

# Critical Infrastructure Resilience

Fact Sheet: 10.17 R2

## Advantages & Capabilities

- “Systems of Systems” analysis providing efficient and cost effective ways to identify risks and mitigation strategies
- Gap Analysis
- Strategic Recommendations for Implementation Plans
- Program Management and Performance Measurement
- Regulatory Impact Analysis
- Systems Engineering

## Reducing Risk

Our engineers evaluate the connections and interdependencies of infrastructure and identify vulnerabilities and risks from natural, accidental or malicious threats. We employ approaches that enhance security and mitigate the effects of infrastructure failures. We also identify alternatives for resiliency improvement.

*“The reality is that there are many existing capabilities to deny, disrupt or physically destroy NASA’s space systems and the ground facilities that control them.”*

- NASA Space Asset Protection Program

## ITB Experience

**NASA:** ITB has proven capability and understanding of critical space and ground systems throughout the agency. ITB engineers have conducted detailed vulnerability and risk assessments to improve the resilience of Global Positioning System (GPS) navigation, communication/data centers, electrical distribution, and emergency services.

**International:** ITB is working with NASA sites in Europe and the European Space Agency to bring additional resiliency to critical ground systems. Two examples of technology that ITB is currently evaluating:

- Microgrids - allowing an entire complex to be operated purely off the grid.
- Renewable energy and energy storage options.

These technologies bring potential added benefits of reducing greenhouse gas emissions and long-term operating costs.

