

<Project/Solution Name>

High Level Design

**<Name><Org><Title>**

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Document Control

Change History

| Published/revised date | version # | Author | Section / Nature of change |
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| Name | Title / Role | Nature of Contribution |
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|  | Application SME |  |
|  | Infrastructure SME |  |
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# Introduction

## Document Purpose

The purpose of the High Level Design (HLD) is to:

1. Provide a solution to the business requirements
2. Socialise and gain acceptance of the solution
3. Instruct the technical planning and delivery stages of the project (eg detailed design and implementation)

## Document Audience

This document is intended for use by the following people (also see “Change history and approval” section above):

## Document References

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Document Name | Author | Version | Location/Link |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |

## Glossary of Terms

The following tables describes the specific terms that have been used throughout this document.

|  |  |
| --- | --- |
| Term | Description |
|  |  |
|  |  |
|  |  |
|  |  |

# Project Overview

## Problem/Opportunity Statement

*<Describe the current state of the process/issues which needs to be addressed>*

## Business Goals/Objectives

*<This section will provide high level description of the solution goals and/or objectives like what the business wants to achieve>*

## Assumptions

*< List down the assumptions that can also be considered as basic business rules for the design of this solution>*

|  |  |
| --- | --- |
| Assumption ID | Assumption Description |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

## Risks

*<List down the risks relevant to solution design>*

|  |  |  |  |
| --- | --- | --- | --- |
| ID | Assumption Description | Impact | Mitigation |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |

## Constraints

*<Specify the constraints on the system design imposed by requirements or project limitations>*

|  |  |
| --- | --- |
| ID | Constraint Description |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |

## Issues

<List down the design issues that remain unresolved at the date of issue of this document>

|  |  |
| --- | --- |
| ID | Issue Description |
| 1 |  |
| 2 |  |

# Current State High Level View

*Place diagrams here, with explanations. Like an executive summary, this section should be enough* *for a reader to understand the solution concept.*

Only add the relevant diagrams.

### Business Process Diagram

### Application Diagram

### Data/Information Diagram

### Infrastructure Diagram

# Transition State High Level View [Optional]

*Place diagrams here, with explanations. Like an executive summary, this section should be enough for a reader to understand the solution concept. Inform if this is the state the project will be delivering.*

Only add the relevant diagrams.

### Business Process Diagram

### Application Diagram

### Data/Information Diagram

### Infrastructure Diagram

# Future State High Level View

*Place diagrams here, with explanations. Like an executive summary, this section should be enough for a reader to understand the solution concept. Inform if this is the state the project will be delivering.*

Only add the relevant diagrams.

### Business Process Diagram

### Application Diagram

### Data/Information Diagram

### Infrastructure Diagram

# Future state Design

*List the main Application, Data, Infrastructure components and note if they are New or Existing. Use of Tables is perfferable.*

## Components

|  |  |  |
| --- | --- | --- |
| Application Components | Notes | New /Exisiting |
|  |  |  |
|  |  |  |
| Data Components | Notes | New/ Exisiting |
|  |  |  |
|  |  |  |
| Infrastructure Components | Notes | New /Exisiting |
|  |  |  |
|  |  |  |

## Environments

*What environments will be deployed? Eg Test, Pre-Prod, and Prod. How will they differ from each other? How will each environment stay in sync?*

|  |  |  |
| --- | --- | --- |
| Environment | Notes | Synchronisation |
| Development |  |  |
| Test |  |  |
| Pre-Prod |  |  |
| Production |  |  |

## Design Considerations

A Breif high-level desictiption of how the different areas of the design should be approached. The following titles are examples and should be removed/added to as appropriate.

