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| **British Land** |
| **Smart Building Design Guideline – For Commercial Offices & Retail Premise Use Case High Level Design Document** |
| |  |  | | --- | --- | |  | | | Version | 1.6 | | Date | April 2020 | | Contact | British Land Smart Places team | | Copyright | Copyright © 2019 The British Land Company PLC | |

Table 1 Revisions

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Version No | Author | Amendments |
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# Purpose of the Report

## Preamble

The purpose of the document is to serve as a High-Level Design Document template to assist the Smart Building Consultant in submitting the required deliverables for each stage of the project. The document is meant to articulate the required actions for each of the project.

## Document Scope

This part is used to provide a brief overview of the deliverables contained within the document and the RIBA stage and the actions that have been carried out by the Smart Building Consultant.

# <*Insert Deliverable name here*>

## Deliverable Description

< Insert here a brief description of the deliverable and the elements that make up the deliverable>

Example

# 3. EsTABLISHed use cases

## 3.1 **Deliverable Description <insert use case name>**

The following table describes carried out by the Smart Building Consultant in relation to the use case Building Occupancy. The Business requirements have been identified by BL and shared with the Smart Building Consultant.

Table 2 Building Occupancy

|  |  |
| --- | --- |
| 1. **Activity** | **Actions** |
| 1. **Business Requirements** | **Establish Building Occupancy.**   * to get a better understanding of how spaces are used throughout the day, week and month. * to get a better understanding of how many staff work part-time or spend a proportion of each week working from home. * to get an instant picture of availability and direct people to a desk or meeting area you know is free. * to reduce expenditure and carbon emissions, to provide a more comfortable working environment * to determine how much demand there is for informal meeting spaces and break-out areas, letting you optimise office layout to facilitate collaboration and enhance productivity. * to determine the need comfortable areas for group discussions or creative brainstorming, or video conference rooms for discussions with colleagues in different regions * to determine the need for more isolated quiet areas for tasks that require more concentration, or phone booths for people to make important calls. |
| 1. **Technical requirements** | Systems required to Meet the Business requirements:   * CCTV * PAC * Footfall * Location services * Room Booking Systems |
| 1. **System Engineering** | **Physical Access Control**   * Number of enrolled users * List of enrolled user IDs * Last Read Status * Last User ID * fPAC Reader -Last Read Time   **CCTV**   * *Person counter*   **Footfall:**   * *Unfactored Out* * *FactoredIn* * *FactoredOut* * *Count Line ID* * *Count Line Name* * *Count Line Type* * *Detector ID* * *Detector Type* * *Detector Location* * *Detector Last Updated Date* * *Location Name* * *Location ID*   etc. |
| 1. **Success criteria** | Developed the Dashboards in line with the Business requirements.  Cloud Architecture Solution Diagram |

### Cloud Diagram

The following diagram has been developed in relation to the Building Occupancy use case.



Figure 1 Cloud Diagram - Building Occupancy

### Cloud Diagram Description < include Use Case Description>

Example:

<The following diagram shows the proposed data exchange between the On-premise Broker and the Cloud Environment> .

< provide a description of the diagram it should tell on the functionality of each component, what is the purpose of each component>

Example:

<The diagram shows that the MQTT broker will receive data from the following systems, the specifics of this data are captured in the Device Dataset Matrix and is broken out in the following table. >

Insert table here

< provide a description of the API required to access the services and view the dashboard, including any security features >

Insert diagram here



Figure API Diagram

<The On-premise Broker is responsible for creating the subscription topics to be share of the Off-Premise Cloud environment. The topic names for the grouped data object are given in the following table.>

Insert table here

### System Dimensioning

< provide enough explanation as to the physical environment of the On-Premise server, CPU, RAM, memory and why we need the throughput of data to the MQTT broker, the bandwidth and storage requirements etc>

### System Zoning - Dashboards

< provide here details on how the building will be zoned and displayed in the dashboards for heatmaps, congestion etc.>

< provide here how charts and graphs will be displayed in relation to the building>

### System Components

< provide description of system components in a table format>

## Deliverable Description <Room Thermal Comfort >

### Cloud Diagram

< develop in line with previous section >

### Cloud Diagram Description < include Use Case Description>

< develop in line with previous section >

### System Dimensioning

< develop in line with previous section >< provide enough explanation as to the physical environment of the On-Premise server, CPU, RAM, memory and why we need the throughput of data to the MQTT broker, the bandwidth and storage requirements etc>

### System Zoning - Dashboards

< provide here details on how the building will be zoned and displayed in the dashboards for heatmaps, congestion etc.>

< provide here how charts and graphs will be displayed in relation to the building>

### System Components

< provide description of system components in a table format>

1. - ACROynMS and abbreviations

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| --- | --- |
| Abbreviation | Meaning |
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1. - architectural specification
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