Turn Application Portfolio Management into a Governance Tool for the CIO

A pragmatic approach to manage optimization and transformation of your application portfolio

A MEGA White Paper

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Executive Summary

For more than 30 years, the IT portfolios of large organizations have been expanding. This stems from both increasing business needs and the eruption of new technologies on the market. With the increasing focus on corporate globalization, CIOs face even more complex challenges to rationalize their IT portfolio.

You not only need to optimize the architecture of your IT systems; you have to optimize their deployment within the organization. Numerous applications are redundant, misused or even obsolete. Others are meant to be identical and are specifically configured or deployed. More important than the associated maintenance costs, the poor management of application portfolios makes the IT systems vulnerable, hindering their required evolution. The economic and optimization results are so important that they justify the investment in new governance practices.

This is the benefit of new application portfolio management (APM) solutions. They provide multiple criteria analysis, compatible with the complexity of the modern application landscape. They ensure a clear and comprehensive view of all deployed components (including their cost, their contribution to the enterprise performance, etc.) to address the impact of rationalization efforts. These APM solutions allow you to take the budget constraints and business continuity for each operation into account by building scenarios for application portfolio evolutions.

Implementing application portfolio management practices in IT departments is a priority. This is a legitimate opportunity for CIOs to justify the necessary governance tools to drive IT transformation.

Operating within tight budget constraints

"We cannot increase the technical debt which grows with the necessary maintenance costs that are required to keep applications up-to-date. One solution is to rent instead of acquiring new applications. This is one reason for the success of cloud computing."

CIO at a major pharmaceutical group - Best Practice Magazine 2012

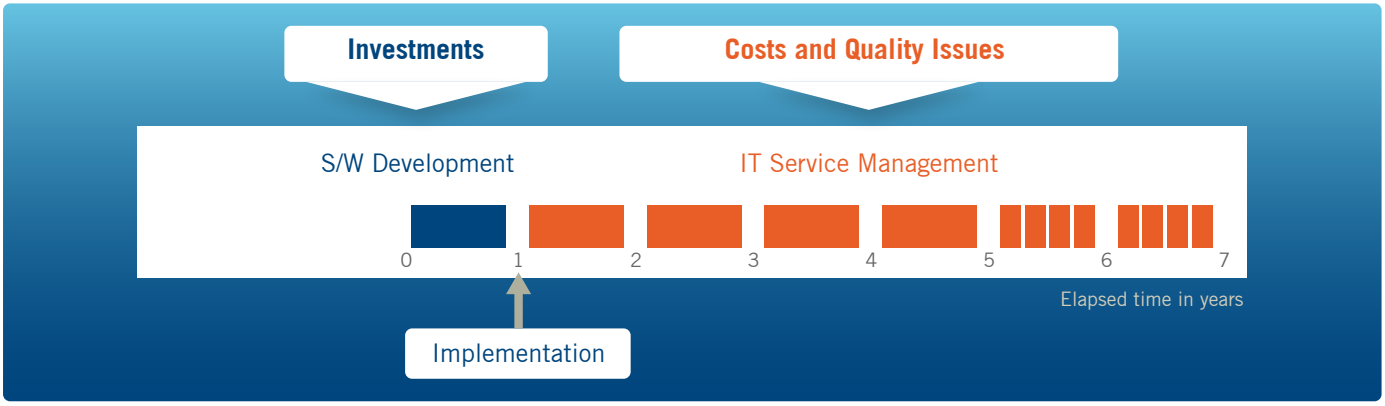
CIOs in 2012 have a specific focus on enterprise agility; they need to meet several different, and often opposing, challenges:

- Support business evolutions at the right time and with the right level of performance while maximizing return on investment
- Follow up on technology trends and functional benefits while ensuring their appropriate deployment
- Comply with legal regulations (traceability, Business Continuity Plans, etc.)
- Participate in a collaborative effort to maximize the profitability of investments made in applications (which is attributed to the improvement of existing applications' features) while continuing to reduce assistance and maintenance efforts

The biggest challenge for CIOs is to reduce the portion of the IT budget that is allocated to running IT operations in order to reallocate those resources to new projects.

The importance of maintenance and IT service management costs have long been understood. The costs typically fall between 40% and 80% of the total cost of the application lifecycle.

Although significant time, money, and effort is spent on the initial development phase, the maintenance phase is when cost and quality issues most often occur.

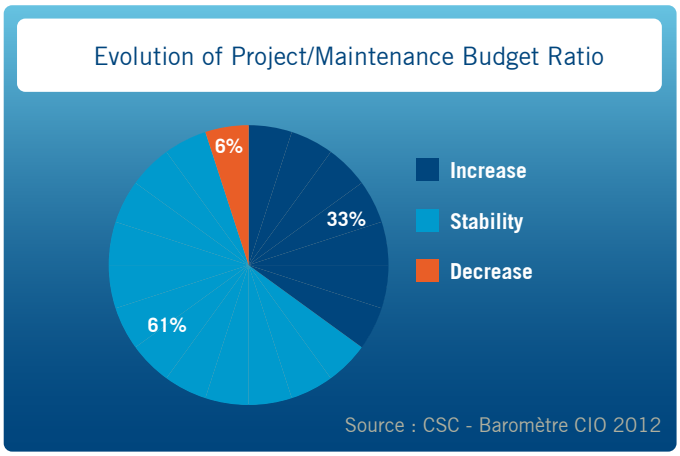


Application Lifecycle Costs

The cost of maintenance

A recent survey illustrates that this cost structure has not changed, even if the maintenance budget is now spent differently, in the overall context of outsourcing and SAAS/ Cloud.

Maintenance costs of the application portfolio still represent a significant part of the IT budget: reducing this cost is a direct mean to provide resources to new projects.



The continuous growth of applications

What our customers are saying

"With all the standards and technologies that have accumulated over time, the ability to maintain them can be very expensive."

"After several mergers & acquisitions, we have too many redundancies between applications."

"Local autonomy of branches and a siloed approach limit the reduction of costs on a global level."

"We do not know how many applications we have in the group... maybe around 10,000. We still pay for maintenance and licenses for some we don't use!"

"With the reduction of our IT budget, our objective is to reduce the number of maintained applications from 800 to 500."

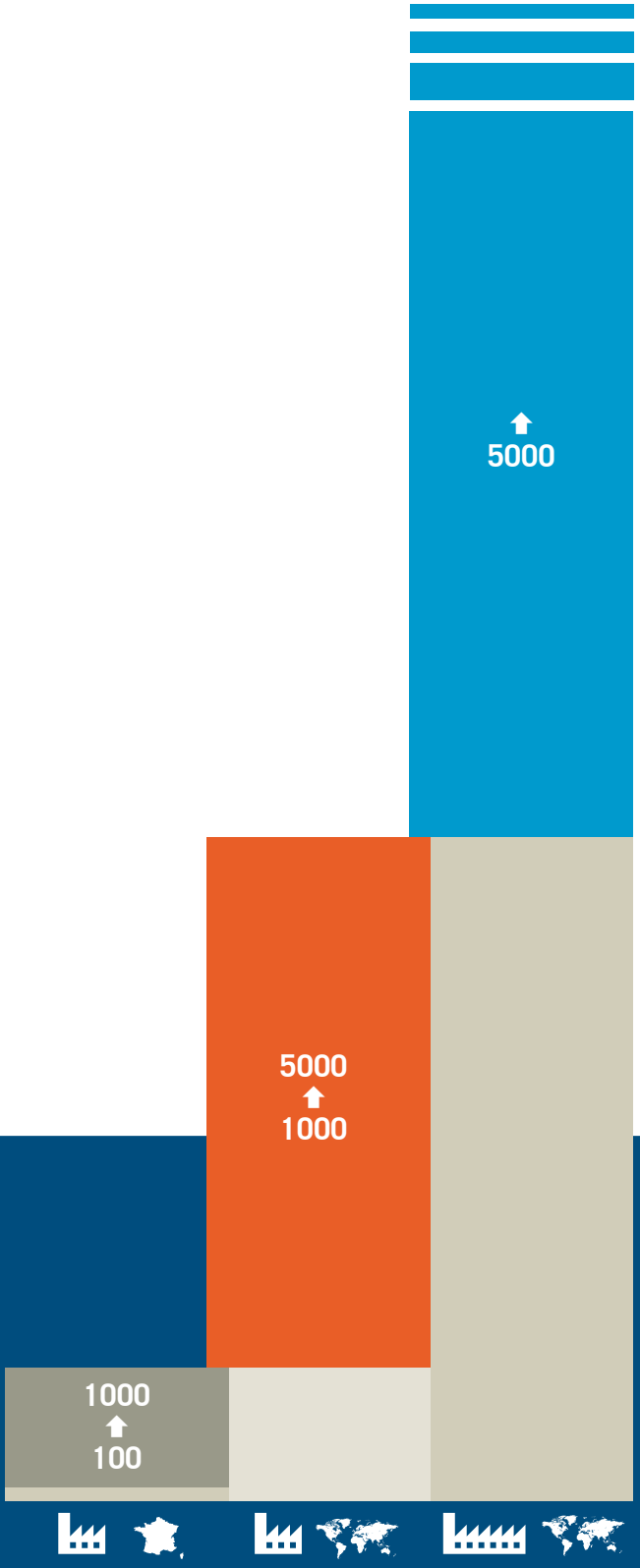
"Our business has totally changed: it's impossible to design our future IT landscape without assessing the existing one."

Over time, many companies accumulate a huge and complex application legacy, generating multiple applications that overlap and are redundant, including:

- applications developed to support new projects / new technologies
- applications resulting from multiple mergers and acquisitions
- heterogeneous standard software packages and “homemade” applications
- complex geographically and organizationally distributed applications

In many cases – because of age, changes in technology, or new business needs – the maintenance costs associated with the application landscape are high compared to the support provided to the business. It is also important to consider the hidden costs of low-quality systems and – even worse – security gaps. These costs can result in the disruption of the modernization of business and infrastructure.

Because they present a technology risk in terms of security and reliability, and also a business risk in terms of losing a competitive edge as well as market share, these applications can result in dangerous consequences.



Figures reflecting the number of applications in different organizations:

- Large, local private or government organizations: between 100 and 1,000 applications
- Large, international private or government organizations: between 1,000 and 5,000 applications
- Very large, global private or government organizations: more than 5,000 applications

Unfinished initiatives

"Beyond development and IT service management, the need for CIOs to have dedicated solutions to support IT asset management is now recognized. IT assets can include several thousand applications, deployed in multiple locations, using multiple technologies, even in the cloud, and characterized by complex cost and risk models. Without a precise inventory and up-to-date evaluation, how can CIOs commit to reducing the cost of his/her application portfolio? They have to guarantee the ability to externalize one activity or another. They have to ensure the continuity of services in case of a major disaster. Is it even possible to accomplish all of this without the right tool?"

