**TRN Resource: TRN Module/Action List**

The Technical Resilience Navigator (TRN) breaks the resilience planning process into five sections called modules. Each module has several actions that lead users through information collection and specific analyses. This TRN Resource provides a summary of the modules and actions included in the TRN.

## Site-Level Planning

This module guides users through documenting foundational information about the site in order to set up an effective resilience planning process.

***Action 1: Establish Resilience Planning Team and Engage Stakeholders***—Focuses on organizing the team who will execute the resilience planning effort and identifying stakeholders whose input is required.

***Action 2: Collect and Review Relevant Information***—Identifies existing policies and plans that could impact or intersect with resilience planning efforts.

***Action 3: Define Site-Level Resilience Priorities and Scope and Boundaries***—Describes the site’s ideal resilience posture and defines the scope of the TRN effort by geographical or operational boundaries, resources assessed, and integration points with site priorities.

***Action 4: Identify Critical Functions***—Identifies the site’s critical functions and establishes their relative criticality, or importance.

***Action 5: Record Resilience Gaps***—Starts the process of identifying resilience gaps that will inform later modules and provide context for brainstorming resilience solutions.

## Baseline Development

The module guides the collection and review of data required to establish risk to critical missions from disruptions in energy and water supplies.

***Action 1: Collect and Review Baseline Documentation***—Identifies and consolidates sources of information used to establish the site’s critical energy and water requirements and baseline conditions of energy and water systems.

***Action 2: Establish Energy and Water Requirements***—Collects data primarily through interviews with mission owners and site operators to establish the specific systems required to sustain critical functions and what the energy and water requirements of those systems are.

***Action 3: Characterize Redundant Systems***—Characterizes the baseline conditions of energy and water systems in terms of the site’s preparedness to respond to disruptions, redundant systems in place, robustness of system design, and plans for rapid recovery.

***Action 4: Update Resilience Gaps***—Continues the process of identifying resilience gaps that will inform later modules and provide context for brainstorming resilience solutions.

## Risk Assessment

This module identifies and characterizes the three components of risk: hazards and threats; vulnerabilities; and potential consequences, with the intent of helping sites identify and reduce risk related to energy and water disruptions.

***Action 1: Characterize Critical Loads for Risk Assessment***—Characterizes the site’s critical loads to establish the outage durations of concern for risk assessment.

***Action 2: Identify Hazards and Threats***—Identifies hazards (of natural or accidental origin) and threats (of malicious or deliberate origin) that have the potential to disrupt energy or water supply to the site or increase the vulnerability of a redundant energy and water system supporting a critical load.

***Action 3: Review Vulnerabilities***—Conducts a vulnerability analysis focused on the capability of onsite redundant energy and water systems to meet critical load requirements during a disruption, and the expected reliability of those systems.

***Action 4: Summarize Risk***—Reviews the Risk Assessment Excel workbook results to summarize how risk is distributed across hazards and threats, critical loads, and risk scenarios, and records the key interpretations that will be used to guide development of resilience solutions.

***Action 5: Identify Gaps from Risk***—Adds resilience gaps to the list of gaps, based on identified risk drivers. These gaps will provide context for brainstorming resilience solutions.

## Solution Development

This module guides sites through the process of reviewing and analyzing their recorded resilience gaps to enable comprehensive brainstorming of solutions that can enhance resilience at the site.

***Action 1: Analyze Resilience Gaps***—Establishes a complete list of resilience gaps by: (1) consolidating resilience gaps from all previous modules; (2) characterizing and analyzing the gaps; and (3) refining the gap descriptions.

***Action 2: Identify Solutions***—Develops a comprehensive list of resilience-enhancing solutions that address resilience gaps and key vulnerabilities identified throughout the previous modules.

***Action 3: Evaluate Solution Sets***—Creates solution sets based on the solutions developed in SD Action 2. These are groups of solutions that could be implemented as a package and, therefore, the user may wish to evaluate together.

## Solution Prioritization

This module uses a semi-quantitative, risk-informed approach to compare the potential benefits and costs of identified resilience solutions to enable ranking of the solutions for implementation.

***Action 1: Screen Solutions***—Narrows the list of solutions down to those that could conceivably be implemented within the site’s existing environment and constraints.

***Action 2: Model Solution Risk Reduction Potential***—Models each solution to understand how it could reduce risk to the site by reducing consequence or reducing vulnerability.

***Action 3: Review Priorities and Costs***—Reviews the resilience priorities developed in the Site-Level Planning module and develop non-risk criteria that will be used to evaluate and prioritize solutions.

***Action 4: Prioritize Solutions***—Considers the trade-offs between cost and resilience enhancement of each solution to determine which resilience solutions to pursue first.

## Roadmap to Action

This module guides development of concrete next steps for resilience-enhancing solutions from conceptualization to project implementation.

***Action 1: Define Projects for Solution Implementation***—Develops the projects required to execute the prioritized solutions.

***Action 2: Evaluate Potential Funding Sources***—Identifies and evaluates potential funding sources such as appropriations, performance contracting, and grant funding that could be used to implement projects.

***Action 3: Create the Business Justification***—Assembles project data and analysis into a concise and compelling story to secure leadership buy-in.

***Action 4: Create an Execution Plan***—Develops execution plans with integrated timelines for each funding source and associated projects.

***Action 5: Implement and Sustain Resilience***—Institutionalizes best practices developed throughout TRN process to create a resilience-focused organizational culture.

### TRN Module/Action Task Chart

If desired, the following table can be used to document the expected task responsibilities of the resilience planning team members and other stakeholders.

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| **Resilience Planning Team Task Chart** | | | | | | | | | | | | | | | | | | | | | |
| **Team Member**  **Name** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Time Frame for Completion** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Site-Level Planning** | | | | | | | | | | | | | | | | | | | | | |
| Establish Resilience Planning Team and Engage Stakeholders |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Collect and Review Relevant Information |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Define Resilience Priorities and Scope |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify Critical Functions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Record Resilience Gaps |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Baseline Development** | | | | | | | | | | | | | | | | | | | | | |
| Collect and Review Baseline Documentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Establish Energy and Water Requirements |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Establish Baseline Conditions of Energy and Water Systems |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Update Resilience Gaps |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Risk Assessment** | | | | | | | | | | | | | | | | | | | | | |
| Characterize Critical Loads for Risk Assessment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify Hazards and Threats |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Assess Vulnerabilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Summarize Risk |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify Gaps from Risk |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Solution Development** | | | | | | | | | | | | | | | | | | | | | |
| Analyze Resilience Gaps |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify Solutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Evaluate Solution Sets |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Solution Prioritization** | | | | | | | | | | | | | | | | | | | | | |
| Screen Solutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Model Solution Risk Reduction Potential |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Review Priorities and Costs |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prioritize Solutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Roadmap to Action** | | | | | | | | | | | | | | | | | | | | | |
| Define Projects for Solution Implementation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Evaluate Potential Funding Sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create the Business Justification |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Create an Execution Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Implement and Sustain Resilience |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |