Team ID: PNT2025TMID14364

1. INTRODUCTION

1.1. Project Overview

The iRevolution project aims to explore and analyze the impact of Apple's iPhone in the Indian market using powerful visual analytics. By leveraging Tableau, this project brings together multiple dimensions of iPhone-related data such as pricing, specifications, reviews, discounts, and market share to deliver clear, interactive dashboards. It transforms complex datasets into intuitive visual stories, helping stakeholders derive insights faster and more effectively.

1.2. Purpose

The main purpose of this project is to assist product analysts, marketing teams, and decision-makers in understanding how various iPhone models perform across different Indian regions and quarters. By using a data-driven approach, the project provides a platform to explore trends in sales, user preferences, and key performance indicators, thus encouraging smarter decision-making in pricing, promotion, and feature planning.

2. IDEATION PHASE

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2.1. Problem Statement

Problem Statement 1:



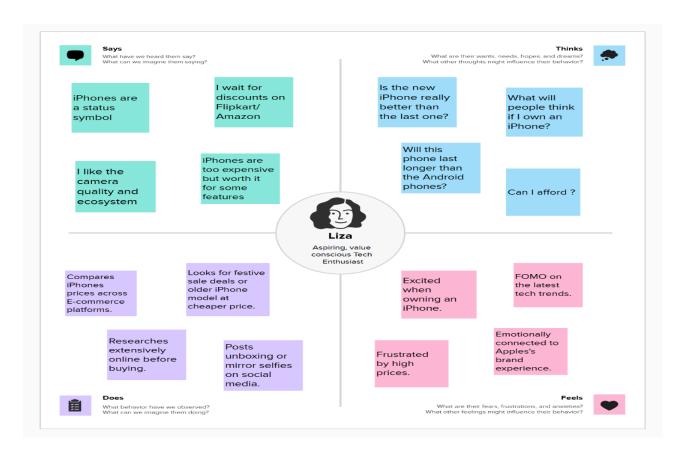
Problem Statement 2:



Problem Statement (PS)	I am	I'm trying to	But	Because	Which makes me feel
PS-1	Smartphone Buyer	Find a smartphone that balances brand value, features and cost	iPhones are expensive and it's hard to justify the extra price.	There is no clear, centralized comparison of long-term benefits.	Conflicted between aspiration and affordability.
PS-2	Apple Market Strategist or Analyst	Understand the iPhone's market Impact in India	Most data are global, fragmented or lacks Indiaspecific insights.	Research on India's unique consumer behaviour and economic factors is limited.	Uncertain about how to expand Apple's market share effectively.

2.2 Empathy Map Canvas

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2.3. Brainstorming

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Template



Brainstorm & idea prioritization

iRevolution: A data-driven exploration of Apple's iPhone impact in India using Tableau







Define your problem statement

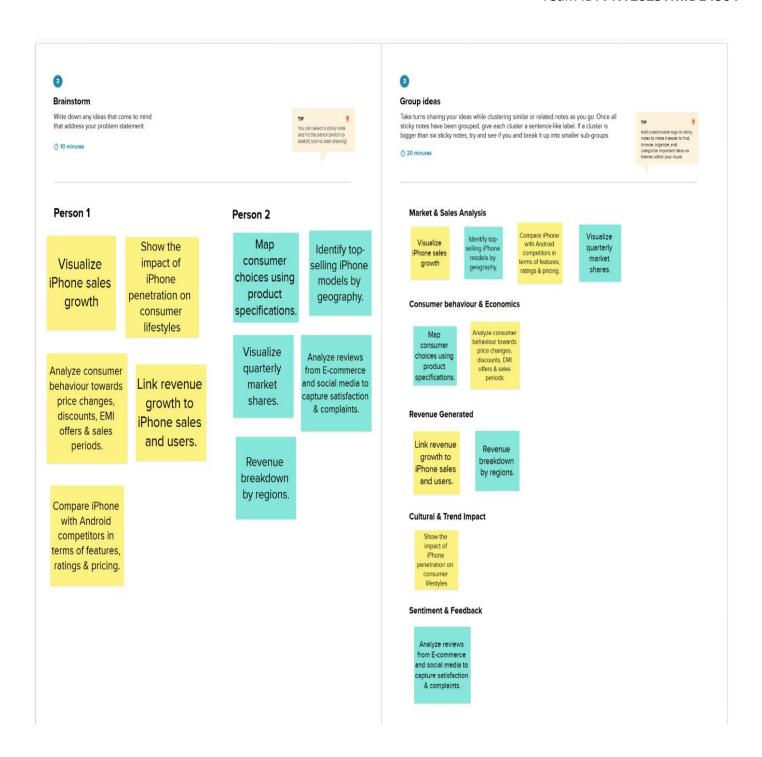
What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

