Architecture Design

# Deloitte Case Study

|  |  |
| --- | --- |
| **Written By** | SM ZEYAUDDIN |

# Contents

1.Introduction..........................................................................................................03

2.Scope....................................................................................................................04

3.Architecture.........................................................................................................05-06

4.Deployment........................................................................................................ 07

# 1. Introduction

Any software needs the architectural design to represents the design of software.

IEEE defines architectural design as “the process of defining a collection of hardware and software components and their interfaces to establish the framework for the development of a computer system.” The software that is built for computer-based systems can exhibit one of these many architectures.

Each style will describe a system category that consists of :

• A set of components (eg: a database, computational modules) that will perform a function required by the system.

• The set of connectors will help in coordination, communication, and cooperation between the components.

• Conditions that how components can be integrated to form the system.

• Semantic models that help the designer to understand the overall properties of the system.

# 2. Scope

Architecture Design Document (ADD) is an architecture design process that follows a step-by-step

refinement process. The process can be used for designing data structures, required software

architecture, source code and ultimately, performance algorithms. Overall, the design principles

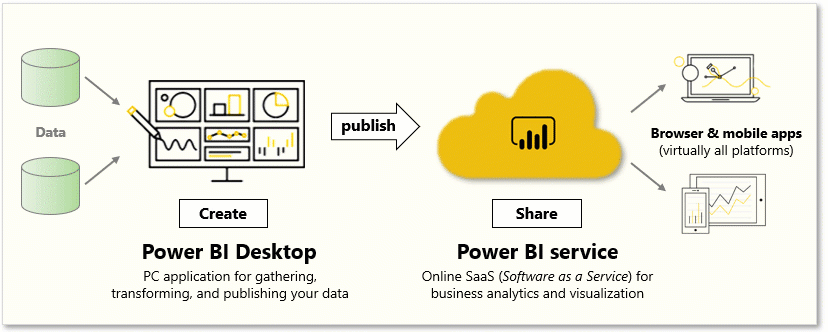
may be defined during requirement analysis and then refined during architectural design work.

# 3. Architecture

Power Bi is a business suite that includes several technologies that work together. To deliver outstanding business intelligence solutions, Microsoft Power Bi technology consists of a group of such components such as:

* Power Query (for data mash-up and transformation)
* Power BI Desktop (a companion development tool)
* Power BI Mobile (for Android, iOS, Windows phones)
* Power BI Pivot (for in-memory tabular data modelling)
* Power BI View (for viewing data visualisation)
* Power BI Map (for visualizing 3D geo-spatial data)
* Power BI Q&A (for natural language Q&A)

The architecture of entire project is shown below:



* Our entire data source is our excel file. This excel file is connected to the Power Bi server. From the server, data can be shown and accessed.
* Power Bi server has various architectural components regarding to solve the query.
* The functionalities show the result according to query entered by the end user or client.
* Client entered the query to show the graph, after selecting the data in form of rows and columns it will go inside the Power Bi server. In Power Bi server, it understands the query and generates the best recommended charts based on selected data and return it into the Power Bi screen.
* Based on recommended charts, client can make the visual aspect of the same.
* If client is not satisfied with the result, he/she has to select data accordingly otherwise make required changes to show the expected result

# 4. Deployment

* The deployment process lets you clone content from one stage in the pipeline to another, typically from development to test, and from test to production.
* During deployment, Power BI copies the content from the current stage, into the target one. The connections between the copied items are kept during the copy process. Power BI also applies the configured deployment rules to the updated content in the target stage.
* Deploying content may take a while, depending on the number of items being deployed. During this time, you can navigate to other pages in the Power BI portal, but you can't use the content in the target stage