



Checklist for Success

GROWING ASPIRING MSI PI'S IN CISE

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Outline

Funded project(s)

Tips for writing a strong proposal

What to do if not funded

Managing, executing, and completing the project

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- **NSA Award Number:** H98230-23-1-0144, \$69,928, **Title:** GenCyber -California State University, Bakersfield.
 - **NSF Award Number:** 2318634. \$157,299. **Title:** Orchestration of Network Slicing for 5G-Enabled IoT Devices Using Reinforcement Learning.
 - CERC grant award, \$20K, **Title:** Reinforcement Learning for Optimizing Load Forecasting in Distributed Energy Resources
 - **NSF Award Number:** 2219701. \$144,994. **Title:** Cyber Resilient 5G Enabled Virtual Power System for Growing Power Demand.
 - **ASEE Award Number:** 332.77-23.3677, \$10K
 - **RSCA grant,** \$5K, CSUB
 - **Diversity grant,** \$1.5K, CSUB
 - **CSUB Research Award,** \$20K
 - **CyberFlorida Award Number:** 3910- 1004-00-D, \$45K

Funded project

Orchestration of Network Slicing for 5G-Enabled IoT Devices Using Reinforcement Learning

Collaborators

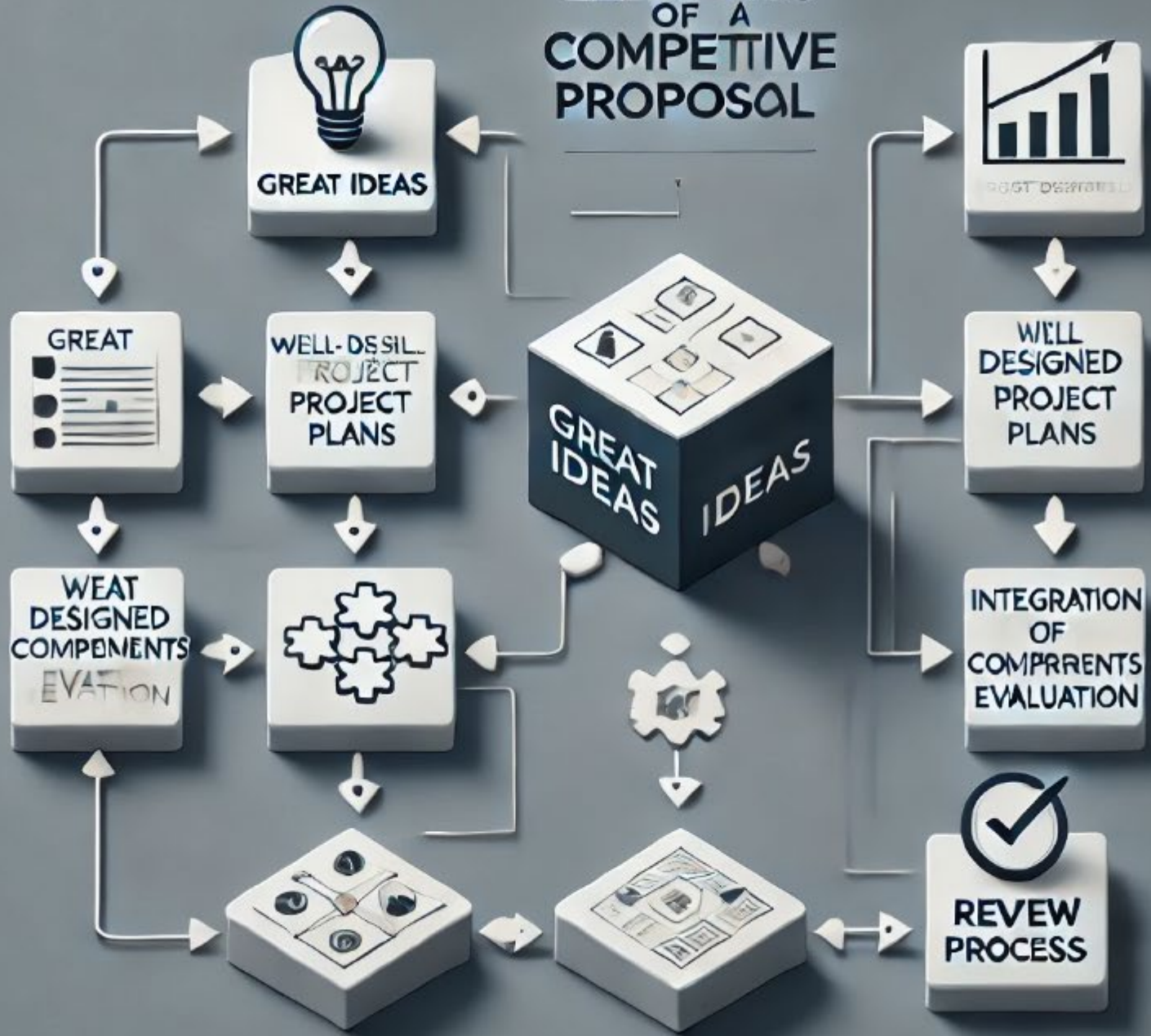
- California State University
- Tennessee State University
- State University New York

