

STRATEGIC PRIORITIES

People First

Growth & Innovation

VoltWrite- Artificial Intelligence

Nate Melby, VP & CIO

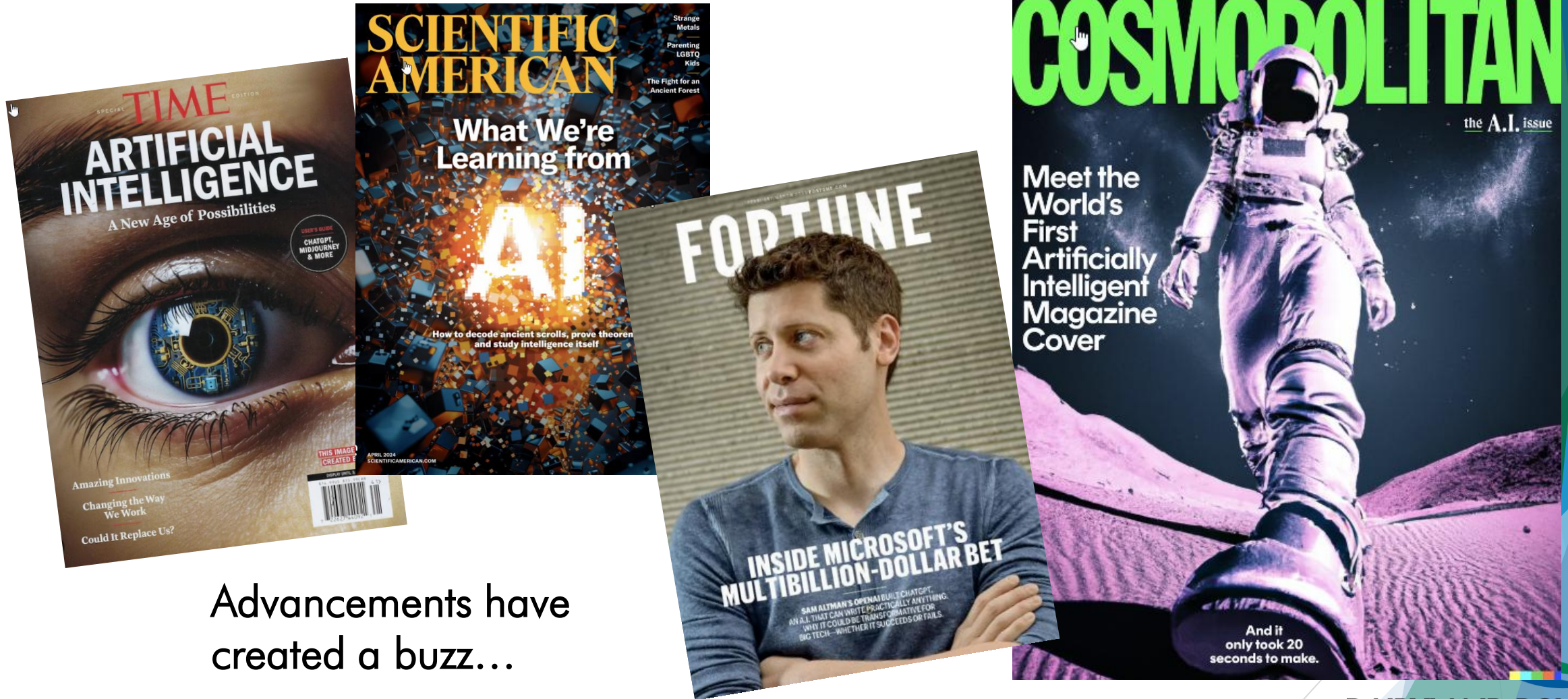
Presented to: G&T Accounting/Finance Conference

June 24, 2025



A Touchstone Energy® Cooperative 

Artificial Intelligence (AI)



Advancements have created a buzz...

Artificial Intelligence (AI)

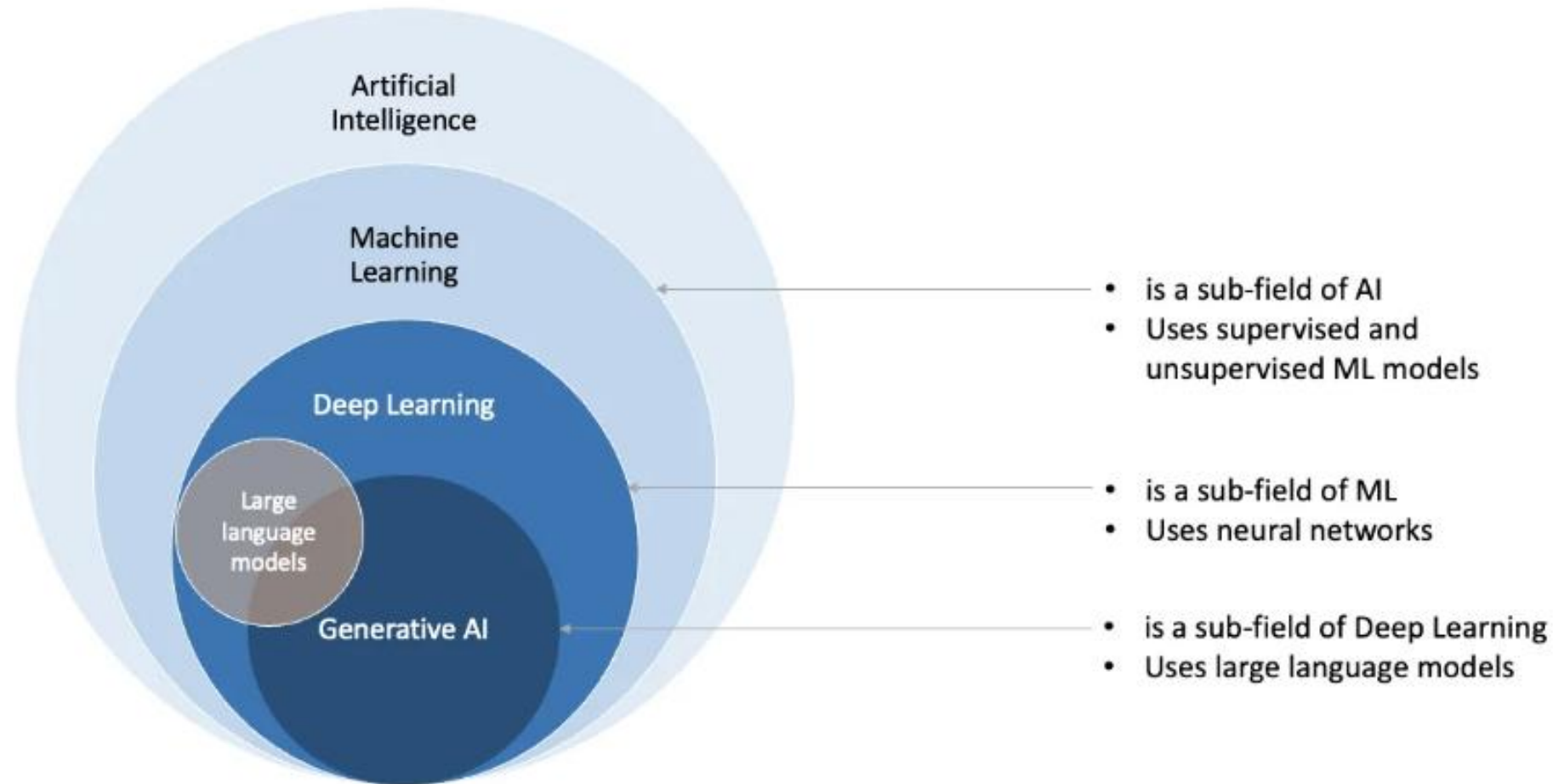


January 2016



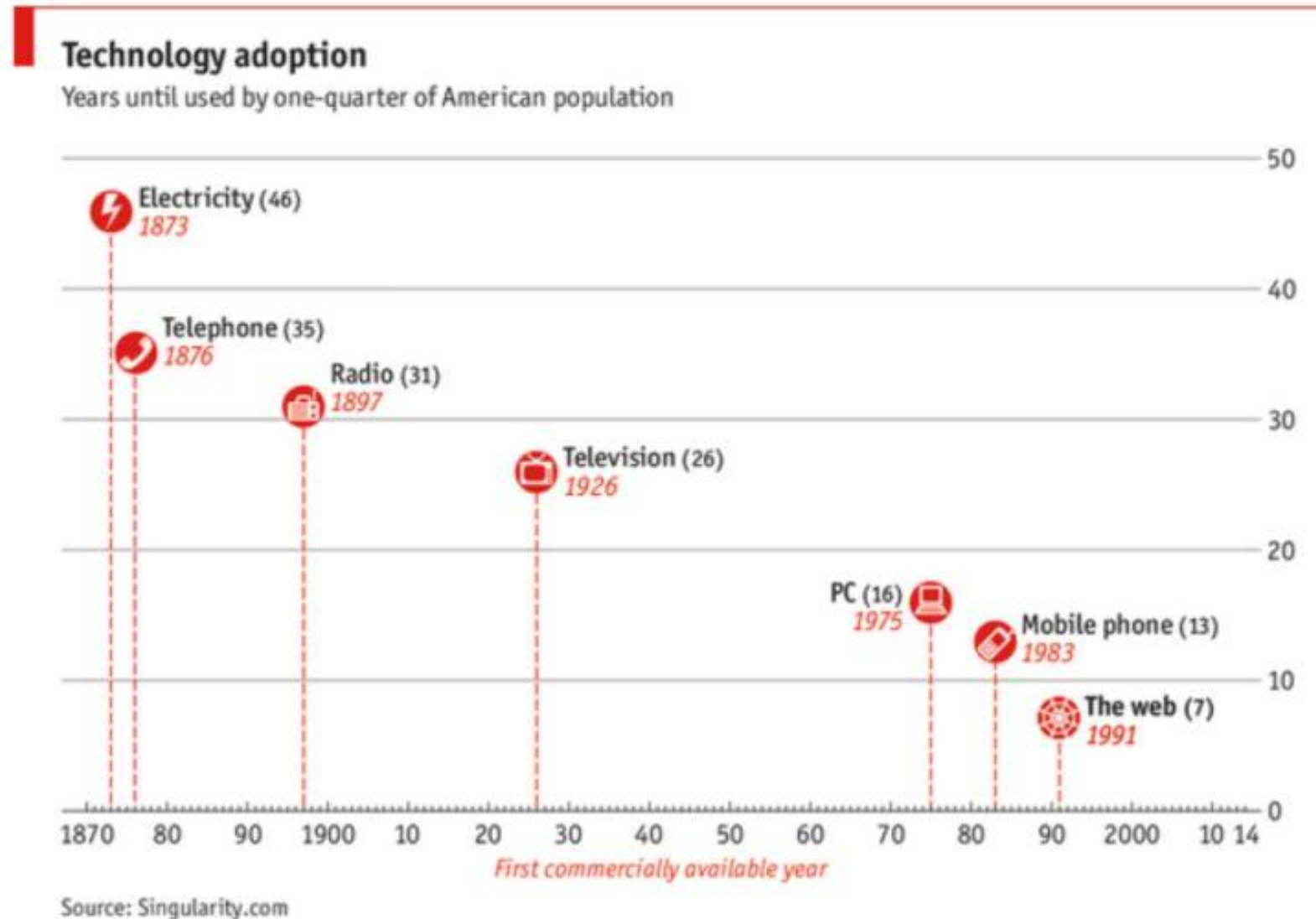
Nov 1998

Artificial Intelligence (AI)



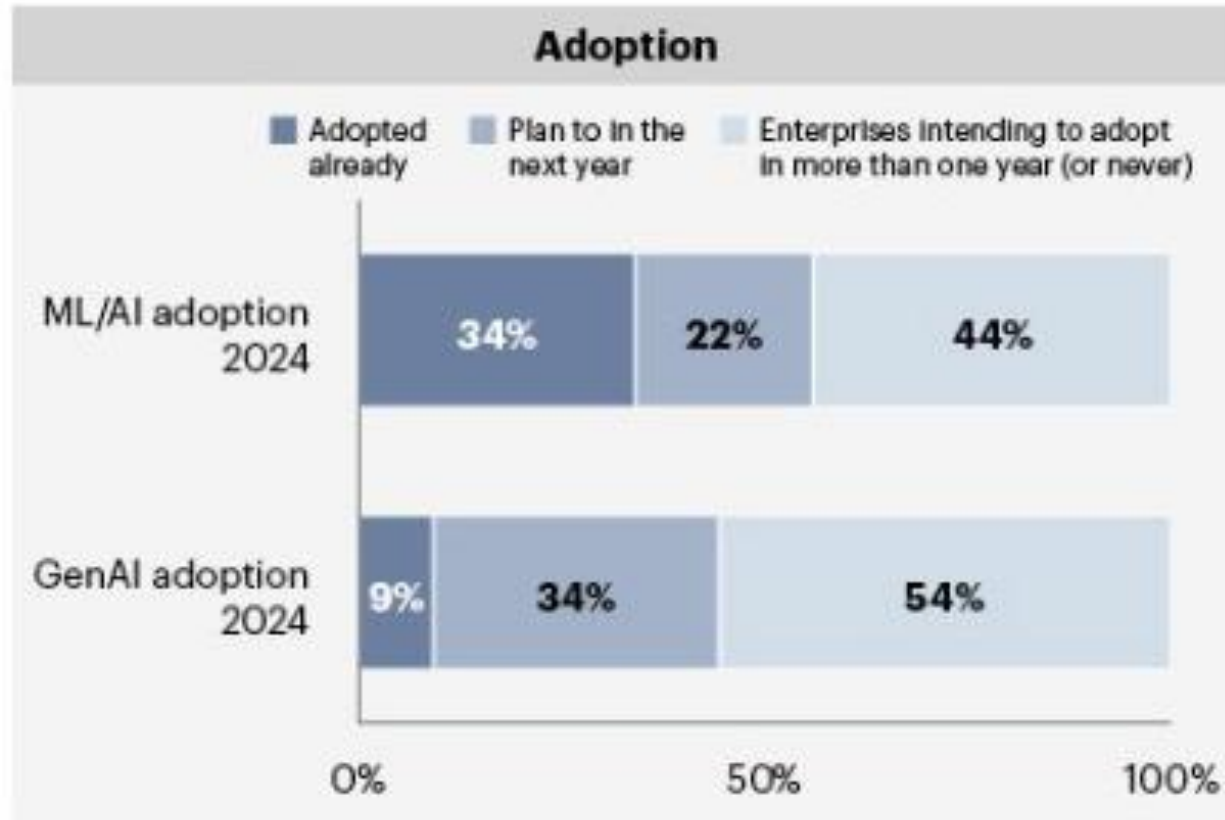
Technology Adoption

- ▶ Electricity – 46 years
- ▶ Chat GPT – 100 M in 2 months



Artificial Intelligence (AI)- Adoption

- ▶ Generative AI will grow rapidly in 2025 - 2026
- ▶ We will see industry advancements and investments
- ▶ IT modernization positions us to take advantage
 - ▶ Cloud
 - ▶ Enterprise Systems
 - ▶ Copilots



Source: Gartner

VoltWrite (AI)



Hi VoltWrite, what are the strategic priorities for a Generation and Transmission cooperative?

Certainly, A Generation and Transmission (G&T) cooperative's primary mission is to provide reliable, affordable, and sustainable energy to its member distribution cooperatives. Key strategic priorities often include:

1. **Reliability:** Ensuring that the G&T cooperative can reliably generate and transmit power to all of its distribution members is critical. This might include regular maintenance and upgrades of generation facilities and transmission infrastructure, as well as contingency planning for potential disruptions.
2. **Affordability:** Keeping costs low for member distribution cooperatives is a key concern. Strategies may include efficient operations, prudent financial management, and leveraging economies of scale.
3. **Sustainability:** With increasing focus on environmental sustainability, G&T cooperatives need to consider strategies for incorporating renewable energy sources into their generation mix. This could involve investment in wind, solar, or other renewable technologies, as well as efforts to improve energy efficiency.
4. **Regulatory Compliance:** G&T cooperatives must navigate a complex regulatory environment. Staying in compliance with all relevant regulations, including those related to environmental impact, worker safety, and grid reliability, is a key priority.
5. **Member Engagement:** As member-owned entities, G&T cooperatives need to maintain strong relationships with their member distribution cooperatives. This might involve regular communication, transparent decision-making processes, and efforts to ensure that the cooperative is meeting its members' needs.
6. **Technological Innovation:** The energy industry is rapidly evolving, and G&T cooperatives need to stay abreast of the latest technologies and trends. This could involve investments in smart grid technologies, electric vehicle infrastructure, energy storage solutions, or other emerging technologies.

