

Oracle® Practitioner Guide
A Framework for BPM Governance
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A Framework for BPM Governance, Release 3.0

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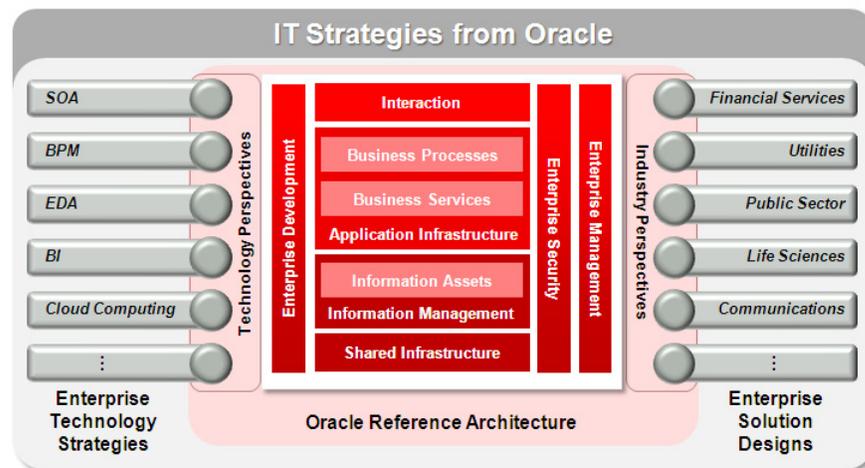
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Preface

IT Strategies from Oracle (ITSO) is a series of documentation and supporting collateral designed to enable organizations to develop an architecture-centric approach to enterprise-class IT initiatives. ITSO presents successful technology strategies and solution designs by defining universally adopted architecture concepts, principles, guidelines, standards, and patterns.



ITSO is made up of three primary elements:

- **Oracle Reference Architecture (ORA)** defines a detailed and consistent architecture for developing and integrating solutions based on Oracle technologies. The reference architecture offers architecture principles and guidance based on recommendations from technical experts across Oracle. It covers a broad spectrum of concerns pertaining to technology architecture, including middleware, database, hardware, processes, and services.
- **Enterprise Technology Strategies (ETS)** offer valuable guidance on the adoption of horizontal technologies for the enterprise. They explain how to successfully execute on a strategy by addressing concerns pertaining to architecture, technology, engineering, strategy, and governance. An organization can use this material to measure their maturity, develop their strategy, and achieve greater levels of success and adoption. In addition, each ETS extends the Oracle Reference Architecture by adding the unique capabilities and components provided by that particular technology. It offers a horizontal technology-based perspective of ORA.
- **Enterprise Solution Designs (ESD)** are industry specific solution perspectives based on ORA. They define the high level business processes and functions, and the software capabilities in an underlying technology infrastructure that are

required to build enterprise-wide industry solutions. ESDs also map the relevant application and technology products against solutions to illustrate how capabilities in Oracle’s complete integrated stack can best meet the business, technical, and quality of service requirements within a particular industry.

This document is part of a series of documents that comprise the BPM Enterprise Technology Strategy, which is included in the IT Strategies from Oracle collection.

Please consult the [ITSO web site](#) for a complete listing of BPM and ORA documents as well as other materials in the ITSO series.

Document Purpose

A Practitioner’s Guide provides insight and guidance when working with a particular type of technology and address the common concerns faced by enterprises and practitioners.

Topic Areas	Business & Strategy							
	Organization & Governance							
	Architecture & Infrastructure							
	Information							
	Engineering & Modeling							
	OA & M							
		EDA	SOA	BPM	BI	MDM	CM	B2B

Enterprise Technology Strategies

Effective BPM governance provides enterprises with visibility into, and oversight of, the relationships and interdependencies that connect the business and IT with a common understanding of BPM across the enterprise. It encompasses people, process, and technology to effectively manage and optimize your organization’s investment in BPM and enable continuous improvement of business process, process redesign, monitoring and control.

This Practitioner’s guide provides an approach to enable the transition to a process-centric organization and support on-going execution of the enterprise’s business process management (BPM) by providing a means to reduce risk, maintain business alignment, and show the business value of BPM investments.

Audience

The primary audience for this guide is for those who are responsible and accountable for the governance of a BPM program and environment. In addition this guide is also applicable to IT managers, project manager, enterprise architects, application architects, developers, and other stakeholders who are responsible and accountable for delivering projects and managing the BPM environment.

Document Structure

This document is organized into the following sections.

[Chapter 1](#) - provides an overview of the Oracle BPM Governance approach.

[Chapter 2](#) - is a description of the Oracle BPM Governance model and its relationship to other governance disciplines.

[Chapter 3](#) - provides a description of the constituent parts that make up a BPM Governance model.

[Chapter 4](#) - is a summary of this document.

[Appendix A](#) - additional background information on a number of related governance disciplines.

[Appendix B](#) - sample inputs and outputs of a Business Process Engineering.

[Appendix C](#) - an example Responsibility Assignment Matrix.

[Appendix D](#) - Testing considerations for deploying process changes.

[Appendix E](#) - where to find further information.

How to Use This Document

This document should be read by everyone that is interested in learning about or leveraging BPM Governance.

Chapters 1 and 2 should be read by everyone who wishes to gain an understanding of the key concepts involved in BPM Governance. Chapter 3 should be read by management and architects that have an interest in understanding the different aspects of developing a BPM Governance model..

Refer to the *ORA Glossary* document for descriptions of key terms.

Conventions

The following typeface conventions are used in this document:

Convention	Meaning
boldface text	Boldface type in text indicates a term defined in the text, the glossary, or in both locations.
<i>italic text</i>	Italics type in text indicates the name of a document or external reference.
<u>underline text</u>	Underline text indicates a hypertext link.

In addition, the following conventions are used throughout the BPM documentation:

"Service" v. "service" - In order to distinguish the "Service" of Service Oriented Architecture, referred to throughout the BPM ETS document series, the word appears with its initial letter capitalized ("Service"), while all other uses of the word appear in all lower-case (e.g. "telephone service"); exceptions to this rule arise only when the word "service" is part of a name, such as, "Java Message Service" ("JMS"), "Web Service", etc.

Introduction

BPM is having a fundamental effect on driving organizational change and delivering operational value and efficiency in a highly systemic way. This means BPM goes to the root of organizational structures, methods and operations, and it is important to ensure that the changes it initiates are the right ones. With the advent of executable business process models in the newest revision of the BPMN standard there is a tendency to imagine that processes modeled by a business user can flow directly into production execution. In fact this is not entirely unrealistic and therefore there is a need for a degree of control to ensure the checks-and-balances of a rigorous method are applied along with an underlying framework to support interaction between the business and IT. This framework is really a communication plan, with clearly defined roles and responsibilities in the BPM initiative. It sets out clear deliverables from one role to the other and within a role defines clearly the accountability, responsibility and supporting characteristics of the role in BPM initiatives to enable BPM to operate enterprise wide by crossing organizational boundaries. A governance framework will typically insist also that a BPM initiative has well-defined goals and objectives and is measured and weighed against these expectations with a feedback mechanism to enable continuous improvement of BPM frameworks and practices themselves. In this way BPM governance defines, measures, and assures the success of your BPM initiative.

1.1 The Oracle BPM Governance Framework

Governance is about creating and maintaining an environment for success; it is fundamentally concerned with making sure effective policies and procedures are established and enforced. When it comes to BPM, ensuring success involves a broad spectrum of factors around the enterprise. It is about having a single source of guidelines tailored to the scope of the BPM program with clearly defined metrics with which to measure success against established objectives. This approach ensures consistency and accountability, supports on-going business justification, and establishes a feedback loop for continuous improvement and growth of the BPM strategy.

Ideally the management, measurement, and enforcement of these strategies for the BPM program will be conducted by a centralized BPM group with an executive mandate, typically referred to as a Program Management Office (PMO) or Center of Excellence (CoE). This level of support is not always justifiable in the early stages of the BPM program, but that should be no reason to neglect governance, in fact, it may be all the more reason to institute practices to take objective measurements in the early stages to quantify benefits and help build the case for expansion. Also, in these early stages, it is important to manage program scope to make sure the launch of a BPM program is not too ambitious for the capabilities of the organization, while also ensuring later expansion is able to exploit the full benefits of BPM.

