PROJECT REPORT

Team id- LTVIP2026MIDS79888

1. INTRODUCTION

1.1 Project Overview

Measuring the Pulse of Prosperity is a data storytelling initiative focused on analyzing economic freedom across countries and regions. Using Tableau as the primary visualization platform, this project brings together diverse indicators—ranging from regulatory efficiency and market openness to government integrity and fiscal health—and transforms them into a unified, interactive dashboard. The goal is to empower decision-makers and researchers with visually intuitive insights that reveal not just how free an economy is, but why it matters.

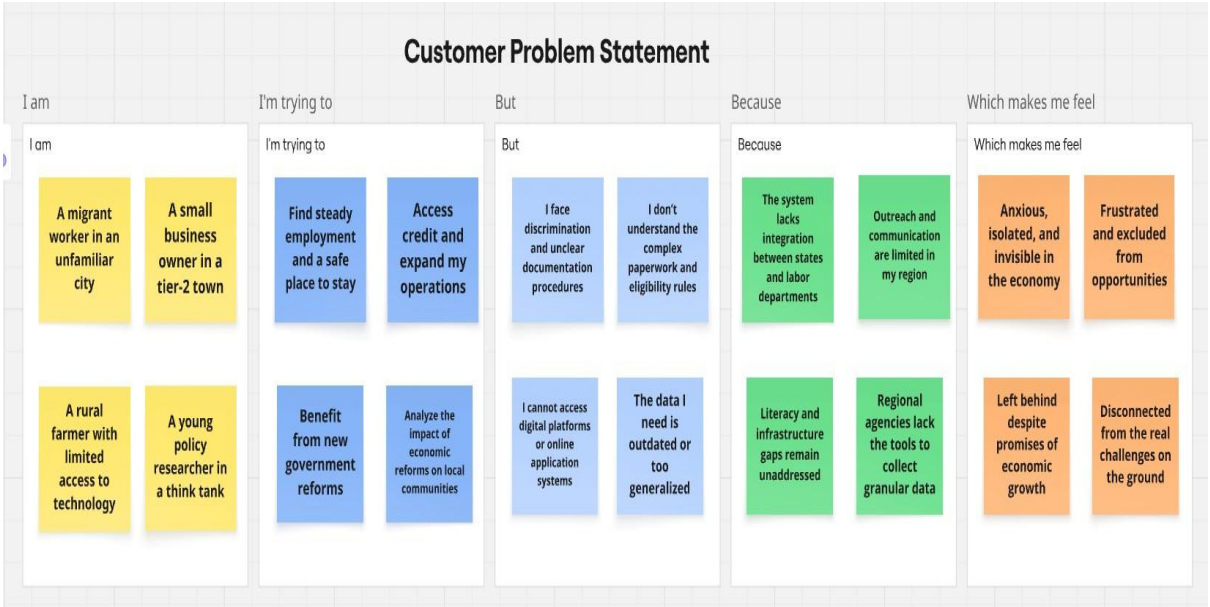
1.2 Purpose

This dashboard is designed to support policymakers, analysts, researchers, and civil society organizations in understanding the multidimensional nature of economic freedom. It enables exploration of historical trends, performance gaps, and regional disparities. By spotlighting behavioral patterns and policy correlations, it aims to foster data-informed decisions around economic reforms and sustainable development goals.

2.IDEATION PHASE

2.1 Problem Statement

Economic freedom metrics are scattered across sources and often delivered in static formats, making it difficult for stakeholders to compare, analyze, or derive actionable insights quickly. A lack of usercentered design in existing tools limits accessibility for non-technical audiences.



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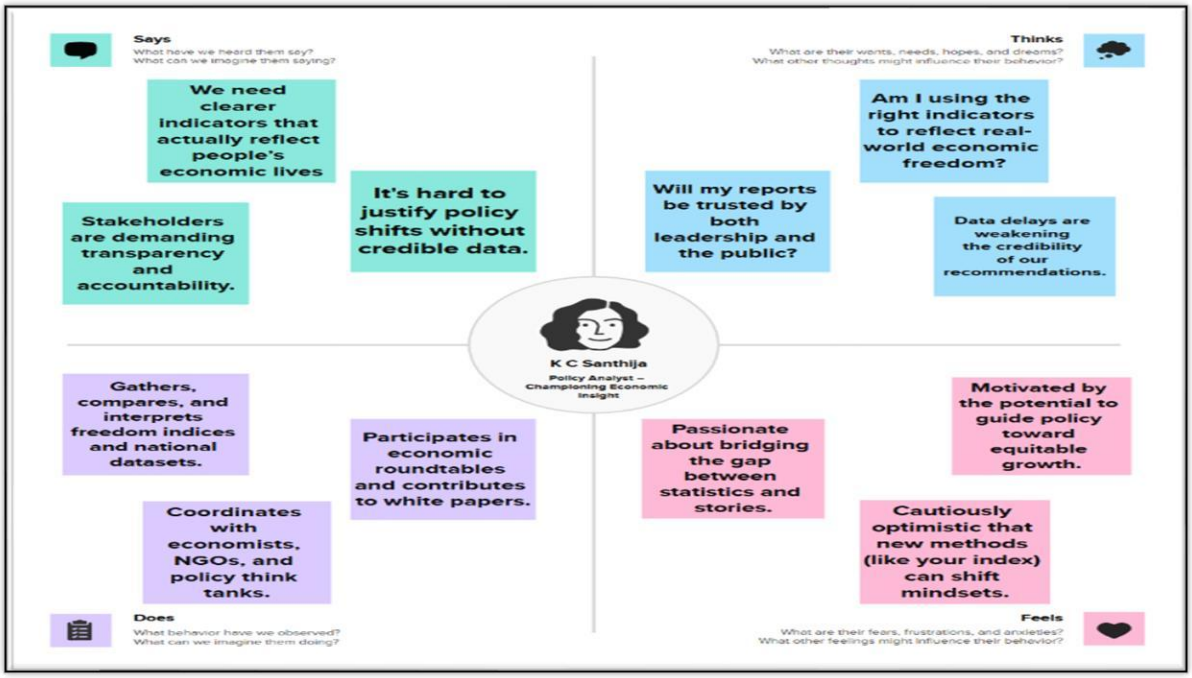
Problem Statement	I am	I'm trying to	But	Because	Which makes me feel
PS-1	A small business owner in a tier-2 town	Scale my enterprise and gain financial access	Regulatory procedures are confusing and hard to navigate	Government support programs are poorly communicated and localized	Frustrated and excluded from economic participation
PS-2	A migrant worker in an unfamiliar city	Find steady employment and a safe place to stay	I face discrimination and unclear documentation procedures	The system lacks integration between states and labor departments	Anxious, isolated, and invisible in the economy
PS-3	A rural farmer with limited access to technology	Benefit from new government reforms	I cannot access digital platforms or online application systems	Literacy and infrastructure gaps remain unaddressed	Left behind despite promises of economic growth
PS-4	A young policy researcher in a think tank	Analyze the impact of economic reforms on local communities	The data I need is outdated or too generalized	Regional agencies lack the tools to collect granular data	Disconnected from the real challenges on the ground

