Balancing the Outsourcing Equation

A Blueprint on how to obtain the benefits of outsourcing without the risks.

Executive Summary

This paper explores the reasons why outsourcing of business application development often times does not deliver the promised cost savings and in fact, frequently results in final products that are grossly over budget, delivered late and having missing or unusable features.

Some of the root causes explored include:

- Business improvement projects losing sight of business objectives and becoming “IT projects”
- Requirements being incrementally adjusted so they “fit” a desired solution or package instead of holding true to the business need
- Lower headline resource costs masking issues that surface later as expensive rework

In addition, this paper offers a proven approach to eliminate many of these issues using a “Blueprint” that consists of 4 key components – process, standards, practices and the use of modern requirements definition and management technology that alleviates many of the issues that sabotage these projects right from the start.

Balancing the Outsourcing Equation

Over the years, application delivery and enhancement projects have increasingly involved outsourcing various aspects of specification, development and testing to third parties to the point where this is now the predominant model. There are three main drivers for this: business focus, technical expertise and cost reduction. As a customer, you want to focus your resources on your business, not IT; by using third parties you can harness the experience and skills of specialists in particular technologies and products; finally you can benefit from the lower resource costs typically available, particularly when using off-shore suppliers.

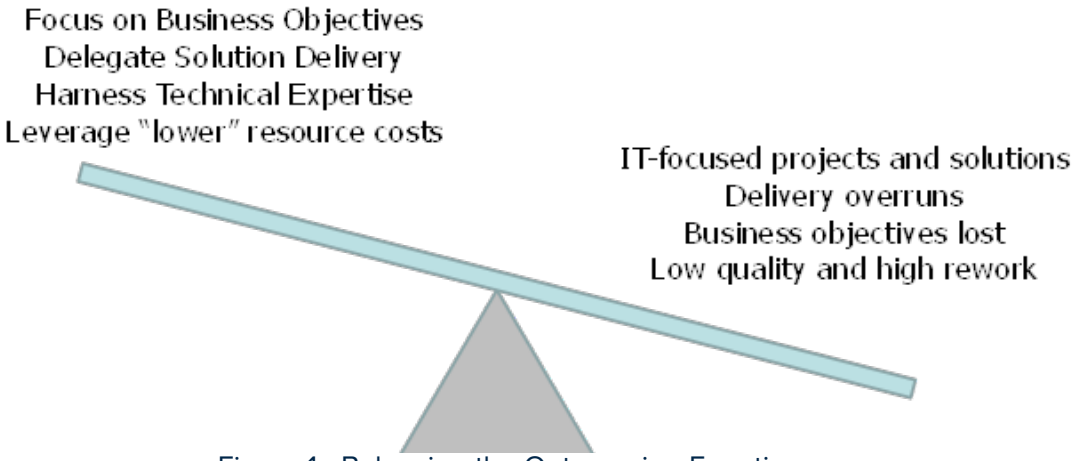


Figure 1 - Balancing the Outsourcing Equation

But there are downsides too: business improvement projects quickly become “IT projects”, losing sight of the business objectives or the business implications of changes to existing systems; requirements get adjusted to “fit” the solution that is most simple to deliver or aligns best with the selected package; and headline lower resource costs often mask quality problems with consequent high amounts of rework so that the underlying cost benefits are not what they seem.

What is needed is a way of obtaining the benefits of outsourcing without incurring the downsides. This paper summarizes an approach to achieving this balance through the careful definition and management of the outsourced contracts.

Solution Delivery Activities

Solution delivery is a complex process with many moving parts and multiple opportunities for outsourcing.

