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6

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PURPOSE & LEARNING OBJECTIVES



Purpose: to equip engineering leaders and project managers with practical strategies to use AI for streamlining project management, boosting efficiency, and improving decision-making — helping firms stay competitive in today's challenging industry landscape.

Learning Objectives:

By the end of this session, participants will be able to:

- **Explain** how AI technologies can enhance key project management processes by automating routine tasks, improving workflows, and optimizing the use of resources to boost efficiency and competitiveness.
- Identify common barriers to adopting AI within engineering firms and apply practical strategies and a proven framework to successfully integrate AI tools into existing operations.
- Demonstrate how AI-generated insights can support strategic planning and decision-making, ultimately driving improved project delivery, profitability, and sustained competitive advantage in a rapidly evolving industry.

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3

INTRODUCTION Fiona Johann, PMP, AEC PM



- PMP-certified Project Manager with a background in higher education leadership
- Partners with AEC professionals to build strong project management and leadership skills
- Experienced in strategic initiatives, program development, and stakeholder engagement
- Focused on helping engineers become confident, effective project leaders



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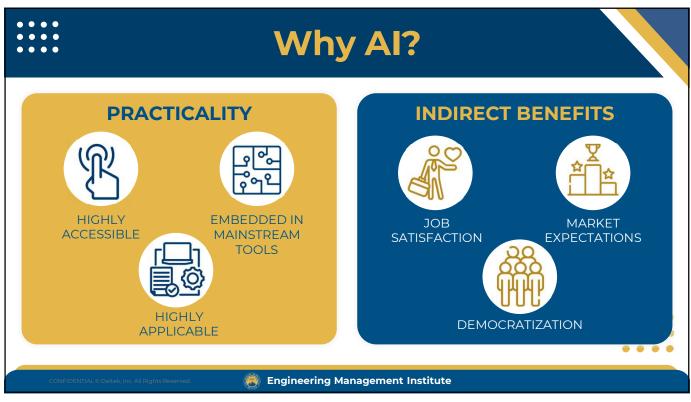
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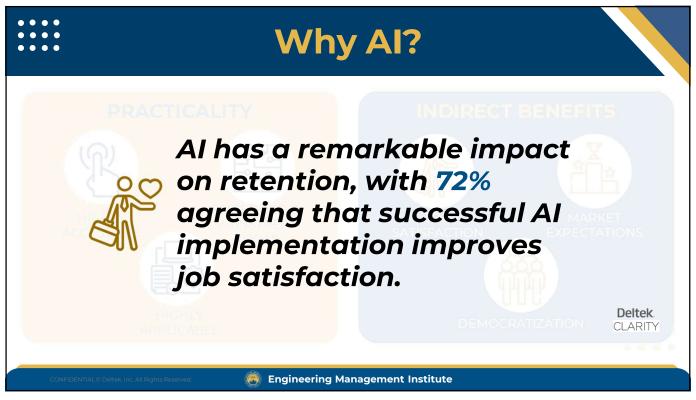


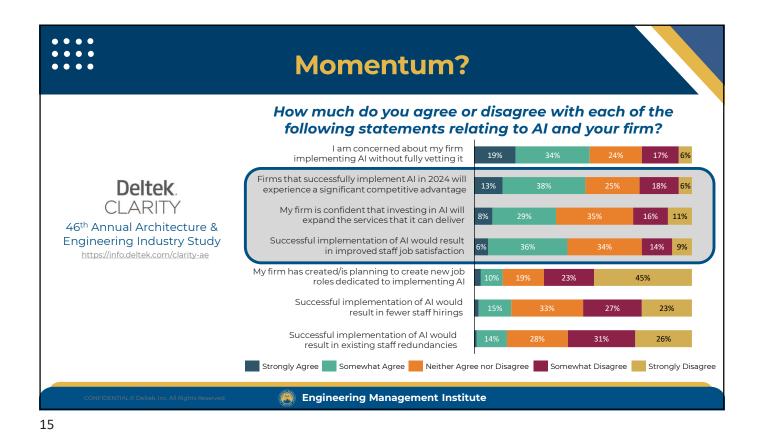
But Digital Transformation is Difficult What are the Top 3 Technology-Related Challenges your company's operations face in the next 12 months? etermining where and how to apply emerging 66% Data and cybersecurity Deltek. Implementing new software systems CLARITY Lack of integration for systems 45th Annual Architecture Migrating to cloud & Engineering Managing legacy systems **Industry Study** Operating with a smaller IT budget https://info.deltek.com/clarity-ae Maintaining physical infrastructure Finding top IT talent Implementing a merger or acquisition Setting up new facilities Cost of IT, driving adoption of new tech and remote staff were included in other ■1st ■2nd ■3rd **Engineering Management Institute**



