MAZDA AUTODRIVE

TEAM 5 – Sowmiya Mankala, Urvashi Burman, Himanshu Mandaloi, Urvi Tank, Kuldeep Owalekar, Yasaswi Madala

SOWMIYA MANKALA

URVASHI BURMAN

HIMANSHU MANDLOI

KULDEEP OWALEKAR

URVI TANK

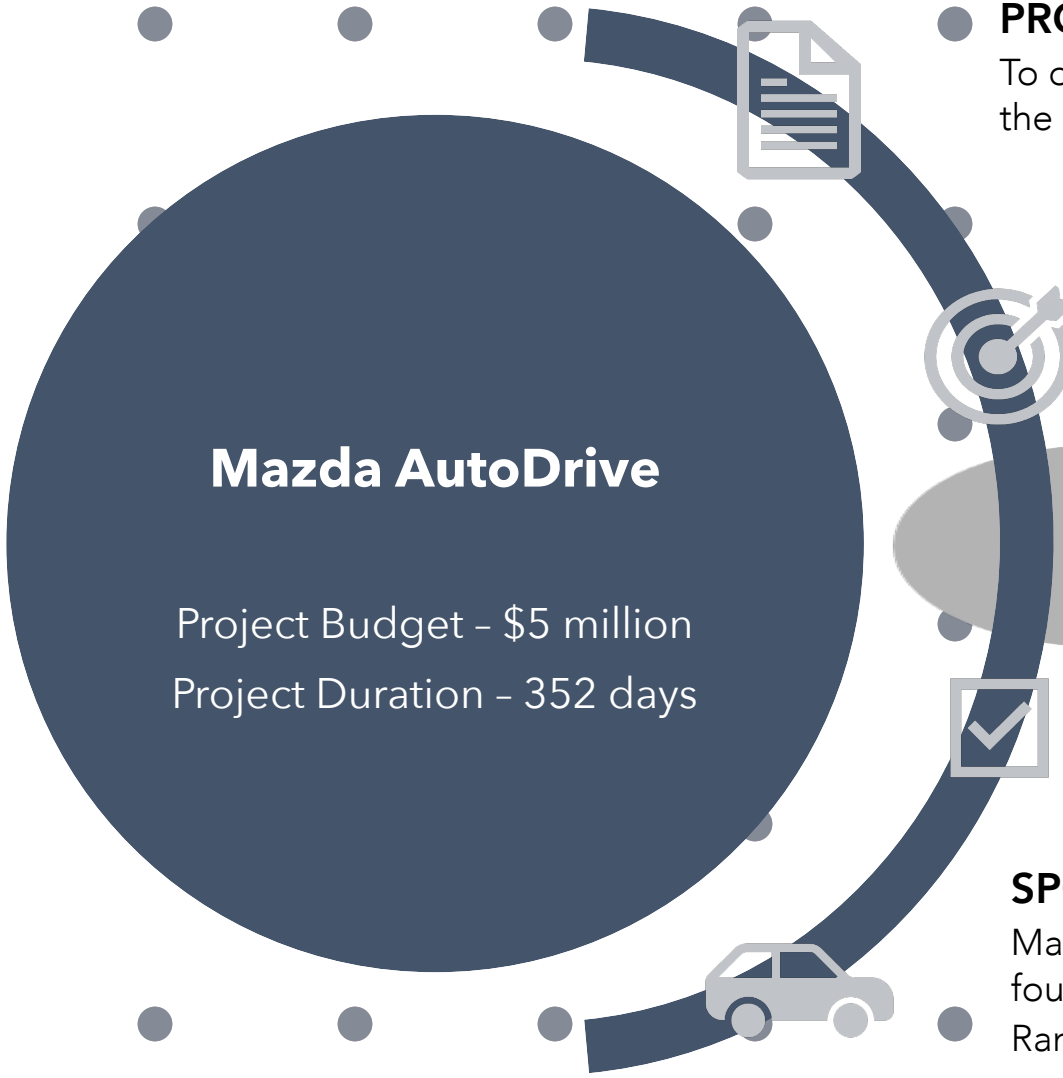
YASASWI MADALA

WE ARE TEAM 5

AGENDA

1. Project Overview & Sponsor Background
2. Key Components of Risk Management Plan
3. Risk Identification
4. Risk Prioritization
5. Project Timeline, Delay & Risk
6. Risk Response Strategies
7. Contingency Reserve
8. Monitoring & Controlling
9. Value of Risk Management

PROJECT OVERVIEW & SPONSOR BACKGROUND



PROJECT BRIEF/ SUMMARY

To develop an autonomous feature for Mazda cars that will allow the vehicle to operate with limited human intervention.

