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Application Portfolio Management

A Portfolio Approach to Managing IT Applications Can Help Banks Improve Their Business Performance

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Putting the Issue in Perspective

The US banking sector navigated numerous challenges in 2004 but finished the year on a reasonably good note. Major banks such as Bank of America, CitiGroup, Wachovia and JP Morgan Chase experienced healthy, double digit top line growth. While analysts predict that 2005 will be a year of relatively stable business, banks are nevertheless going to have to continue to face the impact of various forces. These include increased competition & further consolidation in the industry, imperative to reduce costs to improve profitability, better understand & service customer requirements and manage increased regulations and risks (Basel 2 Accord, Check Truncation Act, the Sarbanes-Oxley Act of 2002, and Identity Theft & Fraud). Historically, banks have relied on technology to manage business processes effectively and drive competitive advantage. However, in our view, the current technology infrastructure of a majority of banks is not equipped to handle such expected business challenges.

A root cause of this situation is the lack of alignment of IT with business objectives, which has resulted in banks spending billions of dollars on initiatives with only short term benefits. In the process, IT investments with the potential to deliver long term business value have often been neglected.

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Putting the Issue in Perspective (Contd.)

The impact of these short-sighted moves is clearly visible in application portfolios, which are the most critical components of the underlying IT Infrastructure. A quick study of the current state of application portfolios in major banks across the world reveals highly heterogeneous systems.

To overcome these limitations, there is need for banks to have a new approach to managing IT applications in such environments, custom-built systems are the norm, not the exception, and most of the applications are not easily inter-connected as they are built on different standards. Many core banking systems have been in operation for well over 25 years, and they are kept going by complicated add-ons and incremental enhancements implemented reactively. This has resulted in "spaghetti architecture" and an unwieldy portfolio of applications that are inherently not amenable to facilitating rapid changes in response to a fast-changing environment.

This paper describes how banks can overcome gaps in business-IT alignment and other limitations of conventional IT management approaches by taking a portfolio approach to managing their IT applications.

The Portfolio Approach – A New Paradigm for Managing IT

A portfolio is typically defined as a combination of assets that are expected to provide a certain return at an expected level of risk (or uncertainty) related to achieving that return. In the IT context, a "portfolio" could mean IT applications or infrastructure (platforms/ servers, operating systems, networks, tools, etc.), IT projects or even a set of resources, skills and relationships (e.g. a set of vendor partnerships). Collectively, these IT asset portfolios constitute the "building blocks" that are used to deliver competitive advantage to the business (by providing various services and capabilities).

While portfolio management *per se* is not a new concept, its application to the IT world has not been very common, possibly because there are fundamental differences in the nature of IT and financial assets that make it practically harder to manage a portfolio of IT assets.

Financial Portfolio	IT Portfolio
All financial assets in a portfolio have a common "monetary" measure for returns	The "returns" can be defined in various ways for different IT assets E.g. reduction in operations cost, effective support to client-facing processes, competitive advantages
Procurement of assets is usually fast & easy in a relatively liquid market. Assets with required profile are readily available	Procurement of IT assets is a relatively slow process – they often need to be created in-house, implemented in phases and stabilize, before they can start delivering the promised returns
Low covariance between the assets in a portfolio implies diversification is an effective strategy for mitigation of non-systematic risk	Diversification is extremely difficult and usually pointless since the assets are highly interdependent and deliver returns only collectively

Figure 1: Comparison of Financial and IT Portfolios

In spite of these challenges, Infosys recommends that banks take a portfolio view of their technology assets. Doing so makes it easier to focus on strategic & operational goals, business value, risks, resource constraints, and the associated tradeoffs, instead of focusing only on traditional ROI metrics (which, in the IT world, has been adherence to budgets and schedules).

So where does one start?

The most commonly asked question by CXOs looking to improve their IT portfolio is "where do we start applying the portfolio management concept?"

Focusing on all of the "building blocks" of the IT portfolio at the same time will pose a challenge from both a resource availability perspective and a management perspective. It is Infosys' view that a bank can get the biggest bang for its buck by starting with the portfolio of applications. This can bring significant value in a relatively short time period, since IT applications are typically directly visible to the business and contain the business functionality & rules that cater to the business needs. Therefore, managing the portfolio of applications well can bring early & measurable benefits. This also helps create buy-in for the portfolio management approach across both business and IT organizations.

An approach to Application Portfolio Management (APM)

Application Portfolio Management initiatives, in our view, should be structured and implemented in a phased manner so that costs, benefits, risks and time are balanced. Also, it is important to keep in mind that portfolio management is an ongoing process and not a one-time destination in itself. We recommend the following three phases:

- A *Portfolio Strategy* phase to define the application portfolio and develop a set of recommendations on the future direction for the portfolio.
- Once the future direction is determined, a more detailed *Portfolio Assessment* (of the application portfolio) is carried out to determine how this transition to the "to-be" state should be carried out. A business case for such a transition is established during this phase.
- *Portfolio Governance* ensures that APM remains a journey and allows for ongoing course corrections and adjustments to ensure that the portfolio always remains optimally aligned with business requirements.