Al productivity boost has the Organizations using AI for potential to increase global decision-making saw a 20% GDP by up to increase in project success rates **\$13** trillion by 2030 - McKinsey Global Institute (2020) - McKinsey Global Institute (2021) 77% of companies were either Al-driven collaboration tools using or exploring the use of AI can enhance team productivity - generative AI on of most by 25%, underscoring their rapidly adopted technologies importance in - IBM Global Al Adoption Index (2023) project management - Forrester (2021) Generative AI used for design Al-driven automation of optimization and simulation repetitive engineering tasks can reduce design time can reduce project execution • **bv up to 30%** time by up to 25% Autodesk (2022) - Deloitte (2022) Engineering Management Institute



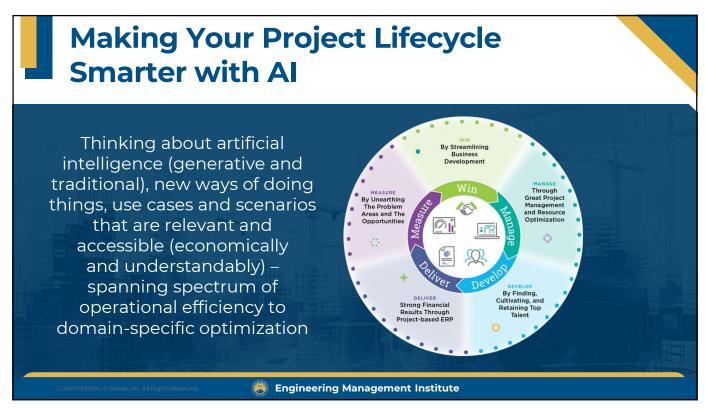


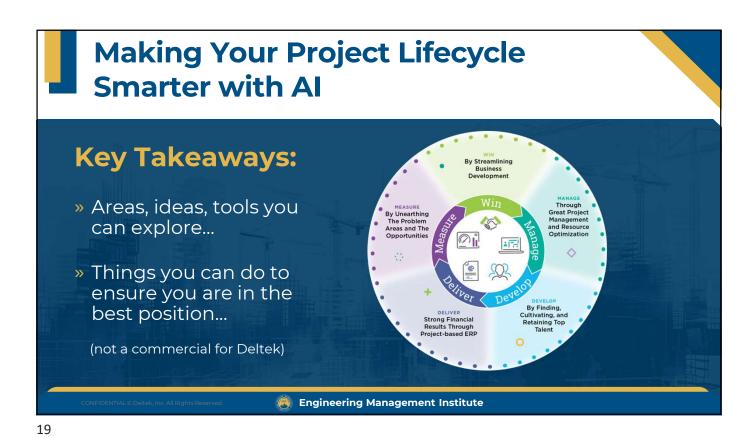


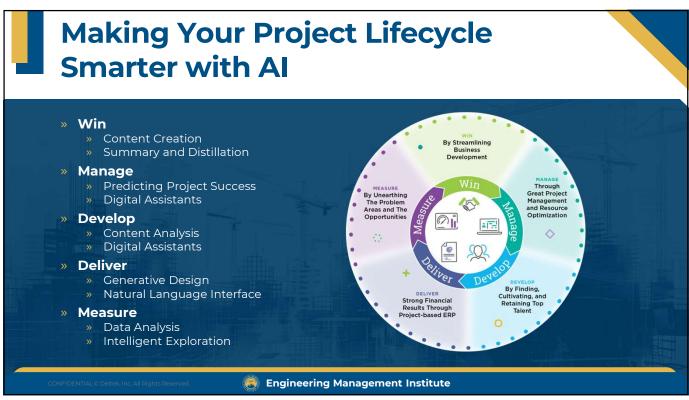
Your Al Moment is Now We don't We don't We're We aren't know where worried have the sure what infrastructure to start about success or the skills governance even or ethics looks like

