

# Practical Configuration Management and Change Management

What works, what doesn't and where is the real value of configuration management

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# Square Mile Overview

UK based – Cirencester, Glos  
Sister company - AssetGen Ltd

Focus on applying asset & configuration management techniques to large infrastructures & data centres

Develop AssetGen toolsets for end to end systems and service mapping

Integrate existing CMDB / knowledge sources with other toolsets

Training, design, data capture, process development

BCS-Configuration Management Specialist Group  
Committee member 2009-

BCS-Service Management Specialist Group  
Founding member and chairman 2006-2008

## Business Processes

Departmental, Company

## Services

End user, infrastructure, supplier

## Applications

PC, server, mainframe, SOA

## Virtual Infrastructure

PCs, Network, Servers, Storage, DBMS

## Hardware Infrastructure

PCs, Network, Servers, UPS, Storage, Other

## Fixed Infrastructure

(Cabling, Power, Cabinets, Rooms, Buildings)

# Different Perspectives

“90% of major incidents are caused by change, even with our change processes and CABs” **It needs a team approach, supported at all levels**

“We are developing our own CMDB because nothing meets our requirements” **How long until a populated, production CMDB?**

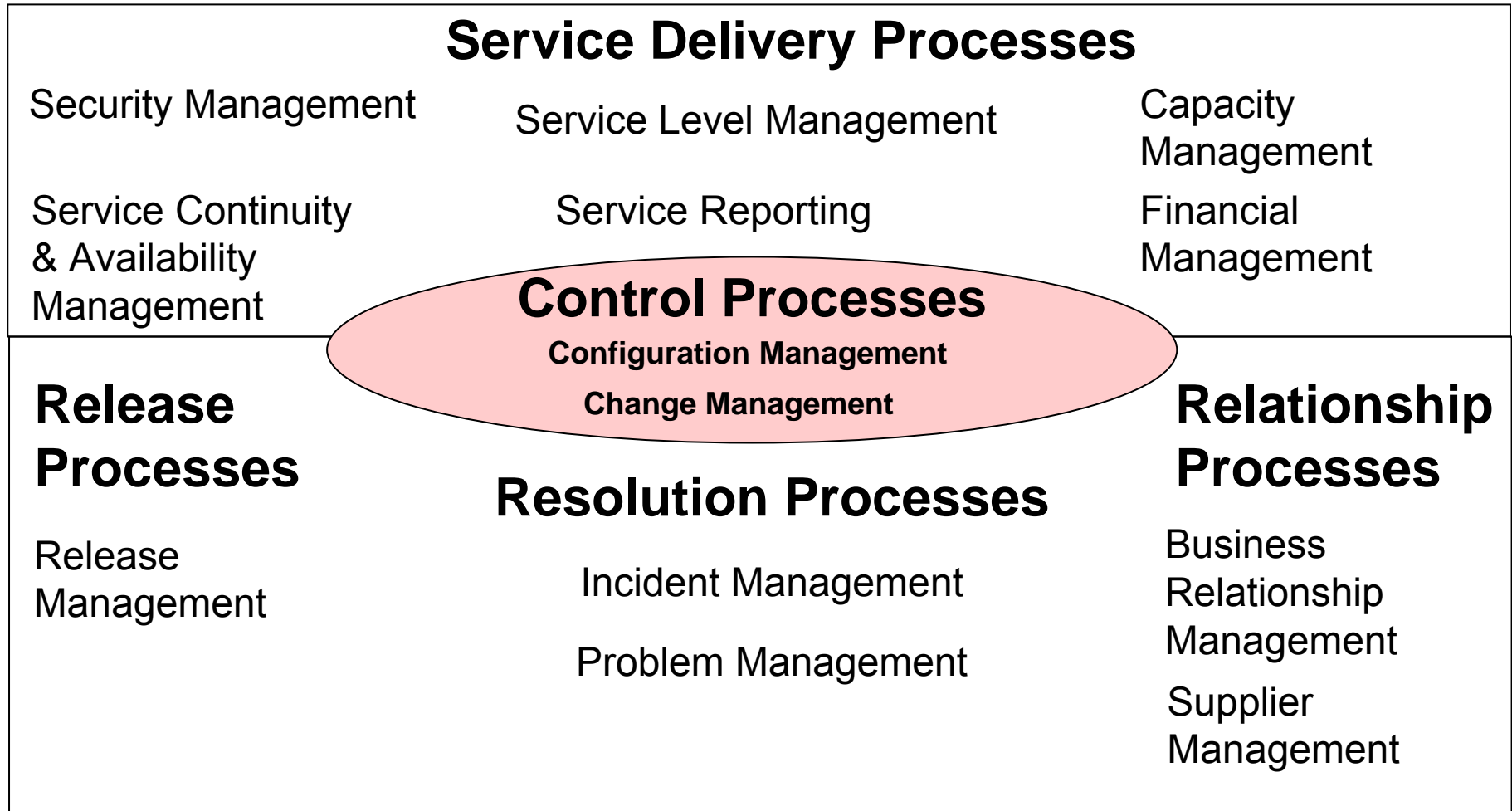
“If it doesn’t automatically map hardware / software / system dependencies, we’re not interested as we won’t trust the data”  
**Configuration management is mainly manual**

“We developed and implemented a CMDB covering all critical applications and hardware platforms, but nobody uses it”  
**CM requires culture change by users**

# Workshop Objectives

- How should change management work?
- What is configuration management?
- How do we determine what we want configuration management to do for us
  - from a service management perspective!
- What is real and what is hype

# ITIL Version 2 / ISO20000



# ITIL Change Management

- To ensure that standardized methods and procedures are used for efficient and prompt handling of all Changes, in order to minimize the impact of Change-related incidents upon service quality, and improve day-to-day operations of the organization.
- All changes must be logged so they can be coordinated, scheduled and root causes identified if failures occur
- One of the key ITIL processes to implement