Each G&T cooperative will have its own specific strategic priorities, based on its unique circumstances and the needs of its members, but these are some of the common themes you might see.

AI-generated content may be incorrect



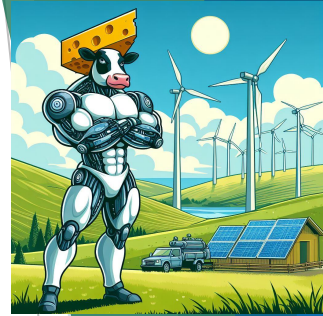
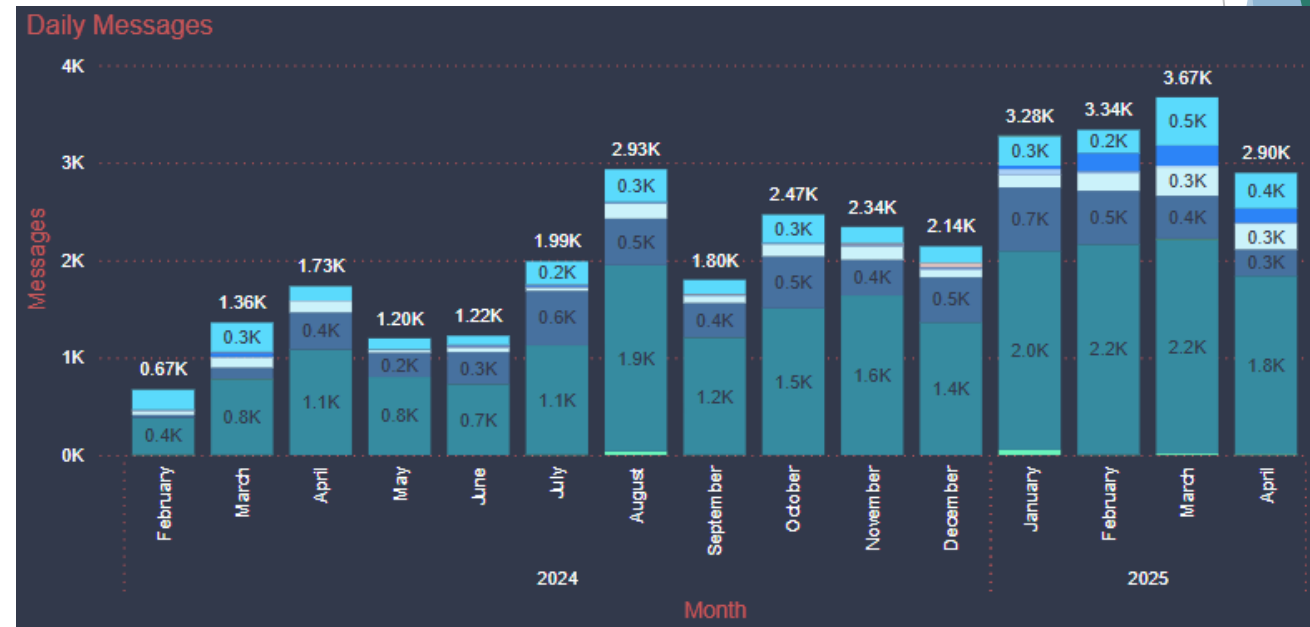
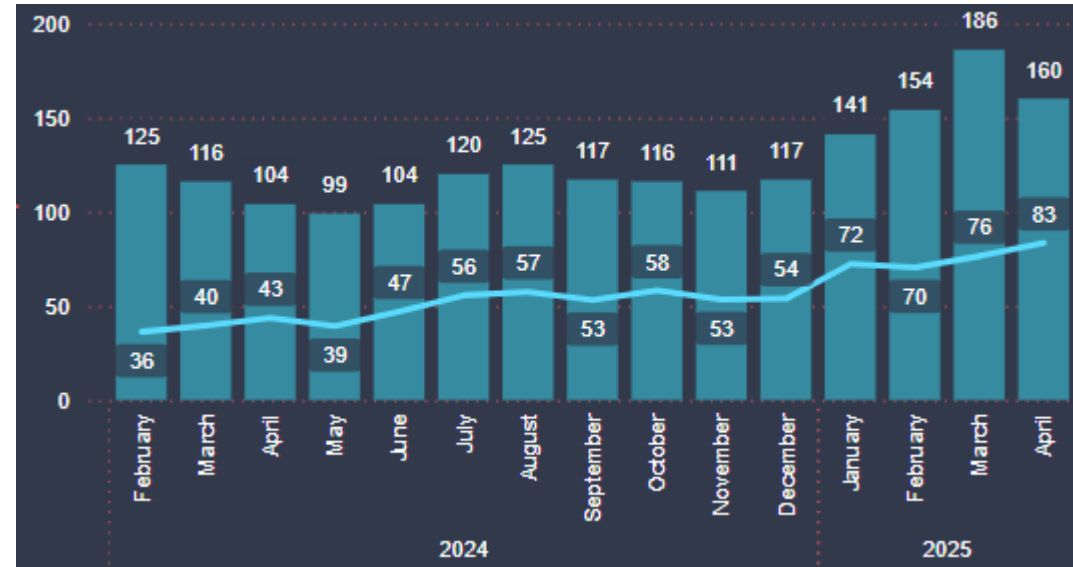
Type a new question...