### Authentication

*<Describe how user access authentication process works when using the solution>*

### Security

*< Explain the main security considerations for the solution. Cover any mitigations or design decisions that have been put in to cater for the security concerns>*

### Backup

*<Describe how backup process works, schedules, automated scripts etc, if any>*

### Database

*<Describe the database & its components major role & tasks.>*

### Monitoring

*<Specify any process/tool which is used to monitor the solution, If any>*

### Reporting

*<Describe How will reporting be delivered for the solution, if any>*

### Vendor Access

*<Does vendor need access to the solution? If yes, decribe how access will be given>*

## Cost Estimate

*Costs will be firmed up at the Detailed Design phase.*

*List all cost estimates (detailed pricing is in the detailed design): Infrastructure, software, support costs (when being outsourced to vendors), licensing, testing etc. Number of FTE’s needed to support the system?*

### One-off initial costs

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Price | Number | Total |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

### On-going support costs per year

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Price | Number | Total |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Business Dependencies

List any Dependencies the delivery of this solution has on other projects. List any projects that have dependencies on the services being delivered iwthin this project.

## Solution Options

A summary description of the different options worked through, considered, and chosen. Any major decisions should be made using the “Architecture Decisions” template and referred to here.

# Solution Compliance

This section describes how the solution complies with the Auckland Transport Enterprise Architecture

### Information Architecture

|  |  |
| --- | --- |
|  |  |
| Have the data items in this solution been mapped to the Enterprise Canonical Data Model for Auckland Transport |  |
| If NO or NOT APPLICABLE explain why |  |
| Are there any Business Requirements that require a design for Business Intelligence |  |
| If YES, highlight which aspects of the design will deliver to those requirements. |  |
| If NO explain why not |  |

### 

### Security

|  |  |
| --- | --- |
|  |  |
| PCI Compliance – does this solution touch any part of a payments process or system?  If YES, a Security SME msut be engaged for this solution. |  |
| Has a Security SME been engaged for this solution? |  |
| If NOT explain why |  |
| If YES, has a security Assessment Document been completed? |  |
| If NO explain why not |  |

### 

### Integration

|  |  |
| --- | --- |
|  |  |
| Does the design of the solution comply with Auckland Transport’s Integration Standards? |  |
| Does this design loosely couple all relevant systems? |  |
| Does this design use an Enterprise Service Bus? |  |
| If NO to any of the above explain why. |  |
|  |  |

### 

### Identity and Access Management

|  |  |
| --- | --- |
|  |  |
| Does the design of the solution comply with Auckland Transport’s Identity Management Standards? |  |
| Does the design of the solution comply with Auckland Transport’s Access Management Standard? |  |
| If NO to either or both of the above, explain why not and how Users and/or Entity identity and access will be managed. |  |

### 

### Privacy

|  |  |
| --- | --- |
| This section is Mandatory |  |
| Does the proposed solution handle personal information? |  |
| Does the proposed solution handle information about an identifiable individual such as ratepayer information? |  |

### 

### Legal

|  |  |
| --- | --- |
| This section is Mandatory |  |
| Does the proposed solution have any legislative constraints? |  |
| If YES, identify the relevant legislation and how this solution design will comply e.g. Public Records Act, Unsolicited Electronic Messages Act Compliance, Privacy Act, Official Information Act, Local Govt Official Information and Meeting Act. |  |

### 

### Virtualisation

|  |  |
| --- | --- |
| This section is Mandatory |  |
| Does the proposed solution fit with AT’s virtualisation strategy? |  |
| If NO explain why |  |

### Technology Architecture Standards

|  |  |
| --- | --- |
| This section is Mandatory |  |
| Does the design of the solution comply with Auckland Transport’s Technology Architecture Standards document (eg standard operating environment)? |  |
| If NO explain why |  |

# Requirements Tracebility Matrix

Components must link back to the requirements. All major design decision must reference the requirements.

This section describes how the solution meets the requirements.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Requirement | Priority | Met?  Yes/No | Comment |
| **Functional Requirements** | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Description | Priority | Met?  Yes/No | Comment |
| **Non-Functional Requirements** | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |