



Envisioning Alternate Futures Will Change Our Thinking About Cybersecurity

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What is alternate futures?

A method within the broader discipline of foresight to consider a range of futures (e.g., probable, possible, preferable) 20-30 years from now across an organizational, cross-discipline, or global domain, and to create or alter our strategies, goals, plans, & actions to achieve desired outcomes

Key Milestones in Foresight

1950's Understanding the New World Order

1960's Developing first university courses on foresight
Establishing first foresight communities

1970's Planning in the energy crisis

1990's Preparing the President using Strategic Global Assessment

Today Creating a Cyber Community of Foresight

2050 Achieving cyber goals based on foresight-driven decisions and choices

Why is alternate futures important to cybersecurity professionals?

We surveyed a range of cybersecurity professionals in industry, academia, and government who held positions at the executive, management, and operations levels across roles in governance, strategy, training; risk management; threat analysis; and system administration.

More than **85%**
felt they “probably or definitely”
should do foresight activities

Our survey group felt strongly that foresight could:

- Identify strategic needs
- Enable a more effective operating environment
- Help enterprises assess risk across multiple functions
- Enhance cybersecurity curriculum
- Hedge against uncertainty and avoid strategic surprises
- Promote information sharing across disciplines
- Understand what changes may affect future cyber defense posture and response
- Prepare/plan to effectively operate in a future environment





What is the process?

1

Identify trends & drivers of change across socioeconomic, technological, geo-political, security & resilience, and other factors

- Changes in global interdependencies
- Access to information
- Demographic shifts

2

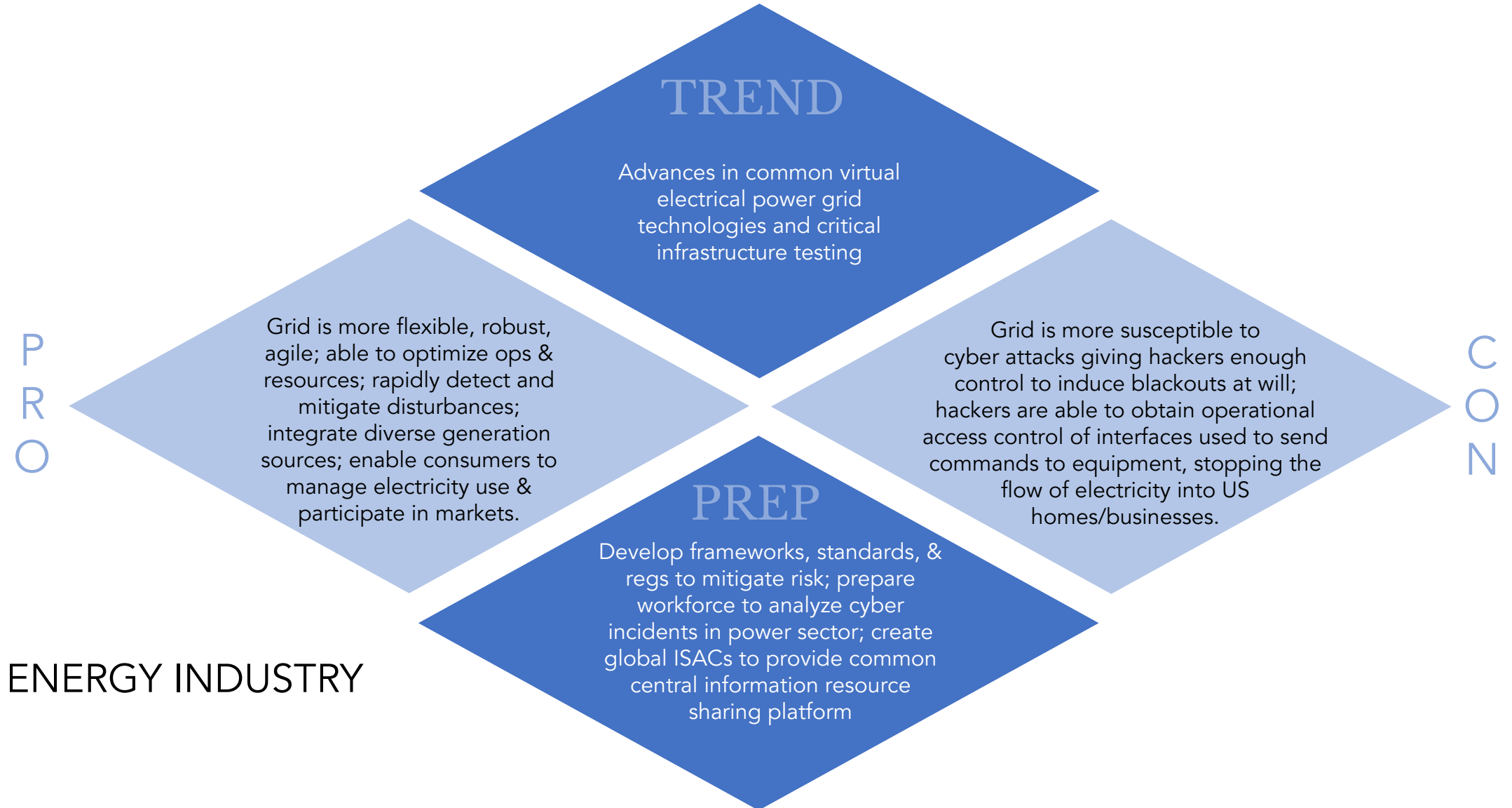
Create potential future scenarios (amplify, reverse, stabilize trends)

- How will our world benefit (pro)?
- How will our world be worse off (con)?

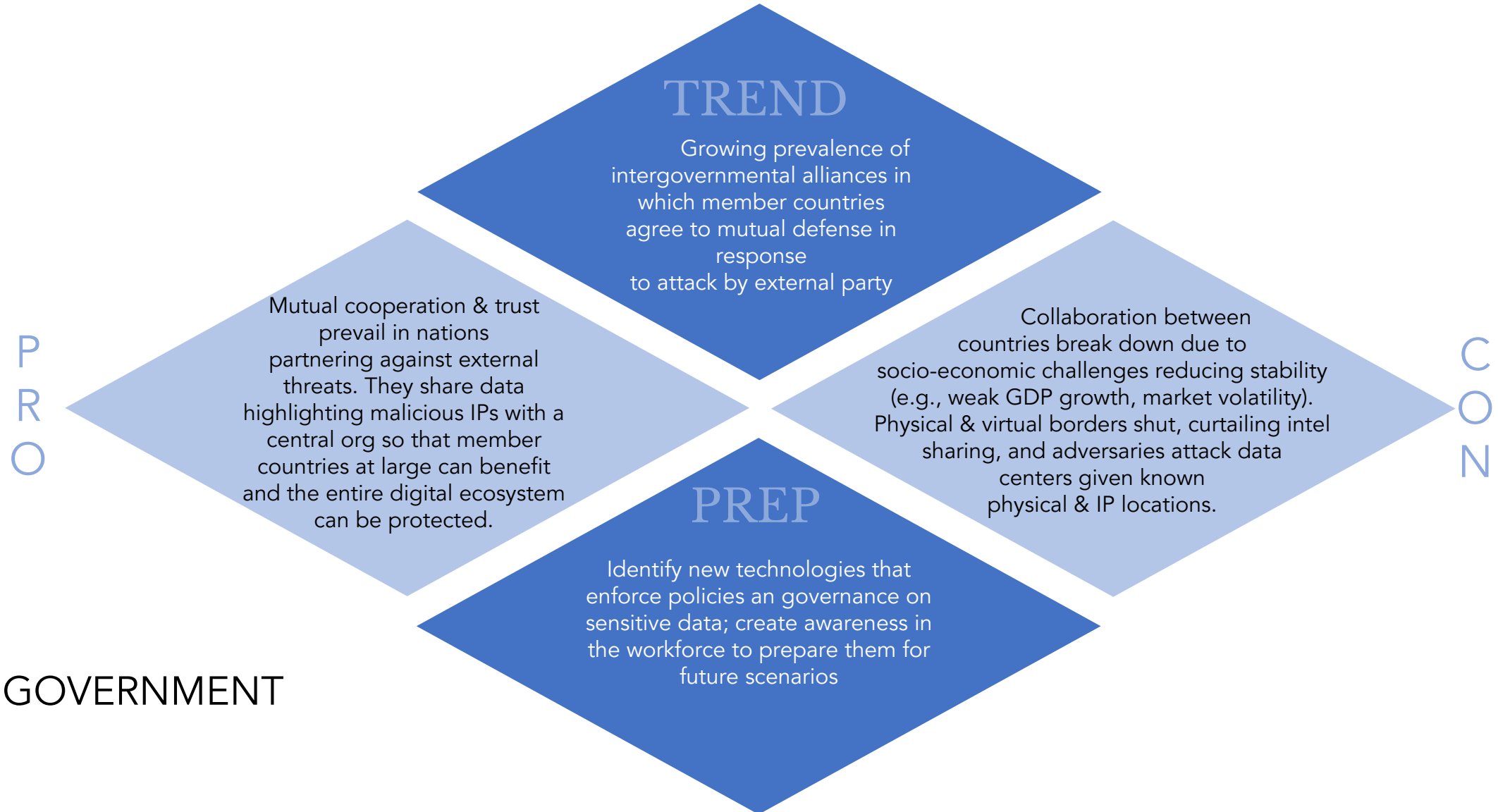
3

Identify commonalities across these scenarios and determine decisions and choices to make now to prepare

