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Internal Audit's Role in ERP System Implementations

Presenters:
Mark Maraccini, Partner
Bill Dykstra, Senior Manager
Crowe LLP

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Mark Maraccini is a lead partner at Crowe for providing risk and audit management services to public sector entities. Mark has over 24 years' experience working with public sector clients (not for profits) on internal and external audits, federal and state compliance services, risk management services and accounting assistance projects.

Over the past 24 years, Mark has worked a plethora of local governmental entities assisting either performing an audit or assisting them with contract compliance, regulatory compliance, accounting advisor services, risk and control assessments and other advisory type services.

Bill Dykstra is a Senior Manager in Crowe's Public Sector Consulting practices. Mr. Dykstra has a Bachelor of Science degree in Accounting and a Master of Arts degree in Nonprofit Management. He is also a Certified Internal Auditor (CIA) and has a Certification in Risk Management Assurance (CRMA).

Mr. Dykstra is an experienced auditor with over 24 years of serving higher education, government, and not-for-profit organizations. During his career, Mr. Dykstra has provided internal audit and risk consulting services to public and private educational institutions, state and local government agencies, public utilities, public transit authorities, and various not-for-profit service organizations and membership associations.

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Session Objectives:

1. Understand the Critical Role of Internal Audit Before, During, and After ERP Implementations

2. Learn About Key Risks, Challenges, and Controls across ERP Implementation Phases

3. Gain Access to Practical Tools and Templates for Internal Audit Involvement

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Why Internal Audit Matters in ERP Implementations

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WHAT ARE COMMON ROLES & RESPONSIBILITIES FOR INTERNAL AUDIT?

Prior to Implementation

Assessing governance, risk, and compliance needs

During Implementation

Reviewing system security and controls

After Implementation

Evaluating goal achievement and user adoption

What is an ERP System?

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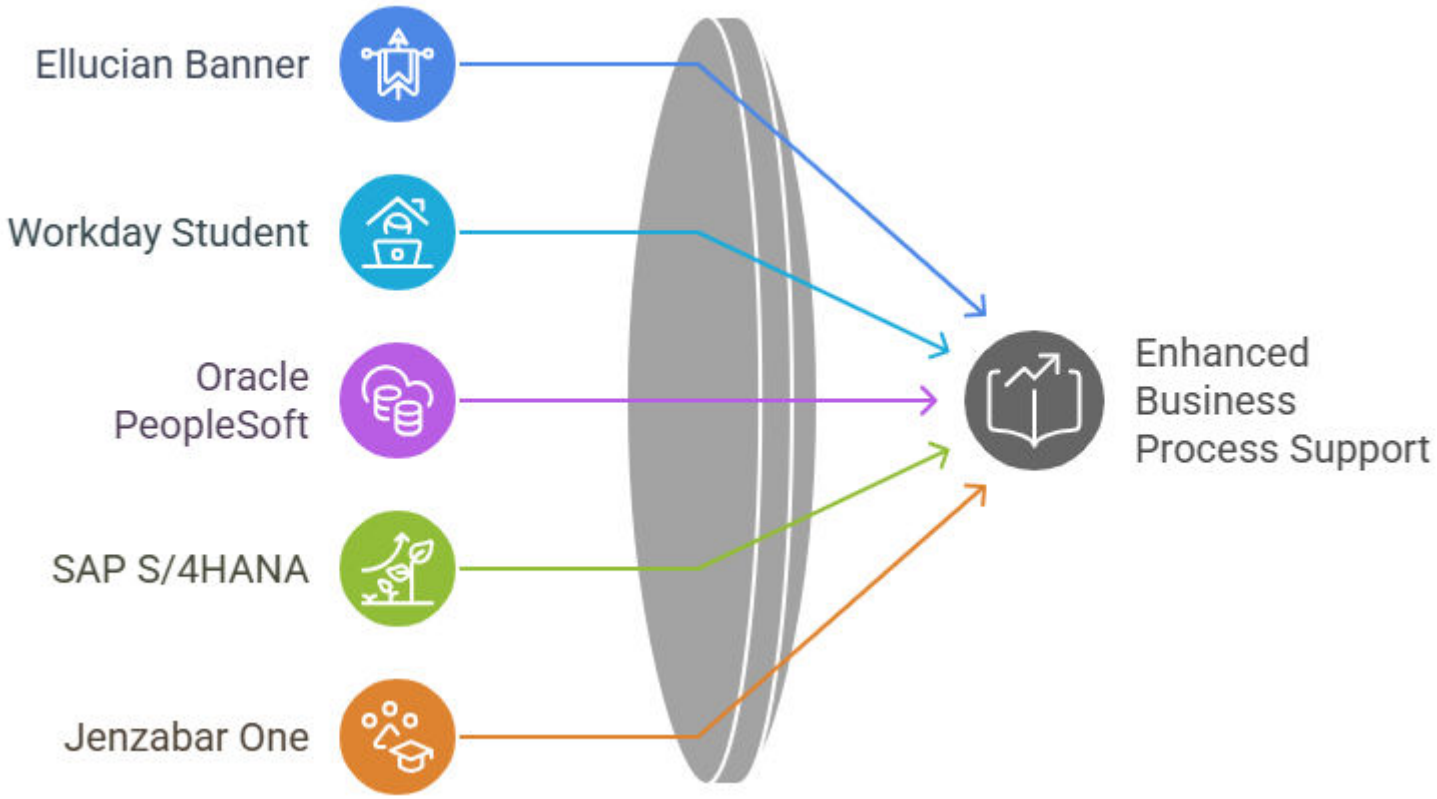
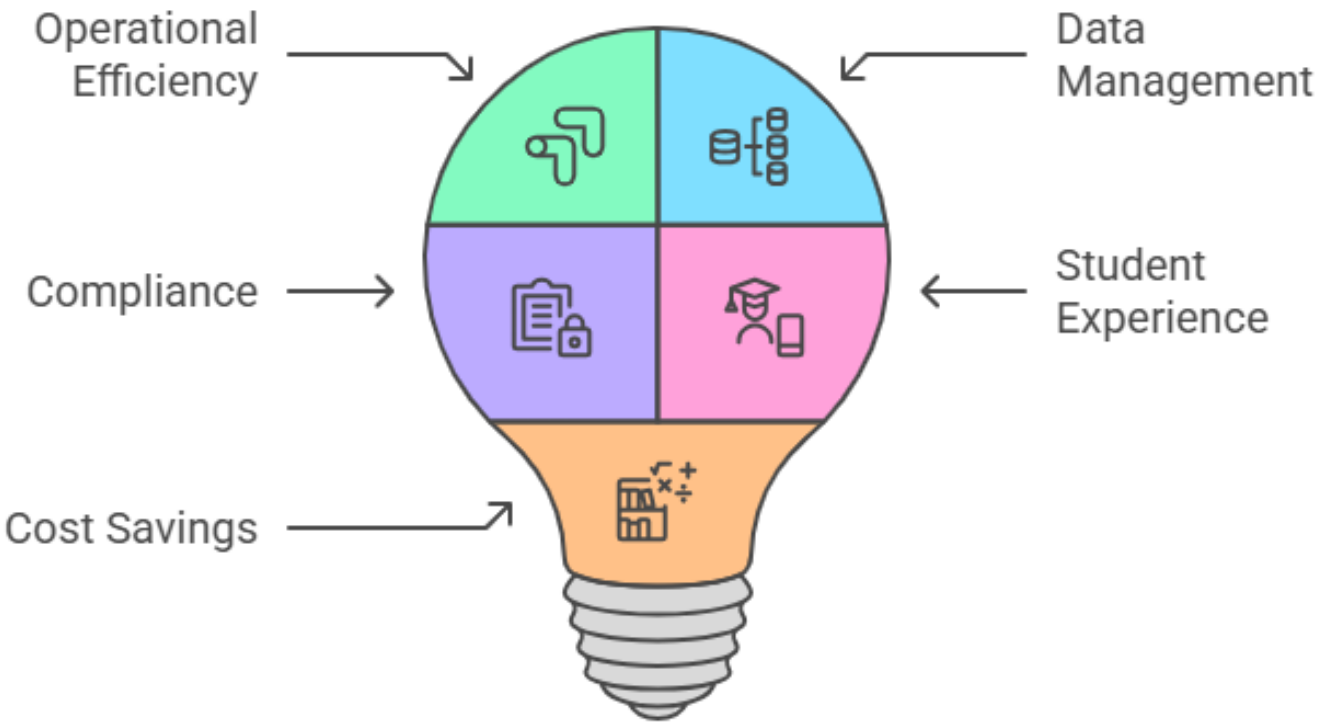
Simply Defined: ERP systems are software that consist of multiple modules or applications which are designed to help organizations perform business processes.

COMMON ERP SYSTEMS USED IN HIGHER EDUCATION



ERP Benefits in Higher Education



Why ERP Implementations Fail

Common Causes for ERP System Implementation Failure

Several studies suggest that Higher Education institutions experience more failures than other sectors with

Failure Rates Ranging from 60% - 90%

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Internal Audit's Role in ERP Implementations

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Prime Opportunities for Internal Audit Contributions

- Conduct Pre-Implementation Risk Assessment
- Evaluate Governance and Project Oversight
- Review Business Process Mapping & Change Management Plans
- Evaluate Cybersecurity & Data Governance Risks
- Monitor Project Milestones and Deliverables
- Assess Training and User Readiness
- Validate Testing and Quality Assurance Controls
- Prepare for Post-Implementation Monitoring

How exactly is this done?

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ERP Implementation Phases & Internal Auditor Responsibilities

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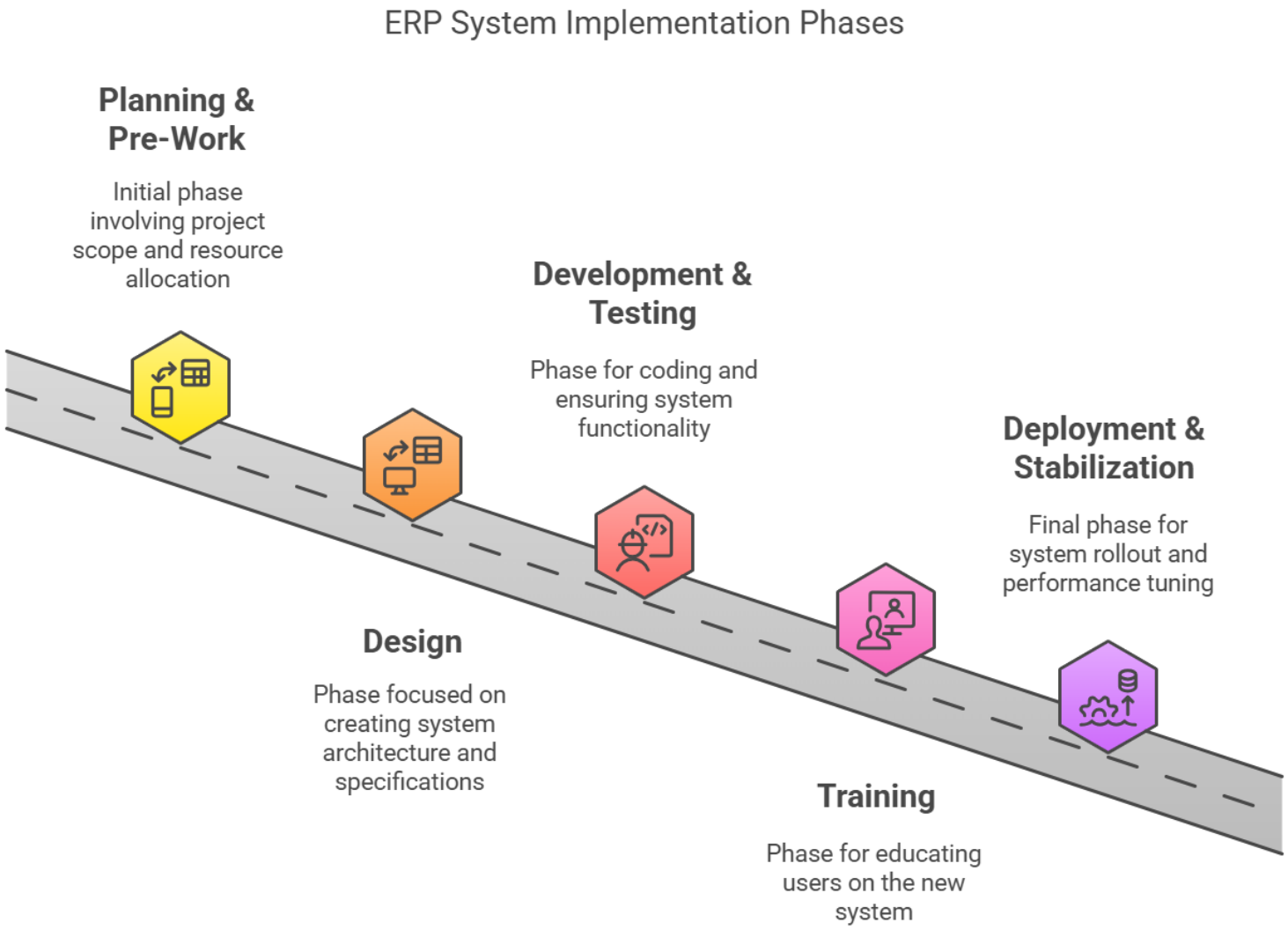

Internal Auditors can play an important role in each phase!

Phase 1 - Planning/Pre-Work

CONDUCT INITIAL RISK AND FEASIBILITY ASSESSMENT

SUPPORT EFFECTIVE GOVERNANCE AND OVERSIGHT

SUPPORT VENDOR SELECTION AND CONTRACT RISK MANAGEMENT

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TOOLS AND TEMPLATES

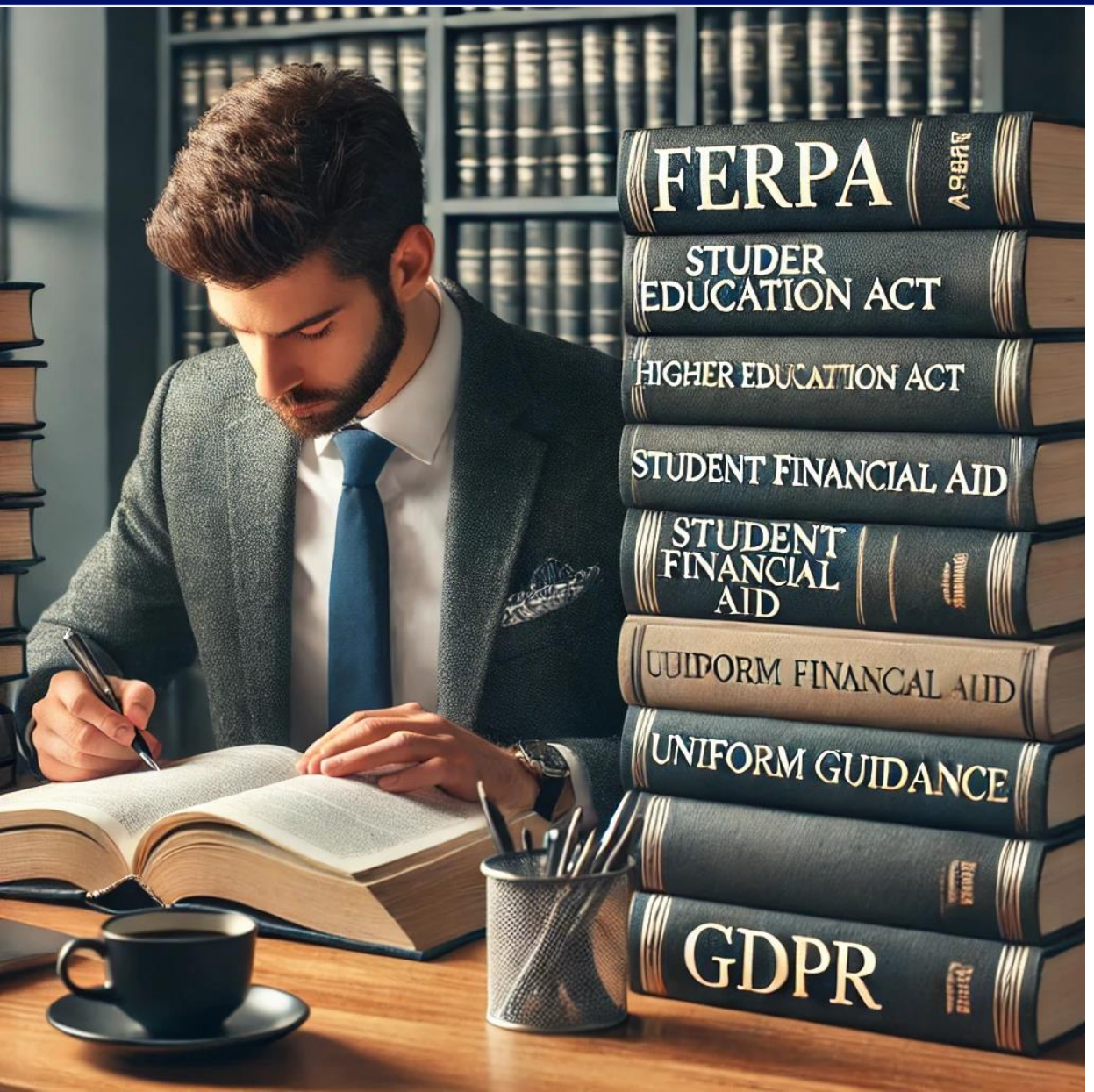
ERP Planning/Pre-Work Phase: Risk Assessment Checklist

CONDUCT PROCESS MAPPING AND ANALYSIS TO IDENTIFY CONTROL GAPS/WEAKNESSES, OPERATIONAL INEFFICIENCIES

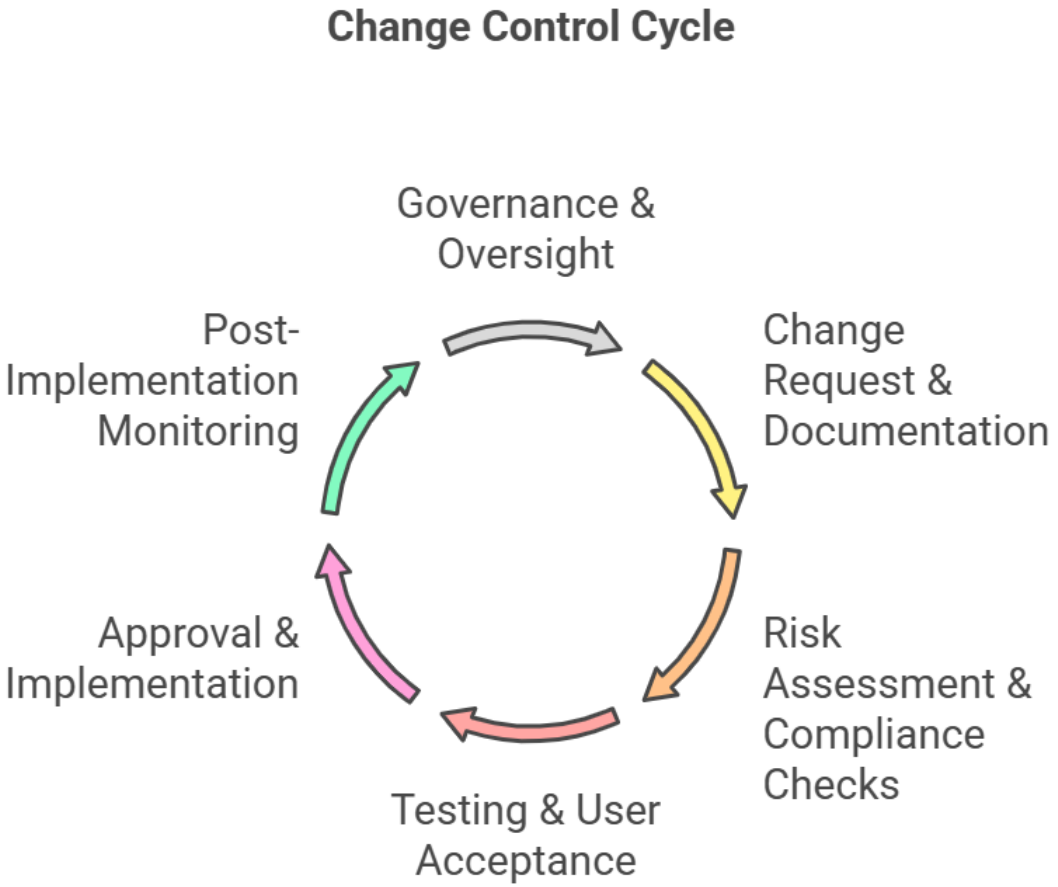
(*THIS TIES TO THE DESIGN PHASE*)

