ERP Risk Advisors

INTEGRIGY

Upgrade +1
Improving Your Security
During Your Upgrade to R12

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Speakers

Jeff Hare

ERP Risk Advisors

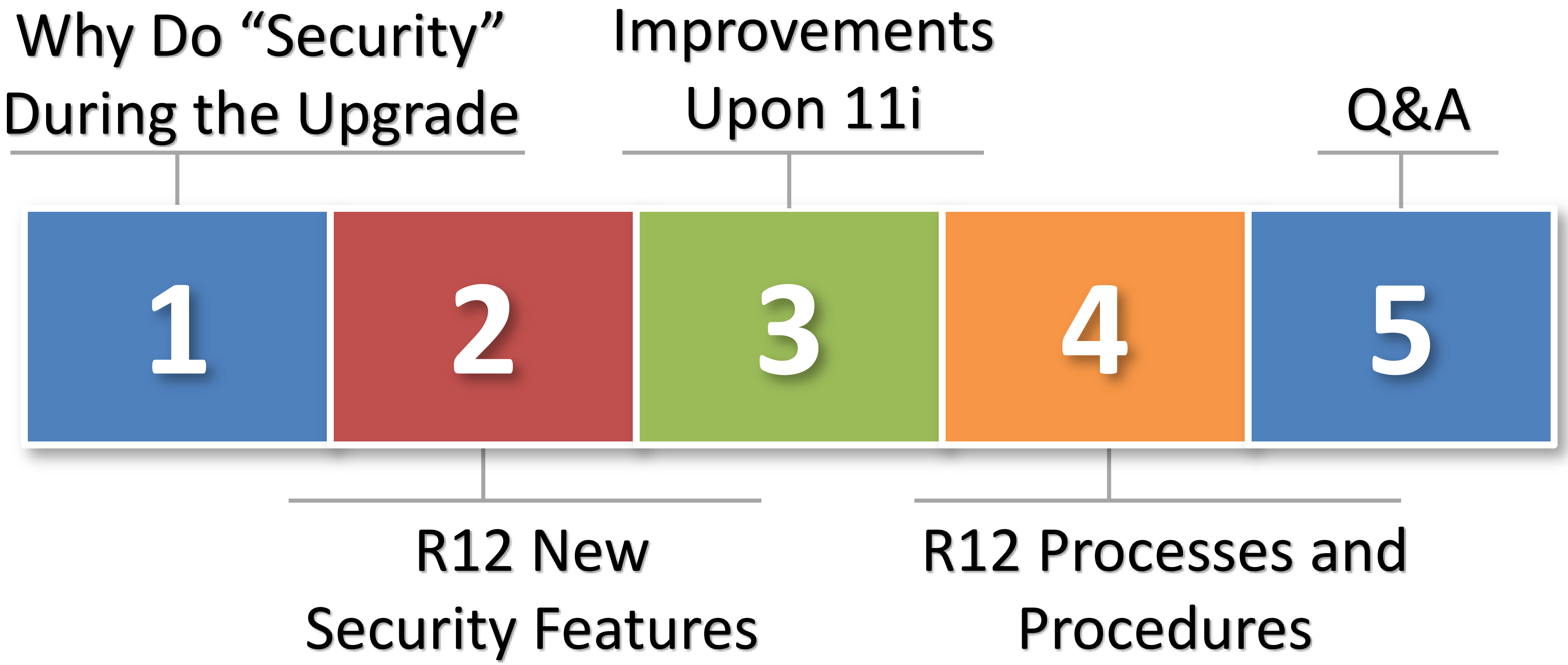
- Founder of ERP Risk Advisors / ERP Seminars and Oracle User Best Practices Board
- 14 years working with Oracle EBS as client and consultant
- Experience includes Big 4 audit, 6 years in CFO/Controller roles – both as auditor and auditee
- Author – *Oracle E-Business Suite Controls: Application Security Best Practices*

Stephen Kost

Integrigy Corporation

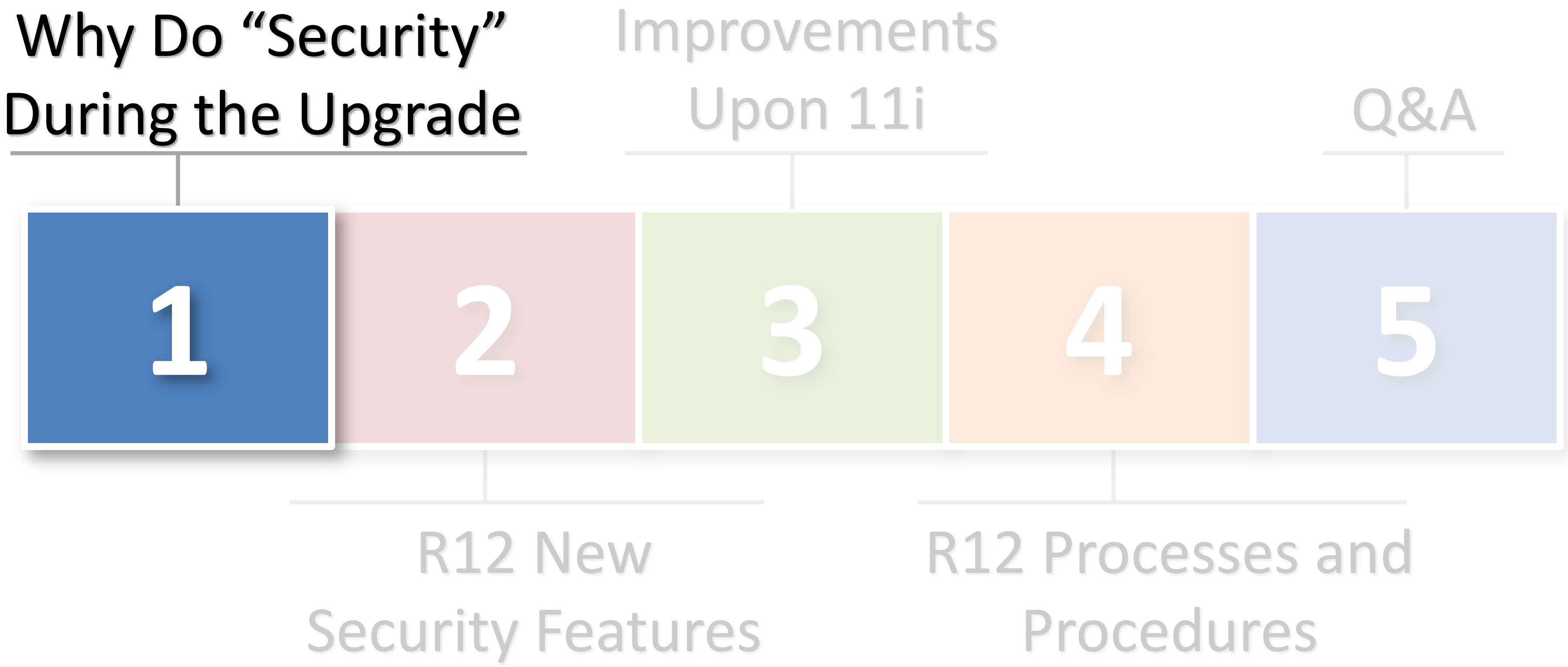
- CTO and Founder
- 16 years working with Oracle and 12 years focused on Oracle security
- DBA, Apps DBA, technical architect, IT security, …
- Integrigy Consulting – Oracle EBS security assessments and services
- Integrigy AppSentry – Oracle EBS Security Assessment and Audit Tool

Agenda



1. Why Do "Security" During the Upgrade
2. R12 New Security Features
3. Improvements Upon 11i
4. R12 Processes and Procedures
5. Q&A

Agenda



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Why do “Security” during the upgrade?

1 Functional, Technical, & Stress Testing

- Functional application testing
- Performance and stress testing

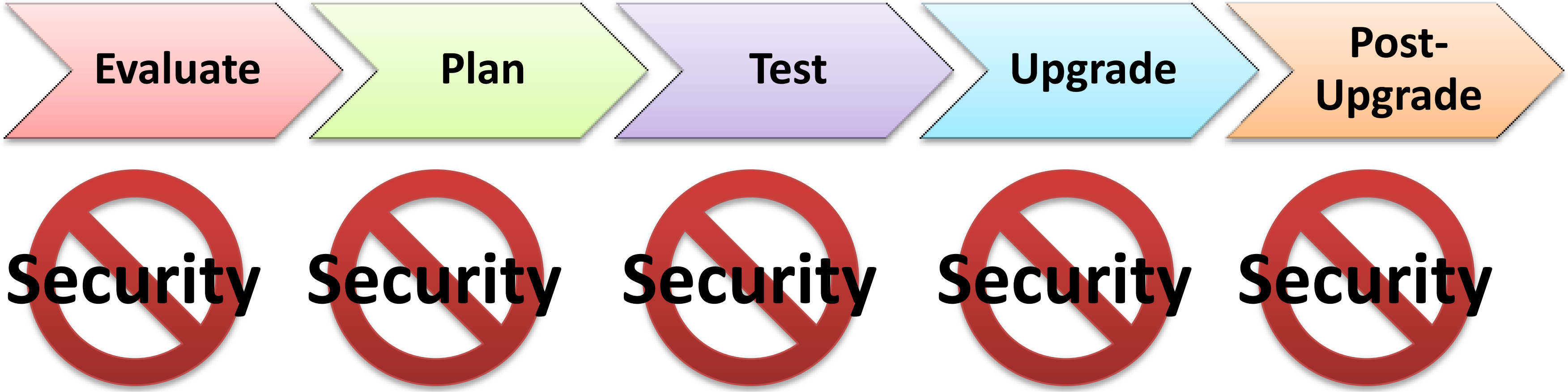
2 Technology Stack Upgrades

- New version = new security features
- Reset of security patching – should be current at go-live

3 Modifications to Customizations

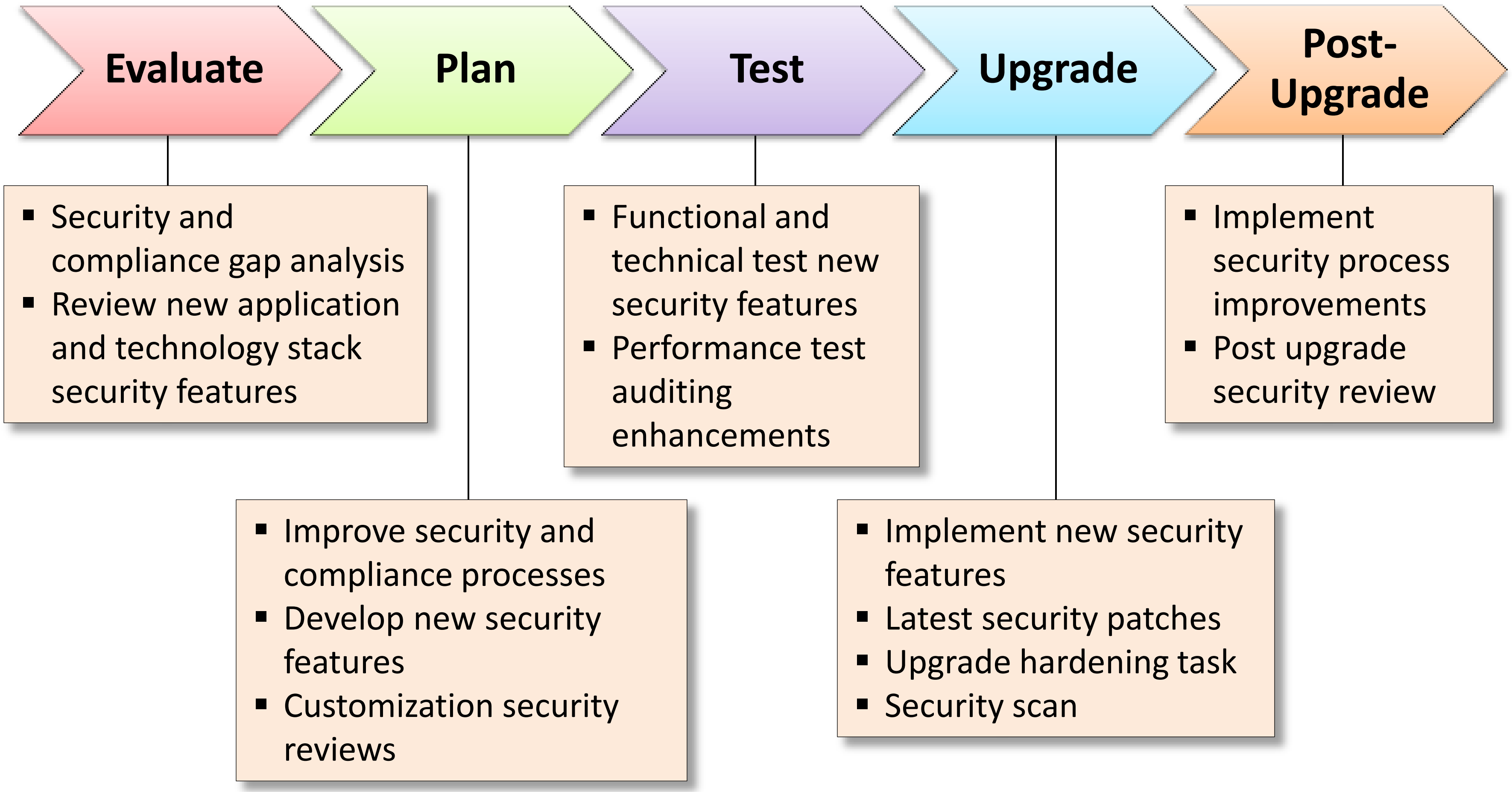
- Some or many customizations must be upgraded
- Ideal time to review development standards

Traditional R12 Upgrade Project



Security "Aware" R12 Upgrade Project

Goal: High security value, low project effort, major testing required, low project risk



Evaluate

- Security and compliance gap analysis
- Review new application and technology stack security features

Plan

- Improve security and compliance processes
- Develop new security features
- Customization security reviews

Test

- Functional and technical test new security features
- Performance test auditing enhancements

Upgrade

- Implement new security features
- Latest security patches
- Upgrade hardening task
- Security scan

Post-Upgrade

- Implement security process improvements
- Post upgrade security review

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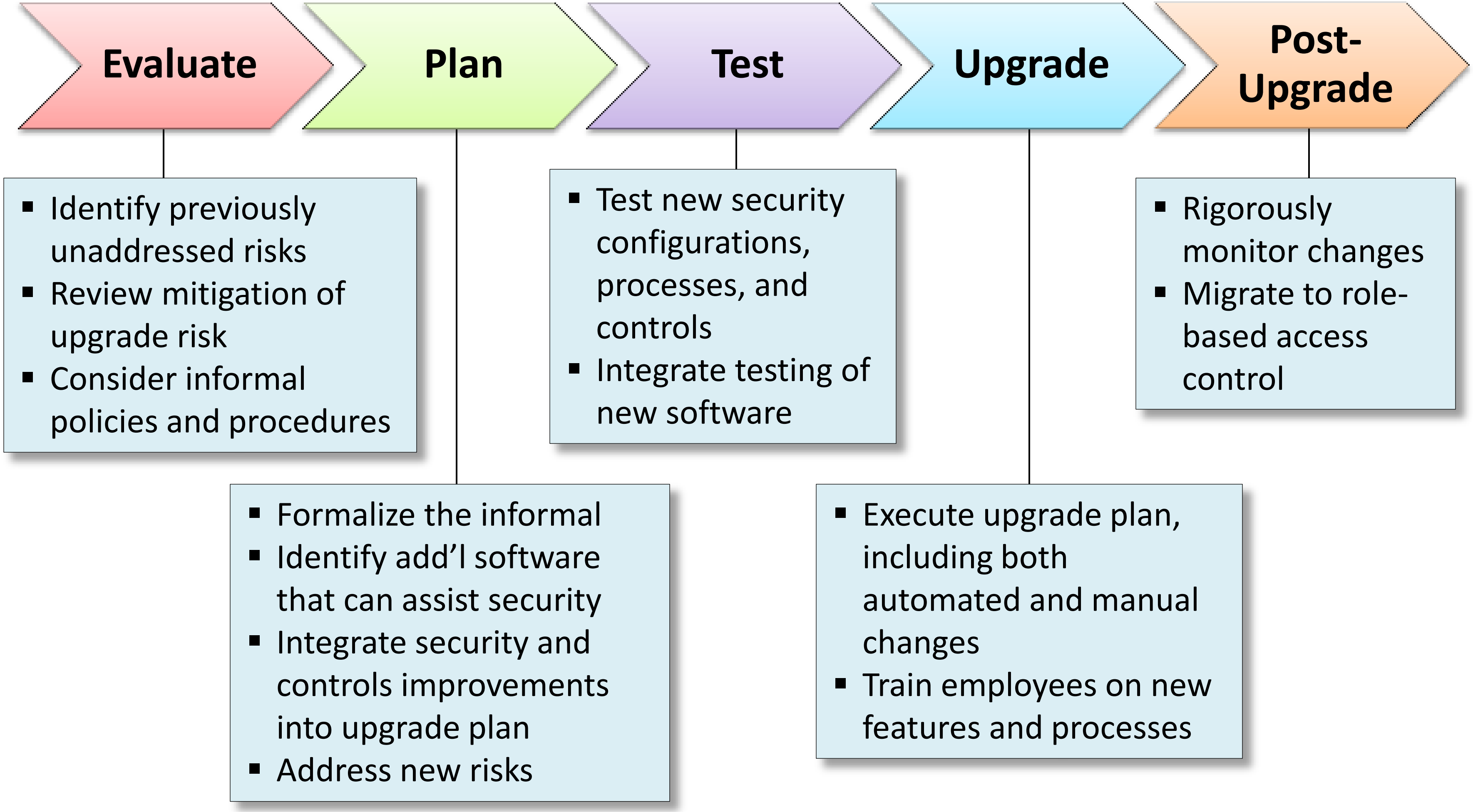

