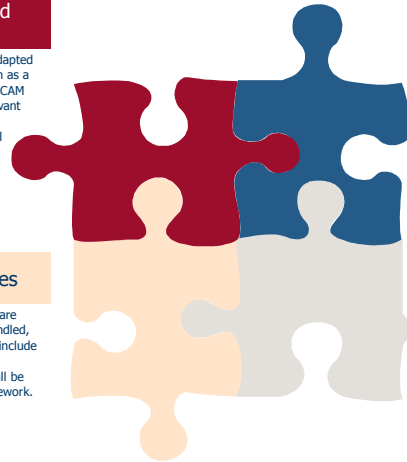


## Risk Convergence in ICAM

### Laws, Regulations and Policies

Relevant laws & regulations are adapted and embedded into the application as a company wide policy framework. ICAM allows systematic mapping of relevant policies to control objectives and consequently to underlying control activities.



### Corporate Governance Structures

ICAM is designed to operate in line with standard control governance structures and enables enterprise-wide oversight of divisional/ regional or matrix organisations.

### Deficiencies and Issues

Issues identified in the enterprise are raised, documented, assigned, handled, and archived in ICAM. Issues can include internal or external audit recommendations and these can all be linked to the internal control framework.

### Internal Controls

Detailed specification and classification of controls ensures full compliance with laws, regulations, and policies. In addition it fully supports the achievement of strategic and tactic goals.

## Risk Management Governance

### "Three Lines of Defence" Model



## Segregation of Duties

### Internal Controls and Segregation of Duties

**Societe Generale, \$7 billion in losses:** Operations expert moved to trading desk, taking some jobs with him.  
**Barings Bank, \$1 billion in losses:** Operations and trading managed by the same individual.  
**Lehman Brothers, \$0.3 billion in losses:** Sales manager took over certain simple operations functions.  
**Daiwa, \$1.1 billion in losses:** Same scenario as Societe Generale.  
**Allied Irish Bank, \$0.7 billion in losses:** Risk limit reporting under control of trader.  
**Tyco, \$0.3 billion in losses:** Three top executives colluded and board of directors exercised ineffective supervision.  
**Orange County, \$1.6 billion in losses:** Trader seen as the unquestioned maestro, while back office was underpowered to understand his trading procedures.

### Why SoD ?

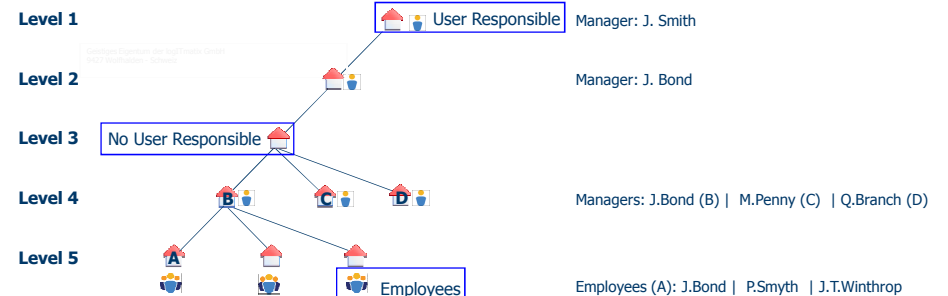
- Required by Sarbanes Oxley
- Proven management technique that organisations of all sizes can benefit
- Primary objective is the prevention of fraud and errors
- With good SoD it requires 2 or more employees for irregularities to occur without detection
- Organise to achieve adequate segregation of duties – see ISACA's Segregation of Duties Control matrix
- Define general categories of functions to be separated

### ICAM supports and enhances SoD

- Structured segregation of duties via dynamic role assignment
- Enables management oversight of duties
- Fully supports the ISACA's Segregation of Duties Control matrix
- Reports SoD anomalies

## ICAM Automated Management Oversight

### Segregation of Duties (SoD)



- Task are designed to be scheduled for all the employees at Level 5 department A.
- The signoff is the Manager one level above, i.e. Level 4.
- Within the Control Segregation of Duties is set to enforced. Therefore multiple execution/signoff combinations are automatically scheduled:  
 Execution tasks: P.Smyth & J.T.Winthrop (Level 5)      Signoff task: J.Bond (Level 4)  
 Execution tasks: J.Bond (Level 5)      Signoff task: J.Smith (Level 1)
- When Segregation of duties is set to be enforced it is not possible for the same employee to complete the execution task and also sign them off. Therefore the scheduler looks up the structure to find the next employee that is not the execution task assignee.