2.2 Empathy Map Canvas



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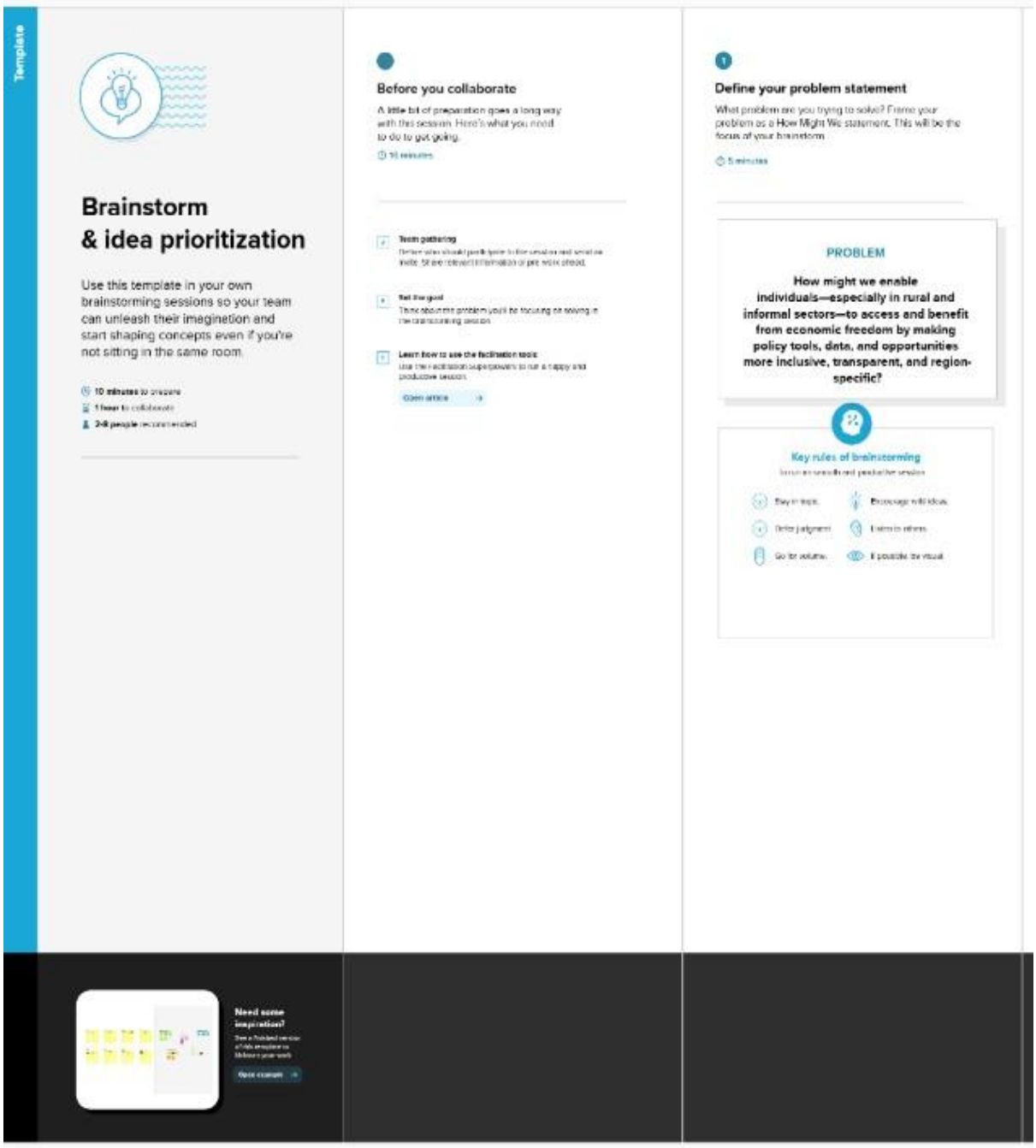
2.3 Brainstorming



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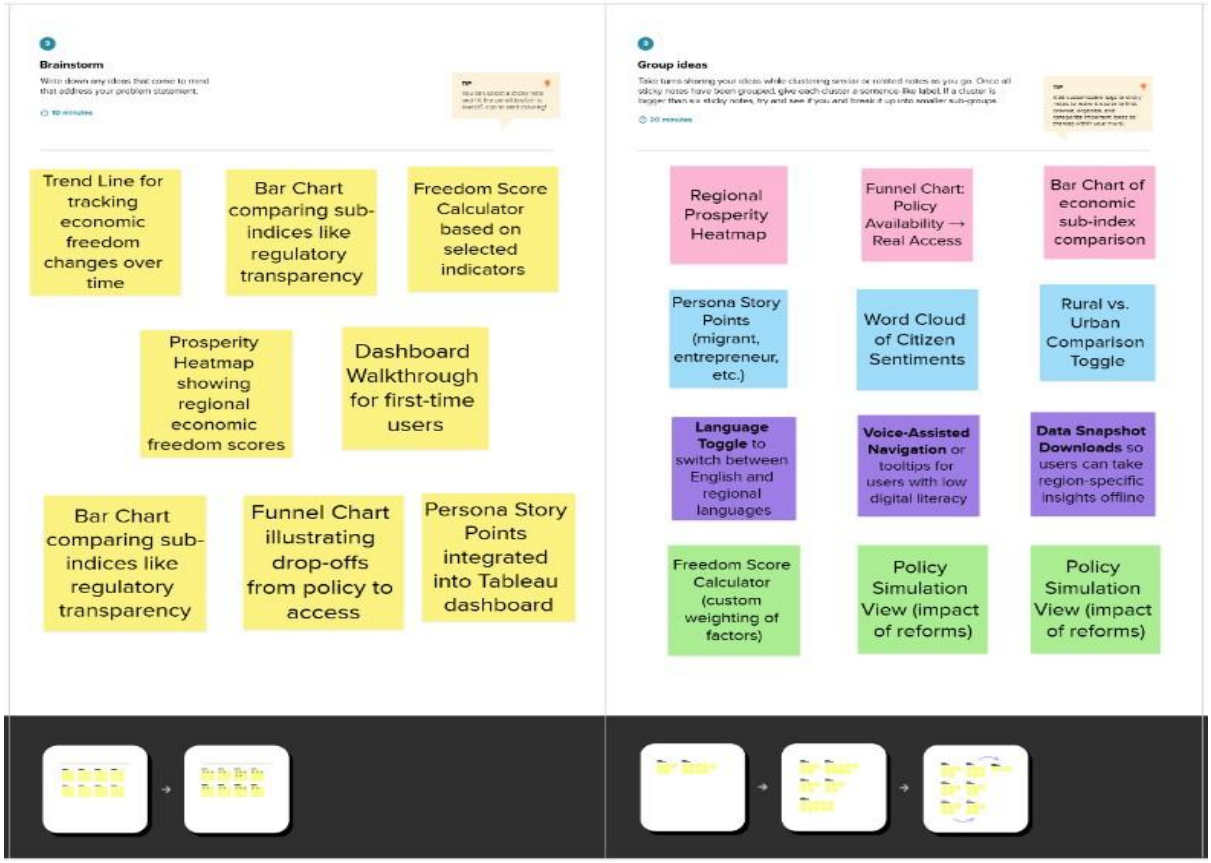