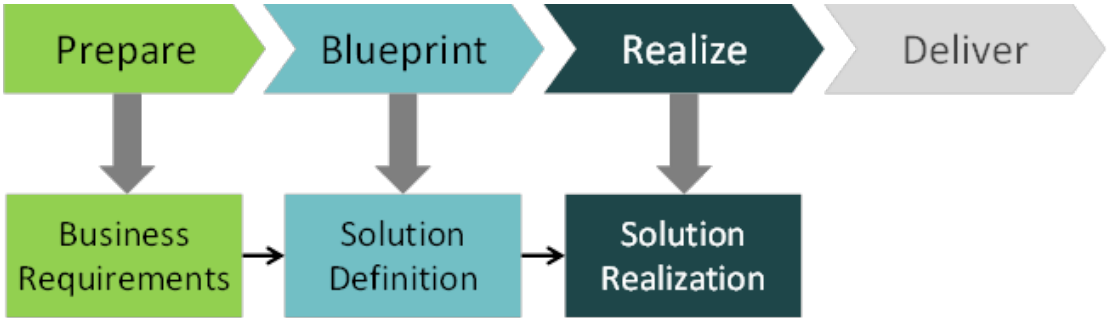


Figure 2 - Solution Delivery Activities

Figure 2 provides a high-level summary of typical solution delivery activities and the principal deliverables from each.

These activities exist regardless of the solution delivery methodology in use. They can be applied to waterfall, iterative and agile approaches. In a waterfall approach they correspond to the high-level project phases. In more iterative approaches they can be repeated within each iteration phase, or even within each iteration.

In the Prepare activity the emphasis is on business objectives, requirements capture and elaboration, scoping of the problem, resource planning, outsourcing planning and so forth. The requirements provide the basis for both solution definition and final acceptance.

The Blueprinting activity is responsible for defining a solution to the business requirements. The solution definition typically involves business process changes, architecture and application specifications and additional or refined functional and non-functional requirements. The solution definition is the basis for solution development and testing.

During the Realization activity, the solution is developed, tested and accepted. In the course of this activity the solution definition (and its associated requirements) will often change. Finally, the Delivery activity addresses business readiness and moving the solution into a live environment.

Outsourcing opportunities exist at both the solution definition and realization stages, and may involve a single outsourced supplier or multiple suppliers. The essence of successful outsourcing is that both parties, the customer and the supplier, are working to a common goal, have a common view of the requirements, an agreed solution to those requirements, and an approach to develop and test according to those requirements.

The central element here is the solution definition. It is the key output of the blueprinting activity and the basis on which the solution is actually developed, tested, and deployed. While the commercial aspects of the

outsourcing contracts are generally well understood, the details of the deliverables and the processes for producing those deliverables are often overlooked, unclear or missing. This means that the customer and the supplier are working to different views of the project's objectives even before it begins, which is a recipe for budget and schedule overruns.

The Customer-Supplier Gap

The objective of blueprinting is to create a solution definition which meets the business requirements, is

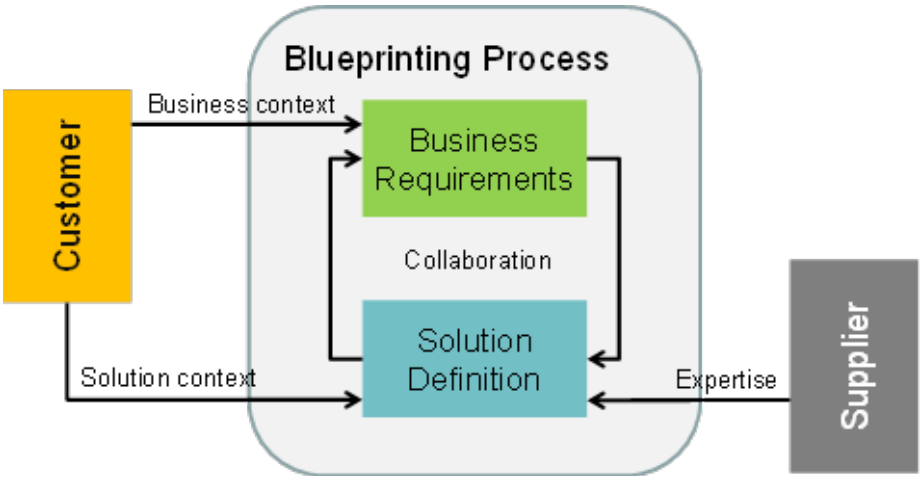


Figure 3 - The Blueprinting Process

architecturally compliant with any wider solution context (business and application architectures), and is realizable with the selected technologies or products (if any). This is a highly collaborative process between the customer, who defines the business and solution context, and the supplier who provides expertise in the target technologies and products.

