorability Portfolio Analysis

Labor costs for development and maintenance account for the largest part of the IT budget – typically, between 40% to 50%, and sometimes even higher. As the application portfolio is rationalized, skill set requirements can be examined as well. Many of these skills are becoming commoditized, and there are often opportunities to offshore development and support resources.

In such situations, organizations can reduce the TCO by reviewing their sourcing options and gauge the potential benefits and risks. An offshorability portfolio analysis (OPA) can be conducted in conjunction with an APR assessment for a deeper dive into current resource allocations and provide recommendations on possible future direction with associated benefits (see Figure 7).

Rapid Legacy Modernization Assessment

Many companies that have not refreshed their technology platforms will experience increasing complexity over time due to one-off or bolt-on solutions built over the years to address a specific need of the business, which leads to longer time-to-market, higher development and maintenance costs, obsolescence and skill set shortages, and results in higher risks to the overall application
portfolio. Leveraging a methodical analysis, modernization recommendations are developed for relevant applications (see Figure 8).

Cloud Suitability Analysis
As cloud solutions and technology platforms mature and move into the mainstream, companies are more comfortable assessing their operational feasibility and business benefits (see Figure 9). The “need for speed” can be realized through an effective cloud strategy, incorporating multiple perspectives to create consistent future state solutions. In some cases, this could result in a breakthrough solution, associated with the additional benefits of lower cost of operations through systems and workplace virtualization, easier software upgrades and pay-by-use commercial models.

ROI of Application Portfolio Rationalization
Rationalizing an existing application portfolio can reduce overall costs of ownership and enable operational efficiency improvement and future
Cloud Suitability Analysis

Figure 9

business capabilities (see Figure 10). The key benefits achieved include:
- Enabling a shift in IT investments toward business growth.
- Creating a more flexible IT spend profile with lower fixed and higher variable expenses.
- Reducing complexity and redundancy in the application portfolio.
- Achieving faster time-to-market, compliments of a more aligned and simpler application footprint.
- Reinvesting early savings into more value-enabling initiatives that drive growth and efficiency.
- Increasing operational agility and enabling easier transitions to a more modern technology architecture.

APR not only reduces the overall IT TCO, but it also alters the cost structure to free up resources and funding that can be applied toward value-enabling activities such as launching a project to implement new business capabilities or conducting a proof-of-concept on an innovative

Improving Operational Efficiency

Figure 10

- Addition of new customers/users.
- Ability to meet current and future functional needs.
- Reduction in time-to-market of new offerings.
- Speed of IT delivery (i.e., development/implementation time, planned to actual).
- Reduction in transaction time for users.
- Reduction in training effort for users.
- Integration of valuable IT assets.
- Asset utilization (i.e., resources, network, hardware, software licenses).
- Reduction in duplicate functionality.
- Reduction in project time by reusing existing functionality.
- Reduction in management and documentation efforts.
- Clear definition of IT rules and policies.
- Reduction in processing time.
- Training (prevention costs, review/inspection (days, cost, rework/retest, failure costs).
- Compliance effort required for meeting IT standards and frameworks (quality audit).

Return from IT Portfolio Rationalization

Optimizing IT Cost

Business Innovation

IT Efficiency

Process Improvement

Ease of Governance

Improving Operational Efficiency
Redirection of IT TCO to Value-Enabling Activities

Figure 11

technology. As the application portfolio becomes more complex on an existing nonrationalized landscape, IT costs tend to become burdensome—in other words, the ongoing “keep the lights on” type of costs grow and compete with funding for new projects, further exacerbating cost-cutting pressures amid ongoing economic uncertainty. APR provides a new cost structure that delivers more room to invest in new projects, enabling IT to better respond to business requests for new transformative capabilities and innovation (see Figure 11).

Follow-through and Value Capture
Application portfolio rationalization is not a static or one-time exercise. No matter how effective APR is at delivering a plan for a streamlined application portfolio, organizations must work continuously and consistently to ensure that the agreed-upon direction is not only followed but delivers the benefits envisioned. In an enterprise transformation journey, a great plan can evolve over time due to a multiplicity of internal or external factors. However, without a blueprint, progress can be tough to come by and results difficult to achieve.

To realize the benefits from an APR initiative, the first step is to prioritize projects in the enterprise program management roadmap along with instituting proper governance to capture the value for both the business and IT. In addition, the governance model should include an architecture review board to enforce compliance with the blueprint to avoid application portfolio deterioration over time. Lastly, the application inventory that was built through the APR initiative should be maintained and refreshed regularly. Too often, companies belatedly discover that existing inventory is not up-to-date or reliable, requiring them to start their portfolio assessment from scratch.
About the Authors

Jewoo Cha is a Senior Manager in Cognizant Business Consulting’s Strategic Services Practice. He has over 20 years of management and technology consulting experience in IT strategy/alignment, IT portfolio management, cost optimization, process reengineering, enterprise architecture and IT governance. He can be reached at Jewoo.Cha@cognizant.com.

Harold Albo is a Director in Cognizant Business Consulting’s Strategic Services Practice and has over 25 years of professional experience. His strategy consulting experience includes IT transformation projects, application portfolio analysis and IT service management and governance. Harold has deep experience in IT performance and cost optimization. He can be reached at Harold.Albojr@cognizant.com.

Ramji Mani is an Assistant Vice President in Cognizant Business Consulting and has over 25 years of professional experience in the manufacturing industry. His experience is across the value chain of “order to fulfillment” providing IT and business solutions in planning, supply chain, execution, cost optimization and driving efficiency. He can be reached at Ramji@cognizant.com.