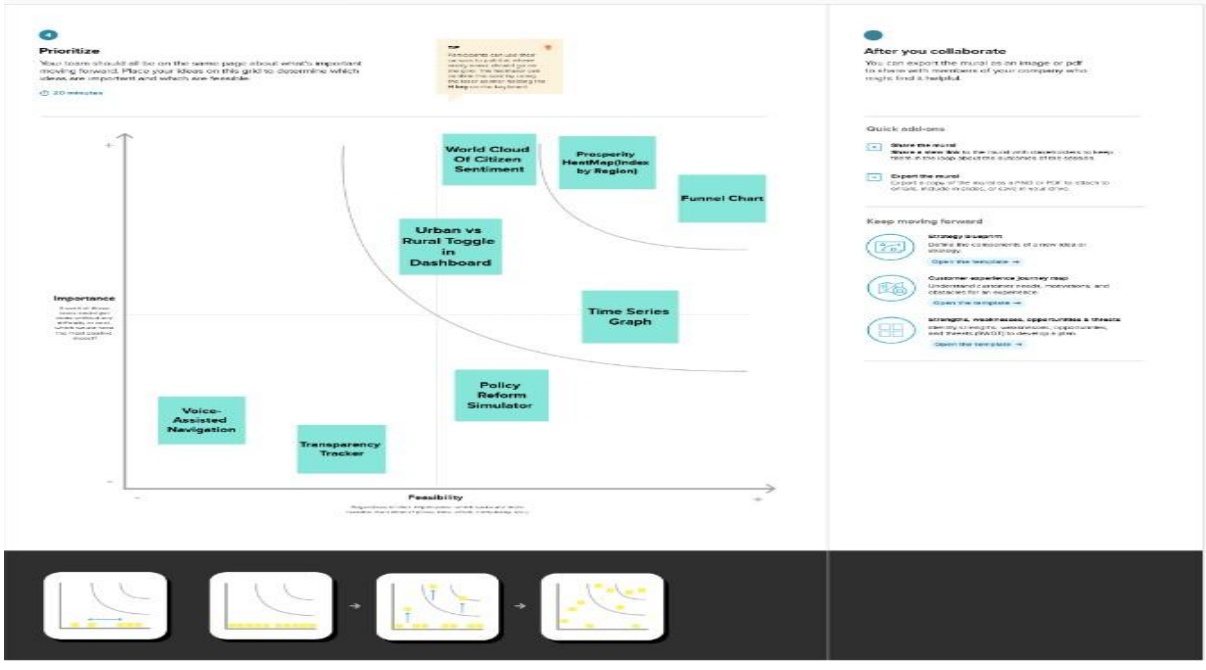

Team:santhija,Deepika,snehalatha,Sravanthi

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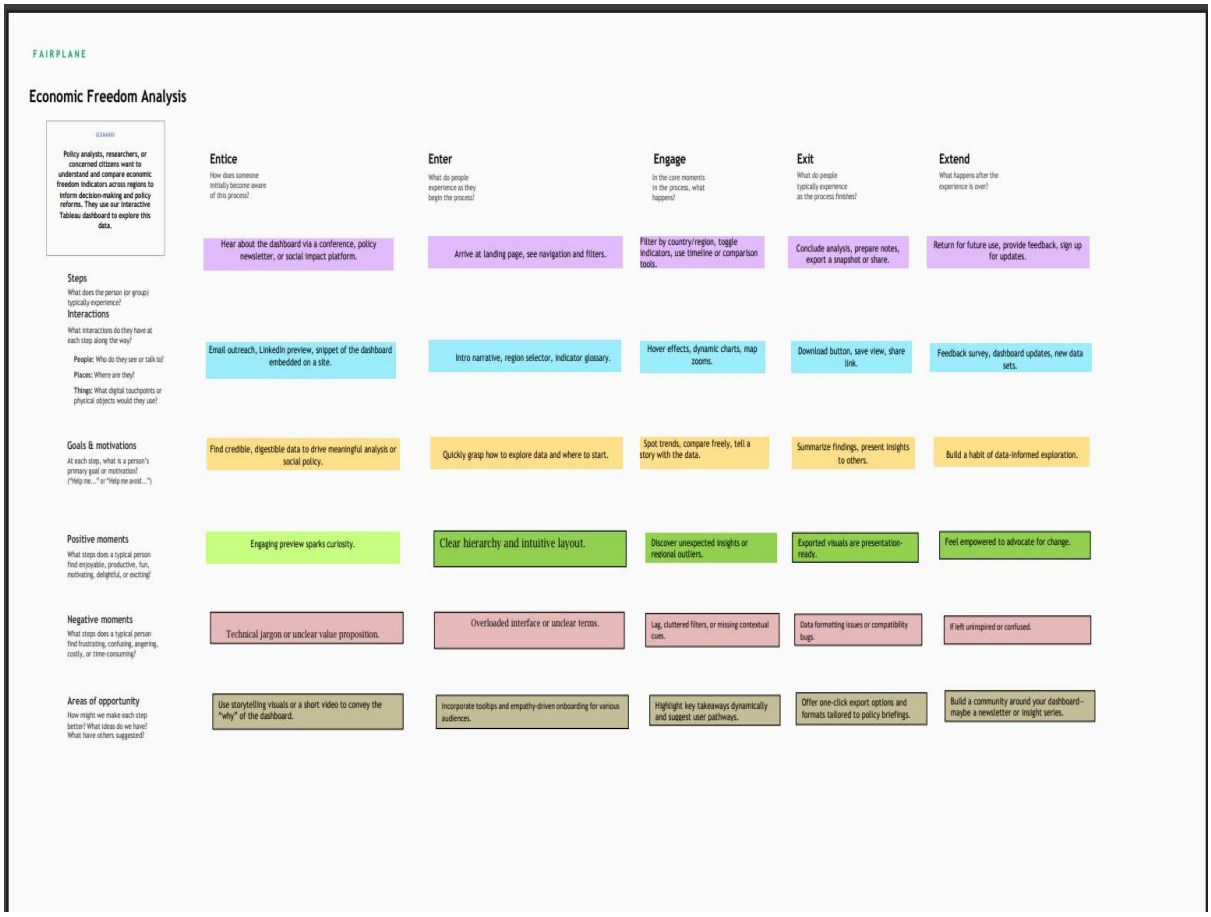
3.REQUIREMENT ANALYSIS

This phase identifies what the dashboard must achieve to address user needs effectively. Functional requirements include data ingestion, filtering, visual storytelling, and export capabilities. Nonfunctional requirements ensure responsiveness, accessibility, and fast performance. System requirements focus on tools like Tableau Desktop, Tableau Prep, and cloud storage. 3.1 Customer Journey Map



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3.2 Solution Requirement

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	**User Registration**	*User Registration* Users can register through three options: a standard registration form, Gmail authentication, or LinkedIn login.
FR-2	**User Confirmation**	Once registered, users confirm their accounts either through an email verification link or via a one-time password (OTP) sent to their registered contact.
FR-3	**Interactive Dashboards**	The application offers an intuitive dashboard to view and explore economic freedom indicators. Users can apply filters based on country, year, or policy category for tailored insights.
FR-4	***Policy Comparison Tools***	Users can compare multiple countries across selected indicators and view side-by-side rankings or performance gaps.
FR-5	**Storytelling Walkthrough**	A guided dashboard experience presents high-level trends and insights using Tableau's story feature, making the data more accessible and impactful.
FR-6	**Data Upload (Admin Only)**	Administrators can upload new datasets, which automatically initiate backend recalculations to refresh index values and dashboards.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Features a clean dark-mode UI, tooltips, intuitive filter panels, and readable fonts to reduce user fatigue and confusion.
NFR-2	**Security**	Authentication is handled through OAuth2; all traffic is encrypted (HTTPS), and role-based access controls are in place along with activity logs.
NFR-3	**Availability**	The platform targets 99.9% uptime using cloud redundancy and failover mechanisms to ensure continuous access.
NFR-4	**Performance**	Dashboards are optimized to load in under 5 seconds, even with complex filters or calculations enabled.
NFR-5	**Data Accuracy**	Every index value and ranking is traceable to its source data and goes through validation checks before being published.
NFR-6	**Scalability**	The system is designed to scale for additional metrics, machine learning modules, and broader geographic coverage without major architectural changes.