A number of problems typically arise in this process leading to solution definition which does not meet the customer needs and is difficult to implement by any other supplier than the one who produced it.

- Incomplete Business Context – business objectives and business process requirements are not sufficiently formalized leaving the solution definition without a rigorous context. It is then difficult to determine whether the business requirements are being addressed or not, or to establish clear traceability between the proposed solution and the business requirement.

- Lack of Visualization – lists or spreadsheets of textual requirements statements are difficult to review and validate for most stakeholders. People operate best with visual forms and diagrams where they can understand the business and the solution graphically.

- No Common Language – many suppliers operate using their own solution definition processes and deliverables which are unintelligible to the customer, but the customer has to review and agree them, and other suppliers (potentially) have to implement them. What is needed is a standardized common language for defining and structuring solution definitions and business requirements that is understandable by all parties.

- Supplier lock-in – by keeping solution definitions opaque or incomplete, blueprinting suppliers can make it difficult for other suppliers to successfully bid for the solution realization activity. This means customers become locked-in resulting in less competitive solution realization contracts.

- Consistency and Completeness – while visualizations are best for gaining understanding of the big picture, the detailed textual rules and requirements are also important and need to be checked for detailed consistency and completeness. People cannot manually check that all the details are covered and consistent – they need some form of automated traceability support.

- Unstructured Complexity – large projects have many moving parts are prone to produce large volumes of requirements, processes, features and functions, with little structure. This makes it difficult to review and understand the content, but also difficult to define priorities as the dependencies between the elements are not clearly articulated. Layering and structure are needed to organize and manage the complexity.

- Thick Documents and Fragmented Reviews – no one reads large documents. While they provide a certain gravitas to a specification, and can be useful as a formal baseline or snapshot of already-agreed detail, they are not the right vehicle for actually reviewing and agreeing that detail in the first place. Everyone makes their own comments on a document, they can't see each other's comments, and the comments then have to be synthesized into one central place. Lighter weight, on-line approaches to reviews and comments are needed, with document production the end result.

- Distributed Communication – stakeholders are typically busy, mobile people. Getting everyone in the same room at the same time can be problematic, particularly if they are in different locations. This means it can be difficult to get agreement between stakeholders and laborious to share and capture comments, opinions and decisions. Often key requirements or decisions are made via email and then have to be factored in as additional work. More collaborative social communication techniques are needed where stakeholders can discuss topics and review comments directly against the requirements and specifications themselves.

- Information Management – on medium to large projects the number of documents can grow large, and the number of versions even larger, as changes are made and review comments incorporated. A single, common repository for all requirements and solution definition information is needed that can act as a "single source of truth".

- The Myth of Fixed Requirements – defining a solution to a set of requirements is an iterative process that usually leads to change on both sides. For example, often requirements will change when detailed information about potential solutions arises that were unknown originally. A successful blueprinting process allows both requirements and solution definition to evolve in a synchronized fashion. Change control is key,

not frozen requirements.

Delivery Management Gaps

Often, solution definitions comprise many features and may span multiple business areas. In these cases, realizing the solution usually involves some form of feature prioritization with a series or roadmap of releases.

