

Plan Ahead

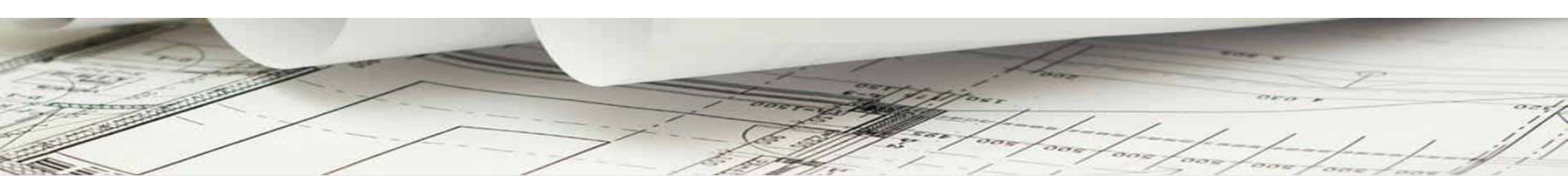
Prior preparation promotes
project performance

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**CONTROL
ENGINEERING**



Control Engineering's System Integrators of the Year for 2008

Up to \$10M annual revenue

Bachelor Controls, Inc. of Sabetha, KS

www.bachelorcontrols.com



Bachelor Controls, Inc.

Systems Integration for Manufacturing

\$10M to \$25M annual revenue

Matrix Technologies, Inc. of Maumee, OH

www.matrixti.com



Over \$25M annual revenue

Honeywell Process Solutions of Phoenix, AZ

www.honeywell.com/ps

Honeywell

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System Integrator of the Year Selection Criteria

- Business skills
- Technical competence
- Customer satisfaction

See “System Integration at its Best” at www.controleng.com

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Expectations & Accountability

- Determine exactly what you expect from the project or else you won't know whether or not you're getting it
- Differentiate between what you *want* and what you *need*
- Place limits on scope of your project to avoid “project bloat” down the line
- Determine who will be responsible for delivering what before you start the project

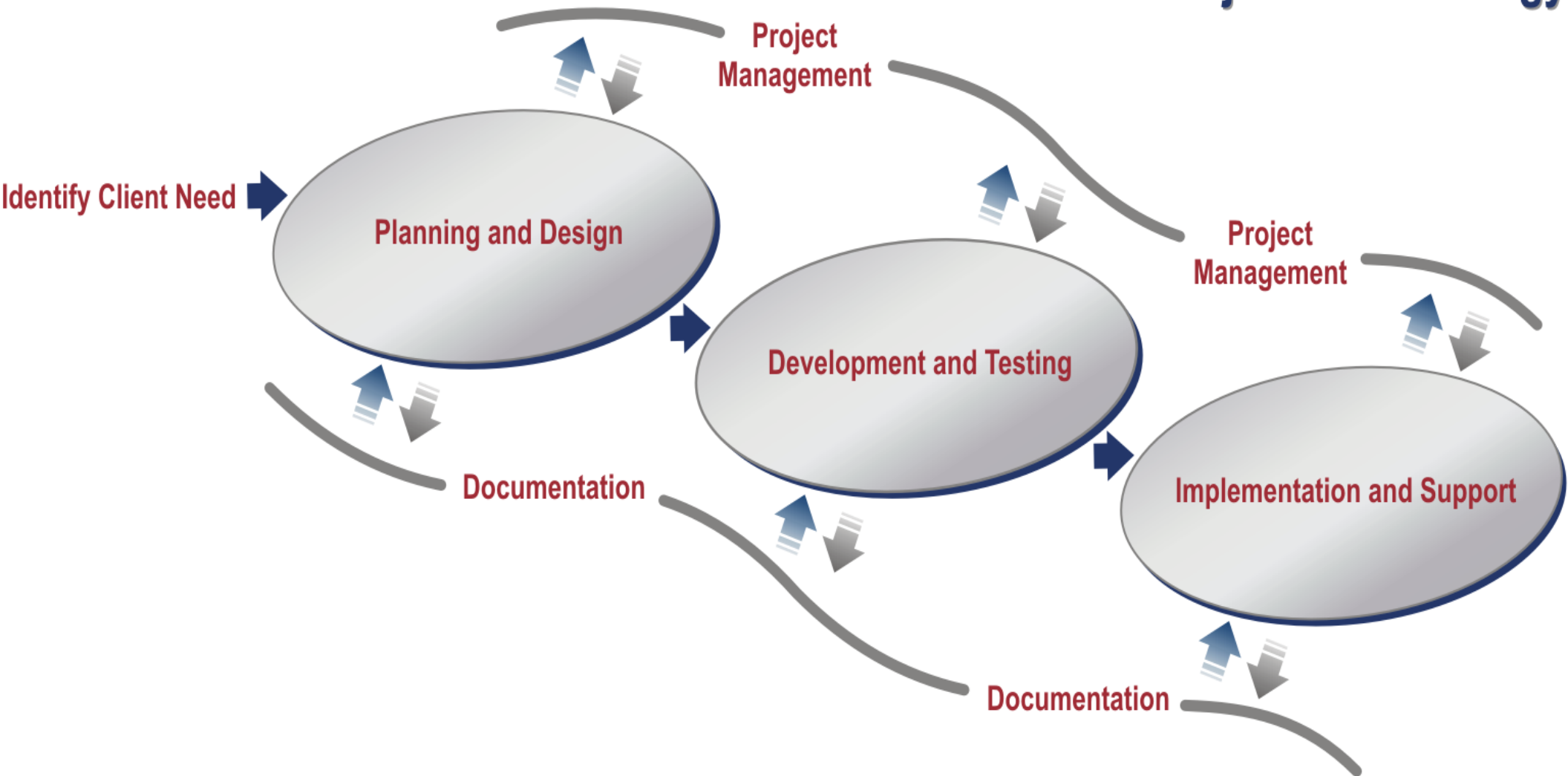
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BCI Project Methodology