François Tabourot, Executive Vice President, Strategy and Marketing, MEGA International

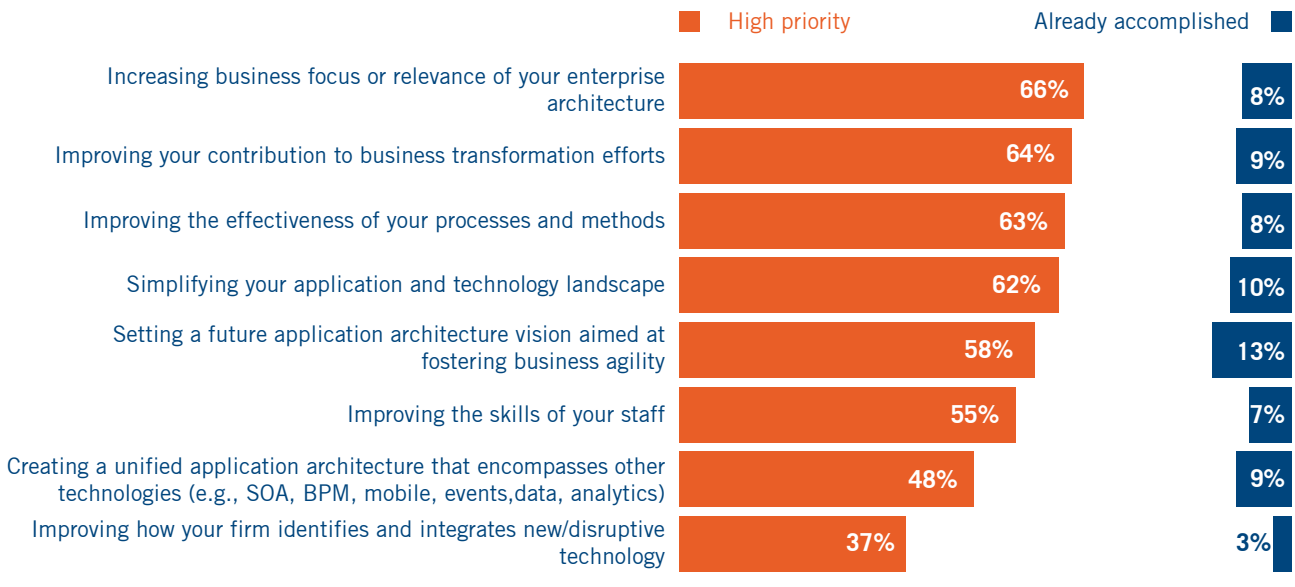
In order to meet the challenges of optimizing and rationalizing legacy systems, multiple large initiatives have been implemented, which include:

- establishing a corporate global IT department to support initiatives and cross-promote the sharing of resources
- promoting technology and application standards, with ERP implementation, and standardization of application interfaces
- implementing an enterprise architecture program that is sometimes reduced to a siloed initiative not connected to the real problems of IT management
- implementing APM projects that are often ad hoc and limited to short term wins
- implementing project portfolio management (PPM) initiatives, which are typically focused on new investments to be made rather than the actual cost of the maintenance and evolution of legacy applications

According to Forrester Research, rationalization and transformation are still top concerns for CIOs and enterprise architects.

Before launching transformation programs, it is necessary to implement a formal process for application portfolio evaluation using an appropriate toolset to avoid chaos

Considering the mission and goals of your EA program, please rate each of the following challenges in terms of importance for attention and investment within your architecture program.



Source : Forrester - September 2011 Global State of Enterprise Architecture Online Survey - Base : 543 ITprofessionals familiar with EA practices

Results of Forrester Research's Survey

Turning APM into a Governance Tool

"The principle is to consider IT as a factory. A plant director has to deal with modern machines as well as older ones, amongst which some perform at full capacity while others only at reduced usage rates. The plant director has to increase the usage ratio of its resources. This is the same for IT systems. A primary responsibility for CIOs' includes the reduction of the number of applications. Applications have often been requested by users who have since left the company, or who no longer care about them. The result is dozens, or even hundreds, of orphaned applications," explains the CIO of a large pharmaceutical group.

Application portfolio management is based on the analysis of information regarding all existing applications currently in use within the organization. The application information that is required to be regularly collected includes:

- contribution to the business
- risks
- application quality
- application lifecycle
- application usage
- application relationships with other applications
- costs to maintain and evolve applications

The objective of such an approach is to manage the continuous evolution of the application portfolio to its optimal state and to provide concrete insight about applications (costs, reactivity, quality, risks) to make valid decisions about the portfolio's future.

APM can often be misused when it is done in fragments and for short-term benefits, but it can be turned into an effective management tool if it is integrated in a global and structured approach.

Benefits of a holistic portfolio management tool:

Reduction of costs and complexity

- Information about the application, including redundancies, overlapping and unjustified costs, needs to be provided to make informed decisions about potential changes to the application including modification, retirement, maintenance, etc.
- The financial and economic elements of an application portfolio are important considerations when assessing the value of the applications. Setting cost savings goals and measuring the impact of changes to the legacy systems is important to mitigating unnecessary maintenance costs.

Risk and compliance management

- Application failure can vary widely. They can be associated with technical performance, support interruption, lack of technical skills and technology obsolescence. Consequences of failures cover a large spectrum, including inability to meet business requirements, non-compliance with regulatory requirements, or vulnerability against cyber-attacks. By keeping control of your application portfolio, according to your criteria, you are able to anticipate failures.
- Appropriate assessments of how your application portfolio is deployed throughout the company's operations provide a key opportunity to identify the most critical applications for your organization and align them with business continuity requirements. APM speeds up the implementation of a complete and effective business continuity plan that is based on valid information provided by the people in the field.

