

# Square Mile Systems

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## Understanding the Complexity of IT

***Enabling Best Practice in IT Infrastructure Management!***

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# Personal Background

- Technical background
  - Microchip design, WAN/LAN networks
- Consultant
  - Network troubleshooter
- Business Manager
  - Owner/manager
- Industry roles
  - Director, National Outsourcing Association
  - Chairman, BCS Service Management Specialist Group

# Operational Excellence in ICT?



# In Practice

- **Inland Revenue** -Error deleted “more than 100000+ taxpayer records” who are owed rebates. Impact still unknown after 1 year analysis
- **Manchester Police** -Upgraded phone system crashed, costs to be recovered for extra police patrols, 24hr station opening, extra call handlers and staff
- **Tesco** - Computer failure caused 220 stores to go without fresh food
- **Cahoot** – System upgrade affected login process, affected Abbey shares
- **DWP** – Test PC image rolled out in error 90K desktops affected
- **Buncefield Oil Depot**
- **Square Mile Systems** – ISP moved data centre, 4 days no web / email

# Strategic ICT Objectives

1. Deliver managed services and projects within budget
2. Prove compliance with software licences
3. Bill accurately for services to customers
4. Tangible, visible controls for auditors
5. Recovery of key business processes as required by regulators or contracts
6. Ensuring the IT environment meets safety laws
7. Manage change to systems with minimal disruption
8. Enabling the recreation of live, test or backup systems from up to 7 years ago
9. Clear ownership and responsibility across technology teams

# Many Issues

- Accountability of management and suppliers (including IT)
- Who should pay for extra costs incurred of organisational mistakes, or errors
- Sabotage, complicity, negligence or accident?
- Lack of effective controls affect customers, profits, share price, confidence, executives, morale
- Having to proving your management controls to others