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Expectations & Accountability

- Don't rely solely on everyone's recollections of previous discussions to guide the project
- Determine who will report to whom and what they will be responsible for reporting
- Set intermediate milestones and develop a plan for checking the project's progress
- Determine up front what constitutes "successful completion" or else you'll never know when the project is finished

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Discipline

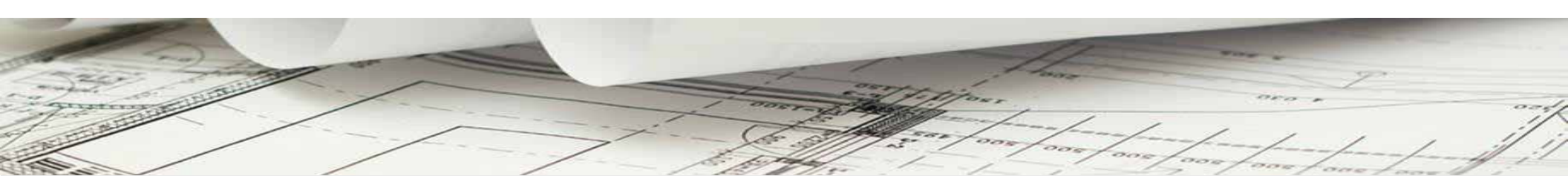
- Plan on devoting your own time and attention to the project
- Stay focused on your original goals and avoid “feature creep”
- Make sure everyone else in your organization sticks with the plan as well
- Be prepared to take responsibility for operating and maintaining the completed automation system

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Resources

- Choose the right integrator for the project
- As much as possible, determine in advance what equipment and materials will be required for the project
- Projects often turn out to be more difficult than anticipated
- Start planning for vendor support early on in the project

