



# Thou Shall Integrate by the Sweat of thy Brow...

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SPA2008 – 19<sup>th</sup> March 2008

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Eoin Woods, BGI



# Timetable

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- 13:00 – 13:10: Introductions
- 13:10 – 13:40: Session Overview
- 13:40 – 14:00: Exercise Setup and Preparation
- 14:00 – 15:30: Simulation Exercise (inc. break)
- 15:30 – 15:45: Review Experience
- 15:45 – 16:00: Present and Discuss Experiences

*Clean timetable slide if times change (hidden)*



# Timetable

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- 00:00 – 00:10: Introductions
- 00:10 – 00:45: Session Overview
- 00:45 – 01:00: Exercise Setup and Preparation
- 01:00 – 02:30: Simulation Exercise (inc. break)
- 02:30 – 02:40: Briefly Review Experience
- 02:40 – 03:00: Present/Discuss Experiences



# Introductions

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- Rob James
  - Data Architect at HSBC CIBM
  - Data, enterprise and integration architecture
- Eoin Woods
  - Software Architect at Barclays Global Investors
  - Software (and some enterprise) architecture
  - Previous EA work mainly integration design and refereeing



# Session Objectives

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- Examine the dynamics of the system integration process
- Run a guided simulation to allow exploration of the process
- Allow reflection and sharing of experience
  - consolidate what we've learned
  - allow lessons to be drawn
  - identify open questions



# Session Overview

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- This is a simulation not a workshop, meaning:
  - Session takes the form of a guided exercise not a fixed set of tasks
  - We define the problem but provide minimal instructions and guidance
  - Time for reflection at the end to draw out insights
- We will form teams and “integrate” some systems, working in different ways



# Simulation Overview

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- One hour, one problem to solve
  - Expense management system and purchase order management system need to send payments
  - Both use a common payment processing system
- Work in groups to “integrate” the three systems
  - Each group simulates a particular scenario
- The “coding” task is to produce integration mapping tables for inter-system messages



# Simulation Rules

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- Front and Back Office teams will be separated & no direct contact is allowed between them
  - Can pass hand written documents
  - Meet to discuss problems (not create deliverables)
  - Instant messenger / email
  - Phone
- You must follow the constraints of the scenario we assign to your group (next slide)



# Simulation Scenarios

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- “Just Do It”
  - Minimise cross-team coordination required
  - Integrate the systems on a case-by-case basis
- “Central Standard Based Approach”
  - We will provide a common schema for inter-system messages
  - The teams map their systems’ interfaces to the common schema to integrate the systems