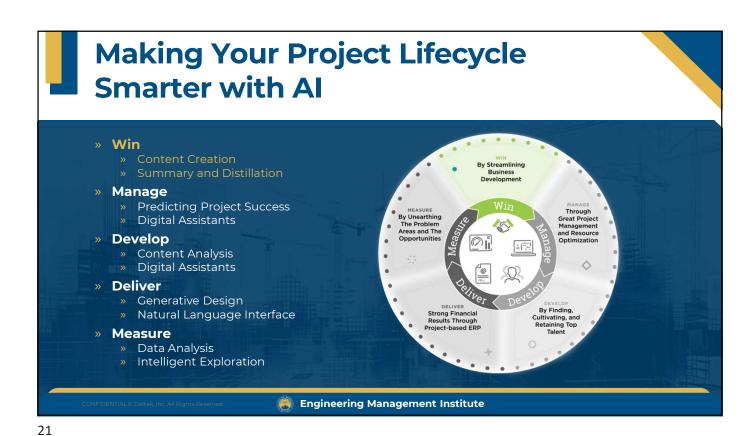
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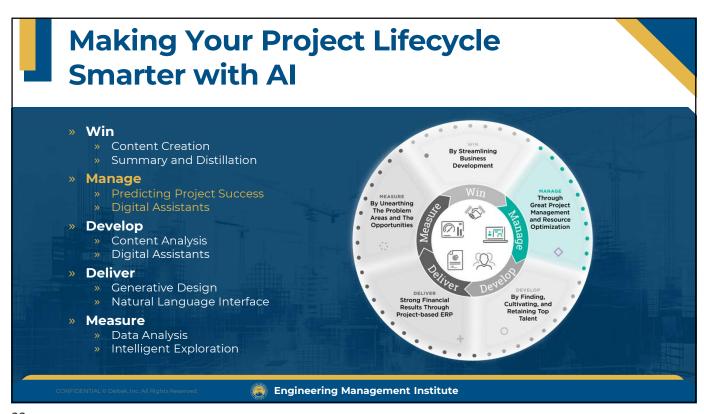


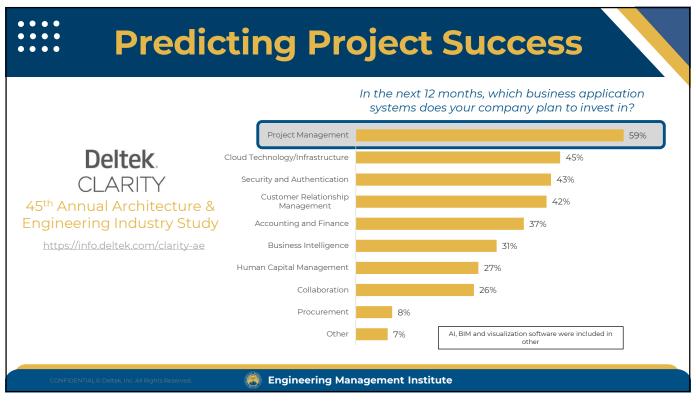






Content Creation, Summary and Distillation » GPT tools are not just about the data/content within them - you can utilize them with your data and content » Leverage to "read" and BRLS-5946(180) summarize RFPs to JULY 20, 2023 TTALS DUE AUGUST 31, 2023 BY 5:00 PM capture salient points and ISSUED BY: nty Resource Managem 5961 S. Mooney Blvd. Visalia, CA 93277 requirements Claude - https://claude.ai/ Engineering Management Institute