Better investments that are better qualified

- Limited budgets need to be allocated to valuable assets and investments for the business first. APM provides all the elements to support decision-making in order to guide the investment choices and associated budget planning.
- Outsourcing part or all of your IT resources is one of your important strategic decisions. For this purpose, APM also provides unique information to make valid decisions about the sourcing strategy and cloud/SAAS implementations, especially from a financial perspective.

Alignment of IT assets with business challenges

- Once you are able to align the contributions of your IT resources with the business, you change the scale of returns on investment. Thanks to APM, which provides clarity to the relationship between applications and business, CIOs can establish a stronger position to promote their projects.
- The potential savings on application maintenance opens budgets to use toward serving business needs and improving operations.

Implementing a pragmatic and structured approach

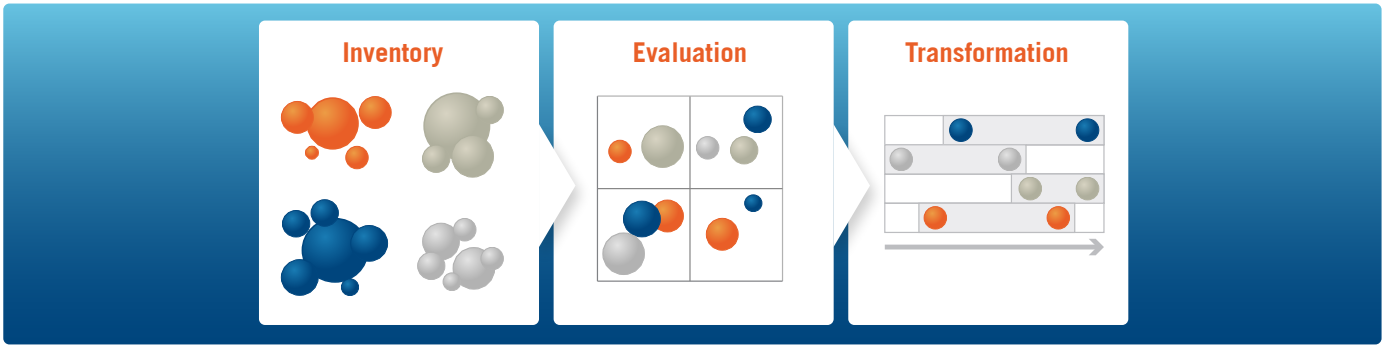
Governance principles of APM are basic: only IT assets (application, technology, etc.) that have acceptable business value, cost, and associated risks are to be maintained. Others that are no longer justified need to be progressively removed from the IT portfolio.

A simple and recurring process

This process of phasing out an IT asset isn't successful if it's rushed. Rather, it's a long-term process that needs to be integrated into the global IT governance framework.

The process consists of three steps:

1. A comprehensive inventory of existing applications
2. An evaluation of applications in terms of business value (depending on business and strategic objectives), maintenance and support costs, and risk acceptance
3. The defining of a roadmap for legacy application management, including all transformation initiatives (application migration, adaptation, and retirement)