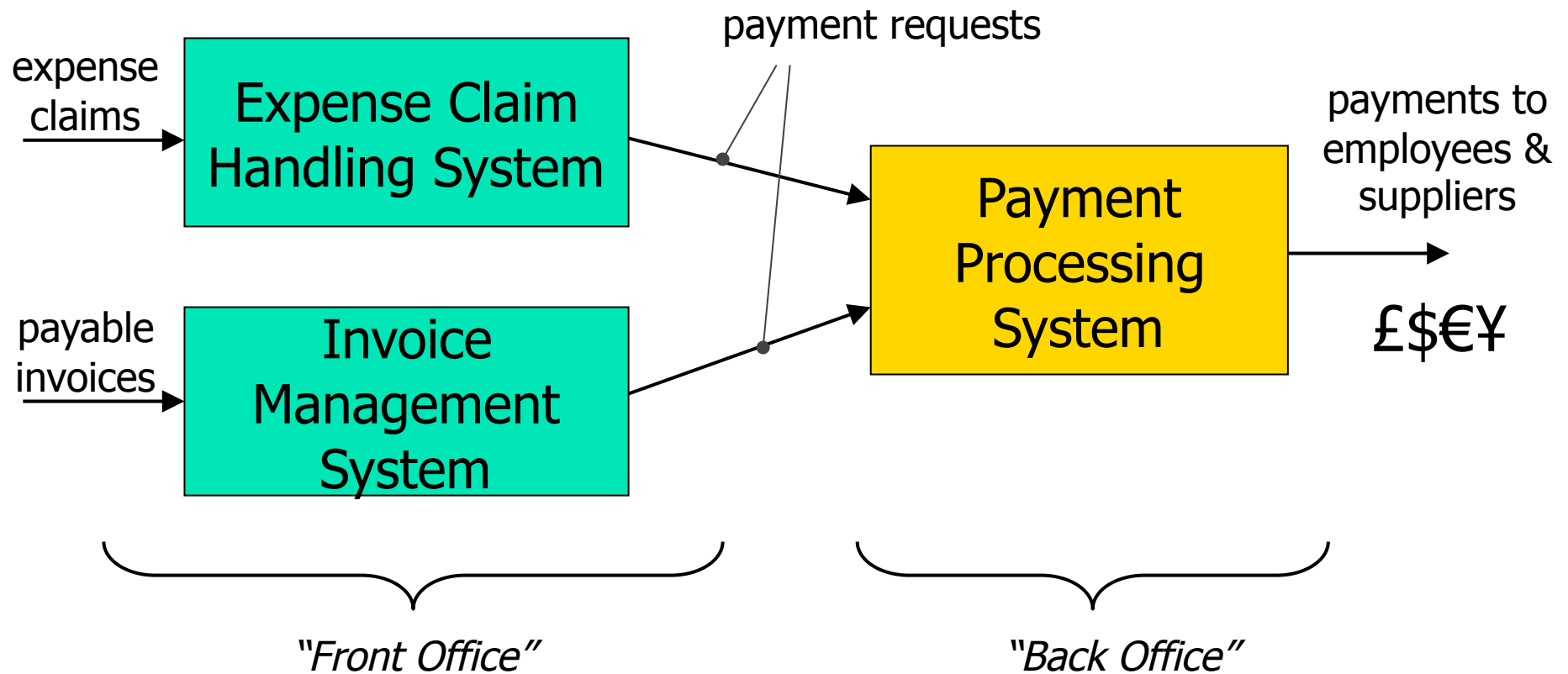
# Integration Problem

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Domain is payment processing systems ...

- An Expense Claim Handling System
  - used to manage employee expense claims
- An Invoice Management System
  - used to manage payments to suppliers
- A Payment Processing System
  - used by the other two to send payments to employees or suppliers

# Simulation Problem to Solve





# Simulation Inputs

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- Brief descriptions of the systems and their existing interfaces
- Example XML messages for each system
- Specifications of the required integration messages
- Brief descriptions of the two scenarios
- Proposed common integration schema for the standards-based scenario



# Simulation Outputs

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- Mapping tables (e.g. spreadsheets) showing how the systems are integrated
- Any data formats you've added
- Any other work products you needed to produce
- The experience of trying to integrate systems across teams



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# Simulation Setup and Preparation

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- Divide into 2 groups of about 6 people
  - We'll give each group a scenario to follow
- In each group split into 3 teams
  - One for each system
- Front Office and Back Office teams move to their own work areas
- Read the materials specific to your system
- Each team should review what it plans to do
  - Ask us questions if anything isn't clear



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# Simulation Exercise

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- 90 minutes total
  - ~60 minutes exercise
  - ~30 minutes break time whenever you want it
  - Remember to follow your scenario and the rules
- Ends at 15:30
  - No over runs please!



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# Review and Presentation

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- Gather your groups together
- 10 minute review of the exercise
  - What went well?
  - What went badly?
  - What would you change or do differently?
- Capture 3 lessons that you've learned to present to the whole group



# Summary and Review

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- We've found integration to be a hard problem because:
  - Everyone makes assumptions based on incomplete information
  - Communicating is hard due to distribution and lack of common language
  - Designing neutral bridges is difficult and expensive
- What have our lessons today revealed?



# Comments and Questions?

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