

AI IN THE WORKPLACE

Where It's Been...Where It Is...Where It's Going



Colby Cousens
Chief Information Officer



Angelica Medina
DPW & Electric Business Manager

February 2025

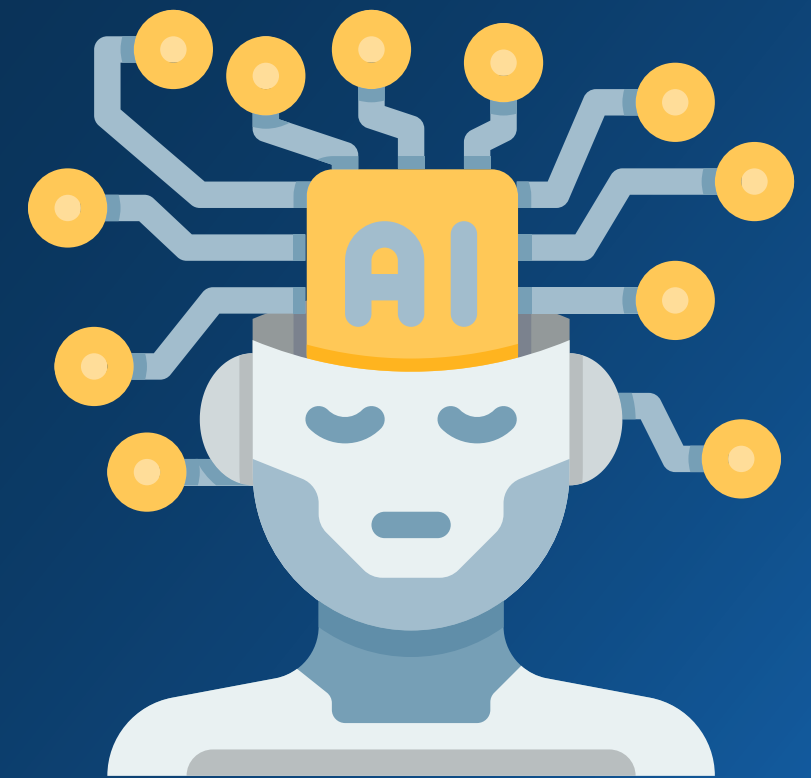


AI IS NOT THE FUTURE OF TECHNOLOGY

It's the technology of today that's shaping our future

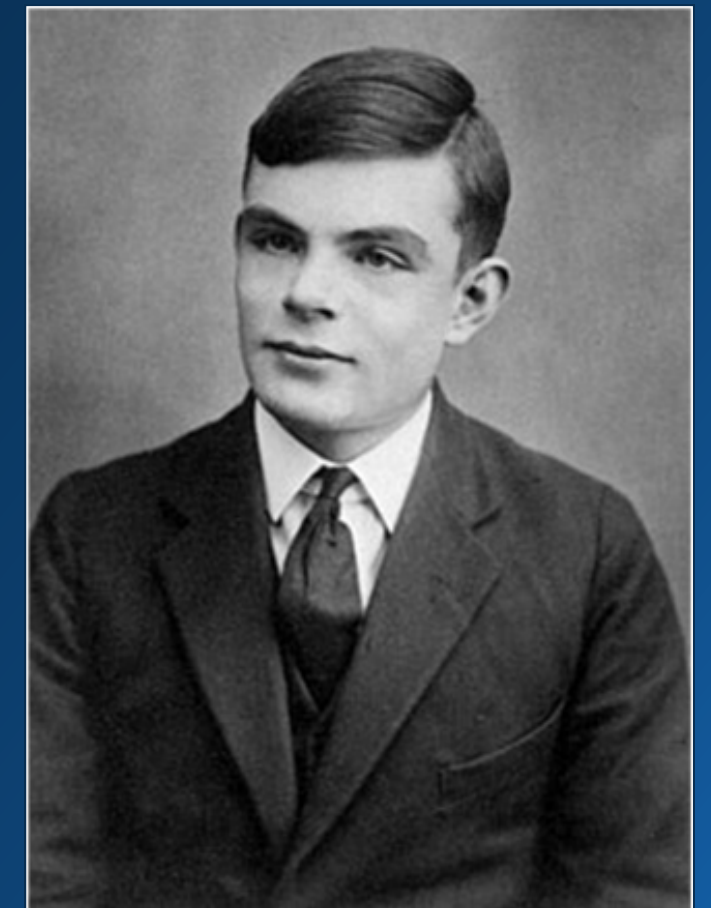
WHAT WE'LL COVER TODAY

- A short history of AI
- What AI is (and isn't)
- Applications in Public Works
- Risks and guardrails
- Getting started
- Closing and discussion



EARLY CONCEPTS

- 1950s: Alan Turing and the 'Turing Test'
- Optimism about machines being able to think
- Birth of computer science and AI theory



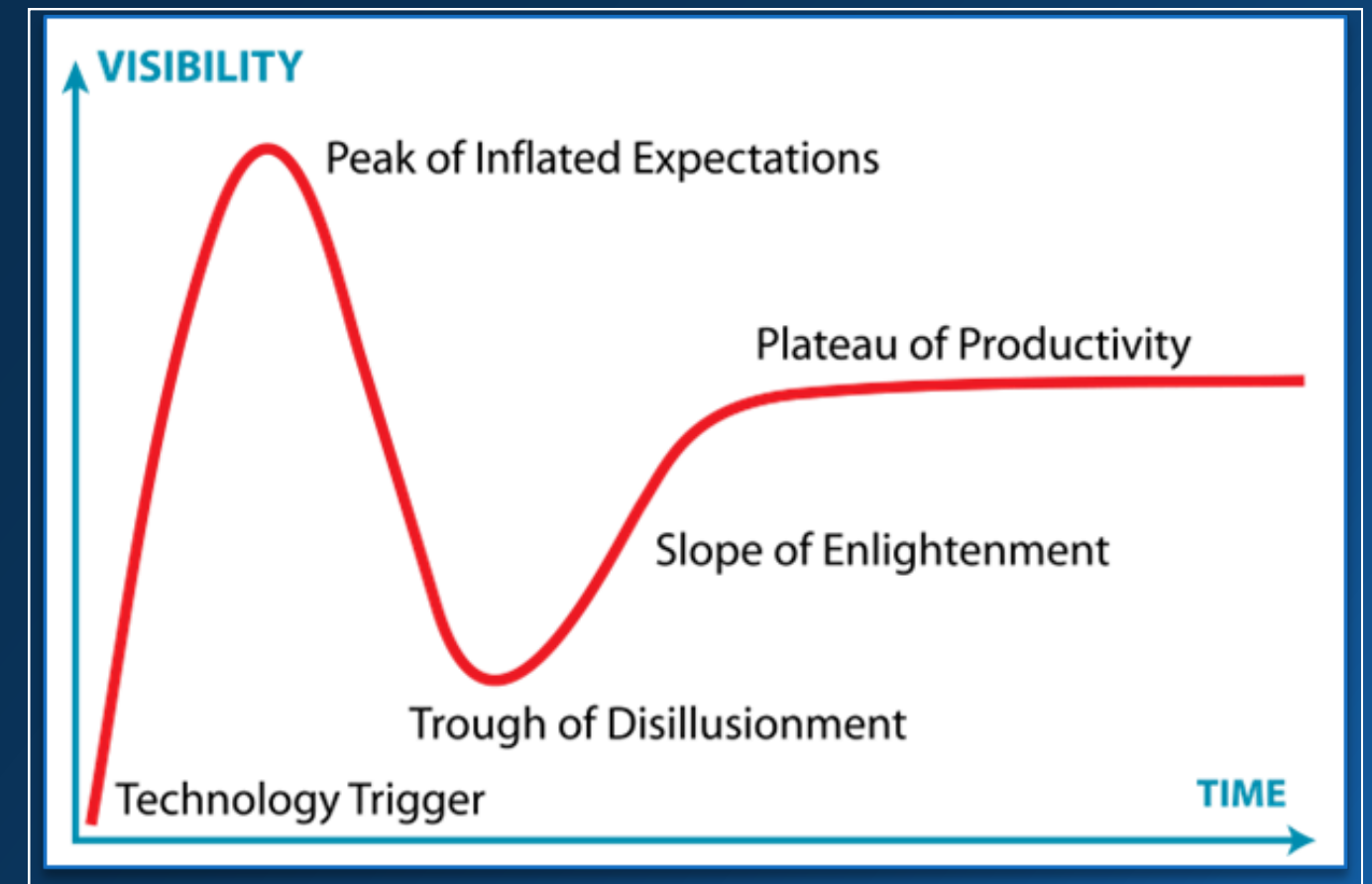
THE FIRST AI WAVE

- 60s-70s: Symbolic AI using if-then rules
- Applications in chess, problem solving
- Limited by computing power and data



THE AI WINTERS

- 70s, 80s & 90s
- Funding and excitement faded when results fell short
- Lesson: hype cycles are normal in technology



MACHINE LEARNING ERA

- 80s-2000s: Algorithms learn from data instead of rules
- Examples: handwriting recognition, spam filters
- Practical but limited without large data sets



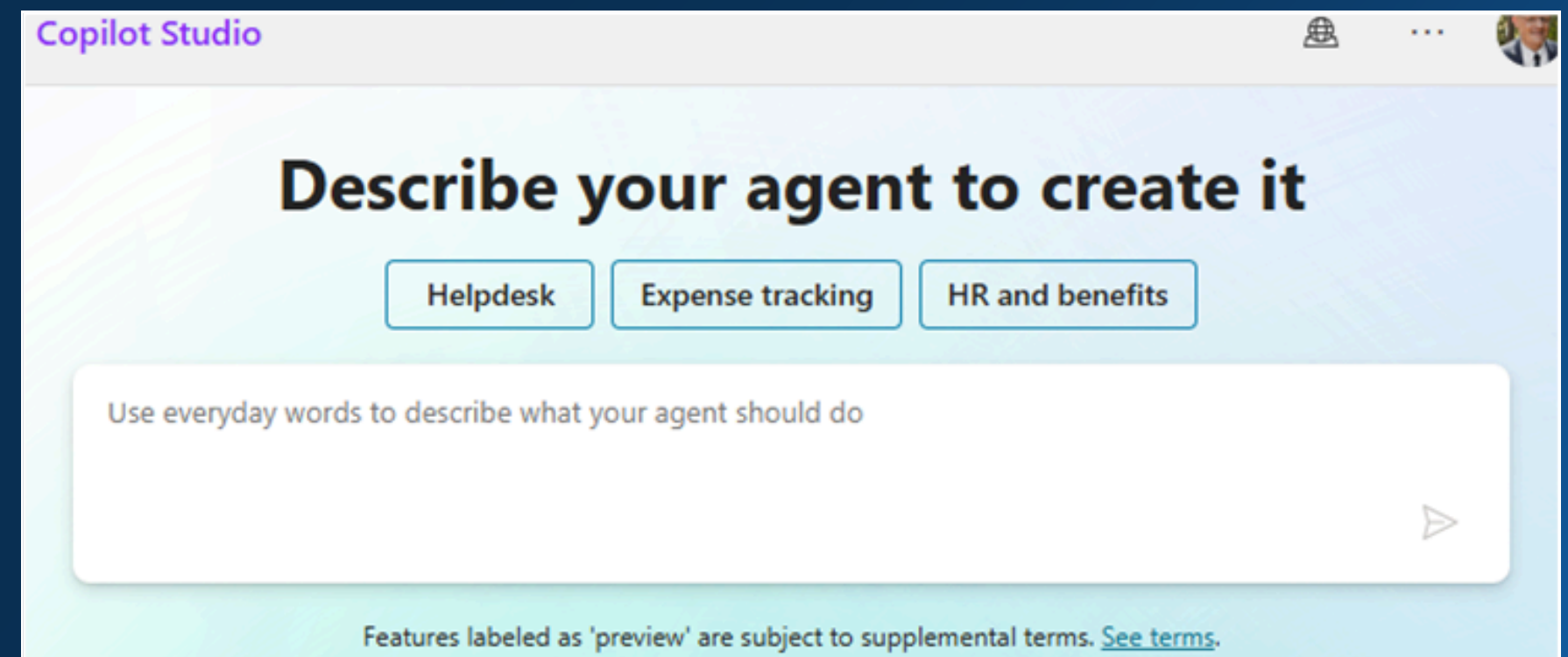
THE DEEP LEARNING REVOLUTION

- 2010s: Neural networks, big data, GPUs
- Breakthroughs in vision, speech, translation
- AI adoption expands into everyday applications



