**Foresight Part 2: Chatting about Risk**

# Introduction

In the highly dynamic and challenging world of designing, developing, and delivering complex equipment and systems, effective risk management plays a critical role in ensuring project success. With the advent of advanced data analytics and AI technologies, leveraging historical data from aggregated Risk Registers can provide invaluable insights into potential project risks and their mitigation strategies.

By harnessing the power of historical Risk Register data through a chatbot AI interface, stakeholders can proactively identify, assess, and manage risks throughout the project lifecycle. The questions presented in this document are designed to uncover critical insights related to project scope, technical challenges, financial constraints, supply chain dependencies, compliance requirements, resources and external environmental factors.

Key benefits of using these targeted inquiries include:

* **Enhanced Risk Identification:** Proactively identifying potential risks based on historical data ensures that no critical risk element is overlooked.
* **Informed Decision-Making:** Data-driven insights from past projects facilitate informed decision-making and prioritisation of risk mitigation actions.
* **Strategic Planning and Preparation:** Understanding recurring risks and effective mitigation strategies from previous projects aids in strategic planning and preparation for similar challenges.
* **Efficient Resource Allocation:** Targeted risk identification supports more efficient allocation of resources to areas of highest impact.
* **Comprehensive Risk Management:** Addressing the concerns of various stakeholders ensures a holistic approach to risk management, identifying where risks are not being managed effectively and improving project coherence and coordination.

Whether in the initial bid phase, preparing to launch the project or in project execution, the structured approach to interrogating risk data through questioning the data equips the team with the knowledge and tools necessary to navigate the complexities inherent in project management. Stay ahead of potential risks and ensure a higher probability of project success by leveraging the power of historical risk data insights.

The goal is to enable natural language query of the risk data to include AI models for alerts, historical trends, recommendations and the predictive forecast from Part 1. The solution should integrate seamlessly with existing risk data extracts and provide actionable insights.

The following sections outline a series of detailed questions that could be asked of a Chatbot AI interface to a large risk data set.

# Example Questions

## Bid Manager

1. Can you summarize the top recurring risks from previous similar projects in terms of their impact and likelihood?
2. What were the most common root causes of schedule delays in previous projects of similar scope?
3. Can you provide examples where schedule buffers were insufficient, and what adjustments were made?
4. Which mitigation strategies have been most successful for high-impact risks in past projects?
5. What contingency plans were most effective in historical projects?
6. Are there any frequent cost overrun themes observed in historical projects?
7. What measures have been most effective in controlling budget overruns?
8. What are the typical technical risks associated with the system components similar to those in this proposal?
9. What technical integration issues have been most prevalent in previous projects?
10. Are there commonly identified interoperability risks with similar systems and how were these mitigated?
11. What supplier-related risks have frequently impacted project delivery in similar past projects?
12. Are there any specific components or materials that have historically been hard to procure?
13. What mitigation actions were taken when supplier risks materialized?
14. What are the common regulatory or compliance-related risks faced in previous projects, and how were they addressed?
15. What human resources challenges have been most common in past developments and how were they mitigated?
16. What external risks (e.g., geopolitical, economic, environmental) have impacted past projects?

## Project Manager

1. What are the top three risks currently impacting the project timeline, and what are their specific causes?
2. Which mitigation strategies have historically been the most effective for similar projects in terms of cost, schedule, and performance?
3. How frequently are risk assessments conducted and reviewed in this type of project, and what triggers a re-assessment?
4. Are there any emerging risks that we should be aware of that were not initially identified, and how were they discovered?
5. What contingency plans are in place for dealing with high-impact risks, and how often are these plans tested?

## Risk Manager

1. Can you provide a detailed summary of the highest-rated risks across all projects, including their potential impacts and likelihoods?
2. How do the current risk exposure levels compare to previous projects of similar scale and complexity?
3. What is the success rate of risk mitigation actions implemented in the past year, and how is their effectiveness measured?
4. Are there any patterns or trends in the types of risks encountered over multiple projects, and what insights can we draw from these trends?
5. How well do our current risk management practices align with industry best practices and standards?

## Systems Engineer

1. Which technical risks have had the most significant impact on system performance, and what were the underlying technical issues?
2. How often do technical requirements change due to identified risks, and what are the main drivers for these changes?
3. Which design phases are most prone to risk occurrences, and what specific issues arise during these phases?
4. How are integration and interoperability risks managed during system development?
5. What are the most effective mitigation strategies for risks in the IVVQA (Integration, Validation, Verification, Qualification and Acceptance) phase of the lifecycle

## Supply Chain Manager

1. What supply chain risks have frequently disrupted delivery schedules, and how were these disruptions mitigated?
2. How are supplier-related risks typically identified and assessed during the procurement process?
3. Which suppliers have historically posed the highest risk levels, and what measures have been taken to manage these relationships?
4. Are there any specific risk indicators that predict supply chain delays, and how are they monitored?
5. How do geopolitical and economic factors influence supply chain risks?

## Financial Controller

1. What financial risks have been consistently high in previous projects, and what were their main drivers?
2. How do risk events typically influence project budgets, and is there a pattern in how projects account for these impacts?
3. Can you highlight any trends in cost overruns due to risk events, and what measures have been successful in mitigating these overruns?
4. What risk mitigation actions have led to significant cost savings, and how were these savings realised?

## Quality Assurance Manager

1. Which risks have most often resulted in quality issues, and what were the specific defects or failures observed?
2. How effective are current quality control measures at mitigating identified risks, and what metrics are used to evaluate this effectiveness?
3. What are the recurring themes in risk events related to quality defects, and how can they be addressed systematically?
4. How do quality assurance practices compare to industry standards in managing risk, and what areas need improvement?

## Compliance Officer

1. What compliance risks are frequently noted in the Risk Register, and what regulations or standards do they pertain to?
2. How do we ensure adherence to regulatory requirements despite identified risks, and what are the consequences of non-compliance?
3. Which regulatory lapses have occurred due to risk events, and how were they rectified or mitigated?

## Executive Leadership

1. What are the strategic risks that could potentially impact the organisation's long-term goals, and how are these risks prioritised?
2. How does the overall risk exposure of current projects compare with previous initiatives in terms of potential impact and likelihood?
3. What is the organisation's risk appetite, and how do current risks align with this appetite, especially in high-stakes projects?