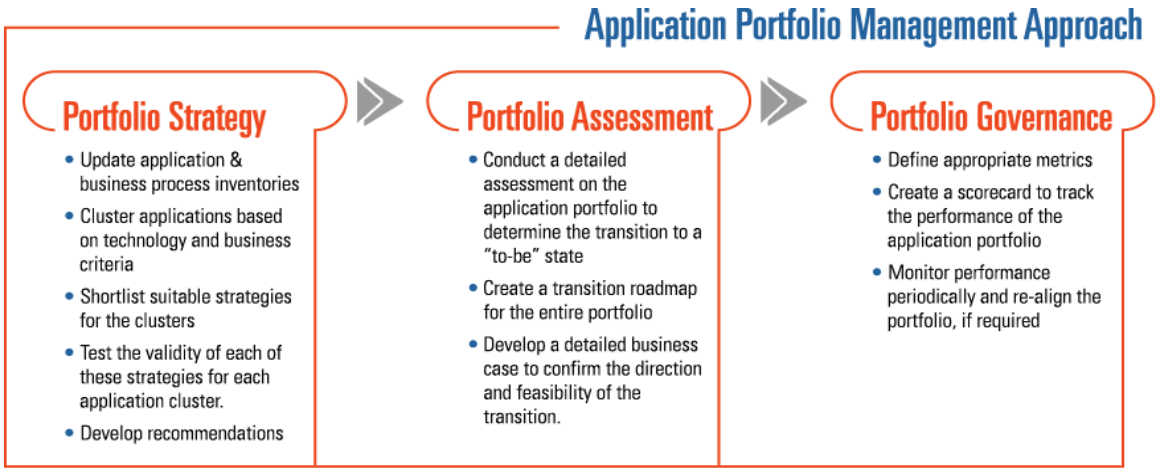

Figure 2: Application Portfolio Management Approach

While the overall concept of APM is pretty straight forward and the benefits perhaps quite obvious, it is our experience that banks tend to make some basic errors that prevent them from realizing the anticipated value:

- Thinking of APM as a one time event, and not as a "living, breathing" continuous process, will undo any short-term gains. Many banks stop at Portfolio Assessment and ignore Portfolio Governance.
- An APM initiative should not be confused with Project Portfolio Analysis. A "Project" has a limited life span and a review of a project portfolio or a decision to outsource/ offshore a project can be made whenever a new project is conceived. Most savings from APM are, by contrast, recurring. Also the review frequency for application portfolio may be much lower - e.g. quarterly, six-monthly or even annual, based on the extent of changes to the application portfolio.

A case for Application Portfolio Management

As with any strategic initiative, it is important to build a strong business case before proceeding on the APM journey. Our experience shows that there exists a good case for APM and the impact can be felt in the short term as well as the long term through IT and business functions respectively. APM ensures that investments and implementations of IT are in synch with changing business needs and trends. At the technology level, it improves the overall IT effectiveness, ensuring that IT is not a reactive function anymore, always playing "catch-up" with business. At the business level, this enhances a bank's capability to meet the challenges in the external environment and achieve overall business goals.

The utility and impact of Application Portfolio Management can be understood in the context of various strategic initiatives typically undertaken by banks:

- Mergers & Acquisitions: APM can be leveraged in pre as well as post M&A situations to guide strategic fit assessment and post merger consolidation respectively
- Strategic Cost Management: Banks can reduce costs by applying APM to their existing set of applications. The following could be a few of the potential outcomes of an APM exercise which will drive the cost savings:
  - Platform Rationalization/Consolidation
  - Application Retirement.
  - Outsourcing/ "Offshoring"
- Improving Business Process Effectiveness: APM can provide insights into gaps or redundancies in the current application portfolio and enhance the bank's ability to:
  - introduce innovative products
  - provide better customer service
  - manage risks more efficiently and effectively.

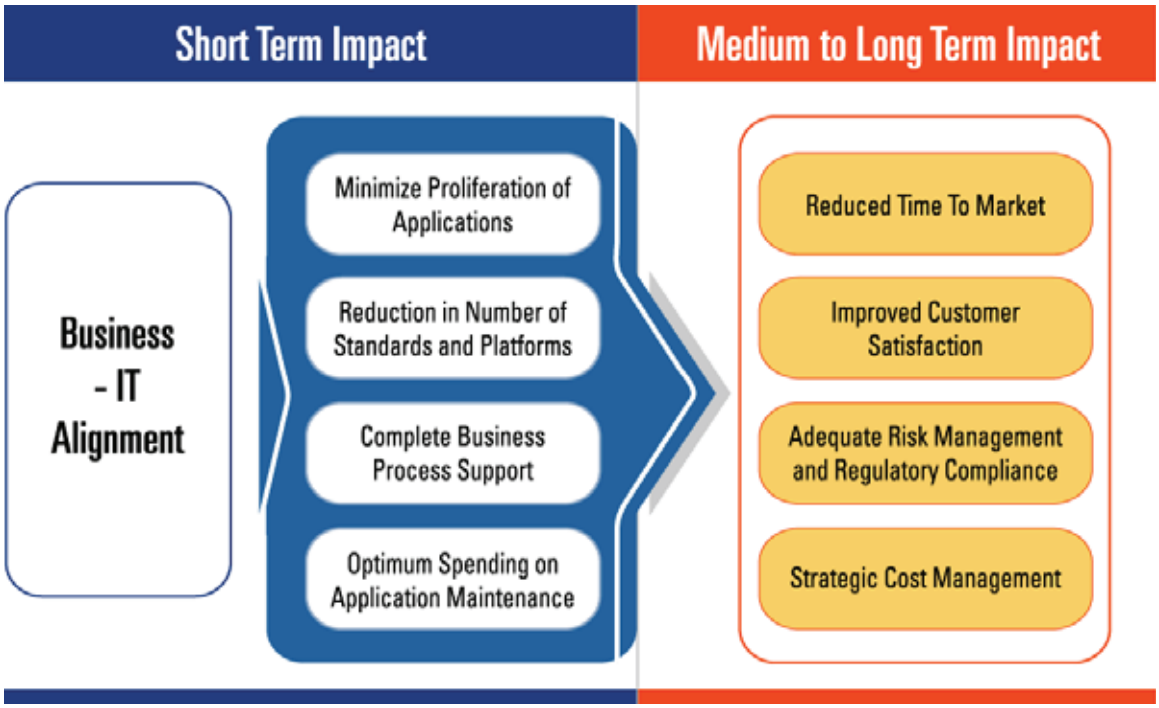

Figure 3: Application Portfolio Management Facilitates Business-IT Alignment

While quantifying the business related benefits would be very specific to the context of a particular bank, the expected impact on IT can be calculated with reasonable accuracy across the industry. The primary drivers of the impact on IT are current spending, diversity of standards & platforms in application portfolio and level of maturity in global sourcing. For example, a commercial bank with a $500 M IT budget can potentially expect up to $26 M to be freed up from the annual application maintenance budget. These savings can be channeled to fund more strategic projects, if appropriate. If not, they contribute straight to the bottom line.

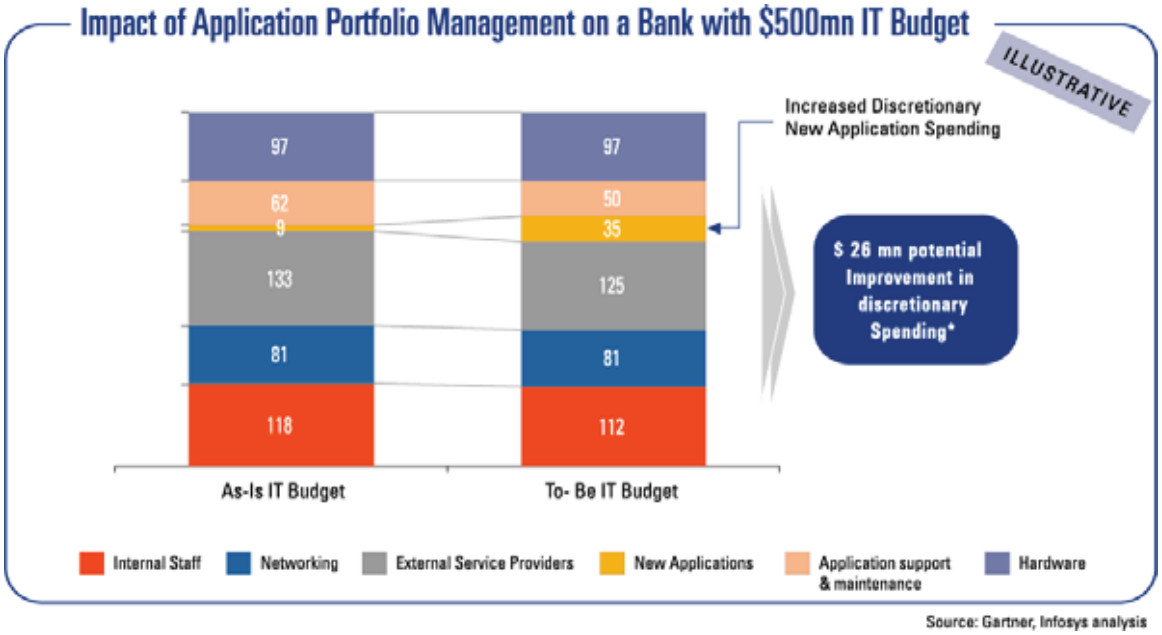

Figure 4: Business Case for Application Portfolio Management

Solutions for Application Portfolio Management

A complete solution for Application Portfolio Analysis and Management, in our view, should ideally consist of the following:

- A robust framework or approach for APM that reconciles the multiple trade-offs between different definitions of return and also between the various risks and returns.
- Automated tools that support each stage and make the analysis and management of the application portfolio more efficient. This is illustrated in the diagram below

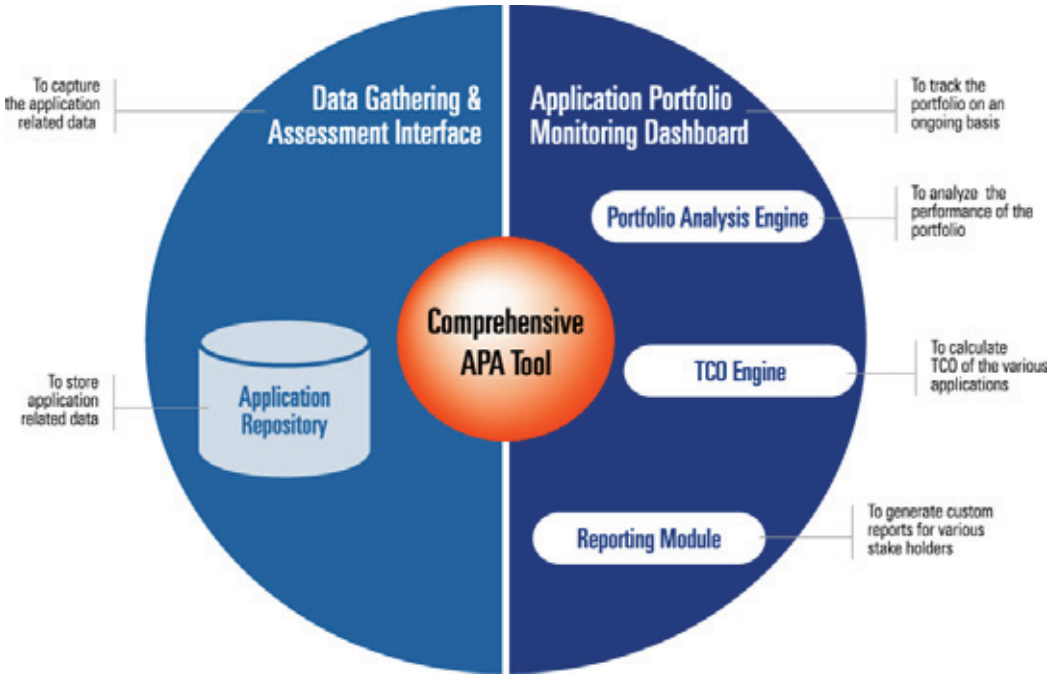

Figure 5: Comprehensive Tool for Application Portfolio Management

Our analysis of these current offerings in the market shows that no single vendor offers a comprehensive solution. Broadly there are two categories of vendors with different value propositions targeting the market.

- Portfolio analysis package vendors – There are several "portfolio analysis" tool vendors in the market, whose products come in different flavors
  - Application Portfolio Analysis
  - Application Portfolio Management
  - IT Asset Management
  - Project Portfolio Management
- Business/ technology consulting firms – These firms offer Application Portfolio Management or Application Portfolio Rationalization as service offerings

Most vendors offer either stand-alone frameworks bundled with consulting services or only general Portfolio Management tools, where third parties are needed to customize and implement the solution. Most frameworks adopt a one dimensional view typically driving the end result towards offshoring applications in the portfolio. Such an approach will still deliver savings due to cost arbitrage opportunities associated with offshoring; however, the value derived may be sub-optimal or the associated risk may be higher, because this approach does not make any attempt to structurally alter the underlying application portfolio. Other Portfolio Analysis tools do contain some of the required components, but typically lack a mechanism to easily define and track the application portfolio metrics on an ongoing basis without dependence on external consultants or heavy investment of ongoing resources-a sort of dashboard. This reduces the utility of the tool and tends to perpetuate the incremental approach to managing IT portfolios.

Summing up

For most banks, their current portfolio of disparate IT applications is an impediment to improving operational effectiveness. This paper presents our view that managing applications as a portfolio will not only help banks bridge the gap between business imperatives and application portfolio strategy, but also enable them to maximize benefits even while managing the associated risks. However, what is needed is a robust approach to Application Portfolio Management that allows the organization to not just make a one-time saving based on offshoring certain applications but also to realize the potential of recurring savings through proactive management of the portfolio.

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