Reimagining Local Government: How AI Technology is Transforming the County Operations Landscape

Oct 3, 2023
Michigan Association of Counties – 2023
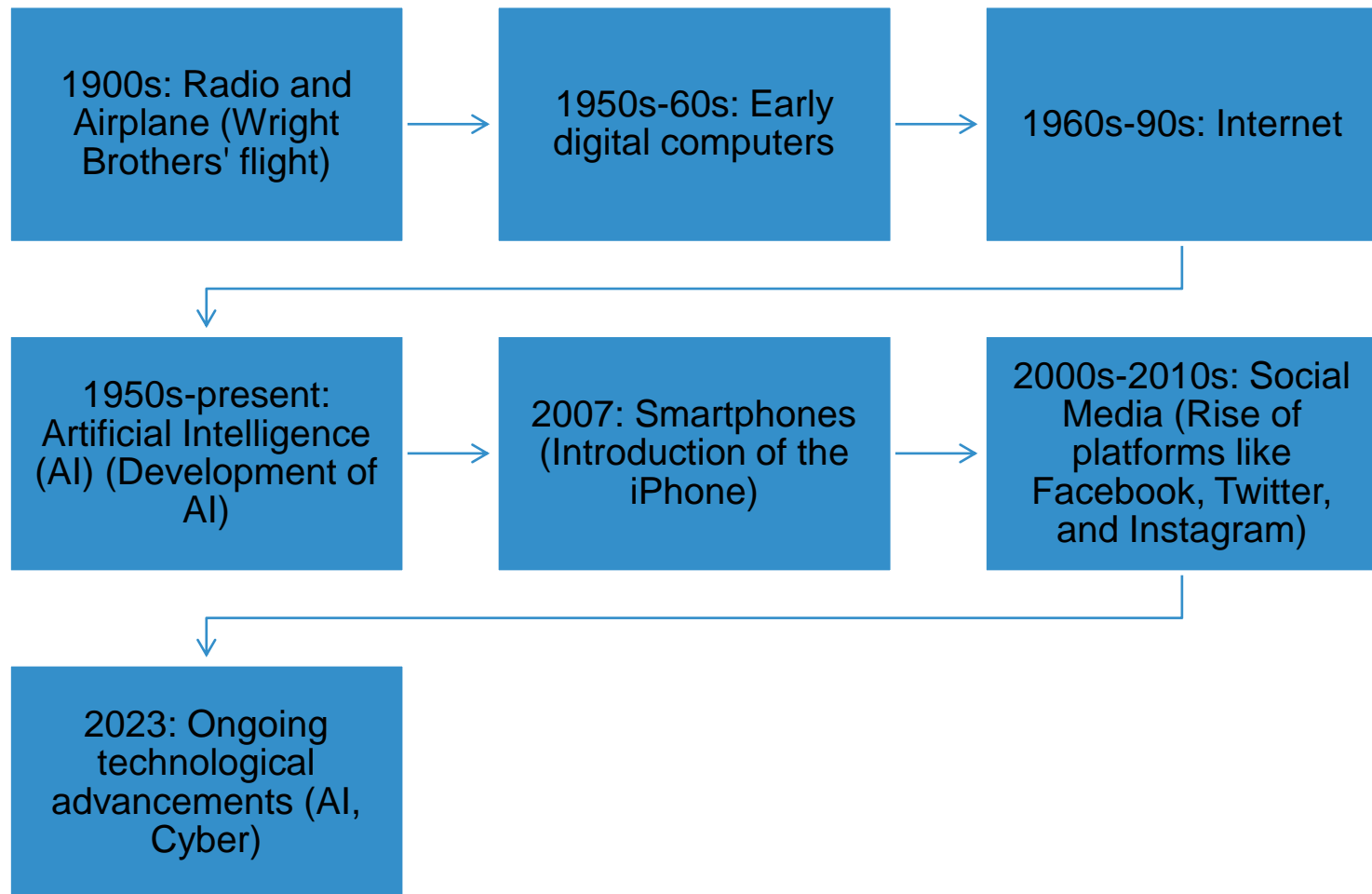Annual Conference

Rita D Reynolds, CIO
NACo

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NACo

- Introductions
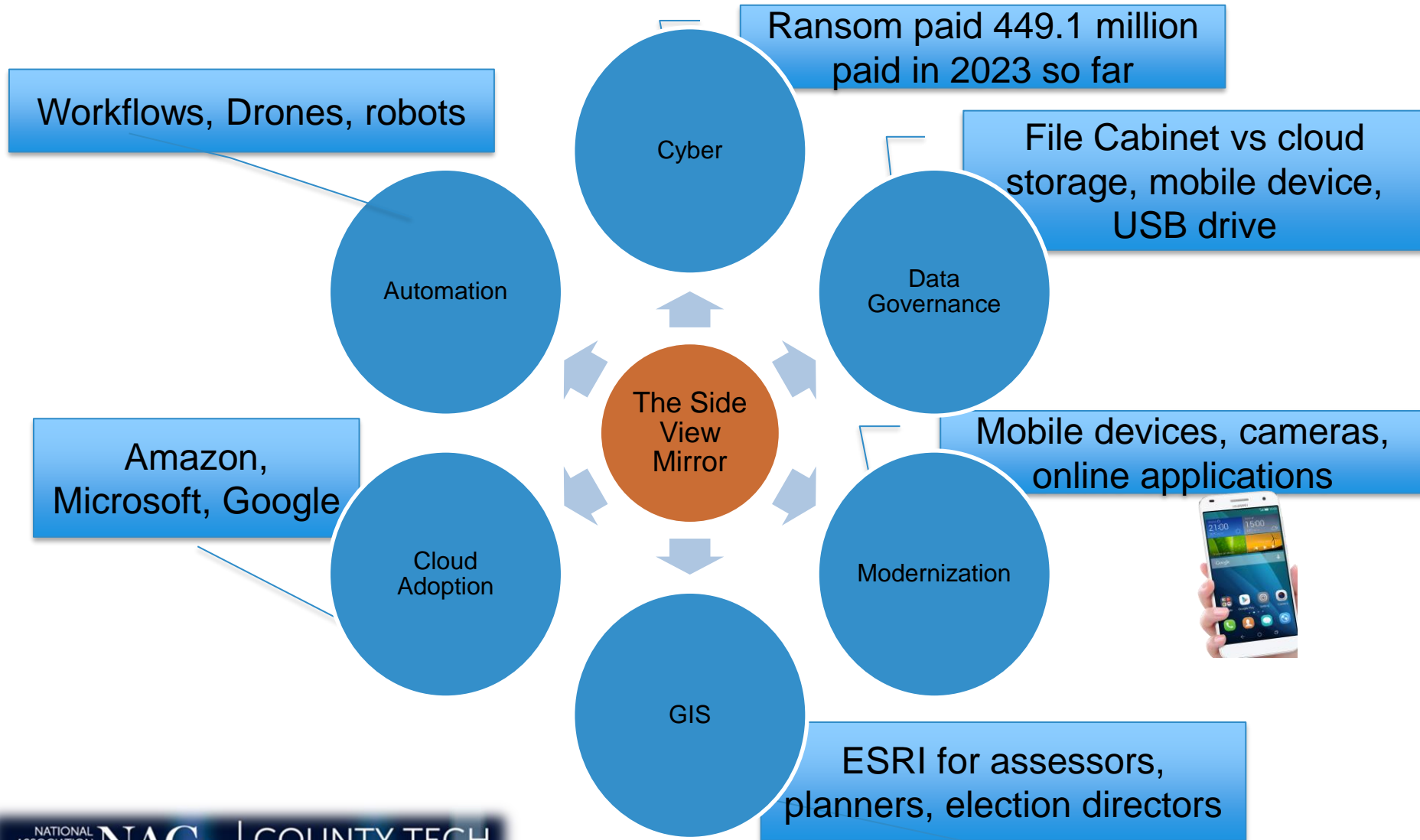   - CCAP Experience – 20 + years
    - NACo – July 1, 2019
    - Background
        - Database Development
        - Software Programs
        - Technology Strategy
        - NACo Tech Xchange and county IT leader engagement
    - Free Time
        - I'm a runner

Technology History

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┌─────────────────────┐     ┌─────────────────────┐     ┌─────────────────────┐
│ 1900s: Radio and    │ →   │ 1950s-60s: Early    │ →   │ 1960s-90s: Internet │
│ Airplane (Wright    │     │ digital computers   │     │                     │
│ Brothers' flight)   │     │                     │     │                     │
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                                                                    │
        ┌───────────────────────────────────────────────────────────┘
        ↓
┌─────────────────────┐     ┌─────────────────────┐     ┌─────────────────────┐
│ 1950s-present:      │ →   │ 2007: Smartphones   │ →   │ 2000s-2010s: Social │
│ Artificial          │     │ (Introduction of the│     │ Media (Rise of      │
│ Intelligence (AI)   │     │ iPhone)             │     │ platforms like      │
│ (Development of AI) │     │                     │     │ Facebook, Twitter,  │
│                     │     │                     │     │ and Instagram)      │
└─────────────────────┘     └─────────────────────┘     └─────────────────────┘
                                                                    │
        ┌───────────────────────────────────────────────────────────┘
        ↓
┌─────────────────────┐
│ 2023: Ongoing       │
│ technological       │
│ advancements (AI,   │
│ Cyber)              │
└─────────────────────┘
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Technology - The Landscape

Workflows, Drones, robots

Automation

Cyber

Ransom paid 449.1 million paid in 2023 so far

Data Governance

File Cabinet vs cloud storage, mobile device, USB drive

Amazon, Microsoft, Google

Cloud Adoption

The Side View Mirror

Modernization

Mobile devices, cameras, online applications

GIS

ESRI for assessors, planners, election directors

Technology – Landscape

County Challenges

Broadband availability and accessibility	Cyber Attacks	Workforce shortages	Budgetary constraints

The Future(is Here Now)

Counties are Confronted with Today			
Staffing Shortages	Budgetary Constraints	Cyber security enhancements	Broadband challenges

The Future(is Here Now)

Evolution

Suggestions for Next Steps

AI has taken center stage

Benefits

Challenges

Use Cases

Artificial Intelligence Exploratory Committee
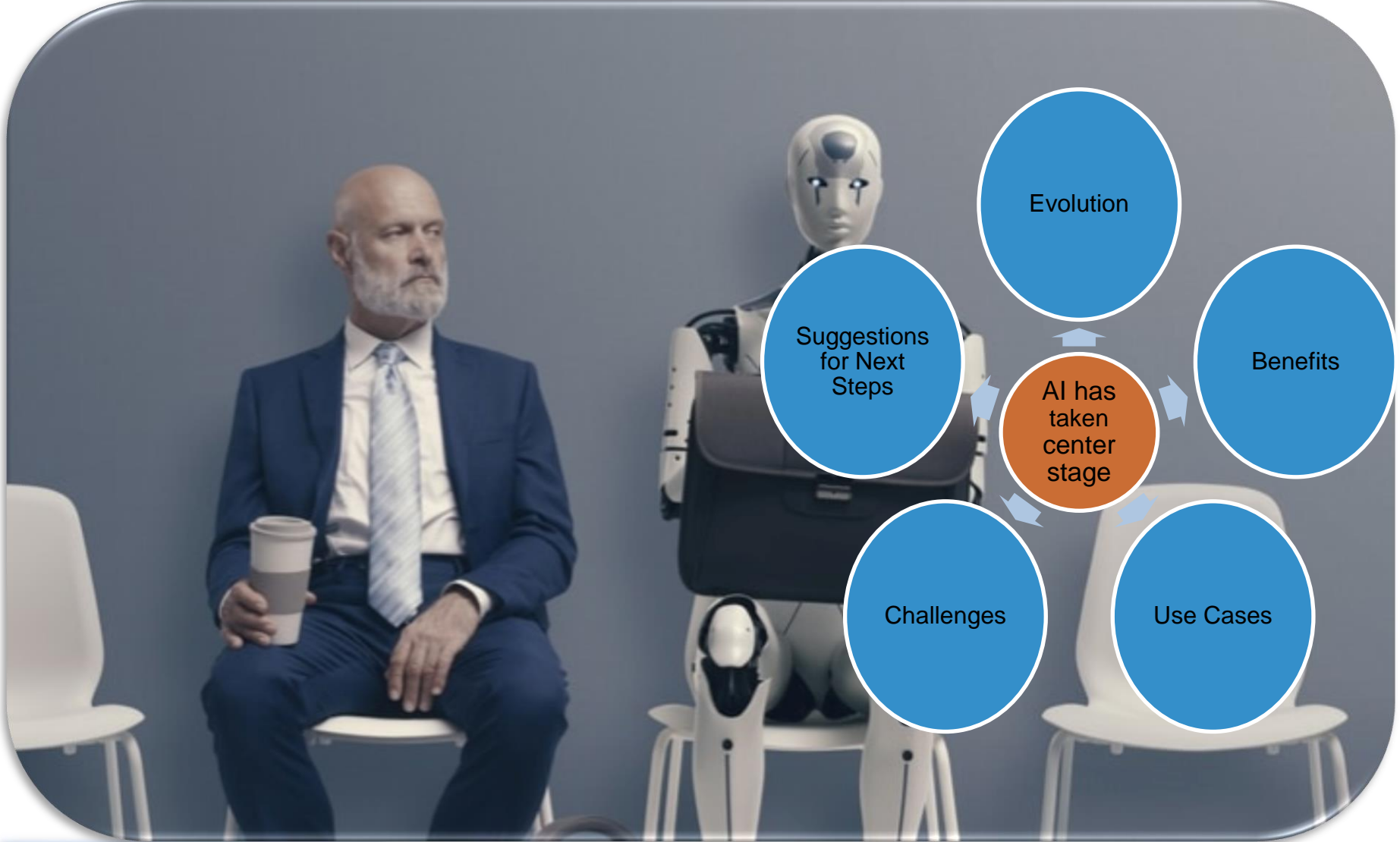
A brief history of AI

Artificial Intelligence

Machine Learning

Deep Learning

Generative AI

1950s

Artificial Intelligence

the field of computer science that seeks to create intelligent machines that can replicate or exceed human intelligence.

1959

Machine Learning

subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions.

2017

Deep Learning

a machine learning technique in which layers of neural networks are used to process data and make decisions.

2021

Generative AI

create new written, visual, and auditory content given prompts or existing data.

A brief history of AI at NACo

Evolution

Artificial Intelligence

Machine Learning

Deep Learning

Generative AI

Nov, 2023

Generative AI
ChatGPT is introduced to the world.

Jan, 2023

NACo Tech Brief on ChatGPT
subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions.

May, 2023

NACo Forms AI Exploratory Committee
a machine learning technique in which layers of neural networks are used to process data and make decisions.

First In Person Meeting of NACO AI Exploratory Committee
Microsoft and CAI present current environment of generative AI – benefits, challenges, approach

The Future(is Here Now)

And the AI impact is real

CARMAX

Carmax estimates an individual would take 11 years to do what Azure OpenAI Service was able to do in days

PROGRESSIVE

Progressive is saving $10M annually with AI-powered chatbots

EY Building a better working world

EY is saving 250K hours of manual work per client using intelligent document automation

Counties

Estimated time savings from weeks to days or as little as hours

The Future (is here now)

"We recognize both the potential benefits and risks these tools enable," Newsom said in a statement accompanying his order. "We're neither frozen by the fears nor hypnotized by the upside. We're taking a clear-eyed, humble approach to this world-changing technology. Asking questions. Seeking answers from experts. Focused on shaping the future of ethical, transparent and trustworthy AI."

Gov. Gavin Newsom, California
California issued an executive order on Sept 6, 2023
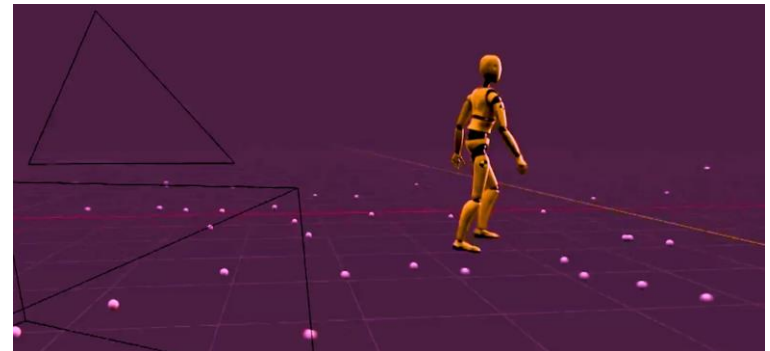
The Future (is here now)

Benefits

Benefits are Significant, life changing

Increased productivity

Shorter research time

Doesn't take breaks

Benefits

Workforce Assistance

Professional construct

Faster delivery of solutions
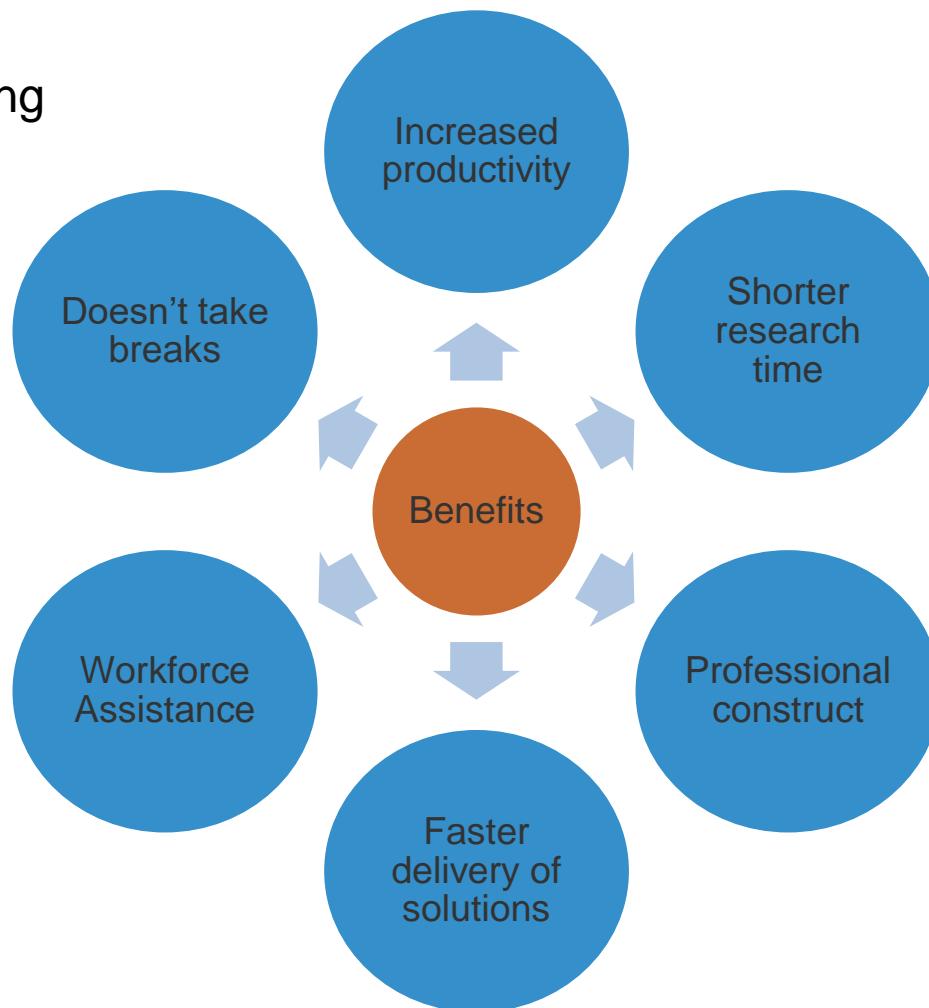
The Future (is here now)

Text generation

Q&A

Text summarization

Text extraction

Paraphrase rephrase

Search

Code generation

Image generation

Image classification

Audio generation

Video generation

The Future (is here now)

Use Cases

- Press Releases
- Article fine-tuning
- Code writing
- Recruitment
- Job Descriptions
- Policy Development

Use Cases
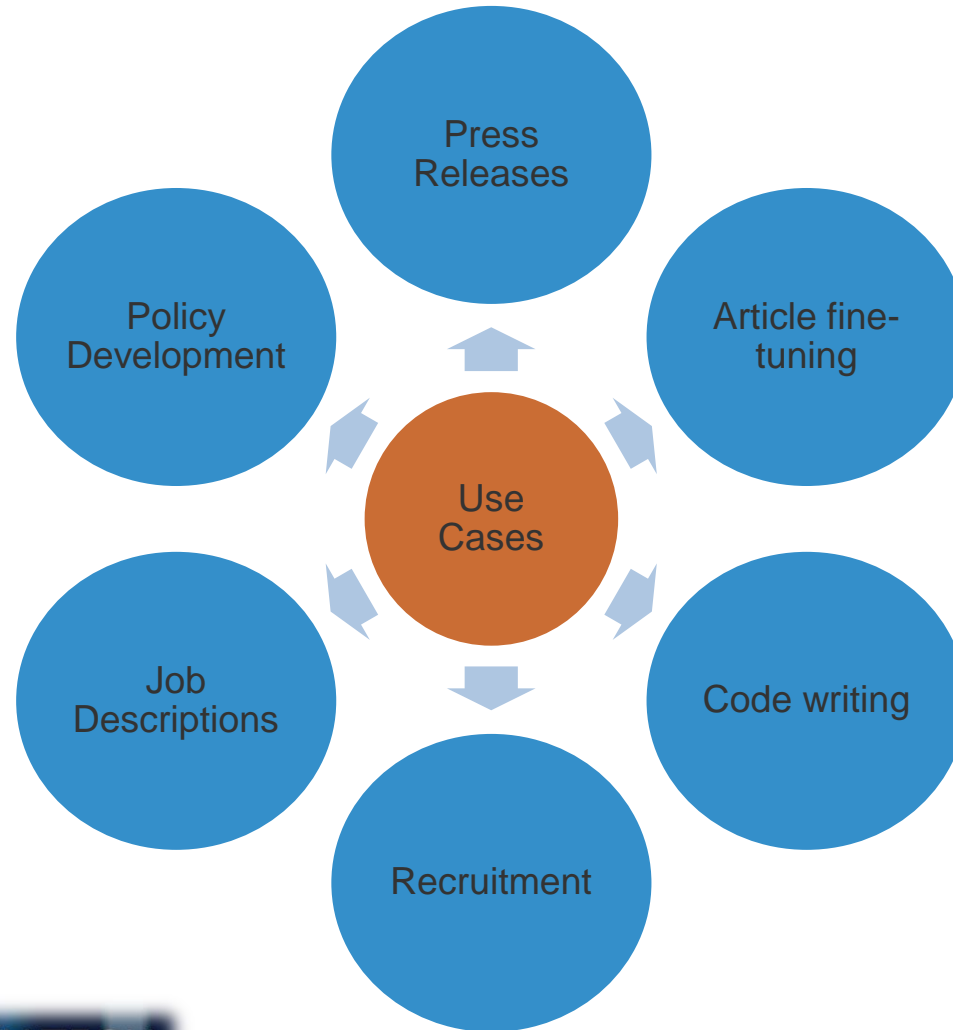
The Future (is here now)

What can these new AI services do?

- ✓ **Natural language chatbots:** everything from customer service to personalized tutoring to training for suicide prevention counselors.

- ✓ **Advanced search capabilities:** searching not just for links, but for answers.

- ✓ **Generate text:** emails, draft legislation, contracts, screenplays.

- ✓ **Real time** translation, transcription, analysis, and summaries of content (audio, video, text).
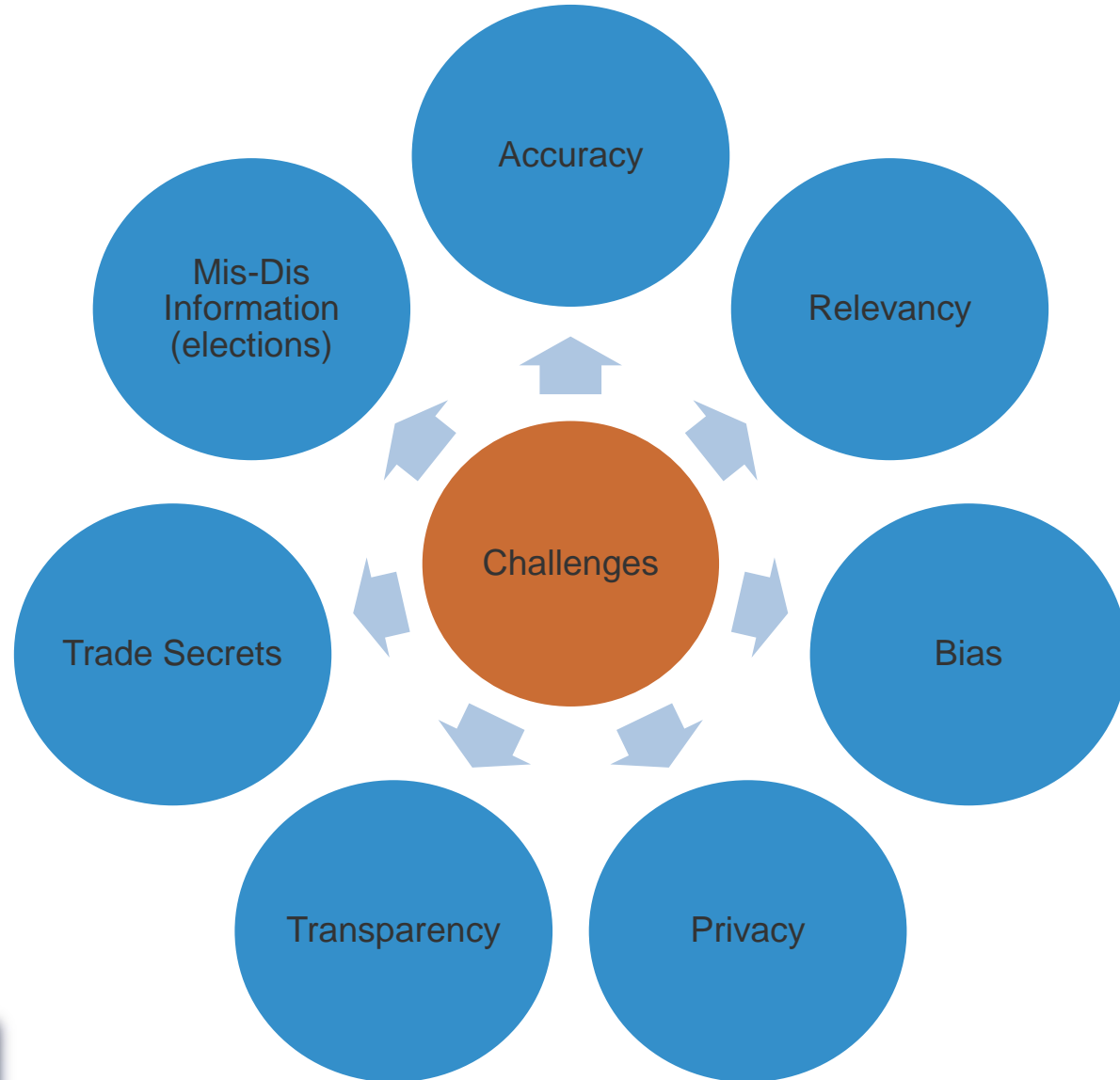
- ✓ **Image** recognition and generation.
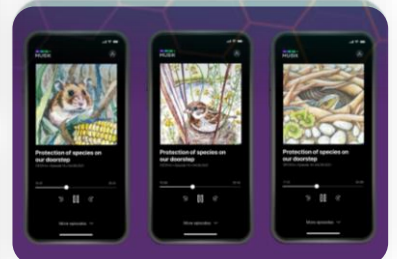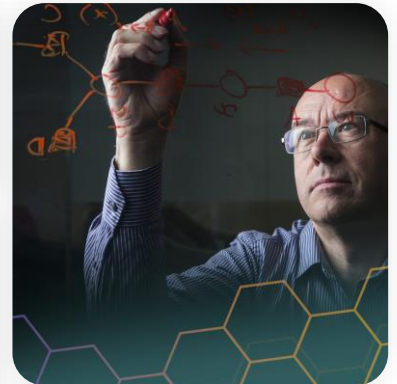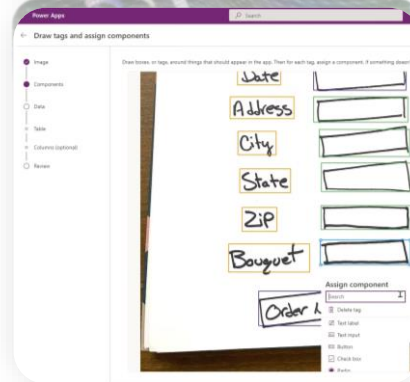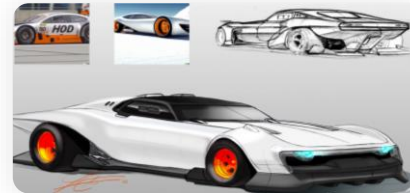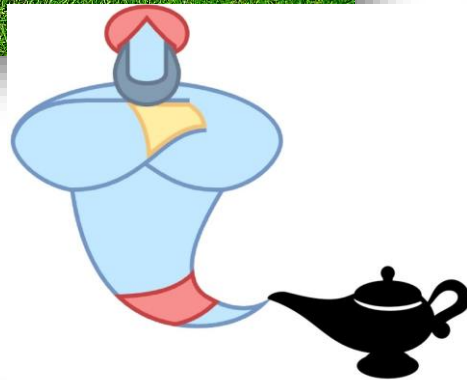
The Future (is here now)

Challenges

Recently a New York attorney representing a client's injury claim relied on a conversational chatbot to conduct his legal research. The federal judge overseeing the suit noted that six of the precedents quoted in his brief were bogus

Accuracy

Relevancy

Mis-Dis Information (elections)

Challenges

Bias

Trade Secrets

Transparency

Privacy

The Future (is here now)

The Future (is here now)

Microsoft's AI principles
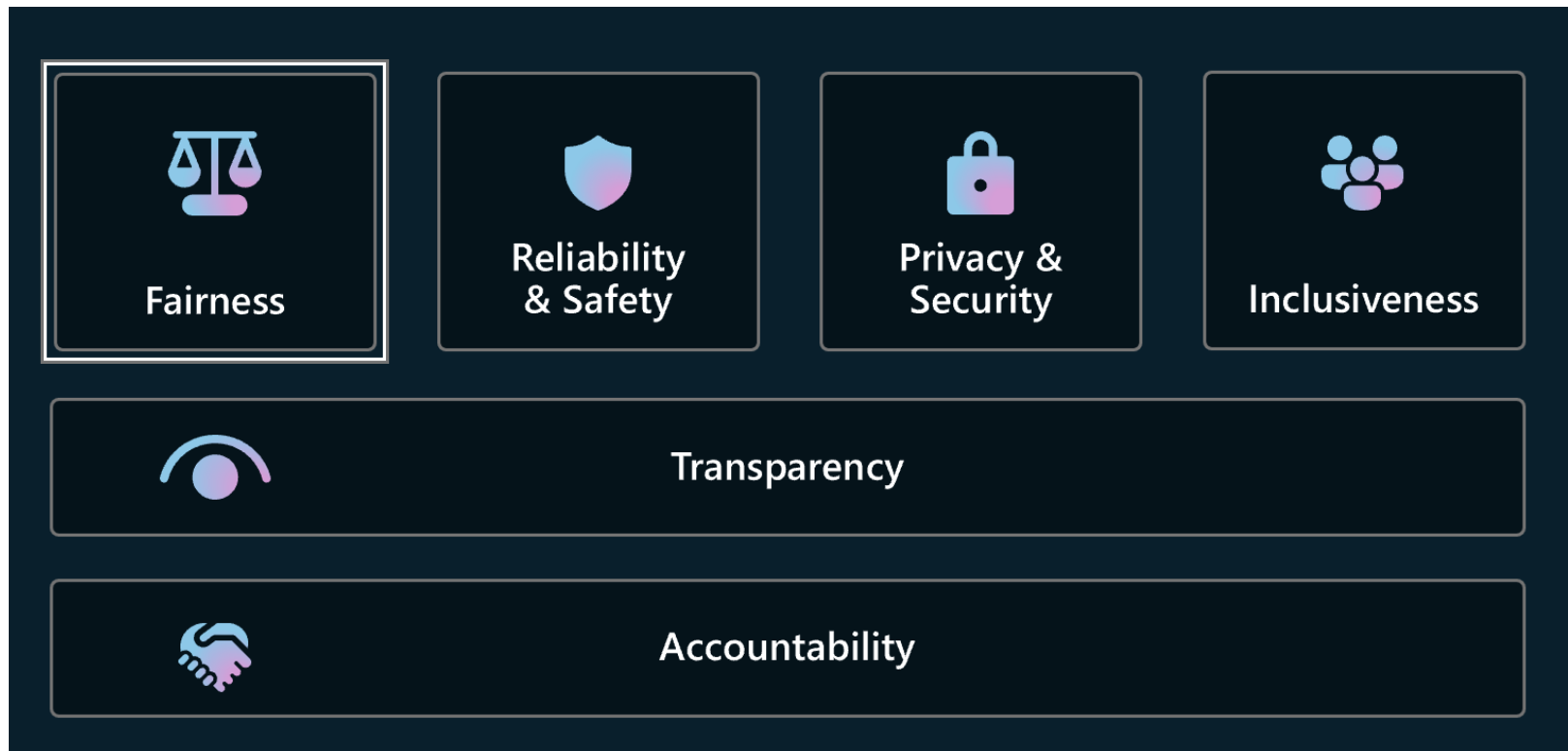
The Future (is here now)

Take aways

Guiderails — How to use AI responsibly

AI Inventory — Ask Employees if they are using AI

Flexible Policy — More guidelines than policy at this point in time

AI Assessment Tool — Before starting any project with AI, assess (how, why, type of data)

Take aways
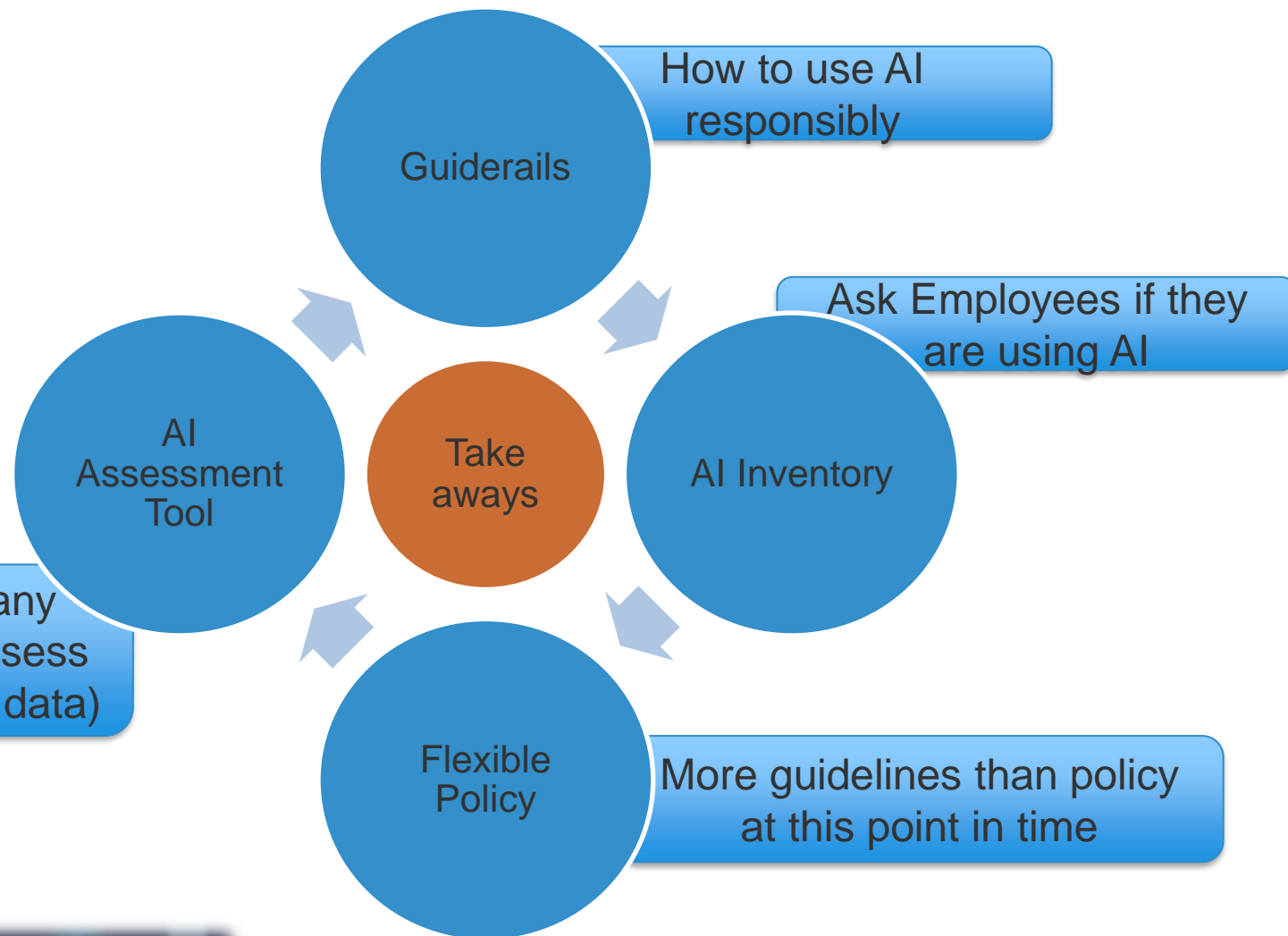
The Future (is here now)

Guidelines

Would you put this in a memo to all staff?

Responsible AI

- Avoid including real names
- Avoid including SSN, Credit Card information
- Avoid including medical information
- Omit employee name in documents
- Do not save your chats

NACo's AI Exploratory Committee

NACo's AI Exploratory Committee

Nov 20 1:00-2:00 PM – Charting your AI Growth: Practical Generative AI – an introduction to Use Cases

Oct 18 1:00-2:00 PM – Charting your AI Growth: A Practical Guide on the use of generative AI – What are all those tools

Dec 13 1:00-2:00 PM – Charting your AI Growth: Practical Generative AI – Steps for productivity improvements

Tech Xchange AI Training
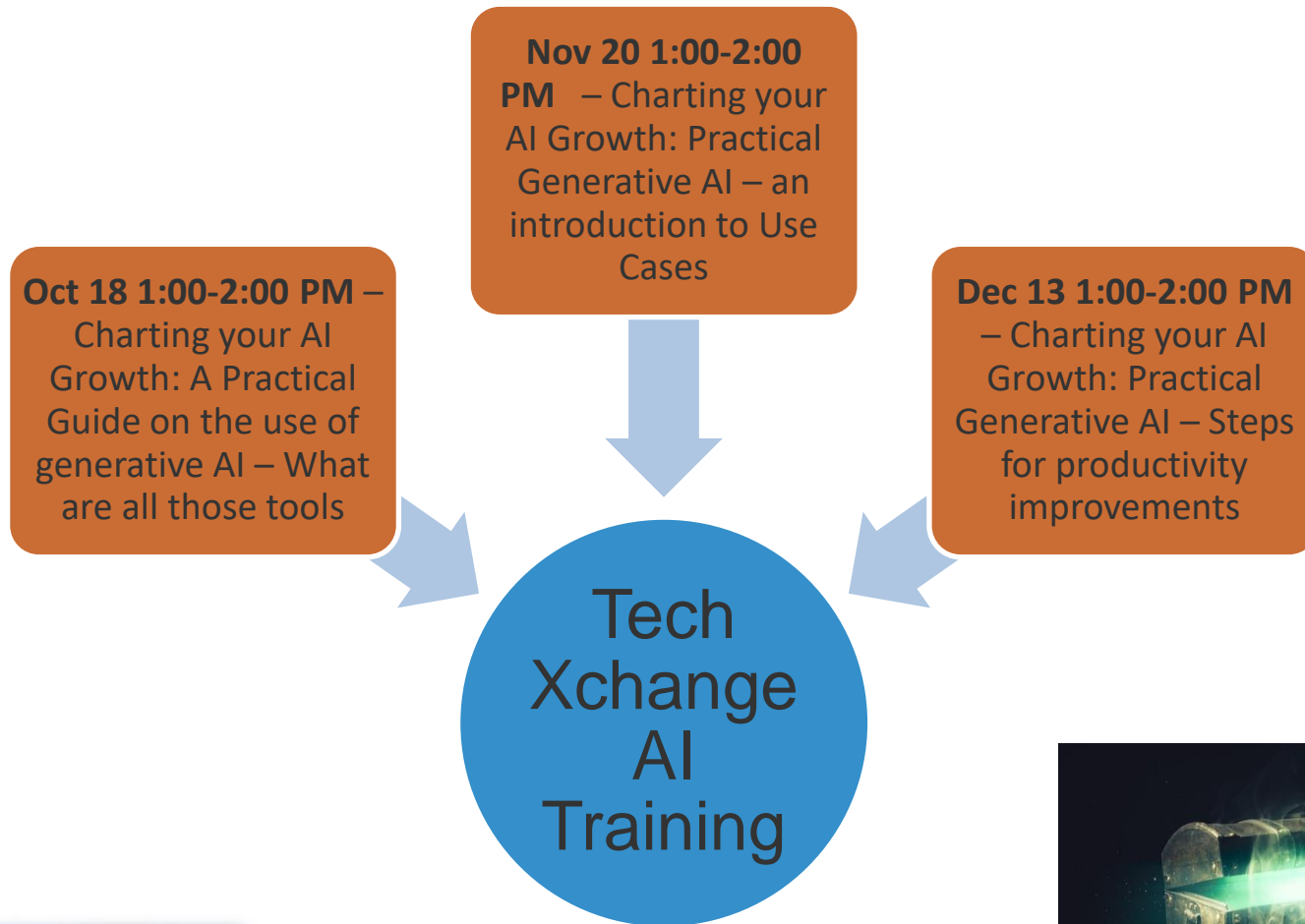
The Future (is here now)

The Hype Cycle

Innovation Trigger · Peak of Inflated Expectations · Trough of Disillusionment · Slope of Enlightenment · Plateau of Productivity

expectations / time

As of August 2018
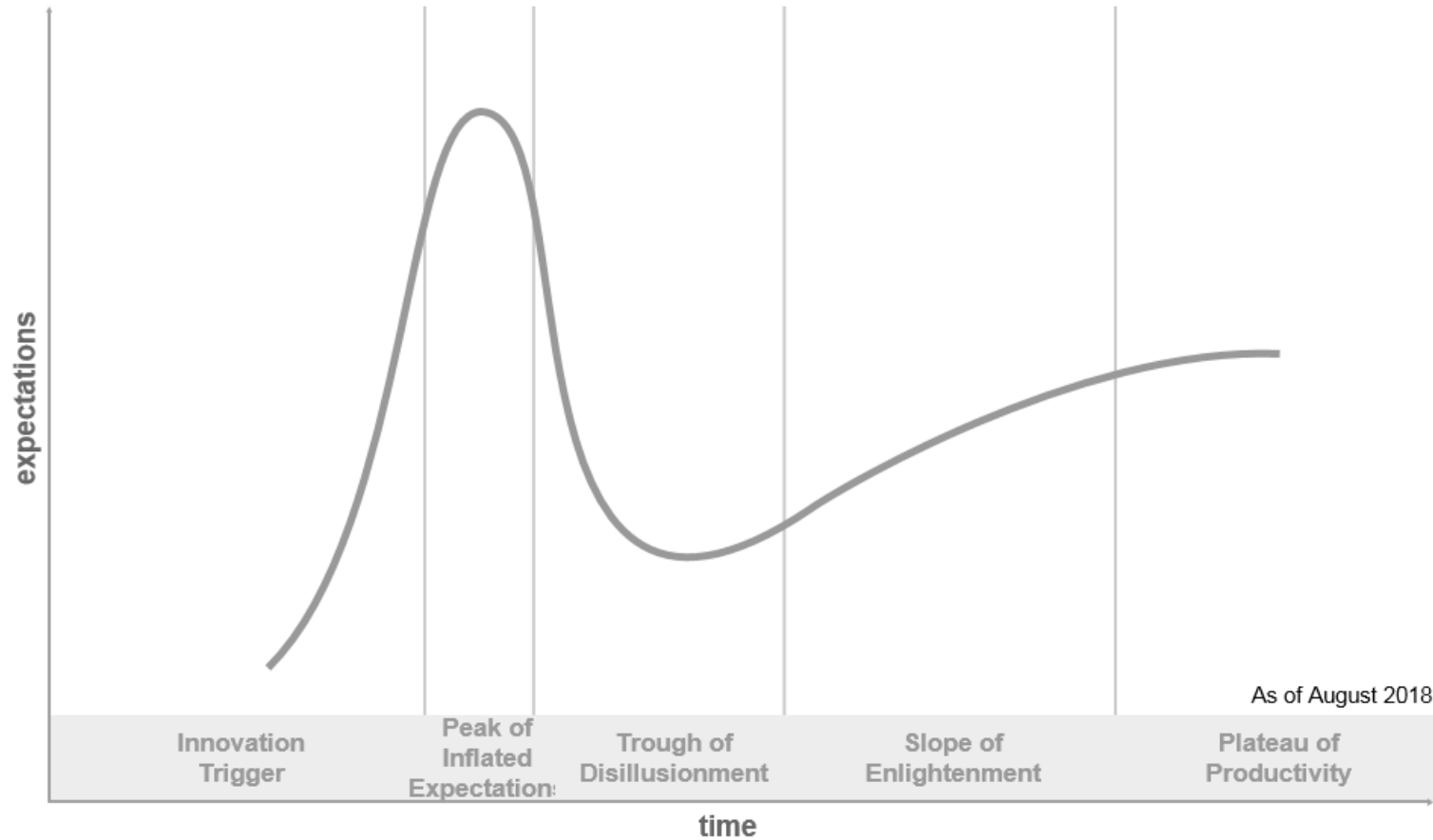
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Thank You

Questions?

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THERE'S A REASON
the windshield is so much bigger
than the rear view mirror

WHERE YOU'RE HEADED
is much more important
than what you've left behind

LIFT INSPIRE SHARE