📊 Problem Statement

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**Domain:** Telecom & Streaming Services **Function:** Strategy & Operations

**Context:**  
Lio, a major telecommunications provider in India, is planning a strategic merger with **Jotstar**, a leading OTT streaming platform. This merger aims to combine **LioCinema’s** extensive subscriber base with **Jotstar’s** diverse content library to reshape the digital streaming landscape in India.

**Objective:**  
As part of the merger preparation, the Lio management team seeks to analyze user behavior and platform performance across **LioCinema** and **Jotstar** over the past year (Jan–Nov 2024). The goal is to uncover key insights into:

* Platform performance
* Content consumption patterns
* Subscriber growth
* Inactivity and churn behavior
* Upgrade and downgrade trend

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**Step 1**: **Feature descriptions** for both **LioCinema** and **Jotstar** platforms

1. **Contents Table (LioCinema & Jotstar)**

* **content\_id:** Unique identifier for each content item.
* **content\_type**: Type of content (e.g., Movie, Series).
* **language**: Language in which the content is available (e.g., Hindi, English).
* **genre**: Genre of the content (e.g., Romance, Action, Drama).
* **run\_time**: Duration of the content in minutes.

1. **Subscribers Table (LioCinema & Jotstar)**

* **user\_id:** Unique identifier for each subscriber.
* **age\_group:** Age group of the subscriber (e.g., 18–24, 25–34).
* **city\_tier**: Classification of the subscriber's city (e.g., Tier 1, Tier 2, Tier 3).
* **subscription\_date**: Date when the user subscribed to the platform.
* **subscription\_plan**: Initial subscription plan selected (e.g., Free, Basic, Premium, VIP).
* **last\_active\_date**: Most recent date of user activity; NULL if the user is currently active.
* **plan\_change\_date**: Date when the subscription plan was last changed.
* **new\_subscription\_plan**: Updated subscription plan after an upgrade or downgrade.

1. **Content Consumption Table (LioCinema & Jotstar)**

* **user\_id**: Unique identifier for each subscriber.
* **device\_type**: Device used to watch content (e.g., Mobile, TV, Tablet).
* **total\_watch\_time (mins)**: Total time the user spent watching content, in minutes.

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**Step 2**: **Data Preparation -** Dataset: Import the dataset as a MySQL database file into Power BI.

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**Step 3: Data Cleaning –**

* Remove unwanted column from tables (jotstar\_db content\_consumption, jotstar\_db subscribers, liocinema\_db content\_consumption, liocinema\_db subscribers).
* Merge tables and create new tables (fact\_jotstar, fact\_liocinema).
* Append two tables fact\_jotstar & fact\_liocinema and create new table fact\_merger.
* Append two tables jotstar\_db contents & liocinema\_db contents and create new table dim\_merger.

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**Step 4: Calculated Columns Created:**

* **Year -** Extracted year from the date for year-level grouping.
* **Quarter -** Generated using DAX to group months into quarters (Q1–Q4).
* **Month Number -** Numeric month (1–12), useful for sorting months.
* **Month Name -** Text month name (e.g., Jan, Feb), for display.
* **Day Number -** Extracted day of month (1–31).
* **Day Name -** Day of the week (e.g., Mon, Tue), useful for weekly analysis.
* **Weekday Number -** Numeric day of the week (Mon = 1 to Sun = 7), used for sorting.

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**Step 5: Data Model –**

* Using the bridge table concept, a dim\_platform table is created between the two tables to solve the many-to-many relationship problem.
* This is a **star schema hybrid** with a **shared dimension** (dim\_platform) between two other tables.

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**Step 6: Create a Measure Table –**

1. **Active Rate (%)** = DIVIDE ([Active Users], [Total users], 0)
2. **Active Users** = CALCULATE ([Total users], fact\_merger[last\_active\_date] = BLANK ())
3. **Downgrade Rate (%)** = DIVIDE ([Downgraded users], [Total users], 0)
4. **Downgraded users** = CALCULATE ([Total users], fact\_merger[subscription\_plan] IN {"Basic", "VIP", "Premium"} &&(fact\_merger[new\_subscription\_plan] = "Free" || (fact\_merger[subscription\_plan] = "Premium" && fact\_merger[new\_subscription\_plan] = "Basic") || (fact\_merger[subscription\_plan] = "Premium" && fact\_merger[new\_subscription\_plan] = "VIP")))
5. **Inactive Rate (%)** = DIVIDE ([Inactive users], [Total users], 0)
6. **Inactive users** = [Total users] - [Active Users]
7. **Paid users** = CALCULATE ([Total users], fact\_merger[subscription\_plan] IN {"Basic", "VIP", "Premium"})
8. **Paid users %** = DIVIDE ([Paid users], [Total users], 0)
9. **Total content items** = DISTINCTCOUNTNOBLANK (dim\_merger[content\_id])
10. **Total users** = DISTINCTCOUNT (fact\_merger[user\_id])
11. **Total Watch Time** = SUM('fact\_merger'[total\_watch\_time\_mins])
12. **Upgrade / Downgrade Rate (%) =** DIVIDE ([Upgraded users] - [Downgraded users], [Total users], 0)
13. **Upgrade Rate (%)** = DIVIDE ([Upgraded users], [Total users], 0)
14. **Upgraded users** = CALCULATE ([Total users], fact\_merger[subscription\_plan] ="Free" && fact\_merger[new\_subscription\_plan] in {"Basic","VIP","Premium"} || fact\_merger[subscription\_plan] = "Basic" && fact\_merger[new\_subscription\_plan] ="Premium" || fact\_merger[subscription\_plan] = "VIP" && fact\_merger[new\_subscription\_plan] ="Premium")