Evaluate

- Identify previously unaddressed risks
- Review mitigation of upgrade risk
- Consider informal policies and procedures

Plan

- Formalize the informal
- Identify add’l software that can assist security
- Integrate security and controls improvements into upgrade plan
- Address new risks

Test

- Test new security configurations, processes, and controls
- Integrate testing of new software

Upgrade

- Execute upgrade plan, including both automated and manual changes
- Train employees on new features and processes

Post-Upgrade

- Rigorously monitor changes
- Migrate to role-based access control

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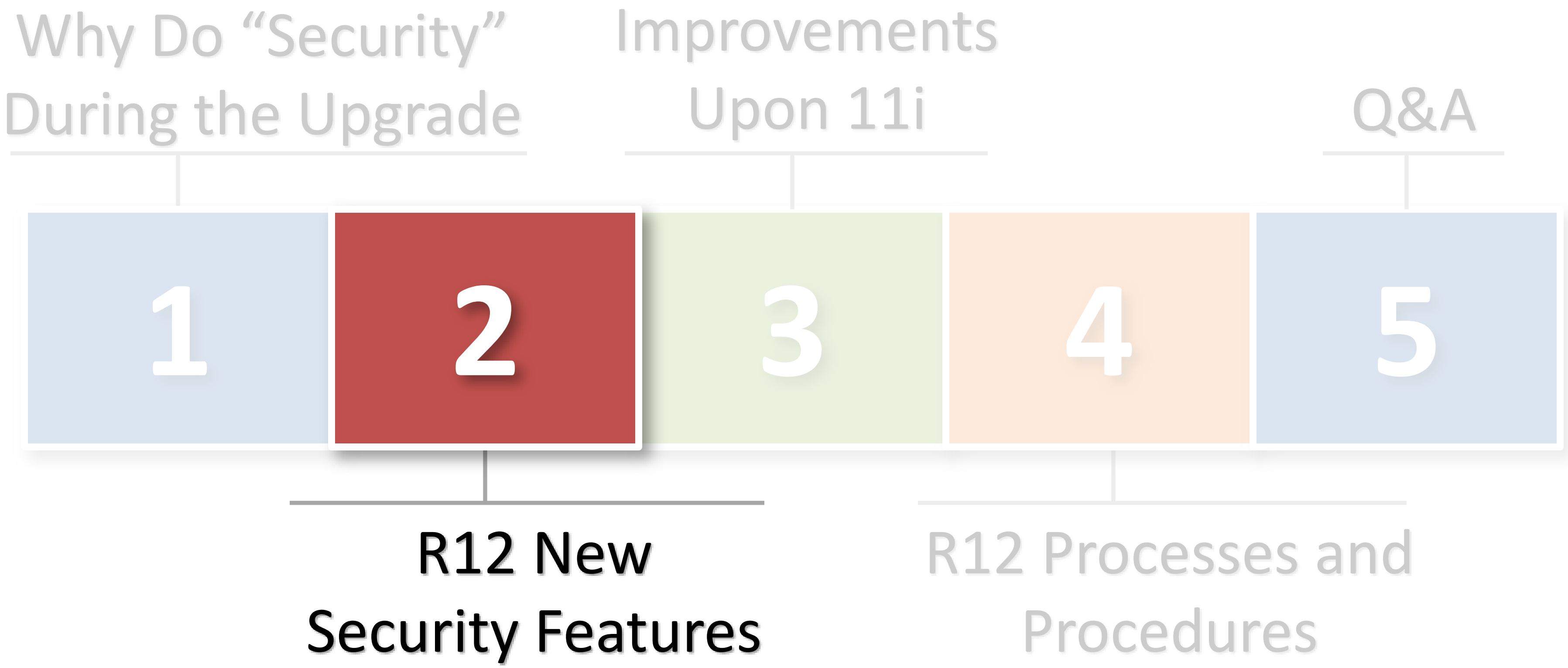

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R12 New Features

- **MOAC – reduce number of responsibilities**
  - Restrictions on localizations
- **SLA – ability to enter journal through subledgers**
- **Definition Access Sets – better secure various components throughout the GL**
- **Data Access Sets – better security within the chart of accounts (Inquiry, Balancing Segment Values)**

Role Based Access Control (RBAC)

- RBAC is an ANSI standard for access control
- Allows for responsibilities to be assigned through roles
- Simplifies assigned of common responsibilities
- Role Inheritance and Role Categories
- See Metalink Note ID 290525.1

User Management (UMX)

- **New user registration**
  - Self request access with approvals and workflow
- **Enhanced Login Assistance**
  - Forgot Username
  - Forgot Password
- **Process to create users with strong, one-time passwords**
- **New security wizards**

