

Deem Government Cloud Adoption

Data Analysis Dashboard 2024



Powered by: Power BI



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Introduction

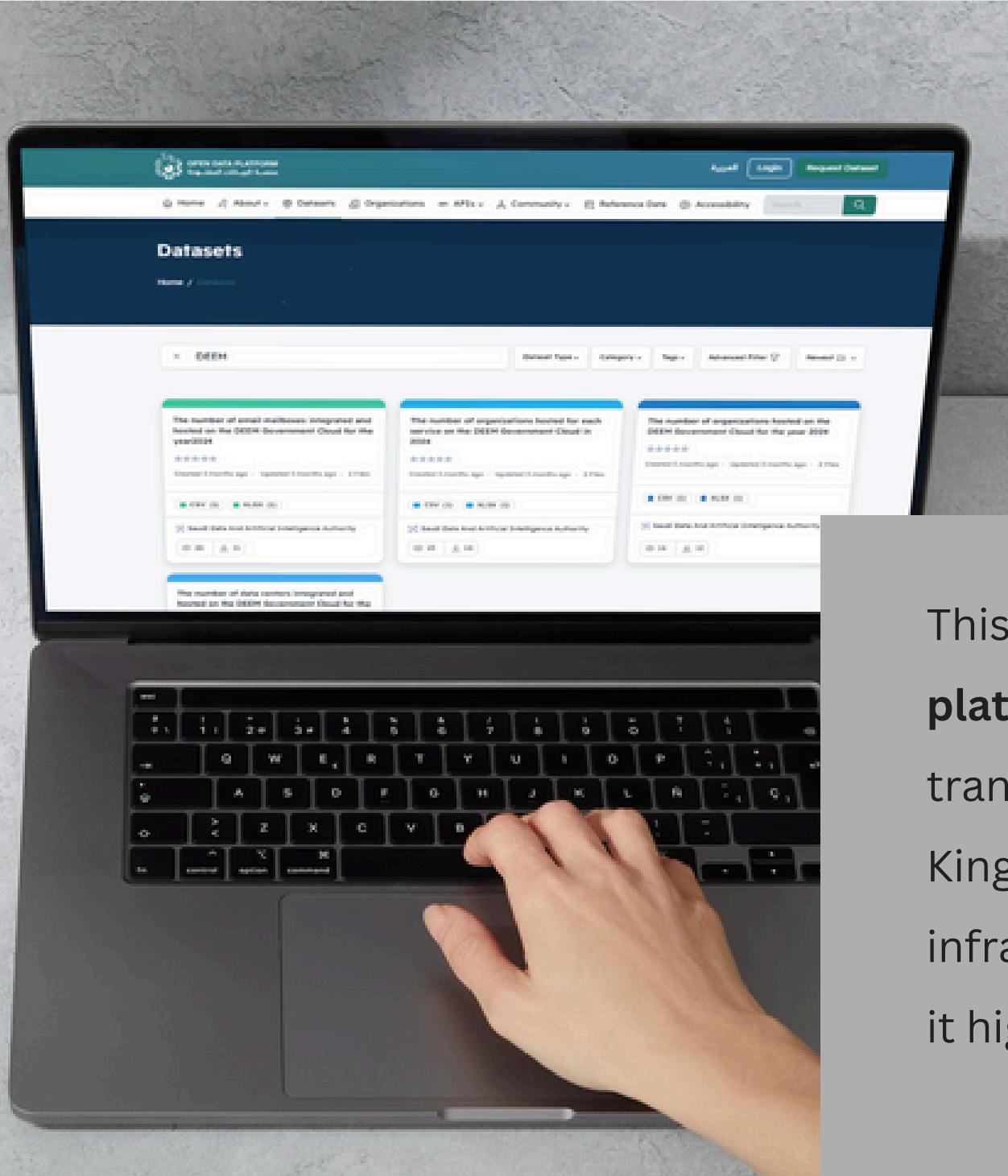
This project presents an interactive Power BI dashboard that analyzes the adoption of the DEEM Government Cloud services across Saudi government entities for the year 2024. The goal of this dashboard is to provide clear insights into cloud migration growth, service usage trends, and digital transformation progress among government organizations.

Analysis Objective

The main objectives of this analysis are:

- To track the number of government entities adopting DEEM Cloud.
- To monitor the migration of data centers to the national cloud.
- To analyze the usage of core cloud services such as Email, Drive, Meet, Domains, and Data Security.
- To highlight growth trends and digital adoption progress.
- To support data-driven decisions for cloud strategy and infrastructure planning.

Application Service



The dataset used in this analysis was obtained from the **National Open Data Platform** and published by the **Saudi Data and Artificial Intelligence Authority (SDAIA)**.

This dataset was selected because it represents **DEEM**, a **national cloud platform** that plays a vital role in supporting Saudi Arabia's digital transformation. As a trusted government cloud service, DEEM reflects the Kingdom's progress in building secure, reliable, and scalable digital infrastructure. Analyzing its adoption is both meaningful and inspiring, as it highlights a national achievement we take pride in.



The Core Steps of the Project

1

Data Collection

Gathered real DEEM Cloud data from the Saudi Open Data Platform.

2

Data Cleaning

Removed errors, unified formats, and prepared the dataset.

3

Data Modeling

Structured the data and created calculated fields using DAX

4

KPI Development

Built key metrics to measure adoption and service usage

5

Dashboard Design

Designed interactive visual pages using Power BI

6

Data Analysis

Identified trends, growth, and patterns in cloud adoption.

7

Insights & Storytelling

Translated data findings into meaningful insights

<https://open.data.gov.sa/ar/datasets?searchValue=DEEM>



Design Inspiration

The dashboard design was **inspired** by professional layout ideas from **Pinterest**, focusing on clean structure and user-friendly flow. The visual identity of the dashboard follows the official **DEEM Cloud brand** colors to reflect consistency and relevance to the topic. Color codes were extracted using the **ImageColorPicker** tool to ensure accurate color matching with the original DEEM identity.

Dashboard Structure

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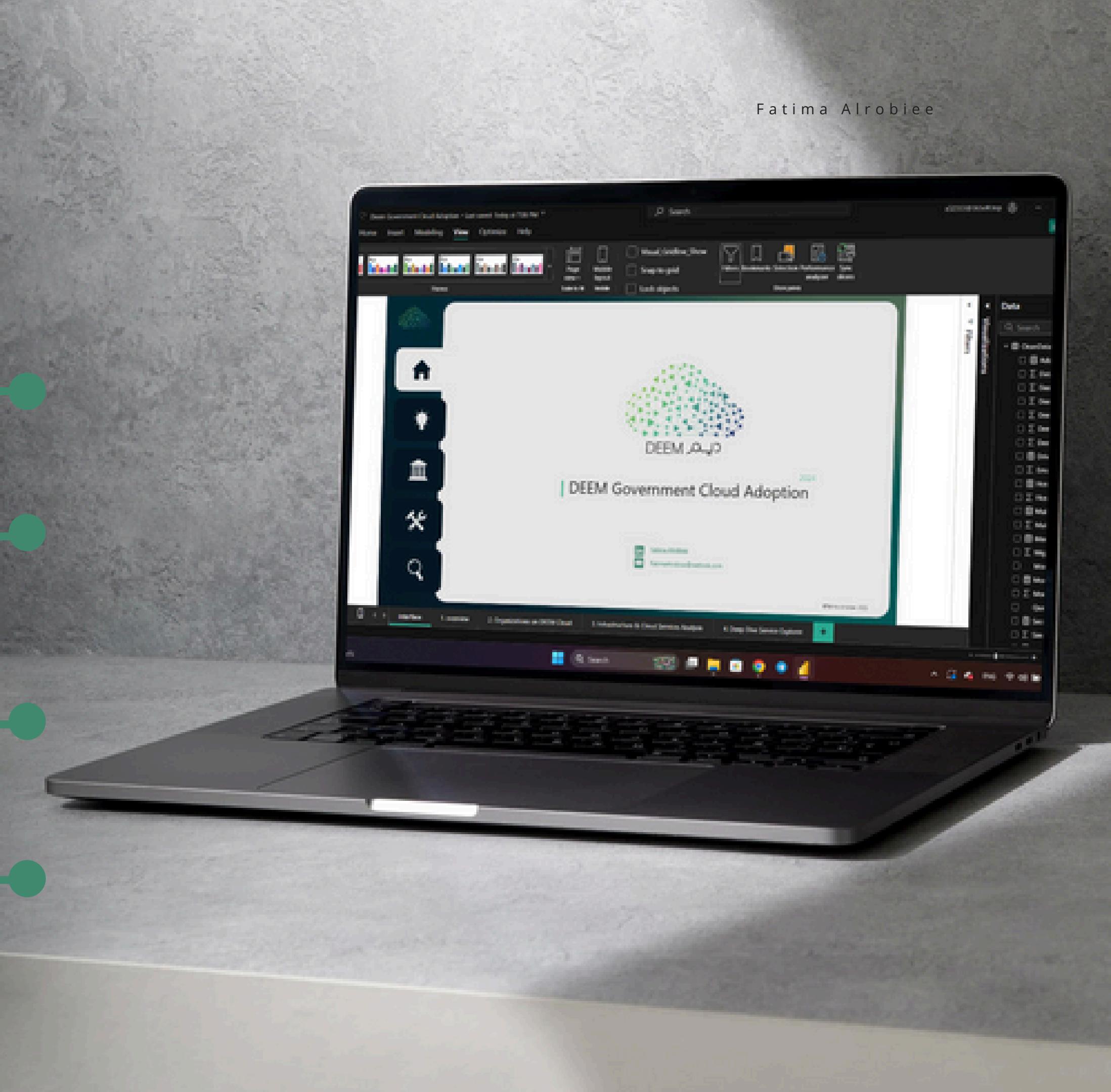
The dashboard was designed in four pages:

