

RESILIENCE Consulting





All organizations are vulnerable to disruption and change

The World is becoming more volatile, uncertain, complex and ambiguous (VUCA). A facility designed a few years ago may not be fit for the future due to changing parameters caused by stresses such as climate change, technical advances or market changes. Organizations need to be aware of strategic risks and potential opportunities to their business from a range of stresses; for example, the use of AI and automation will change the way a facility runs, the workforce and skill sets it needs. The effects of climate change on extreme weather events is another concern. While these could cause a major business disruption, those with the foresight to embrace and prepare can turn this to an advantage and get ahead of the competition.

GEOPOLITICS

CLIMATE
CHANGE

NATURAL
DISASTERS

TECHNOLOGY

URBANIZATION



A resilient organization is adaptive, agile, robust and competitive – harnessing experience and embracing opportunity to achieve longevity.



Organizational Resilience provides a common platform and shared understanding for adapting to a dynamic business environment; allowing leaders to take measured risks with confidence, responding quickly and appropriately to both opportunities and threats.

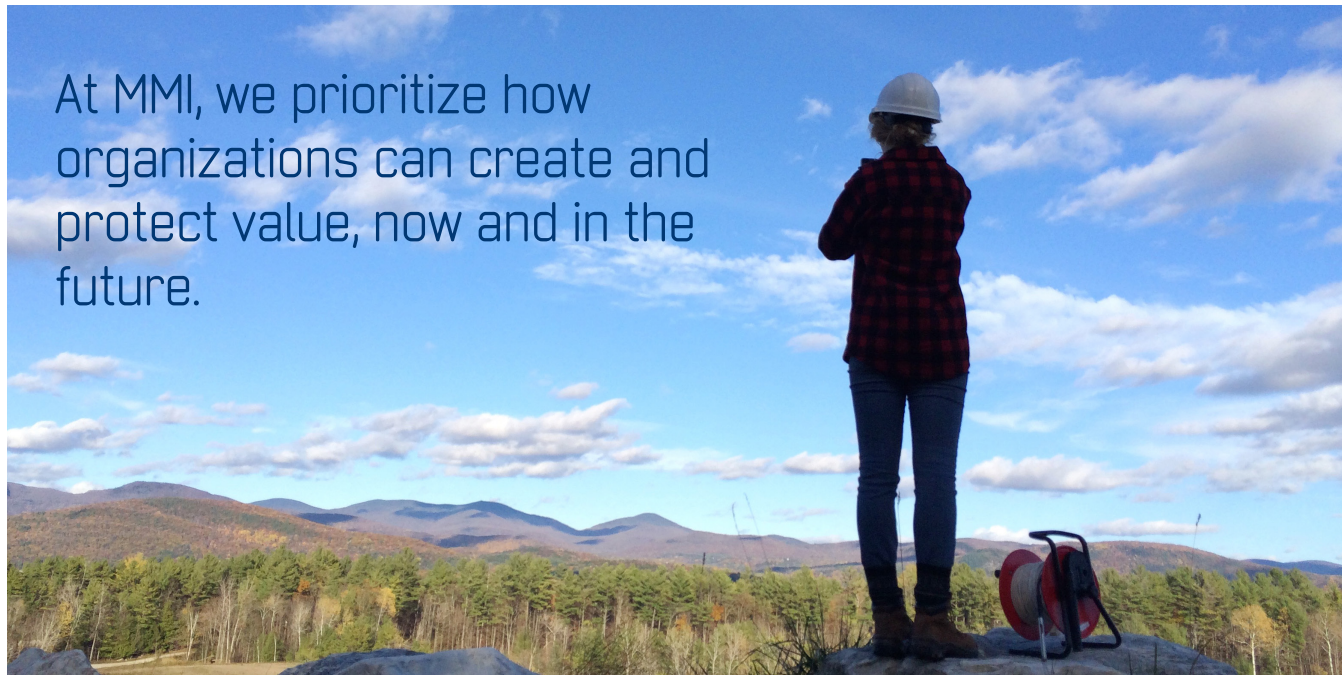
Whilst risk prevention and mitigation is an important part of resilience, equal focus is given to business improvement. It is not a defensive strategy. It is a positive, forward-looking strategic enabler; resilient organizations are agile and proactive; aware of, anticipating, creating and taking advantage of new opportunities.

We recognize that most companies have taken steps to improve their resilience, however these are often not joined up across the organization. This is because understanding the dependencies and interconnectivities of systems is complex and requires cross-company collaboration. We have developed a framework and approach that can provide a comprehensive assessment of the resilience of your organization, its assets and supply chains. Pulling together and reviewing all these aspects allows the following benefits:



- A comprehensive view – facilitating clear decision making and prioritization of resources.
- Increased strategic adaptability, agile leadership and robustness.
- Provides business case for investing in resilience measures.
- Identifies cross departmental co-benefits leading to cost savings .
- Leads to the realization of competitive advantage.

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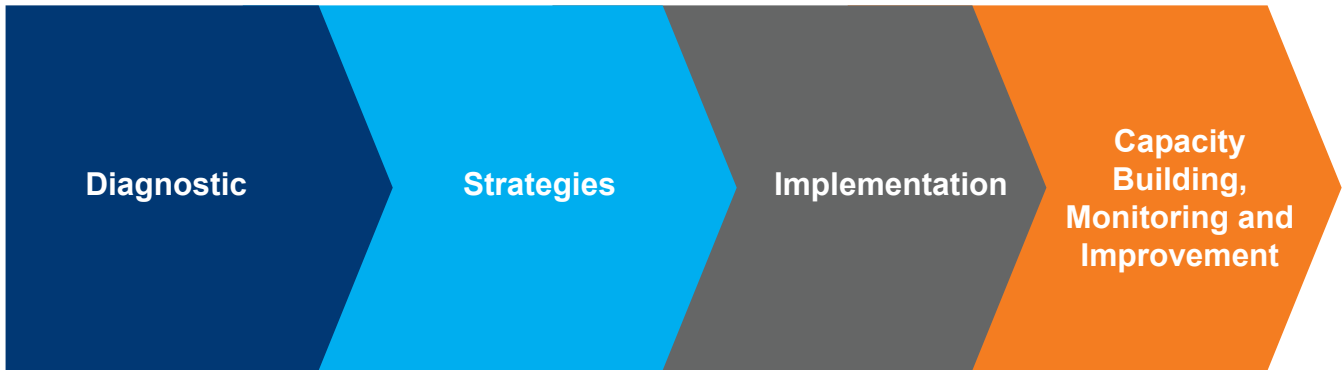
At MMI, we prioritize how organizations can create and protect value, now and in the future.

MMI's resilience team integrates input from our technical experts to offer a holistic approach to resilience that is in alignment with BS 65000 Organizational Resilience standard. We support our clients to create a comprehensive understanding of the resilience of their organization or asset. We follow the process laid out in our "Roadmap to Resilience". We start by understanding the value that your organization delivers through a series of workshops and stakeholders interviews. This allows objectives to be agreed and set around resilience. We perform a shock and stress assessment for your organization. This look at hazards such as flooding, earthquake, fire etc. but also consider stresses such as geopolitical factors, climate change, technological advances (automation and AI) and how these interact with each other. We also look to the future and how these shocks and stresses may change over time. This allows us to really help future proof your organization.

Next, we understand the systems that deliver value within your organization and identify where critical vulnerabilities exist and how they may be impacted by the identified shocks and stresses. These vulnerabilities will include physical infrastructure and systems but also the people within the organization and risk governance processes and culture. We have a unique adaptive capacity survey that measures the agility of your organization, which coupled with our review of risk mitigation measures provides a rounded picture of the resilience of your organization.

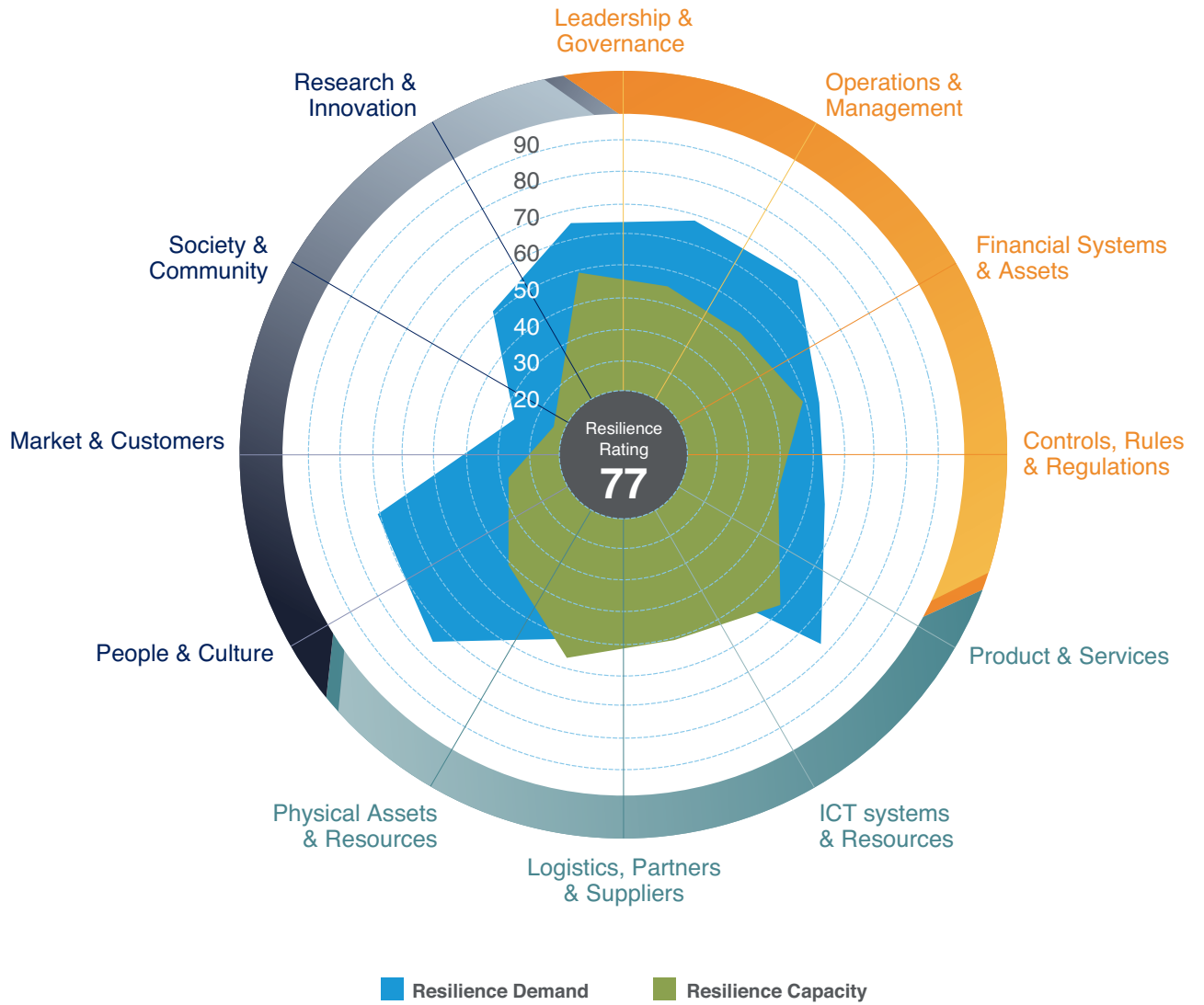
We provide a measurement of the resilience of your organization or asset through our innovative resilience framework, on the next page. This provides a baseline of where you currently are and helps prioritize areas for improvement. This quantitative measure will also assist you in building the business case for investing in resilience measures as the cost-benefit can be clearly measured and articulated over time.

ROADMAP TO RESILIENCE



Providing a comprehensive insight into your organization's resilience.

Our innovative, multi-factor resilience framework considers all aspects of an organization and its supply chain and is centred around how it delivers value. This gives a comprehensive quick snapshot of how resilient your organization is and where more focus is needed.



MMI'S ASSET RESILIENCE FRAMEWORK
(blue denotes resilience demand, green denotes resilience capacity).
The biggest gap indicates the areas in most need of resilience building.

Working closely with our clients, we help realize the benefits of investing in resilience.

