

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	06 May 2023
Team ID	NM2023TMID15400
Project Name	Industrial Workers Health and Safety System based on the Internet of Things
Maximum Marks	

Brainstorm & Idea Prioritization:

To prioritize ideas for an Industrial Workers Health and Safety System based on the Internet of Things (IoT), we can focus on essential features. Firstly, real-time monitoring using IoT sensors to track vital signs like heart rate and temperature would be crucial for immediate health risk identification. Secondly, implementing hazard detection sensors to monitor substances, noise levels, and air quality would help prevent potential dangers. Thirdly, location tracking through wearable devices or beacons would ensure worker safety in restricted areas. Fourthly, wearable safety devices like smart helmets or safety vests with proximity alerts can prevent accidents. Fifthly, incorporating IoT technology to manage worker fatigue by monitoring sleep patterns and recommending breaks would prioritize their well-being. Additionally, an emergency response system that triggers alerts and notifies relevant personnel in case of accidents is essential. Lastly, utilizing IoT devices for interactive safety training and predictive maintenance of equipment would enhance overall safety in industrial environments.

Reference:

<https://app.mural.co/invitation/mural/naanmudhalvan9291/1684466878983?sender=ua3fc7bba50761da6e8789649&key=d574e9d2-a680-42aa-b564-bc61b82af525>

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



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



Team gathering

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



Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.



Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) →



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

The industrial sector is plagued by numerous health and safety challenges, resulting in accidents, injuries, and even fatalities. Existing health and safety systems often lack real-time monitoring capabilities and fail to provide comprehensive insights into the working conditions and employee well-being.



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-2: Brainstorm, Idea Listing and Grouping:

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 icon to sketch/ icon to start drawing!

GOWTHAM S

Workload
management
Real-time
monitoring

JEEVANANTHAM M

Provision
of safety
equipment
Safety
equipment
availability

KESHUVARDHAN V

Safety
equipment
availability
Real-time
monitoring
Safety
equipment
availability

KIRUBANITHI S

Compliance
monitoring
Safety
equipment
availability
Risk
assessment
Real-time
monitoring

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 can 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 team.

Heat stress
monitoring:

Deploy of sensors to monitor ambient temperature, humidity, and heat index to warn workers when heat stress is a concern.

These sensors can provide real-time alerts to workers and supervisors.

Enabling them to take appropriate precautions to prevent heat-related illnesses.

Safety
monitoring
dashboards:

Create an online dashboard that displays data from various IoT sensors and devices in real-time.

These dashboards can provide actionable insights and safety alerts to workers and supervisors.

Enabling them to identify potential risks and make informed decisions for protecting workers.

Emergency
response
systems:

Implement an instant emergency response system that can alert workers and supervisors in case of an emergency.

These systems can include features such as automated alerts, location tracking, and communication.

Emergency
shelters
facilities to
provide first
aid and
medical
assistance to
affected workers.

Training and
education:

Develop IoT-based training programs and e-learning modules to enhance worker safety knowledge and skills.

Virtual reality (VR) simulations can be used to train workers on safety protocols and emergency procedures.

Allowing workers to practice safety protocols in a controlled environment.

Step-3: Idea Prioritization:

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.