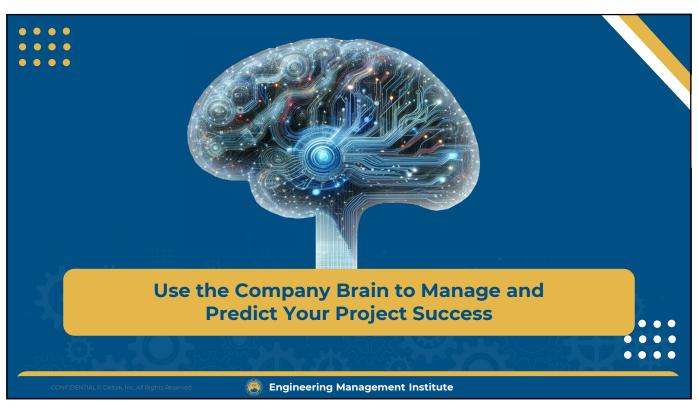


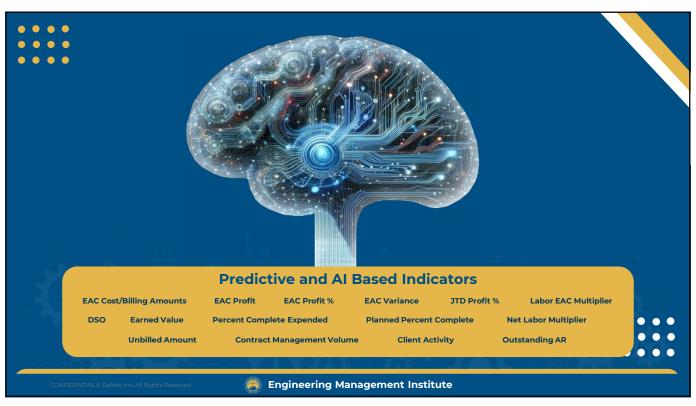
Predicting Project Success

- » Equip project managers with the right tools
- » Develop project management best practices
- » Build and manage project plans; good data in produces valuable insights out
- » Leverage BI and AI and put key indicators at the fingertips of your project managers



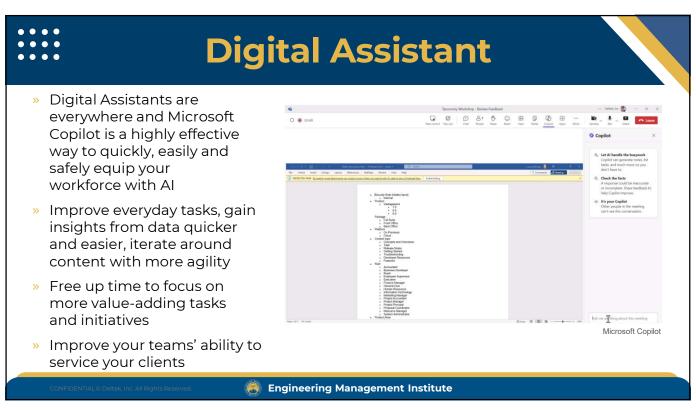
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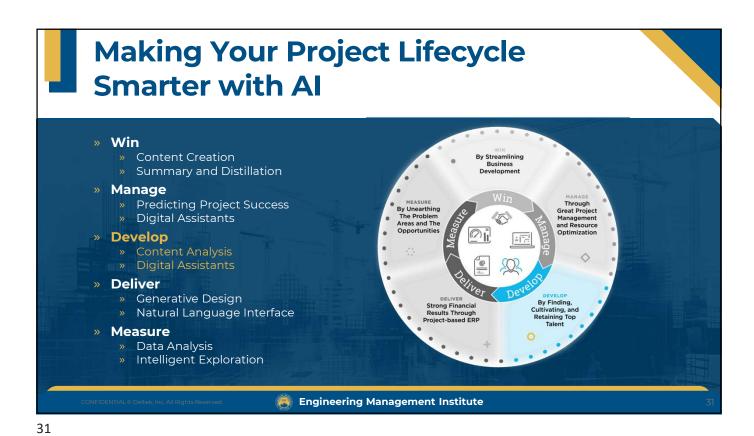