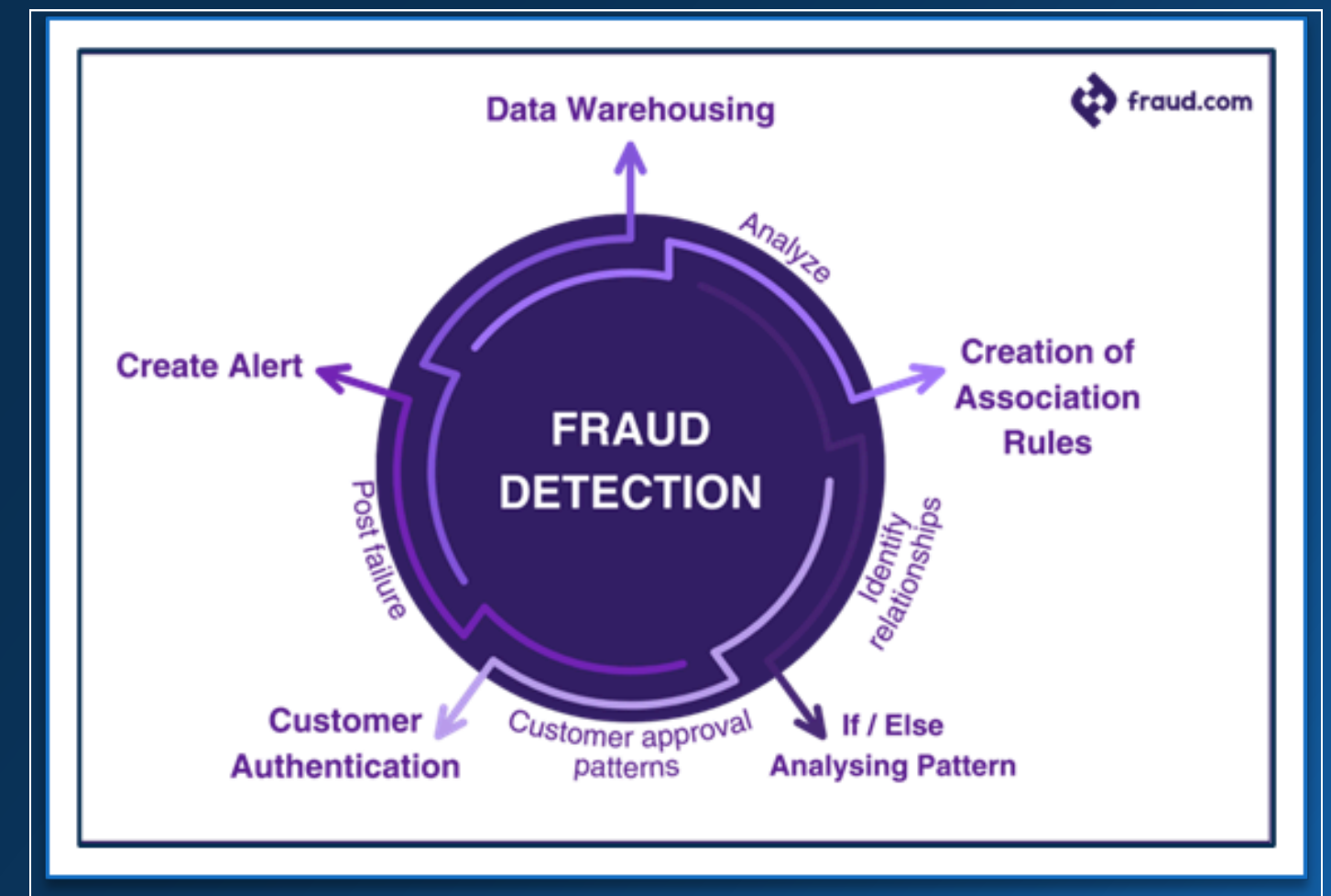
TODAY: GENERATIVE AI & BEYOND

- Tools like ChatGPT, Copilot, DALL-E
- AI moving from labs into daily tools
- Now reaching municipalities and public works



DEFINING AI SIMPLY

- AI recognizes patterns, predicts outcomes, automates tasks
- Everyday examples: GPS, fraud detection, Siri/Alexa



WHAT AI ISN'T

- Not magic or true thinking machines
- Not a replacement for human judgment
- Best used to augment staff, not replace them