**What would we log as a change in a data centre?**

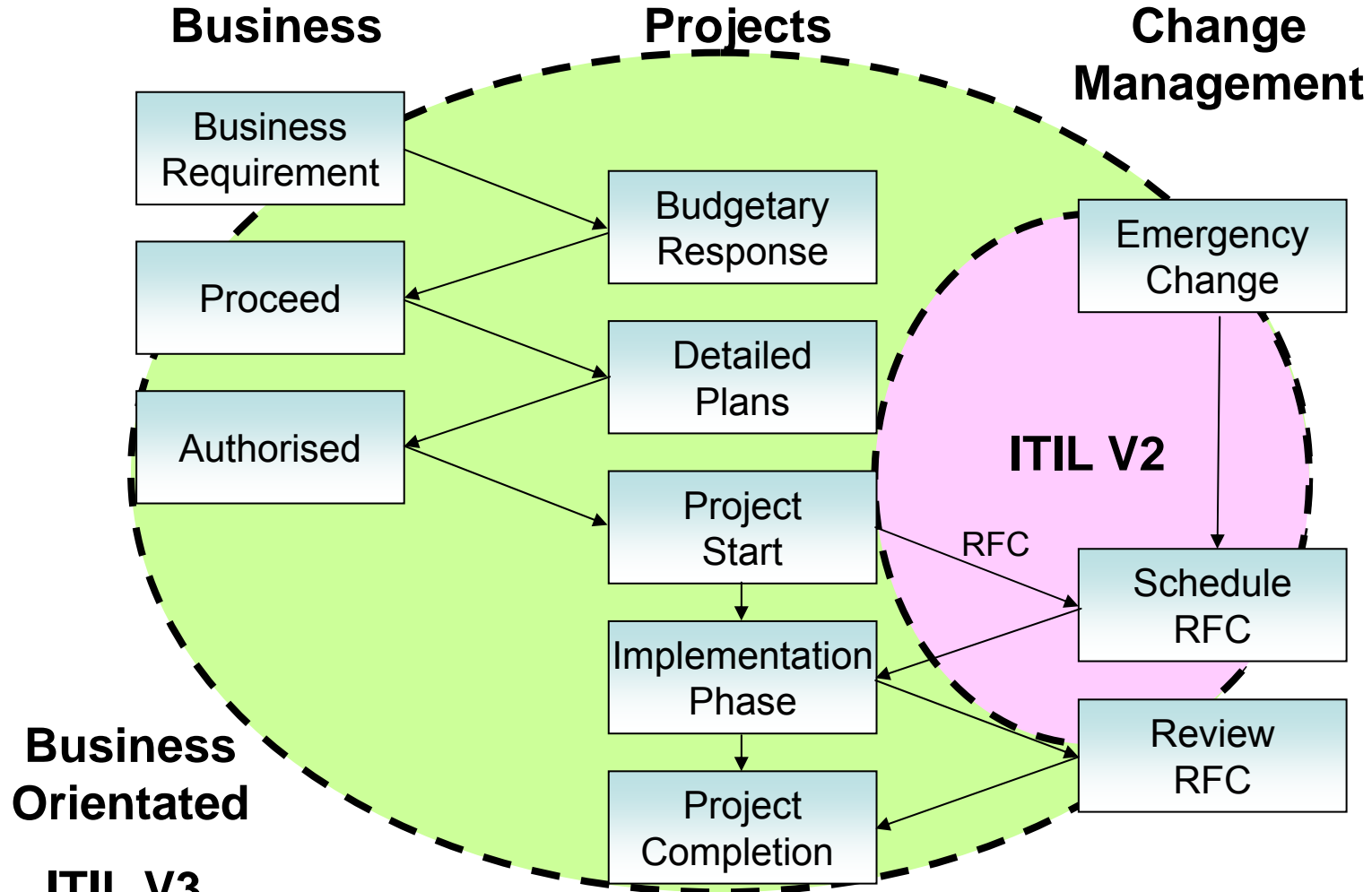
# Change Management Example

1. A generic change system will typically require the requestor to
  - Identify Configuration Items (CI) being changed (hardware/software)
  - Identify the potential services impacted
  - Describe the testing and rollback plans
2. The Change Advisory Board (CAB) will look at other changes from a CI and a service basis to assess related change conflicts or potential risks when scheduling

For example.

- Change Req CR1 on Server SVRA may affect the Payroll service
- Change Req CR3 on Software PY1 may affect the Payroll service

# Change lifecycle



Business Orientated  
ITIL V3,  
ISO20000

# Typical Service Catalogue

1. Service Name

2. Service owner

3. Change log

4. Service description summary

5. Full service description

- Functional description
- Technical description
- Architecture
- Service structure

6. Support details

- Service Desk contact details
- Opening hours
- Incident priority and severity
- Incident response time
- External providers

7. Service hours

- Options
- Extensions
- Maintenance hours

8. Service quality

- Performance
- Reliability / serviceability
- Availability targets
- Service metrics & reporting

9. Roles and responsibilities

- IT and customer

10. Change management

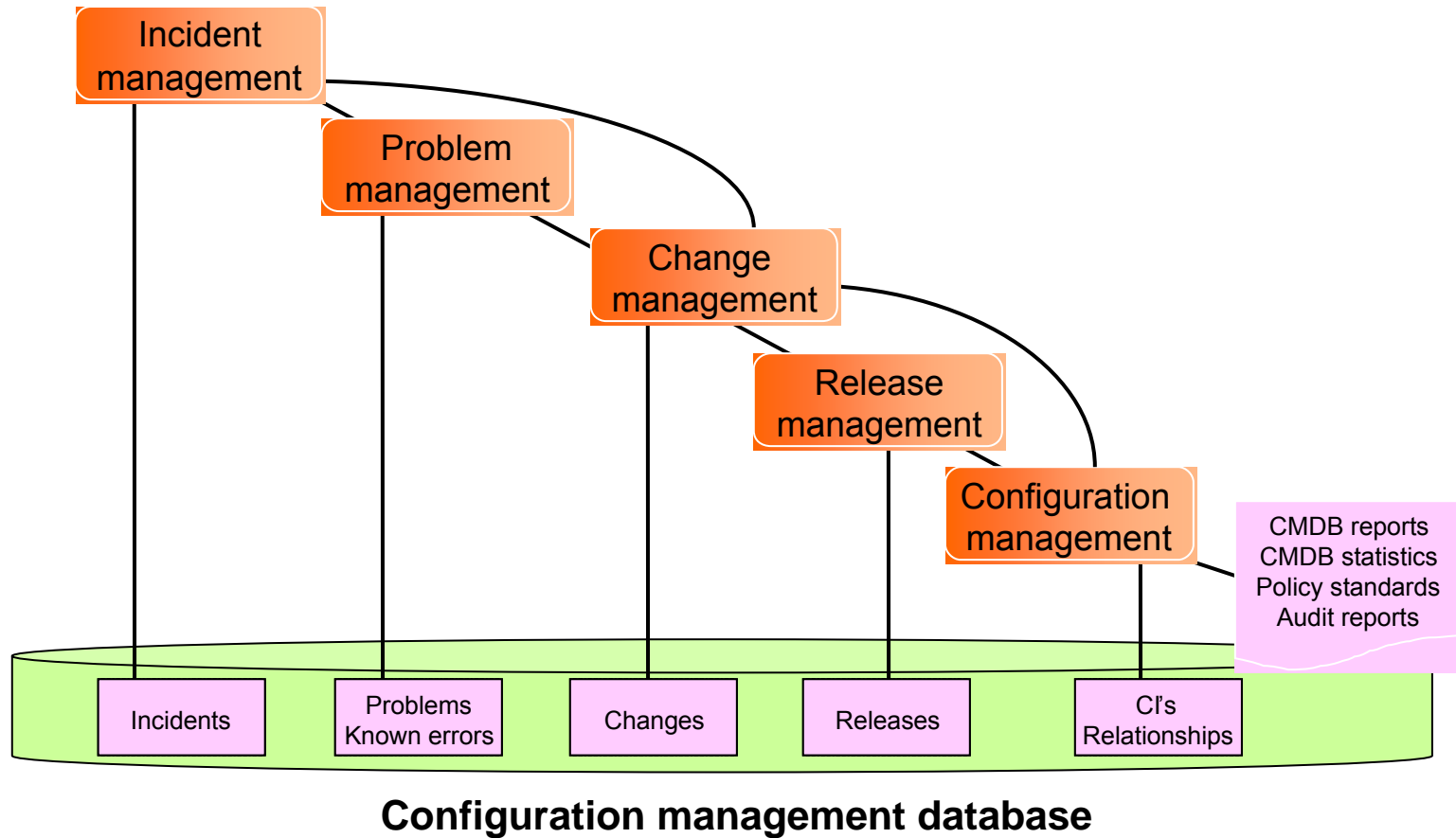
11. IT security

12. IT service continuity

13. Cost model

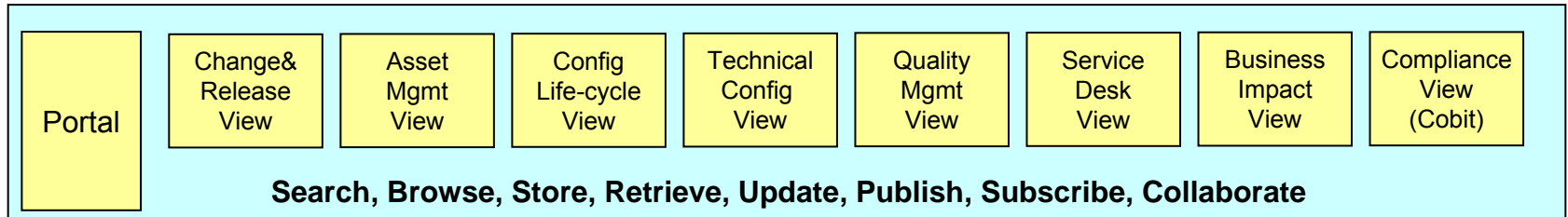
14. Links to related documents

# ITIL V2 Use of CMDB

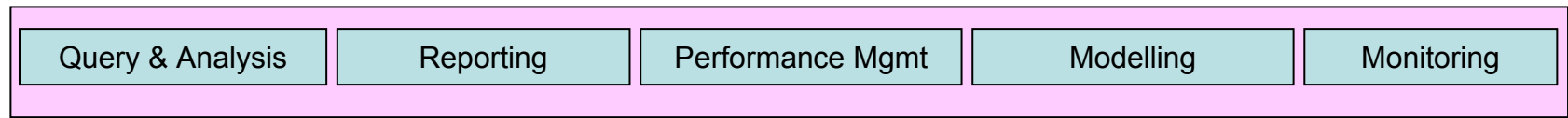


# ITIL Version 3 CMS

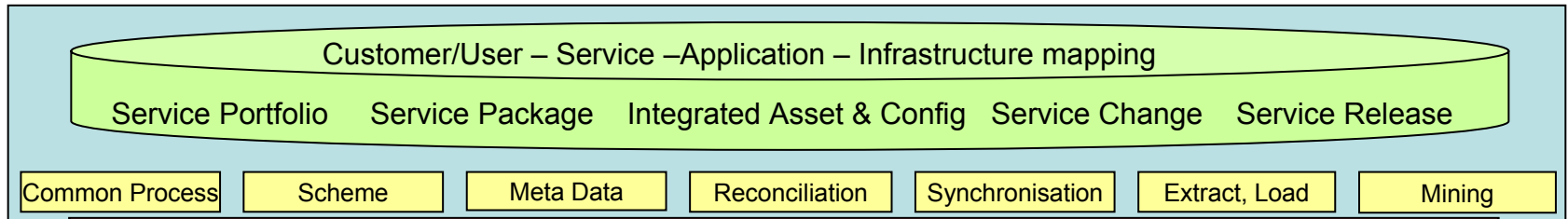
## Presentation Layer



## Knowledge Processing Layer

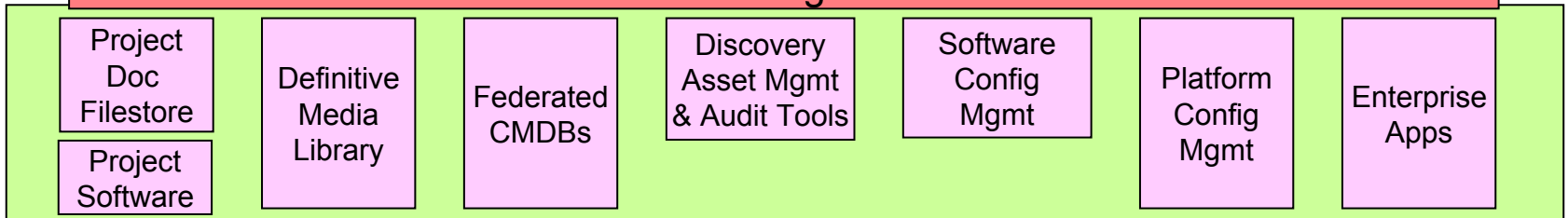


