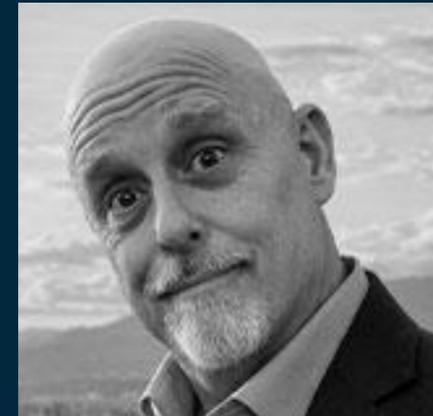


Artificial Intelligence, Real Jobs: What AI Means for Low Voltage Professionals in the Field and the Office

Charles "Chuck" Bowser III, RCDD, TECH
Host
Let's Talk Cabling Podcast



LET'S TALK CABLING
PODCAST/VLOG

ARTIFICIAL INTELLIGENCE, REAL JOBS

What AI Means for Low Voltage Professionals
in the Field and the Office

BICSI CALA – Costa Rica

Chuck Bowser, RCDD, BICSI TECH

EVERY MAJOR SHIFT WAS DOUBTED

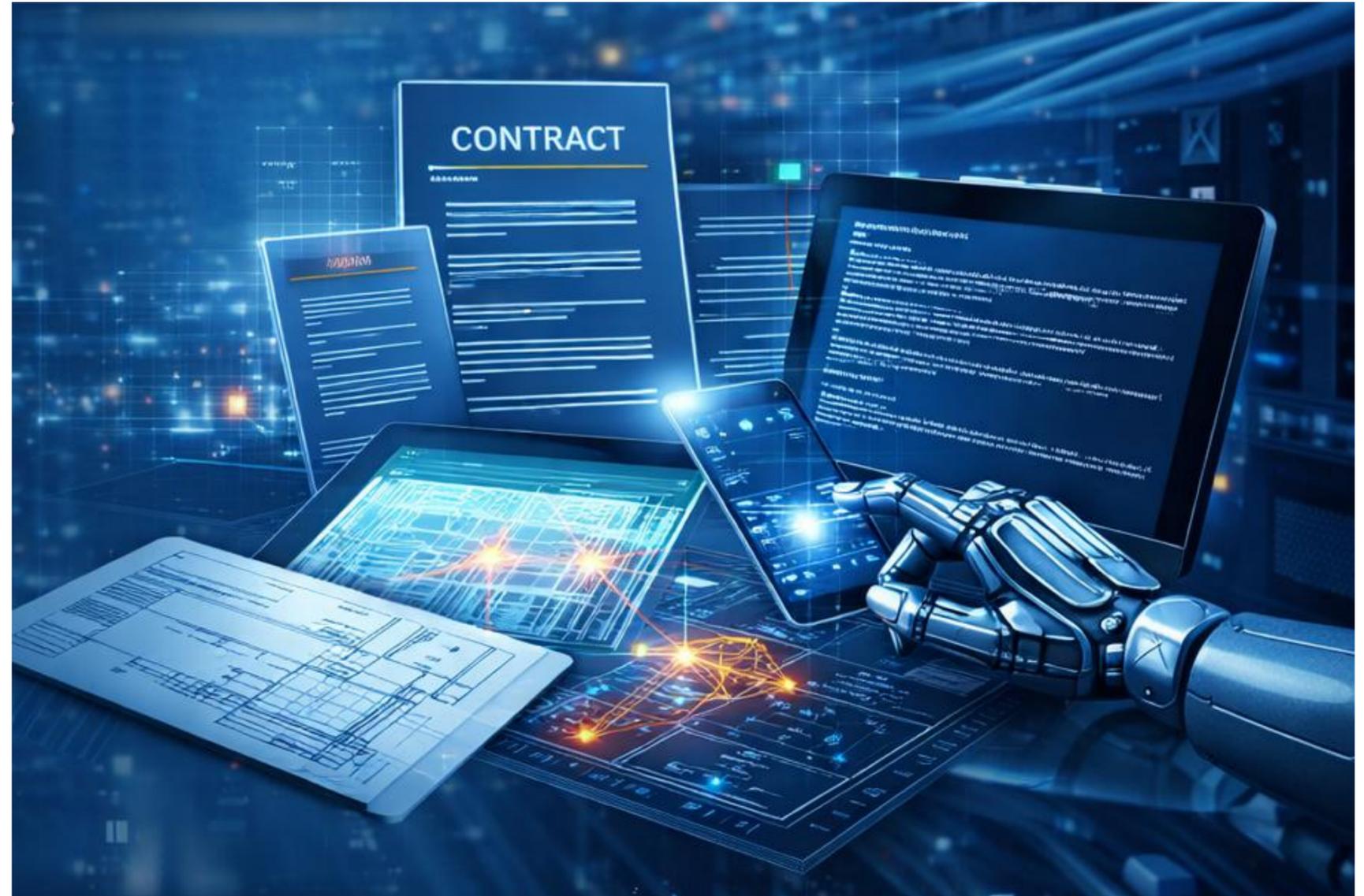
- Fiber was “too fragile”
- PoE would “never power real devices”
- Cloud was “too risky”
- AI is “overhyped”



AI IS ALREADY HERE!

ITS NOT COMING, ITS OPERATING NOW

- **Writing proposals**
- **Creating takeoffs**
- **Diagnosing logs**



MAJOR LARGE LANGUAGE MODELS BEING USED NOW

 OpenAI

GPT-4o
GPT-5
GP-5.2

ANTHROPIC

Claude 3 / Claude 3.5
Sonnet

 Google

Gemini / Gemini 2.5

 Meta

LLaMA 3.1 / LaMA4

 Mistral

Mistral Large 2

 Mistral Large 2

Mistral Large 2

 DeepSeek

DeepSeek R1

 xAI

Grok-2

 Alibaba

Qwen 1.5

 NVIDIA

Nemotron-4

 Cohere

Cohere

AUTOMATION VS AI

AUTOMATION vs ARTIFICIAL INTELLIGENCE

AUTOMATION	ARTIFICIAL INTELLIGENCE
Static	Learns patterns
Scripted	Predictive
Repeats tasks	Improves tasks
Programmed once	Trained continuously
Follows rules	Adjusts based on patterns
Static	Adaptive

How AI “Learns”

- 1 Data
- 2 Training
- 3 Pattern Recognition
- 4 Prediction



THE BIG NAMES THAT STARTED AI



- **Alan Turing**
- **ELIZA chatbot**
- **Expert systems**
- **Deep learning**

THE MODERN EXPLOSION

ACCESSIBILITY CHANGED EVERYTHING

- **2012: Deep learning breakthrough**
- **2022: OpenAI releases ChatGPT**
- **AI becomes public**



WHY TRADES SHOULD PAY ATTENTION

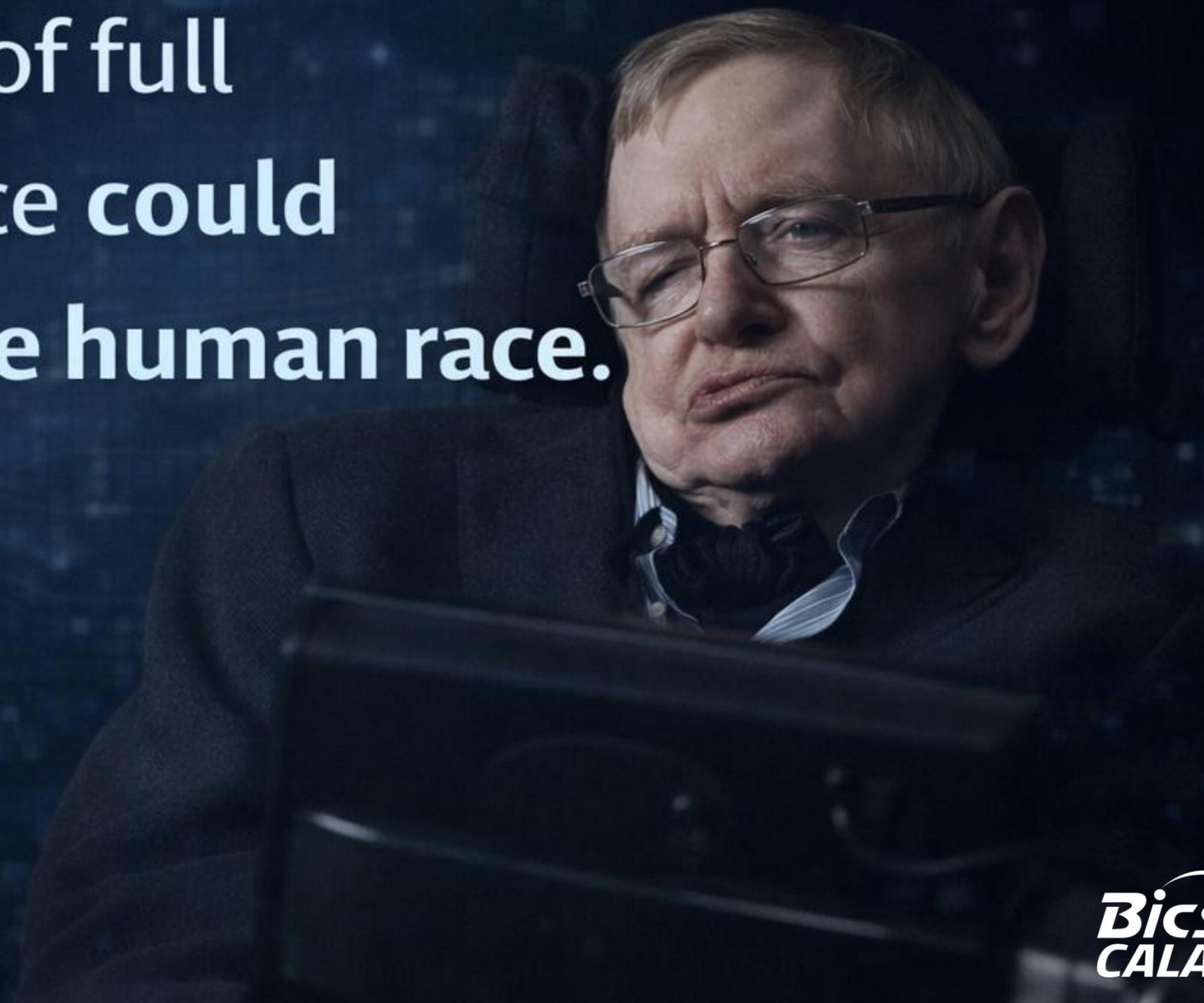
ACCESSIBILITY CHANGED EVERYTHING

- **Technology doesn't eliminate work.**
- **It eliminates certain versions of work.**



“The development of full artificial intelligence could spell the end of the human race.”

— Stephen Hawking

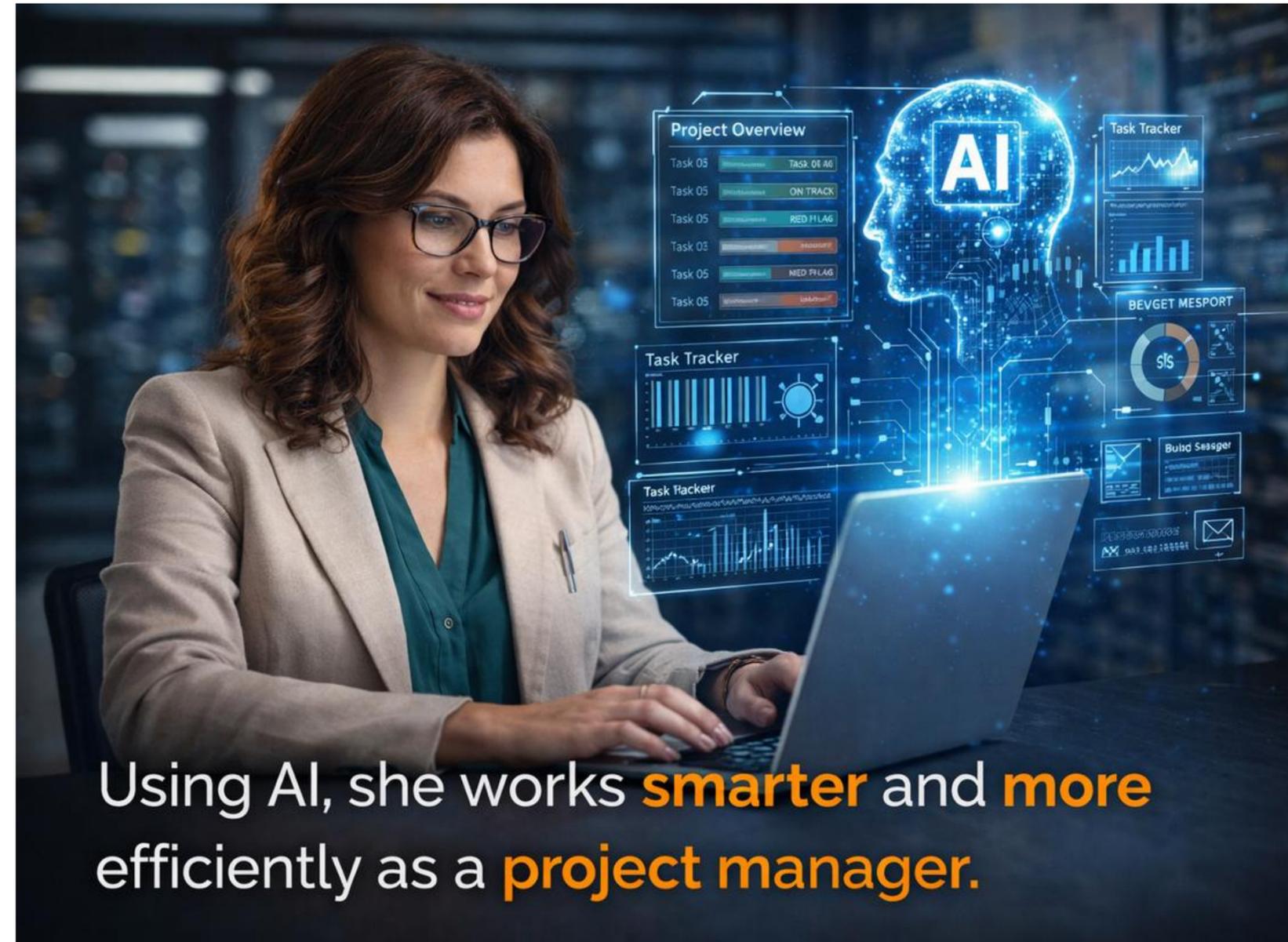


WHERE IS AI NOW, AND WHAT COMES NEXT

WHAT STAGE ARE WE IN

Advanced Narrow AI

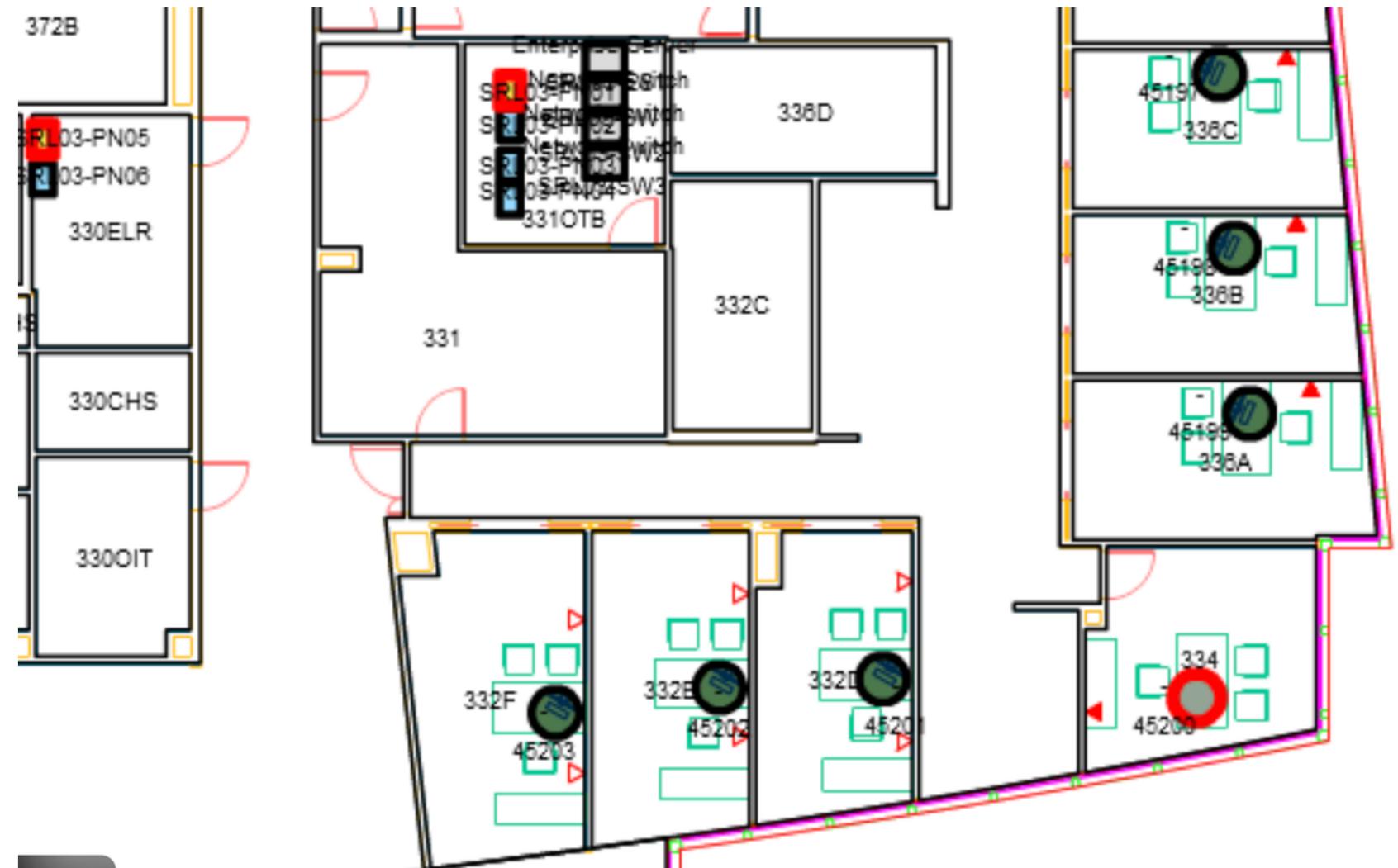
AI that performs
specific tasks extremely
well.



WHAT CAN AI DO TODAY?

A LOT ACTUALLY..

- **Write reports**
- **Review contracts**
- **Analyze schedules**
- **Generate drawings**
- **Troubleshoot logs**



WHAT AI CAN'T DO (YET)



- **Take liability**
- **Own mistakes**
- **Replace field intuition**

AI in the ICT Office Today

PROJECT MANAGERS

AI Assists With:

- Meeting summaries
- Schedule optimization
- Risk identification
- Budget variance detection
- Drafting RFIs and reports

From administrative heavy to decision focused



From administrative heavy to decision focused

ESTIMATORS

AI Assists With:

- Blueprint takeoffs
- Symbol counting
- BOM generation
- Labor hour modeling
- Historical cost comparisons

From manual counting to cost strategy



From manual counting to cost strategy

DESIGNERS

AI Assists With:

- Draft layout generation
- Pathway optimization
- Code cross referencing
- Spec compliance checks
- Version control comparison

From drafting to validation and coordination



From drafting to validation and coordination

AI IN THE FIELD TODAY

BECOMING COMMONPLACE

- **Photo validation**
- **Predictive maintenance**
- **AI troubleshooting tools**
- **Remote AR guidance**



THE NEXT STAGE: AGENTIC AI

THIS IS THE NEAR FUTURE.



- **AI that:**
 - **Performs multi-step tasks**
 - **Makes decisions within guardrails**
 - **Interfaces across systems**

AFTER THAT, EMBODIED AI
THIS IS THE NEAR FUTURE.

Humanoid robotics

Physical task automation



HOW FAR OFF?

SOONER THAN YOU THINK...



- **Software impact: Now**
- **Office compression: 3–5 years**
- **Serious robotics field replacement: 10–20 years**

“Artificial intelligence is advancing rapidly enough to pose a severe threat to humanity.”

— Elon Musk



REAL IMPACT ON ICT JOBS

WHO WILL FEEL IT FIRST?



- **Project Managers**
- **Estimators / Designers**
- **Field Technicians**

PROJECT MANAGERS

PM'S MUST BECOME STRATEGIC, NOT CLERICAL

- **AI reduces:**
 - **Admin**
 - **Reporting**
 - **Documentation**
- **AI exposes:**
 - **Weak leadership**
 - **Poor decision making**

ESTIMATORS

MANUAL COUNTING IS NO LONGER NEEDED!

AI already:

- Reads plans
- Counts symbols
- Generates BOMs

Future:

- Labor modeling
- Cost optimization
- Spec compliance verification



DESIGNERS

AI DRAFTS IN SECONDS. ENGINEERS DECIDE WHAT'S SAFE.

AI will draft, humans will validate

- **Coordination**
- **Code compliance**
- **Risk management**
- **Engineering judgment**



FIELD TECHNICIANS

AI SKILLS INCREASES VALUE

Safe today, not invincible tomorrow

AI impact:

- **Guided installs**
- **Remote overlays**
- **Automated documentation**



THE SKILL THAT WINS

SURFACE SKILL SHRINKS. DEPTH SKILL GROWS.



Deep fundamentals:

- **Grounding and bonding**
- **Transmission theory**
- **Firestopping**
- **Standards mastery**

WHAT HAPPENS NEXT?

HINT, ITS ALREADY STARING TO HAPPEN

- **Roles compress**
(fewer people needed)
- **Entry digital work shrinks**
- **Hybrid roles expand**
(new skill sets required)
- **Communication becomes premium**



AI HUMANOIDS AND THE REALITY CHECK

STILL EARLY, BUT ADVANCING.

- **Cost**
- **Battery**
- **Dexterity**
- **Liability**



Today's Keyword: Adaptation



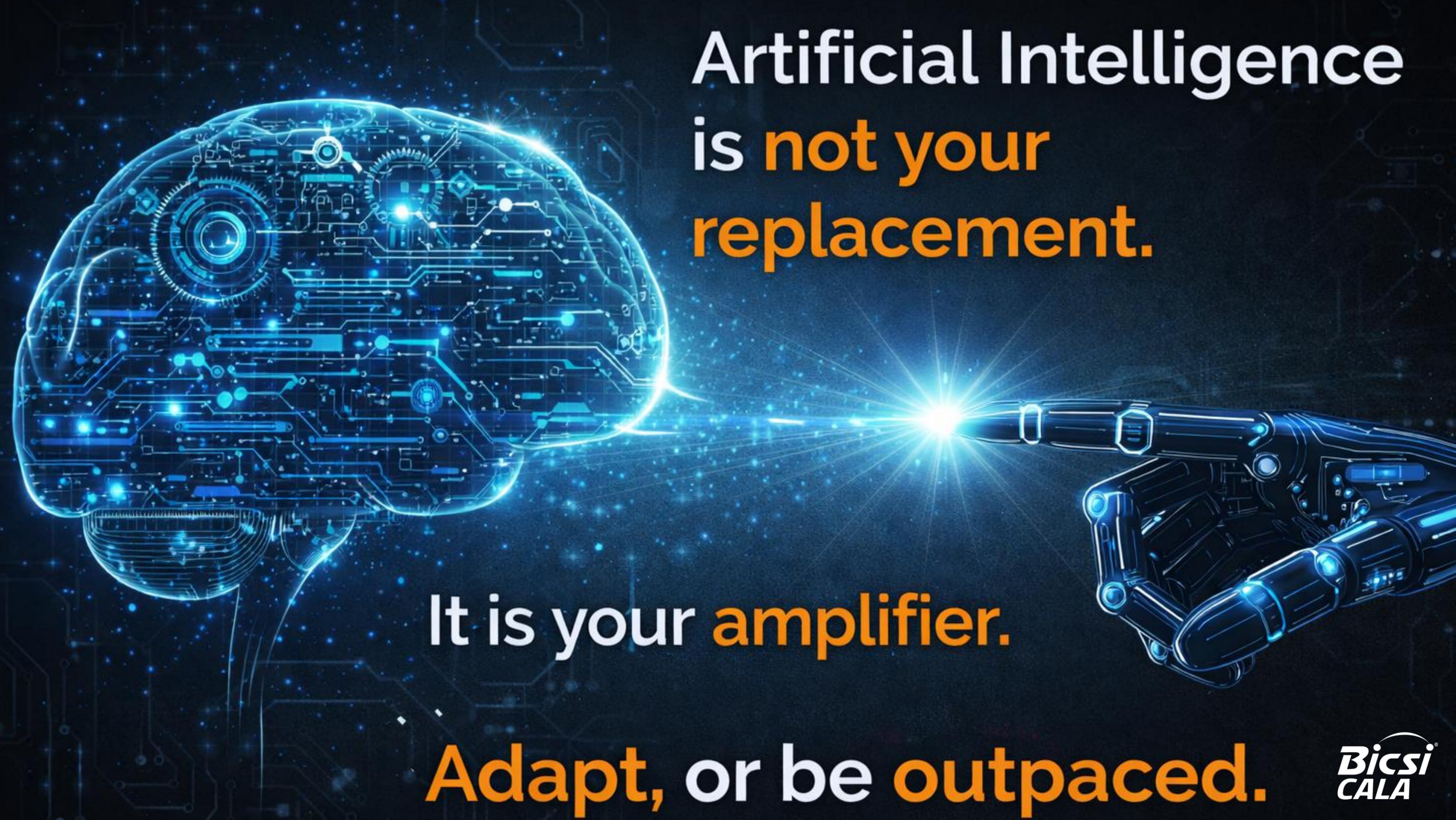
Good ICT professionals are **not replaced**.
They adapt to AI enhancements.

YOUR HOMEWORK ASSIGNMENT!

BE AN EARLY ADOPTER! DON'T GET LEFT BEHIND.

- **Experiment weekly**
- **Master fundamentals**
- **Improve communication**
- **Learn AI tools**
- **Stay adaptable**





Artificial Intelligence
is **not your**
replacement.

It is your **amplifier.**

Adapt, or be outpaced.



**KNOWLEDGE
IS
POWER**

THANK YOU!



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