

Characterizing End-to-End Risk of the Telecommunications Supply Chain

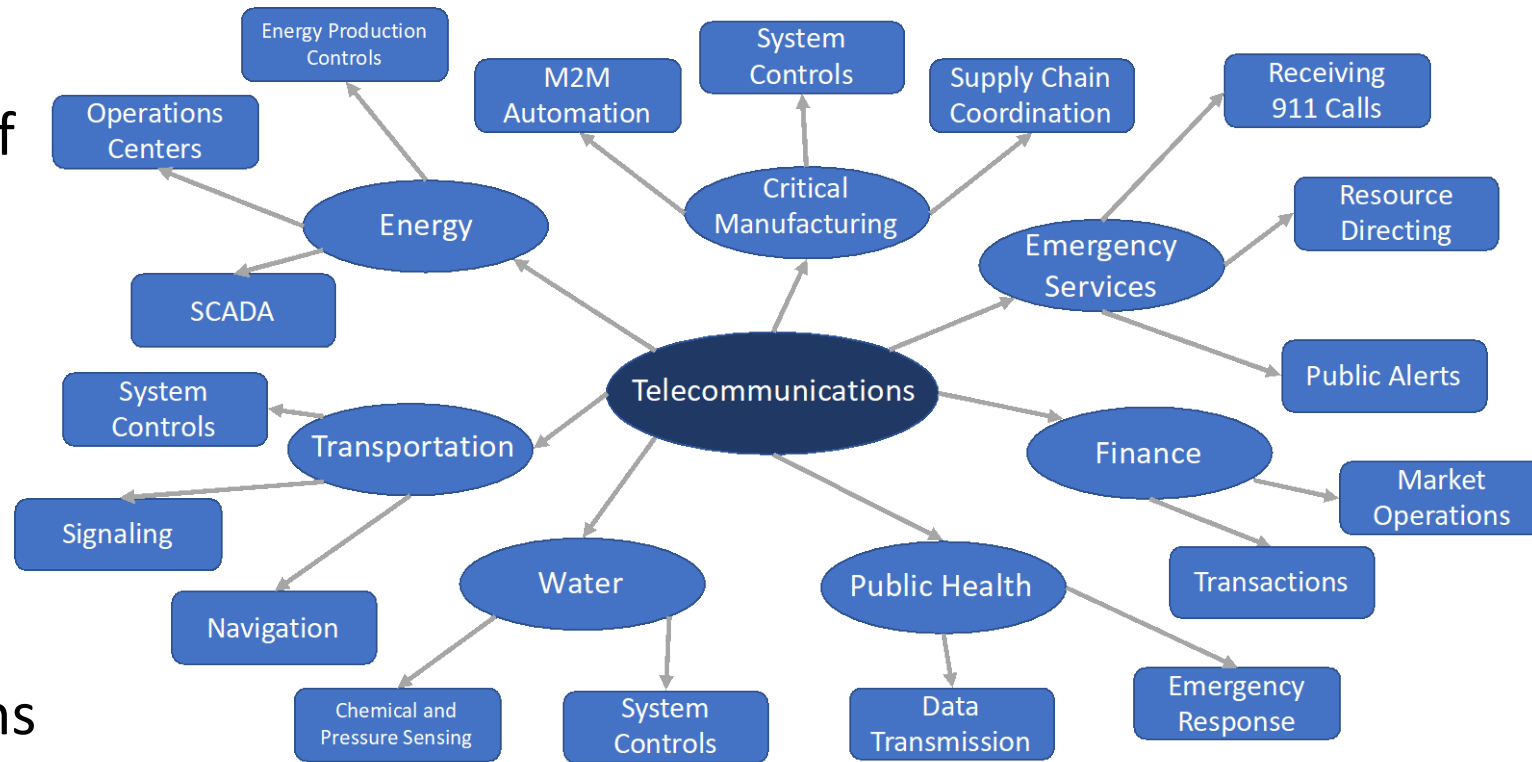
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Project Overview

Objectives

- Identify physical and operational risks across end-to-end elements of telecommunications supply chain, particularly in transition to 5G for cellular network
- Comprehensively analyze these risks, including comparing across disparate elements of the supply chain, focusing on critical infrastructure impacts and functions