## Information Integration Layer

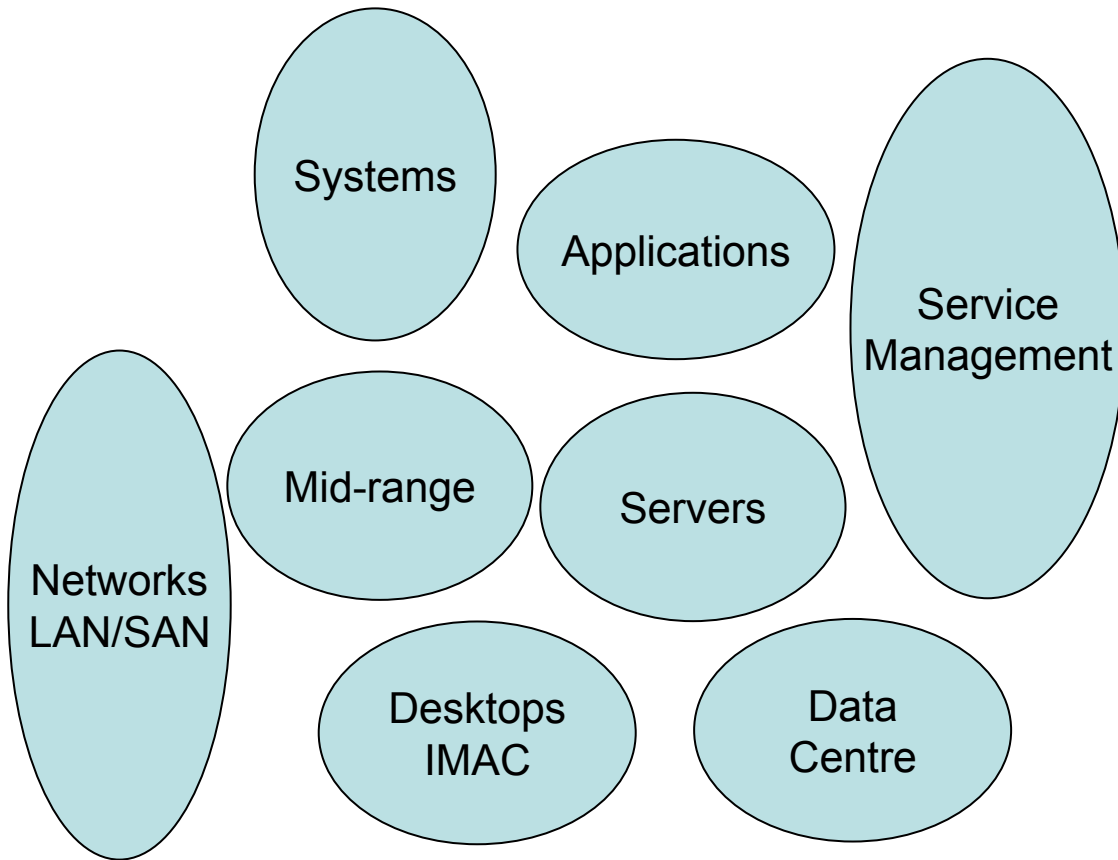


## Data Integration

## Data & Information Sources & Tools



# Different Teams



**Business Processes**  
Departmental, Company

**Services**  
End user, infrastructure, supplier

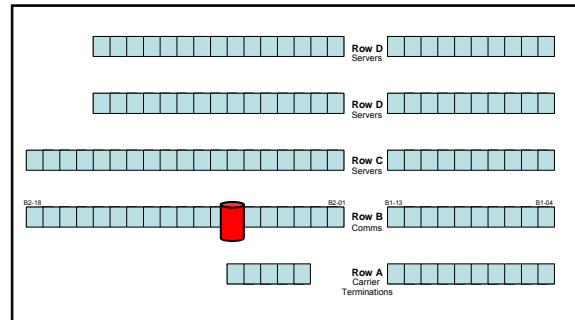
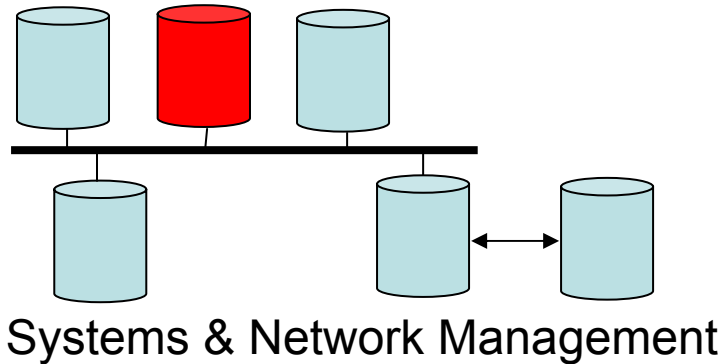
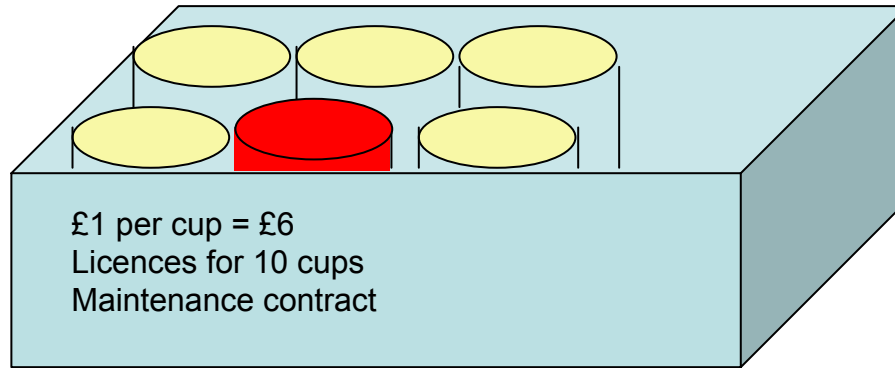
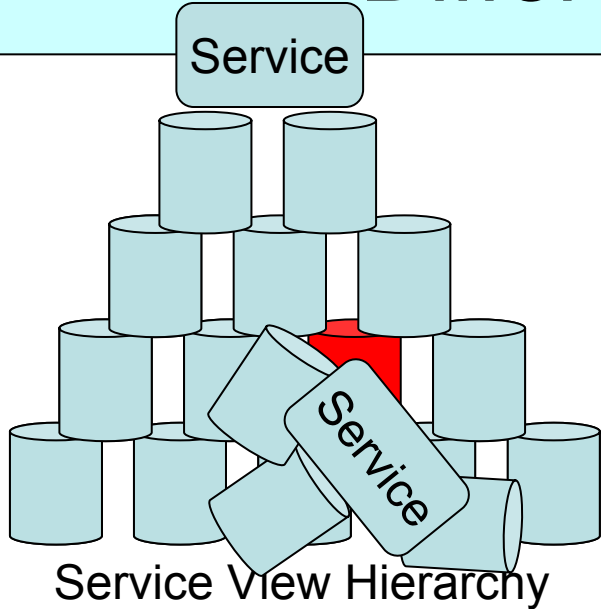
**Applications**  
PC, server, mainframe, SOA