- ▶ VoltWrite is Generative AI
- ▶ Uses our private environment
- ▶ Pre-trained Transformer

VoltWrite (AI)

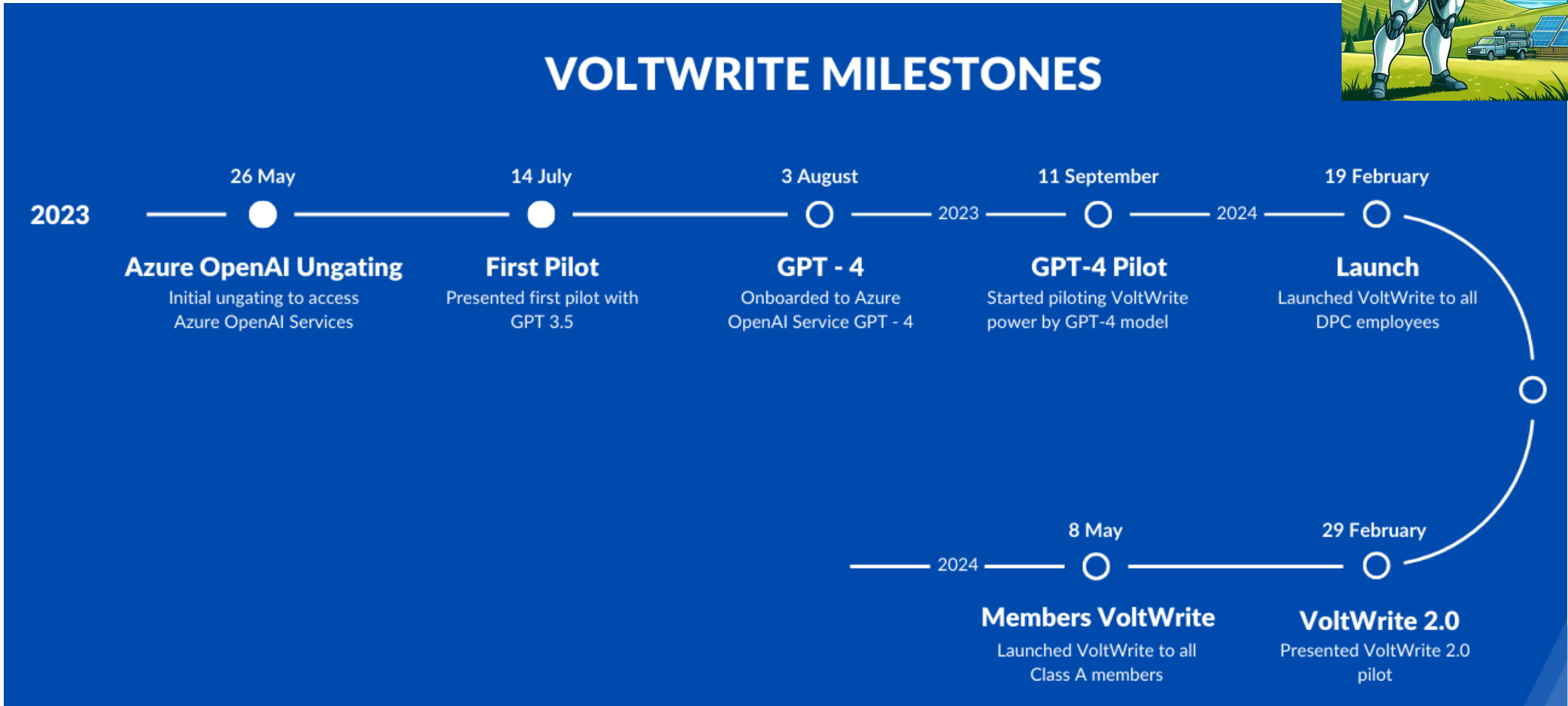
- ▶ User adoption has been steady since Feb 19, 2024 launch
 - ▶ 14,600 Conversations
 - ▶ 6 minute average



VoltWrite (AI)

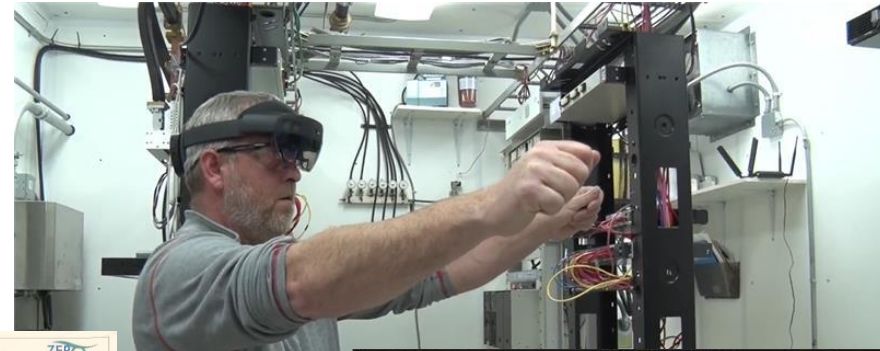
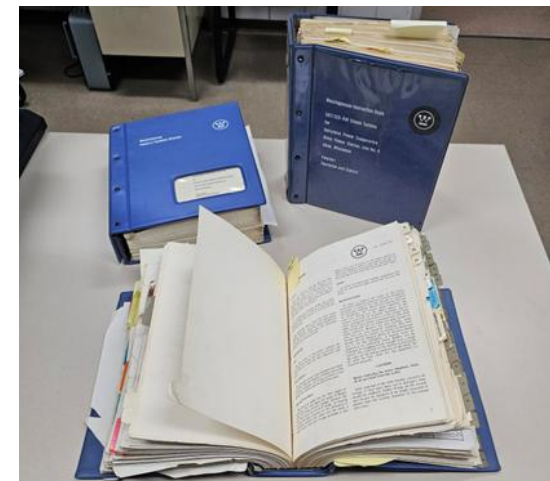
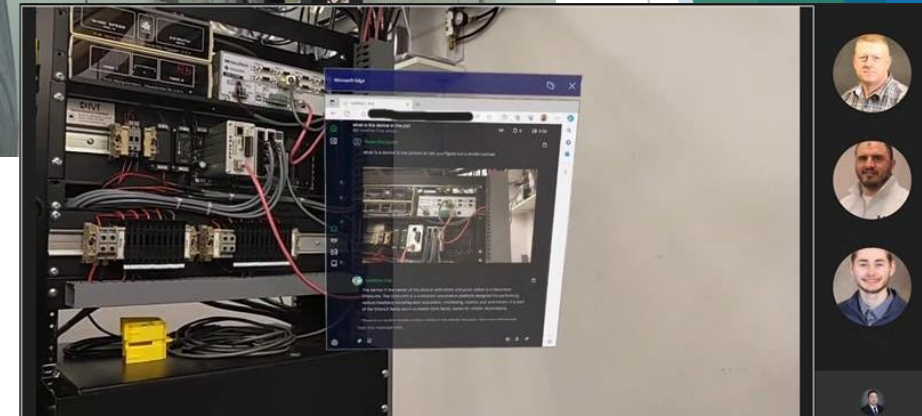


