Power BI Inflation Analysis: Journeying Through Global Economic Terrain

Introduction :

Inflation, a critical economic indicator, profoundly impacts businesses, consumers, and policymakers worldwide. In this scenario, a multinational corporation operating in diverse markets seeks to optimize pricing strategies, mitigate risks, and make informed investment decisions. Leveraging Power BI's analytical prowess, we delve into inflation data to offer tailored recommendations aligned with each market's unique economic conditions.

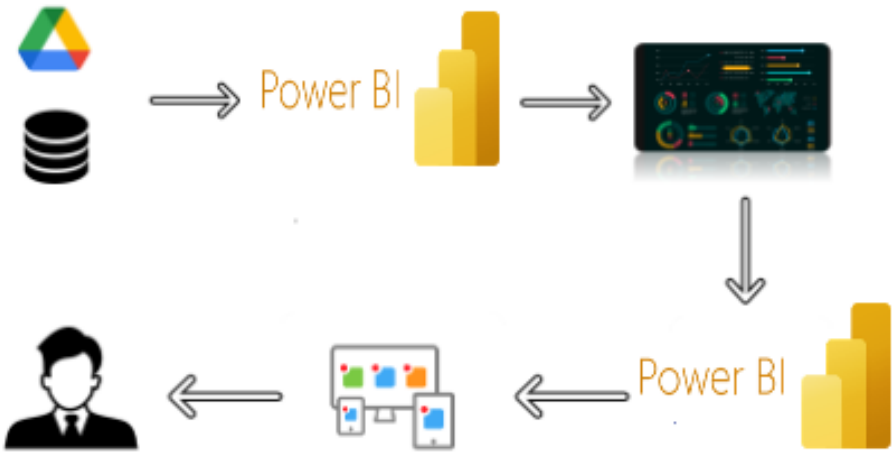
Our approach involves data collection, preparation, and modeling to build a robust analysis framework. Through insightful visualizations and strategic recommendations, we aim to equip stakeholders with actionable insights for informed decision-making. Our deliverables include an interactive Power BI dashboard showcasing inflation trends and a comprehensive report summarizing analysis findings and recommendations.

Scenario 1: Lack of Data Integration and Standardization
In the context of "Power BI Inflation Analysis: Journeying Through Global Economic Terrain," a key problem might be the lack of standardized data sources and integration methods. Different regions and organizations may report inflation data differently, leading to inconsistencies and challenges in aggregating and analyzing global inflation trends effectively within Power BI. This lack of standardization hampers the ability to provide accurate and comprehensive insights into inflation dynamics worldwide.

Scenario 2: Limited Historical Data Accessibility
Another challenge could be the limited accessibility to historical inflation data across various countries and regions. This scarcity of historical data poses a significant obstacle in building robust predictive models within Power BI for forecasting inflation trends accurately. Without a comprehensive historical dataset, analysts may struggle to identify long-term patterns and correlations necessary for making informed decisions and projections.

Scenario 3: Complex Economic Interdependencies
The intricate interdependencies among global economies pose a complex challenge in "Power BI Inflation Analysis: Journeying Through Global Economic Terrain." Fluctuations in one country's inflation rate can have ripple effects across other regions, making it difficult to isolate and analyze the drivers of inflation within individual economies. Effectively capturing and analyzing these interdependencies within Power BI requires sophisticated modeling techniques and access to diverse datasets, which may not be readily available or easily integrated into the analysis platform.

Technical Architecture:



Project Flow

To accomplish this, we have to complete all the activities listed below,

1) Data Collection
- o Collect the dataset,
- o Connect Data with Power BI

2) Data Preparation
- o Prepare the Data for Visualization

3) Data Visualizations
- o Visualizations

4) Dashboard
- o Responsive and Design of Dashboard

5) Report
- o Report Creation

6) Performance Testing
- o Amount of Data Rendered to DB
- o Utilization of Data Filters
- o No. of Calculation fields
- o No. of Visualizations/Graphs

7) Project Demonstration & Documentation
- o Record explanation Video for project end to end solution
- o Project Documentation-Step by step project development procedure

Milestone 1: Data Collection & Extraction from Database

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes and generate insights from the data.

Activity 1: Collect the dataset

Please use the link to download the dataset: https://www.kaggle.com/datasets/sazidthe1/global-inflation-data

Activity 1.1: Understand the data

Data contains all the meta information regarding the columns described in the CSV files.
Column Description of the Dataset:
1) Country name: Name of the Country.
2) Inflation Rate: Inflation rate of each country.
3) Region: Region of country which belongs
4) Year: represents the calendar year for which the corresponding inflation data is recorded.
5) AdjustedInflationRate: The 'Adjusted Inflation Rate' column is derived by multiplying the inflation rate by 0.01.
6) Inflation Rate Category: The 'Inflation Rate' column is categorized as high, medium, or low based on predefined thresholds.

Milestone 2: Data Preparation

Data preparation is a critical stage in the data analysis process, encompassing activities aimed at cleaning, transforming, and organizing raw data into a structured format suitable for analysis. This process involves identifying and addressing issues such as missing values, outliers, inconsistencies, and inaccuracies in the dataset, ensuring data quality and reliability.

Activity 1: Prepare the Data for Visualization

Preparing the data for visualization involves cleaning the data to remove irrelevant or missing data, transforming the data into a format that can be easily visualized, exploring the data to identify patterns and trends, filtering the data to focus on specific subsets of data, preparing the data for visualization software, and ensuring the data is accurate and complete. This process helps to make the data easily understandable and ready for creating visualizations to gain insights into the performance and efficiency. Since the data is already cleaned, we can move to visualization.

Data Loading Video Link

https://drive.google.com/file/d/13CSa2gMKo-mRiFEsGTzU3YVbm0KTngqr/view?usp=drivesdk

Data Cleaning Video Link

https://drive.google.com/file/d/134F6AZc4VO65UECWFEFr2eEZ1Lop7fSi/view?usp=drivesdk

Milestone 3: Data Visualization

Data visualization is the process of creating graphical representations of data to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

Activity 1.1: Average Inflation Rate

Activity 1.2: Maximum Inflation Rate.