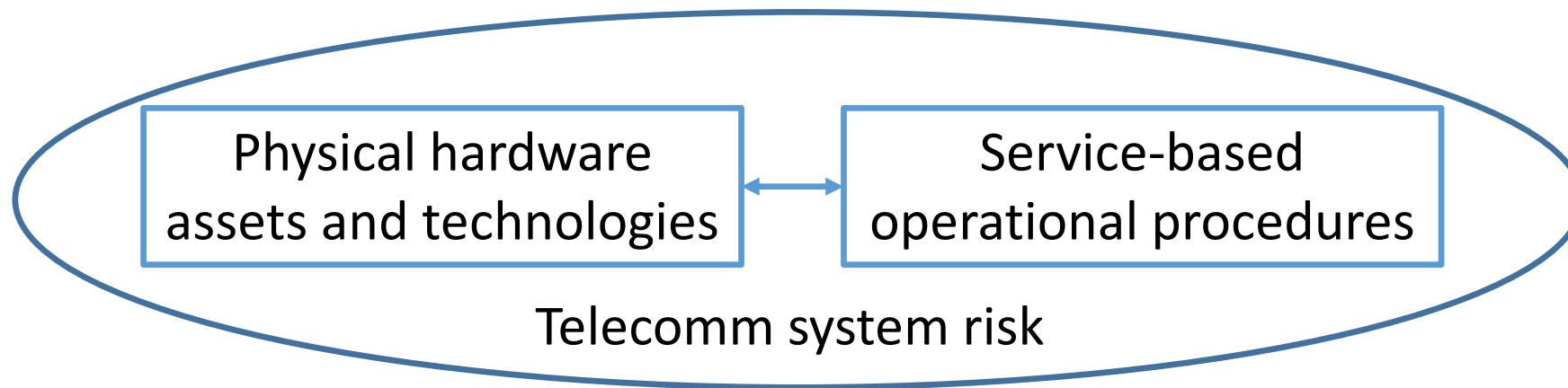
Research Approach

Industry interviews:

- AT&T Security team
- AT&T Disaster Recovery
- Dependent energy stakeholders:
GreyStone Power Corporation,
Georgia Transmission

Questions addressed:

- What are your biggest risks?
- What have you done to address these risks?
- What do you have in place for recovery?
- Looking forward, what are you identifying as the biggest risks and how is your outlook changing?



Testing, Evaluation, and Validation Plan

Engagement with potential end users for comprehensive telecommunications system risk assessments:

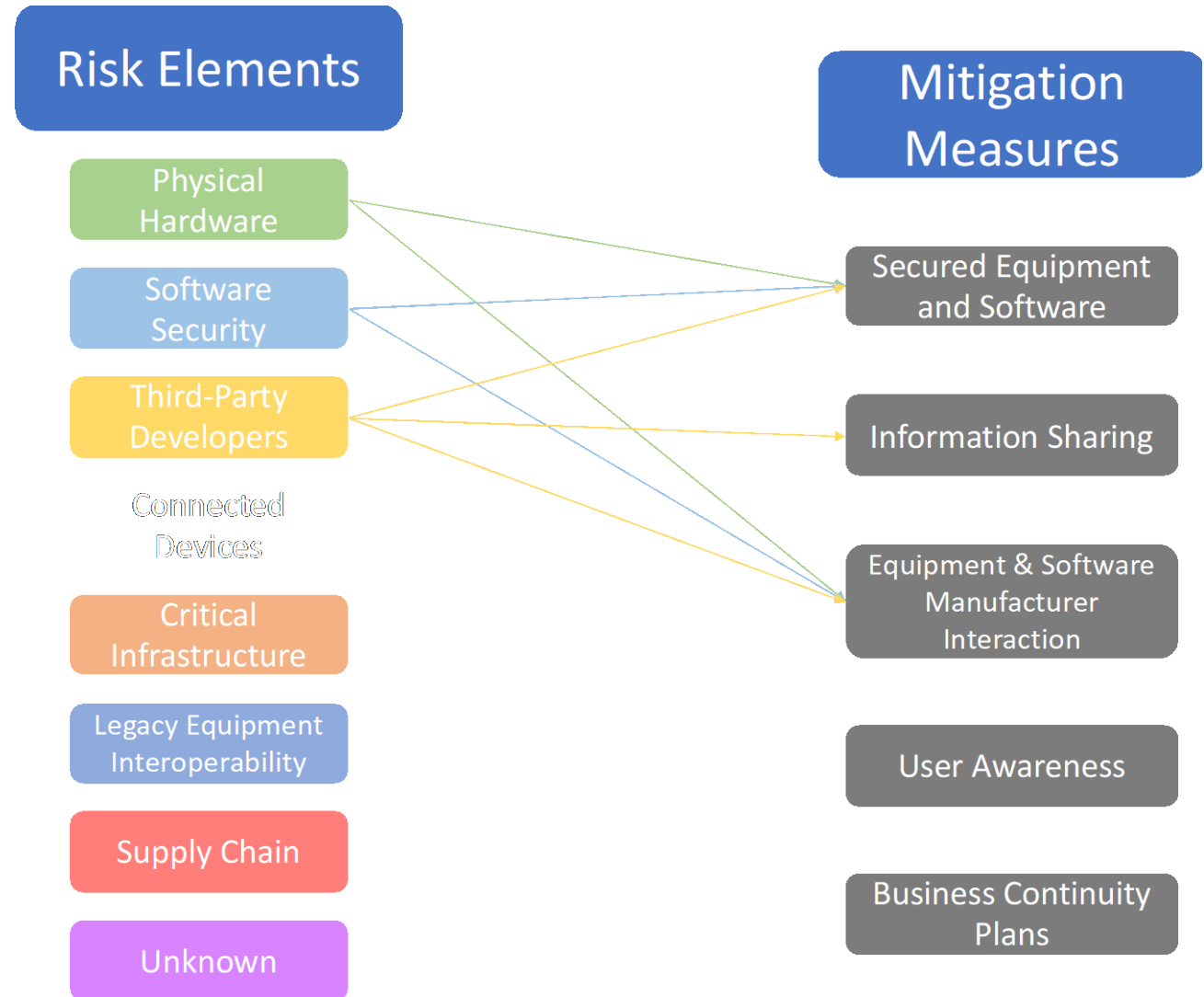
- CSCC (Communications Sector Coordinating Council), ITSCC (Information Technology Sector Coordinating Council), NRMCC (National Risk Management Center)