VOLTWRITE MILESTONES



What do we do with it?

- ▶ Win back time – “Augmented Worker Strategy”
 - ▶ Perform analysis and generate faster ideas
 - ▶ Symantec summarization
 - ▶ Better writing
- ▶ Discover new use cases daily
 - ▶ Policies and standards reconciliation
 - ▶ Synthetic data creation - SCADA
 - ▶ Strategic Workforce Planning
 - ▶ MaxPower - Total Rewards (Retrieval Augmented Generation (RAG))
 - ▶ VoltGen- JP Madgett Plant (RAG)
 - ▶ 1400 documents – almost 2 million pages
 - ▶ Originally EPRI project
 - ▶ VoltSafe- Safety Insights
 - ▶ Telecom- Augmented Reality (AR)/AI assisted support

A Dairyland Power Cooperative Job Briefing form. The form includes sections for Job Information, Safety Information, and a checklist for various tasks. It is filled out with handwritten notes and signatures.

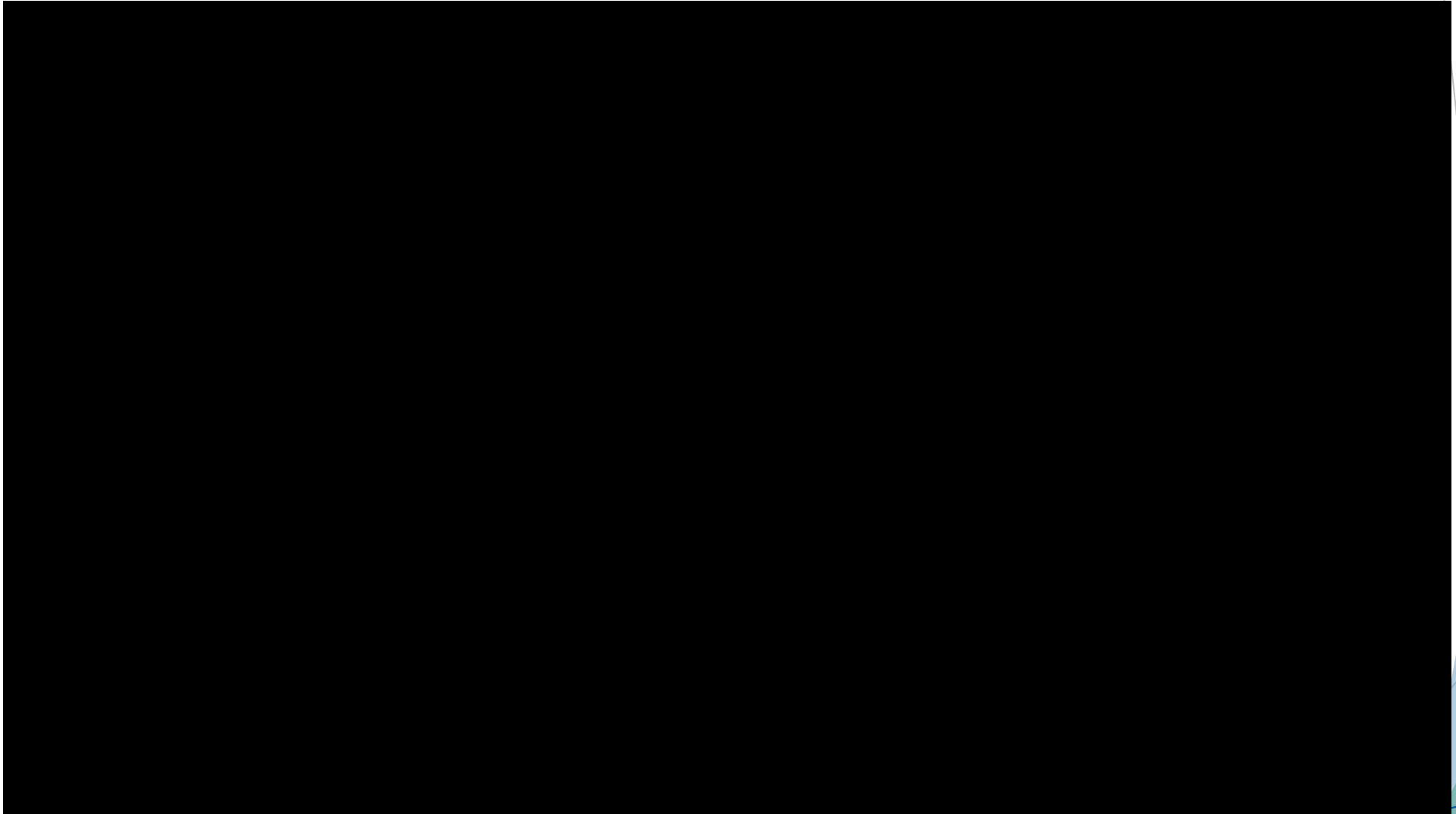
What do we do with it?