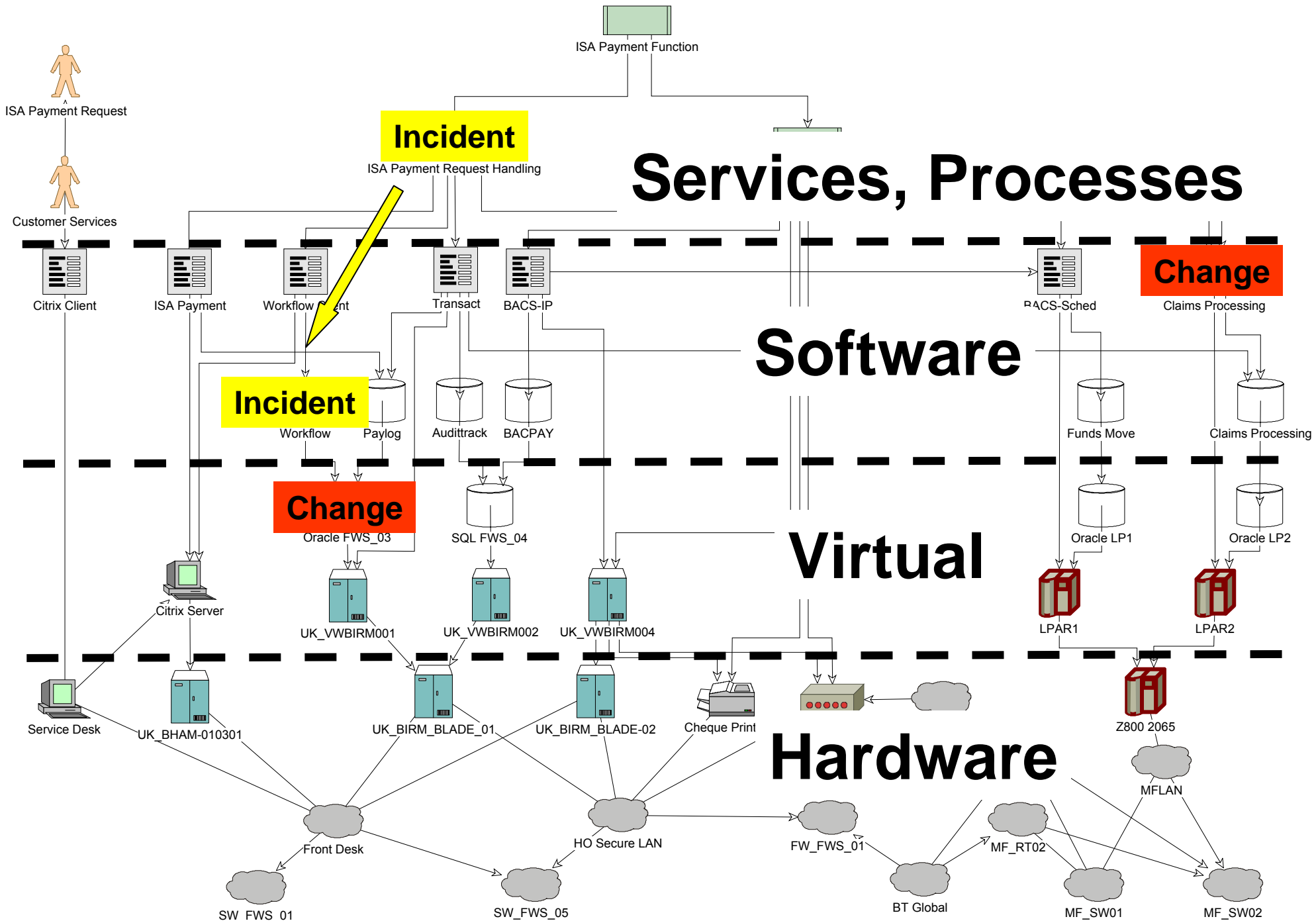
**Virtual Infrastructure**  
PCs, Network, Servers, Storage, DBMS