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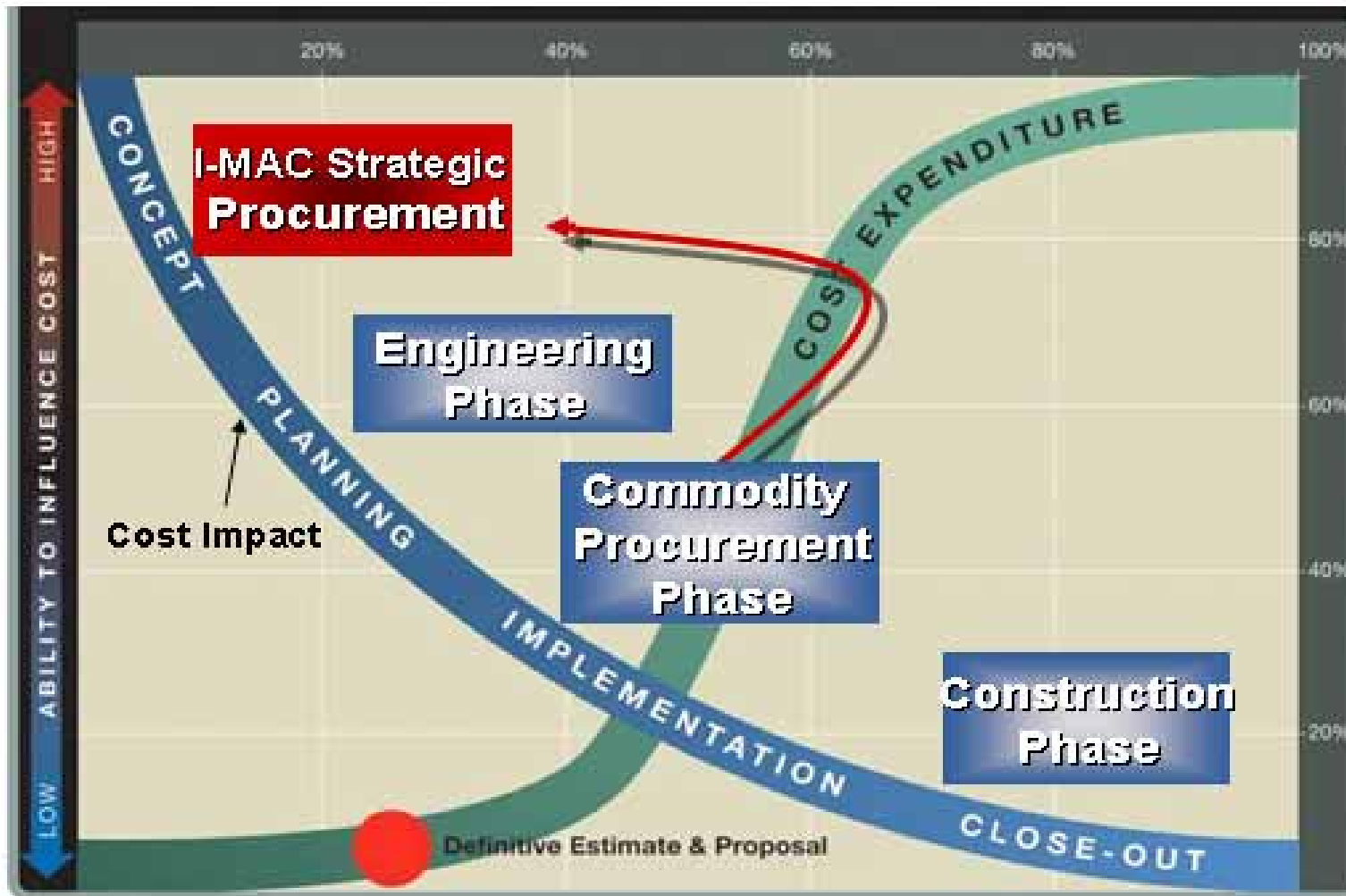
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Early Involvement Can Deliver Big Benefits

Honeywell

High
↑
Ability to Influence
↓
Low



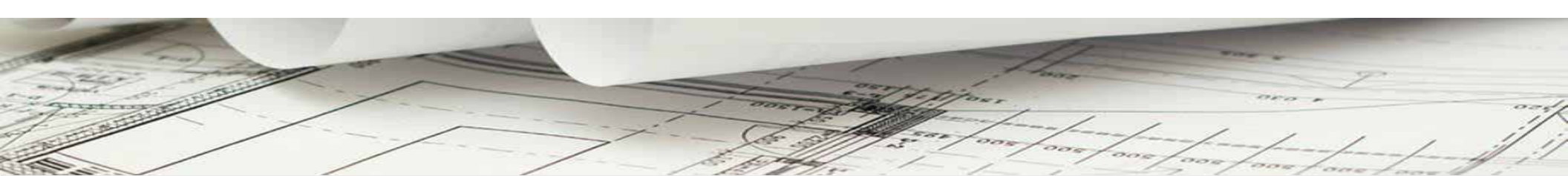
Every dollar spent in project scoping returns three dollars in reduced project cost, reduces project schedule and reduces risk

