


Ideation Phase

Brainstorm & Idea Prioritization Template




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|---------------|--|
| Date | 16 April 2025 |
| Team ID | PNT2025TMID07432 |
| Project Name | Global-Energy-Trends-A-Comprehensive-Analysis-of-Key-Regions-and-Generation-Modes-using-Power-BI |
| Maximum Marks | 4 Marks |


Brainstorm & Idea Prioritization 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



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.

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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


How might we [your problem statement]?


**Key rules of brainstorming**
To run a smooth and productive session


 Stay in topic.

 Encourage wild ideas.

 Defer judgment.

 Listen to others.

 Go for volume.

 If possible, be visual.

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Problem Statement:

Global policymakers, researchers, and energy companies face challenges in understanding how energy generation varies across regions and over time—especially with the global transition toward renewable sources. Key factors such as geography, policy, demand, and resource availability create complex energy trends that are hard to visualize and analyze comprehensively.

Project Goal:

Utilize **Power BI** to perform a comprehensive analysis of global energy trends by:

- Comparing energy generation by mode (renewables, fossil fuels, nuclear, etc.)
- Highlighting regional patterns and shifts over time.
- Supporting data-driven energy planning and sustainability strategies.

Step-2: Brainstorm, Idea Listing and Grouping

Brainstormed Ideas for Implementation

1.Data Collection & Preparation

- Collect global energy generation data from trusted sources (e.g., IEA, World Bank, national databases).
- Include attributes like region, year, energy mode, total generation, and growth rates.
- Clean and normalize datasets for consistency across regions and sources.
- Use Power Query for importing, merging, and transforming data.

2.Data Analysis & Key Metrics

- Compare energy generation by mode across different regions and over time.
- Analyze:
 - Growth trends in renewables vs. fossil fuels
 - Regional dependence on specific energy sources
 - Top energy-producing and consuming countries
- Create DAX measures for:
 - Total generation per region
 - Year-on-year growth
 - Renewable vs. non-renewable share

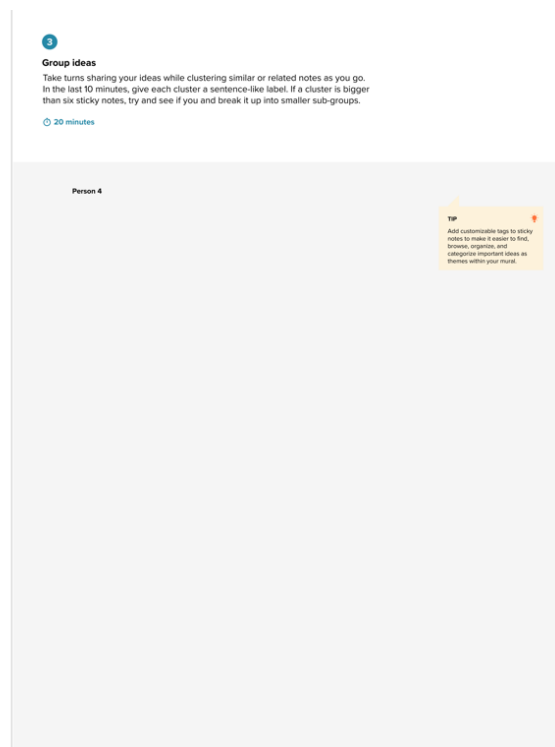
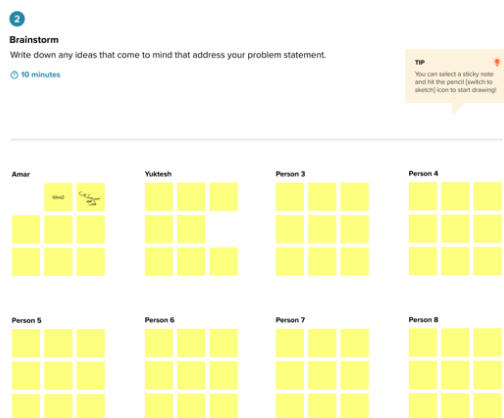
4.Visualization & Dashboard Creation

- **Line Chart:**
Energy Generation over Time (by Region or Energy Mode)
- **Stacked Area Chart:**
Renewable vs. Non-renewable Share over Time

- **Map Visual:**
Global distribution of energy generation (colored by energy type or total volume)
- **Bar Chart:**
Top 10 Countries by Energy Generation (segmented by mode)
- **Decomposition Tree:**
Factors contributing to energy trends (region → energy mode → year)
- **Card Visuals:**
 - Total Global Energy Generation
 - % from Renewables
 - Region with Highest Renewable Adoption

5. Predictive Insights & Business Impact

- Project future energy trends using linear projections or historical growth patterns.
- Provide region-specific recommendations:
 - Emerging leaders in renewable energy
 - Areas heavily reliant on fossil fuels
- Help energy companies and governments:
 - Align with global sustainability goals
 - Plan energy transitions and investments



Step-3: Idea Prioritization

| Idea | Priority Level | Reason for Priority |
|---|----------------|--|
| Data Cleaning & Transformation | High | Essential for accurate insights and consistency across countries/regions |
| Line Chart (Energy Trends over Time) | High | Clearly shows historical trends and shifts across energy modes |
| Stacked Area Chart (Renewable vs Non-renewable) | High | Highlights global sustainability progress and energy mix changes |
| Map Visual (Regional Distribution) | High | Offers geographic perspective on energy generation patterns |
| Bar Chart (Top 10 Countries by Generation) | High | Easy comparison across leading nations by energy output |
| Decomposition Tree (Energy Trend Factors) | High | Breaks down regional/mode-wise contributors to trends |
| Card Visuals (KPIs: Total Gen, % Renewables, Top Region) | High | Quick snapshot of key global energy metrics |
| Predictive Insights (Growth Forecasting) | Medium | Adds future-looking value but depends on quality time series data |
| Real-Time Data Feeds / Live Dashboard | Low | Requires APIs or streaming sources; better suited for future version |
| Advanced AI-based Forecasting | Low | Needs in-depth modeling and larger datasets for accurate projections |

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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