**Hardware Infrastructure**  
PCs, Network, Servers, UPS, Storage, Other

**Fixed Infrastructure**  
(Cabling, Power, Cabinets, Rooms, Buildings)

# Different Views of a Server





# Different Lifecycles

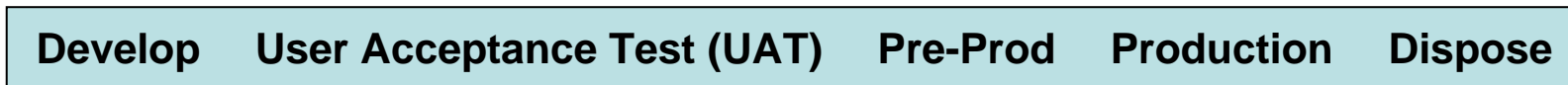
## Hardware



## Commercial Software



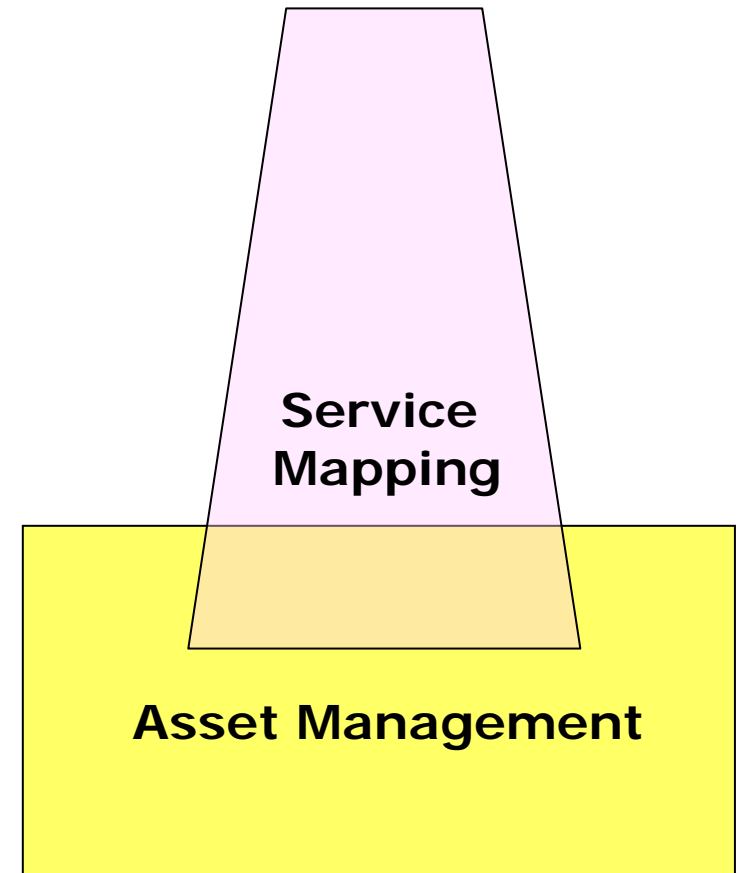
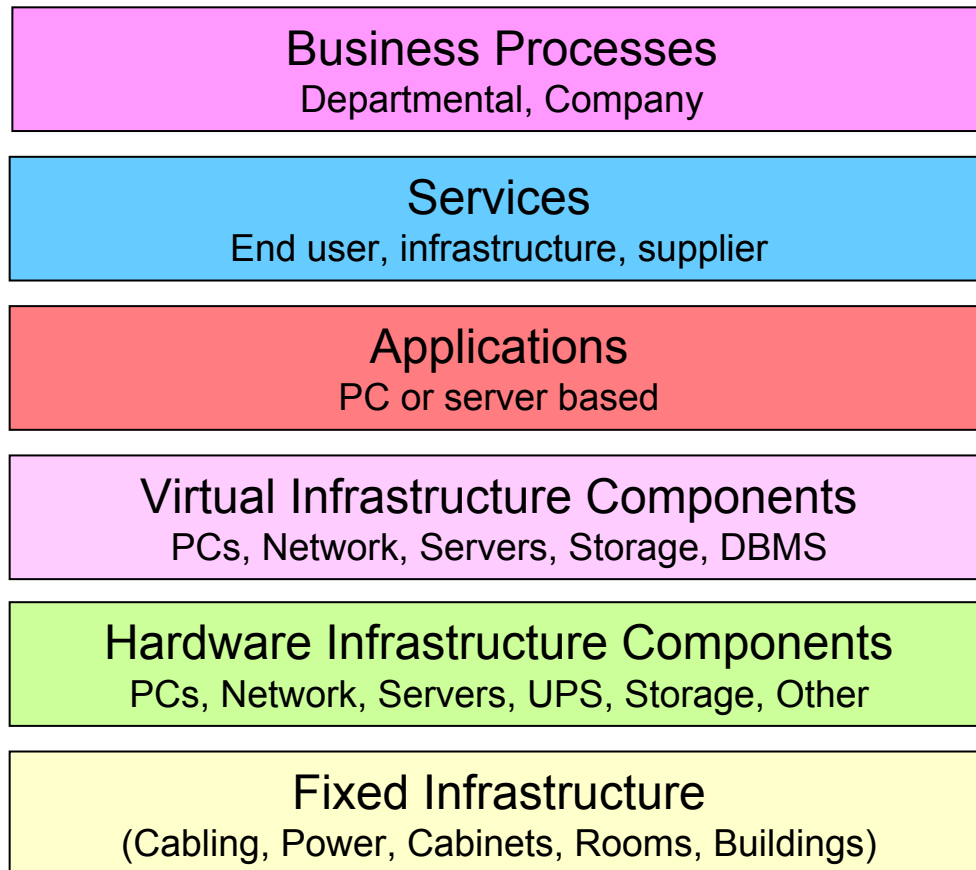
## Bespoke Applications