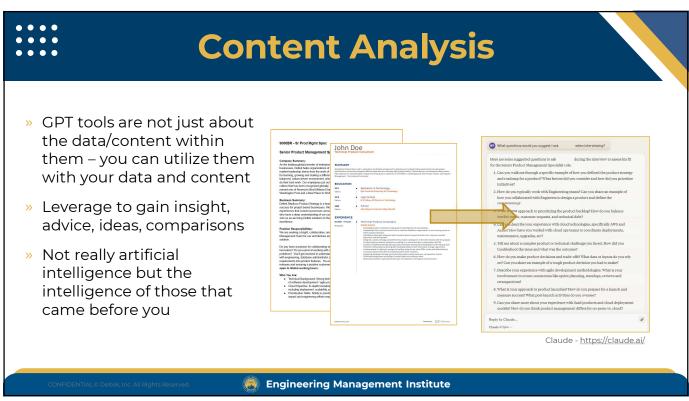


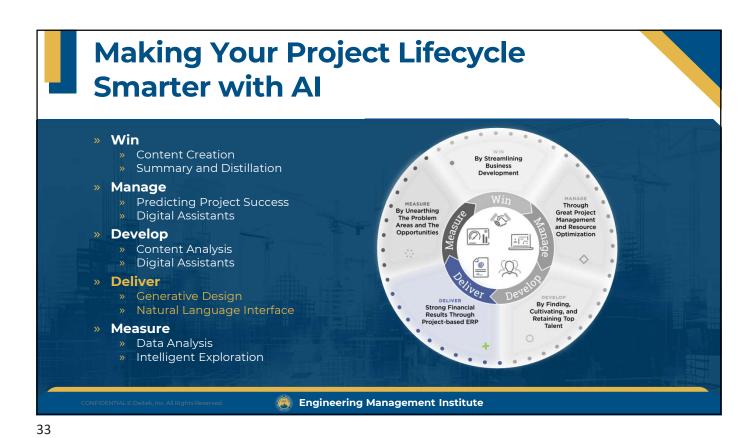


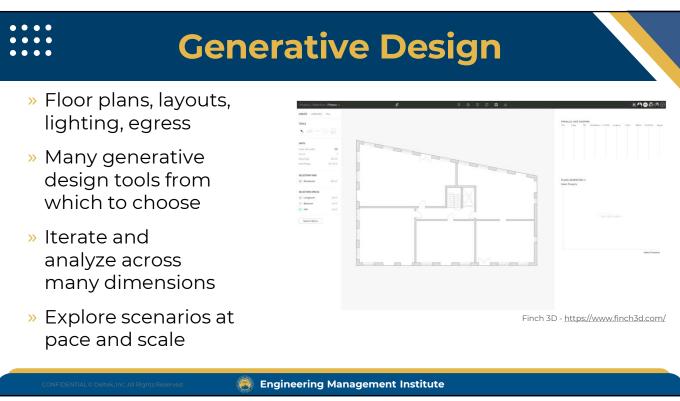




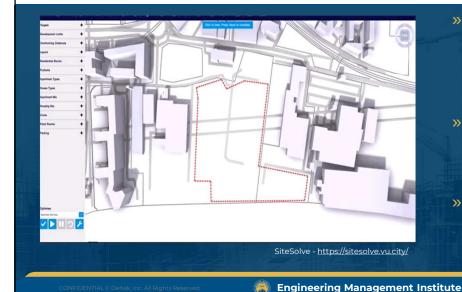








Generative Design

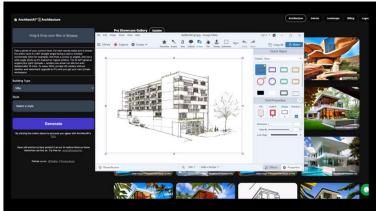


- » Site analysis, massing, sunlight and shadows, zoning constraints, usage types
- » Many generative design tools from which to choose
- » You set the criteria and constraints, the tool iterates