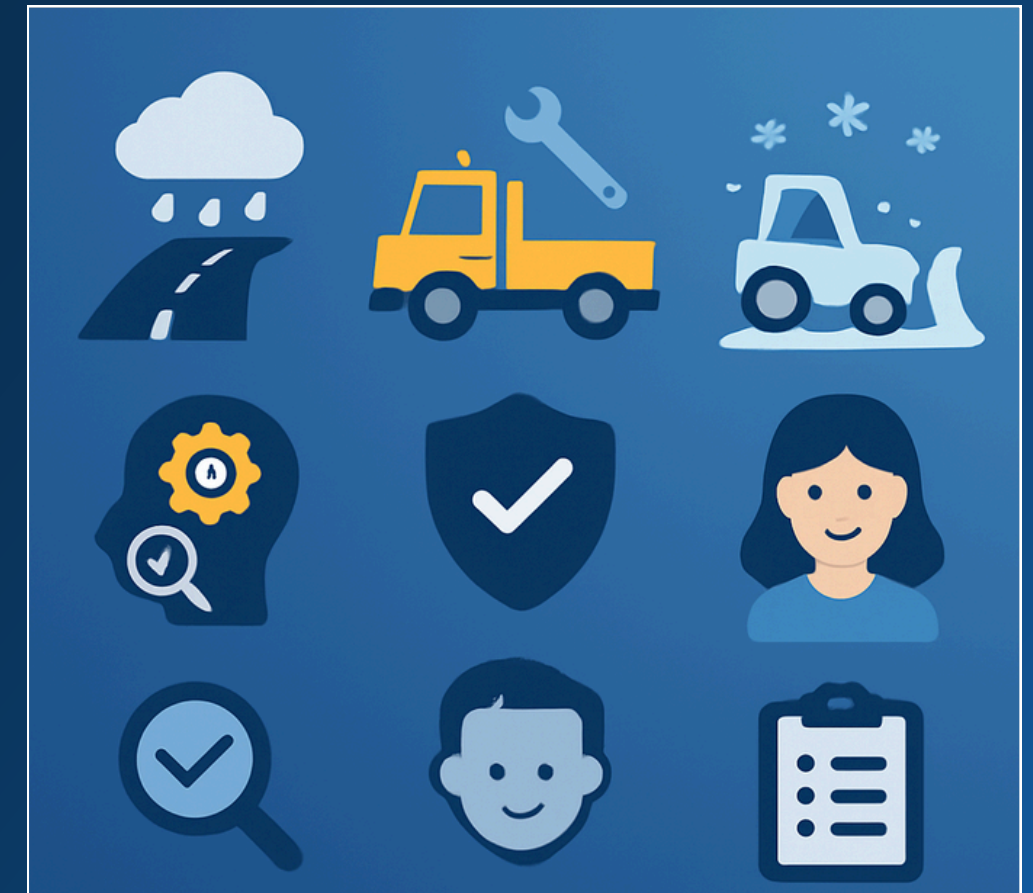


KEY BENEFITS

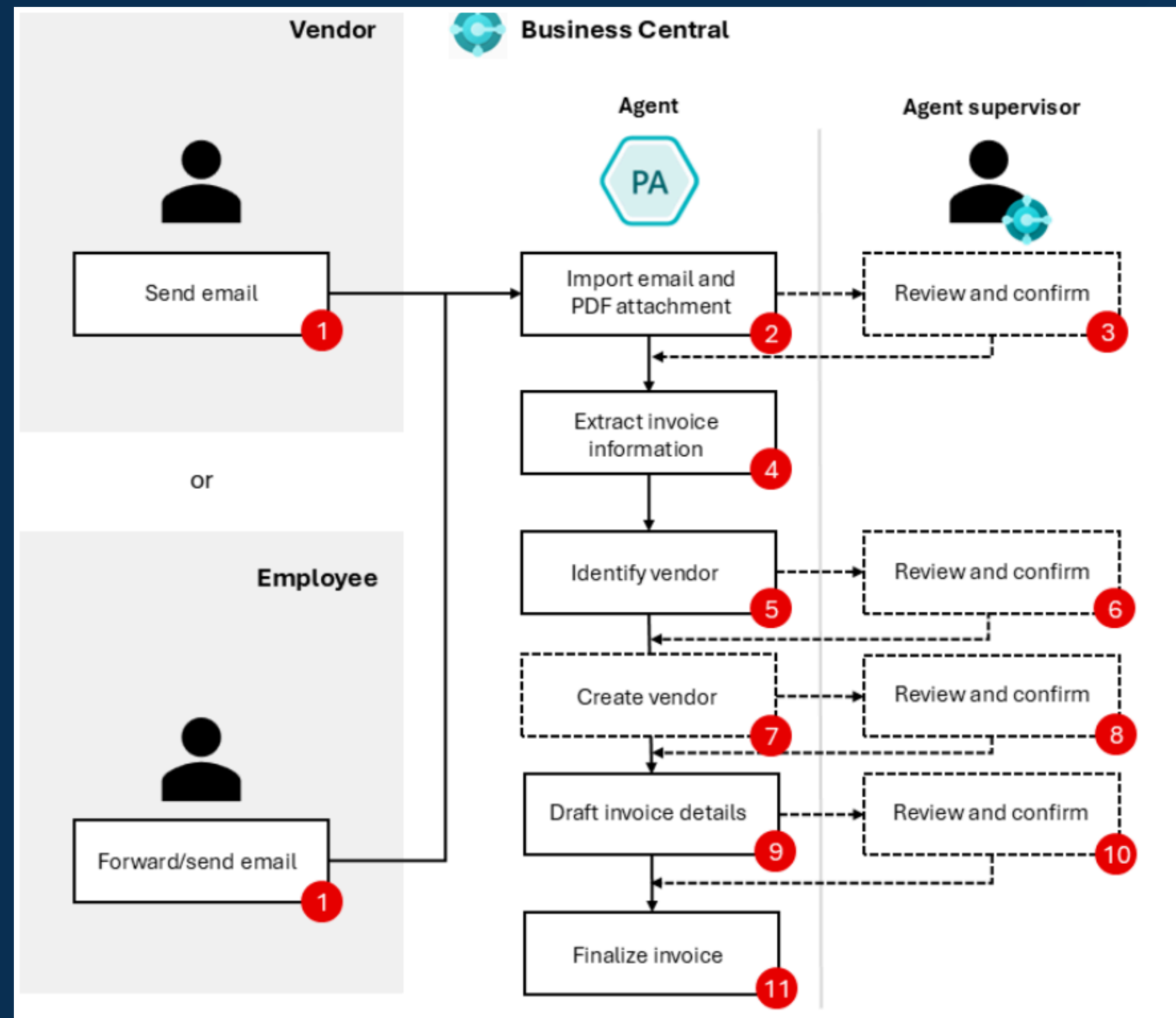
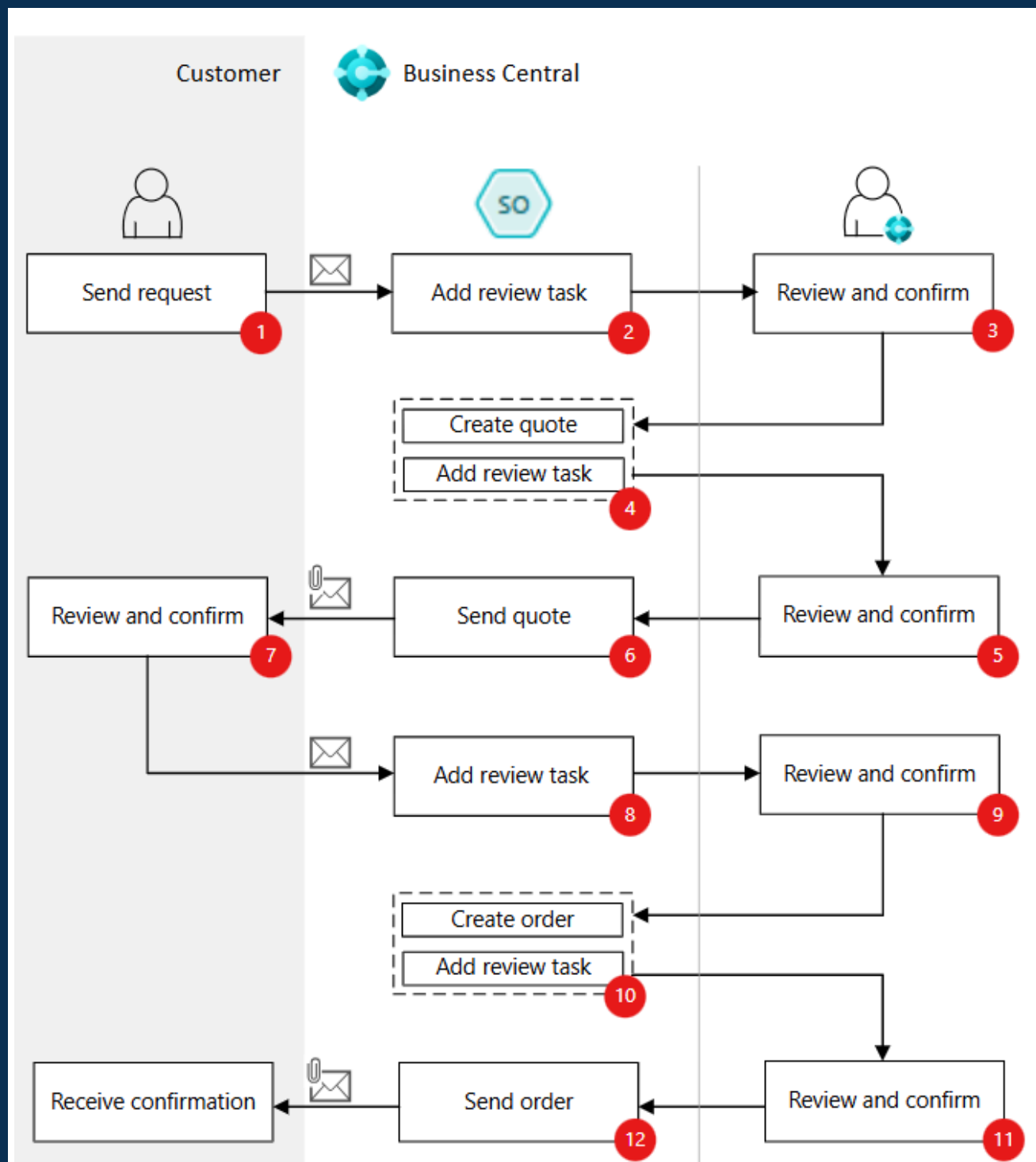
- Time saved on drafting and repetitive tasks
- Consistency in communication and documentation
- Faster analysis of complex policies and financial data
- Enhanced staff training and learning
- Creative boost for branding, events, and customer engagement