Once resilience needs are identified, we build resilience capacity through a combination of integrated measures; upfront risk reduction coupled with improvements in adaptive capacity, informed based on a cost-benefit assessment. Our advisors and technical experts can assist in developing strategies and implementing change over a broad range of areas.

Unlike other advisors, MMI has deep engineering expertise to complement our strategic resilience service, making sure that capacity building initiatives are economic, realistic and technically sound. We provide the following resilience related services:



ADVISORY SERVICES

- Resilience Investment Appraisal
- Resilience Strategy Development
- Risk & Resilience Governance & Management
- Resilience Audit
- Security & Counter Terrorism Strategy
- Change Management
- Client Value Surveys
- Risk & Resilience Data Management
- Community Resilience Initiatives



PHYSICAL VULNERABILITY REDUCTION

- Earthquake Engineering
- Water/Wastewater
- Flood Mitigation
- Systems Engineering
- Climate Change Mitigation & Adaptation
- Geotechnical Engineering
- Environmental Engineering
- Fire/Blast Engineering
- Structural Engineering
- Asset Integrity



BUSINESS CONTINUITY, INCIDENT RESPONSE & RECOVERY PLANNING

- Emergency Response Planning
- Business Continuity Planning
- Incident Management Plans
- Information Management Systems
- Training & Exercising

Our team of world class experts are here to assist you



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CAROLINE FIELD is a Principal with more than 20 years of experience in engineering consultancy for the built environment. Caroline currently leads MMI's Resilience Practice Area; helping clients develop risk-based, comprehensive approaches to resilience. Her approach balances physical mitigations with adaptive capacity, consider shocks and stresses, social and economic factors, and incorporates future-trends analysis.

Using a resilience framework and approach that supports client decision-making and prioritization, Caroline assists clients in developing and implementing their resilience policy and strategy. The strategy can be used to help cities, masterplans, campuses, organizations, infrastructure systems and buildings manage disruption and change.

Caroline recently completed a city resilience masterplan with the World Bank for the City of Beirut. Strategies included the establishment of a cross-sectoral platform for disaster risk management as a crucial aspect of risk governance to manage and implement the actions identified; an earthquake risk reduction plan; climate change adaptation plan; coastal resilience plan; information management plan, community resilience building plan, response plan and recovery plan framework.

Caroline is active in developing resilience standards and approaches with industry organizations such as the British Standard for City Resilience, which she Chairs and the ASCE Infrastructure Resiliency Division where she co-chairs the SPEED committee. Caroline is a Chartered Engineer with the Institute of Civil Engineers in the UK, a Member of the Register of Security Engineers and Specialists, a licensed professional engineer in California and a member of the American Society of Civil Engineers.



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RICHARD LOOK has worked at every level of government developing policy, managing requirements, systems mapping, implementing strategy and running critical operations. He has first-hand experience from every aspect of resilience from preparing communities, to developing hazard mitigation, to the coordination of numerous emergency responses and recovery operations. He is adept at eliciting requirements using a range of analytical and interactive methods and developing and delivering verification plans through test, exercise, audit, performance management and reporting. He applies a collaborative, innovative, systems approach breaking problems down to route causes and applying core principles to ensure robust, effective and efficient solutions. Richard is a Senior Resilience Consultant within the Resilience Team.

With a background in emergency planning, business continuity, programme and project management, procurement, systems, requirements and the military, he brings a practical, integrated, resilience approach to VUCA (volatile, uncertain, complex, ambiguous) problems. He has spent the last 17 years practicing in this area with significant experience both mitigating community risks and responding to emergencies. Most recently, Richard has focused on providing resilience consulting services for cities, organizations and buildings.

He has been a joint winner of the Royal Charter International Research Award, completed a resilience diagnostic and strategy for a \$10bn health care project, been core to the development of an online city resilience assessment tool and was the Project Lead delivering the Comprehensive Urban Resilience Masterplan for the City of Beirut. Richard has a pragmatic, systematic, performance-based approach to resilience that centres on creating and protecting value by balancing potential opportunities and threats with the clients' risk and cost appetite as well as the end users' safety needs.

We are
engineers, scientists
and innovators.

Technical, Engineering and Scientific
Services to Help Manage Risk.



engineers • scientists • innovators

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