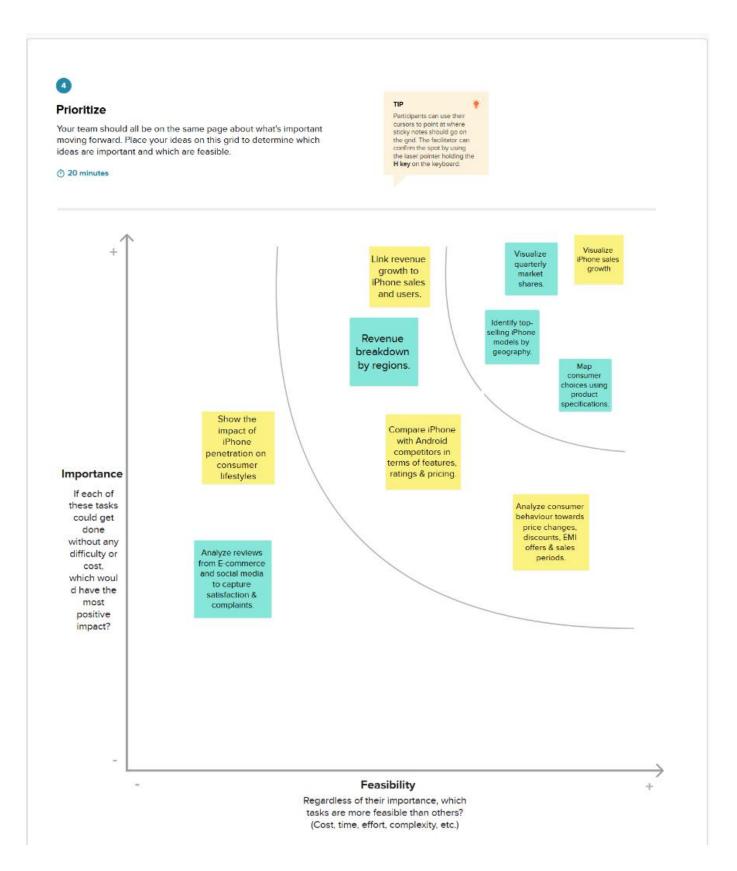
① 5 minutes

PROBLEM

How might we enable Apple's market strategies to gain actionable, Indiaspecific insights into iPhone market penetration, consumer behaviour and social-economic impact, so they can design better growth strategies?







