



**PURPOSE:** Climate resilience is the ability of a system to survive an immediate shock, adapt to ongoing consequences and thrive in a changed long-term landscape. Adaptation is the way we achieve this by making necessary design and operational adjustments to cope with the effects of climate change.

## DRIVERS FOR DECISION-MAKERS:



Increasing frequency and severity of climate-related hazards necessitates a coordinated, evidence-based response to climate resilience.



High costs of inaction due to increasing damage and downtime, operational and maintenance costs and disruption to service delivery should be managed through effective resilience planning.



Ensuring service continuity and accessibility of health services during and after climate-related events relies on proactive risk management and timely response (including maintenance).

## REVIEW

### Existing systems – normal operations, maintenance, emergency response planning

- ❑ Review existing enterprise or asset-scale risk management register for climate risk, including for business continuity and supply chain resilience
- ❑ Map existing controls to manage physical climate risks and/or climate disaster risk management and evaluate current adaptive capacity in the organization
- ❑ Review emergency response and business continuity plan(s) and evaluate the current approach to climate change and climate-related events (for example, heatwaves, floods, bushfires, cyclones)

### Asset management plan

- ❑ Review asset management plan(s) for climate risks.

### Maintenance

- ❑ Review maintenance plans and schedules to account for climate impacts – for example, monitoring and servicing practices before and after extreme climate events

## PLAN

### Master planning

- ❑ Develop and/or update climate risk assessment to consider proposed asset renewal or upgrade
- ❑ Identify climate adaptation strategies to address priority risks identified in the risk assessment
- ❑ Ensure reliable redundancy and backup power systems, water supply and communication systems are in place for timely coordination and response during climate events as part of emergency management planning

### Feasibility/business case

- ❑ Prioritise adaptation strategies for implementation using appropriate tools and stakeholder engagement
- ❑ Integrate climate adaptation into business cases for asset renewal and updates
- ❑ Identify responsible owners for prioritised adaptation strategies for implementation

## DELIVER

### Design

- ❑ Integrate priority climate adaptation strategies into site planning, building asset design (structures, mechanical and electrical components), landscape design and utilities (planning, design and procurement)

### Construction

- ❑ Supply, install and commission climate adaptation strategies in line with design drawings and specifications
- ❑ Develop operations and maintenance plans for newly constructed upgrades, considering future climate change

### Operation

- ❑ Update emergency response and business continuity plan(s) to account for climate change and climate-related events
- ❑ Update asset management plans to account for climate risks
- ❑ Incorporate climate-resilient approaches to regular maintenance of existing and upgraded assets

For more information, refer to the *Climate resilience and adaptation guide*.



## TIPS FOR OVERCOMING CHALLENGES

### CHALLENGES

- Managing risks outside the site boundary
- Existing assets in hazard-prone areas
- Long-term planning and uncertainty

### OPPORTUNITIES / ACTIONS

- Use scenario planning and sensitivity analyses to prioritize adaptation measures that provide co-benefits under future scenarios
- Engage with local stakeholders to coordinate and align risk management efforts and emergency response protocols
- Engage a qualified climate risk specialist to investigate complex and interdependent risks in the system and engage with wider stakeholders at each stage of the project to understand system interdependencies (with transport, utilities etc.) and shared risks



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## PLAN

### Master planning

- ❑ Review relevant climate-related policies and guidelines for the project jurisdiction
- ❑ Undertake climate hazard screening including identifying relevant hazards and analyzing current and future hazard exposure for selected time horizons
- ❑ Avoid selecting a site in proximity to hazard zones (flood zones, bushfire-prone areas), with consideration of site accessibility
- ❑ Undertake a high-level climate risk assessment based on the master plan, with consideration of interdependent infrastructure systems such as utilities and transport
- ❑ Identify preliminary climate adaptation strategies for inclusion, and at least:
  - ✓ optimize building orientation and layout-based climate hazard screening – for example, prevailing winds, bushfire spread
  - ✓ incorporate spatial provisions and buffer zones for proposed climate adaptation strategies including consideration of temporary/refuge areas for emergencies
  - ✓ develop a plan for redundancy and backup systems for power, water and communication systems

### Feasibility/business case

- ❑ Develop a detailed climate risk assessment to validate priority risks. This may be very high and high risks, depending on the organization's defined risk appetite
- ❑ Identify and evaluate climate adaptation strategies to address priority risks
- ❑ Prioritise adaptation strategies for implementation with the health service provider, using appropriate tools and stakeholder engagement
- ❑ Evaluate the high-level financial implications of climate-related risks and integrate climate adaptation into the business case
- ❑ Assess the technical requirements and cost estimates for proposed adaptation strategies

## DELIVER

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### Construction

- ❑ Supply, install and commission climate adaptation strategies in line with design drawings and specifications

### Operation

- ❑ Develop operations and maintenance plans for newly constructed upgrades, considering future climate change
- ❑ Develop an asset management plan to account for climate risks

For more information, refer to the *Climate resilience and adaptation guide*.



## TIPS FOR OVERCOMING CHALLENGES

### CHALLENGES

- Managing risks outside of the site boundary
- Long-term planning and uncertainty
- Budget constraints

### OPPORTUNITIES / ACTIONS

- Use scenario planning and sensitivity analysis to prioritise adaptation strategies that provide co-benefits under multiple future scenarios
- Prioritize adaptation strategies that deliver on concurrent project requirements and objectives
- Engage a qualified climate risk specialist to investigate complex and interdependent risks in the system and engage with wider stakeholders at each stage of the project to understand system interdependencies (with transport, utilities etc.) and shared risks