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**Step 7: Report Design**

1. **Overview Page 📊**

This page gives a quick summary of total users, their activity status, paid subscribers, subscription plan performance, and content distribution across Liocinema and Jotstar, helping identify engagement trends and growth opportunities after the merger.

**📊 KPI’s:**

* Total Users
* Active Users
* Inactive Users
* Paid Users
* Total Content Items

**📊 Visuals:**

* Content type comparison by Total Content Items
* Paid Subscribers by City
* Active & Inactive Users by Subscription Plan
* Total Users Breakdown
* Platform and subscription plan-wise Active and Inactive Users rate %
* Total Users by Field Parameter (City Tier, Age Group, Subscription Plan, Device Type)

📊 **Slicers:**

* Platform
* Month
* Genre
* Language

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**Inside Points:**

* Show how many users are active vs. inactive.
* Compare paid users across different city tiers.
* See which subscription plans have the most active users.
* Check how each platform is performing.
* View how content is split by type (Movies, Series, Sports).
* Find areas where users are less active to improve engagement.

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**2. Content Library Analysis 📚:**

**Objective:**This page provides an overview of the total content library across platforms, genres, and user engagement, as well as tracking upgrade and downgrade trends to assess content appeal and platform performance.

**📊 KPI’s:**

* Total Content Items
* Total Users
* Active Users
* Paid Users %

📊 **Visuals:**

* Content Items by Platform
* User Engagement by Platform (Active Users vs Total Users)
* Content Items by Genre
* Upgraded Users and Downgraded Users by Month

📊 **Slicers:**

* Platform
* Language
* Content Type

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**Inside Points:**

* Compare content volume across Liocinema and Jotstar.
* See which genres have the highest content share.
* Measure user engagement by platform.
* Track monthly upgrade and downgrade patterns to understand subscription shifts.

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**3. Subscriber Analysis 👥**

**Objective:**  
This page shows subscriber distribution by demographics, subscription plans, and device types, while tracking monthly subscription growth to highlight areas for acquisition and retention improvement.

📊 **KPI’s:**

* Active Users
* Paid Users
* Active Rate (%)
* Upgrade Rate (%)
* Inactive Users

📊 **Visuals:**

* Subscribers by Age Group
* Total Users by Device Type
* Total Users by Subscription Plan (Pie)
* Monthly Subscription Growth

📊 **Slicers:**

* Platform
* Subscription Plan
* City Tier

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**Inside Points:**

* See user distribution by age group.
* Compare total users across device types.
* Measure plan-wise user share.
* Track month-by-month subscription growth trends.

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**4. Content Consumption Analysis 📺**

**Objective:**  
This page tracks watch time by day, device, and platform to understand viewing patterns and optimize content delivery for higher engagement.

📊 **KPI’s:**

* Downgrade Rate (%)
* Downgraded Users
* Upgraded Users
* Upgrade / Downgrade Rate (%)
* Total Watch Time

📊 **Visuals:**

* Watch Time by Day and Device Type (Matrix)
* Watch Time by Device Type (Bar Chart)
* Platform Watch Time Distribution (Pie)
* Daily Watch Time Pattern (Line Chart)

📊 **Slicers:**

* Platform
* Month
* Device Type

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**Inside Points:**

* Track daily watch time across devices.
* Identify which devices have the highest total watch time.
* See which platform contributes more to overall watch time.
* Spot peak and low watch days to adjust content scheduling.

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**Summary of Analysis**

* Checked total, active, inactive, and paid users across both platforms.
* Compared content by platform, genre, and type.
* Reviewed subscription plan performance and monthly upgrade/downgrade trends.
* Analyzed subscribers by age group, device type, and city tier.
* Studied watch time by day, device, and platform to find viewing patterns.

**Key Insights**

* 39% of users are inactive – big chance to re-engage.
* Premium/VIP users are more active than Free/Basic users.
* Jotstar has higher active rates than Liocinema.
* Watch time is highest on mobile and certain weekdays.
* Upgrade/downgrade rates change monthly, likely due to content releases or offers.

**Suggestions**

* Run campaigns to bring back inactive users.
* Upsell Free/Basic users to Premium with offers.
* Use Jotstar’s best practices to improve Liocinema.
* Release new content on peak watch days.
* Track upgrade/downgrade changes to spot trends early.

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