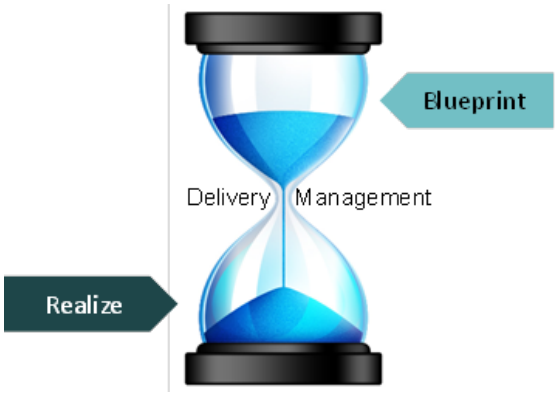


Figure 4 - The Delivery Management

This delivery management dimension can be thought of as a control on throughput between the solution definition and its realization as characterised by the hour-glass in Figure 4.

Notwithstanding the difficulties of producing a good quality solution definition, implementing or realizing that definition introduces further problems.

- Multi-party Communication – many of the communication difficulties occurring during blueprinting are exacerbated during solution realization. Whereas blueprinting supplier staff are often in the same time zone and have good multi-language skills, during realization it is common for suppliers to be in different time zones and have reduced multi-language skills. Further, the number of suppliers involved often increases (for example to cover the realization of different business areas, and to separate development from testing). This situation emphasises the importance of a centralized repository of requirements and specifications accessible by all parties, and the use of visual forms to help communicate that information.

- IT Priorities Dominate – solution realization is one step removed from the business requirements. Without business-driven prioritisation linked in to the solution definition it is a frequent occurrence that delivery priorities become based on what makes sense within IT rather than what makes sense from an end-to-end business perspective. This in turn leads to slower “time to value” for the business as features are delivered in the wrong order and are not joined-up. To resolve this, traceability is needed back to the business requirements, the requirements need to be structured and a business objectives prioritization scheme must be applied.

- Lack of Visibility of Business Value Delivery Status – a lack of business requirements traceability in the solution means that it is difficult for the customer to understand the status of solution delivery in business

terms. Supplier status reports talk of functions and features, but the customer is interested in business value. This mismatch can then lead to further miscommunication on priorities as the customer understanding and the supplier understanding of delivery status are different.

- Life-Cycle Impact Analysis – changes to business requirements may occur at any time. Because the relationship between the requirements, the solution definition and the solution realization is not centralized or fine-grained, many projects struggle to quantify the impact of an up-stream change. This leads to changes to requirements or scope being agreed without a full understanding of the dependencies of that change. To ameliorate this problem it is important to have full delivery-lifecycle traceability. This allows a potential business change to be mapped to a solution definition change and in turn to a solution development and test impact.

- Life-Cycle Change Management – good version and configuration management of the solution definition