PROJECT OBJECTIVES

To enhance the driving experience of Mazda car owners by incorporating advanced driver assistance systems (ADAS) and automated driving technologies into Mazda vehicles.

FEATURES

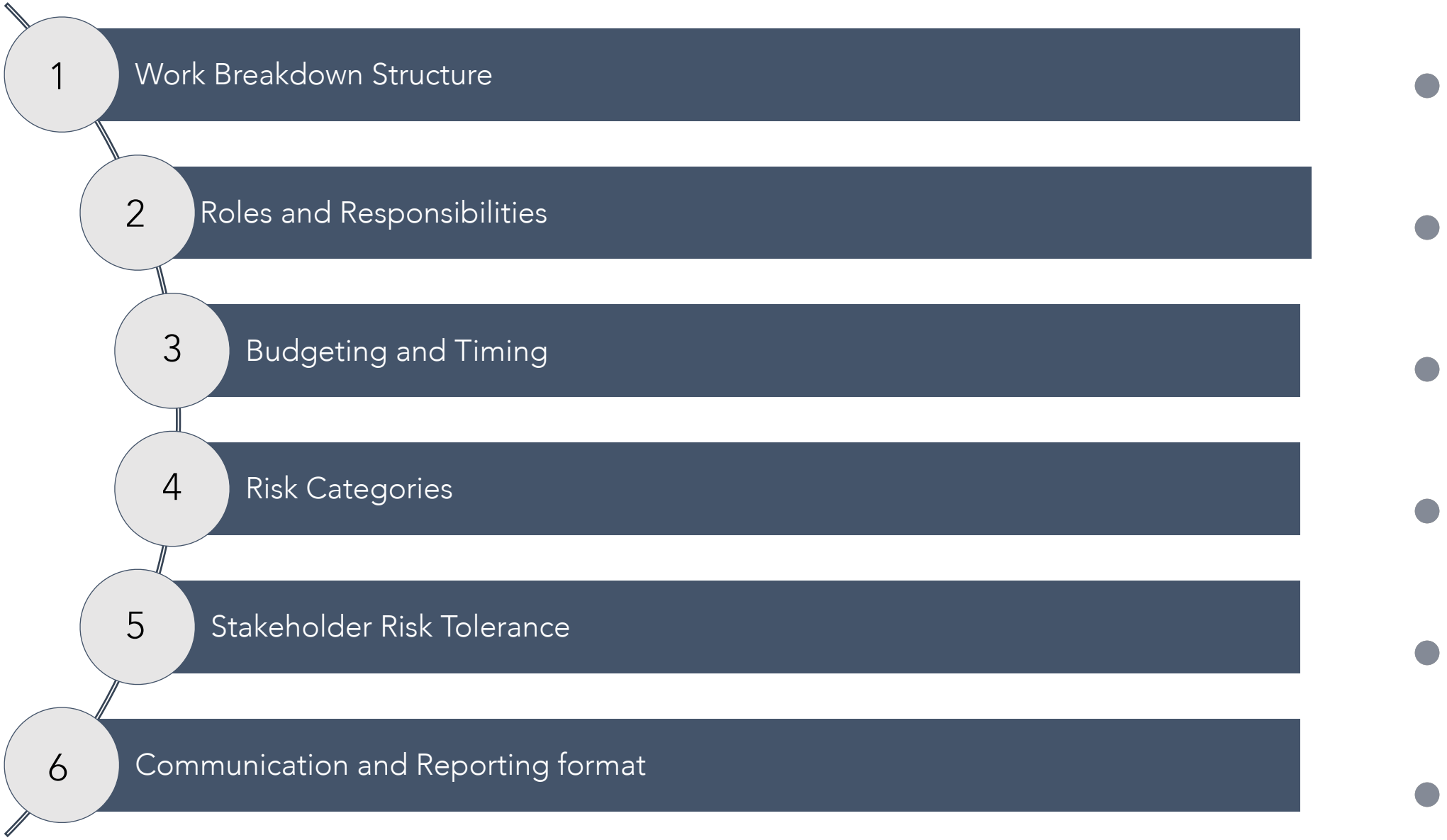
Adaptive cruise control, lane-keeping assistance, automatic emergency braking, and user-friendly.