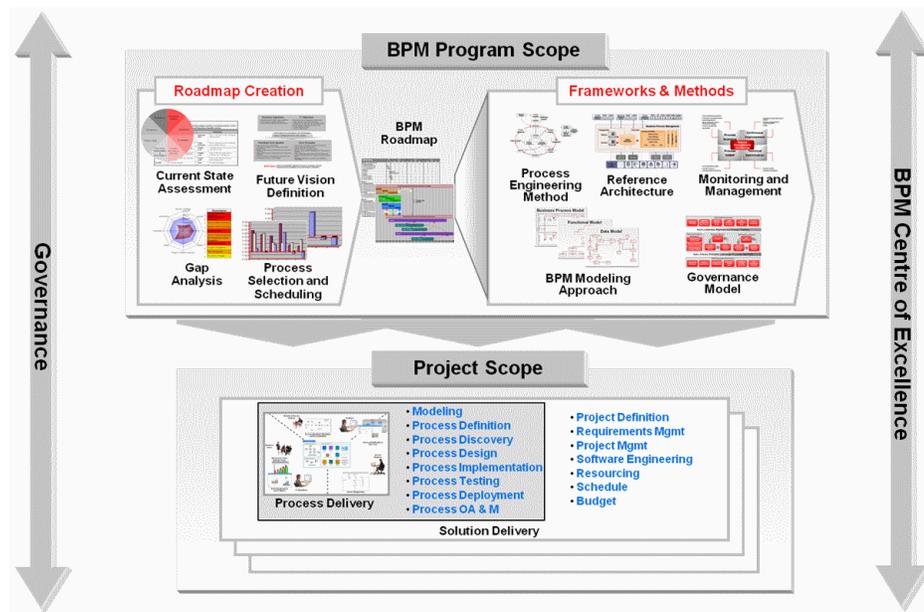
Achieving improvements in narrowly scoped processes (i.e. departmental level) is relatively straightforward to manage (largely due to well contained departmental organizational structures); however, the greatest value from BPM is found in automating enterprise-wide value chains and this is where good governance becomes critical. Unfortunately a number of challenges commonly stand in the way of this kind of cross-functional, enterprise-wide governance, including the following:

- Organizational structures are typically organized by functional silos.
- Related to the organizational concern, there is typically a resistance to change and even to cross-functional cooperation.
- Formal governance frameworks for this scope are rare.
- Inadequate infrastructure and tools support.

Departmental scoped process projects are often more manageable due to another factor, besides the established organizational structure, that is, the wide adoption of project scoped process improvement strategies, such as Six Sigma (process improvement strategies are described in more detail later in this document). In deploying these strategies companies have already established process improvement governance at the project level and, while this is not everything that is needed for enterprise-wide BPM governance, it is a good place to start. A plan to address the above concerns must be put in place however, to avoid getting stuck in project scope and to enable realization of the full benefits of enterprise-wide BPM and the long-term success and development of the program.

The diagram below provides a high-level outline of the scope of BPM program and project level concerns identifying the context for governance and the associated COE/PMO.

Figure 1–1 BPM Governance and COE in Context with Oracle's Approach to BPM



As we can see from the diagram above, the scope of BPM governance spans everything from roadmap creation and its ongoing maintenance, frameworks and methods, all the way through business process projects themselves. In this document

we shall attempt to explain the significance of governance in all these aspects of Oracle's approach to BPM.

In practice, BPM governance works on two levels, the program and the project level. At the program level, while executive management sets the strategic direction for the BPM initiative, the governance body is responsible for its measurement and enforcement, ensuring alignment using the frameworks and tools outlined in figure XX above; managing the roadmap and selection of projects to meet strategic goals. At the project level, BPM governance directs the project management of solution delivery to work within an engineering and project framework that comprises best practice for successful business process automation.

In some respects BPM is itself a form of governance. Take for example this statement from Gartner:

"BPM is a management practice that provides for governance of the businesses process environment toward the goal of improving agility and operational performance. BPM is a structured approach employing methods, policies, metrics, management practices, and software tools to manage and continuously optimize an organization's activities and processes." (Gartner report, Business Process Management: Preparing for the Process-Managed Organization, 2005).

What we are describing in this document however, is not so much concerned with the governance of a business process improvement (using BPM), but rather the governance of the implementation and adoption of BPM itself. Of course there is considerable overlap, for example, in the implementation of BPM we strive to deliver capabilities such as business activity monitoring that enables process governance and contributes to the higher level practices of business intelligence and performance management (EPM/BI). Clearly, some of the success measures of the BPM program should ultimately include strategic objectives, such as, the ability to support BI and EPM. The difference is, however, here we are describing the governance of the BPM program, with its associated implementation of technical and business infrastructure and on-going development and improvement of methods and practices.

There is also great similarity and potential overlap with SOA governance. If SOA is being used as it should be in support the BPM initiative, it too must be well governed and the two governance practices should be carefully coordinated not only to streamline the process, but also to exploit the symbiosis between BPM and SOA.

Governance is also concerned with organizational issues, such as ensuring that the program has appropriate roles assigned with the necessary skills and authority to carry out their responsibilities; for example, in the creation and delivery of training the role of governance is to ensure that the program planning has taken account of the resources and skills needed to fulfill this activity and that a system is in place to measure its effectiveness.

Governance is necessary to achieve the full range of benefits from BPM. A number of key organizational and governance capabilities are also required to achieve BPM maturity and adoption (see Oracle BPM Maturity Model). Managing the maturity development of the organization becomes especially important when successful pilot projects provide a high rate of return and become very visible generating demand for BPM that may exceed the organization's capability. In this case governance is critical for managing growth of BPM.

Sometimes projects or programs fail because they are unable to meet their original success criteria and in that situation root causes can be established and corrections or adjustments made to ensure success the next time around. Unfortunately some

projects fail simply because they don't establish their own success criteria and are therefore unable to declare success or even in some cases to know when the project is complete. In these cases unforeseen expectations emerge after the project is implemented or perhaps the project owners based their efforts on assumed objectives unrelated to corporate strategies. This is the worst case of failure and it clearly arises from a lack of governance.

To define and quantify success we clearly need to identify suitable metrics, after all what is success if we don't measure it? But the suitability of the metrics is important too, we need to take a balanced view and not just count faults and errors that drag down service level measurements; benefits ranging from increased throughput to greater agility must also be made quantifiable.

In summary the key benefits and objectives from BPM governance include:

- The ability to expand on initial BPM successes while controlling risk
- Structures, approach, and practices to accelerate adoption and cultural change
- A feedback mechanism to continuously improve frameworks and practices that support BPM

Governance creates an environment to support BPM to ensure success and effective growth, while the best form of governance not only enforces good practices and measurement, but manages the delicate balance between too little control (leading to unpredictable results) and too much (potentially slowing progress and stifling innovation).

Oracle's Approach to Governance

The approach to BPM governance spans many concerns and one of the challenges for governance practitioners is identifying, coordinating, and managing all these various elements. A number of the key considerations are shown in the diagram in figure 1 above and a roadmap is used to coordinate program and project activities.

At the program level, BPM governance uses the maturity assessment to identify deficiencies in an organization's capabilities that would prevent it from taking advantage of BPM opportunities or negatively impact its ability to realize certain BPM benefits (Oracle uses a BPM Maturity Assessment tool to quantify and monitor maturity and adoption of more than 60 critical BPM capabilities). The capabilities maturity assessment is compared to the expectations of the organization for BPM to meet specific needs. The gap between capability and expectations is determined and a set of remediation activities are coordinated in a program-level roadmap (see the ITSO BPM Roadmap Planning document for more information).

High-level project timelines are also included in the roadmap in order to ensure that dependencies, such as required organizational changes and infrastructure build-out, are appropriately coordinated.

Broadly speaking BPM program governance should:

- Identify the key assets that are essential to BPM success and determine how to manage them effectively through measurement and feedback.
- Establish principles, policies, and procedures for implementing BPM and ensure they are followed.

2.1 Relationship to Other Governance Frameworks

It is necessary to understand the scope of BPM governance in relation to other governance concerns and practices, not only to avoid duplication or conflict, but where appropriate to integrate them for greatest continuity. The following sections briefly identify other governance frameworks and their relationship to BPM.

Corporate Governance is the most mature form of governance which is concerned with key corporate asset types like financial, buildings, and personnel. Corporate governance policies can be complex, ranging from enforcement of regulatory requirements, such as Sarbanes-Oxley (SOX), all the way down to expense policies. As the earlier Gartner description of BPM states, BPM itself offers the ability to support this form of governance through policy enforcement, measurement, and by contributing analytical information to business performance management.

IT Governance (formal and informal) encompasses the processes that govern IT investment decisions, end-user relationships, project management, and other IT operational concerns. IT governance can be broad and complex, for example, at one

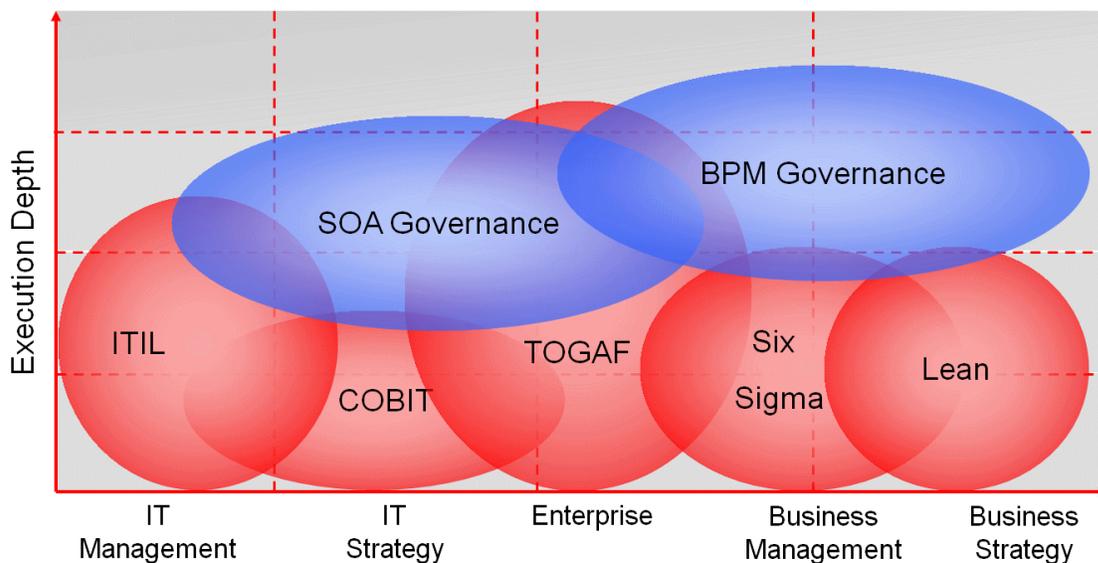
end of the spectrum it is easier to detect someone is using a non-standard PC, but it is a lot harder to determine whether someone is using a non-standard architecture.

Architecture Governance supports IT Governance in the example above by requiring architecture design approval for all new projects and major changes and software acquisitions. Typically operating through an Architecture Review Board (ARB) architecture governance ensures that new software and systems conform to established standards, principles, and guidelines in order to maximize IT value through interoperability, longevity, effectiveness, etc.

SOA Governance supports business and IT practices concerned with service selection, engineering, and lifecycle. SOA Governance bears most similarities to BPM Governance having considerable overlap in the assets they manage. BPM Governance has a greater business strategy focus however, while SOA still spans business and technical concerns it has a greater IT bias.

Intersections between the well known governance frameworks are represented in the diagram below showing the relative level of execution detail against an IT to business continuum.

Figure 2-1 Intersection with other Governance Frameworks



SOA governance, more closely aligned with IT concerns, should provide strong technical support to BPM governance. The ITIL, COBIT, and TOGAF frameworks are described in more detail in the ITSO Framework for SOA Governance document, while an outline of Six Sigma and Lean can be found in [Appendix A](#)

2.2 A Unified Governance Framework

The Oracle BPM Governance Framework follows the model of the Oracle Unified Governance Framework (UGF) represented in the diagram below.

Figure 2–2 Oracle Unified Governance Framework



The Oracle Unified Governance Framework defines a pattern for governance in any technology strategy and in doing so it supports integration of various governance efforts.

Universal Governance Framework categorizes the full spectrum of governance concerns and specifies the role of leadership and the need for planning, policies, principles, and procedures which must all be supported by tools and infrastructure.

The primary purpose of a governance framework is the management of key assets to extract the best business value, while the value of an underlying model, such as UGF, is to ensure consistency and completeness. A governance framework should identify what these key assets are and what policies and principles should be defined to achieve the best business value. We then identify the appropriate means such as technology, organizational structures, and procedures to enforce these policies and ensure principles are followed.

Understanding the underlying model for a governance framework enables us to better relate and integrate various governance efforts.

2.3 BPM Governance Framework

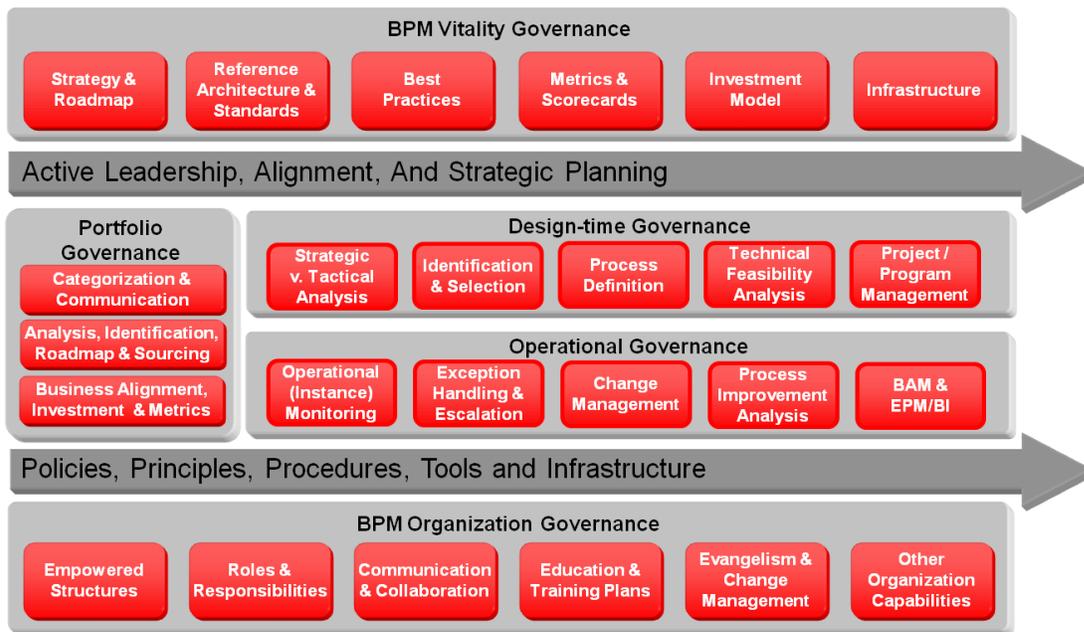
The Oracle BPM Governance Framework is a structured approach that categorizes the key elements required to support the execution of a BPM program. In this way it provides a means to reduce risk, maintain business alignment, and measure the business value of BPM investments. The framework helps identify the unique challenges faced by enterprises embarking on BPM projects and programs, it provides support to address these challenges and increase the effectiveness of BPM adoption.

By defining the principles, policies, processes, roles and infrastructure required to augment existing governance strategies the Oracle BPM Governance Framework complements traditional governance approaches.

The Oracle BPM Governance Framework consists of the BPM Governance Reference Model and the BPM Governance Continuous Improvement Loop. These are explained in the following paragraphs.

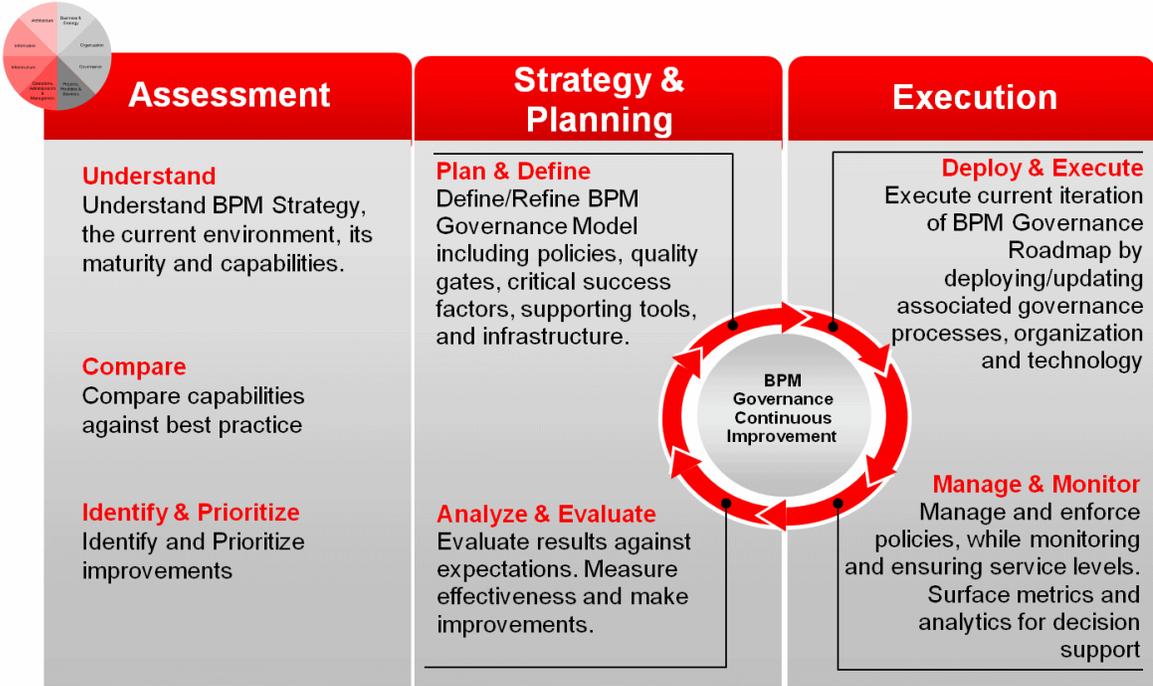
The BPM Governance Reference Model is a generic but complete model that is applied as a template for BPM governance to expedite the process of developing a specific BPM governance approach for any given enterprise. All aspects of the BPM Governance Reference Model are reviewed and considered for customization to the specific environment. This reference model is summarized in the following diagram of the BPM Governance Framework highlighting the alignment with the Oracle Unified Governance Framework outlined in the previous section.

Figure 2-3 BPM Governance Framework



The BPM Governance Continuous Improvement Loop quantifies the effectiveness of BPM governance and updates the Governance Model to apply improvements and corrections.

Figure 2-4 BPM Governance Continuous Improvement Loop



The phases of the Oracle BPM Governance Continuous Improvement Loop are as follows:

- **Assessment:** The framework applies an incremental approach to defining and deploying a BPM Governance model in which the assessment phase evaluates the BPM strategy to identify and prioritize the current BPM challenges and assembles them into an initial BPM Governance roadmap.
- **Strategy and Planning:** Existing governance practices are evaluated alongside the BPM Governance Framework to determine immediate governance needs, size the effort to match the scale of the BPM program, and integrate with existing practices. The roadmap is further elaborated to expand the governance capability in parallel with BPM rollout, while its effectiveness is evaluated with every subsequent cycle of the improvement loop.
- **Execution:** Existing governance practices are updated while new ones are implemented according to the established roadmap. As governance practices are implemented they are carefully monitored to collect metrics concerned with the effectiveness of the BPM program and the impact of BPM governance.

BPM Governance

Oracle BPM Governance is an agile, efficient decision and accountability framework designed to effectively direct and assist in realizing the benefits of BPM, while encouraging a degree of cultural evolution in ways an organization delivers BPM to the enterprise. It covers planning and strategy to build sustainable structures and processes to support the operation successful BPM initiatives in organizations that are planning a systematic roll-out of BPM beyond initial pilots or single deployments.

The following sections break down the Oracle BPM governance model introduced in the previous section.

3.1 Governing the Vision and Strategy

Vision and Strategy is one particular area where we see an overlap with "process governance" since we are collecting business motivation for the purposes of value alignment in process selection, traceability, and measurement of effectiveness against objectives. It is this last point, measurement against objectives, in particular, that intersects with process governance; however, while process governance extends to business process and business performance improvement, BPM governance focuses on other aspects of vision and strategy including:

- Vitality of standards, infrastructure, and practices
- Process and Service Portfolio Management

The first point in this list appears in the BPM Vitality Governance portion of the BPM framework model.

3.1.1 BPM Vitality Governance

The majority of elements under vitality governance are not typically created by the governance body; however, their use and enforcement across the enterprise is critical to governance, as is their maintenance (or "vitality"). Strategies, standards, practices, infrastructure, etc. must kept current with business motivation and strategy, legal and corporate mandates (from other governance bodies), and industry and technology progress.

The top portion of our governance framework model encapsulates the elements requiring attention to vitality.

Figure 3–1 BPM Vitality Governance

3.1.1.1 Strategy and Roadmap

The creation of the BPM strategy and roadmap are described in the ITSO Roadmap Planning document. Here however, we are considering the "vitality" of the strategy and roadmap, which refers to its continuous improvement through monitoring and measurement of effectiveness against established goals and objectives, the application of corrections, updates, and improvements to the approach to ensure better results in the next iteration or project.

In keeping with the UGF approach, BPM Governance also regulates itself through the BPM Governance Continuous Improvement cycle in which regular assessments (based on the Oracle BPM Maturity Model) support the improvement (or vitality) of all aspects of governance.

3.1.1.2 Reference Architecture and Standards

The governance authority is responsible for enforcing architectural principles and standards across the enterprise. Standards vitality is a Maturity Model capability that measures the extent to which standards are applied, the enforcement and adherence to standards, as well as the maintenance of the standards to ensure that they do not become outdated and irrelevant.

While standards for BPM may be selected by an Enterprise Architecture (EA) group (or similar body) adherence to standards is enforced by governance authority. The governance group typically works with the EA team to ensure continued applicability (i.e. vitality). Strategic partnerships with key technology suppliers and standards organizations might also be necessary to influence future standards development.

3.1.1.3 Best Practices

Best practices must also be allowed to evolve. As methods and strategies are applied and integrated with existing practices costs and benefits must be weighed to assess their value and make adjustments as needed. Many practices are recommended throughout the Oracle BPM Approach and all of these needs to be adapted to their situation and merged with other industry and corporate practices.

3.1.1.4 Metrics

Metrics and scorecards in this context refer to the measures and assessments applied to BPM Governance itself and the methods and practices it is governing. This category of metrics is distinct from others found in portfolio and operational governance and refers specifically to the measures needed to assess the value of practices in the BPM approach.

3.1.1.5 Investment

Once BPM program is under way the level of investment should be maintained in accordance to its value. As the BPM program demonstrates measurable financial benefits a case for expansion can be made based on proven return on investment. In addition, as the BPM environment matures it should be possible to shift investment

from legacy application customization and into more effective and agile BPM development.

3.1.1.6 Infrastructure

Infrastructure is constantly evolving and BPM should benefit from improvements in its underlying platform. Major examples of such infrastructure evolutions include SOA and Cloud.

3.1.2 Portfolio Governance

Portfolio governance appears under our strategy topics for a number of reasons represented in the associated section of the model. Portfolio governance is responsible for managing BPM projects, assets, and associated metadata across the enterprise. It establishes a common language through categorization, supports process identification and selection, and ensures continued business alignment. Each of these elements is represented in the diagram below.

Figure 3–2 BPM Portfolio Governance



Since BPM relies heavily on its underlying application service foundation it is important that a robust, coherent portfolio of enterprise application functionality and information (application functions, content, data, and metadata) exist as a set of accessible services. The governance authority is primarily focused on optimizing the portfolio in order to support BPM effectively. This is achieved in three major activities:

3.1.2.1 Categorization and Communication

A portfolio must be accessible to all potential consumers of its contents. Communication of application and service capabilities starts with categorization and classification of the portfolio contents. An unambiguous, structured description of enterprise application functionality and information, understandable by both business and technical consumers, is a prerequisite to effective modeling of enterprise-wide business processes and mapping of IT assets. The role of governance is to ensure that effective categorization and taxonomy schemes, for effectively describing IT assets, supports enterprise-wide communication.

Fortunately, SOA has already evolved the techniques for categorizing and describing units of application business functionality and information in the form of services. This is one of the many areas in which SOA provides a valuable foundation for BPM.

3.1.2.2 Analysis, Identification, Roadmap, and Sourcing

Portfolio governance must ensure that assets are fully accessible to all areas of BPM engineering including various analysis stages, business process identification, roadmap planning, and ultimately the identification of the technical sources for business functionality and information.

3.1.2.3 Business Alignment, Investment, and Metrics

The portfolio should support alignment and realignment of the automated process with business needs throughout the process life cycle. The portfolio supports traceability of automation projects to business motivation and associated investment decisions.

Once again BPM governance is not typically responsible for creating the portfolio, but instead ensuring its value through continued maintenance and integrity.

3.2 Governing the Lifecycle

For the purposes of governance categorization the BPM life-cycle is split into two major components, design time governance and operational governance. Governance of BPM at design time spans strategic analysis all the way to project and program management while operational governance is concerned with everything from the day-to-day monitoring of business processes all the way up to business activity monitoring for the benefit of the business performance improvement.

Conformity to the defined business process lifecycle is measured and enforced; non-compliant projects are required to comply or seek approval for variance.

Details of the requirements of the BPM lifecycle can be found in the Business Process Engineering Practitioner's Guide.

Figure 3-3 BPM Design-Time Governance



Business rules governance is also included in analysis and definition category. Rules should be centralized across the enterprise allowing business users to make changes without IT involvement, but still ensuring proper governance. Similarly, real-time monitoring of Key Performance Indicators (KPIs) forms the basis for continuous, proactive process improvement once the process is running in an operational environment, but the relevance of KPI's must be continuously reassessed to ensure they provide a basis for information that is useful to both the business and IT.

