

Solution Lifecycle Management – Solution Scorecard

Introduction

The Design Review Board (DRB) serves as the governing body for the Solution Lifecycle Management process. The DRB members are responsible for reviewing solutions and providing feedback to the project team regarding areas of improvement. The Solution Scorecard provides an objective and consistent set of evaluation criteria for this review.

This document presents the Solution Scorecard and associated processes.

Abbreviations and glossary

The following abbreviations appearing in this document are defined here.

Abbreviation	Meaning
DRB	Design Review Board

The following terms appearing in this document are defined here.

Term	Meaning
baseline	The current or "as is" state.
best practice	Practices and approaches that have proven successful over time at providing services and information.
business driver	Internal goals and strategies and external trends that influence the business.
domain	A domain is a high-level, logical grouping of functional or topical operations that form the main building blocks within the architectural framework.
principle	A statement of preferred direction or practice.
standard	A rule or principle that is used as a basis for judgement, typically external in origin.
trend	Emerging influences that impact how services and information are provided.

Design Review Board

The Design Review Board (DRB) has been created to establish and facilitate design reviews of solutions in order to ensure that systems developed have a consistently high level of design quality. This will be measured by ensuring:

- Compliance with standards, guidelines, and best practices
- Application of appropriate platform and tools to the business and system requirements
- Inclusion of both cross-functional and business aligned teams in the project

To accomplish the above, the Design Review Board will:

- Lead efforts to establish standards and best practices



- Provide recommendations with regard to appropriate technical personnel, based on required skills and expertise
- Develop and analyze solution architectures in order to document and communicate their benefits and risks

The DRB is required to review all projects that meet any of the following criteria:

- New technology to the organization
- Outsourced design
- Review requested by a project team, management, or customer

Business Driver

Business Drivers are items that influence an architecture. They may be internally imposed by the organization (i.e. internal goals or strategies) or may be external influences (i.e. legislation or trends). Three common categories of business drivers include Principles, Best Practices, and Trends.

Principles are statements of preferred direction or practice. Principles constitute the rules, constraints and behaviors that an organization will abide by in its daily activities over a long period of time. Principles are also business practices and approaches that the organization chooses to institutionalize to better provide services and information. Principles are also often called Standards.

Best Practices are practices and approaches that have proven successful over time at providing services and information.

Trends are emerging influences within the business world that impact how services and information are provided. Trends include business trends as well as architecture specific trends (i.e. technology trends, information management trends).

Definition

A Solution Scorecard is a tool used to assess how well a solution meets a set of assessment criteria. Each assessment criterion should have the following properties:

1. Objective
2. Understandable to non-technical stakeholders
3. Quantifiable as a percentage
4. Aligned with an existing architecture domain
5. Applicable to a wide variety of situations, including new development (in house and outsourced), purchased solutions, and enhancements to existing solutions
6. Tied to one or more Business Drivers
7. Assigned a weight relative to other assessment criteria within the same Domain

Assessment criteria that do not exhibit the above properties should be revised or dropped as appropriate. Some assessment criteria may not be applicable for all solutions.

Scoring

The result of the Solution Scorecard should be a "pass", "fail", or "warning" for each assessment criteria, each domain, and the solution as a whole. "Not applicable" assessment criteria should be omitted from the scoring, though an excessive number may indicate a problem. Typically, a score of 50% or less is considered failing, and 80% or higher is passing. These values may be adjusted to be more lenient or strict, as required.

There are a number of possible scoring options for individual assessment criteria. Typically, a maximum score of 80% is allowed for a documentation-related criterion where the document is not current. No/Yes and False/True criterion are scored at 0% and 100% as appropriate. Frequency criterion are typically scored at Never (0%), Sometimes (30%), Mostly (70%), and Always (100%), though they may also be scored based on actual occurrence or completeness.

The composite score for a Domain is the ratio of the sums of the products of the individual criterion's weight and score to the total possible weighted score (the sum of the weights). Mathematically:

$$score_{domain} = \frac{\sum (weight \times score_{criterion})}{\sum weight}$$

As all Domains are assumed to carry equal weight, the composite score for a solution is the average of the Domain scores.