Phase 2 - Design

IDENTIFY RISKS AND RECOMMEND KEY MITIGATION STRATEGIES BEFORE DEVELOPMENT BEGINS



VERIFY THAT REGULATORY COMPLIANCE REQUIREMENTS ARE EMBEDDED IN THE ERP SYSTEM



VERIFY THAT ADEQUATE CHANGE CONTROLS ARE IN PLACE PRIOR TO DEVELOPMENT

[ERP Design Phase - IA Change Control Checklist]

Phase 3 – Development & Testing

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REVIEW SYSTEM CONFIGURATION AND SECURITY CONTROLS

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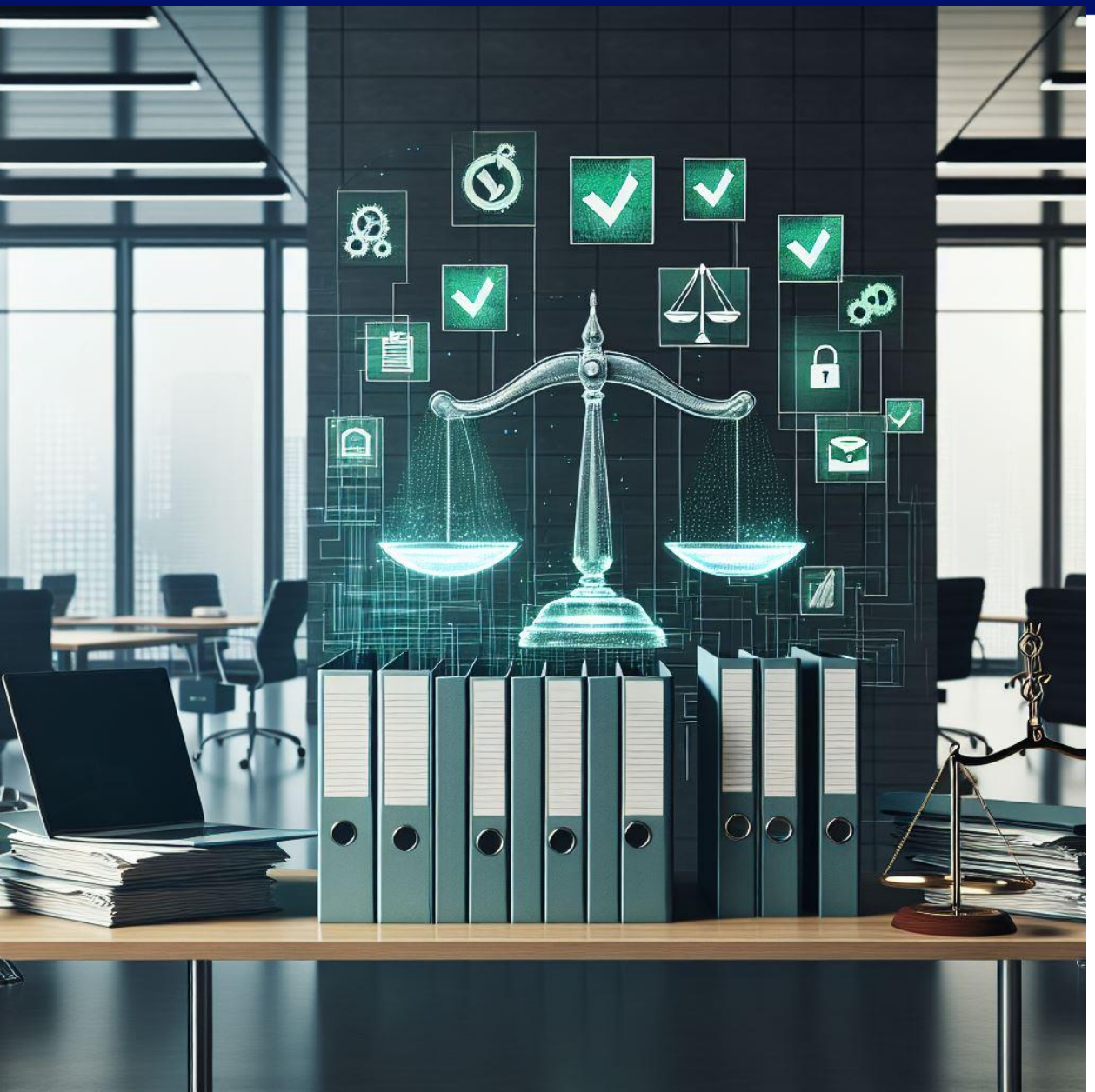

VALIDATE REGULATORY COMPLIANCE

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TEST BUSINESS PROCESS - SYSTEM FUNCTIONALITY

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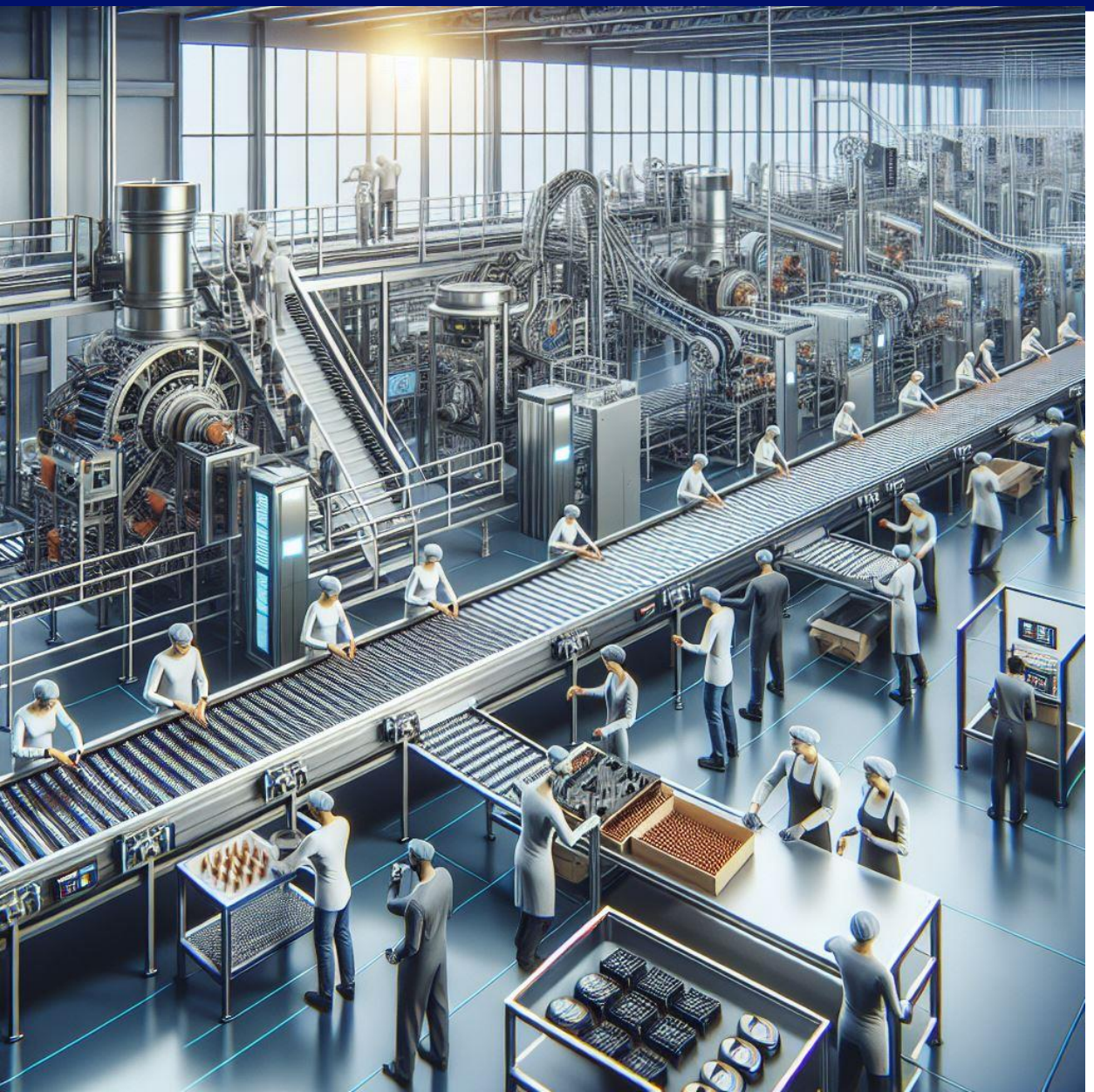