Project

- Goal - to design end-to-end resource management of 5G-enabled IoT devices utilizing reinforcement learning techniques and Massive MIMO slicing techniques
- Three key tasks :
 - To design 5G network slicing using massive MIMO for IoT devices
 - To design an RL model to solve IoT devices orchestration problems in large-scale 5G network
 - To integrate the RL solution in a massive MIMO network sliced 5G enabled IoT network



ELEMENTS OF A COMPETITIVE PROPOSAL



NSF Merit Review Criteria

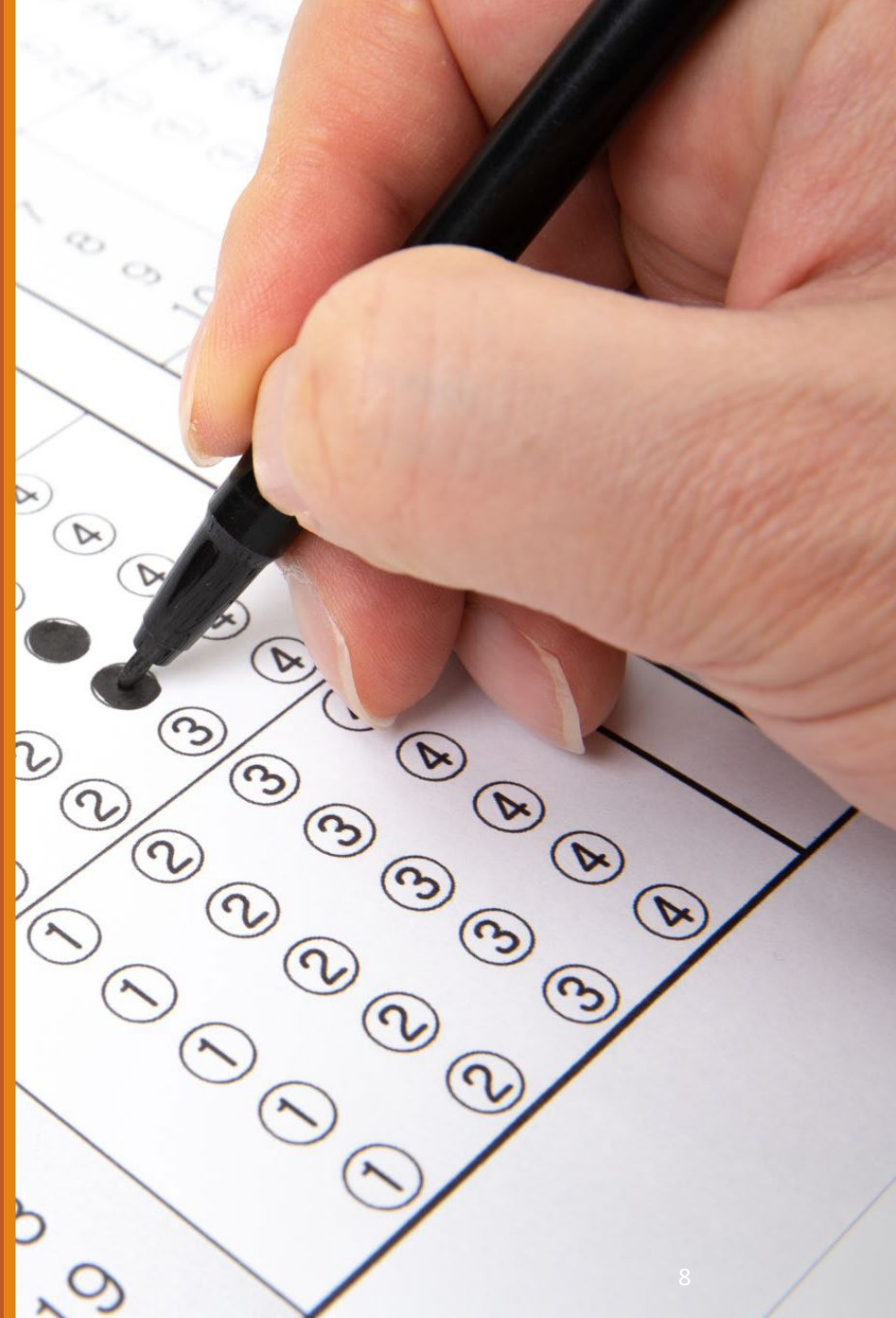
Intellectual Merit: the potential to advance knowledge

Broader Impacts: the potential to benefit society and contribute to the achievement of specific, desired societal outcomes

Proposers must fully address both criteria

Tips for writing a strong proposal

- Use good style (clarity, organization, etc.)
 - Write *simply*, but professionally
 - Avoid *jargon* and *acronyms*
 - Check *grammar* and *spelling*
 - Use sections, headings, short paragraphs, bullets, and white space (avoid dense, compact text)
 - Use *figures* and *tables* appropriately
 - Give *examples*
 - *Highlight* (bolding, italics – but not overdone)
 - Follow suggested (or implied) *organization/formatting*
 - Include *letters* showing *commitments* from others
 - In most cases, PAPPG has very specific wording that can be used





Tips for writing a strong proposal (cont.)

- Pay special attention to the **Project Summary**
 - Summarize goals, rationale, methods, and evaluation and dissemination plans
 - Address *Intellectual Merit* and *Broader Impacts*
 - Upload your Project Summary (as a pdf) with three main headings:
 - *Summary*
 - *Intellectual Merit*
 - *Broader Impacts*

Tips for writing a strong proposal (cont.)

Proofread the proposal

Sell your ideas but do not over-promote

“Tell a story” and turn a good idea into a competitive proposal



What to Do if Not Funded

- **Feedback:**
 - Understand the **strengths and weaknesses** of your proposal from the detailed feedback provided by NSF reviewers.
- **Revise and Resubmit:**
 - Address the **reviewers' comments**.
 - **Strengthen the proposal** based on the feedback.
- **Alternative Funding Sources:**
 - Explore other funding opportunities, such as **industry grants, state programs, or other federal agencies**.
 - Consider crowdfunding or institutional funding.
- **Collaborations:**
 - **Partner** with other researchers or institutions to strengthen the proposal.
 - **Leverage existing relationships** for support and resources.

Managing and Executing the Project

Project Planning:

- Develop a detailed project plan with **clear objectives, tasks, and timelines**
- Use project management tools to track progress and manage resources

Team Coordination:

- **Assign roles** and responsibilities to team members
- **Hold regular meetings** to ensure alignment and address any issues

Resource Management:

- Monitor **budget** and resource allocation
- Ensure that all necessary **resources** are procured and available

Data Management:

- Implement a robust data management plan.
- **Ensure data security, integrity, and accessibility.**

Continuous Monitoring:

- Regularly **review project progress against milestones.**
- **Adjust the plan** as needed to address any deviations or challenges.

A blue pen with a silver tip is positioned diagonally across the top left of the slide. The background of the slide features a light blue bar chart with several bars of varying heights. The overall aesthetic is clean and professional, using shades of blue and white.

Completing the Project

- **Final Evaluation:**

- Conduct a thorough evaluation of the project's outcomes.
- Compare the results with the original objectives and hypotheses.

- **Reporting:**

- Prepare and **submit required reports** to NSF.
- Include detailed findings, impacts, and any deviations from the plan.

- **Dissemination:**

- **Publish results** in reputable journals and present them at conferences.
- **Share findings** with stakeholders and the broader community.

- **Future Work:**

- Identify areas for future research or potential follow-up projects.
- Explore opportunities for further funding or collaboration.

Thank you