APPLICATIONS IN PUBLIC WORKS

- Pavement forecasting
- Fleet maintenance
- Winter operations
- Inspections with AI
- Safety monitoring
- Resident services
- Administrative efficiency



APPLICATIONS IN PUBLIC WORKS



ADMINISTRATIVE FUNCTIONS

- Job description reviews, edits, and creation
- Interview question development
- Form template creation
- Email drafting
- Policy and procedure drafting
- Data entry automation



LEARNING & TRAINING TOOLS

- Learn new software (i.e. Power BI)
- Step-by-step tutorials
- Real-time Q&A support
- Accelerate workforce skill development



AI IN THE UTILITY SPACE: CURRENT & FUTURE

- Athena Chat Bot: metering and customer information analysis
- Leak detection automatic notification
- Personalized payment reminder messages/videos
- Load shedding modules and load growth forecasting

RISKS OF AI

- Data quality issues: bad data leads to bad results
- Bias and fairness: need equitable service delivery
- Cybersecurity: AI increases data exposure
- Over-reliance: humans must remain in control



MANAGING RISKS

- Start small with pilots and validate results
- Ensure transparency and fairness in decision-making
- Extend cybersecurity protections to AI tools



AI MATURITY CURVE

- Awareness → Pilot → Scale → Transform
- Start with small pilots
- Scale only after validation



WHERE DO I BEGIN?

- Start with everyday pain points. What takes up too much of your time?
- Highlight quick wins
- Show peer examples



WHERE TO GO FIRST

- Leverage existing tools: Copilot, Word, Excel
- Free and low-risk AI: ChatGPT, Google Gemini
- GovTech and ICMA: beginner AI resources
- MMA is starting to host AI sessions

*“Think of AI as a 24/7 intern who never complains
and always produces a draft.”*

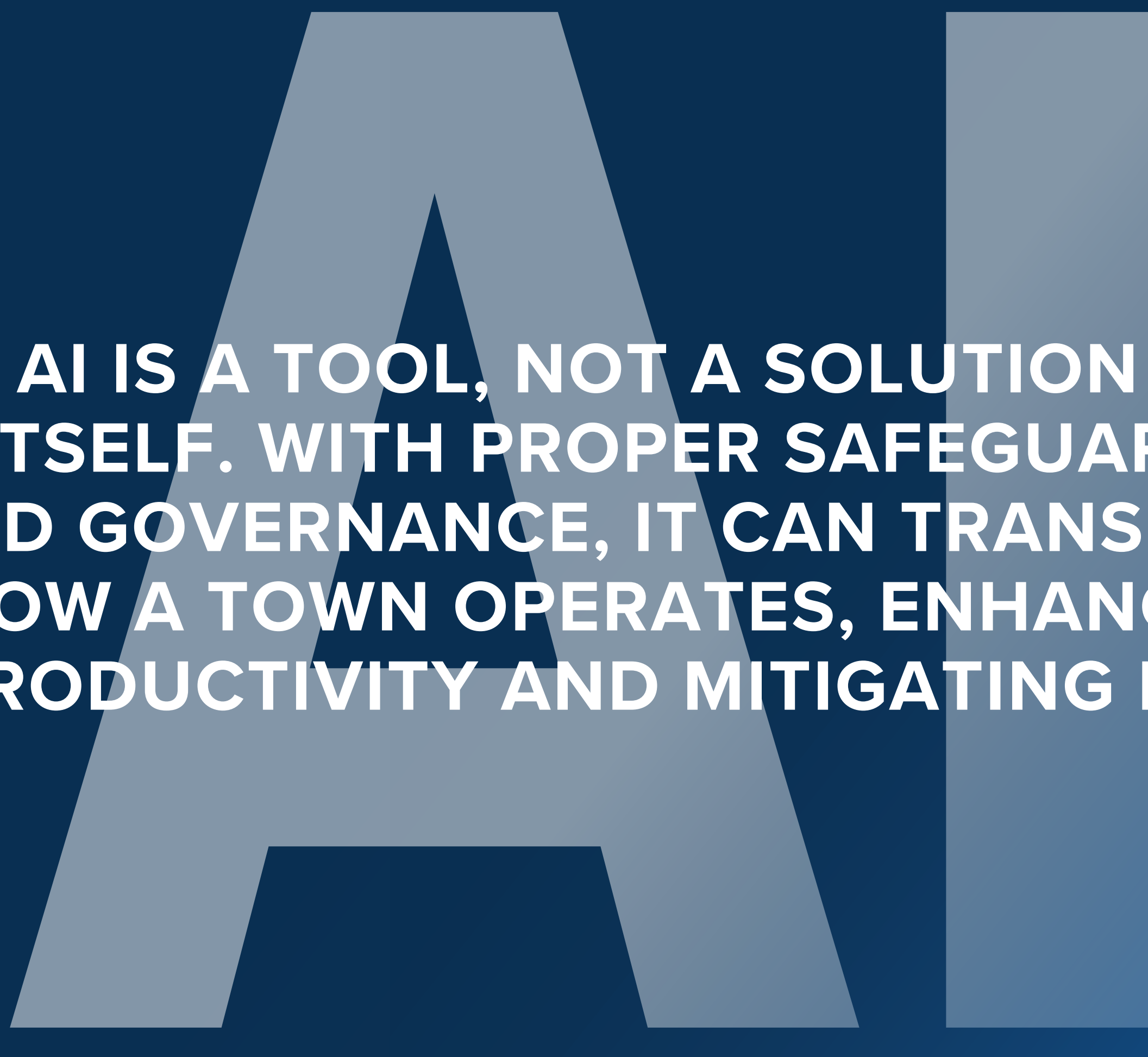
VISION 2030

- Smarter, safer, and more efficient highways powered by AI
- Residents get faster service with fewer resources
- Municipalities lead with innovation and collaboration



DISCUSSION PROMPT

- What process in your department could AI improve first?
- Where do you see risks that need management?
- Which towns could partner on shared pilots?

A large, light blue, semi-transparent watermark of the letters 'AI' is positioned in the background. The 'A' is formed by two wide, slanted strokes meeting at a point at the top, with a horizontal bar at the bottom. The 'I' is a simple vertical rectangle. The text is centered over this watermark.

**AI IS A TOOL, NOT A SOLUTION IN
ITSELF. WITH PROPER SAFEGUARDS
AND GOVERNANCE, IT CAN TRANSFORM
HOW A TOWN OPERATES, ENHANCING
PRODUCTIVITY AND MITIGATING RISK.**

Q&A

THANK YOU!



Colby Cousens

Chief Information Officer
ccousens@danversma.gov



Copilot Certified



Angelica Medina

DPW & Electric Business Manager
amedina@danversma.gov