TEST ADHERENCE TO CHANGE CONTROL PROCEDURES

VALIDATE DATA MIGRATION INTEGRITY AND RELIABILITY

ASSESS BUSINESS CONTINUITY AND DISASTER RECOVERY PLANS

Phase 4 - Training

EVALUATE THE TRAINING PROGRAM'S COVERAGE AND EFFECTIVENESS

[ERP Training Program Assessment Checklist]

ASSESS USER ADOPTION RISKS VS. OCM STRATEGIES

OR

EVALUATE TRAINING ON HIGH-RISK AREAS:

- REGULATORY COMPLIANCE
- ROLE-BASED ACCESS

Phase 5 – Deployment & Stabilization (Post-Implementation)

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REVIEW POST-TESTING APPROVAL AND READINESS FOR "GO-LIVE"

ERP Deployment Readiness Checklist

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CONDUCT POST-IMPLEMENTATION TESTING AND EVALUATE USER SUPPORT

CONDUCT A COMPREHENSIVE POST-IMPLEMENTATION REVIEW AND DOCUMENT LESSONS LEARNED

ERP Post-Implementation Audit Checklist

Case Study & Interactive Discussion

- Scenario: Internal Audit's role in an ERP implementation failure.
- Group Activity: Identifying risks and proposing IA recommendations.
- Debrief: Sharing best practices.

ERP Planning & Pre-Work Case Study of GPU

Group Exercise: Adding Value as Internal Auditors

Instructions for Small Groups:

1. Review the case study.
2. Focusing on each bullet under Planning & Pre-Work, identify opportunities where internal auditors could add value by providing assurance, advisory, or risk mitigation support.
3. Prepare a list of recommendations that internal audit should present to the ERP project team and senior leadership.

In Closing

Planning/Pre-Work Phase – IA enhances governance and risk management through risk assessments, vendor selection oversight, and control gap identificationIA Role in ERP.

Design Phase – IA assesses regulatory compliance and effective change controls before ERP development begins.

Development & Testing Phase – IA reviews system security mechanisms, validates data integrity, and assesses disaster recovery plans.

Training Phase – IA evaluates training effectiveness, user adoption risks, and compliance-focused user education.

Deployment & Stabilization Phase – IA supports a smooth go-live, validates post-implementation support, and helps document lessons learned.

KEY TAKEAWAY

IA is essential throughout ERP implementation, providing risk management, compliance oversight, and continuous improvement.

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Q&A & Closing Remarks

- Open floor for questions and discussions.
- Thank you for attending!

Thank you!

Please Contact Us with Questions

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