- 3. REQUIREMENT ANALYSIS
 - 3.1. Customer Journey Map

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	Scenario: An Indian consumer's journey from discovering to using an iPhone	Entice How does someone become ewere of this service?	Enter What do people experience as they begin the process?	Engage In the core moments in the process, what happens?	Exit What do people typically experience as the process finishes?	Extend What happens after the experience is over?
***	Experience steps What does the person (or people) at the center of this scenario spically experience in each step?	Sees IPhone ads on TV/ Notices friends using Social media IPhones	Compaers prices online Checks Flipkarl Amazon reviews	Sels up iPhone Uses camera, ICloud,Facetime,etc.	Faces slowdown or Considers upgrading battery decline	Buys new Phone Refers brand to friends
*	Interactions What interactions do they have at each step along the way? • People: Who do they see or talk to? • Places: Where are they?	People: Places You'llube, Friends influencers sales Intsegrem, Flipkart retail reps stores	People: Salesperson, Places: Amazon, online reviewers Reliance Digital,Flipkart	People: Apple Support, Place: Settings App friends for setup help Store, (Cloud	People: Service centre Places: Apple Store, staff, buyers OLX, Flipkart	People: Friends, Apple Places: Apple community reps forums, supports app
<u>*</u> *	Goals & motivations At each slep, what is a person's primary goal or motivation? ("Help me" or "Help me avoid")	I want to own a and tony-listing premium phone stand out	I want a secure and Help me find the best Durable device value iPhone	I want great camera Stay connected and and security productive	Should I upgrade or Can I sell this at good Repail? price?	Stay in the Apple Keep my data and apps Ecosystem secure
•	Positive moments What steps does a typical person find enjoyable, productive, fun, motivating, deleghtful, or exciting?	Watching aesthetic First Hand Experience Phone content at Apple Store	Discovering discounts or sale offers Easy EMI calculations	iOS interface Camera Performance smoothness	Good resale value for recent models Trade in availability	Ecosystem continuity Long-term trust in traind
8	Negative moments What steps does a typical preson find flustrating, contusing, angeling, costly, or time consuming?	Price Shock Incertainty about resale value	High import duties No charger in the box	Limited Customization Lack of expandable storage	Battery performance decline High repair costs	Difficulty in transferring Accessories costs more data to android than alternative
-\	Areas of opportunity How might we make each step better? What tidess do we lave? What have others suggested?	Showcase affordable Promote EMI offers older models clearly	Bundle Offers with Transparent trade-in accessories process	Offer regional language Affordable AppCare in tutorial India	Clear Upgrade Plans Loyalty Programs	Refferal reward program Affordable cross-device sync

3.2 Solution requirement

Functional Requirements:

Following are the functional requirements of the proposed solution.

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FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Interactive KPI Dashboard	Display revenue, units sold, active users and discount percentage filtered by year and region.
FR-2	Model & Specification Analytics	Allows users to compare iPhone models based on features like display size, battery type, RAM and camera.
FR-3	Quarterly Market Share Visualization	Displays brand-wise share in India across four quarters using Donut and Bar charts.
FR-4	Pricing Pattern Insights	Visualizes average price distribution and discount trends by feature and battery type.
FR-5	Geo-Map Representation	Shows Apple's regional performance across Indian states.
FR-6	Story-based Dashboard Navigation	Sequential story view explaining Apple's performance journey with narrative captions.

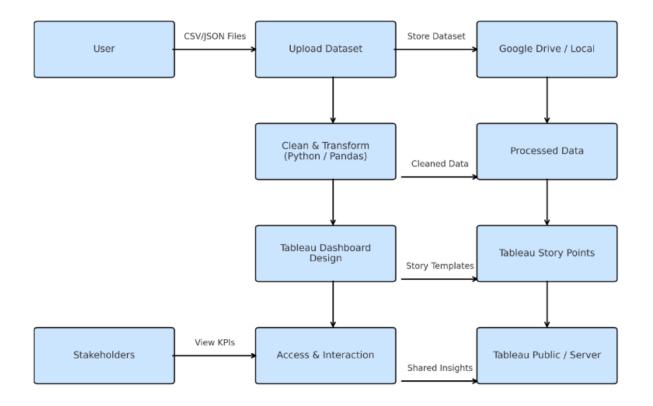
Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Dashboards are user-friendly, intuitive and
		responsive on various devices.
NFR-2	Security	Ensuring all uploaded datasets are stored locally or
		in secure cloud storage with restricted access.
NFR-3	Reliability	Dashboards should display data consistently without
		visual or data loss or misrepresentation.
NFR-4	Performance	Dashboards must load within 2-4 seconds even with
		filters applied.
NFR-5	Availability	Dashboards must be available via Tableau
		Public/Server with 99.9% uptime.
NFR-6	Scalability	The framework should support future data addition
		(e.g. new models or regions).

3.3 Data Flow Diagram

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3.4 Technology Stack

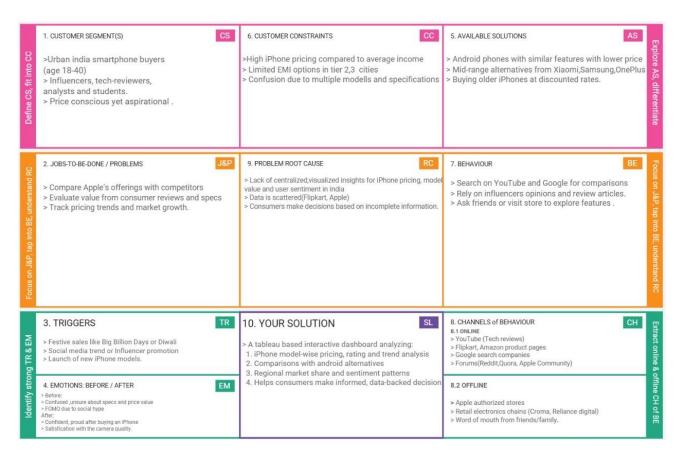
S. No.	Component	Tools/Technology	Purpose
1	Data Source	CSV, xlsx, JSON files	Raw smartphone sales and specification data.
2	Data Processing	Tableau Prep Builder	Handling missing values and data inconsistencies.
3	Visualization	Tableau Desktop	Creating Interactive Dashboard and Stories.
4	Storage	Google Drive / Local	Storing Raw and Processed Datasets.
5	Collaboration	Google Docs	Team Communication and report writing.

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6 Deployment	Tableau Public / Server	Dashboards sharing and
		stakeholder access.

4. Project Design

4.1. Proposed Solution Fit



4.2. Proposed Solution

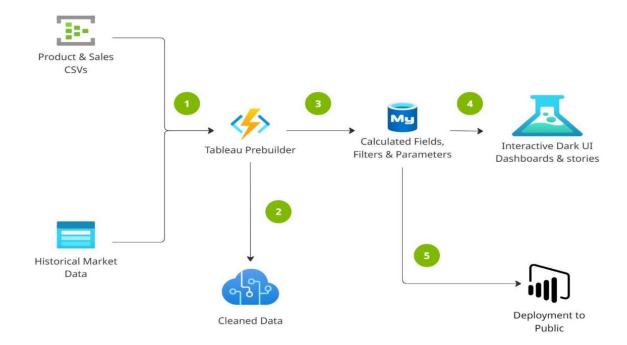
S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	How might we enable Apple's market strategies to gain actionable, India-specific insights into iPhone market penetration, consumer behaviour and social-economic impact, so they can design better growth strategies.
2.	Idea / Solution description	We're building an easy-to-use, interactive Tableau dashboard that brings together sales data, model-wise comparisons, user reviews,

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3.	Novelty / Uniqueness	 and pricing trends for iPhones in India. This tool will help users visually explore iPhone insights, compare with other brands, and make smarter, data-backed decisions all in one place. It's a one-stop visual platform for understanding iPhone performance in India Combines sales data, pricing, reviews, and model popularity, all under one dashboard Simplifies complex information into interactive charts, helping both tech and non-tech users Useful for consumers, analysts, students and smartphone sellers alike.
4.	Social Impact / Customer Satisfaction	 Empowers users to make informed buying decisions and avoid impulse purchases. Builds trust by reducing confusion and bringing transparency to product value. Helps middle-income and first-time iPhone buyers understand what they're really paying for. Makes smartphone data accessible to everyone, not just analysts.
5.	Business Model (Revenue Model)	 Start free: open access to the core dashboard. Offer premium features like deep insights, downloadable reports, and model comparisons. Partner with retailers or blogs for affiliate insights. Long-term potential to license data tools to smartphone companies or educational platforms.
6.	Scalability of the Solution	 Can easily scale to include other brands (Samsung, OnePlus, etc.) or new Apple products (iPads, Macs). Can expand regionally or globally with more datasets.