SPONSOR BACKGROUND

Mazda Company is owned by a Japanese multinational automaker founded in 1920.

Range of Vehicles – sedans, hatchbacks, SUVs, and sports cars

KEY COMPONENTS OF RISK MANAGEMENT PLAN



RISK IDENTIFICATION

Define Project Objectives & Create a Work Breakdown Structure

Brainstorm potential risks with Team Members

Document on Risk Register

Categorize the Risks based on Impact and Likelihood

Tools and Techniques

- Research Data
- Brainstorming
- Risk Register

Difficult Part

- Qualitative Analysis

Lessons Learnt

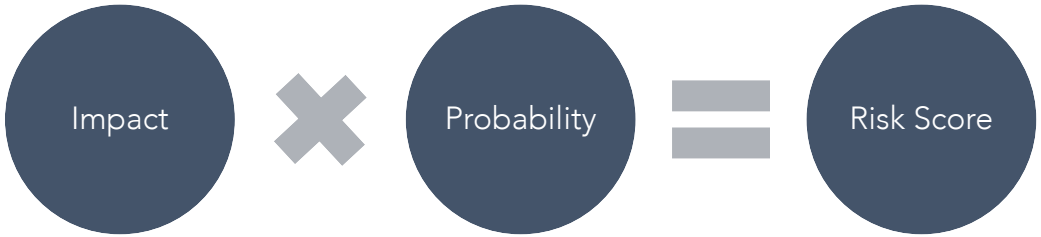
- Identify Risks
- Categorize Risks

Value of the Approach

- Team Discussion
- Document risks on Risk register on time

RISK PRIORITIZATION

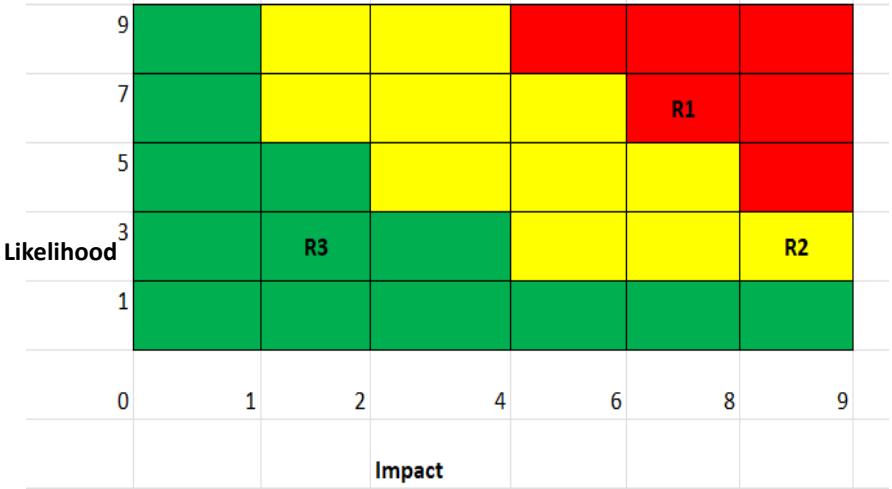
Risks were prioritized by documenting a Qualitative and Quantitative assessment



How valid is this approach?

- Qualitative assessment – subjective understanding.
- Quantitative assessment – numerical data (statistics and scores).
- Both together – decision-making and prioritizing risks.

Example: Risk 1 – The risk of integration of software with the hardware caused by the presence of software code bugs and wireframes design errors results in an increase in the timeline in the development phase and a longer testing phase in the project. [Impact = 8, Probability = 7, Risk Score = 56]



HEATMAP

Thresholds
High: 45 - 81
Medium: 13 - 44
Low: 0 - 12

THRESHOLD

Risks	RS	I*P
R1 - Software Integration failure	56	8*7
R2 - Object detection failure	27	9*3
R3 - Extensive research	6	2*3

RISK SCORE

PROJECT TIMELINE, DELAY & RISK

80% Project completion

Thursday - 8th February 2024

After completion of Integrating software modules into hardware components

100% Project completion

Friday - 28th June 2024

Anticipated Task Delays

- Testing prototypes
- Material procurement for hardware development
- Test cases – environment testing

Riskiest Parts of the project

- Developing and comparing prototypes
- Integrating software modules into hardware components
- Testing phase - test cases (lane-testing, object detection, emergency test)