Distribution Cooperative Examples

- ▶ Analyzed a 500-page state law to extract 6 pages of relevant information
- ▶ Compared a Canadian trade agreement written in French against our state's to see if there were beneficial opportunities
- ▶ Reviewed PTO policy against new state law regarding paid family leave to ensure compliance
- ▶ Load analysis, anomaly detection

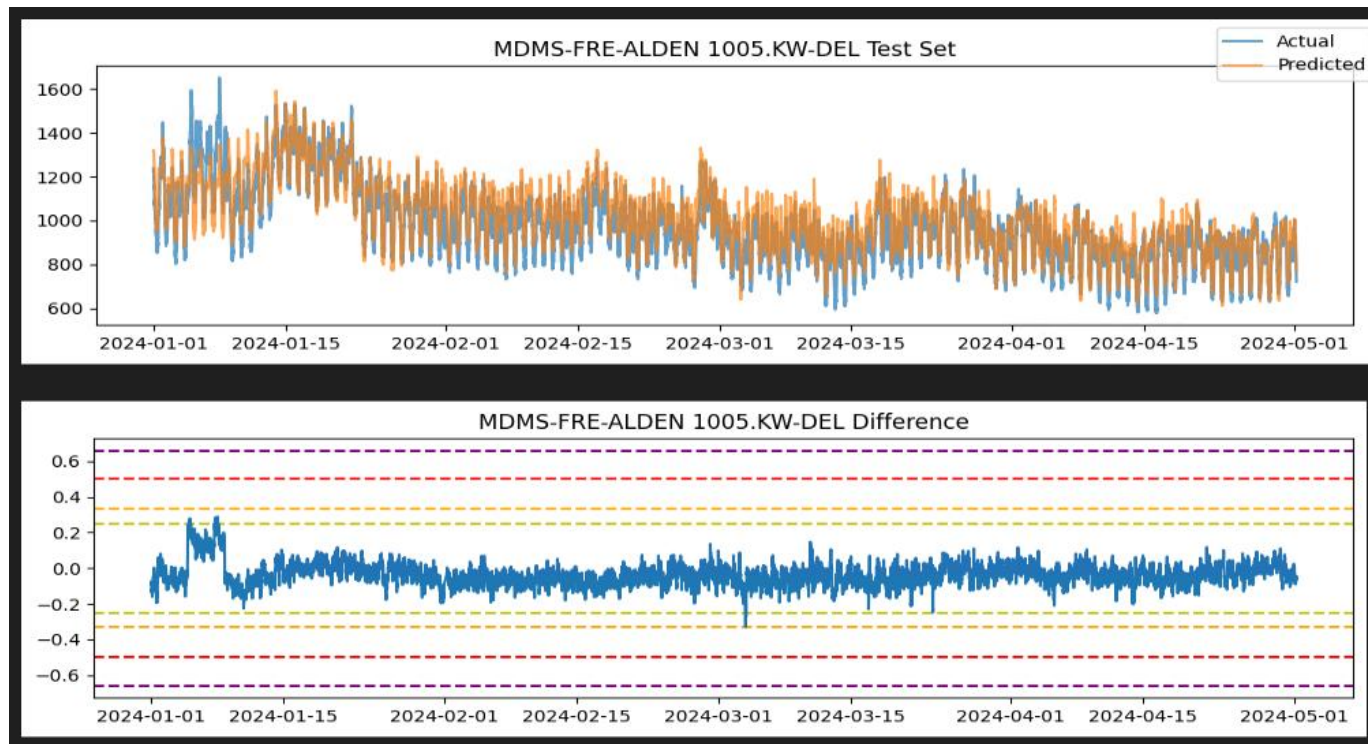


Augmented Reality (AR)/AI



Predictive AI

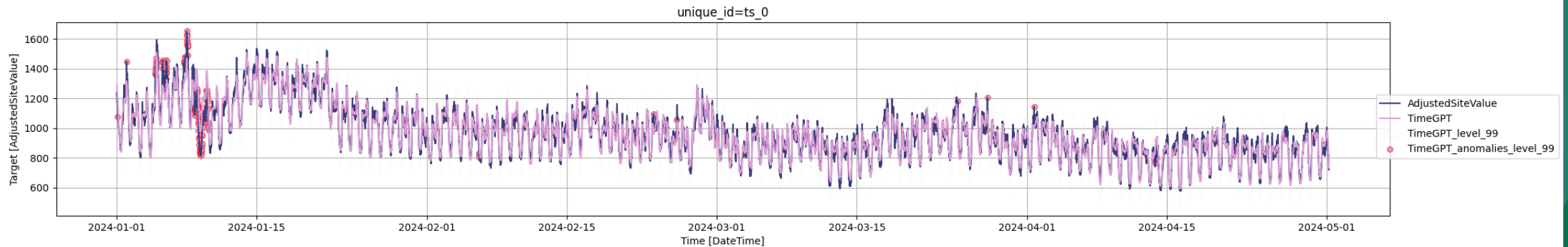
- ▶ Streamlining the manual process of visually inspecting electrical demand data for meter anomalies to ensure accurate billing and operational reliability.
- ▶ Regression Machine Learning Model (XGB Regressor)



