Agenda

- Introduction and overview

- Discover AI in action

- AI maturity

- Managing expectations of AI

- AI adoption risk reduction strategies

- Preparing data for AI

AI Terminology

- Machine Learning (ML)
- Deep Learning
- Natural Language Processing (NLP)
- Robotics
- Generative AI
- Computer Vision

Key Takeaway: AI is not just ChatGPT

AI Landscape – Construction's Journey

Early 2000's

- OCR processing of invoices

2010

- Predicting maintenance for equipment

2015

- Identifying potential safety risks

2023

- BIM design automation

Key Takeaway: AI is not new to Construction

Polling Question #1

What are some the biggest challenges you anticipate/are experiencing in navigating AI adoption in your organization?

Choose top three...

- ❑ Executive buy-in
- ❑ Organizational culture
- ❑ Lack of consistent processes
- ❑ Availability of technical resources
- ❑ Internal and/or external policies
- ❑ Lack of sufficient quality data
- ❑ External drivers (e.g. regulations)
- ❑ Cost/resource availability
- ❑ Other

AI in Action

AI In Action

Pursuit & Preconstruction

Business pursuit
Autonomous reality capture
Automated design and planning
3D Modeling and augmented reality
Automated document management
Requirements extraction
Estimating, cost prediction and budget maintenance
Project scheduling optimization
Construction site layout planning

Construction

Predictive maintenance
Safety monitoring and enhancement
Material and resource optimization
Resource allocation and logistic optimization
Meeting summarization and action item tracking
Automated bricklaying and masonry
Autonomous equipment
Robotic layout
Road printing robots
Automated defect detection

Key Takeaway: Multiple use cases for AI exist in Construction and are already being adopted

Polling Question #2

Where do you see the most value in AI adoption for your organization?

Choose top three...

- ❑ Backoffice
- ❑ Business Pursuit
- ❑ Design and Pre-construction
- ❑ Project Management and Scheduling
- ❑ Site Logistics/Resource Planning
- ❑ Supply Chain Management
- ❑ Safety and Risk Management
- ❑ Inspections/Progress Tracking
- ❑ Construction Automation
- ❑ Internal Initiatives
- ❑ Other

AI Maturity

Maturity Matrix - Examples

Construction Area	Early Stage/Basic	Mid Stage/Developing	Late Stage/Mature
Pursuit/Initiation	Automated account insights based on industry news	Automated go/no go AI driven next steps	Voice to text note taking in CRM
Design	Outcome based design	Enhanced Modeling	Clash detection
Pre-construction	Automated specification extraction	Project schedule optimization	Contract Review
Procurement	Procurement trends, material sourcing optimization	Fraud identification	
Construction & Monitoring	Predictive safety issue identification	Autonomous equipment Progress tracking	Safety PPE compliance monitoring Slip and fall monitoring
Close-out	Automated punchlists, defect detection	Automated asset registers, automated maintenance schedules	

Key Takeaway: There are mature examples of AI use in Construction

Evaluating AI Maturity

- Vision
- AI technology stack
- Data management practices
- AI expertise and team
- Use cases/case studies
- AI model performance and reliability
- Ethical and responsible AI practices
- Reference checking

Key Takeaway: Understanding the vendor's AI maturity is critical in selecting a solution

Polling Question #3

Which approach are you most likely to take/are already taking for adopting AI in your organization?

Choose one…

- ❑ Buy – utilize AI functionality built into a vendor's product
- ❑ Build – develop our own AI solution for internal use
- ❑ Hybrid – use a combination of both
- ❑ Undecided – still evaluating the value of AI

Managing Expectations of AI

Strategies for Managing Expectations

- AI capabilities and limitations
- When AI goes bad
- AI expectation setting
- AI resources requirements
- AI deployment timeframes
- Policies, regulations and ethical use

Key Takeaways:
Rebranding of AI to Augmented Intelligence or Artificial Intern
AI deployment timelines need to be realistic…as the saying goes, "Rome wasn't built in a day"

AI Adoption Risk Reduction Strategies

Risk Mitigation Strategies

- Clear objectives
- Stakeholder engagement
- Pilot projects
- Data governance
- Data ownership
- Ethical, policy guideline development
- Vendor management
- Model transparency
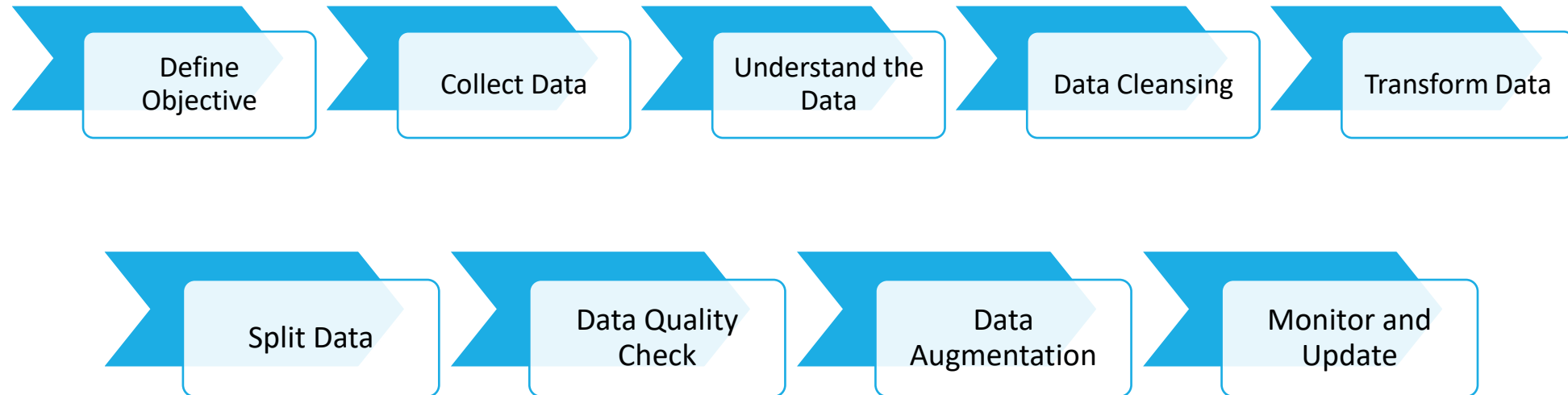- Gut check
- Continuous improvement

Takeaways

Key Takeaways:
Importance of data preparation
Policy compliance
Use of pilot projects
Common sense test
Continuous model training

Data preparation for AI

Data Preparation

Define Objective

Collect Data

Understand the Data

Data Cleansing

Transform Data

Split Data

Data Quality Check

Data Augmentation

Monitor and Update

Key Takeaway: Data preparation is key to successful AI implementation

AI Roles for Data Preparation

👥 Process Teams/Data Owners

👤 Business Analyst

👤 Data Governance Specialist

👤 Data Engineer

👤 Data Scientist

👤 Database Manager

Key Takeaway: Data preparation requires a combination of people, process and technology

Wrap-up and Q&A

Contact Us

Thank you for participating in our webinar. Whether you're seeking case studies, updates on upcoming events, or have inquiries about our work, we're here to assist you. Here's how you can reach us:

We're here to assist you

30 Minute Call with Angus
+ Dive deeper into a webinar topic
+ Start collaborating on an item in your IT strategy
+ Answer your misc. AI questions

Deeper Dive AI Bootcamp
+ AGC IT Conference, August 6-8, [Chicago, IL]
+ Preparing for AI: Use Case Identification, Data Management & Preparing for Adoption
+ Use code Burger15 for a 15% conference discount

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Thank You