35

Generative Design

- » Image generators and AI based rendering tools drive the art of the possible
- » Many imaging tools from which to choose
- » Style and treatment exploration at pace and scale



ArchitectAI - https://architectai.app

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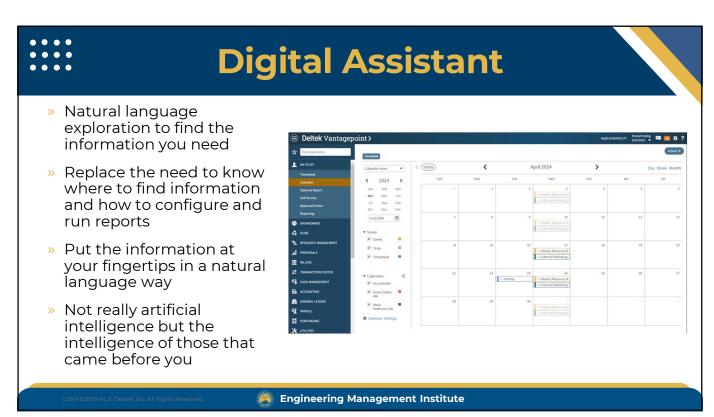
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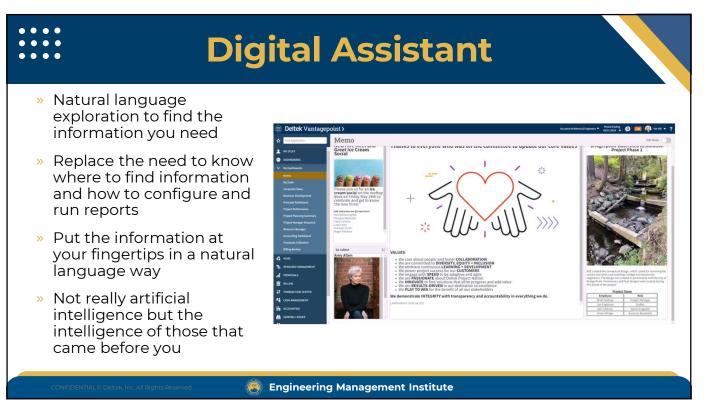


