Click here and type Project Name

System Architecture Definition

Part of Solution Foundations

# Purpose of this document

* To provide a common understanding of the technical architectures to be used during development and deployment of the solution including:
  + Hardware/Infrastructure
  + Software Architecture
* To describe the target environment for the solution and (if different) the development environment.
* To provide an outline description of anticipated developments in areas such as:
  + Hardware (i.e. the infrastructure, processing, storage, networking etc.) for both development and deployment
  + Software (i.e. the major software objects or components - both process and data - and their interactions)
  + Information Security (e.g. access policy, access control etc.)

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# System Architecture

## Architecture Overview

*Construct a high level model (diagram or series of diagrams) that clearly identifies all the hardware components of the architecture and illustrates how the software application is overlaid on the chosen hardware. Verify that it is complete in terms of both hardware (identifying all technical platforms and relationships between them) and software (identifying all interfacing systems, all application software components and appropriate middleware and database software).*

***Note:***

*In the description above, the word component refers to a “part of” the architecture or system and not specifically to re-usable components that the project may produce or re-use.*

## Hardware Components and Relationships

***By reference to the Architecture Overview above, describe in as much detail as is available:***

*Each of the hardware components of the system that are illustrated in the previous diagram (i.e. describe the ‘entities’ on the diagram - the boxes or other shapes).*

*The physical interfaces between them under predicted implementation scenarios e.g. office access and home access (i.e. the lines on the diagram).*

*Briefly explain how the proposed architecture fits with the organisation’s strategic architecture (if that exists). Identify risks and issues related to deviating from current technical architecture or policy.*

***Note:***

*If the purchase of new hardware or the installation of new infrastructure is required to support the deployment of the proposed system, it needs to be described in sufficient detail here to provide likely hardware specifications and associated costs.*

## Software Components and Relationships

***By reference to the Architecture Overview above, describe at a high level:***

*The major software components of the system in terms of their purpose (e.g. application server, data server, web server, transaction manager etc.)*

*How these components relate to each other in terms of software. Describe the involvement of any middleware in the architecture. Describe the interfaces between the software components under predicted implementation scenarios e.g. office access and home access.*

*How the proposed system interfaces with existing applications and any others currently under development.*

*Briefly explain how the proposed architecture fits with the organisation’s strategic architecture (if that exists). Identify risks and issues related to deviating from current technical policy with regard to middleware etc.*

## Non-Functional Requirements (NFR)

*Describe the key areas of non-functional requirements that are likely to be important to the project and how the architecture described above supports the non-functional requirements. If possible prioritise these on a scale of one to 3 as indicated in the table. Non-functional requirements were first considered in the Technical Constraints section of the Feasibility Report so refer back to this as a starting point.*

***Note:***

*At this point it may not be possible to describe the non-functional requirements in the detail indicated in the comment text within the table. Don't worry too much about this but be sure to make a note in the table that further investigation of this requirement is needed during the functional modelling phase.*

|  |  |  |
| --- | --- | --- |
| Non-functional requirement | Priority 1=critical 2=important 3=unimportant | How this is supported by the architecture |
| Usability |  |  |
| Performance |  |  |
| Capacity |  |  |
| Scalability |  |  |
| Security |  |  |
| Availability |  |  |
| Resilience & recovery |  |  |
| Disaster Recovery |  |  |

## Maintainability Considerations

*The* ***System Life Expectancy and Maintenance Strategy*** *section of the* ***Business Area Definition*** *considers the options for how the system will be constructed. Describe how the architecture deals with these considerations, for example how a modular architecture will allow modules may be removed or replaced and how new modules may be added.*

***Note:***

*The impact of the chosen approach must be fully considered and costed and critical decisions made around short term or long term deviation from the architecture described above. These should be considered when creating the Delivery Plan.*

# Technical Environments

## Development Platform

*Identify the software tools that will be used during development beyond the standard desktop environment (Software tools include compilers, modelling tools, configuration management tools, testing tools, etc.)*

*Define the different environments that will be used by or created for the project e.g. development, testing, user testing environments.*

***Note:***

*The description of the development platform should provide the project with sufficient information to identify:*

* *the technical skills needed by the developers.*
* *purchases needed to be made for development activity to take place.*

## Target Platform

*Identify the hardware and software that will need to be in place for the system to be delivered?*

*Identify the tools needed for staff performing support and maintenance activities?*

***Note:***

*The description of the target platform should enable planning later within the project for migration and cutover.*