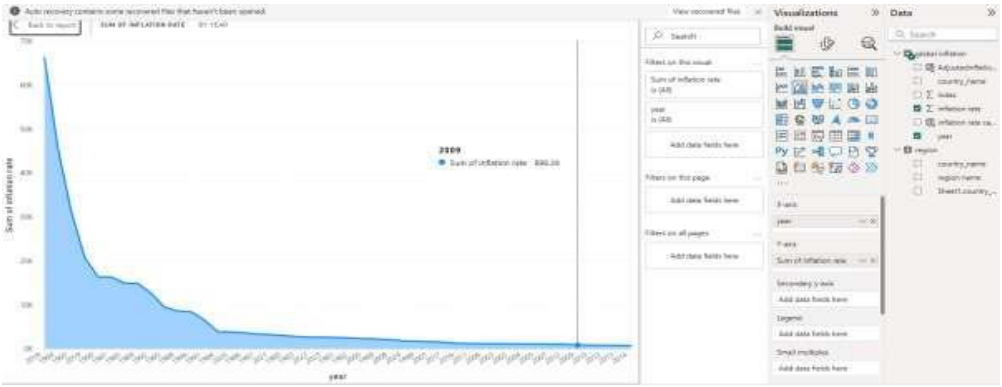
Activity 1.3: Total Number of Regions

Activity 1.4: Name of the country

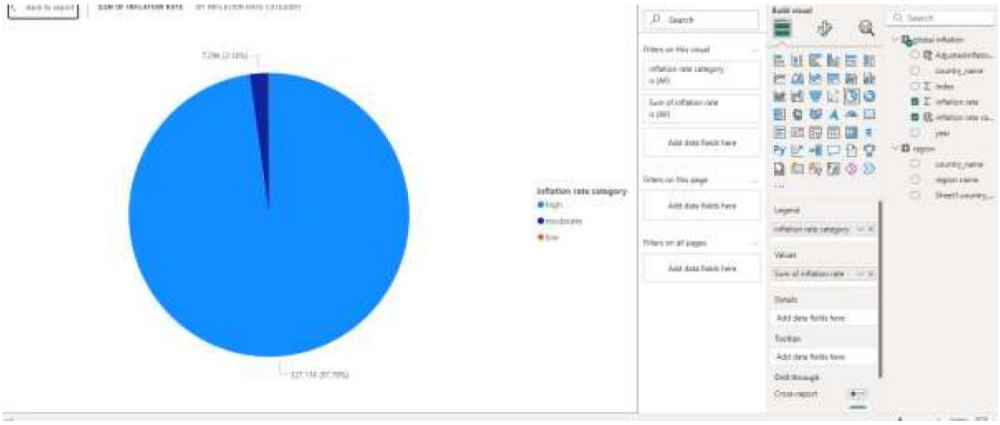
Afghanistan

First country_name

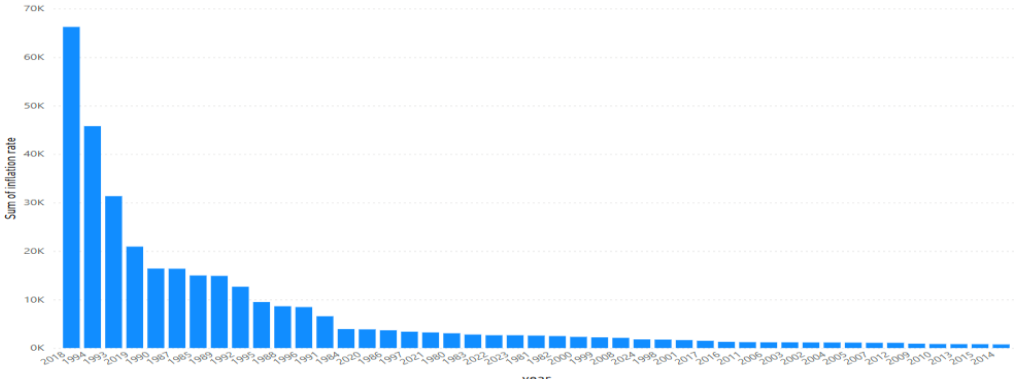
Activity 1.5: Sum of inflation rate by year.



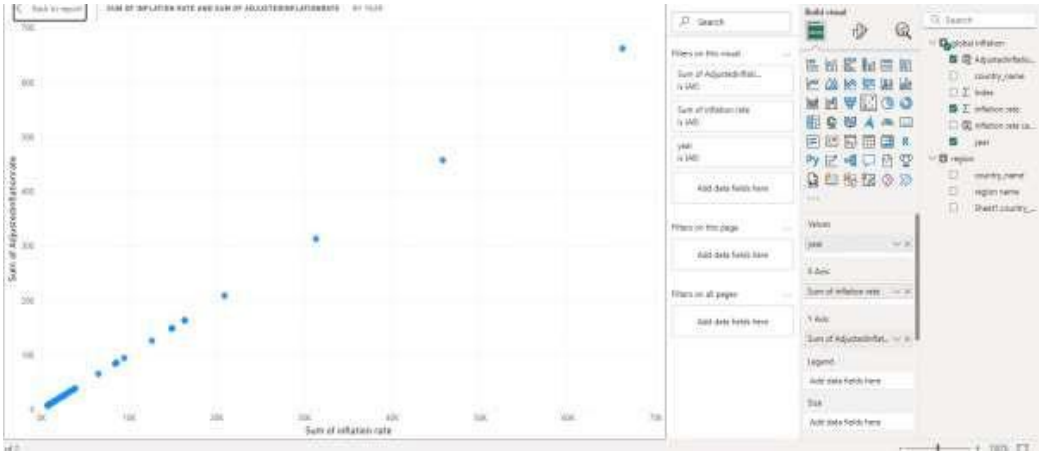
Activity 1.6: Sum of inflation rate by inflation rate category.



Activity 1.7: Sum of inflation rate by inflation rate category.

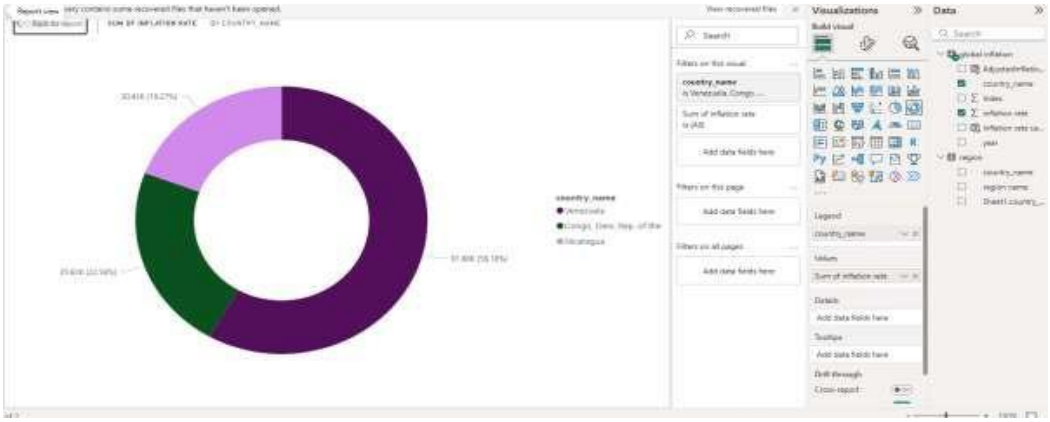


Activity 1.8: Sum of inflation rate and sum of adjusted inflation rate.