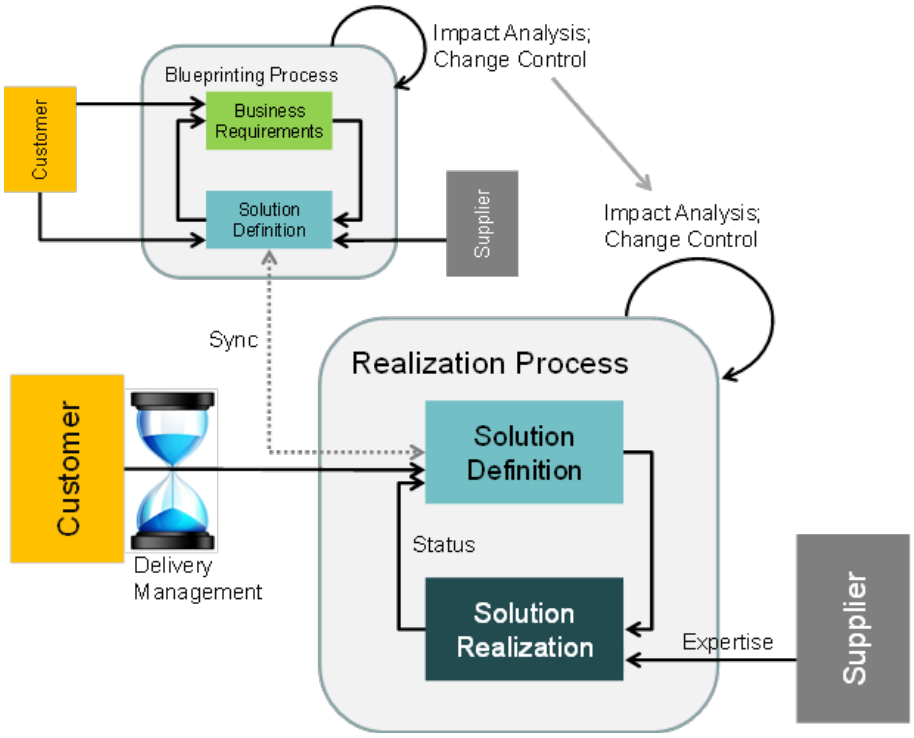


Figure 5 - Delivery Management & Change Control

and realization is important within the realization activity, but is also needed back to the business

requirements. Once the impact of a business requirements change has been understood and approved, the change needs to be implemented and this requires the specification of the change to be propagated across activity areas and across outsourcing suppliers and environments.

Bridging the Gaps - The Requirements Management Office (RMO)

The customer-supplier gaps and delivery management gaps identified above can be bridged by the right combination of tooling, processes and standards within your organisation. We call this the Requirements Management Office (RMO) and it comprises the following elements:

- Blueprint – purpose-built Requirements software providing a centralised repository with leading-edge definition, management and collaboration capabilities, and application-lifecycle management support. This establishes a "single source of truth" for all stakeholders.
- Structured Requirements Standards – IIBA[1] BABOK[2] compliant requirements and solution definition standards and associated traceability. These standards provide a consistent set of artifact types, properties, relationships and organization, enabling efficient team working, communication, collaboration and scalability.
- Application Lifecycle Management (ALM) policies – best practice standards for the integration of specification, development and testing aspects of application artifacts and tooling
- Requirements Governance – the required organisational structure, roles and associated processes and reporting standards for requirements and solution definition, change management and delivery management.

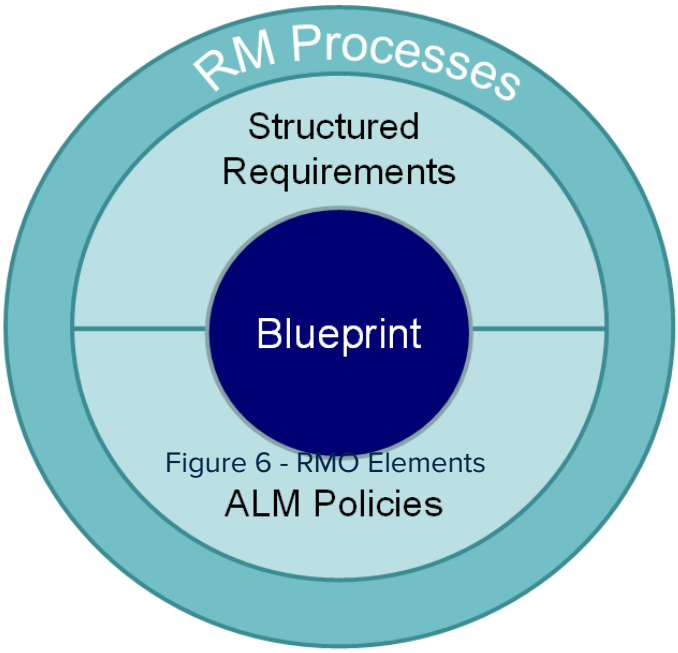


Figure 6 - RMO Elements

[1] International Institute of Busienss Analysis (IIBA)

[2] Busienss Analysis Body of Knowledge (BABOK)

Blueprint

The Blueprint repository provides a single source of truth for all stakeholders with an emphasis on visual

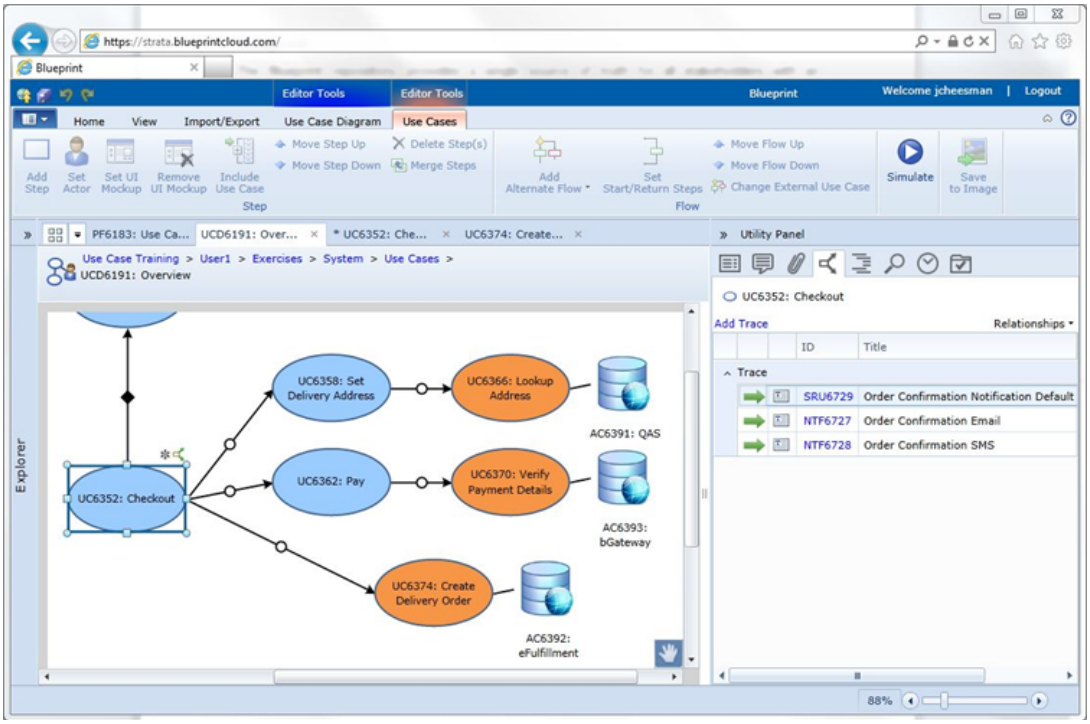


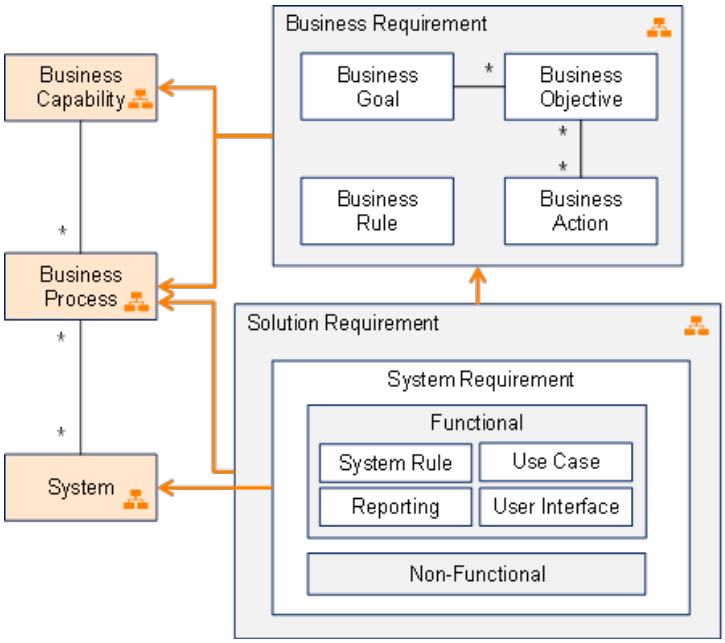
Figure 7 - Blueprint visualisation of structured requirements and traceability

specification to facilitate communication and avoid specification gaps. For example, Figure 7 shows a screenshot from Blueprint with high-level system functionality and interfaces depicted as a use case diagram alongside traceability links from one use case to system rules and notifications.