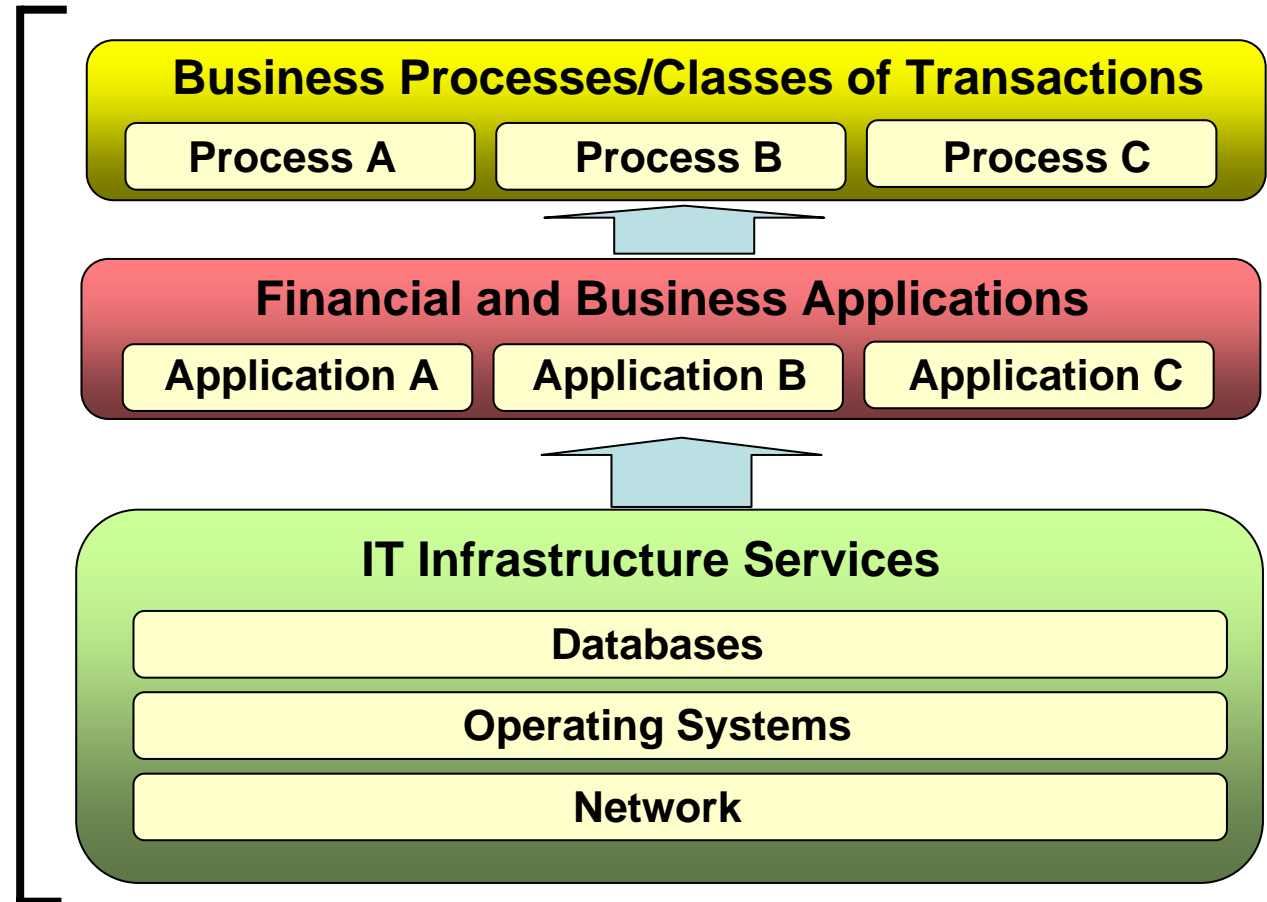
# Current Themes

- Service Management - ISO20000/ITIL
- SOA (Service Orientated Architecture)
- Virtualisation
  - VPN, VLAN, SAN, Citrix, Virtual Servers
- Service Provisioning
- Power/cooling

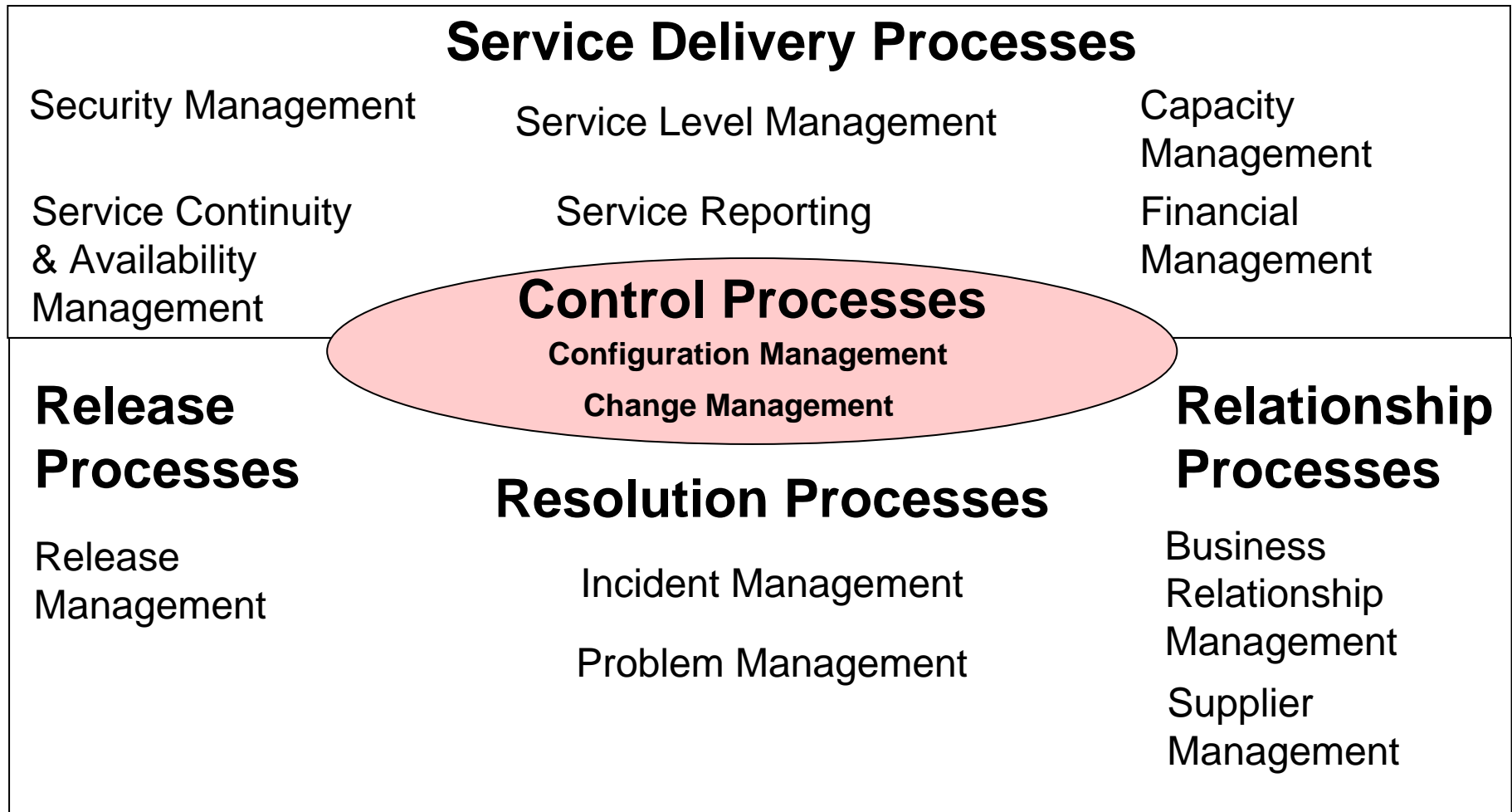
# Understanding the Infrastructure

## Knowledge Base

Processes  
Technical assets  
Dependencies  
Skills/understanding



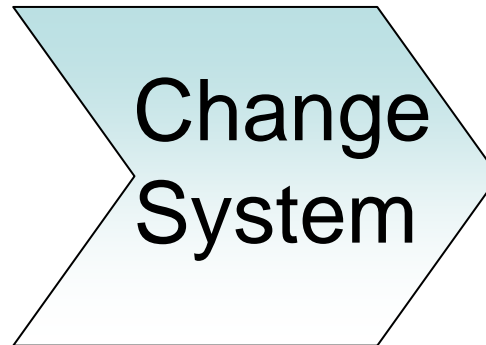
# ISO20000/BS15000 / ITIL



# ITIL Change Process

## Inputs

Request for Change (RFC)  
Emergency Change  
Forward Schedule of Changes (FSC)



## Outputs

Change Approved/Rejected  
Projected Service Availability (PSA)  
Forward Schedule of Changes (FSC)