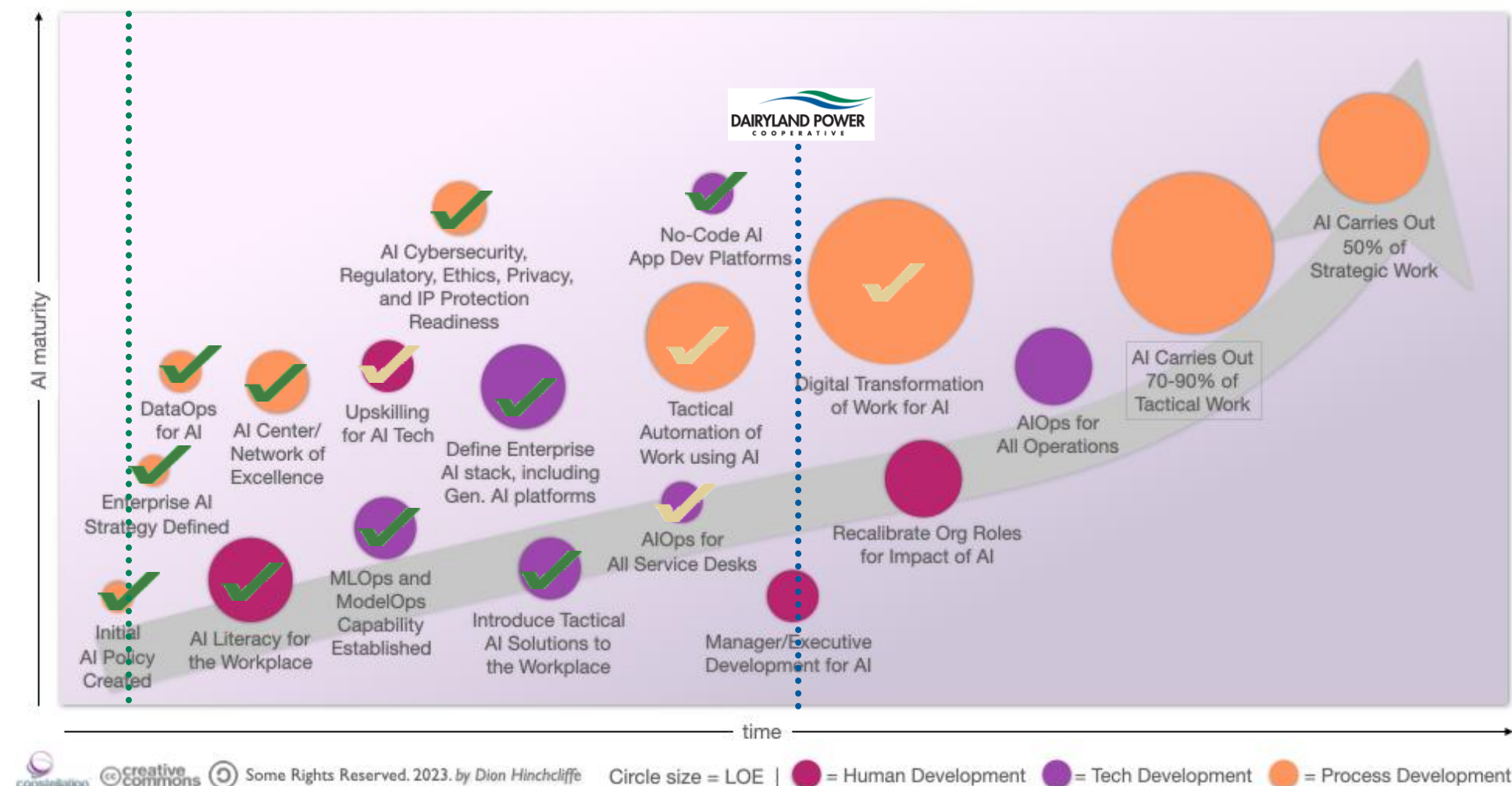
Predictive AI

► TimeGen-1

- State-of-the-art GPT foundation model designed specifically for time-series forecasting.



Artificial Intelligence (AI)- Maturity Curve



AI Ethical Considerations

- ▶ Responsible use of AI
 - ▶ Fairness
 - ▶ Bias
 - ▶ Fair treatment
 - ▶ Systemic inequality
 - ▶ Transparency
 - ▶ Understanding AI decisions
 - ▶ Explainable insights
 - ▶ Auditing
 - ▶ Accountability
 - ▶ Responsibility for AI actions
 - ▶ Error correction and identification
 - ▶ Legal and ethical frameworks
 - ▶ Human Oversight
 - ▶ Maintaining human control
 - ▶ Ensuring human oversight
 - ▶ Collaboration with AI- augmented capabilities



Three Waves of AI

▶ Wave 1: Predictive AI

- ▶ Forecasting trends
- ▶ Data-driven decisions

▶ Wave 2: Generative AI

- ▶ Generate content
- ▶ Allow human conversations with Natural Language Processing (NLP)

▶ Wave 3: Agentic AI

- ▶ AI systems can autonomously execute tasks
- ▶ Interaction with other AI agents



Agentic AI

- ▶ AI Agents
 - ▶ Can take action
 - ▶ Make decisions (within defined parameters)
 - ▶ Do not require constant oversight
- ▶ What does this mean?
 - ▶ A change in how we work
 - ▶ Agents will augment human capabilities- humans will orchestrate
 - ▶ There will be nuances here
- ▶ Imagine...
 - ▶ Having your personal AI agent make travel arrangements for you
 - ▶ Being in meetings where agents interact with your team and provide insights
 - ▶ We may start to see blending between human and AI workflows



Agentic AI



Is this the singularity?





Comments and Questions



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Chief Information Officer at Dairyland Power
Cooperative



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