	 With the right UI, this could evolve into a full web/mobile app for tech shoppers. New data sources (social media trends, pricing predictions) can be added over time.
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4.3. Solution Architecture



5. PROJECT PLANNING & SCHEDULING

5.1. Project Planning

S.No.	Parameter	Description
1.	Problem Statement (Problem to be	How might we enable Apple's market strategies
	solved)	to gain actionable, India-specific insights into
		iPhone market penetration, consumer
		behaviour and social-economic impact, so they
		can design better growth strategies.

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2.	Idea / Solution description	We're building an easy-to-use, interactive Tableau dashboard that brings together sales data, model-wise comparisons, user reviews, and pricing trends for iPhones in India. This tool will help users visually explore iPhone insights, compare with other brands, and make smarter, data-backed decisions all in one place.
3.	Novelty / Uniqueness	 It's a one-stop visual platform for understanding iPhone performance in India Combines sales data, pricing, reviews, and model popularity, all under one dashboard Simplifies complex information into interactive charts, helping both tech and non-tech users Useful for consumers, analysts, students and smartphone sellers alike.
4.	Social Impact / Customer Satisfaction	 Empowers users to make informed buying decisions and avoid impulse purchases. Builds trust by reducing confusion and bringing transparency to product value. Helps middle-income and first-time iPhone buyers understand what they're really paying for. Makes smartphone data accessible to everyone, not just analysts.
5.	Business Model (Revenue Model)	 Start free: open access to the core dashboard. Offer premium features like deep insights, downloadable reports, and model comparisons. Partner with retailers or blogs for affiliate insights. Long-term potential to license data tools to smartphone companies or educational platforms.

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Scalability of the Solution	 Can easily scale to include other brands (Samsung, OnePlus, etc.) or new Apple products (iPads, Macs). Can expand regionally or globally with more datasets. With the right UI, this could evolve into a full web/mobile app for tech shoppers. New data sources (social media trends, pricing predictions) can be added over time.

6. FUNCTIONAL & PERFORMANCE TESTING

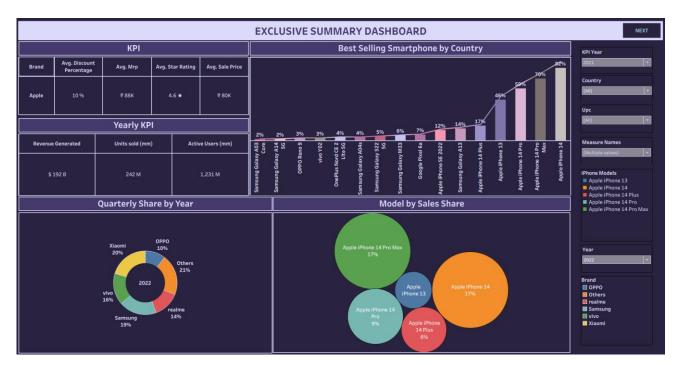
6.1. Performance Testing

S.No.	Parameter	Screenshot / Values
1.	Data Rendered	Rendered from cleaned CSV files with Apple iPhone specifications, regional sales, quarterly performance,
		annual revenues, etc. Loaded ~ 800+ rows.
2.	Data Preprocessing	Handling NULL values, feature mappings applied for battery type, standardized formats, removing data inconsistencies,
		display size, model grouping and quarter classifications.
3.	Utilization of Filters	Applied Tableau Filters for Brand, Year, RAM, Display size, Battery Type and Quarter. All responsive under 2-3 seconds.
4.	Calculation fields Used	 Average Price by Spec Discount Percentage Revenue Trends by Year Brand-wise Quarterly Share KPI Metrics
5.	Dashboard design	No of Visualizations / Graphs – 4 Dashboards
6	Story Design	No of Visualizations / Graphs – 2 stories with 4 story points each