Performance targets:

Data collection	# stakeholders interviewed
System assessment	# elements and sub-elements identified in end-to-end assessment of telecommunications supply chain
Analysis approach	Types of link functionalities defined across chain

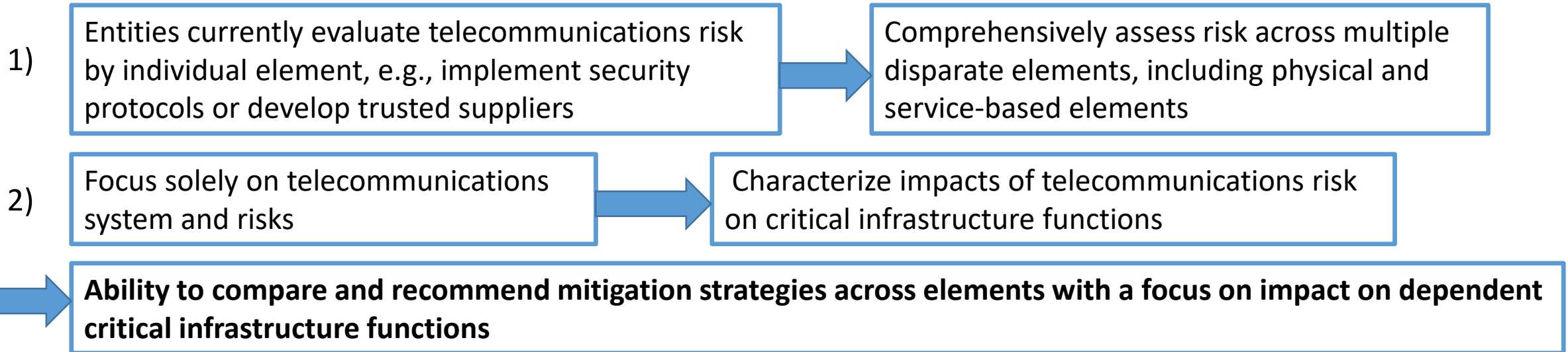
Milestones and Accomplishments

Integrate information from across sources to build risk profile of 5G and corresponding mitigation measures/recommendations:



Project Impact

Knowledge gaps addressed:



HSE components to benefit:

- Communications as a national critical function and the infrastructure functions relying on communications and particularly 5G for increasing asset automation, monitoring, and control

Student training:

- Conducting interviews with industry owners and stakeholders, integrating information across multiple sources

Transition Plan

Planned transition products:



Comprehensively assess risk across multiple disparate elements, including physical and service-based elements

- Tool to capture varying functionality of links across telecommunications supply chain
- Ability to compare risk across disparate elements, including technical, policy, and organizational elements



Characterize impacts of telecommunications risk on critical infrastructure functions

- Knowledge products about telecommunications risk particularly at the interface of 5G and critical infrastructure functions
- Support CISA in educating state, local, tribal, and territorial governments (via knowledge products, workshops, etc.) on 5G risk and management