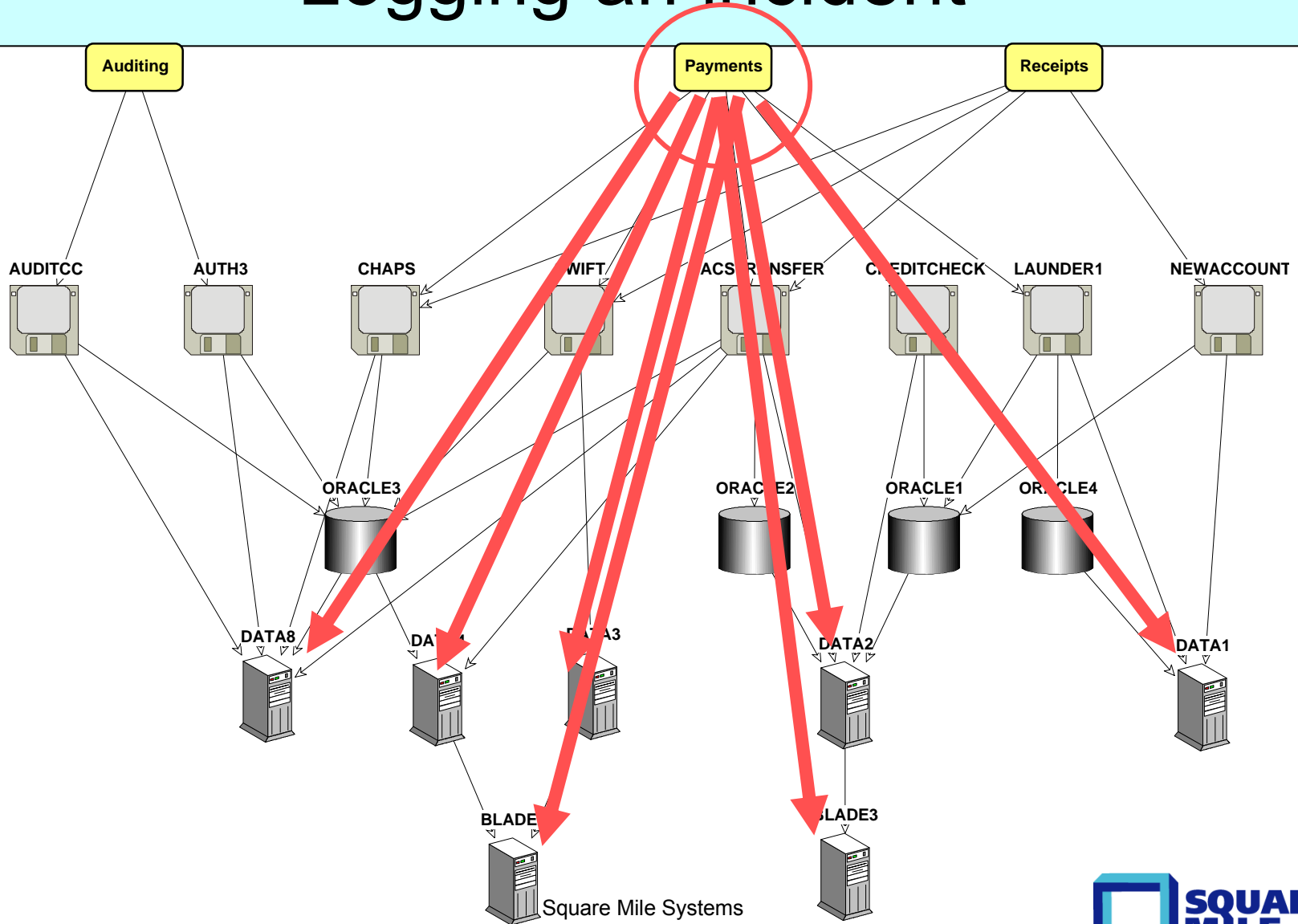
## Service



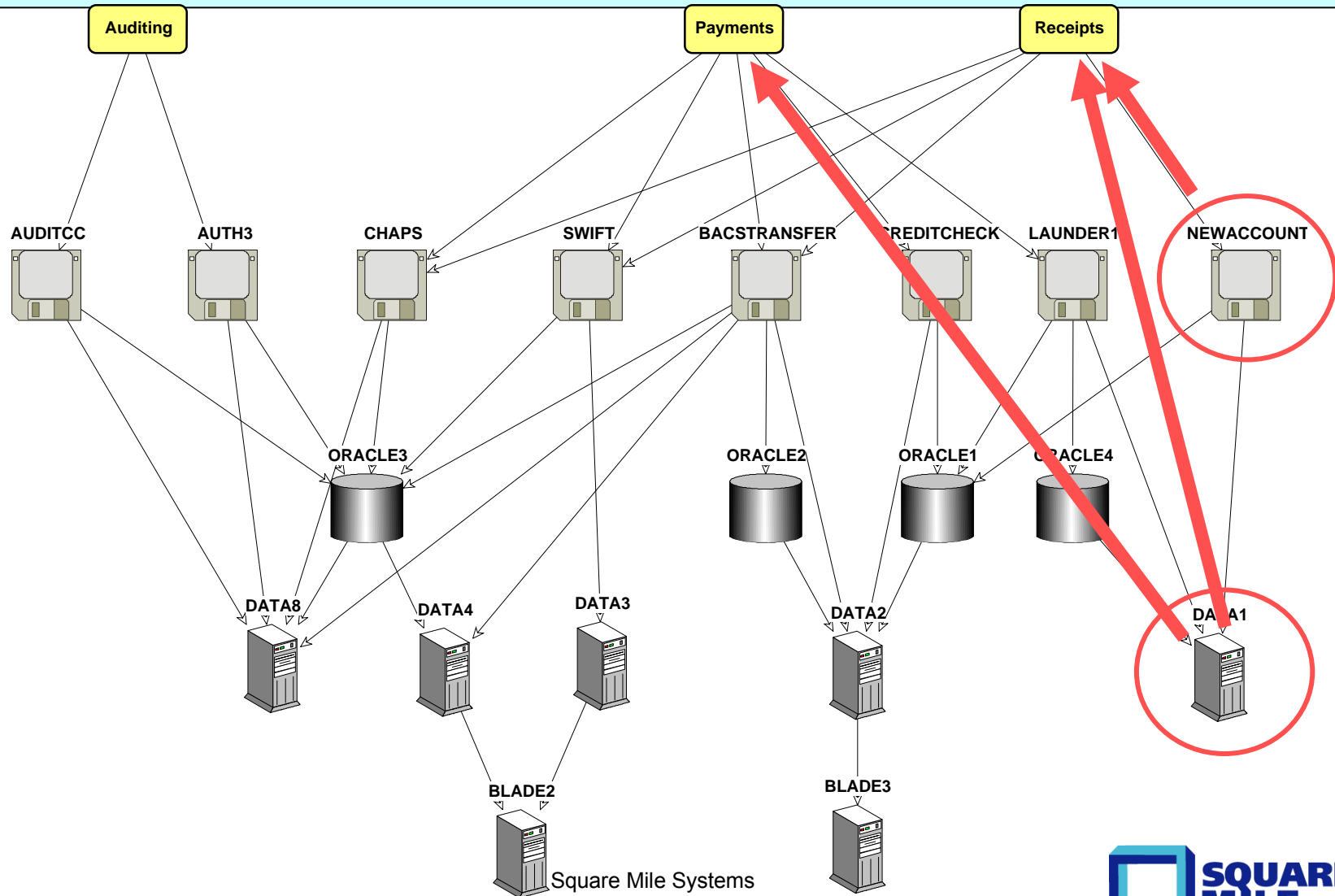
# Setting Scope for Service Mapping



# Logging an incident



# Submitting a Change Request

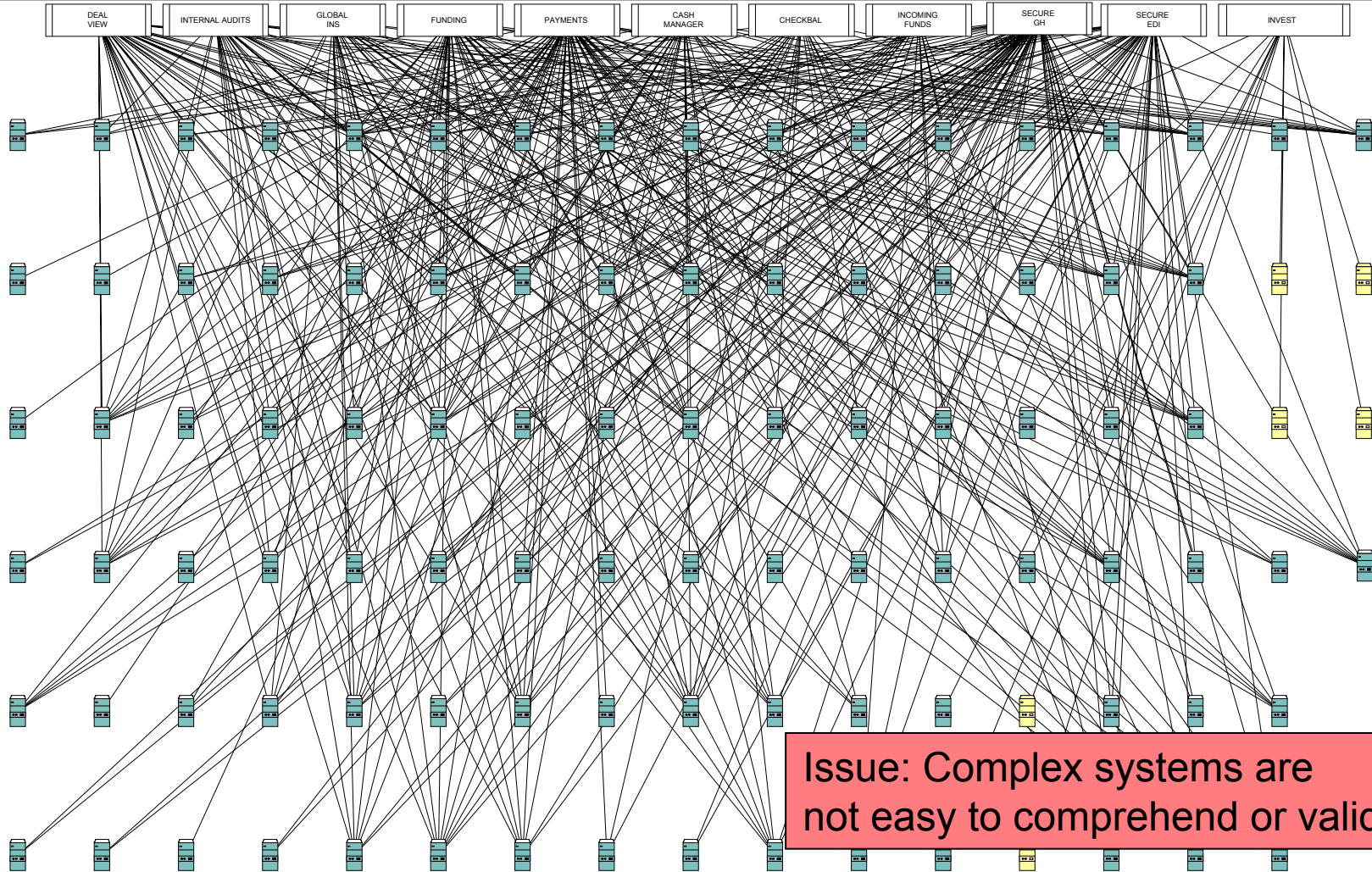


# Exercise Attribute or CI?

For a server, should the following parameters be attributes of a CI, or a separate CI which is related.

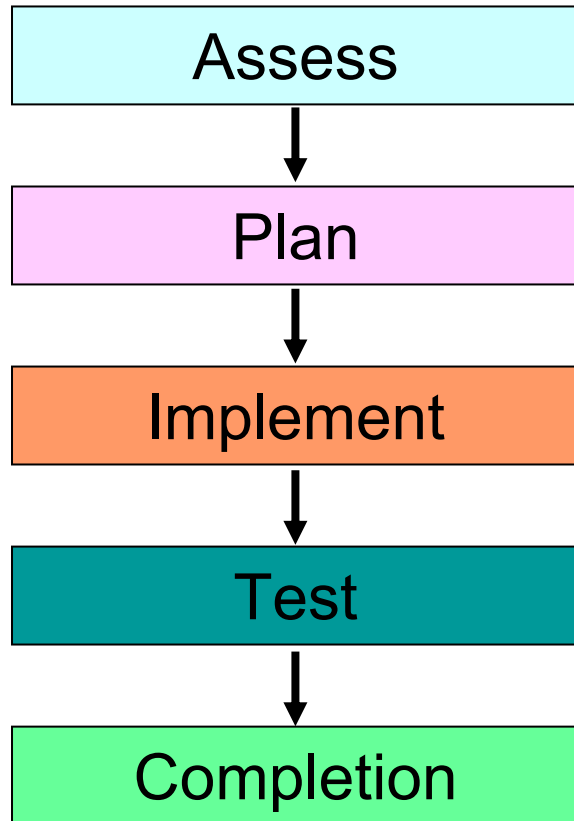
| Item                       | A/R |
|----------------------------|-----|
| Operating System           |     |
| Installed application      |     |
| Business owner             |     |
| Network port               |     |
| Location                   |     |
| Disk Space                 |     |
| Expansion card             |     |
| Business service supported |     |

# Multiple Applications & Servers



Issue: Complex systems are not easy to comprehend or validate

# A Simple Project Lifecycle



When do we fill in a change form?

# Different Needs

## “Top Down” – End to End Task

## Dependency Mapping

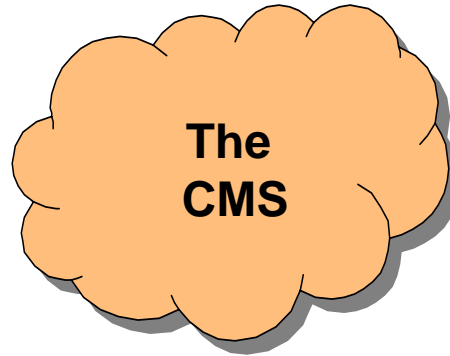
- Education in War Room
- Problem Management
- Problem/Incident/Change Hotspots
- Other operational documentation
- Path dependencies
- Single Points of Failure
- Views by location, business units, services
- Contingency views
- Support matrix across CIs