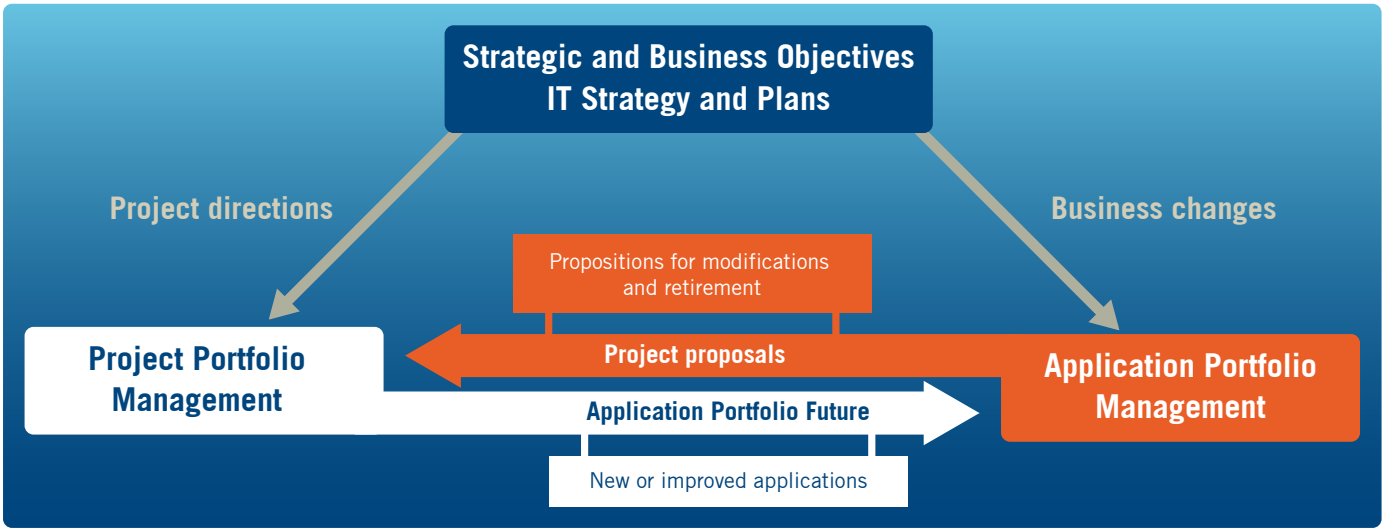


The APM Process

Integration within a global IT governance approach

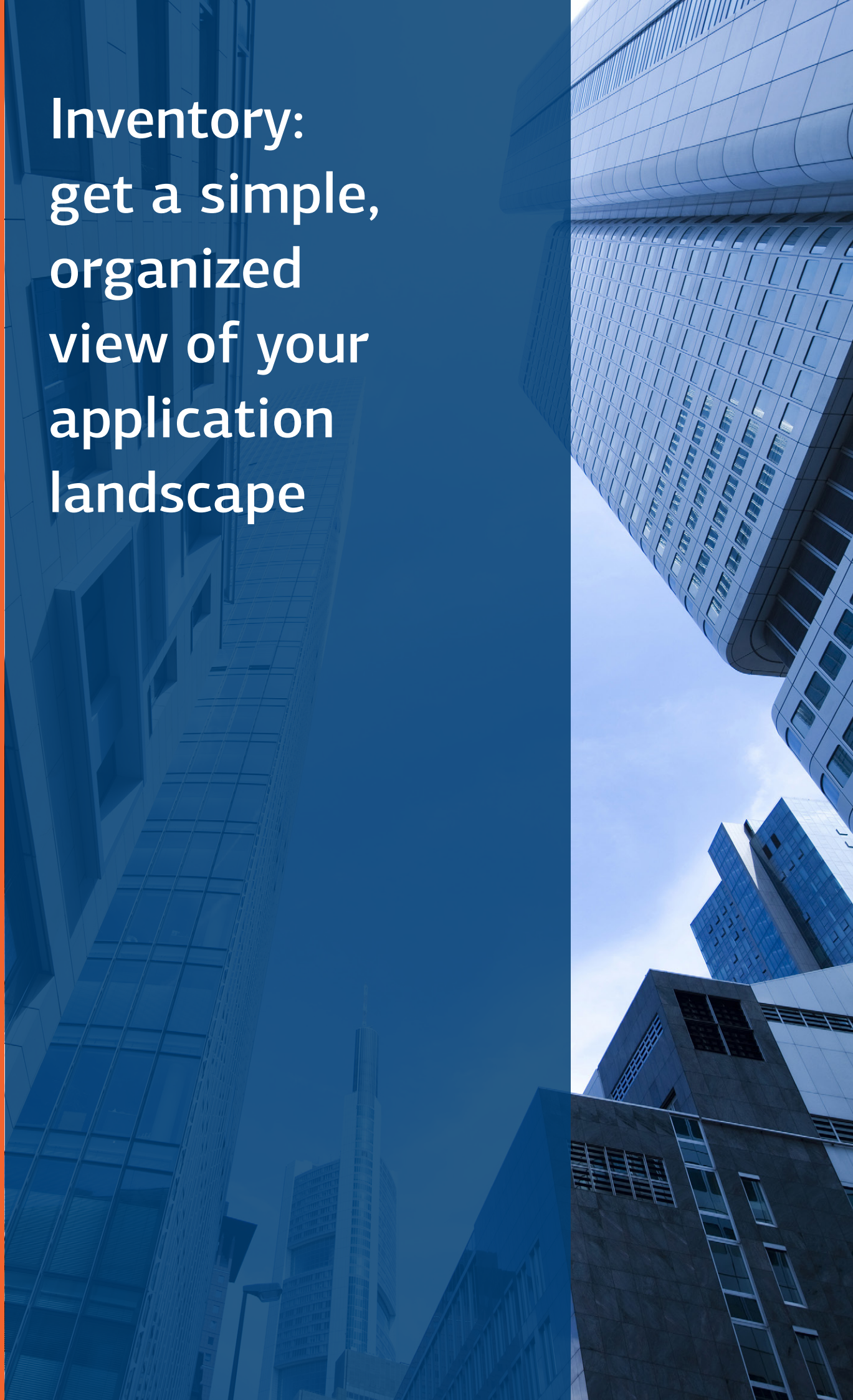
In order to be effective, the approach has to be integrated within the IT governance framework. It must:

- Be aligned with the business view and the IT strategic blueprint as part of the overall company strategy
- Be closely related to projects, ensuring that new requests are qualified against legacy systems, as well as providing new proposals for new projects



Integration within the IT governance approach

Inventory: get a simple, organized view of your application landscape



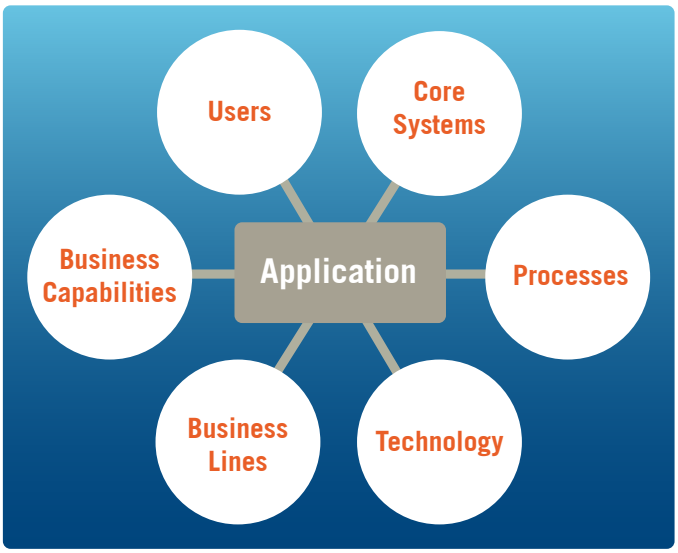
An application is a collection of software components and data that represents a logical set from different perspectives:

- Business (functionalities)
- IT developments (processes and data)
- Production (installation and execution)

Defining appropriate criteria to build a common application repository

A clear definition of reference data is necessary to consolidate application information from the analysis objectives. This ensures the repository of applications is managed consistently and it can include information such as: costs, risks, business processes, and business architecture.

A simple structure of application information is necessary to perform future analysis and evaluation.

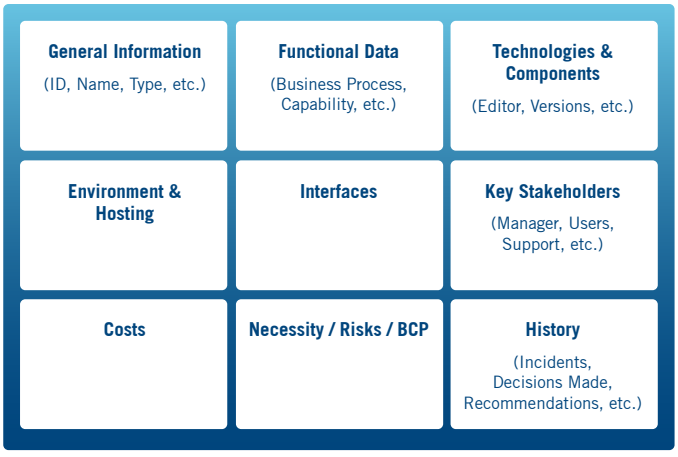


Example of an APM information model

Organize a decentralized data collection

The regular updating of information must involve all necessary stakeholders: application managers, users, business owners, IT managers, technical architects, and more.

This is the consolidation of all data collected from relevant sources that have the ability to draw an accurate ID card of the application.



Application ID Card: Example of Key Criteria

Evaluate the value, costs, safety, and business & technology efficiency of the application portfolio

By analyzing collected data based on evaluation criteria, you can provide the necessary information to assess the application portfolio and to make decisions about each application.

Short-term and mid-term classification for the lifecycle of the applications provides the criteria to identify actions to be performed - tolerate, maintain or evolve, retire or modernize.

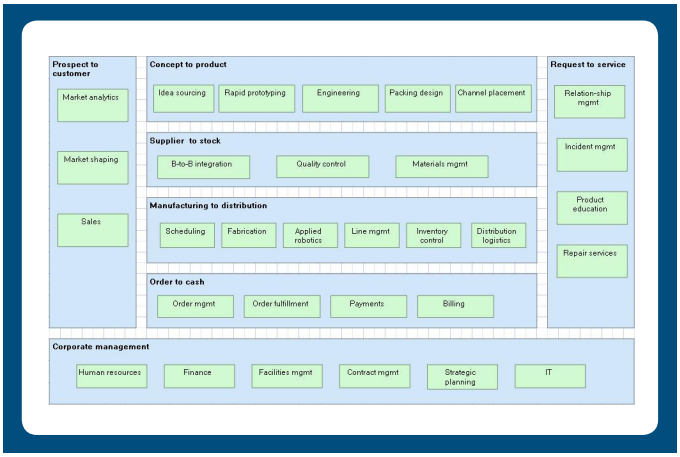
You need to integrate all different perspectives to be able to perform evaluations and make relevant decisions.

Assessing business value

It is necessary to assess the business value of the application in order to make relevant decisions on its evolution. However, APM is not intended to define nor analyze business models. The business view to be used is therefore simple and high-level, but still compatible with the usual concepts of business architecture. Among them we can use process maps, IT city plans, business capabilities, or similar information.

A simple but powerful model provides the ability to depict a reference framework for application knowledge and evaluations, such as:

- Enriching application landscape qualification and characterizing functional coverage of applications (identifying redundancies or automation requirements)
- Aligning existing applications with business challenges
- Providing information for evolution, investment and sourcing decisions



Example of a capability model

Assessing technical efficiency

Rationalization and simplification of the application portfolio requires the optimization of technical components that support these applications.

It is important to define what information is useful to depict infrastructures and technologies (server type, DBMS, OS, etc.) and their deployments. You can link that information to existing data to build a specific set of relationships between applications, infrastructures, and technologies.

It allows you to answer to questions such as:

- Do existing technologies facilitate the implementation of simplifying operations and reducing costs while adhering to infrastructure standards?
- What are the risks associated with an obsolete technology?
- What are the risks associated with the end of support by one supplier?
- Are the technologies that are used compliant with the group recommendations as it relates to the technical framework?

Assessing costs

The economic dimension is critical. The Total Cost of Ownership (TCO) model is certainly one of the most common and precise cost models to meet this requirement. However it requires a huge investment of time and effort to collect numerous attributes such as:

- Annual costs for maintenance of software and hardware
- Potential costs of renting if the hardware is not purchased outright by the company
- Potential insurance costs
- Installations and migrations
- IT asset procurement
- Benchmarking costs
- Costs associated with hardware retirement, etc.

Implementing a simple cost model, such as the one recommended by Forrester Research (RCO-Relative Cost of Operations) works very well. Identification and assessment reduced to the costs that are affected by application evolution (application retirement, technology change, etc.) provides the right information to assess costs without requiring a complex process to be implemented.

Integrating different perspectives to make decisions that take into account the entire range of constraints

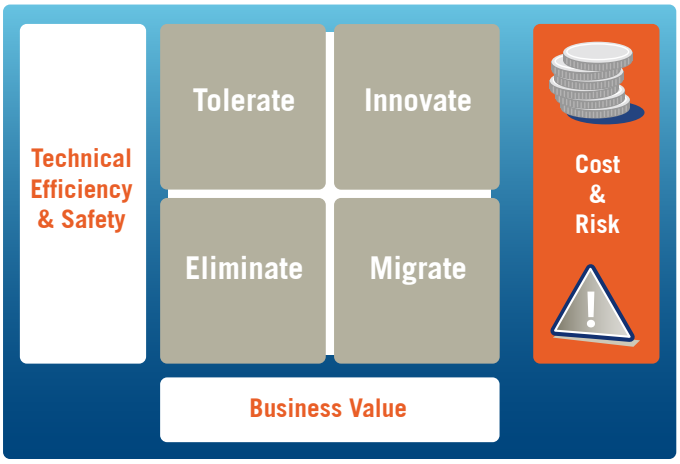
In order to benefit from an effective management tool, it is necessary to go beyond independent business, cost, or technology assessments. Integrating different perspectives into a consistent framework allows access to important information that facilitates relevant decision-making.