Optionally, a failing score in any criterion may cause the entire Domain to be given a failing score.

Note: none of the values presented above are to be considered fixed, and may be adjusted by the Design Review Board.

Baseline Definition

To establish a base set of assessment criteria for the Solution Scorecard, each of the Domain teams should be asked to provide a list of 5-15 criteria that they feel are most critical. These criteria should be grouped by Domain and presented as a draft Solution Scorecard. This draft should be reviewed and revised by the Design Review Board and the Domain teams. Once consensus has been achieved, the Solution Scorecard is published for use by project teams.

Ongoing Maintenance

The assessment criteria should be reviewed by the Design Review Board and Domain teams on a periodic basis (at least quarterly) to ensure relevance and alignment with current Business Drivers. Any changes should be published (as a new Scorecard) no more often than quarterly.

Usage

An assessor is assigned to a project by the Design Review Board when the Project Manager requests a design review in preparation for a project milestone review. This individual will fill out the Solution Scorecard with the project team. In cases where the project team and assessor have questions on assessment criteria, the assessor will be responsible for contacting the appropriate Domain team for clarification and aid.

Once the Solution Scorecard has been completed, the assessor reviews the score with the project team. The project team will often choose to take steps to improve its score at this time prior to formal Design Review Board review.

Once the project team is satisfied with its assessment, the Project Manager and assessor present the Solution Scorecard to the Design Review Board. The DRB may allow a project to move forward despite a non-passing score or additional steps may be required prior to moving forward to the project milestone review.

Example Solution Scorecard

Explanation

Below is an example Solution Scorecard illustrating the concepts presented in the previous section. The Domains, Assessment Criteria, and overall format are based on the author's experiences, and do not represent an agreed to, official Solution Scorecard for any particular organization.

Based upon feedback from the document reviewers, a simple "Pass/Fail/NA" scoring was determined to be most appropriate. Additionally, a space is provided next to each Assessment Criteria for the name of the assessor.



Assessment Summary

Solution Name	
Assessment Date	
Assessed by	

Domain	Pass/Fail	# of NAs
Business		
Application Platform		
Information		
Infrastructure		
Integration		
Lifecycle		
Presentation Platform		
Security and Privacy		
Overall		

Notes:

Business

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
BUS01	Business roadmap is documented.			
BUS02	Functional requirements are documented.			
BUS03	Business owner is identified.			
BUS04	Project is in current plan.			
Overall				

Application Platform

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
APP01	The design of the system is documented.			
APP02	The source code for the system is in a source code management system (CVS, Subversion, or Visual Source Safe).			
APP03	The application is built automatically.			
APP04	The solution adheres to published coding standards appropriate to the development language.			
APP05	All software components of the system are on the Deployable Technology List.			
Overall				

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
INF01	The data model is documented.			
INF02	Data owners are identified.			
INF03	Data retention requirements are documented.			
INF04	Data backup requirements are documented.			
INF05	Data quality has been assessed.			
Overall				

Infrastructure

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
IFS01	Network requirements are documented.			
IFS02	System deployment view is documented.			
IFS03	The system has a disaster recovery plan.			
IFS04	The system has been successfully recovered as part of a disaster recovery exercise.			
Overall				

Integration

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
INT01	All upstream and downstream system to system communications are documented.			
Overall				

Lifecycle

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
LIF01	The health of the system is monitored by NetIQ.			
LIF02	Support processes are documented.			
LIF03	Service levels for the system are documented.			
LIF04	User training is available online.			
Overall				

Presentation Platform

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
PRP01	The system utilizes an appropriate, approved presentation mechanism.			
PRP02	Reports are available online.			
Overall				

Security and Privacy

ID	Assessment Criteria	Pass/Fail/NA	Notes	Assessor
SEC01	Users are authenticated against Active Directory.			
SEC02	System participates in Single Sign On.			
SEC03	All sensitive data (passwords, SSNs, etc) is stored in an approved, encrypted form.			
SEC04	The system utilizes a role based access control model.			
SEC05	The system has passed a security audit, including a penetration test.			
SEC06	User actions are logged.			
Overall				