



# Building a Learning Culture in MISO Software Engineering

MISO Software Engineering Leadership

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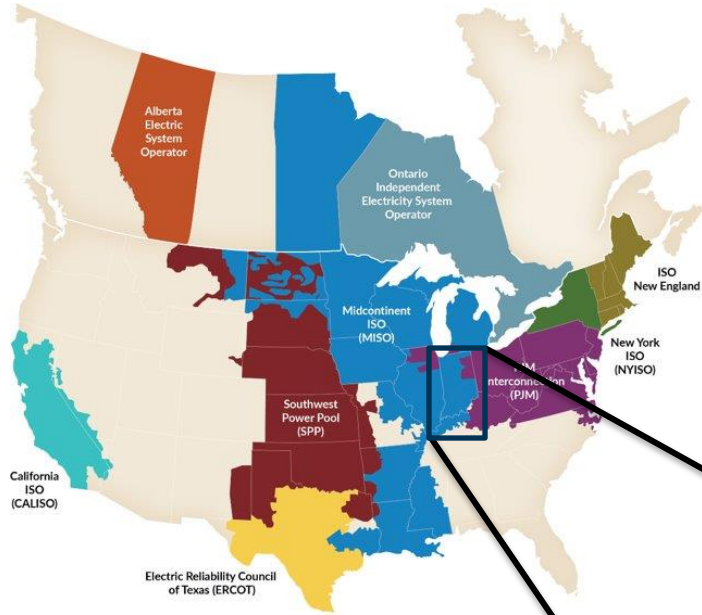