Which applications contribute to the business? Which applications are not used?

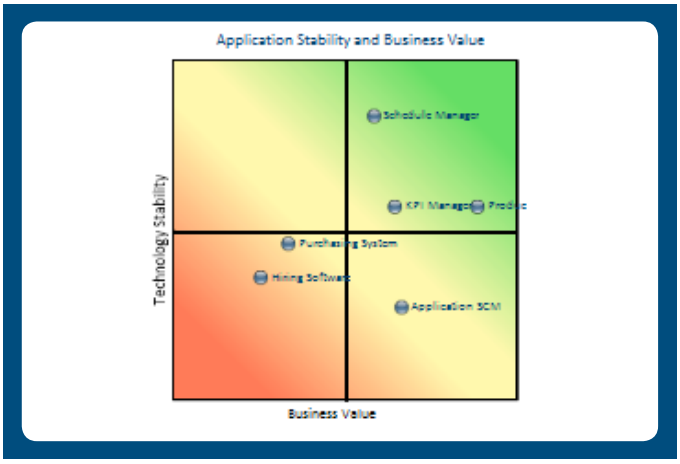
Which applications are duplicated or which are based on out-of-date technologies? Which ones can be deleted at no risk to the business?

Which applications need a refresh? Which infrastructures are essential to the critical business applications?

Linking together different perspectives and cross-referencing information allows you to understand the real issues and make the right decisions.



Different analysis perspectives



Example of Cross-Referenced Analysis

Evaluation Criteria

(examples)

Business Value

- Critical application for the business
- Contributes to revenue/market share
- Improves operational efficiency
- Reduces costs

Functional status

- Aligned with business needs
- Usability
- Productivity

Technical efficiency and reliability

- Performance
- Flexibility
- Maintainability
- Flexibility of configuration

Costs

- Maintenance costs
- Replacement costs

Transformation: organize the decision process and changes to your application portfolio

Portfolio applications, as well as their technical components, evolve depending on certain needs in the context of:

- Business projects
- Technological opportunities
- Maintenance requirements

Application portfolio evaluation makes it possible to define priorities in new actions to be performed, but it also needs to integrate planned maintenance and transformation projects.

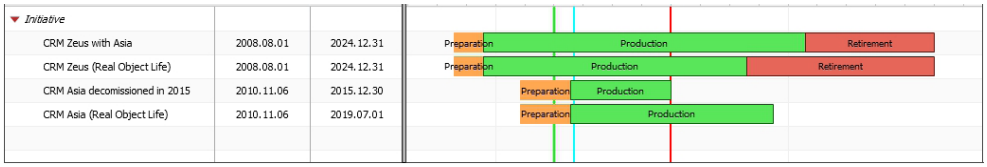
In order to decide which actions to take, the CIO must:

- Have a clear vision of the lifecycle of each application and its components
- Develop scenarios based on changes to lifecycles related to the decisions made regarding applications (retirement, maintenance, etc.)
- Have the ability to sort through requested projects and decide which are most important based on specific criteria (risks, costs, business value, etc.) among different transformation scenarios

Define roadmaps to plan and manage necessary transformation scenarios

Each application, or even each version of an application, has its own lifecycle: from implementation to operation to retirement.

Transformation scenario analyses makes it possible to clarify the different options for their lifecycle (for example, the retirement date in the short- or mid-term), and to select their target roadmaps.

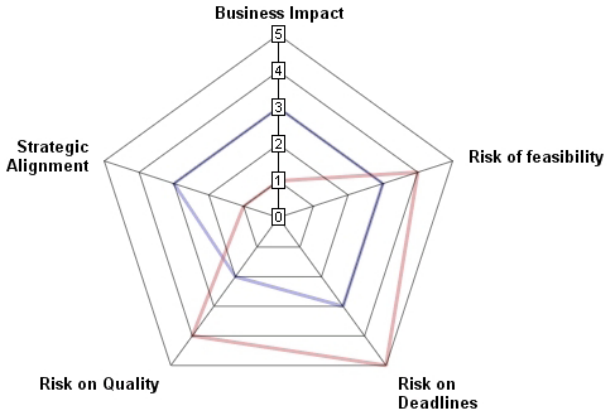


Example of an Application Lifecycle (for different scenarios)

Analyze transformation scenarios

APM provides the tools to build and compare the different transformation scenarios depending on predefined analysis criteria, including costs, risks, business, etc.

A preliminary analysis of transformation scenarios guarantees that the decision is adapted to the organization's ability to change. This ensures that it will reduce the financial, organizational and human risks of any change.



Example of a comparison between two scenarios

The need for a tool

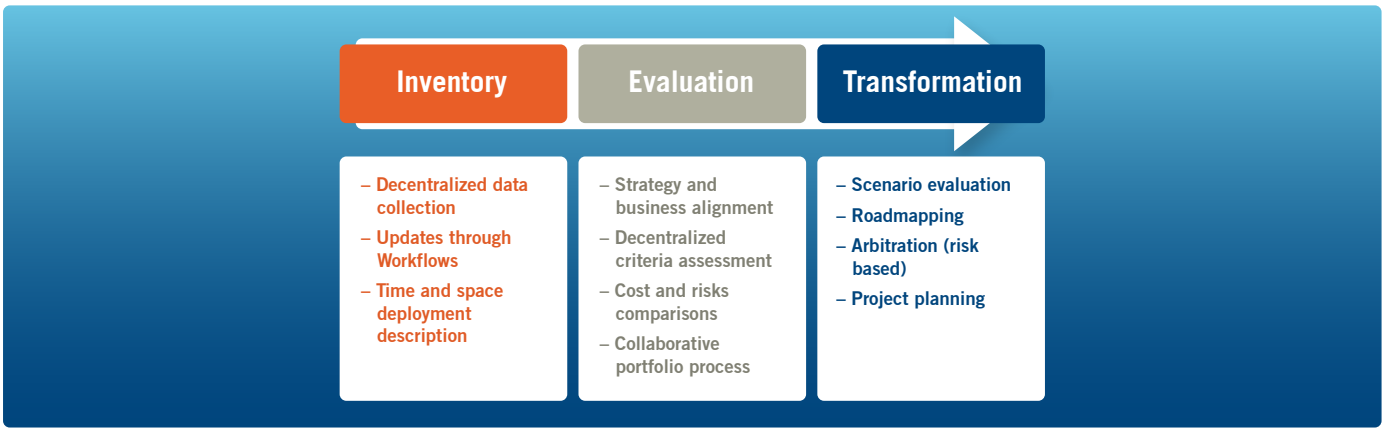
"APM programs [...] have clear goals: Create transparency in IT so that it can be used to inform business executives and enable more strategic joint planning. Tools play a pivotal role in the programs: They serve as a centralized place to store information and provide views to expose redundant applications – or, in some cases, prevent them from being introduced – to reveal technical dependencies, and to articulate, if not wholly justify, IT budgets"

Phil Murphy – Forrester

Application Portfolio Tools Miss the Mark – April 19, 2011

In order to support the CIO's APM directives, a formalized toolset is necessary.

Many initiatives start with an in-house solution, often based on spreadsheets, but quickly find limitations when multiple recurring tasks need to be performed to address the inventory, evaluation and transformation of the application portfolio.



APM Tools

Maintaining application inventory

To accomplish this, it is important to:

- Manage multiple characteristics per application (several dozen for each application) for each stage of its associated lifecycle
- Define data collection processes and associated management rules and controls
- Coordinate the implementation of the inventory with multiple stakeholders and locations
- Manage the complexity of multiple deployments (application versions to be simultaneously maintained, variations in deployments depending on geography, deployment of core systems, etc.)

Evaluate your application portfolio to make decisions about its transformation

To accomplish this, you have to:

- Perform multidimensional analysis on collected data to make decisions (outputs, reports, dashboards, impact analysis, statistics, business intelligence, etc.)
- Get information regarding application portfolio budget expenses (for example, a view of the applications' operating costs)
- Build and compare transformation scenarios

A dedicated application portfolio management tool provides an effective solution to these needs through the implementation of a common and structured repository. This is organized for information sharing and easily associated to management tools (as required) for application landscape governance.

The MEGA Solution

Evaluate to Transform

The MEGA solution for application portfolio management is based on the implementation of a continuous process. It includes best practices in order to reduce costs and improve the quality of IT services. It is naturally integrated within IT governance initiatives.

MEGA APM supports the three main steps of application portfolio management: inventory, evaluation and transformation. It provides you with a unique repository to check the consistency of information in a comprehensive manner.

The underlying platform ensures information exchange with the other components of the MEGA Suite, and integrates APM in a global enterprise architecture framework.

Inventory: Get a simple, organized view of the application portfolio.

Based on a global information model, a common repository allows you to store all application information – collected through decentralized process – in one central "single source of truth". Automatic workflow ensures regular updates of collected data. Communication tools facilitate the sharing of the status of your portfolio through a wide range of deliverables. Import tools speed up the initialization of data.

Evaluation: Assess value, costs, risks and technology efficiency and safety of the application portfolio

With a unique view of all the different components of your IT portfolio and their relationships, you can easily determine which applications are really paying their way and where to remove costs from the organization. You can identify applications that are critical to the business, and mitigate the risks of losing critical infrastructure supporting them. You have all the information to make relevant decisions about your application portfolio evolution.

Transformation Management: Arbitration and planning

Scenario analysis provides the ability to perform IT transformation while minimizing risks and costs. Once the target is identified you can define roadmaps to plan transformation initiatives.

MEGA Consulting Expertise: Proven on numerous customer projects

MEGA consultants are experts in the implementation of repositories and methodologies to optimize the organization of IT departments. They master IT systems architecture and design practices. Their skills and expertise in those domains allow them to efficiently support CIOs in the implementation of a tool-based APM process that is consistent and results in effective governance.

According to the maturity of your project, the MEGA team can help you:

- Define the information model adapted to your context and objectives
- Define the business architecture (process maps, capabilities, etc.)
- Define indicators and dashboards to manage your application portfolio to ensure the proper evaluation to identify priorities and make right decisions
- Build evolution scenarios (evaluation criteria, propositions, comparisons)
- Integrate MEGA APM within your environment
- Manage change and accompany the implementation of a tool-based approach

Conclusion

By integrating APM into a continuous process, based on the use of a specialized software solution, CIOs get the modern governance tools that they need.

They fill the gap to address the complexity of new IT resource management. Can you imagine an HR department without a tool to manage human resources? Or a Finance department without an ERP? So why shouldn't CIOs benefit from a dedicated APM solution?

This APM solution is a tool for governance and decision-making that can be used to support this new priority of CIOs: analysis and execution of enterprise transformation programs.

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