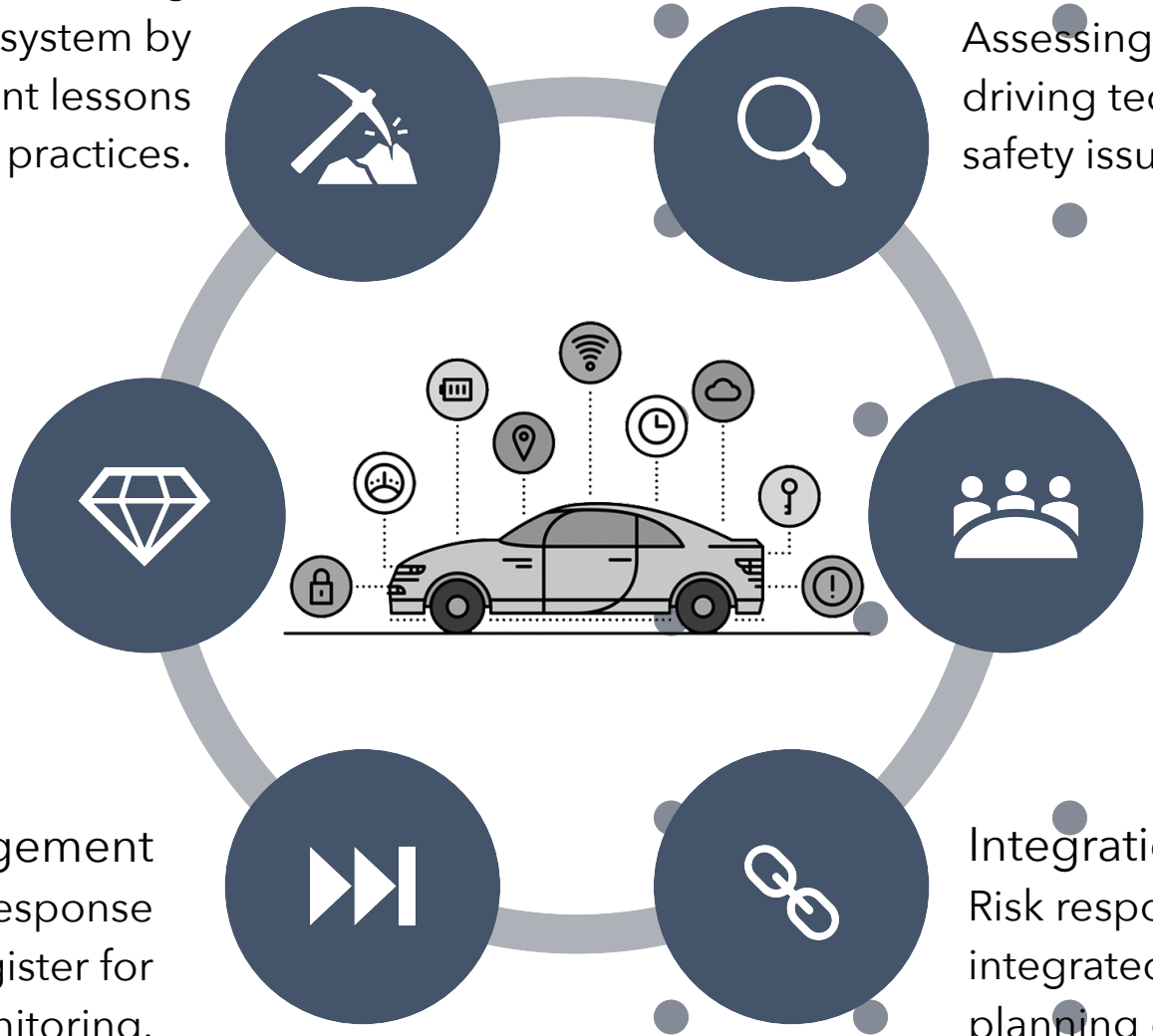
RISK RESPONSE STRATEGIES

Continuous Improvement & Learning

Improve Mazda's Autopilot system by applying risk management lessons and industry best practices.

Risk identification & Assessment:

Assessing risks of ADAS and self-driving tech dev, incl. tech, regulatory & safety issues.



Risk Assessment and Value Addition

It adds value by reducing uncertainties and enhancing the overall outcome.

Risk Response Strategies

Tailored strategies for each identified risk: risk avoidance, mitigation, transfer, and acceptance.

Secondary Risk Management

Secondary risks from risk response strategies added to register for monitoring.

Integration with planning components

Risk response strategies were integrated into other planning components for a unified project plan.