Standards and Policies

While Blueprint provides the underlying capability, every project and program needs a set of standards, structures and policies on top, to ensure consistent usage. These standards include such things as a defined set of requirements types and a clear traceability policy to which governance can be applied. Figure 8 depicts an example set of requirements types and an associated traceability policy. It is the role of the RMO to define, manage and oversee consistent application of such standards and policies, both within the analysis and specification activities and across the application lifecycle.

Figure 8 - Example Requirements Standards and Traceability Policies



Requirements Governance and Dashboards

In addition to the ownership and management of requirements standards and tooling, the RMO is responsible for defining and administering the appropriate processes needed to support the requirements lifecycle. This

Figure 9 - Requirements Lifecycle Status Summary

typically includes the definition of standardized reporting on topics such as requirements quality, lifecycle status and solution delivery. Summary reports can then be extracted to provide a high-level dashboard for the state of the project portfolio.

Figure 9 shows an example of a requirements lifecycle status report for a set of 200 requirements, showing how many requirements are in any given state.

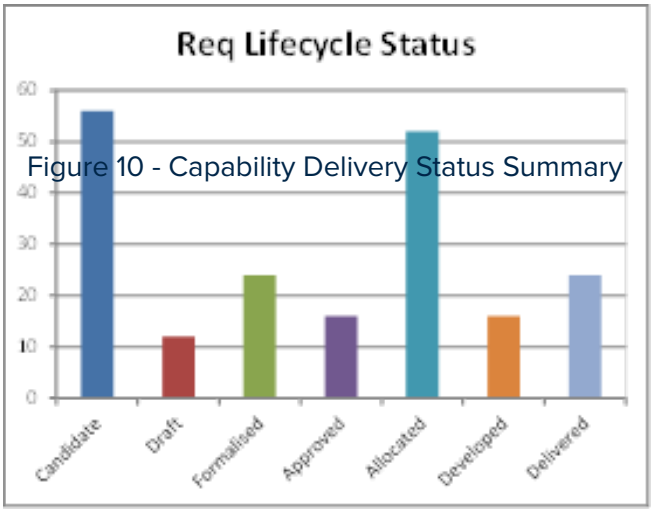


Figure 10 - Capability Delivery Status Summary

Figure 10 shows an example of a capability delivery report summarizing the status of the requirements quality, functional delivery and business value delivery for each capability using a combination of requirements metrics. This helps delivery managers to prioritize resources and manage risks as appropriate.

Capability	Reqs Quality	Functional Delivery	Value Delivery
Order Tracking	🟢	🟡	🔴
Customer Preferences	🔴	🟡	🔴
Product Info Enhancements	🟡	🟢	🟢
Compliance Reporting	🟢	🟡	🟡

About Blueprint

Blueprint is the world leader in collaborative requirements definition and management (RDM) solutions for companies looking to improve the success of critical revenue-generating projects. Blueprint transforms the business-IT relationship into a visual and engaging collaboration, enabling a unified approach that results in on-time, and on-budget applications. Predictable project schedules combined with faster time-to-market is critical to the competitive success of Blueprint's Global 2000 customers. Headquartered in Toronto, Blueprint has global sales, operations and partner presence. Visit http://www.blueprintsys.com.

About Strata

Strata Software is a specialist in business requirements and software specification. We provide services and solutions to improve the definition, quality and management of requirements and specifications, increasing productivity and reducing delivery risk throughout the application development and integration lifecycle. We also provide application specification and requirements management as outsourced services. Strata is based in London, UK and has been a strategic partner of Blueprint since 2008. Visit http://www.stratasoftware.com.

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