

## Building Resilience in an Uncertain World

### ABSTRACT

Risk management is evolving from being a reactive function to becoming a strategic enabler. With the ever-increasing frequency and complexity of global disruptions, a shift to long-term resilience planning is vital. As the complexity of the risk landscape grows, so does the challenge of managing these interconnected dependencies, where a failure can have multiple unforeseen ripples.

We shall explain *technical* and *non-technical approaches* to managing these, for example:

- **Non-technical:** Managing systemic risks with integrated project governance through iterative feedback loops to be able to respond quickly and appropriately to threats/opportunities.
- **Technical:** Improving sensor networks and sense-making capabilities to auto update cost models [e.g., Machine Learning (ML) application on Reference Class Forecasting (RCF)].

### We shall explore 3 Strategic Themes:

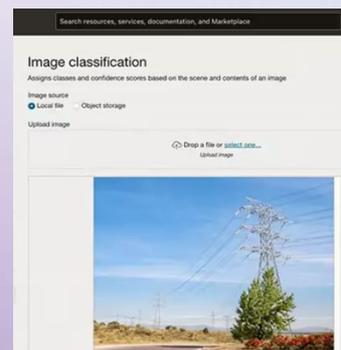
1 Strategic Integration of Risk Management	2 Addressing Technology Driven Risks	3 Managing Systematic Risks with Integrated Project Governance
Embedding risk management into core strategies via: <ul style="list-style-type: none"> <li>• Scenario planning, predictive analytics, and stress testing to make informed decisions.</li> <li>• Build capabilities in strategic risk assessment, including scenario planning and risk forecasting.</li> <li>• Foster closer collaboration with leadership to align risk strategies with business goals.</li> <li>• Develop tools and dashboards that provide real-time insights into organisational risks and opportunities.</li> </ul>	The proliferation of artificial intelligence (AI), automation, and digital transformation has introduced new risks, such as algorithmic bias, data privacy concerns, and cybersecurity threats.  While these technologies enhance efficiency and innovation, they also demand increased risk management regarding cybersecurity frameworks, including zero-trust architecture and incident response plans.	Recalling Cynefin, Framework, complexity remains the domain of probing and emergent insights, we shall share practical examples shared on how Projects can invest in 3 strategies to build organisational capabilities to thrive in complexity and increase their FARNess (Flexibility, Adaptiveness, and Robustness), to maximise the variety of responses they can call upon.  Projects can invest in 3 strategies to build organisational capabilities to thrive in complexity: <ol style="list-style-type: none"> <li>1. Systems activism</li> <li>2. Diversity of thought</li> <li>3. Social capital</li> </ol>

### Case Study: Automate Defect Detection Using Drones and OCI Vision for Digital Twins

Use of an advanced AI service in image processing on a large scale with the aid of deep learning, which provides pre-built models for image and text recognition in an automated way.

OCI Vision plays a pivotal role in automating defect detection in construction scenarios.

- Detecting issues across assets can be time consuming and labour intensive, but it can be automated with AI. Oracle's AI vision can automate defect detection for digital twins, leveraging Oracle Cloud Infrastructure (OCI) Vision. This type of solution can detect rust asset information using images collected by drones.
- Raw data is gathered by drones inspecting specific areas of a construction project, and the images are uploaded to OCI Object Storage. An event trigger then initiates the OCI Vision service, which employs custom models to detect anomalies within the collected images.





## Securing Project Resilience in a Complex World

### Speaker Profiles



#### **Director and Principal Consultant - Riskontrol risk management services**

*'Graeme is passionate about improving the links between risk, resilience, and complexity management to equip risk managers with the tools they need to meet the challenges of our increasingly complex world.'*

- As Chair of the Risk & Complexity SIG, Graeme is leading a team of experts to publish the IRM Risk & Complexity Good Practice Guidelines.
- He regularly speaks at events on managing risk in increasingly complex environments including the On-Risk conference 2023 at the London Stock Exchange, and the APM/ACostE conference 2024 in Manchester.
- Director and Principal Consultant at Riskontrol, providing specialist risk management services relating to complex environments.
- CEO of Riskoncise, a risk complex management software which was shortlisted for the CIR Risk Awards Product of the Year 2022.
- Author/Co-Author (see Publications section):
  - IRM's Enterprise Magazine Autumn 2022 - Harnessing Complexity
  - IRM's Enterprise Magazine Winter 2024 – Adapting to Complexity
  - ACostE Project Control Professional November 2024 – Securing Project Resilience in a Complex World
  - Financier Worldwide Magazine December 2024 – Navigating Interconnected Risks
- Co-Author of two AMP PRAM Guide chapters:
  - Risk Complexity
  - Risk Facilitation'



#### **Fellow - Controls and Skills Authority (CaSA), Institute of Risk Management (IRM)**

Sachin has 20+ years' experience in delivering PMO, Programme Delivery and Transformational Change on major ERP projects, and major infrastructure projects.

Sachin is a Fellow of the Controls and Skills Authority (CaSA), and the Institute of Risk Management (IRM). Sachin is also a member of the CaSA Southwest Regional Board, and Nuclear Institute's Digital SIG (DIGSIG), and past AXELOS P3M3 Assessor and Member of the IRM Risk & Complexity SIG.

Past Case Studies of his work has been featured in [Project Control Profession Magazine](#) for work in digitising a Nuclear New Build's (NNB) procedures using AI/Machine Learning (ML) and Natural Language Processing (NLP) and integrating them with Asset registers.

Sachin is a regular past presenter at the Association of Cost Engineers (ACostE now CaSA) conferences '22, '23, and '25. As an author his contributions to risk management have been featured in PM World Journal: "**How I Learned to Stop Worrying and Love Risk**", and PMI Project Management.com contributor.

DADA is a Company Member to the CaSA, and have achieved 3rd Party ISO9001, Cyber Essentials accreditation amongst others.

DADA has been a regular presenter/exhibitor at the Project Controls Expo ('20,'21,'22). In their maiden year of Company Membership, they were shortlisted, against Bechtel and Tetra Tech, in the Britain's Energy Coast Business Cluster (BECBC) 2023 Annual Awards, by National Nuclear Laboratory (NNL) in the "[Innovation and Creativity](#)" category. Here, they created a SMART Construction platform by turning project data into predictive intelligence to create a "risk radar" to continuously identify hidden risks.