CONTINGENCY RESERVE

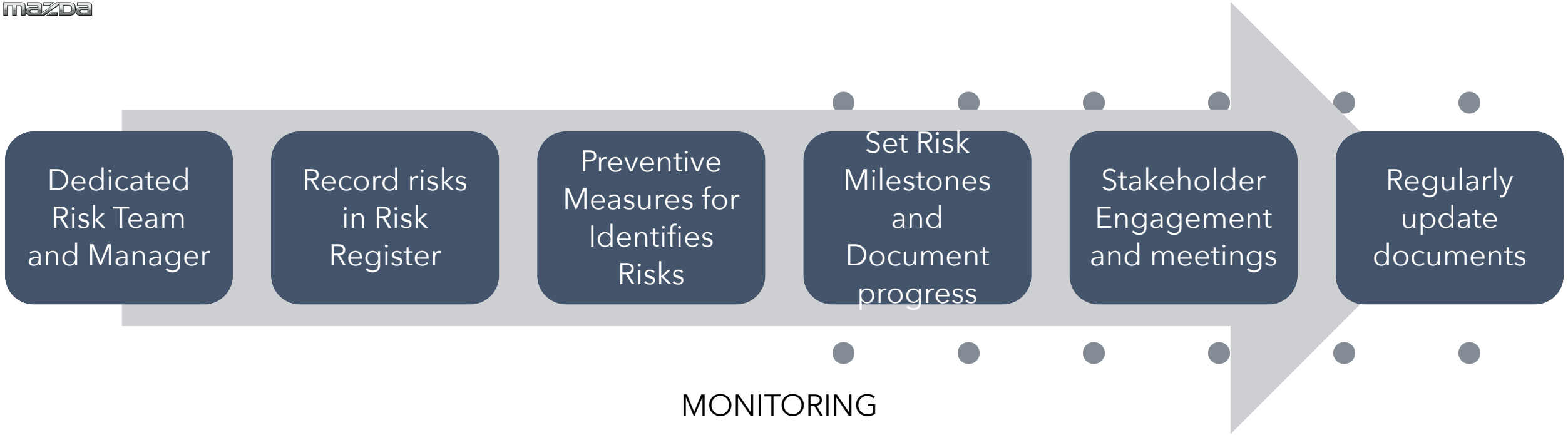
Contingency Reserve
10% of the total budget
($5,000,000)