Design-time governance also includes business process change management (spanning analysis, definition and, and management in the diagram above) in which process changes are fully documented, modeled, and simulated to ensure expected behavior.

Change management is particularly important in the operational environment where the potential impact of a new process release must be assessed, not only for the users of the process, but also in terms of long running processes that may still be executing. The business process release procedure should include business justification, impact

analysis, testing, rollback procedure, and ultimately measurement of effectiveness against the original business case.

Figure 3–4 BPM Operational Governance



Infrastructure change management is similarly important in BPM due to the presence of long running business processes whose execution may span an infrastructure change. Good infrastructure change management procedures prevent unintended consequences from infrastructure changes. All affected parties should be notified well in advance of the proposed changes.

BPM infrastructure changes must only be allowed when strictly adhering to the defined policies. As with all other aspects of governance, metrics should be defined, collected, and compared with predicted benefits to ensure change management can effectively predict and meet goals.

3.3 Organization Optimization

The scope of organization governance covered by this framework is defined by the scope of organization concerns represented by the frameworks and methods of diagram in figure 1. The Process Engineering method describes key roles for successful BPM projects, while at the program level documents, such as the Roadmap and Maturity Model, describe executive level interactions. Fundamentally, the scope of organizational concerns within this framework is limited to new roles to support an effective engineering approach and those responsible for liaison between the business and IT.

There is no doubt that BPM can require broader organizational changes in the practice of business process engineering: especially so in the case of process redesign or re-engineering, but also to some extent in continuous improvement and other BPM scenarios. Just as business process redesign itself is beyond the scope of engineering method however, the impact to organizational structure from redesign is beyond the scope of this document. While still vitally important, this type of organizational change is unique and personal to every enterprise, so organizational change management may be found within the organization itself or through a suitable consulting engagement. The governance framework supports the inclusion of organizational change management (as we see from the organization portion of our governance model below), but does not provide an approach for this large and complex topic.

Figure 3–5 BPM Organization Governance



One of the most important organizational concerns for BPM governance is ensuring all the necessary roles required to support BPM are filled with appropriate levels of knowledge, experience, availability, and authority. BPM roles are defined elsewhere in the BPM ETS document set, but an example of a key role often neglected by enterprises embarking on a BPM program is the Process Owner. True business processes typically span multiple business units and without an overall owner line of business managers have little incentive to ensure enterprise-wide effectiveness of the process as it crosses organizational boundaries. Organizational deficiencies of this kind must be quickly identified and addressed by the governance body to ensure BPM success.

3.3.1 Empowered structures

Effective BPM requires executive sponsorship which means business and IT executives work together on BPM strategy. Ideally an executive officer should be dedicated to BPM while governance works towards achieving a consistent pattern of communication "closing the business-IT gap".

The Forrester report "BPM Has Become Mainstream" emphasizes the need for a "BPM Competency Center". The competency center (otherwise commonly known as a CoE) should be a cross-functional team that includes business and IT members; it may also be a virtual team, especially in smaller IT environment. The competency center provides broad support for BPM initiatives throughout the process lifecycle including reviews, guidance, and potentially skilled resources.

A Process Change Authority (or "review board") may be established with broad oversight, to ensure that process changes align with business strategy and do not adversely impact related processes and organizations.

3.3.2 Roles and Responsibilities

Key BPM roles are defined in the ITSO Business Process Engineering Practitioners Guide, but it is the role of governance to ensure these roles are adequately filled with appropriately skilled resources.

Required roles and responsibilities should be documented with details including skills and duties. Responsibility and accountability must also be checked using simple tools, such as a Responsibility Assignment Matrix (A sample responsibility assignment matrix can be found in Appendix C).

As stated already, a critical role for successful BPM is the Process Owner. Since true business processes span the enterprise, typically crossing numerous organizational boundaries, without an assigned owner no-one (besides the CEO) is likely to be accountable for the effectiveness of end-to-end processes.

3.3.3 Communication and Collaboration

A related concern for organizational governance, specific to BPM, is to ensure effective business and IT collaboration. Business and IT teams should work together to identify and implement process improvements, process/service intersections, and identification and selection of KPIs. To support this cooperation the organization should have cross-functional teams focused on optimizing process definitions and execution and dedicated business analysts liaising with process owners.

3.3.4 Education and Training

As a model-driven strategy, business and technical modeling skills are critical to BPM. The progression of business models from documentation (level 1), through analysis (level 2), and ultimately to execution (level 3), combined with the round-tripping through the continuous improvement loop requires skill and discipline.

The end user viewpoint of process change necessitates training for all impacted employees with continuous monitoring and on-going updates. A knowledge sharing program with coordinated cross-divisional learning and mentoring provides opportunities for skills updates while comprehensive enterprise-wide knowledge sharing may incorporate "social networking" and Enterprise 2.0 techniques.

3.4 Control Mechanisms

So far we have described the many elements of governance, now we'll look at the underpinning practices that tie them all together.

These control mechanisms might be managed by a centralized governance group (such as a CoE), but they should be practiced and used effectively by all members of BPM leadership.

3.4.1 Active Leadership, Alignment, and Strategic Planning

Active leadership is the term used to describe the deep level of involvement of business and IT management in BPM.

Once the BPM governance approach is established it must be enforced across the enterprise to ensure consistency and the effectiveness of program performance analysis. This is simply referred to as alignment.

Strategic planning is a practice that ensures an effective top-down, business driven approach to BPM. Within the BPM ETS series, strategic planning is primarily described in the practitioners guide to BPM roadmap planning which incorporates the concept of enterprise-wide assessments with measurements of BPM maturity and adoption.

3.4.2 Policies, Principles, Procedures, Tools and Infrastructure

While business processes are significantly influenced by business policies, manifesting as business rules, policies in the context of governance refer to the rules that are enforced across the enterprise to ensure the integrity and consistency of BPM practices.

Examples of BPM governance policies might include rules governing the flow of business process changes into production, such as, the authority and levels of testing required associated with type of process change. Within such a policy definition types of change are defined according to their scope and risk assessment. A sample change/test policy is outlined in Appendix D.

Principles are similar to policies, but are generally broader statements of intent. They are high-level statements of the needs for effective BPM governance practice. Some common examples of BPM governance principles are:

- **Executive sponsorship:** as a practice that cuts across organizational divisions and ultimately influences enterprise-wide value chains a BPM program must have executive-level sponsorship. Many other aspects of BPM require executive support including much of the rest of this list.

- **Business - IT cooperation:** BPM is a business initiative that requires substantial support from IT, so it is critical that business and IT establish an effective communication strategy.
- **Alignment with corporate strategy:** this enables value alignment in process selection, effective selection of performance indicators, and associated analytics.
- **Organization alignment:** to become a "process centric organization" (or even just a regular organization wanting to take full advantage of BPM) requires organizational adjustments.
- **Collaborative approach:** this is an organizational strategy spanning business process analysis, operational management, and the approach to process automation itself. Collaboration is typically enabled by techniques such as E2O and is implemented through technology infrastructure.
- **Traceability:** all changes must be traceable to their original business motivation. Ideally when a business strategy changes, processes supporting the obsolete motivations can be quickly identified.
- **Accountability for the end-to-end process:** this is a specific component of organizational alignment which typically requires the assignment of an owner to each high-level business process.
- **Authority and enforcement:** the BPM governance body must have the authority to enforce governance policies and ensure that its principles and procedures are applied.
- **Separation of concerns:** while both the business and technical aspects of an automated business process are contained within the same model, it is important to apply some mechanism to distinguish between them and avoid misunderstanding and misuse of modeling constructs between these domains.
- **Must not be seen as a silo would initiative:** BPM only realizes its greatest benefits from the automation of enterprise-wide value chains. While departments may contribute sub process implementations to a holistic business process model the automation of these departmental level processes serves no great purpose by itself.

These principles may be regarded simply as the general needs of any BPM program; however, it should be the role of the governance body, with its enterprise-wide visibility, to ensure these principles are applied.

Procedures are written, step-by-step instructions that perform an important task such as the packaging of a deployable business process application.

Tools and Infrastructure should, wherever possible, enforce policies, conform to principles, and apply and support governance procedures. At the same time these should not be so rigidly embedded into the tools and infrastructure such that they become an impediment to change or too rigid to adapt to new and unforeseen circumstances. Tools and infrastructure should support policies principles and procedures where ever practical, but must also be flexible enough to ensure that improvements to governance practices can be made when needed.

3.5 Best Practices for BPM governance

The following sections contain a brief description of some of the best practices for BPM governance gathered over time from real-world situations.