3.3 Data Flow Diagram

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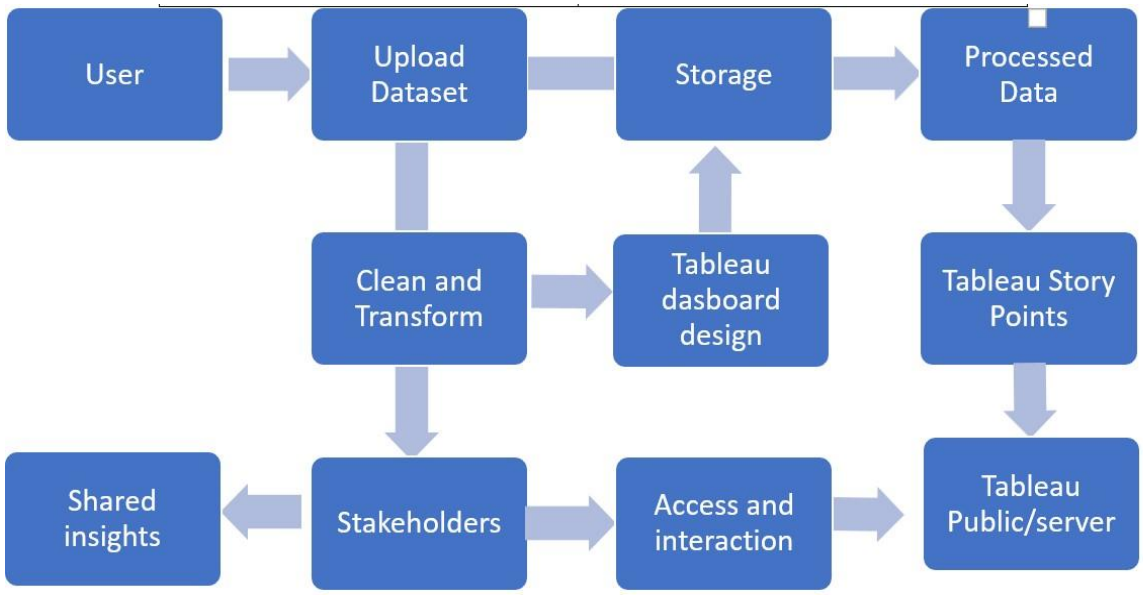

3.4 Technology Stack

Technology Stack for "Index of Economic Freedom Analysis".

Component	Tool or Technology	Purpose
Data Source	**CSV, Excel, World Bank API**	**Collect economic indicators, regional metadata**
Visualization	**Tableau Desktop or Public**	**Create interactive dashboards and economic freedom index**
Storage	**Google Drive or AWS S3**	**Stored Raw data, Processed Results, and visual assets**
Collaboration	**Google Docs, Slack, Notion**	**Share insights notes empathy map with your team**
Deployment	**Tableau Public, Embedded Tableau**	**Publish dashboards for stakeholder engagement**

4. PROJECT DESIGN

4.1 Problem Solution Fit

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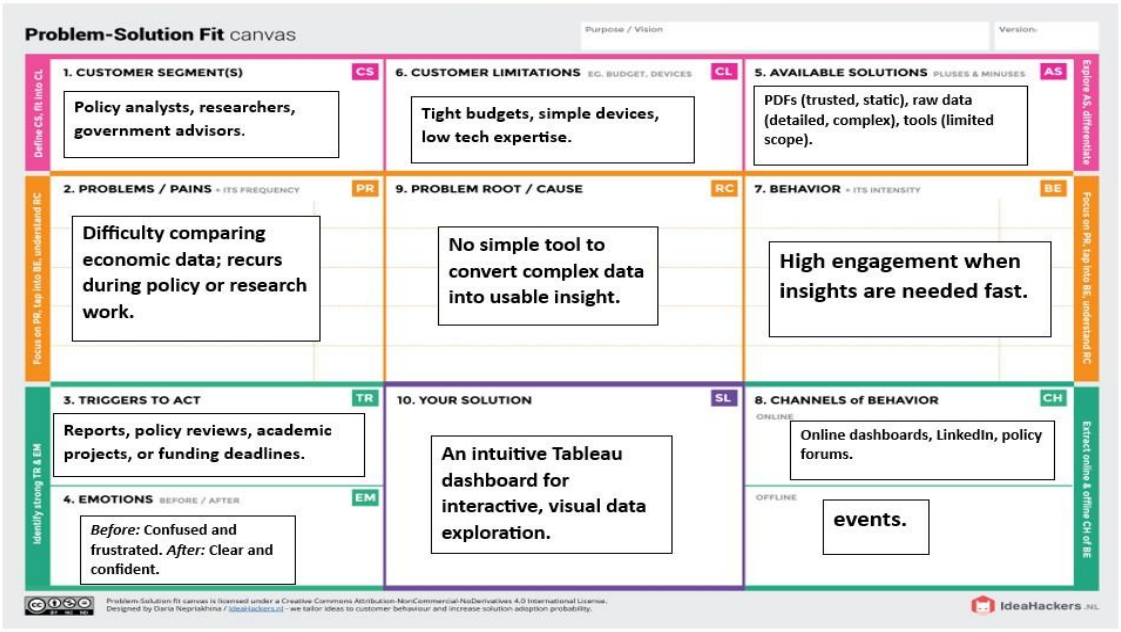

4.2 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Stakeholders struggle to access, interpret, and compare economic freedom data across regions due to fragmented sources and static reports, limiting their ability to make informed decisions.
2.	Idea / Solution description	An interactive Tableau dashboard that consolidates key economic freedom indicators, enabling users to explore trends, compare countries, and extract insights through filterable visuals and intuitive storytelling.
3.	Novelty / Uniqueness	Unlike traditional reports or indexes, this solution emphasizes dynamic, user-driven exploration. It integrates visual storytelling with behavioral interactivity, making complex data digestible for both technical and non-technical users.
4.	Social Impact / Customer Satisfaction	The dashboard empowers policymakers, researchers, and development institutions to make evidence-based decisions.
5.	Business Model (Revenue Model)	Free access for educational and government use; potential monetization through premium analytics, consulting partnerships, or licensing to research institutions and think tanks.
6.	Scalability of the Solution	Highly scalable—can integrate additional indicators, expand regionally or globally, and embed in policy portals, academic hubs, or public data platforms.