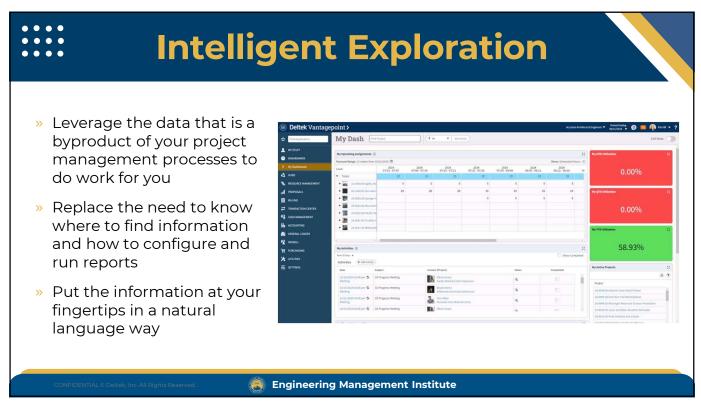


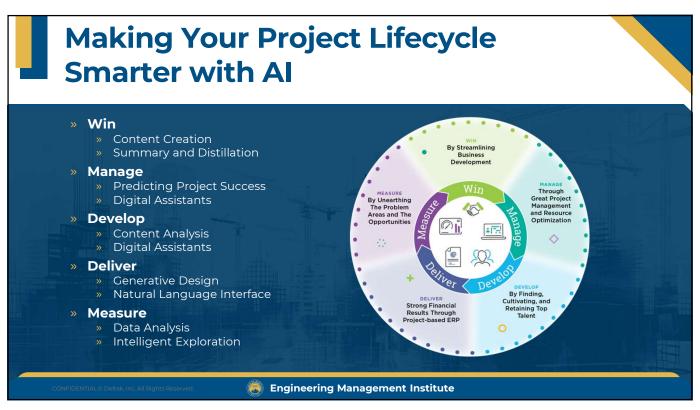


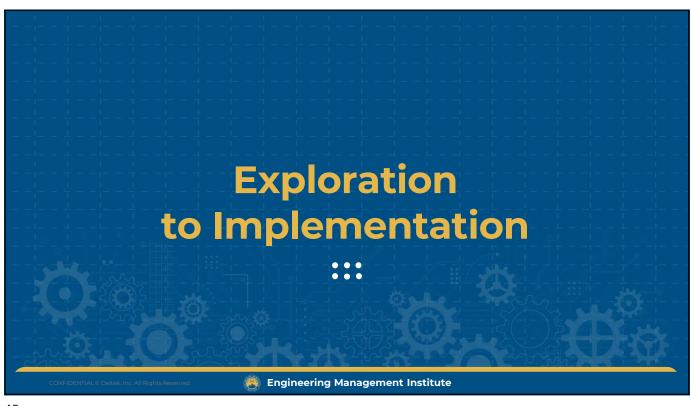
Making Your Project Lifecycle Smarter with Al » Win » Content Creation » Summary and Distillation » Manage » Predicting Project Success Through Great Project Management » Digital Assistants » Develop » Content Analysis » Digital Assistants » Deliver » Generative Design » Natural Language Interface » Measure » Intelligent Exploration Engineering Management Institute











Structuring AI for Real Results

- » What is it?
 - » A strategic guide and self-assessment tool that helps C-Suite leaders align Al with their business goals.
- » Who Authored It?
 - » Walter Pasquarelli, tech and AI expert and evangelist.
- » How does it work?
 - The playbook breaks down AI adoption into five critical pillars.
- » Includes a Self-Assessment Tool
 - » The playbook provides a structured self-assessment, allowing leaders to pinpoint gaps, prioritize areas for improvement, and build a roadmap for Al-driven transformation.



Get Your Copy Today



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Structuring AI for Real Results » Start with Purpose: Align AI initiatives to

- real business challenges, not just shiny tools.

 » Focus on Foundations: Strategy, data,
- » Focus on Foundations: Strategy, data, governance, and culture matter more than any single technology.
- » Prioritize Pragmatic Wins: Target use cases that create immediate value and build momentum.
- Think Long-Term: All is a journey, not a project, lay the groundwork for continuous evolution.
- » Empower People: Technology succeeds when your teams are ready, curious, and supported.

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47

Pillar: Strategy & Scope

Firms that adopt AI without aligning it to strategy often waste time and miss real value. This pillar is about identifying what matters most and linking AI to business goals.

Key Principles and Considerations:

- » Align to Business Goals Every Al initiative should tie directly to a strategic objective (efficiency, growth, innovation).
- » Prioritize Practical Use Cases Start where AI can deliver quick, meaningful wins (e.g., automate reports, improve forecasting).
- » Define Scope Clearly Avoid trying to overhaul everything at once—pilot specific projects.
- » Champion Outcome Over Technology Focus on the problem to solve, not the tool to use.
- » Accept Iteration Strategy will evolve; be ready to learn and adjust based on early results.

Call to Action

- ✓ Identify 1-2 internal challenges (e.g., proposal generation).
- ✓ Start with "internal-first" use cases before expanding to client-facing.
- ✓ Have a 30-minute leadership brainstorm to list all recurring headaches in operations—circle one and find an Al tool to test.

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Call to Action

- Assign someone to catalog relevant data sources currently in use throughout firm.
- ✓ Audit your tools—what Al is already built in (e.g., MS Copilot, Deltek Al features).
- ✓ Partner with a vendor for cloud, storage, or data prep needs.

Pillar: Infrastructure and Integration

Al is only as good as your data and systems. Many firms overlook data cleanliness and workforce readiness.