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Budget

- Plan on getting what you pay for and paying for what you get
- Cost overruns sometimes can't be avoided
- Determine up front how you're going to handle cost overruns and how much is too much
- If you wait until you're already over budget to determine at what point you're going to stop throwing good money after bad, you've probably wasted more money than you needed to

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Schedule

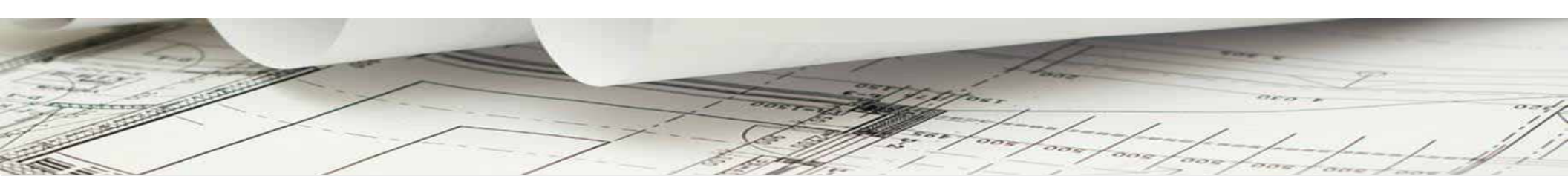
- Create a schedule that works not only for you but your integrator and all your suppliers as well
- Integrators tend to be conservative in setting their schedules, but they have real-world experience to guide them
- You too must commit to a schedule for your contributions to the project
- Delays happen

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Technology

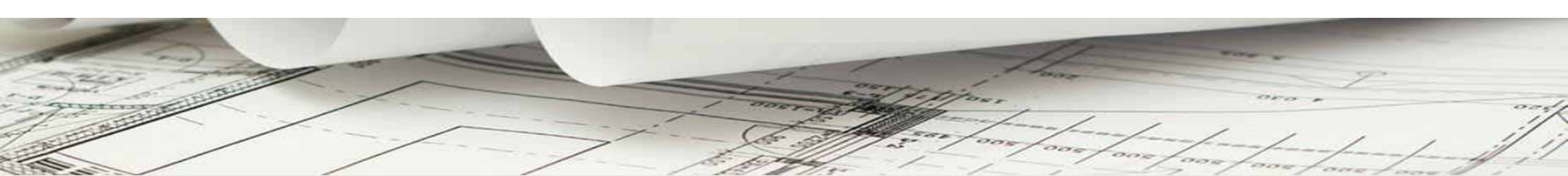
- Before you begin planning a new automation system, inventory your existing technology and assess the current state of your facility's automation
- Before you begin interviewing integrators, determine what technology and what technological skills will be required for the project
- Identify any gaps in your own technological competence and choose an integrator who can fill them
- If you don't want to deal with the technology at all, you can define what needs to be done and let the integrator decide how to do it

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Technology

- Involve your integrator in the planning stage of the project
- All technology eventually becomes antiquated
- Consider the technology impact that the automation system may have on the rest of the organization
- Consider the integration of the new systems with existing or future production information or business systems

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I-MAC Delivers Results to Clients

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- **Reduction in project schedule** by 3 man months
- Early engagement of automation contractor resulted in \$600K **savings**
- Change orders held to less than 1% of total project value
- New construction methodologies resulted in **overall man-hour reduction**
- \$1.2M in construction re-design savings
- Minimal project contingency
- Total installed cost reduced by 25% (revamp)
- Database standards and consistency **improve schedule and team efficiency**
- ROI improvement of approximately 10%

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QUESTIONS?

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Thank you for listening

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