Proxy User

- **Proxy User allows a user to specify a proxy who can act on their behalf.**
  - For example, an executive can designate an assistant as a proxy, allowing that assistant to
  - Create, edit or approve transactions on behalf of that executive
- **Generally, avoid use due to auditing issues**
- **Can be used to solve the concurrent request scheduling problem**

Protecting Database Accounts

- **Lock Database Schema Accounts (GL, FA, AP, etc.)**
  - Use AFPASSWD rather than FNDCPASS
  - **Lock Products Schema Accounts**
    - > AFPASSWD –L TRUE
  - Improved separation of duties
  - *See R12 SAG – Configuration*
- **Oracle 11g case sensitive passwords (12.1 only)**
  - SEC_CASE_SENSITIVE_LOGON = TRUE
  - APPLSYSPUB must always be uppercase
- **Change the APPLSYSPUB password**
  - Finally works in R12 and supported by Oracle
  - Also make sure the password is changed in AutoConfig

PCI PA-DSS

- **Oracle PA-DSS Consolidated Patch for Release 12.1**
  - Reduces complexity of PCI DSS compliance
  - Fixes multiple functional weaknesses when processing and viewing credit card data
  - Does not eliminate significant manual configuration for PCI DSS
  - Only 12.1 is PA-DSS compliant
  - See Metalink Note ID 984283.1
- **11i and 12.0 will not be PA-DSS compliant**
  - See Metalink Note ID 1101213.1

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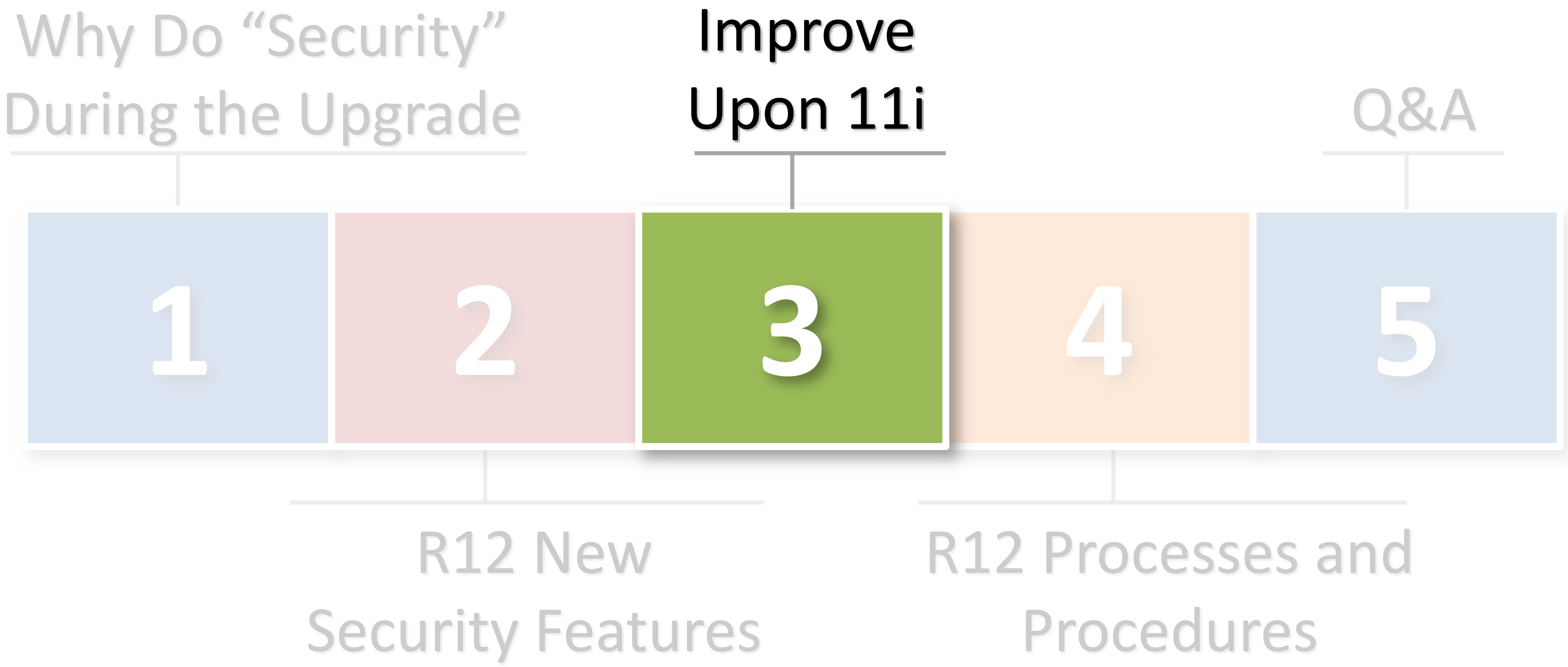