3.5.1 Ensure effective measurement

Consistent, effective measurement and reporting are key to enacting change and facing down corporate politics and the human tendency to resist change. Of course measurement is useless if it is being applied to the wrong things (in fact, measuring the wrong things can lead the bad decisions with far reaching impact), so selection of metrics is vital to effective measurement.

Effective governance measures should focus on exposing opportunities for ensuring alignment with corporate goals and objectives, reducing defects in process engineering, cost reduction, risk mitigation, security enhancement, business agility, etc. These categories should be prioritized so their measurements can be compared in a more objective fashion.

Organizational changes are typically the most difficult to implement, but over time these become more easily justified by consistent, objective measurements and are more readily accepted by the organization when credible analysis identifies benefits to individuals as well as the corporation.

Consider the following criteria when selecting business process metrics:

- Common financial measures such as cost-benefit analysis, Return on Investment (ROI), Total Cost of Ownership (TCO), direct corporate contribution, etc.
- Business and technical strategies supported
- A 360 degree view of the process lifecycle and the impact on all parties from business, IT, partners, and customers.
- Conformance to standards and practices (and the impact of circumventing them with exceptions and waivers) across the following categories:
 - Architecture and associated standards and principles
 - Policies: corporate, regulatory, and legal
 - Methods and procedures
- Success criteria, such as Critical Success Factors (CSFs), metrics from existing practices, such as Lean & Six Sigma disciplines, and existing Business Intelligence (BI) analytics.
- Risk assessment, contingency planning, and risk mitigation

There are numerous business strategies, frameworks, and techniques that provide structured approaches to business process measurement (some with the ultimate goal of business performance measurement and management). Among these is the Balanced Scorecard (Kaplan and Norton) which groups measures into four categories (spanning lagging and leading indicators):

- Financial: the shareholders' view
- Internal business: relating to the mission and vision of the enterprise
- Innovation and learning: necessary to ensure future value and viability
- Customer: how does the customer perceive us?

Similar sources of business process metrics and measurement approaches include SCOR (Supply-Chain Operations Reference), APQC (American Productivity and Quality Center), and many others.

Typically, business process metrics (and to some extent business performance indicators) can be decomposed into a set of process KPIs (Key Performance Indicators) and collected automatically from the runtime process instances; however, additional

information is commonly required to support analysis at this level. While automated process instrumentation can make a significant contribution to business process metrics, it cannot be expected to provide all the necessary data for complete and effective analysis.

3.5.2 Take a pragmatic approach

This best practice might also be referred to as "pick your battles". The key message here is that governance should not become a dogma: governance efforts should focus on highest returns and allow exceptions for low value issues.

3.5.3 Create an engineering support team

Some governance requirements impose an overhead on BPM projects and potentially additional skills too. Some relief can be provided to project teams by creating a central engineering group to assist with procedural concerns, engineering practices, and remediation of defective designs.

This activity of course needs to be carefully managed in order to allocate resources where they are most needed and avoid merely giving in to under resourced projects.

For an effective centralized engineering support team, the governance team must specify exactly what is to be supported and how its resources are assigned.

3.5.4 All beneficiaries contribute to funding

While most companies are organized, and thus funded, in vertical silos, governance is a horizontal, crosscutting concern for the benefit of the entire enterprise. This typically results in challenges for funding the governance body. When a well-intentioned department or divisional initiates the governance activity it becomes difficult to justify assignment of time and resources to external projects, however, governance cannot be fully effective when constrained in this way; worse still, other departments may establish their own competing governance teams.

Clearly, governance needs an executive level mandate, but funding ideally comes from the budgets of all organizational units that ultimately benefit. By collecting governance funding in the form of a tax all contributors become motivated to use the facilities provided: this contrasts with the corporate funded governance body which is more likely to be ignored.

3.5.5 Establish a review board

Similar to the Architecture Review Board of other governance practices (e.g. SOA), BPM governance should establish a board to review the business process models and associated implementation strategies before getting approval for production release. Such a Business Process Review Board would be responsible to ensure that the modeling standards have been upheld and the principles of process engineering and governance have been applied.

3.5.6 Ensure single points of contact for responsibility and accountability

Single points of responsibility and accountability must be established for all major activities. While responsibility and accountability may sometimes be assigned to a single person it is important to ensure the organization is clear about where these assignments lie. This may seem like an obvious organizational consideration, but since business processes typically span organizational divisions it is rarely obvious who is responsible/accountable for BPM program activities.

The concepts of roles and responsibilities are expanded further in [Appendix C](#).

3.6 Establishing a COE

The success of a BPM program commonly lies in the hands of a centralized BPM leadership team, typically called a BPM Centre of Excellence (COE). This COE leverages cross functional teams for various disciplines from business architecture to system infrastructure.

As mentioned in the earlier section on organization optimization, every organization is different. This of course impacts the creation of a Centre of Excellence, its scope, and its place in the organization. There is no one-size-fits-all definition of a COE. Instead we need to take the approach of specifying all the things a COE could do, identifying the relevant organization units, and figure out on a case-by-case basis, what is most needed and where within the organization the appropriate skills are available.

Fundamentally there are two major concerns of a COE:

- Ensuring that the business strategies toward process improvement are followed.
- Ensuring that the BPM methodologies, operational process discipline, and supporting technology are consistently applied.

The primary responsibility of the COE is to provide support to the organization in the form of resources, expertise, and governance oversight to enable successful execution of BPM initiatives. Another major responsibility of the COE is to define and maintain the overall BPM approach, ensuring ongoing improvements to methods and practices as well as consistency in delivery.

One of the COE's greatest challenges arises from the need of BPM to operate at the value chain level. This necessarily means crossing both organizational and technical boundaries; so in order to achieve the greatest benefits from BPM, the COE must be able to exert influence across the enterprise.

Experience has shown that the selection of a "Process Champion" is a significant factor in the success of the COE and the corresponding BPM program. The COE can be built around this person regardless of whether he/she is based in business or IT.

Another factor in identifying the leadership for the BPM CoE is concerned with the type of BPM activity. There are a number of different approaches to improving accompanies business processes and these should be taken into account when identifying the resources and skills needed to staff this team. Some of the major types or motivations for BPM programs (and the corresponding resourcing considerations) are listed here:

- **Redesign:** this category includes business process re-engineering (BPR) and typically involves extensive analysis of existing processes followed by major redesign efforts that should substantially improve business processes. This type of BPM effort invariably has a significant impact on organization structures and job descriptions and commonly involves the replacement of human activities with computerized/automated functions. This type of effort must be led by experienced business process consultants whether inside or sourced externally. Expertise in organizational change and close liaison with human resources is also required.
- **Automation:** automation is often seen in conjunction with process redesign, however, taken by itself automation is primarily concerned with computerized control of business process flow and the associated exchange of information between process activities regardless of whether human activities are being computerized or not. There are various approaches to automation including the

implementation and/or integration of packaged applications (CRM, ERP, etc.) along with specialized internal custom applications. In this sense automation requires more technical skills, in particular technical architecture, which should be found in the EA and IT groups.

- **Improvement:** this is the case of continuous incremental improvement to business processes. Typically, but not necessarily, following automation, continuous process improvement follows the general cycle of business analysis, refinement, technical analysis and design, implementation, as described in the Oracle business process engineering methodology. Process improvement may also arise from lean or six Sigma activities. In any case improvement involves a broad spectrum of participants with a business process owner/manager assigned according to the level of the process be it value chains at the enterprise level or departmental subprocesses.
- **Control:** the focus of the BPM program may simply arise from the need to make business processes more transparent and manageable rather than one of the previously mentioned approaches to process change. The need for process control might arise from transformation efforts concerned with making the organization process centric or in response to regulatory demands for transparency such as SOX. This is very much a business led activity; however, it is most effectively implemented through computerization with BPMS and as such requires significant support from IT.

A common problem in establishing COE is that it is often ignored if corporate politics is allowed to get in the way or if the group does not have the right level of executive support. A couple of powerful ways to get itself accepted across the various business silos include providing skilled resources to support BPM activities and to measure and publish tangible benefits achieved.

Ideally the COE is seen as a business function that reports to the COE and becomes both the governance body and an enabler to direct the organization towards standardization and efficiency in its operations, procedures, and practices.

3.7 BPM and SOA Governance

SOA has become a widely accepted IT strategy for enabling business agility. By promoting modularity and encapsulation, SOA not only provide significant flexibility and other benefits for addressing business demands, but also provides an ideal foundation for BPM. While process centricity is seen as the latest evolutionary development for corporations, BPM provides a corresponding evolution in IT strategy.

Organizations experienced in SOA have already realized the need for SOA governance: left unchecked, SOA assets turn into service sprawl and a lack of consistent engineering discipline impacts interoperability. SOA should have already established the importance enterprise-wide governance of a combined business and IT strategy.