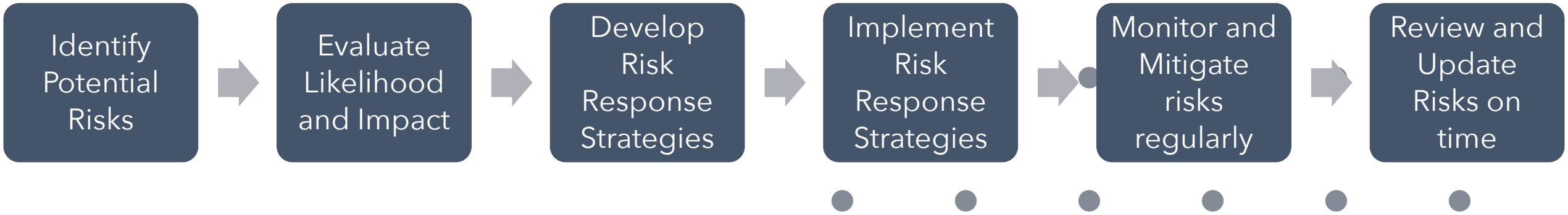
$500,000

Contingency Reserve will be used for

- Issues
- Change Requests
- Unanticipated Risks

RISK MONITORING AND CONTROLLING





VALUE OF RISK MANAGEMENT

Enhanced decision-making and planning

Improved project process and performance

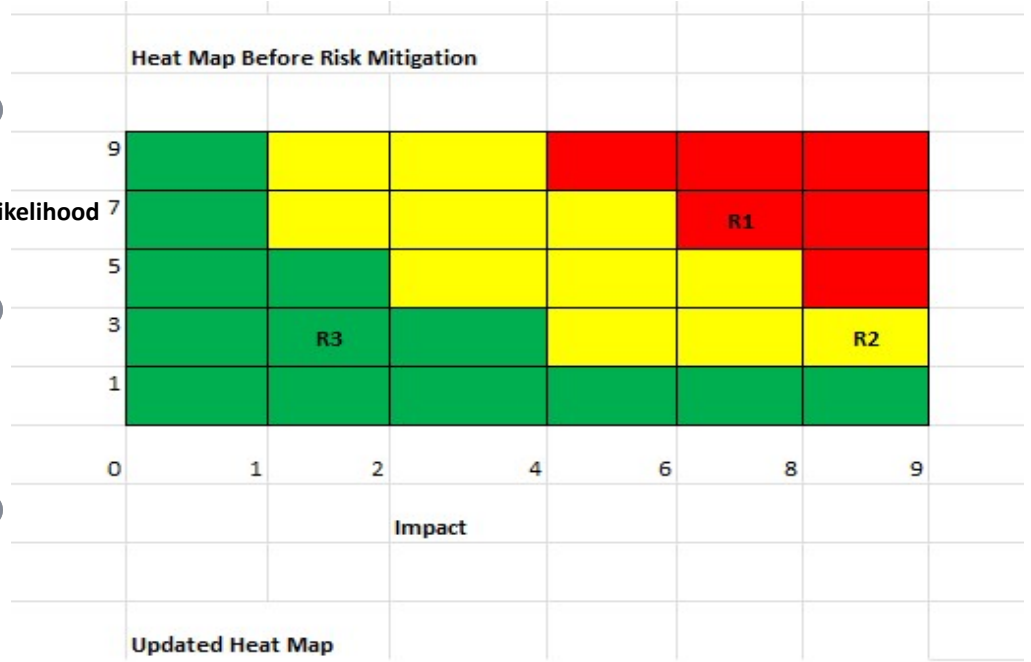
Creates stakeholder confidence and trust

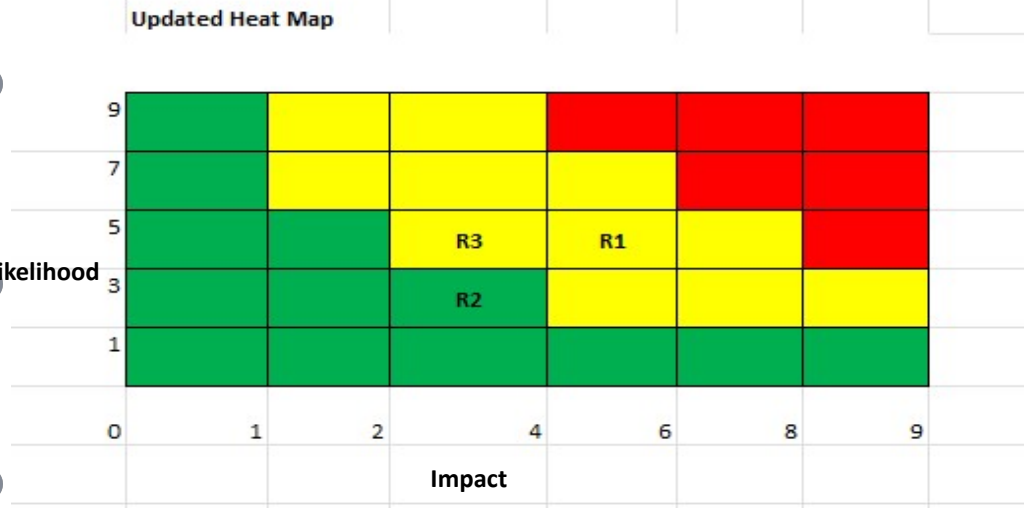
Minimizes negative impacts

Creates opportunities & maximizes positive outcomes

Efficient use of budget

Impact	Risk Score= Impact*Likelihood	Impact	Probability	EMV Cost(USD)= Cost*Probability
High Impact: A delay in the final approval by 30 days and an additional cost of 450,000 USD will be incurred.	56	8	7	70% of 450,000 = $315,000
Moderate Impact: Releasing of the product will get delayed by 20 days with an additional cost of 250,000 USD.	27	4	3	30% of 250,000 = $75,000
Somewhat Low Impact: Building a better product which will result in early finish of the project by 10 days with a cost reduction of 110,000USD	6	2	3	30% of 110,000 = $33,000





REFERENCE

1. Coleman, T. S., & Tomlins, G. A. (2011). A practical approach to risk management. Butterworth-Heinemann.
2. Cooper, D., Bosnich, P., & Grey, S. (2014). Project risk management guidelines: Managing risk with ISO 31000 and IEC 62198. John Wiley & Sons.
3. Salkeld, D. (2000). Project risk analysis and management. E & FN Spon.
4. Hillson, D. (2012). Risk management for project driven organizations. Routledge.

THANK YOU!