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Q&A

Upgrade +1 Concept

- **Consider new software:**
  - SOD software
  - Trigger or log-based technologies to develop detailed audit trails (before/after values)
  - External security analysis
  - Allow for monitoring of SQL forms, configurations related to key controls, development objects – better QA over your Change Management process

Fix What Was Broken

- Privileged user access
- Excessive access to configurations by end users
- Access to transactions by IT personnel
- Usage of generic or vendor supplier user accounts
- Not monitoring activity through SQL forms

Application Security Design

- Move toward use more customized responsibilities, if not all custom responsibilities
- Move toward use of all custom top-level menus and more custom sub-menus – such as those related to setups – reduce upgrade risks
- Take into consideration sensitive data
- Better definition of Request Groups

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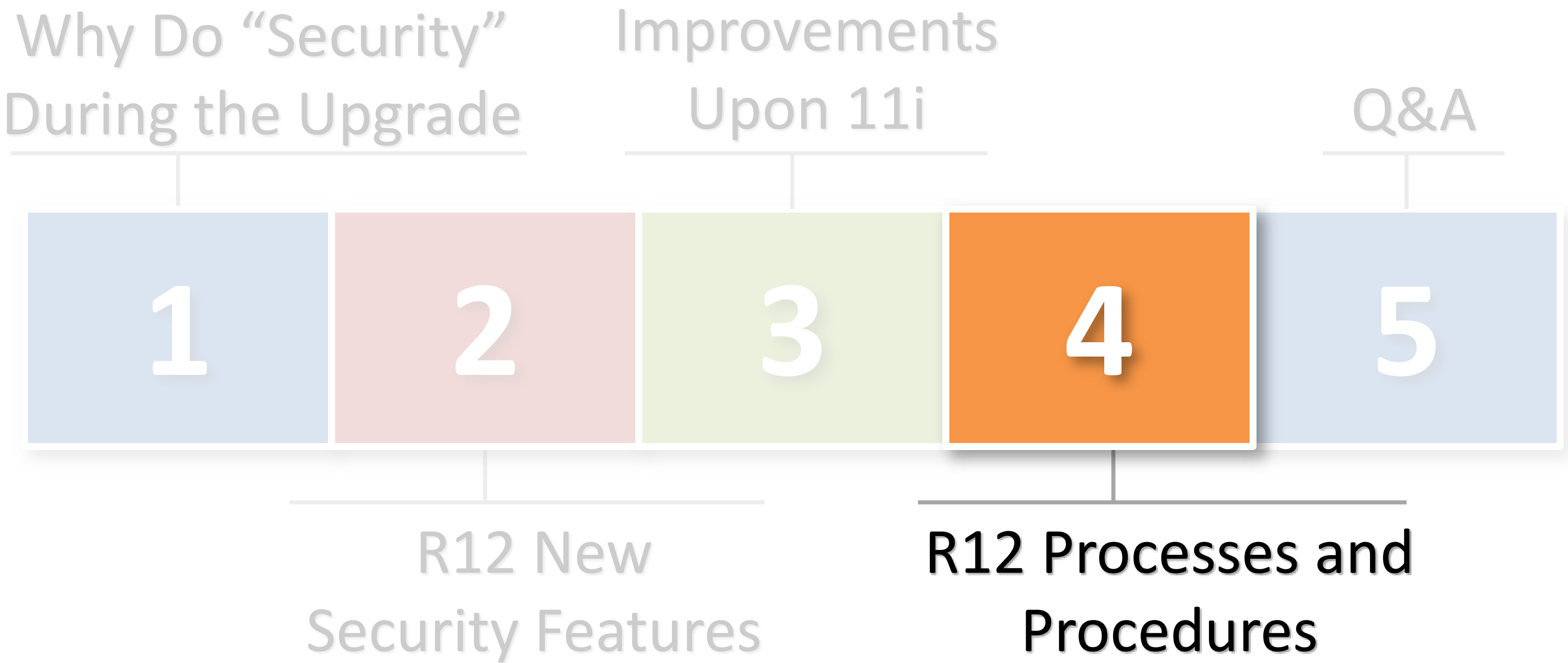

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Change Management

- **Formalize processes related to:**
  - Configuration Change Management
  - Patch Change Management
  - Application Security Change Management
  - Database Security Change Management
- **Implement a more robust Quality Assurance process related to Change Management**
  - Reduce unapproved changes
  - Protect integrity of system

Improve Controls

- **Identify additional risks such as:**
  - Operational risks specific to your organization
  - Fraud risks
  - Data security
- **Automate controls:**
  - Seeded workflows – build/changes processes to accommodate; Personalizations; Alerts
- **Document compliance with published Best Practices**

R12 Upgrade Controls Recommendations

- Process and Controls Change Committee
- Automate controls, where possible
- Evaluate ‘key’ controls to reduce audit scope, cost
- Implement technology and processes to better monitor / automate controls
- Document formal risk assessment process for application security risks
- Develop process to assess and document results of risk assessment – all risks

R12 Upgrade Security Recommendations

- **Include security tasks throughout the upgrade project**
  - Implement high value, low effort security improvements and enhancements
  - Leverage the “free” testing cycles
- **Adhere to the Oracle Best Practices for Oracle EBS security**
  - See Metalink Note ID 403537.1
  - Written by Integrigy
  - Oracle has not updated since 2007
- **Validate the security configuration post-upgrade**
  - Perform a post-upgrade security scan or review
  - Validate compliance against security best practices
  - Oracle E-Business Suite is complex and “the devil is in the details”

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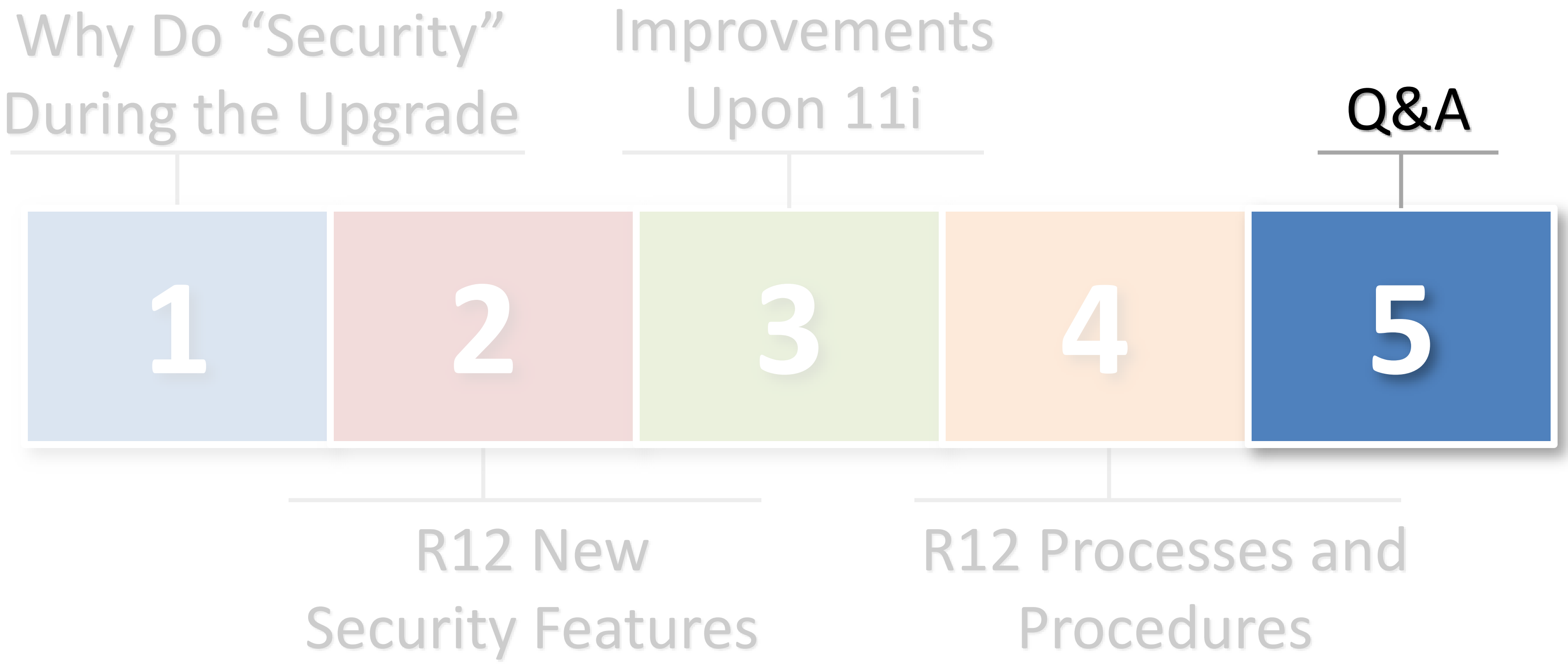

Why Do “Security” During the Upgrade

Improvements Upon 11i

Q&A

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