Many of the responsibilities of SOA governance overlap with BPM governance, such as:

- Identifying the decision-making processes and accountable decision-makers
- "Reviewing service/process designs to ensure they are optimized to achieve the benefits of the associated discipline
- Documenting and managing policies for implementing services and processes
- Analyzing the return on investment (ROI) for service assets and business processes

Despite this apparent overlap, SOA and BPM governance are completely complimentary. The BPM program should build on the foundation provided by SOA in governance as much as it does in infrastructure. In many areas BPM governance should simply build on existing SOA governance, especially where the challenges of cross-enterprise activities and organizational change have been confronted.

One important difference between that must be remembered is that SOA is an IT strategy while BPM is fundamentally a business strategy. This leads to important distinctions in areas such as responsibilities for service versus process definition; while both may be seen as model driven strategies the skills required for business process modeling are uniquely focused towards the business.

As with all aspects of the ITSO Enterprise Technology Strategies, BPM governance is built on a common foundation with the express purpose of enabling integration/composition with other related technology strategy governance practices. This has been shown in the foregoing section describing the ITSO Unified Governance Framework.

Summary

In a nutshell BPM Governance is an essential program overlay activity that enforces standards, engineering practices, organization structures, roles and responsibilities, in order to measure, manage, and improve the effectiveness of BPM itself. It ensures that your BPM initiative is aligned to your corporate strategies and objectives and that BPM delivers measurable value.

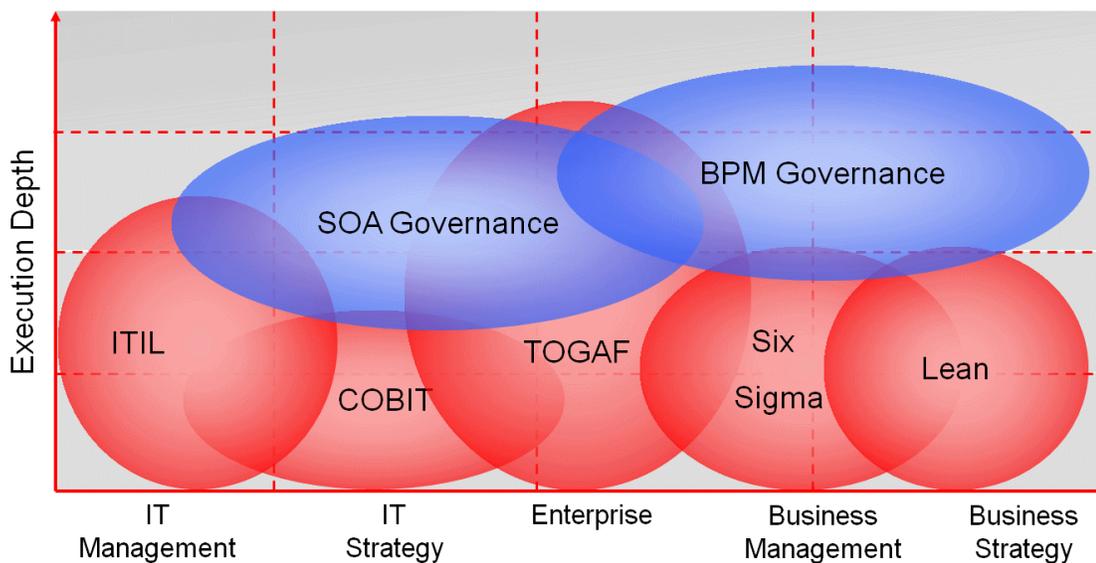


Relationship to Other Governance Approaches

A number of related governance frameworks were mentioned earlier in this document. The diagram below was used to represent these frameworks within a notional scale indicating strategic significance and level of execution detail.

SOA governance is described in more detail in the ITSO Framework for SOA Governance document along with a broader description of ITIL, COBIT, and TOGAF and their relationships. An outline of Six Sigma and Lean is provided below.

Figure A-1 *Intersection with other Governance Frameworks*



TOGAF (The Open Group Architecture Framework) is an Enterprise Architecture framework providing a comprehensive approach for planning, design, implementation, and governance of within an IT environment.

COBIT (Control Objectives for Information and related Technology) is a governance framework created by the Information Systems Audit and Control Association (ISACA). COBIT provides a set of tools to support management of requirements, technical issues, and business risks.

ITIL (The Information Technology Infrastructure Library) is a set of concepts and practices for IT management, development, and operations.

A.1 Six Sigma and Lean

Six Sigma evolved from quality initiatives (TQM, etc.) and merged with process re-engineering efforts in the '90s. It focuses on a set of statistical techniques for measuring efficiency of existing, well established processes with the objective of making process improvements.

Six Sigma generally defines three types of change efforts

- Process management which is defined more narrowly than in the more general sense of BPM focusing on the linkage between process and strategy in order to prioritize process change. This aspect of Six Sigma relates to the business architecture efforts in the strategic analysis phase of the Oracle BPM Engineering Method.
- Process improvement employs statistical techniques to incrementally improve process efficiency and quality. This category of change effort is the primary focus of Six Sigma which techniques for organizing teams for process improvement projects, applying statistical techniques to measure process effectiveness and quality, and subsequent analysis of results.
- Process redesign refers to the more substantial process changes of the type that may be expected from BPR/BRE.

At the heart of Six Sigma is a statistical analysis technique designed to identify opportunities for process improvements by connecting processes to quality measures. More broadly it is a process improvement methodology and governance discipline targeted toward departmental process teams.

While Six Sigma does recommend that measures should be related to strategic goals, individual projects typically focus on fine-grained sub-processes and business activities using only a small set of targeted measures. At this level Six Sigma projects can tackle a handful of processes for improvement in relatively short time spans (e.g. three processes every six months), but it is not a suitable strategy for core business processes involving end-to-end value chains. That said, it is a good introduction to the discipline of process improvement governance, albeit within departmental scope.

Lean originated in the Japanese Toyota production system in the late 1970's and was popularized in the US in the 1990's. Today, Lean and Six Sigma are commonly combined and simply referred to as "Lean Six Sigma" practice. Like Six Sigma, Lean is a method for process improvement founded in statistical techniques. Unlike Six Sigma however, Lean defines methods for both departmental level processes, focusing on elimination of waste, and enterprise level value chain process improvement. In addition Lean not only offers process improvement, but also provides strategies for process redesign.

In general, the various methods associated with Six Sigma and Lean focus on analytical techniques supporting process improvement and process change. The Oracle BPM Approach is largely concerned with the prerequisite steps of planning for successful adoption of BPM, but the business process improvement practices of Six Sigma and Lean certainly fit within the scope of the frameworks and methods of the Oracle BPM Approach alongside process engineering, modeling, etc. Most importantly, it is likely that Lean and Six Sigma programs are already in place, in which case, BPM should be seen as a complimentary strategy: BPM's monitoring, control, and transparency are potentially significant benefits to Lean / Six Sigma, while the BPM program should benefit from established business process governance.

Governing Inputs and Outputs

Governance is very much concerned with ensuring that human processes flow effectively between teams and life-cycle activities. One way in which this effectiveness can be monitored is to check the timeliness and quality of the assets that are consumed and produced at every stage. A tabular list, such as the sample provided below, supports this monitoring effort by cataloguing the inputs and outputs of each major activity and identifying the governance function.

In this example below a series of governance functions, along with inputs, outputs, and preconditions, have been identified for each of the activities in the business process engineering life-cycle.