Key Principles and Considerations:

- » Audit Existing Capabilities First Find out what Al capabilities already exist within your current tech stack.
- Ensure Data Accessibility and Quality Al is only as good as the data it draws from; start cleaning and structuring data now.
- » Think Modular and Scalable Choose solutions that can grow as your firm's AI needs mature.
- » Leverage Cloud & Open APIs Flexibility is key; cloud platforms and APIs enable faster integration.
- » Partner, Don't Build from Scratch Small and midsized firms should prioritize plug-and-play tools, not massive custom builds.

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49

Pillar: Compliance & Governance

Trust is foundational. If your team or clients don't trust your AI practices, adoption will stall—or worse, create risk.

Key Principles and Considerations:

- » Create Accountability Roles Designate a responsible person or team for Al governance oversight.
- » Emphasize Human Review No Al output should go client-facing without human validation.
- » Monitor for Bias and Risk Regularly audit Al outputs for fairness, legality, and brand alignment.
- » Plan for Evolving Regulations Stay agile laws around AI are still forming and your policies will need to adapt.

Call to Action

- ✓ Ask the question "Have we defined responsible use of AI and made it clear to the team?"
- ✓ Create a simple "AI Use Policy" (what's OK, what's not).
- ✓ Assign an "Al steward" for compliance tracking.

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Call to Action

- ✓ Choose one pilot AI use case (e.g., automated meeting notes) and track time saved each week.
- ✓ Recommend quarterly reviews of AI experiments

Pillar: Monitoring & Evaluation

Without KPIs, AI tools become gimmicks.

Measuring value ensures continuous
improvement and buy-in.

Key Principles and Considerations:

- » Set Clear Success Metrics Early Examples: time saved, errors reduced, client response time improved.
- » Track Both Quantitative and Qualitative Value Productivity is measurable, but team morale and client trust matter too.
- » Pilot, Measure, Scale Start small, prove value, expand.
- » Commit to Ongoing Learning Al models and tools improve; your evaluation framework must evolve with them.
- » Celebrate and Publicize Wins Internally Build positive momentum by sharing success stories.

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51

Pillar: Culture

Culture either accelerates or blocks Al adoption. Your team needs permission to experiment, fail, and learn.

Key Principles and Considerations:

- » Normalize Experimentation Create a safe space to try, fail, and learn.
- » Upskill Everyone, Not Just Tech Staff Al literacy should be baseline knowledge across all roles.
- » Lead by Example Leadership should be visibly curious and willing to use AI tools.
- » Recognize and Reward Early Adopters Celebrate team members who experiment with and champion Al initiatives.
- Frame Al as an Empowerment Tool Continuously message that Al enhances—not replaces—human creativity and judgment.

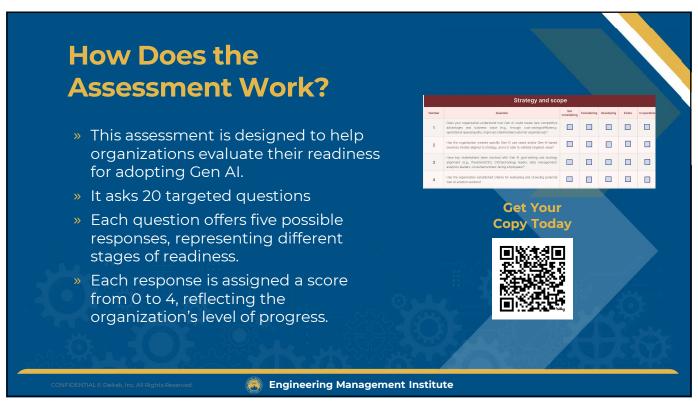
Call to Action

- ✓ Host AI Exploration Days or "Prompt Jams."
- ✓ Create internal champions or an Al working group.
- ✓ Ask each team to try one Al tool this month and share learnings in a 10-minute "Al moment" at the next staff meeting.

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Summary

- Recognize how AI can streamline project management by automating routine tasks and improving workflows
- · Explore internal use cases where Al can create immediate value and build momentum
- Equip project managers with tools to enhance forecasting, collaboration, and project outcomes
- Align Al initiatives with strategic business goals to ensure measurable impact
- Understand the importance of organizational readiness, including culture, governance, and infrastructure





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