Overview

Organizations on DEEM

Infrastructure & Cloud Services

Deep Dive Service Explorer



Dashboard Structure

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Dashboard | Overview

2024

Integrated Data Centers: 263

Hosted Entities: 193

Cloud Services Used: 263

Total Mailboxes: 131.26K

Hosted Entities Trend:

Mailboxes Usage:

Integrated Data Centers:

Cloud Services Usage:

Icons: Home, Lightbulb, Bank, Tools, Search.

Dashboard | Cloud Adoption by Government Entities

2024

Total Hosted Entities: 193

Total Increase: 10

Growth Rate: 5.46 %

Quarterly Cloud Adoption:

Net Monthly Change:

Adoption Trend:

Icons: Home, Lightbulb, Bank, Tools, Search.

Dashboard | Infrastructure & Cloud Services Analysis

2024

Infrastructure Growth (YTD): 26

Monthly Integration Rate: 2.26

Cloud Service Expansion: 136

Mailbox Adoption Surge: 37.78

Service Usage Matrix:

Month	Centers	Email	Drive	Domains	Meet	Security	Spaces
1	156	94	76	63	54	15	0
2	156	94	81	65	54	16	0
3	157	94	85	65	58	19	0
4	159	94	86	65	60	20	0
5	160	93	88	67	63	22	0
6	162	92	90	67	63	26	0
7	164	94	93	68	64	28	0
8	165	96	94	73	66	29	0
9	166	95	95	73	69	34	0
10	167	97	100	77	69	35	1
11	169	98	104	79	69	35	1
12	170	96	106	88	73	35	11
Total	1951	1137	1098	850	762	314	13

Cloud Services Growth Contribution by Quarter %:

Insight: Security & Drive services showed the highest contribution to growth in Q2 and Q4, indicating strong infrastructure adoption trends.

Cloud Services Distribution:

Centers	Email	Drive	Domains	Meet	Simple Storage	Sec...
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Icons: Home, Lightbulb, Bank, Tools, Search.

Dashboard | Deep Dive Service Explorer

2024

Service Contribution Analysis:

Cloud service usage is primarily concentrated in infrastructure services, while collaboration and workspace services show limited adoption. This indicates a reliance on core operational services and reflects an opportunity to accelerate digital collaboration maturity across entities.

Icons: Home, Lightbulb, Bank, Tools, Search.

Data Preparation

Before building the dashboard, the dataset was cleaned and prepared as follows:

- Removed duplicates and empty values
- Standardized month names and added month numbers

Created calculated metrics such as:

- Monthly Change
- Total Services Used
- Adoption Growth Percentage
- Quarterly Aggregation



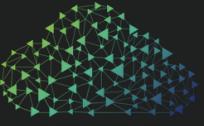
Challenges

Benefits of The Dashboard

- Improves transparency in government cloud adoption.
- Helps measure migration progress and service usage impact.
- Supports future planning for cloud strategy.
- Enables performance monitoring in a simple and visual form.

During the analysis, a few challenges were faced:

- Missing values in some monthly records.
- Combining multiple datasets into a unified model.
- Ensuring accurate time intelligence and performance metrics.



Data Story

Before DEEM Cloud, government entities relied on traditional on-premise systems with limited scalability, higher maintenance, and weak digital collaboration. The launch of DEEM Government Cloud marked a shift toward secure national cloud transformation.

This dashboard highlights the cloud adoption journey in 2024 across four transformation stages.



Limited onboarding,
basic services adoption
(Email & Domain)

Growing number of
entities, start of digital
collaboration (Deem
Drive & Meet)

Multi-service usage,
operational efficiency
improves

Peak adoption, strong
security focus and
cloud scalability



<https://github.com/fatimasdr>

Thank You