TECHNOLOGY UPDATE

The Digital Integration of an Analog Industry

SEAN MCGUIRE

Executive Director, Innovative Technologies & Fabrication

MCAA

OUTLINE

- Digital Integration
- FITE Club
- AI

OUTLINE

- Digital Integration
- FITE Club
- AI

CALL THE GIRL CALCULUS

- Do you like her?
- Are you brave enough to talk to her?
- Do you have a chance?
- Are you willing to talk to her Mom or Dad First?

DIGITAL INTEGRATION

- Estimating
- Design
- Fabrication
- Project Management
- Accounting/ERP

MCAA

THE DIGITAL DISCONNECT

DIGITAL INTEGRATION PROCESS

Accounting/ERP Solutions

- Vista
- Foundation Software
- Sage 100/300

Estimating Solutions

- FastPipe
- QuoteSoft

Design Solutions

- Revit
- AutoCAD

Fabrication Solutions

- Stratus

Project Management Solutions

-

Service Software

-

Scheduling and Inventory

-

INDUSTRY MATURATION

FINANCIAL IT EXECUTIVES

- Chief Technology Officer
- Chief Information Officer
- Chief Financial Officer

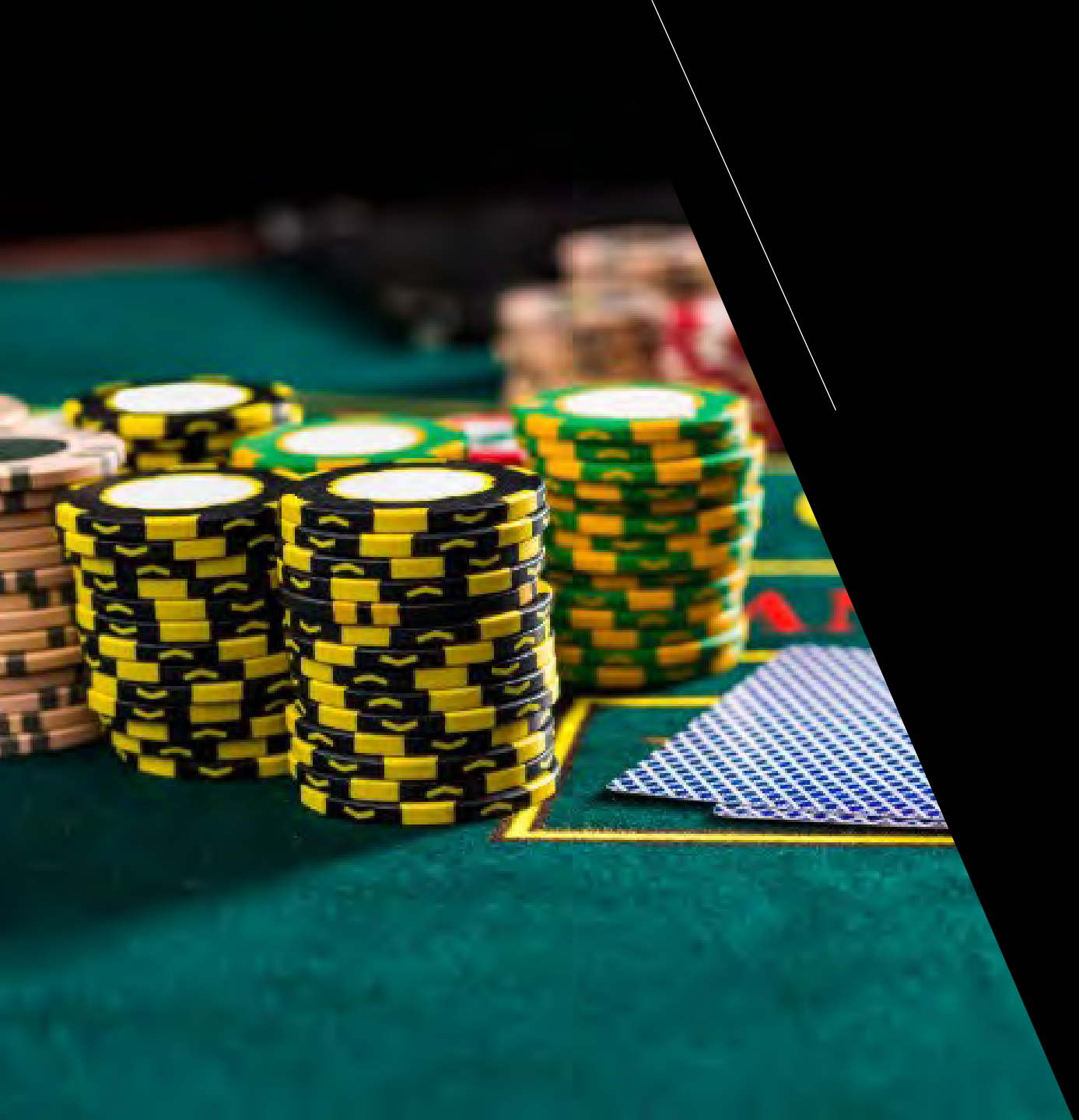


TABLE STAKES

- Size
- Data-Driven Contractor
- For Construction – Need to have VDC and Fab Capabilities
- Need a CTO with Understanding of the Operations of the Entire Company

CTO ROLES & RESPONSIBILITIES

- Not IT - IT is network infrastructure. Overseen by CIO.
- Having over-arching authority about implementation (ALL SOFTWARE)
- Not necessarily ERP. (Rarely)
- Have to understand the entire company. Knows everyone's workflow

CIO ROLES & RESPONSIBILITIES

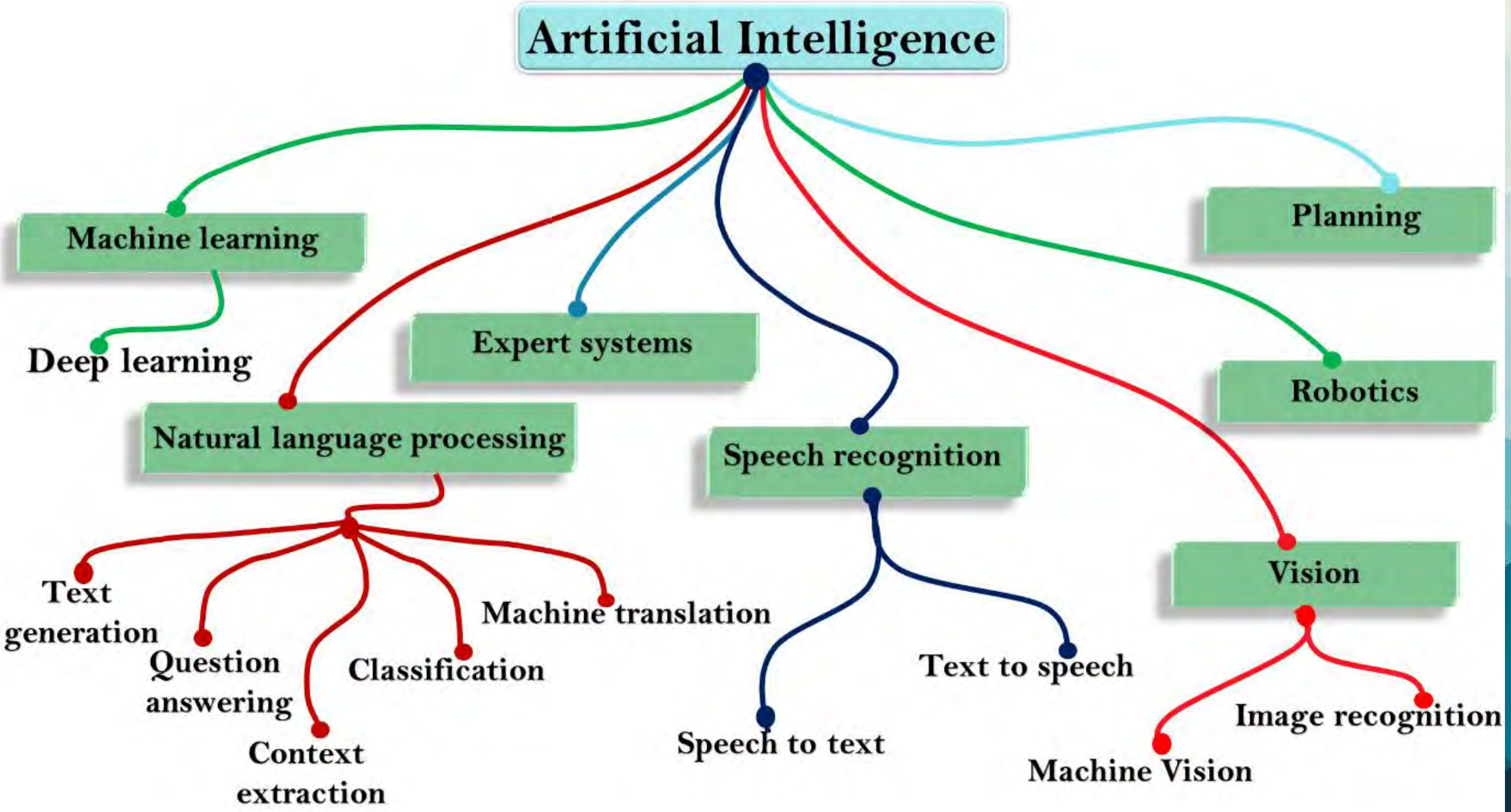
- Infrastructure- Cybersecurity and SSO.
- Penetration testing.
- Computer Hardware.
- Mobile Device Manager
- Jobsite IT- In charge of information strategy.
- Has background in data strategy- Network Performance

CFO ROLES & RESPONSIBILITIES

- Solely in charge of the financials
- Financial strategy
- Owning the controllership
- Right hand of the owner
- Accurate GAAP Financials
- Forecasting & Reporting• Solvency
- Risk mitigator/management
- Compliance & taxes, Payroll & receivables

Artificial Intelligence may not put you out of business....

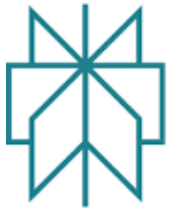
... but a contractor using AI just might.


Artificial Intelligence
Machine learning
Deep learning
Natural language processing
Text generation
Question answering
Context extraction
Classification
Machine translation
Expert systems
Speech recognition
Speech to text
Text to speech
Planning
Robotics
Vision
Machine Vision
Image recognition

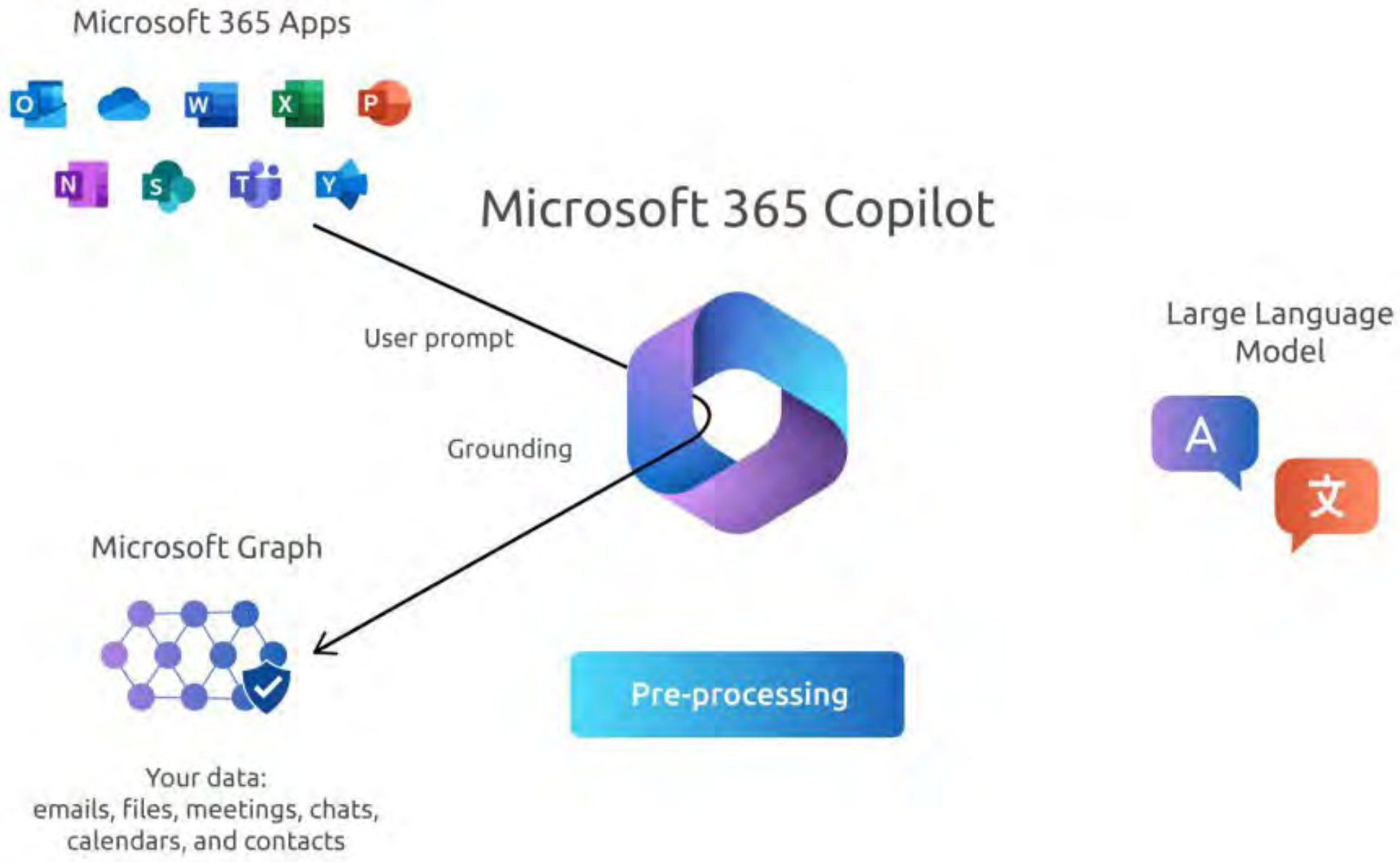
HOW AI IS IMPACTING THE CONSTRUCTION INDUSTRY

Copilot

ChatGPT



perplexity


Microsoft 365 Apps
Microsoft 365 Copilot
User prompt
Grounding
Large Language Model
Microsoft Graph
Pre-processing
Your data:
emails, files, meetings, chats,
calendars, and contacts

TOP USES OF MICROSOFT COPILOT FOR MECHANICAL CONTRACTORS

- Automated review and suggestions for better document quality
- AI-powered assistance for faster and easier document creation
- AI-assisted summarization for easy knowledge sharing
- Customizable GPTs for improved contract review and project management
- GPT Software knowledge base for internal use case

T

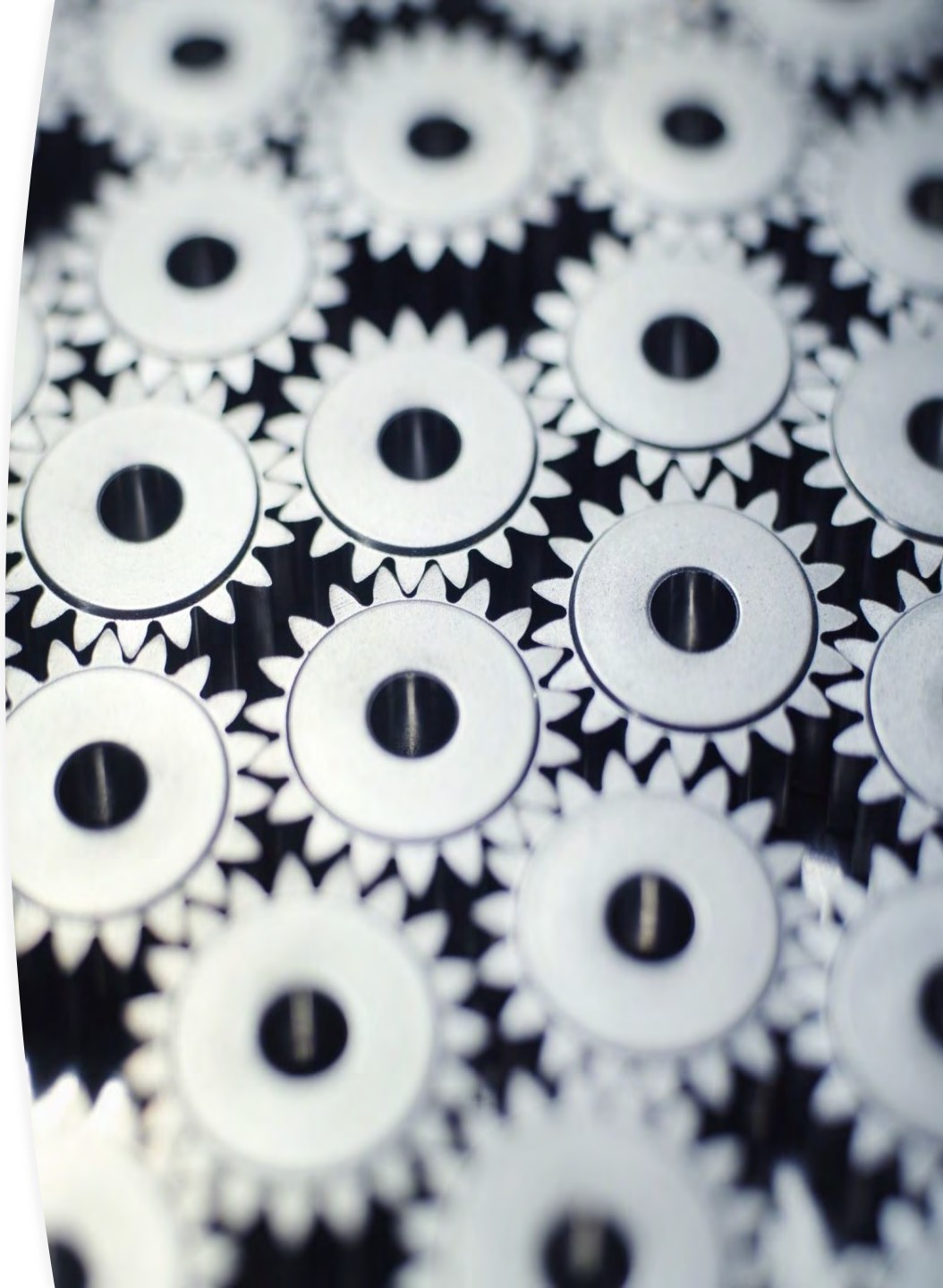
O

X

W

TOP USES OF CHATGPT FOR MECHANICAL CONTRACTORS

- Creation
  - Create a job offer for a project manager
  - Formal communication, announcements
- Editing
  - “Edit this for grammar and spelling”
  - “Make this sound more professional”
- Summary
  - Summarize this document
  - Condense this to 50 words or less
  - Read a whole bunch of crap and be an expert on it



RECOMMENDATIONS

- Internal task force
- Be curious
- Understand limits
- CIO/CTO – need an expert and need a champion
  - There are risks to using these tools if you don’t know where your company information is going
  - There are ways to do this safely
- Have to be data driven – great at collecting and using data
- Budget for IT