Table B-1 Process Engineering Inputs and Outputs

Engineering Lifecycle Activity	Governance Function	Inputs	Outputs	Preconditions
Strategic Analysis & Selection	Consult Business Motivation Maps to Support Business Process Selection	Business Drivers, Strategy Maps, Motivation Model, Capabilities Map, Functional Model	Profiles for potential business process projects are created and categorized/prioritized One or more of these project profiles is approved	Business, Strategy and Planning Maps are already loaded into repository
Discovery & Definition	Analyze current service use	Existing portfolio of services and their relationships to processes		Existing portfolio of services and their relationships to processes are already loaded into repository
Refinement	Consult service portfolio	Process Context, process model, process detail, simulation model, runtime performance data		Existing Process Context, process model, process detail, simulation model, runtime performance data are already loaded into repository

Table B-1 Process Engineering Inputs and Outputs

Engineering Lifecycle Activity	Governance Function	Inputs	Outputs	Preconditions
Technical Analysis & Design	Specify services to be reused	Refined process model	List of prescribed assets to be used are related to project profile(s)	Existing services are already loaded in repository
	Make new service/version requests		New service requests are created	Template for service requests has been created in repository
Project Definition	Approve funding for new service/version requests, and prescribe to projects	New service/version requests	New service requests are prescribed to project profiles in repository	
Software / Service Engineering	Produce new service/versions	Project profile with new service/version requests	New service/version	Standard, corporate-approved design-time policies and terms of use are already loaded into repository
	Retire old service/versions		Notification	
	Capture new or versioned services into portfolio		Design-time Policy and Terms of Use Attachments	Standard, corporate-approved OWSM security policies are already accessible from BPM tools
	Notify subscribers of changes		Validation of design-time policy	
	Optionally apply design time policy, and standard terms of use		Security Policy Attachments	
	Optionally apply security policy			
Business Process Application Composition	Reuse assets in new BPM compositions	Existing and new service interfaces (business services, human task, decision services)	Executable process composite	Existing services are already loaded in repository
	Capture process composite into portfolio			Service requests have been fulfilled and captured into repository

Table B-1 Process Engineering Inputs and Outputs

Engineering Lifecycle Activity	Governance Function	Inputs	Outputs	Preconditions
Testing (SIT)	Approve and promote composite to test	Composite business process application, test plan & business requirements	Approval to test composite	
	[Deploy to test and]		[Deployed composite to test]	
	Capture new test endpoints		Test endpoints	
	Publish new service endpoints to test registry		Test endpoints	
	[Test]		Test results, remediation recommendations - optional	
	Optional: Add Test artifacts and results to composites in the portfolio			
Deployment Planning	Approve test results; promote composite to production or staging	Executable components, business requirements (SLA's etc.), Standard Terms of Use	Approval to stage	
	[Deploy]		[Deployed composite to staging or production]	
	Capture deployed assets/endpoints into portfolio		Staging/production endpoints	
	Apply runtime policy for Security and SLAs		Runtime policy attachments	
			Quality of service thresholds set for alerting based on negotiated terms of use	
Approval (UAT)	Approve and "Register" production processes in portfolio	Deployed process with runtime policies attached	Approval to release into production	

Table B-1 Process Engineering Inputs and Outputs

Engineering Lifecycle Activity	Governance Function	Inputs	Outputs	Preconditions
Commissioning	Publish services into production registry	Deployed process with runtime policies attached	Production Endpoints	
		Production endpoints loaded		
Monitoring & Analysis (inc. OA&M)	Monitor and manage SLAs, quality of service and security	Negotiated Terms of Use	Quality of service metrics surface in Management Dashboard	
	Post Quality of Service scorecard (closed loop)	Runtime Policy Attachments	Frequency of use statistics in Management Pack	
		Quality of Service Thresholds	Quality of Service Scorecard posted to registry and/or repository	
Refinement	Review and retire processes as needed, with advance notification	Quality of Service, reuse, ratings & reviews, and frequency of use information	Change in Process active status	
			Subscriber notification	
			Optional deletion from repository and repository (manual)	

Responsibility Assignment Matrix

A Responsibility Assignment Matrix, also known as "RACI matrix" (see below) or Linear Responsibility Chart (LRC), describes the involvement, by various roles, in completing tasks or deliverables for a project or program. It is especially useful in clarifying roles and responsibilities in cross-functional/departmental projects as is invariably the in a business process engineering scenario. A Responsibility Assignment Matrix is a useful tool for governance to ensure all tasks are receiving appropriate attention from the organization and responsibilities for project tasks are effectively communicated.

RACI is an acronym derived from the four key levels of involvement: Responsible, Accountable, Consulted, and Informed. A variation on the original RACI theme is "RASCI" which distinguishes a "Supporting" level of involvement and enables the assignment of "Responsible" to a single participant (identifying individual participants for Responsible and Accountable obligations is commonly a governance requirement or principle).

These involvement levels (or participation types) are described as follows:

Responsible: Those who are assigned the work to achieve the task. There is typically one role with a participation type of Responsible, while others can be delegated to assist in the work (see "Supporting"). The Responsible participant must ensure that task is performed to the satisfaction of the Approver (see "Accountable").

Accountable: Also known as Approver or final Approving authority. Those who are ultimately accountable for the correct and thorough completion of the deliverable or task, and the one to whom Responsible is accountable. Typically the Accountable participant must sign off (Approve/ Authorize) the work that Responsible participant delivers. There must be only one Accountable specified for each task or deliverable.

Supporting: Resources allocated to (or by) the Responsible participant. Unlike Consulted, who may provide input to the task, the Supporting participant performs work to assist in completion of the task or deliverable.

Consulted: Those who participate to provide information, guidance, and reviews (e.g. subject matter experts or enterprise architects). Unlike Informed (below), communication with consulted participants is bi-directional.

Informed: Those who are kept up-to-date on progress, often only on completion of the task or deliverable. Formal communication with this participant is just one-way.

In the RACI (or RASCI) matrix, participation types are typically aligned with roles: individual roles however, may have multiple actors. It is important therefore to ensure that the roles aligned with responsible and accountable participation types are assigned to individual actors.

In the example RASCI matrix below, the involvement of process engineering participants is shown for each activity in the engineering life-cycle using the "RASCI" initial letters for role assignments. The matrix is further extended using graphical utilization indicators:

 minimal involvement

 25% utilization

 50% utilization

 75% utilization

 Full-time involvement

Figure C-1 Example RASCI Matrix

Engineering Lifecycle Phase	Process Engineering Participants												
	Business Participants				IT Participants						Contributors/Advisors		
	Business Leadership	Process Owner	End User	Process Analyst	Documentation & Training	Process Architect	Process Developer	Software Developer	QA	IT Ops	Enterprise Architect	Security Architect	Data Architect
Strategic Analysis & Selection	○	●		●							○		
	C	A		R							S		
Discovery & Definition	○	●	○	●		○							
	I	A	C	R		I							
Refinement	◐	●	○	●		○							
	C	A	C	R		S							
Technical Analysis & Design		○				●			○		◐	○	○
		I				AR			I		S	C	C
Business Process Application Composition		○				◐	●	●					
		I				A	R	S					
Testing (SIT)		○				◐	●	●	●				
		I				A	S	S	R				
Deployment Planning		○			●	●	◐	◐	○	◐	○	○	○
		I			S	AR	S	S	I	C	C	C	C
Approval (UAT)		○	●	●		○			●	○			
		R	S	C		I			A	S			
Commissioning		○	○			◐	◐	○		●			
		I	I			S	S	S		RA			
Monitoring & Analysis (inc. OA&M)	○	●		●						●			
	I	R		C						A			

Deployment Oversight

With the great ease of propagating process changes into live environments enabled by a modern BPMS it is important to govern what goes into production. An important part of change management and prerequisite to taking control of production deployment is to establish and communicate the levels of testing and assurance needed for each type of change that may be made.

The chart below is a high-level matrix of the levels of testing that might be required for various types of changes that can be made to a business process with a BPM system. This is not intended to be an exhaustive list of change types, nor is it intended to be a definitive testing recommendation; it is intended merely an illustration of the considerations needed to govern business process deployment.

Figure D-1 Test Requirements

Type of change	Change detail	Simulation	Unit	Regression	Integration	System	Collaboration	Interaction	UAT	Performance	Operational	Availability
Roles												
	Addition of end user participants	✓								✓		
	Addition of new swim-lanes	✓	✓	✓	✓	✓	✓					
Business Rules												
	New business rule chain	✓										
	Add new arguments	✓										
	Changing threshold values	✓										
Model and flow												
	Further automation of existing BP	✓	✓	✓	✓	✓	✓	✓	✓			
	Creation of new BP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Activities												
	Addition of service task	✓	✓	✓	✓	✓	✓	✓	✓			
	Human workflow	✓	✓	✓	✓	✓	✓	✓	✓			
Events												
	Addition of Timers	✓	✓	✓	✓	✓		✓				
	Business Exceptions	✓	✓	✓	✓	✓		✓	✓			
	System errors	✓	✓	✓	✓	✓		✓				

Further Reading

The *IT Strategies From Oracle* series contains a number of documents that offer insight and guidance on many aspects of technology. In particular, the following related practitioner guides may be of interest:

Business Process Engineering - Describes an approach for delivering projects in a BPM environment. It identifies the unique enterprise-wide challenges faced by enterprises adopting BPM and provides a framework to remove the hurdles and improve the efficiency of the BPM initiative.

Creating a BPM Roadmap - Provides an approach for developing a long-term roadmap for BPM adoption. Supported by BPM maturity assessment and process selection tools, the BPM roadmap identifies corrective actions and integrates program and project level initiatives for maximum effectiveness.

Refer to the *ORA Glossary* document for descriptions of key terms.

In addition, the following materials and sources of information relevant to SOA Governance may be useful:

A Framework for SOA Governance - A complimentary guide for SOA governance.