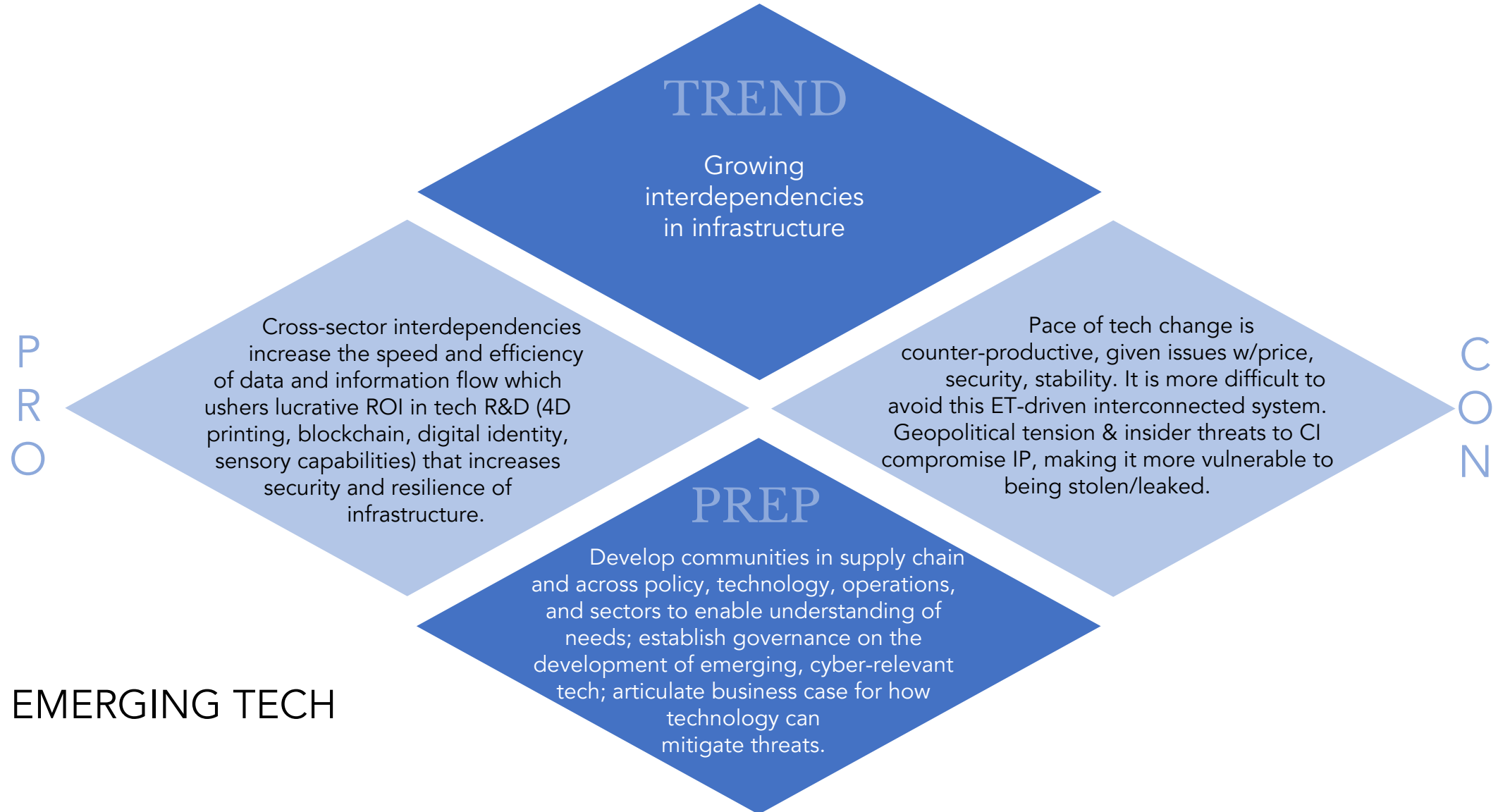
What are some alternate futures scenarios?



What are some alternate futures scenarios? ... Contd.



What are some alternate futures scenarios? ... Contd.



How can you apply the discipline of alternate futures?

PARTNER

- Develop communities in the supply chain, across policy, technology, operations, or other functions, or across sector-specific communities (e.g., healthcare or finance) to enable understanding of needs
- Develop cross-sector communities to identify areas of mutual need or convergence
- Partner with government, academia, industry to incorporate findings in testing & evaluation

TOOLS

- Incorporate scenario findings into sector and multi-sector planning processes
- Adopt new risk management tools and models to manage complex event consequences

AWARENESS

- Broaden awareness of findings throughout the cyber community for integration into strategic and operational planning
- Work with standards organizations to integrate findings into cybersecurity standards
- Integrate findings into congressional requirements
- Influence R&D of cyber-related emerging technologies

An Approach For This Community





Let us know your thoughts and ideas!

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