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.

15 minutes

A **Choose your best "How Might We" Questions**
Create 5 HMW statements before the activity to pro
them to the team.

B **Set the stage for creativity and inclusivity**
Go over the brainstorming rules and keep them in fr
your team while brainstorming to encourage collab
optimism, and creativity.

1. **Encourage wild ideas** (If none of the ideas soun
ridiculous, then you are filtering yourself too mu
2. **Defer judgement** (This can be as direct as harsh
words or as subtle as a condescending tone or t
over one another.)
3. **Build on the ideas of others** ("I want to build on
idea" or the use of "yes, and...")
4. **Stay focused on the topic at hand**
5. **Have one conversation at a time**
6. **Be visual** (Draw and/or upload to show ideas,
whenever possible.)
7. **Go for quantity**

C **Interested in learning more?**
Check out the Meta Think Kit website for additional
tools and resources to help your team collaborate,
innovate and move ideas forward with confidence.

Open the website

Template

Conducting a brainstorm

Executing a brainstorm isn't unique; holding a productive brainstorm is. Great brainstorms are ones that set the stage for fresh and generative thinking through simple guidelines and an open and collaborative environment. Use this when you're just kicking-off a new project and want to hit the ground running with big ideas that will move your team forward.

15 minutes to prepare
30-60 minutes to collaborate
3-8 people recommended

Meta Think Kit
Meta Meta

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Need some inspiration?
See a finished version of this template to kickstart your work.
Open example

1 Choose your best "How Might We" Questions

Share the top 5 brainstorm questions that you created and let the group determine where to begin by selecting one question to move forward with based on what seems to be the most promising for idea generation in the areas you are trying to impact.

10 minutes

QUESTION
How might fleet managers predict fuel consumption accurately only using available data?

QUESTION
How does fuel consumption affect your fleet's running cost?

QUESTION
how to predict and manage fuel tax credit

QUESTION
How can we take measures to RightsizingYour Vehicle Fleet to Conserve Fuel ?

QUESTION
Why is important to model and predict the fuel consumption?

2 Brainstorm solo

Have each participant begin in the "solo brainstorm space" by silently brainstorming ideas and placing them into the template. This "silent-storming" avoids group-think and creates an inclusive environment for introverts and extroverts alike. Set a time limit. Encourage people to go for quantity.

10 minutes

Thejus

EBM algorithm explains the relationship between the input factors and fuel consumption, quantifying the individual contribution of each one of them.

Commonly used models for these purposes are artificial neural networks (NNs), because they are universal approximators that can represent nonlinear characteristics of a complex system by using a nonlinear activation function

Vishnuprasad M

Ability to model and predict the fuel consumption is vital in enhancing fuel economy of vehicles and preventing fraudulent activities in fleet management.

Based on many analysis, it can be concluded that the random forest technique produces a more accurate prediction compared to both the gradient boosting and neural networks.

Fleet fuel economy can be improved by eliminating extra weight, choosing efficient engine and vehicle parts, using effective fuel tracking technology

Distance is not the only factor that affects fuel consumption. Multiple factors like speed, temperatures inside and outside, AC, and other weather conditions like rain or sun besides distance should be used to predict the consumption.

By predicting fuel consumption in fleet vehicles, can prove useful in planning trips as well as performing real-time predictions during driving can be predicted indirectly.

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Riddhima Jandla

Create custom map zones (geofences) for improved off-road claims accuracy, and review and adjust fuel usage details if required.
Maximise FTC claims via GPS Data Reports to enable you or your advisor to apportion fuel usage between activities
Receive ongoing monthly FTC rebates at the optimal rates.

Convert to electric vehicles or alternative fuels. Fuel efficient vehicles require less gas to go a given distance. When we burn less gas, we cut global warming emissions and produce less pollution, while spending less on gas—a lot less.

Vishnu Narayanan s

Fleet fuel economy is calculated using the harmonic mean, not a simple arithmetic mean. The harmonic mean is the reciprocal of the average of the reciprocals of the fuel economies of all of the vehicles in the fleet.

Set an internal utilization threshold for your fleet's vehicles Determine the utilization of each vehicle Determine the number of over and under utilized vehicles Rhen implement changes according to it.

TrAnsition to SmAllery More Efficient EnGines: UsinG smAller enGines cAn helP fleets meet oPerAtionAl needs without DowniGrADinG Vehicle clAss. Some fleets choose to switch from 6-cylinDer to 4-cylinDer enGines to helP reDuce fuel use AnD emissions.

Choose LiGhter Vehicles: When PurchAsinG new Vehicles, look for oPPortunities to reDuce Vehicle weGht. LiGhtweiGht mAteriAls such As Aluminum frAmes, AnD smAller comPonents cAn reDuce rollinG resistAnce AnD DrAG

A fleet riGhtsizinG strAteGy shouID eVAluAte the business cAse of eAch Vehicle to Determine whether reAssiGninGy replAcinGy or eliminAtinG the Vehicle wouID reDuce fuel AnD mAintenAnce costs without comPromisinG fleet ActiVities.

MAke SmArt Vehicle PurchAses. Fleet mAnAGers mAy DecIDe to rePlAce olDer Vehicles with more fuel-efficient or AlternAtiVe fuel Vehicles. These PurchAsinG strAtGies mAy helP fleet mAnAGers mAke Decisions thAt meet oPerAtionAl needs AnD conserVe fuel

3 Brainstorm as a group

Have everyone move their ideas into the "group sharing space" within the template and have the team silently read through them. As a team, sort and group them by thematic topics or similarities. Discuss and answer any questions that arise. Encourage "Yes, and..." and build on the ideas of other people along the way.

15 minutes

TIP
You can use the Voting session tool above to focus on the strongest ideas.

Linear Regression is the simplest of all Machine Learning algorithms. Basically, it determines the relationship between the two variables where one is the independent variable and the other one is the dependent variable. However, this algorithm is too simple and may not be appropriate for complex problems.

The K-Means Clustering is an unsupervised Machine Learning technique that takes input dataset without labels. Further, it creates the clusters of data points. After that, we can use these clusters for the classification task. Since, the data points of new records will fall in one of the clusters, it helps us in predicting the outcome.

What is logistic regressionY Logistic regression is an example of supervised learning. It is used to calculate or predict the probability of a binary (yes/no) event occurring.

Artificial Neural Networks are one of the deep learning algorithms that simulate the workings of neurons in the human brain. There are many types of Artificial Neural Networks, Vanilla Neural Networks, Recurrent Neural Networks, and Convolutional Neural Networks. The Vanilla Neural Networks have the ability to handle structured data only, whereas the Recurrent Neural Networks and Convolutional Neural Networks have the ability to handle unstructured data very well. .

Multiple linear regression (MLR), also known simply as multiple regression, is a statistical technique that uses several explanatory variables to predict the outcome of a response variable

A VRP(vehicle routing problems) optimization algorithm requires the prediction of vehicle fuel consumption for the given route, period of day, driver, etc. The fuel consumption prediction is based on a model, which should account for both driving behaviors and traffic conditions.

Random Forest is a popular machine learning algorithm that belongs to the supervised learning technique. It can be used for both Classification and Regression problems in ML. It is based on the concept of ensemble learning, which is a process of combining multiple classifiers to solve a complex problem and to improve the performance of the model.

4 Decide your focus

Give each person two icons to vote which idea should your team focus on.

5 minutes

Vishnu Prasad M
Vishnu Narayanan s
Riddhima Jandla
Thejus

After you collaborate

A brainstorm like this typically results in a handful of promising ideas that you can carry forward and act upon.

Quick add-ons

A **Cluster related ideas**
Look for patterns or similarities in the standout ideas. Could any be combined together to form a stronger concept? Cluster similar ideas and label each cluster with a theme.

B **Vote on the most promising ideas**
Narrow your focus to only the strongest few ideas by holding a **Voting Session**. Give each person 2 votes

Keep moving forward

2x2 Prioritization matrix
Build shared understanding and make collective decisions for moving ideas forward.
Open the template

Storyboarding
Show existing and/or future consumer experiences through the act of sketching.
Open the template

Pre-mortem
Harness the collective experience and wisdom of the team, before the project even starts.
Open the template

Share template feedback