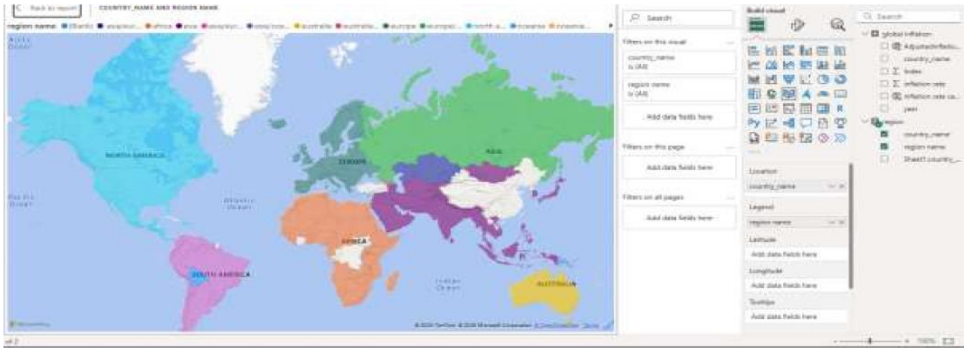


Activity 1.9: sum of inflation rate by inflation rate category

Activity 1.10: sum of inflation rate by country name.



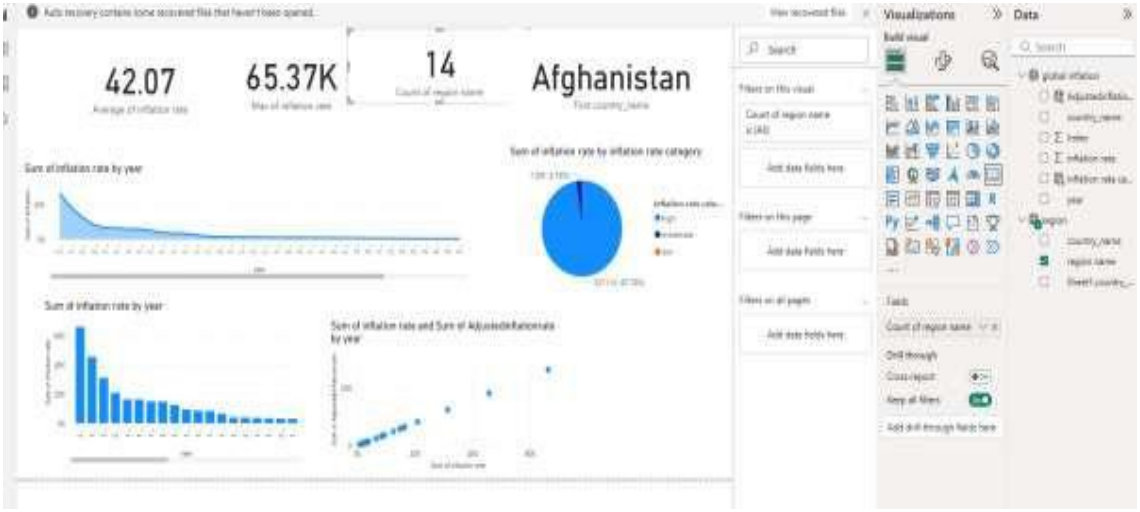
Activity 1.11: country name and region name.



Milestone 4: Dashboard

A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

Activity :1- Responsive and Design of Dashboard



Explanation video link:

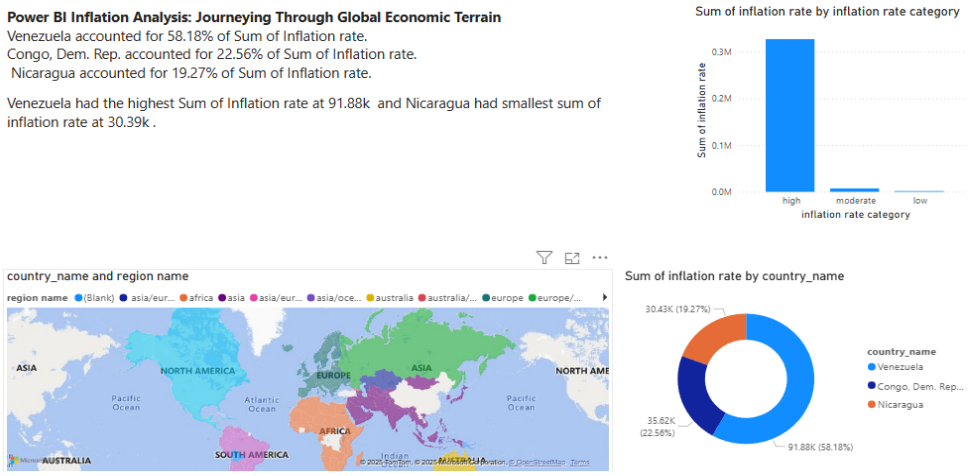
https://drive.google.com/file/d/139pbLdmK72V-WpkWKp93ADNIMdgInAKI/view?usp=drivesdk

Milestone 5: Report

A report is a comprehensive document that provides a detailed and structured account of data analysis, findings, and insights. It is typically used for in-depth analysis,

documentation, and communication of results. Reports are suitable for a diverse audience, including decision-makers, analysts, and stakeholders who need a comprehensive understanding of the data.

Report :



Explanation video link:

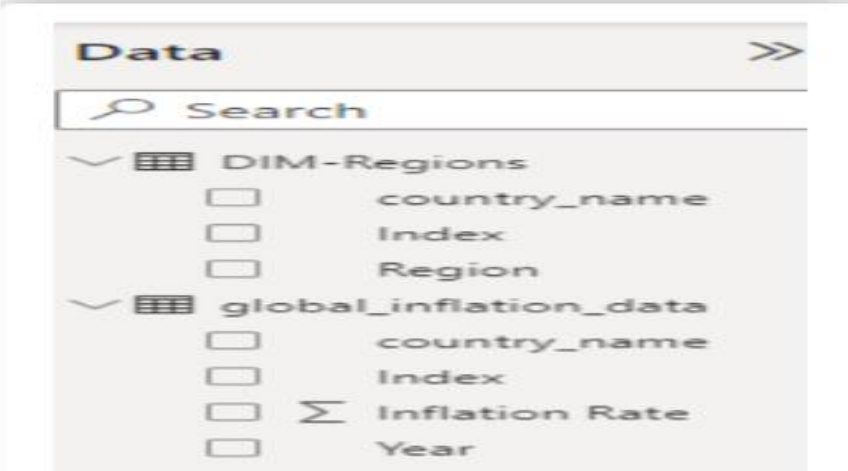
https://drive.google.com/file/d/13FmxMy57J7UrvmY8hPohjkVIoz1sJ0PL/view?usp=drivesdk

Milestone 6: Performance Testing

Performance testing is a critical component of software development aimed at evaluating the speed, responsiveness, and stability of an application under varying load conditions. By simulating real-world scenarios, such as heavy user traffic or high data volumes, performance testing helps identify potential bottlenecks, weaknesses, and areas for optimization within the system..

Activity 1: Amount of Data Loaded

"Amount of Data Loaded" refers to the quantity or volume of data that has been imported, retrieved, or loaded into a system, software application, database, or any other data storage or processing environment. It's a measure of how much data has been successfully processed and made available for analysis, manipulation, or use within the system.



Milestone 7: Project Demonstration & Documentation

Below mentioned deliverables to be submitted along with other deliverables

Activity 1:- Record explanation Video for project end to end solution

Activity 2:- Project Documentation-Step by step project development procedure

Create document as per the template provided

Customer Problem Statement Template

Dot Voting

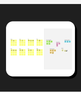
I am	I'm trying to	But	Because	Which makes me feel
BUSINESS	Optimize pricing strategy manager consultand informed decision about investment	Struggling to keep pace with changing inflation rates and understand their impact on my business.	Inflation can erode profit margin reduce purchasing power and disrupt supply chains.	Uncertain anxious and concerned about the long term sustain of my busines.
GOVERNMENT	Inflation trends foresee future rates, and make informed decision about interest rate and fiscal policy	Struggling with out dated data analysis tools manual process and limited resources.	Inaccurate or incomplete data can lead to ineffective police decision .	Effective manage inflation and promote economic stability
INVESTOR	Informed decision about investment and asset allocation in arapidly changing economic environment	Struggling to say on end of inflation and understand its impact on my investment.	Inflation can erode the purchasing power of my investment and reduce their values over time.	Uncertain anxious and concerned about the long term sustain ability of my investment.

Template

Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- **10 minutes** to prepare
- **1 hour** to collaborate
- **2-8 people** recommended



Need some inspiration?

See a finished version of this template to kickstart your work.

Open example →

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

A. **Team gathering**
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B. **Set the goal**
Think about the problem you'll be focusing on solving in the brainstorming session.

C. **Learn how to use the facilitation tools**
Use the Facilitation Superpowers to run a happy and productive session.

Open article →

1 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.

5 minutes

PROBLEM

Analyze inflation trends,forcost future rates and make informed decision about interest rate and fiscal policy.

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

TIP
You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

Person 1

Person 2

Person 3

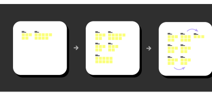
Person 4

3 Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

TIP
Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

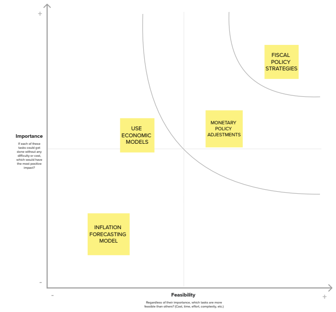


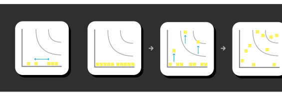
4 Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

TIP
Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.





After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

A. **Share the mural**
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.

B. **Export the mural**
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

Strategy blueprint
Define the components of a new idea or strategy.
Open the template →

Customer experience journey map
Understand customer needs, motivations, and obstacles for an experience.
Open the template →

Strengths, weaknesses, opportunities & threats
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
Open the template →

Template

Empathy map canvas

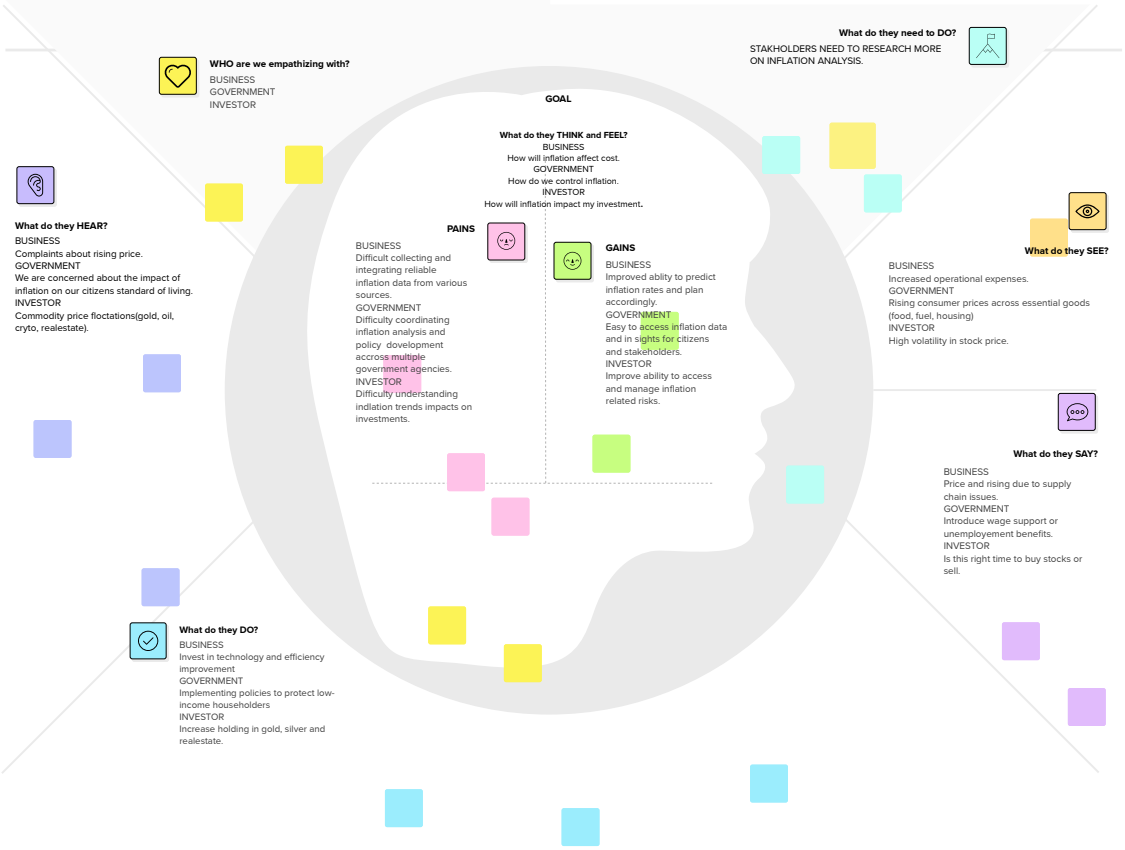
Use this framework to empathize with a customer, user, or any person who is affected by a team's work. Document and discuss your observations and note your assumptions to gain more empathy for the people you serve.

Originally created by Dave Gray at XPLANE

Share template feedback

Develop shared understanding and empathy

Summarize the data you have gathered related to the people that are impacted by your work. It will help you generate ideas, prioritize features, or discuss decisions.



Need some inspiration?

See a finished version of this template to kickstart your work.

Open example

Scenario:
[Existing experience through a product or service]

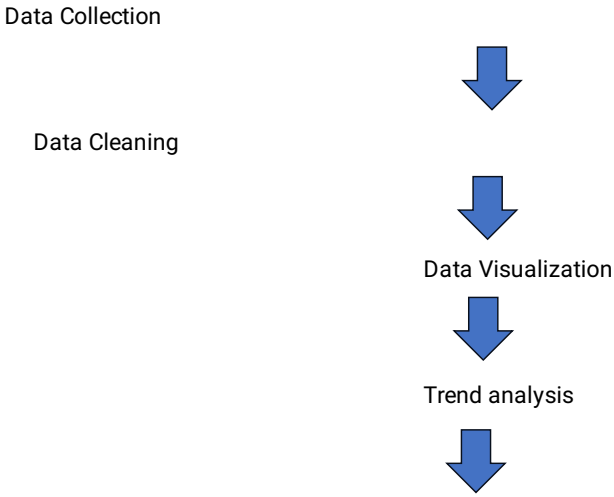
	Entice	Enter	Engage	Exit	Extend
	How does someone become aware of this service?	What do people experience as they begin the process?	In the core moments in the process, what happens?	What do people typically experience as the process finishes?	What happens after the experience is over?
Experience steps What does the person (or people) at the center of this scenario typically experience in each step?	How users first interact with inflation related (e.g.web searches,articles,government report.	The first deep engagement with inflation data (e.g.sub scribing to dashboards signing up for alerts).	Users actively analyzing and using inflation insights (e.g. comparing inflation trends forecasting).	When users finish their analysis or stop using the platform.	Returning users long-term engagement (retention efforts,advanced analytics usage).
Interactions What interactions do they have at each step along the way? ▪ **People:** Who do they see or talk to? ▪ **Places:** Where are they? ▪ **Things:** What digital touchpoints or physical objects do they use?	Capture interest and encourage users to explore inflation data.	Provide an intractive experience for first-time users to navigate and explore key data points.	Encourage users to interact with inflation insights for meaningful analysis.	Understand when and why users stop engaging with the dashboard.	Keep users engaged with ongoing insights and personalized reports.
Goals & motivations At each step, what is a person's primary goal or motivation? ("Help me..." or "Help me avoid...")	Stay updated on inflation trends affecting global markets.	Quickly find relevant inflation data by country,sector,time period.	Compare inflation trends across different time period,industries,countries.	Extract key takeways before leaving.	Stsy updated with new inflation trends and economics forecasts.
Positive moments What steps does a typical person find enjoyable, productive, fun, motivating, delightful, or exciting?	Attract usres by making inflationanalysis visually engaging and easy to understand.	Makes it easy for users to navigates and interact with inflation data.	Users analyzed inflation trends over-time they compare country -level data and economics.	Users extract key insights before exiting they download or share report for later use.	Users return for updated inflation insights they explore advanced features like predictive analytics.
Negative moments What steps does a typical person find frustrating, confusing, angering, costly, or time-consuming?	Users ignore the dashboare due to a lack of relevances or visibility .	Users feel lost or confused navigating the dashboard.	Users struggle to interpret complex inflation data.	Users leave without gaining useful insights key ndata points and hidden or hard to extract.	Users dont return because the dashboard lacks fresh insights.
Areas of opportunity How might we make each step better? What ideas do we have? What have others suggested?	ilncrease dashboard visibility through social media. →	Guide users with interactive tooltips and first-time tutorials simplify filters and categorization.	Connect dashboards to live financial sources for up to -data trends.	Provide key insights in a summery card or visual snap chat,gather insights on usability and missing features.	

Project Design Phase-II

Data Flow Diagram & User Stories

Date	31 January 2025
Team ID	LTVIP2025TMID21334
Project Name	Power BI inflation analysis: journeying through global economic terrain
Maximum Marks	4 Marks

Data Flow Diagrams: A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



User access and Interaction

Data Visualization

Data Export

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Data analyst	Data Collection	USN-1	As a data analyst, , I want to collect inflation data from multiple sources so that I can analyze global trends	Data is collected from FAO, USDA, and other sources	high	Sprint-1
Data analyst	Data Cleaning	USN-2	As a data analyst, I want to clean and standardize inflation data so that it is accurate and usable..	Duplicate records are removed.	medium	Sprint-1
Data analyst	Data Visualization	USN-3	As a data analyst, I want to visualize inflation trends using Power BI dashboards so that I can identify key patterns.	Power BI dashboards include charts for wheat, rice, maize, and fruits.	high	Sprint-2
Business	Trend analysis	USN-4	As a Business, I want to apply predictive models to forecast inflation so that I can support business strategy.	Reports highlight production trends for key commodities.	high	Sprint-2

Government	User access and interaction	USN-5	As-Government, I want to create reports so that I can analyze specific markets	Charts update dynamically based on selections.	medium	Sprint-2
Investor	Data Export	USN-6	As a Investor, , I want to export reports in different formats so that I can share insights with stakeholders	Users can export data in CSV, PDF, and Excel formats.	medium	Sprint-2

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	31 January 2025
Team ID	LTVIP2025TMID21334
Project Name	GLOBLE INFLATION ANALYSIS
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data collection & integration	Import inflation data form multiple sources (world bank, IMF, OECD etc..)
FR-2	Data processing & transformation	Standardize inflation indicators across different datasets.
FR-3	Visualization & analytics	Compare inflation trends across countries regions and economic groups.
FR-4	User interaction & customization	Allow users to select customer data ranges.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Inflation affects the usability of a currency by impacting its purchasing power.
NFR-2	**Security**	Hyperinflation often results in a loss of trust in a country currency leading people to shift to stable alternatives .
NFR-3	**Reliability**	A reliable economy maintains controlled inflation ensuring steady price leves and predictable costa.
NFR-4	**Performance**	Inflation impacts economic performance by influencing GDP growth employment rates and consumer spending.
NFR-5	**Availability**	Inflation affects the availability of goods and service by altering production costs.
NFR-6	**Scalability**	Developed nations often have mechanisms (fiscal policies, monetary tools) to scale their economies in response to inflation.

Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	31 January 2025
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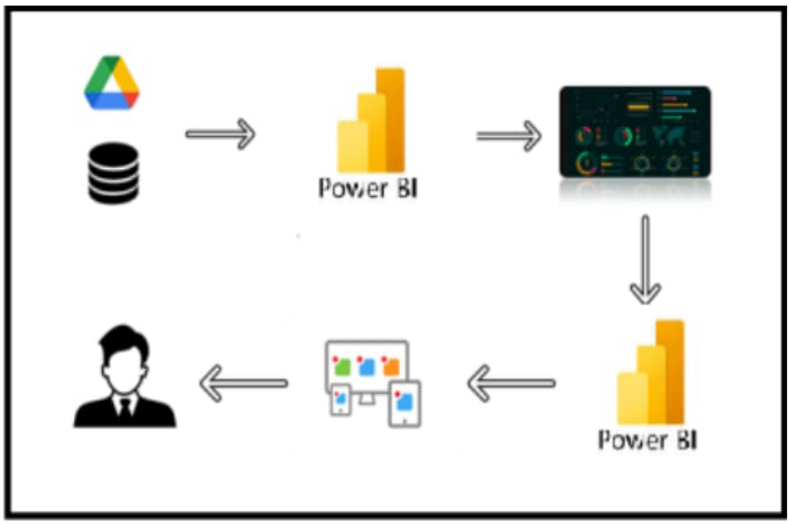
Project Name	Power BI Inflation Analysis : journeying through global economic terrain.
Maximum Marks	4 Marks



Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
	Data Collection	Gathering inflation data from global sources	Power BI, Excel
	Data Loading	Importing data into the analysis environment	Power BI
	Data Cleaning	Handling missing values, standardizing formats	Power BI
	Data Visualization	Creating charts, trends, and dashboards	Power BI
	Scenario-1	Average Inflation Rate	Power BI Visualizations (KPI Card)
	Scenario-2	Maximum Inflation Rate	Power BI Visualizations (KPI Card)
	Scenario-3	Total Number of Regions	Power BI Visualizations (KPI Card)
	Scenario-4	Inflation Rate change over a year	Power BI Visualizations (KPI Card)
	Scenario-5	Distribution Of Inflation rate Categories.	Power BI Visualizations (Area Chart)
	Scenario-6	Filter applied On Country Column	Power BI Visualizations (Pie Chart)
	Scenario-7	Average Inflation Rate Change by Country	Power BI Visualizations (Stacked Column Chart)
	Scenario-8	inflation rate and adjusted inflation rate	Power BI Visualizations (Scatter

1.		change over years	Chart)
2.	Scenario-9	Count of Region By country	Power BI Visualizations (Filled Map)
3.	Scenario-10	inflation rate Distribution	Power BI Visualizations (Stacked Column Chart)
4.	Scenario-11	Top 3 inflation rate Countries	Power BI Visualizations (Donut Chart)
5.	Report Creation	Generating interactive inflation reports	Power BI
6.	Data Export	Exporting processed insights	Power BI, Excel

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
	Scalability	Handles large datasets covering multiple years	Power BI, Excel
	Interactivity	Allows filtering by country, year, inflation type	Power BI(DAX, Power Query)
	performance	Optimized queries for efficient analysis	Power BI(DAX)
	usability	User-friendly dashboards for economic insights	Power BI
	Automation	Automated data refresh for updated insights	Power BI

Problem-Solution fit canvas 2.0 Purpose / Vision

1.CUSTOMER SEGMENTS CS

. Multinational Corporations (MNCs): Companies operating in multiple countries seeking inflation insights for pricing, risk management, and investment strategies.
Policymakers & Government Agencies: Entities monitoring inflation trends to adjust fiscal and monetary policies.

6. CUSTOMER CC

Bloomberg Terminal: Offers global economic data but is expensive.
IMF & World Bank Data Portals: Provide macroeconomic indicators but lack interactive dashboards.
Excel & Custom Scripts: Used for inflation analysis but lack automation and real-time insights.
Google Data Studio & Tableau: Competitors in data visualization, but may lack deep

5. AVAILABLE SOLUTIONS AS

Frustration: Lack of reliable inflation insights leads to poor decision-making.
Uncertainty: Difficulty in forecasting inflation trends.
Overwhelm: Managing data from multiple sources is complex..

2. JOBS-TO-BE-DONE / PROBLEMS J&P

Optimize Pricing Strategies: MNCs need to adjust prices based on inflation in different regions.
Mitigate Risks: Investors and companies need inflation insights to hedge against currency and economic risks.
Forecast Inflation Trends: Economists and policymakers need predictive models to plan for future economic conditions.

9. PROBLEM ROOT CAUSE RC

Power BI dashboards
Economic data platforms (IMF, World Bank, government portals)
Online financial news (Bloomberg, Reuters, CNBC)
AI-driven forecasting tools
Offline:

Economic reports from consulting firms
Government inflation reports
Expert discussions in board meetings.

7. BEHAVIOUR BE

Data Availability: Some markets lack reliable inflation data.
Budget: Not all companies can afford premium data solutions.
Technical Expertise: Not all users have Power BI or data analytics skills.
Integration Issues: Difficulty in merging

3. TRIGGERS

Sudden Inflation Spikes: Companies rush for inflation data when prices rise unexpectedly.
Economic Crises: Events like recessions or supply chain disruptions increase the need for inflation monitoring.
Regulatory Changes: New tax policies or

10. YOUR SOLUTION

Data Fragmentation: Different reporting standards across countries.

Lack of Automation: Manual data collection is time-consuming.

Limited Predictive Capabilities: Basic

8. CHANNELS of BEHAVIOUR

CH

Proactive Businesses: Companies that continuously monitor inflation trends for strategic decisions.
Reactive Businesses: Firms that only check

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	trade restrictions push businesses to reassess pricing strategies.	models fail to capture economic complexities. Inaccessible Data: Some regions don't provide comprehensive historical inflation data.	inflation data during crises. Traditional vs. Digital Users: Some prefer manual reports, while others rely on dashboards and automation	
	4. EMOTIONS: BEFORE / AFTER Frustration: Lack of reliable inflation insights leads to poor decision-making. Uncertainty: Difficulty in forecasting inflation trends. Overwhelm: Managing data from multiple sources is complex..			

Project Design Phase
Proposed Solution Template

Date	15 February 2025
Team ID	LTVIP2025TMID21334
Project Name	Power Bi Inflation Analysis: journeying through global economic terrain
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	**Problem Statement** ● -Governments and organizations struggle to analyze and forecast inflation accurately. ● -Current methods are manual, time-consuming, and often inaccurate. ● This leads to poor policy decisions, inefficient resource allocation, and reduced citizen trust.
2.	Idea / Solution description	● **Idea:** A mobile app that connects users with local service providers (like plumbers, electricians, or home cleaners) using real-time tracking and instant booking features. The app will provide verified professionals, transparent pricing, and customer reviews. ● **Solution:** The app acts as a marketplace, offering users the ability to find local services, compare prices, read reviews, and instantly book appointments. Service providers will be able to create a profile, manage availability, set pricing, and get ratings from customers. The app will leverage real-time data to suggest the best options based on proximity and service availability.
3.	Novelty / Uniqueness	● **Instant Booking with Real-Time Tracking:** Unlike traditional service platforms, this app offers instant booking with real-time tracking of

		service providers, ensuring greater transparency and reducing wait times. ● **Verified Professionals and Customer Reviews:** A stringent verification process ensures that only qualified professionals are listed, increasing trust and reducing fraud. ● **Personalized Recommendations:** The app uses AI to offer personalized service recommendations based on past usage and preferences, improving user experience.
4.	Social Impact / Customer Satisfaction	● **Social Impact:** By creating a platform that helps small businesses and independent service providers gain visibility, the app can help promote local employment, support local economies, and enhance access to necessary services. ● **Customer Satisfaction:** The solution increases customer satisfaction by reducing service search time, providing transparent pricing, and ensuring high-quality service through verified professionals. User reviews and ratings help maintain high standards of service.
5.	Business Model (Revenue M	● **Commission-based Revenue Model:** The app will charge a commission on each transaction between service providers and customers, which could range from 10-20% per completed job. ● **Subscription Plans for Service Providers:** Service providers can subscribe to premium features for better visibility, access to exclusive leads, and advanced analytics about their performance. ● **Freemium Model for Users:** The app is free to download and use, but premium features (e.g., faster booking, priority customer support) can be offered to users for a monthly or yearly subscription.
6.	Scalability of the Solution	● **Geographic Expansion:** The platform can scale by expanding to different cities, regions, or even countries, adapting the app to regional needs and services.

		● **Service Diversification:** Over time, more services can be added (e.g., tutoring, event planning), broadening the platform's reach and increasing its user base. ● **Integration with Other Platforms:** The app can also integrate with other service marketplaces or online payment systems to broaden its functionality and increase customer acquisition.

Project Design Phase
Solution Architecture

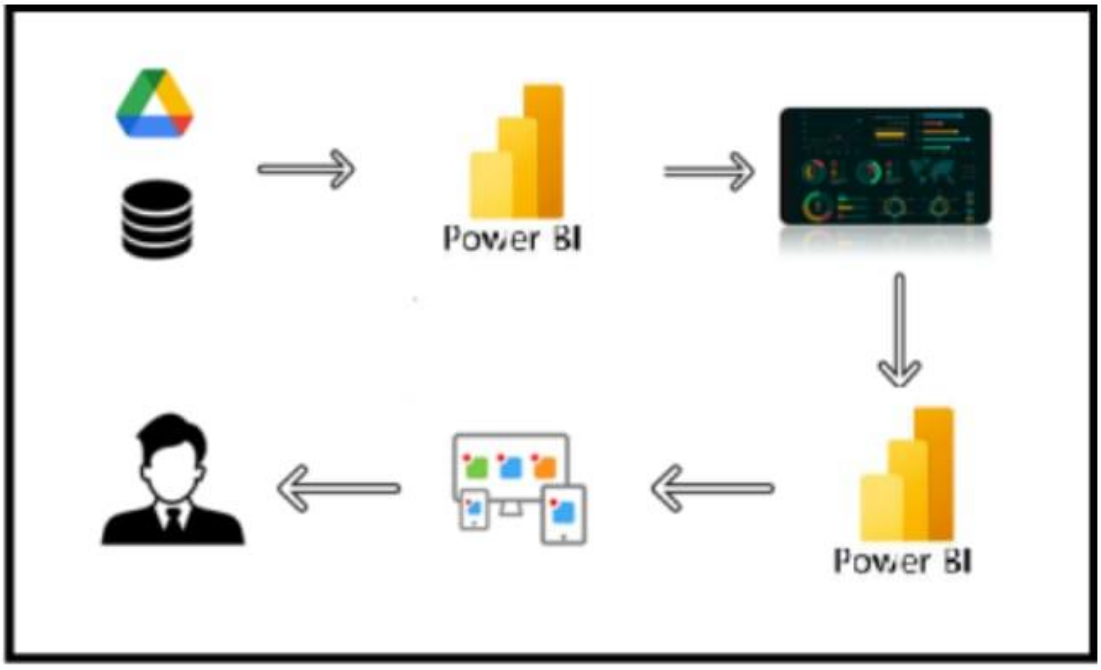
Date	15 February 2025
Team ID	LTVIP2025TMID21334
Project Name	Power BI Inflation Analysis : journeying through global economic terrain.
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behaviour, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Example - Solution Architecture Diagram:



Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Storypoints)

Date	15 February 2025
Team ID	LTVIP2025TMID21334
Project Name	Power BI Inflation Analysis : journeying through global economic terrain.
Maximum Marks	5 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Data Collection	USN-1	As a Data analyst, I want to collect inflation data from multiple sources so that I can analyze global trends	2	High	Dumpaka Teja
Sprint-1	Data Cleaning	USN-2	As a Data analyst, I want to clean and standardize inflation data so that it is accurate and usable.	3	medium	Dumpaka Teja
Sprint-2	Data Visualization	USN-3	As a Data analyst, I want to visualize inflation trends using Power BI dashboards so that I can identify key patterns.	5	high	Cheliya Rajeswari

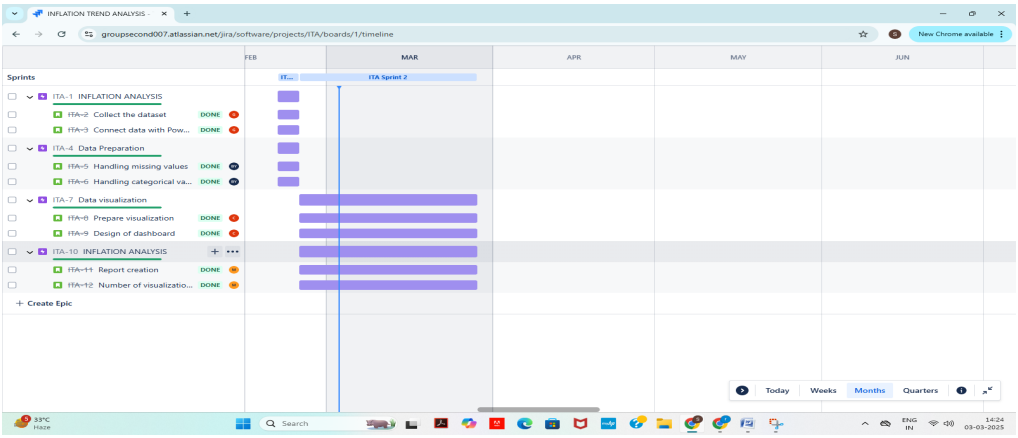
Sprint-2	Inflation analysis	USN-4	As a Business, I want to apply predictive models to forecast inflation so that I can support business strategy.	3	high	Bura Yamuna
Sprint-2	Report creation	USN-5	As a Government, I want to create reports so that I can analyze specific markets	3	medium	Chandanagiri Mounika
Sprint-2	Data Export	USN-6	As a Investor, I want to export reports in different formats so that I can share insights with stakeholders	2	low	Chandanagiri Mounika

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	24	2 Days	20FEB 2025	21FEB 2025	24	21 FEB 2025
Sprint-2	24	2 Days	22FEB 2025	23FEB 2025	24	23FEB 2025
Sprint-3	24	2 Days	24FEB 2025	26FEB 2025	24	26FEB 2025
Sprint-4	24	2 Days	27FEB 2025	28 FEB 2025	24	28FEB 2025

Velocity:
Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$



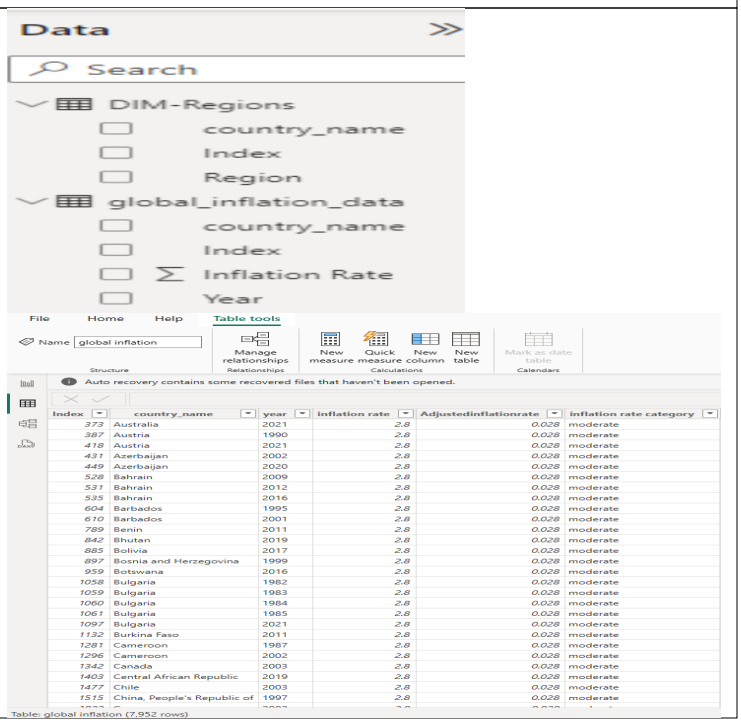

Sprint progress
100% done
Done
100%
In progress
0%
Not started
0%
Sprint burndown
8 points done, 0 points to go
5
4
3
2
1
0
Feb 20
Feb 23
Feb 25
Feb 27
Feb 28
Remaining work
Guideline
Your sprint scope has increased by 8 points

Project Development Phase
Model Performance Test

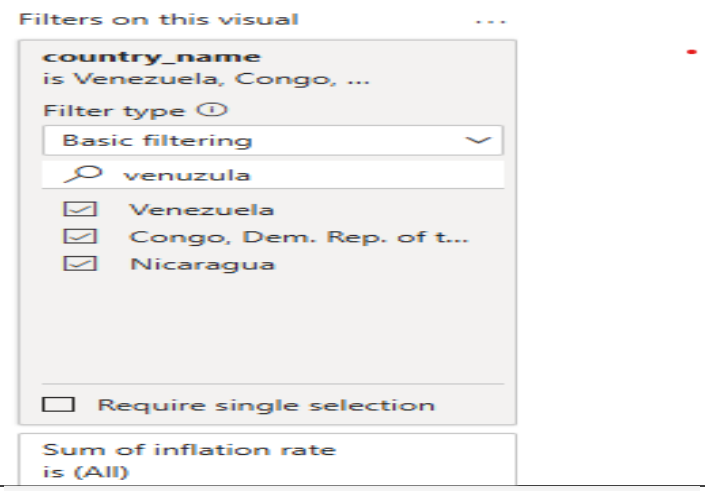
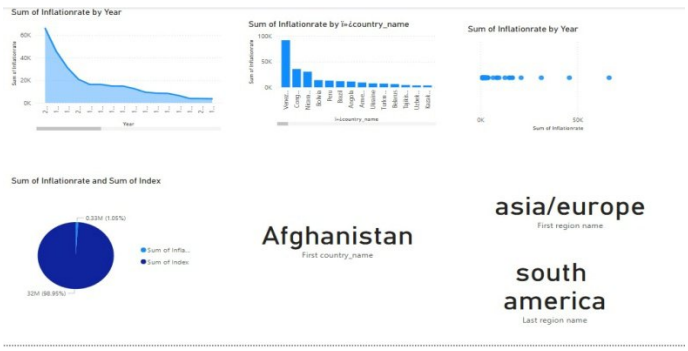
Date	10 February 2025
Team ID	LTVIP2025TMID21334
Project Name	Power BI Inflation Analysis : journeying through global economic terrain.
Maximum Marks	

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Screenshot / Values
	Data Rendered	**Downloading The Dataset** Please use the link to download the dataset: link **Activity 1.1: Understand the data** Data contains all the meta information regarding the columns described in the CSV files. Column Description of the Dataset: 1) Country_name: Name of the Country. 2) Inflation Rate: Inflation rate of each country. 3) Region: Region of country which belongs 4) Year: represents the calendar year for which the corresponding inflation data is recorded. 5) AdjustedInflationRate: The 'Adjusted Inflation Rate' column is derived by multiplying the inflation rate by 0.01 . 6) InflationRateCategory:The 'Inflation Rate' column is categorized as high, medium, or low based on predefined thresholds.
	Data Preprocessing	

Index	country_name	year	inflation rate	Adjustedinflationrate	inflation rate category
373	Australia	2021	2.8	0.028	moderate
387	Austria	1990	2.8	0.028	moderate
418	Austria	2021	2.8	0.028	moderate
431	Azerbaijan	2002	2.8	0.028	moderate
449	Azerbaijan	2020	2.8	0.028	moderate
528	Bahrain	2009	2.8	0.028	moderate
531	Bahrain	2012	2.8	0.028	moderate
535	Bahrain	2016	2.8	0.028	moderate
604	Barbados	1995	2.8	0.028	moderate
610	Barbados	2001	2.8	0.028	moderate
789	Benin	2011	2.8	0.028	moderate
842	Bhutan	2019	2.8	0.028	moderate
885	Bolivia	2017	2.8	0.028	moderate
897	Bosnia and Herzegovina	1999	2.8	0.028	moderate
959	Botswana	2016	2.8	0.028	moderate
1058	Bulgaria	1982	2.8	0.028	moderate
1059	Bulgaria	1983	2.8	0.028	moderate
1060	Bulgaria	1984	2.8	0.028	moderate
1061	Bulgaria	1985	2.8	0.028	moderate
1097	Bulgaria	2021	2.8	0.028	moderate
1132	Burkina Faso	2011	2.8	0.028	moderate
1281	Cameroon	1987	2.8	0.028	moderate
1296	Cameroon	2002	2.8	0.028	moderate
1342	Canada	2003	2.8	0.028	moderate
1403	Central African Republic	2019	2.8	0.028	moderate
1477	Chile	2003	2.8	0.028	moderate
1515	China, People's Republic of	1997	2.8	0.028	moderate

3.	Utilization of Data Filters	
4.	DAX Queries Used	
5.	Dashboard design	No of Visualizations / Graphs – 11 
6	Report Design	No of Visualizations / Graphs -11