MISO as Air Traffic Controller for the Grid

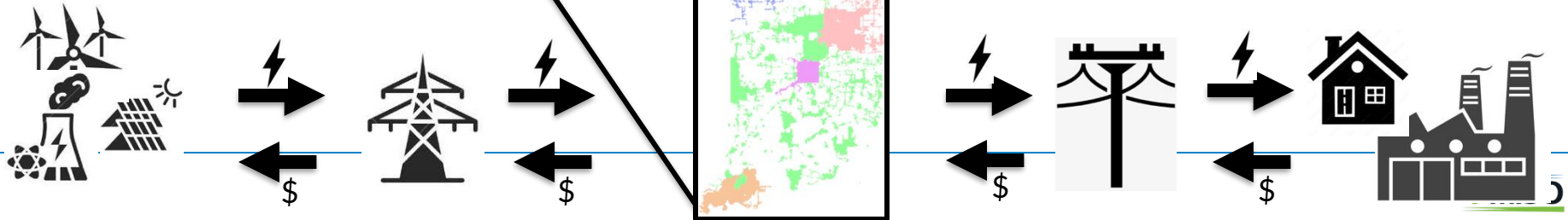


## MISO as a Market for Energy

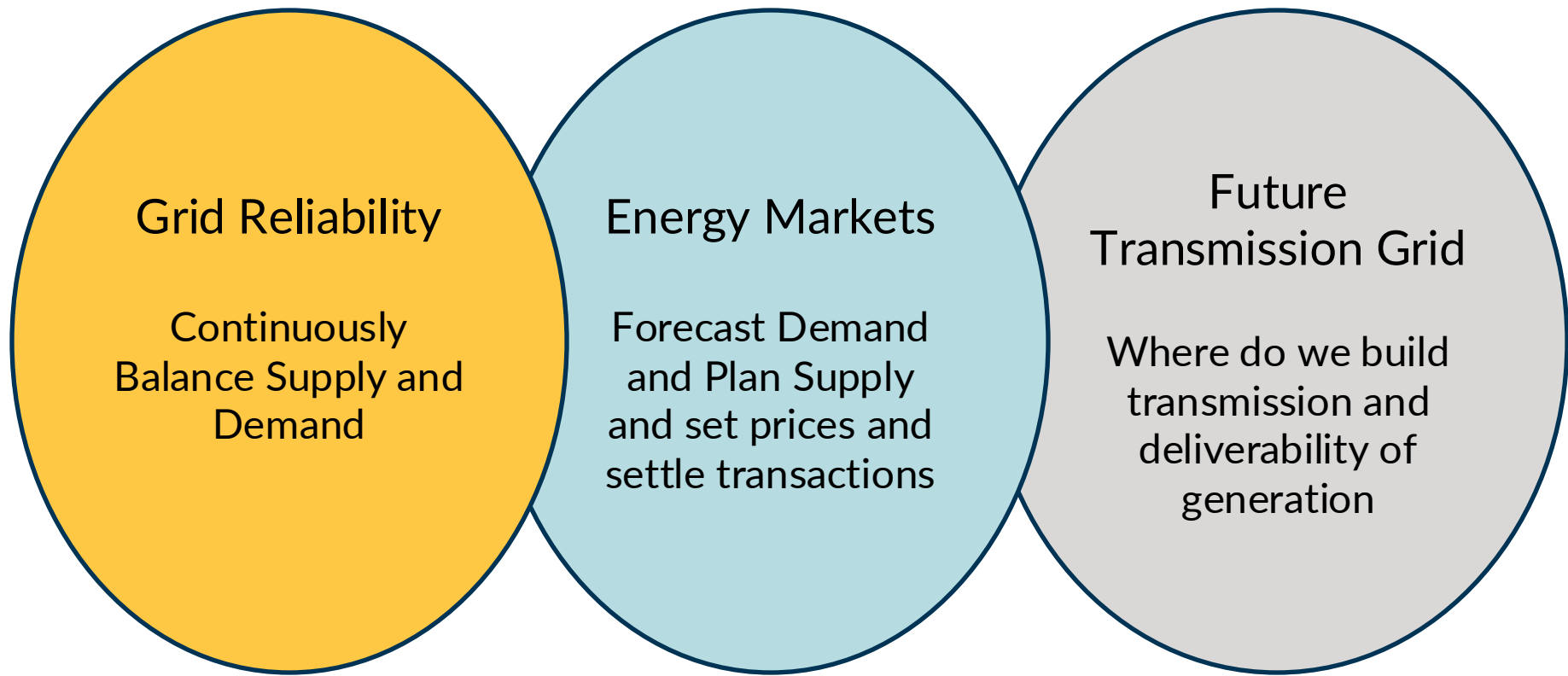
# MISO Scope



Area Served	15 U.S. States and Manitoba, Canada
Population Served	45 Million
Transmission Line	77,000 Miles
Generating Units	1,460
Members	56 Transmission Owners
	219 Non-transmission Owners
Market Participants	> 550
Market Transactions	> \$40 billion
Carbon Reduction	Approximately 32% since 2014



# MISO has three primary value streams



# Major challenges lie ahead

## Disrupters

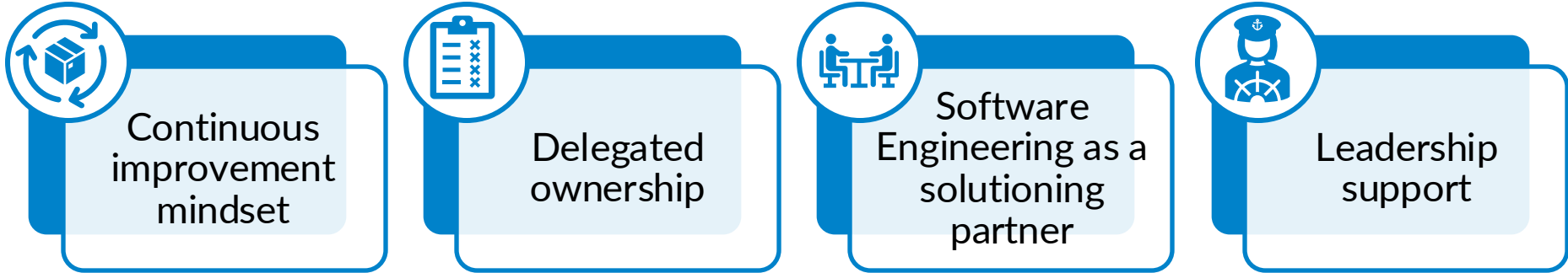
- Weather dependent generation
- Electrification and load growth
- Increased Severe Weather Events



Learning and Innovating  
are foundational



# Learning Culture – How





## Software Engineering Roundtable - Building a sustainable learning culture

# Outcome

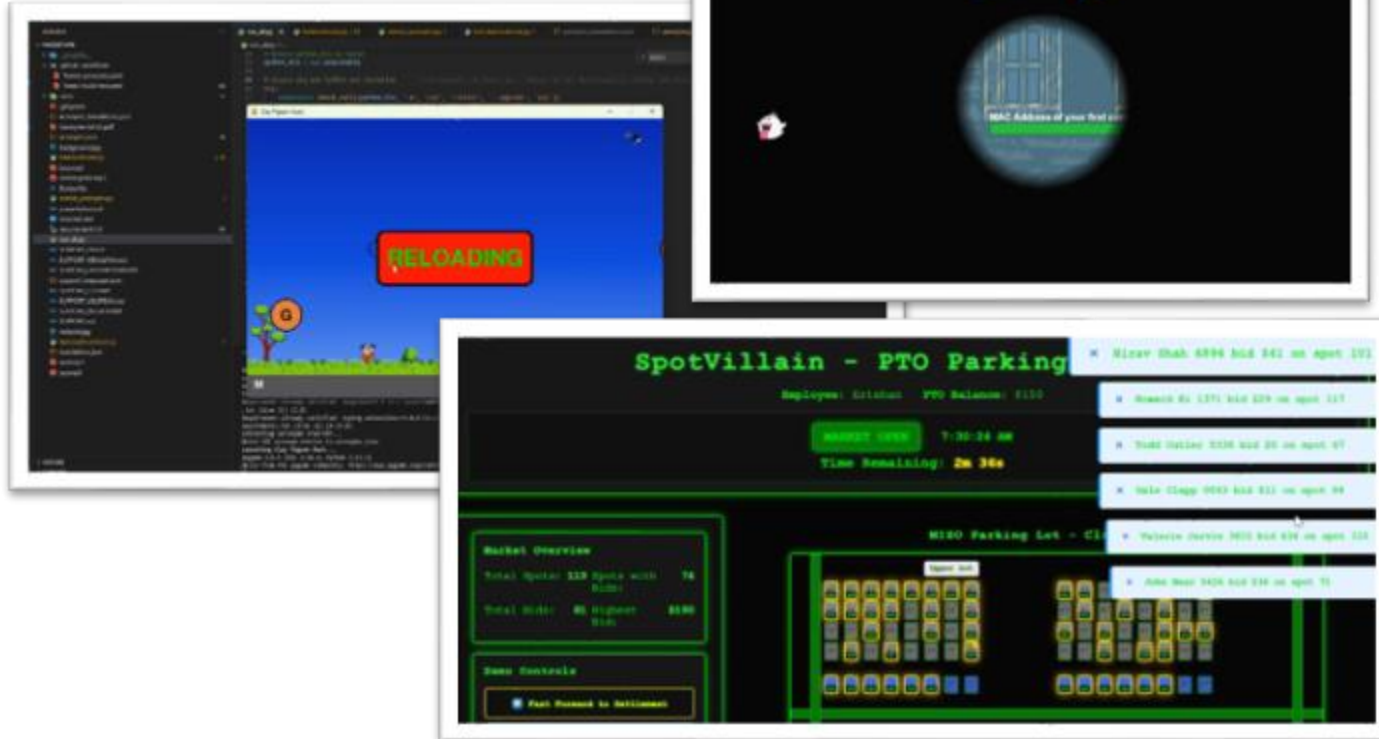


- Around 75% of our staff value the Software Engineering Roundtable as a meaningful forum for sharing and learning
- Conference attendance is up by 20% since last year—a strong sign of growing engagement.

## Software Engineering Summit - Creating space for connection and innovation

## Hackathons - Driving innovation through playful experimentation

# Software Engineering Summit: Hackathon



# Testimonials & Feedback on Hackathon

- CDIO's words about our hackathon – “There are some meetings where you can sense the energy as soon as you enter it. Hackathon felt like it within the 5 minutes of my attendance”
- Architecture team is emulating an architectural hackathon along the same format of the Software Engineering hackathon based on its resounding success

# Delegated ownership



Self-organizing team

## Problem Management





# Product Mindset



# Outcome -

Exceptionally positive stakeholder feedback



“they represent the **best IT/agile/support group** I’ve worked with in my 10+ years of experience here at MISO.

**Responsive:** They consistently deliver new features and resolve issues promptly, demonstrating remarkable efficiency.

**Dedicated:** They put in great effort to thoroughly understand the business logic and user perspectives within these applications. In the areas we've collaborated on, their understanding exceeds that of many folks in market and operations.

**Creative:** They go beyond merely executing instructions from the business side. Instead, developers team often proposes innovative alternatives and effectively communicates these ideas with the business team. “

# Leadership Support









- Executive Sponsorship for Digital Transformation
- AI Championship
- Listening to the Developer Voice

# Outcome



- 83% of software engineers believe we innovate and continuously improve as a department
- 76% of the folks in the software engineering department believe in management team's ability to guide the department

# Quick Recap: 20 Minutes in 1 Slide

-  Executive Sponsorship
-  Modeling Innovation – AI Championship
-  Product-Centric Mindset
-  Empowered Problem Management
-  Developer Voice Matters
-  Cultural Rituals that Reinforce Learning

# Opportunities for Improvement

- Measure outcomes consistently
- Strengthen feedback mechanisms
- Boost support for experimentation
- Improve succession planning & knowledge transfer





# Connect with us

Smita Patnaik



Curtis Reister