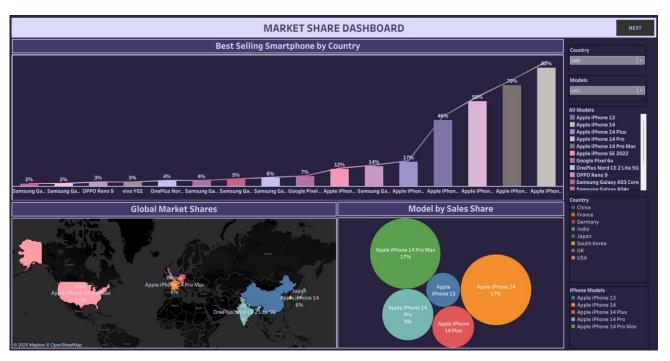
7. RESULTS

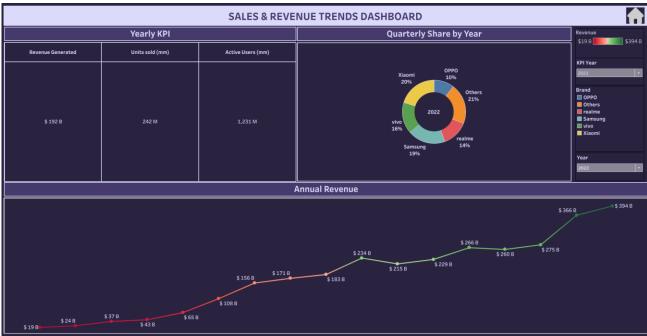
7.1. Output Screenshots

Dashboards:









Story 1 Outputs:

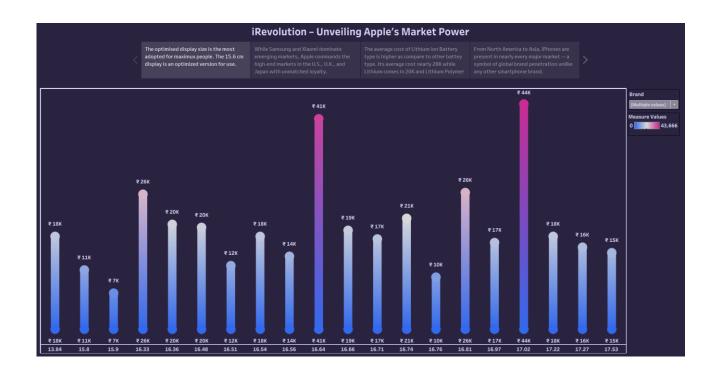


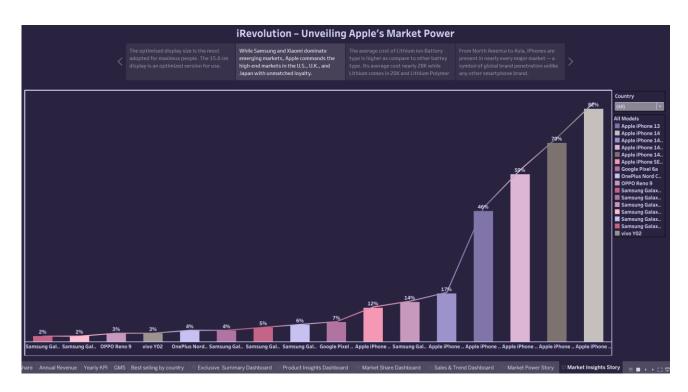






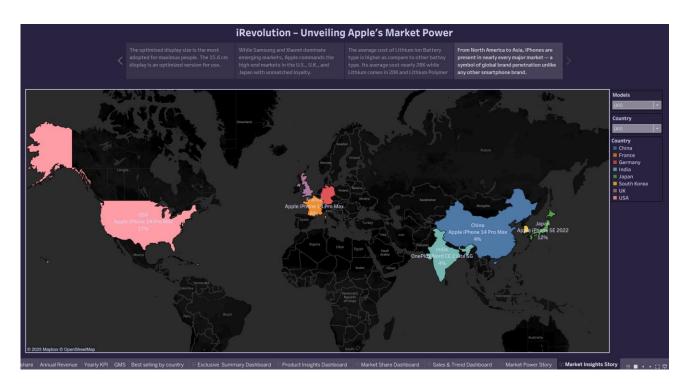
Story 2 Outputs:





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8. ADVANTAGES & DISADVANTAGES

Advantages:

- User- Friendly Dashboards: Intuitive interface
- **Reusable Framework:** The dashboard model can be reused for other smartphone brands or markets by simply updating the dataset.
- Time-Saving: Reduces the manual workload for analysts by providing ready-toexplore visualizations.
- Interactive Insights: Real-time filtering and data slicing allow users to extract exactly what they need without manual intervention.
- Data-Driven Decision Making: Helps strategists, marketers and executives make smarter, evidence-based decisions.

• Disadvantages:

- Platform Limitation: Tableau Public may limit some functionality such as real-time backend connection and publishing privacy.
- Static Structure in Story: While dashboards are interactives, Tableau stories have limited flexibility in dynamic narration.
- Dependence on Data Accuracy: Insights are only as good as the quality of input data: inaccurate or outdated datasets could mislead.

9. CONCLUSION

The iRevolution project successfully demonstrates how data visualization, combined with user-centered design, can drive meaningful insights into Apple's iPhone performance in India. By integrating sales, pricing, feature-based specs, and regional market data into interactive Tableau dashboards, the project not only simplifies complex analytics but also empowers decision-makers to act with confidence. This end-to-end effort—from ideation to deployment—shows the real-world value of design thinking and data storytelling in business intelligence.

10. FUTURE SCOPE

- **Multi-brand Integration:** Extend the current dashboard to include competitor analysis (e.g., Samsung, Xiaomi).
- **Real-Time Data Connection:** Integrate live data sources (APIs or Google Sheets) to keep the dashboards updated automatically.
- **Sentiment Analysis Layer:** Add customer feedback and review analysis to supplement numeric insights with qualitative data.
- Mobile Optimization: Redesign dashboards for optimal viewing on tablets and mobile devices.
- Al-Powered Forecasting: Use predictive analytics to project future sales, pricing trends, or regional performance.

11. APPENDIX

Dataset Link:

https://docs.google.com/spreadsheets/d/1p1ZWaYcEuFl5UNFcmNvpkXi3JnoHamut/edit?gid=1877446487#gid=1877446487

GitHub & Project Demo Link:

https://github.com/Ashish-kumar18/iRevolution-A-data-driven-exploration-of-Apple-s-iPhone-impact-in-India-using-Tableau

Demo URL:

https://drive.google.com/file/d/1MityMRTEEh0rf7xGf5daVNcK_iM_M4ZJ/view?usp=sharing

Tableau Public Link:

https://public.tableau.com/views/SmartbridgeProjectIRD/ExclusiveSummaryDashboard?:language=en-US&:sid=&:redirect=auth&:display count=n&:origin=viz share link

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Project Doc Link:

https://workdrive.zohoexternal.com/writer/open/8xm1lba247ec628d84d2c95ba8a34441c7313?authId=%7B%22linkId%22%3A%225k2wApaIYk5-LYmIU%22%7D

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