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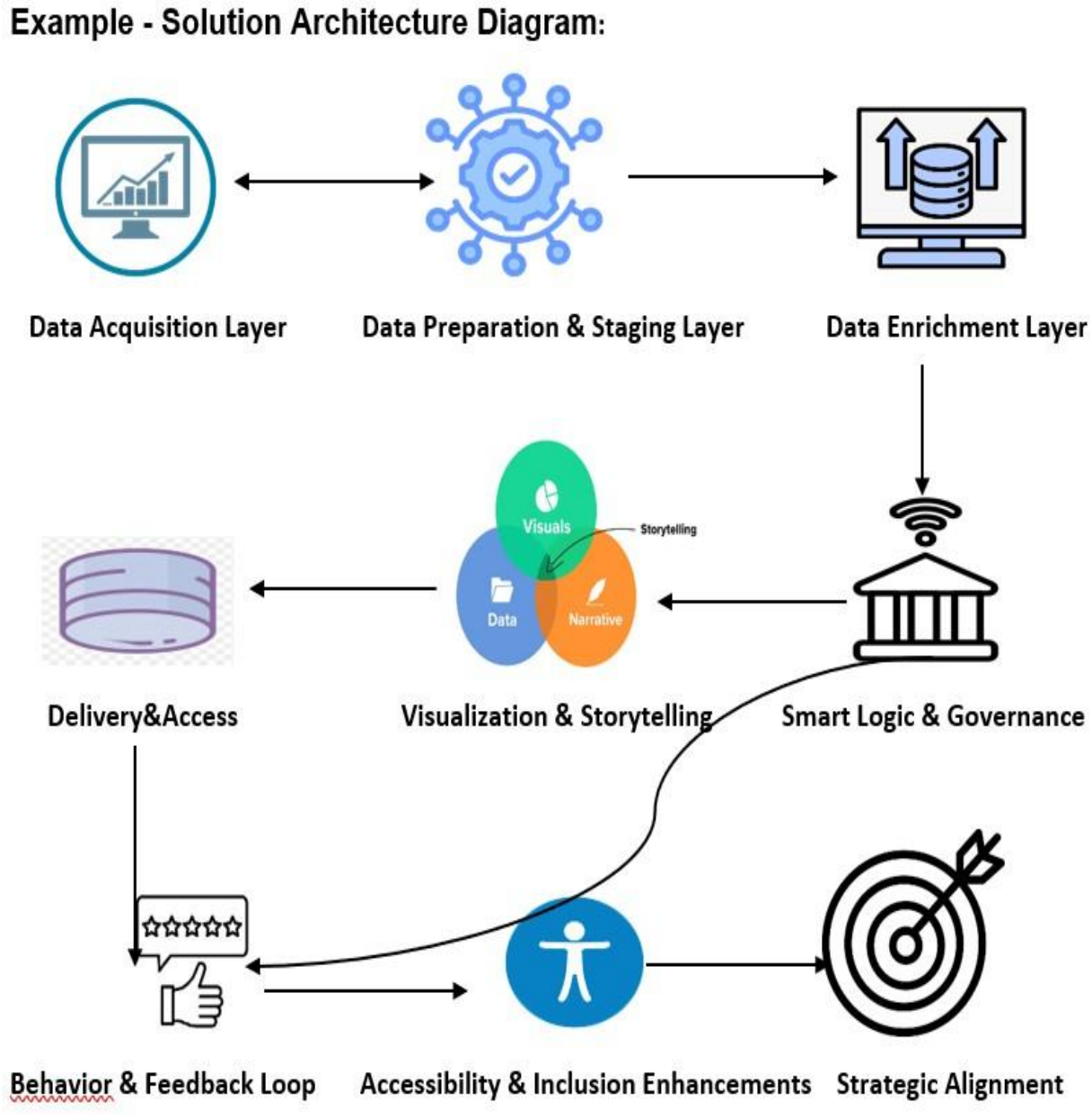
4.3 Solution Architecture



PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Team:santhija,Deepika,snehalatha,Sravanthi

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Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Integration	USN-1	As a developer, I can connect Tableau to the processed economic data file.	2	High	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint-1	Data Preprocessing	USN-2	As an analyst, I can clean and normalize datasets for regional/yearly comparison.	3	High	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint-2	Dashboard Filters	USN-3	As a user, I can filter visuals by region, year, and indicator category.	2	High	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint 2	Metrics Design	USN-4	As an analyst, I can create ranking and score change calculations.	2	Medium	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint-3	Dashboard Layout	USN-5	As a user, I can view dashboards with KPIs, graphs, and intuitive navigation.	3	High	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint-3	Visualization Build	USN-6	As a user, I can interact with a map, bar graph, and line chart.	4	High	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint-4	Story Integration	USN-7	As a stakeholder, I can navigate a story guide that explains key insights.	3	Medium	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi
Sprint-4	Publishing	USN-8	As an admin, I can publish and share the dashboard with users.	1	Medium	Kandati Chenchu Santhija N C Deepika Kalavalapudi Snehalatha Jadala Sravanthi

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	1 Day	28 June 2025	28 June 2025	20	28 June 2025
Sprint-2	20	1 Day	28 June 2025	28 June 2025	20	28 June 2025
Sprint-3	20	1 Day	28 June 2025	28 June 2025	20	28 June 2025
Sprint-4	20	1 Day	28 June 2025	28 June 2025	20	29 June 2025
Sprint-5	20	1 Day	28 June 2025	28 June 2025	20	29 June 2025
Sprint-6	20	1 Day	28 June 2025	28 June 2025	20	30 June 2025
Sprint-7	20	1 Day	28 June 2025	28 June 2025	20	30 June 2025

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

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S.No.	Parameter	Screenshot / Values
1.	Data Rendered	The index_of_economic_freedom.csv dataset has 184 rows and 32 columns, capturing key indicators that measure the economic prosperity of different countries. Ask ChatGPT
2.	Data Preprocessing	Dataset already included country names, we found the country ID redundant and removed it. Additionally, a null value was found in the FDI inflow column, which we replaced with 0 to maintain consistency in the data
3.	Utilization of Filters	**Filters:** 1.Region 2.country Name 3.Measure Names **Parameters:** 1.Top N 2.Goverment_Size parameter 3.Rule_of_law parameter 4.Regulatory Efficiency
4.	Calculation fields Used	**1. Government Size Score** ([Govt Spending] + [Tax Burden] + [Fiscal Health]) / 3 **2. Government_Size metric** IF [Government_Size parameter] = "Government Spending" THEN [Govt Spending] ELSEIF [Government_Size parameter] = "Tax Burden" THEN [Tax Burden] ELSEIF [Government_Size parameter] = "Fiscal Health" THEN [Fiscal Health] ELSE ([Govt Spending] + [Tax Burden] + [Fiscal Health]) / 3 END
		3. Regulatory Efficiency Metric IF [Regulatory Efficiency Parameter] = "Business Freedom" THEN [Business Freedom] ELSEIF [Regulatory Efficiency Parameter] = "Labor Freedom" THEN [Labor Freedom] ELSEIF [Regulatory Efficiency Parameter] = "Monetary Freedom" THEN [Monetary Freedom] ELSE ([Business Freedom] + [Labor Freedom] + [Monetary Freedom]) / 3 END **4. Rule of Law score** ([Property Rights] + [Judical Effectiveness] + [Government Integrity]) / 3 **5. Rule_of_law metric** CASE [Rule_of_Law parameter] WHEN "Property Rights" THEN [Property Rights] WHEN "Judicial Effectiveness" THEN [Judical Effectiveness] WHEN "Government Integrity" THEN [Government Integrity] WHEN "Rule of Law Score" THEN ([Property Rights] + [Judical Effectiveness] + [Government Integrity]) / 3 END
5.	Dashboard design	No of Visualizations / Graphs – Dashboard 1: 

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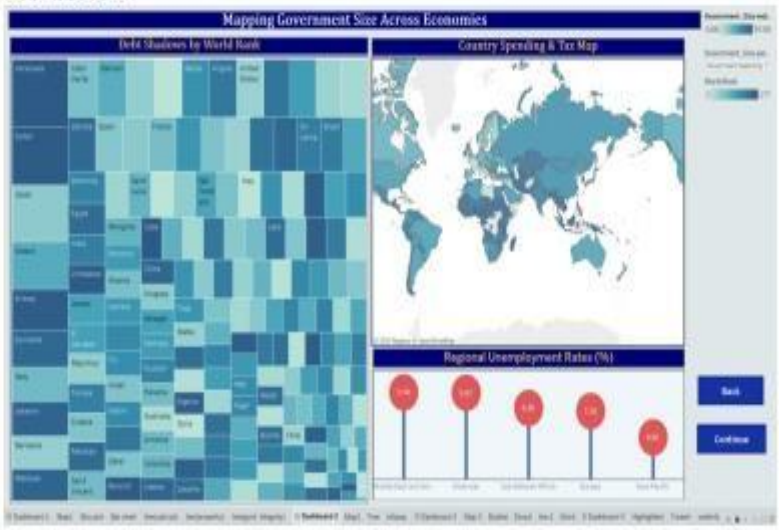
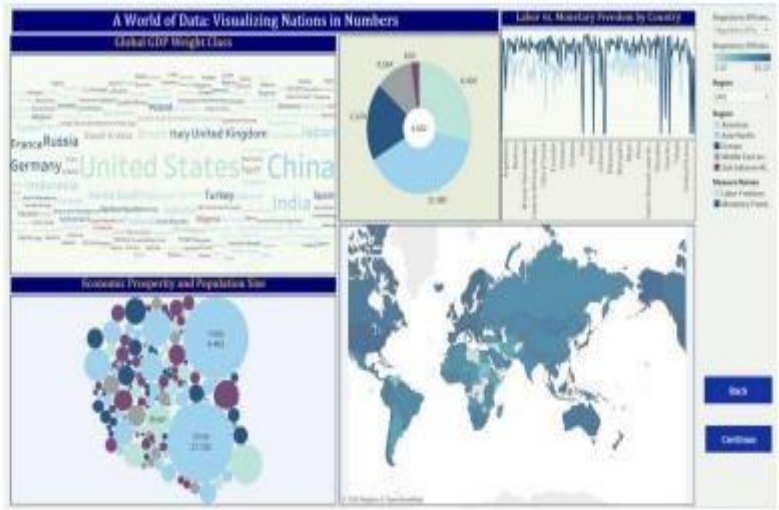
Dashboard 2:



Dashboard 3:



Dashboard 4:

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		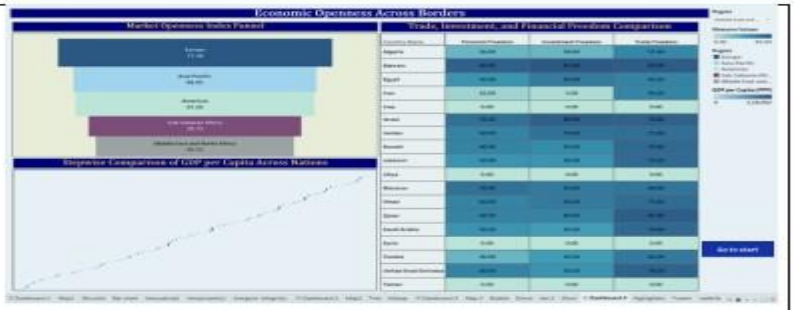
6	Story Design	No of Visualizations / Graphs – **Map chart 1:** A global view of Rule of Law based on Property Rights, Judicial Effectiveness, and Government Integrity **Map chart 2:** Overview of Government Size, highlighting spending levels, tax burden, and fiscal health across countries **Map Chart 3:** Illustrates Regulatory Efficiency through Business, Labor and Monetary Freedom scores across countries **Highlighted Table:** Open Market indicators, highlighting variations in trade, investment, and financial freedom across countries **Line chart:** Effect of Property rights, government integrity, judicial effectiveness on 2022 score **Bar chart** Finland leads in Rule of Law, with Europe dominating overall scores **Tree map:** Venezuela holds the highest public debt as a percentage of GDP globally **Word Chart:** The China leads the world with the highest GDP in billions in the year 2022 **Bubble chart:** China and India top the world with the highest population figures

		Lollipop Chart: The Middle East and North Africa region leads with the highest average public debt levels **Donut chart:** Asia-Pacific leads in GDP and FDI inflow, while Sub-Saharan Africa records the lowest **Funnel chart:** Europe ranks highest in Trade Freedom, while the Middle East and North Africa score the lowest **Waterfall chart:** The waterfall chart illustrates the running total of GDP per capita across countries

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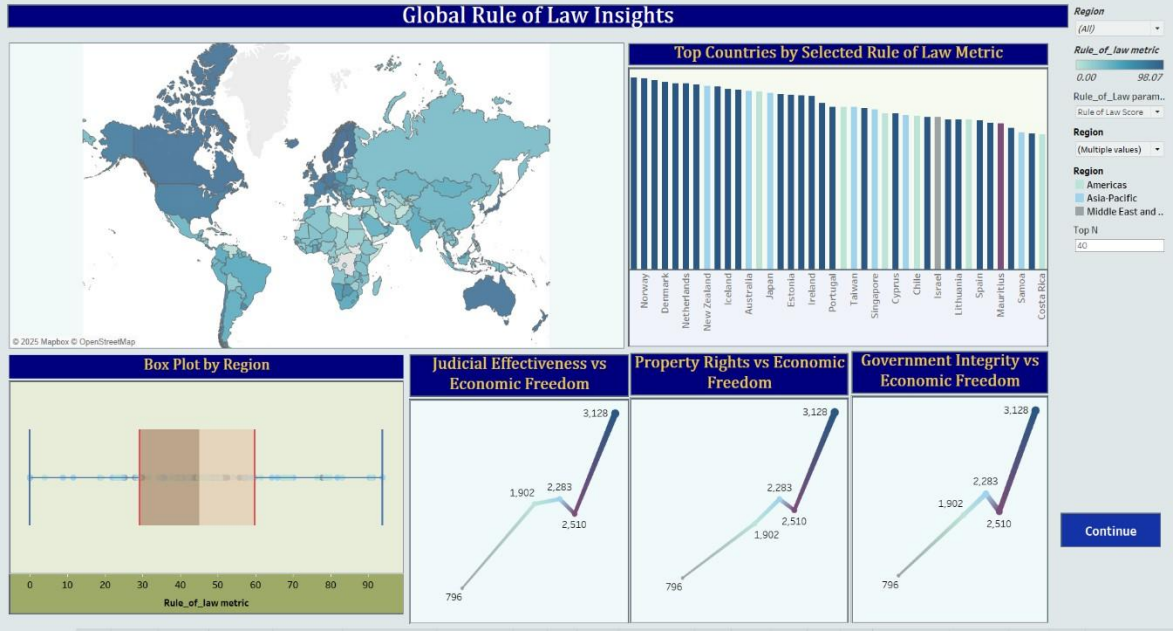
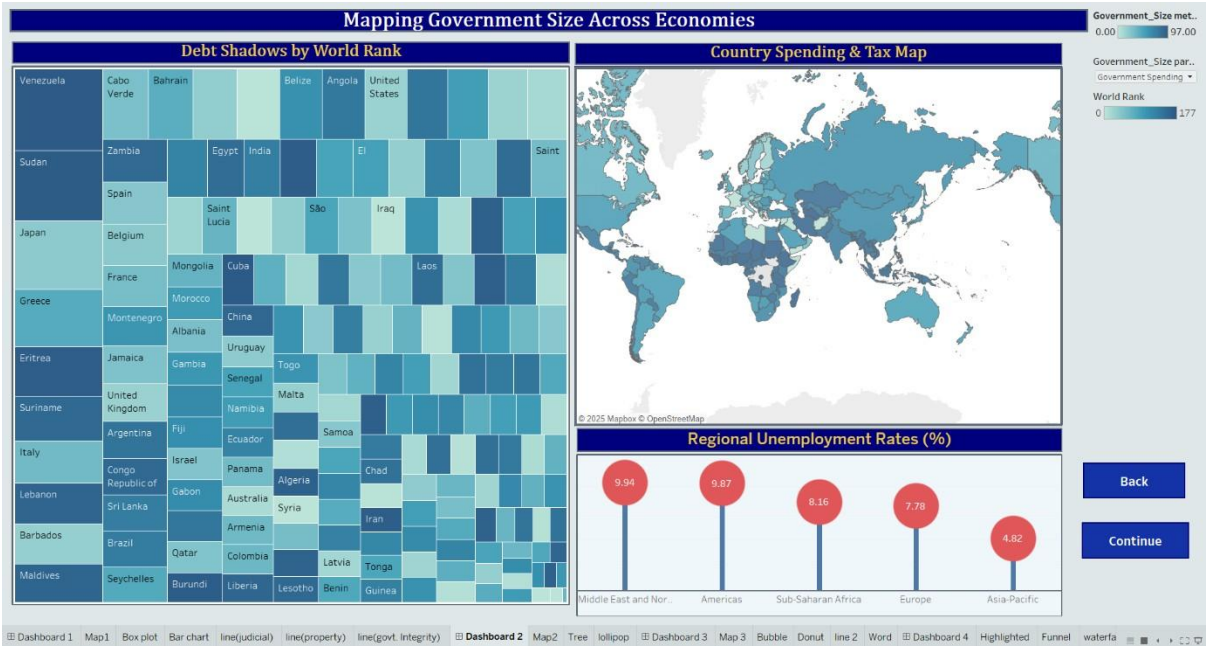
7.RESULTS:

7.1 Output Screenshots:

Dashboards:





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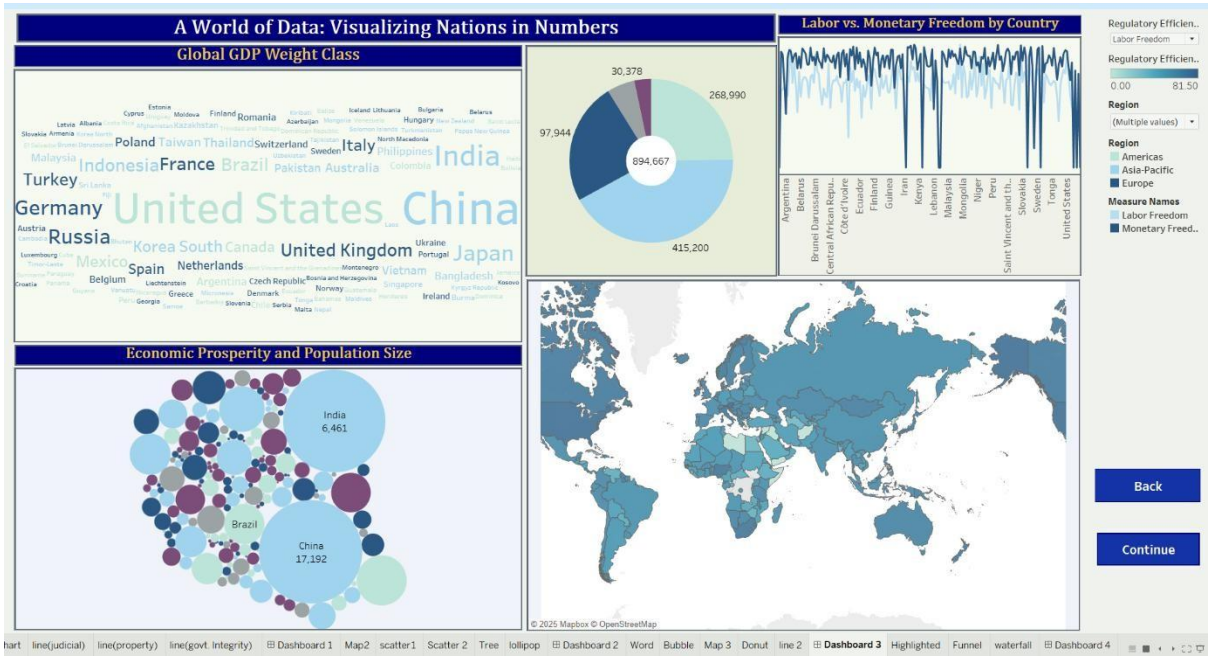

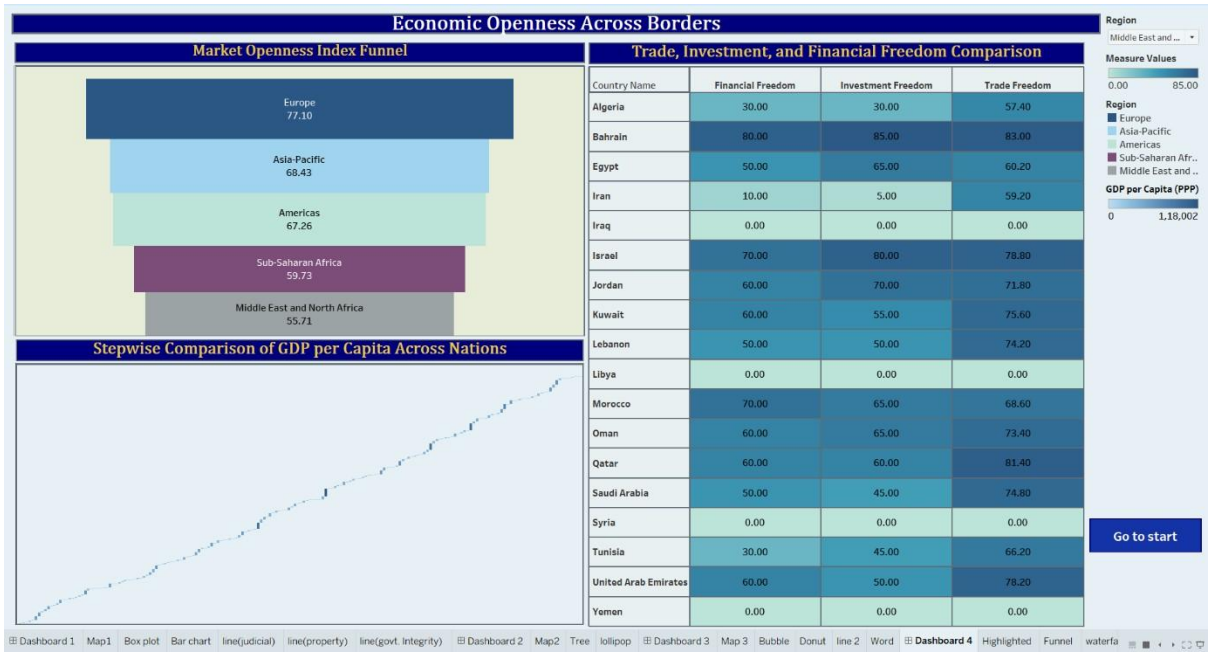

Country Name	Financial Freedom	Investment Freedom	Trade Freedom
Algeria	30.00	30.00	57.40
Bahrain	80.00	85.00	83.00
Egypt	50.00	65.00	60.20
Iran	10.00	5.00	59.20
Iraq	0.00	0.00	0.00
Israel	70.00	80.00	78.80
Jordan	60.00	70.00	71.80
Kuwait	60.00	55.00	75.60
Lebanon	50.00	50.00	74.20
Libya	0.00	0.00	0.00
Morocco	70.00	65.00	68.60
Oman	60.00	65.00	73.40
Qatar	60.00	60.00	81.40
Saudi Arabia	50.00	45.00	74.80
Syria	0.00	0.00	0.00
Tunisia	30.00	45.00	66.20
United Arab Emirates	60.00	50.00	78.20
Yemen	0.00	0.00	0.00

Stories:

Team:santhija,Deepika,snehalatha,Sravanthi

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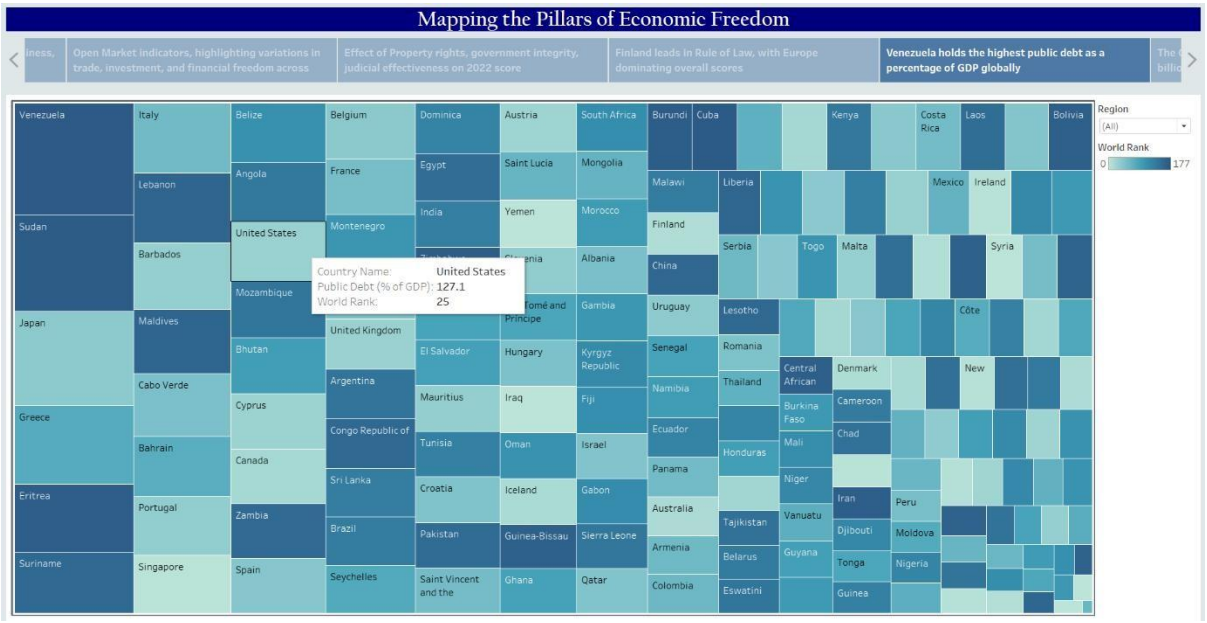

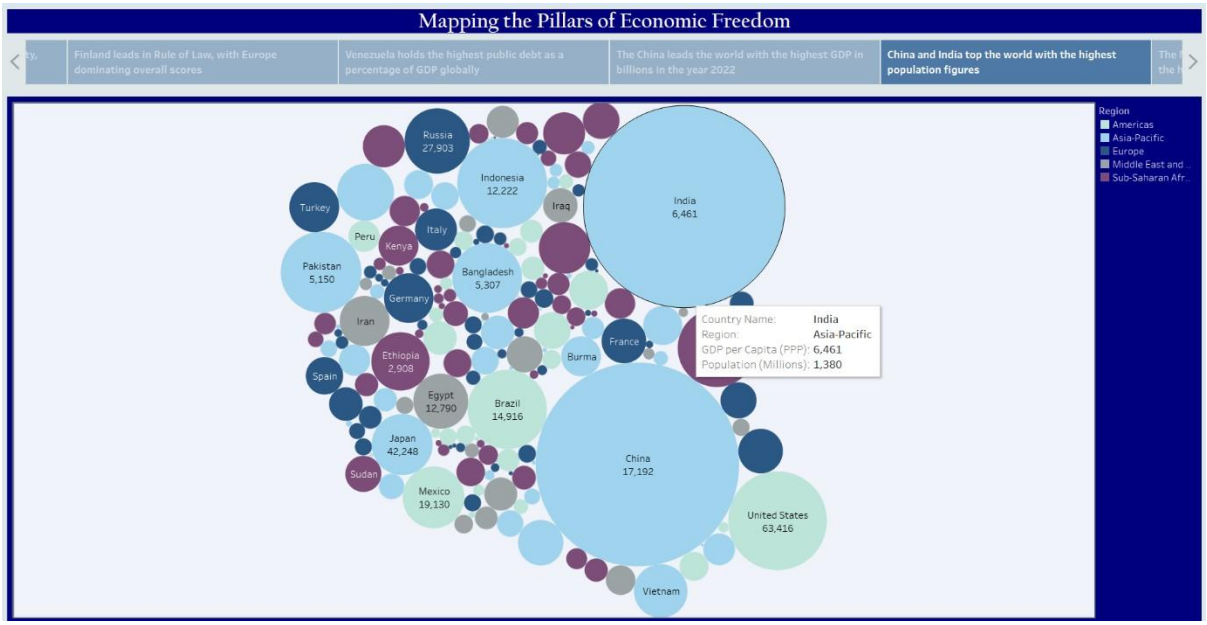

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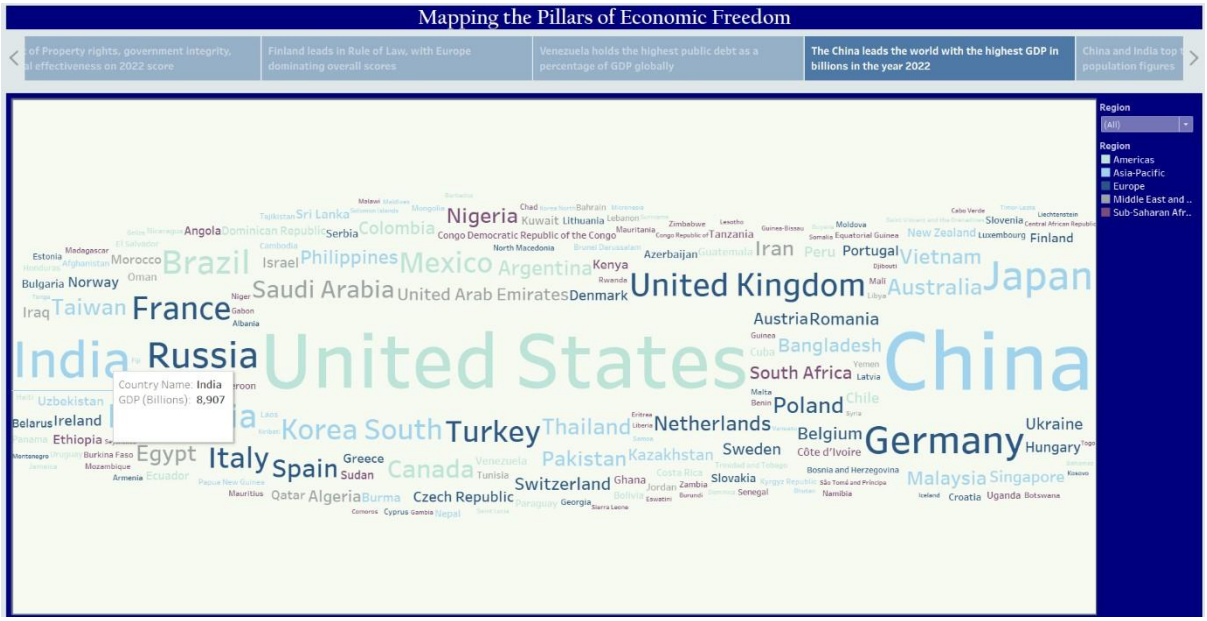

8.ADVANTAGES AND DISADVANTAGES:

Advantages

1. Covers all key aspects of economic freedom
2. Easy to understand with interactive visuals
3. Helps compare countries and regions
4. Useful for analysis and decision-making

Disadvantages

1. Based on limited or outdated data
2. May oversimplify complex economies
3. Some charts can confuse new users
4. Possible bias due to data availability

9. CONCLUSION:

In conclusion, this project provides a comprehensive analysis of global economic freedom through four key pillars—Rule of Law, Government Size, Regulatory Efficiency, and Open Markets. Interactive dashboards and diverse visualizations make complex economic data accessible and insightful. Despite some limitations in data recency and visualization complexity, the project effectively highlights global disparities and patterns. Overall, it serves as a valuable tool for understanding how economic policies shape prosperity worldwide.

10. FUTURE SCOPE:

The project can be expanded with real-time or more recent economic data for improved relevance. Future versions could include predictive analytics to forecast changes in economic freedom. Integrating more social indicators like education or health could provide deeper insights. Additionally, embedding user interactivity and region-specific filters can enhance decision-making and user engagement.

11.APPENDIX:

Dataset link: Dataset

Project Demo: Demo