- Validation of billing/costs/charges

## Impact Analysis

- Incident Management
- Prediction of service outage
- Related problems/incidents/changes/errors
- Live/DR status of key devices
- Batch processes affected
- Times – Service, DR Recovery
- Current device status
- Incident Recovery

## “Bottom Up”- Device led

**Maintenance**  
Accurate updating  
Correct classification  
System reporting  
Validating services  
Consistency across teams  
Linkage to systems monitoring



# Examples

A few examples of communicating service across the organisation

Change

Risk

Linking to technical toolsets

# Further Information

ITSMF

[www.itsmf.co.uk](http://www.itsmf.co.uk)

Discussion forums and CCRM SIG

BCS-CMSG web site

[www.bcs-cmsg.org.uk](http://www.bcs-cmsg.org.uk)

slides downloadable

CMCrossroads

[www.cmcrossroads.com](http://www.cmcrossroads.com)

Web site dedicated to CM (mainly software CM)

Square Mile events

[www.squaremilesystems.com](http://www.squaremilesystems.com)

Slides, white papers downloadable

Webcast

[www.brighttalk.com](http://www.brighttalk.com)

CMDB forum – “Communicating Service Awareness from the CMDB”

Videos

[www.youtube.com](http://www.youtube.com)

Creating Visio Service Diagrams from CMDBs

LinkedIn

[www.linkedin.com](http://www.linkedin.com)

Social networking site with groups on cmdb, itil etc.