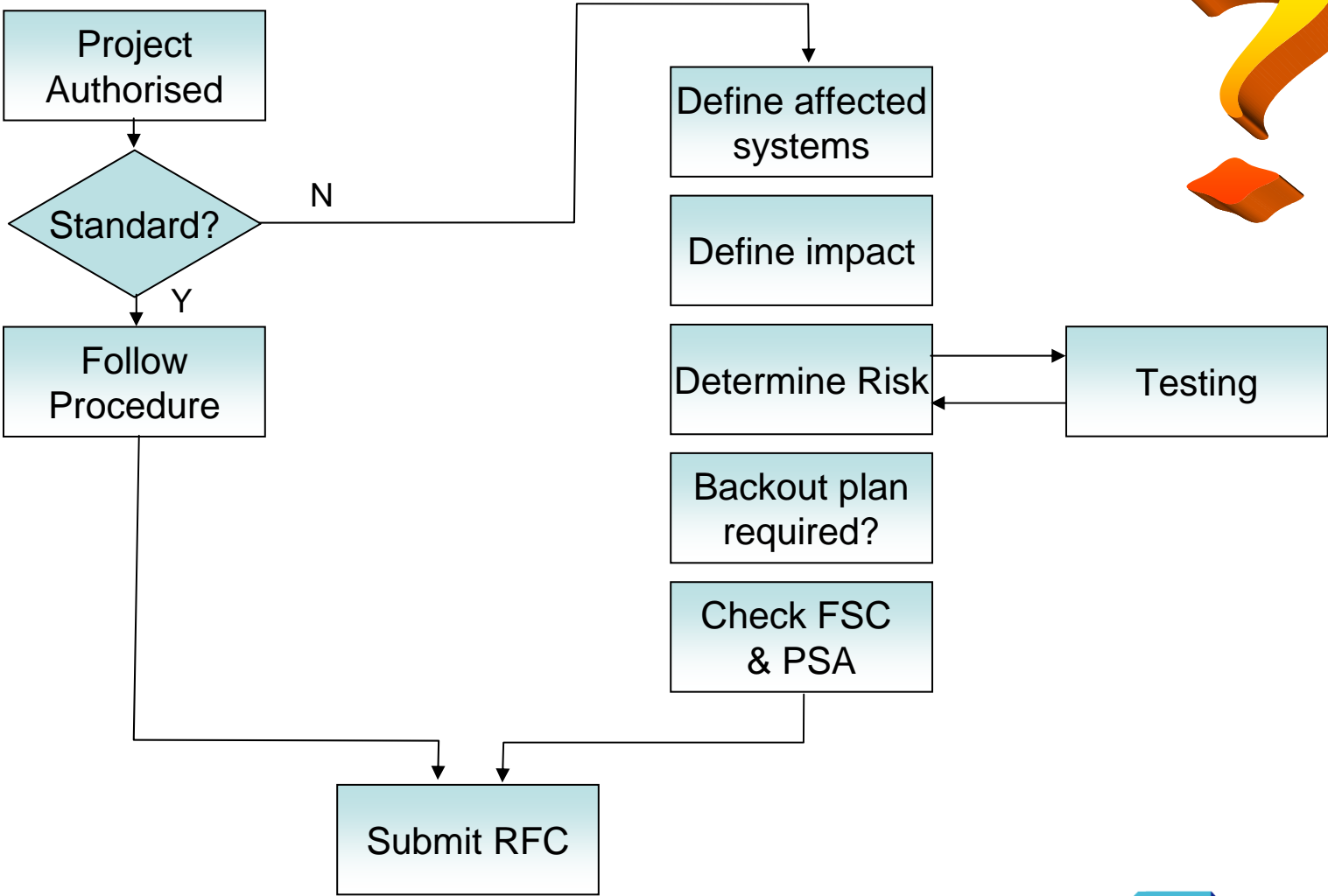


Change Manager



Change Advisory Board

# The RFC



# Configuration Management

- Know your assets
  - Hardware, software, data, processes
- Track their individual configurations
  - Versions, releases, changes
- Understand the dependencies between them
  - Location, power, cabling, network, architectures, data flows

# When Do You Need Understanding?

## 1. Core systems change

- Impact analysis, risk control, capacity
- Servers, networks, software, power
- Costs of disruption, consolidation

## 2. User/customer orientated change

- Adds/moves/changes/deletions/installs
- Desktop/voice/service/software patching
- Costs incurred in meeting business change

## 3. Organisational change

- Asset/services transfer
- Restructuring

# What Data Do You Need?

**Business Processes**

**Services**

**Software & Applications**

**LAN**

**Voice**

**Desktop**

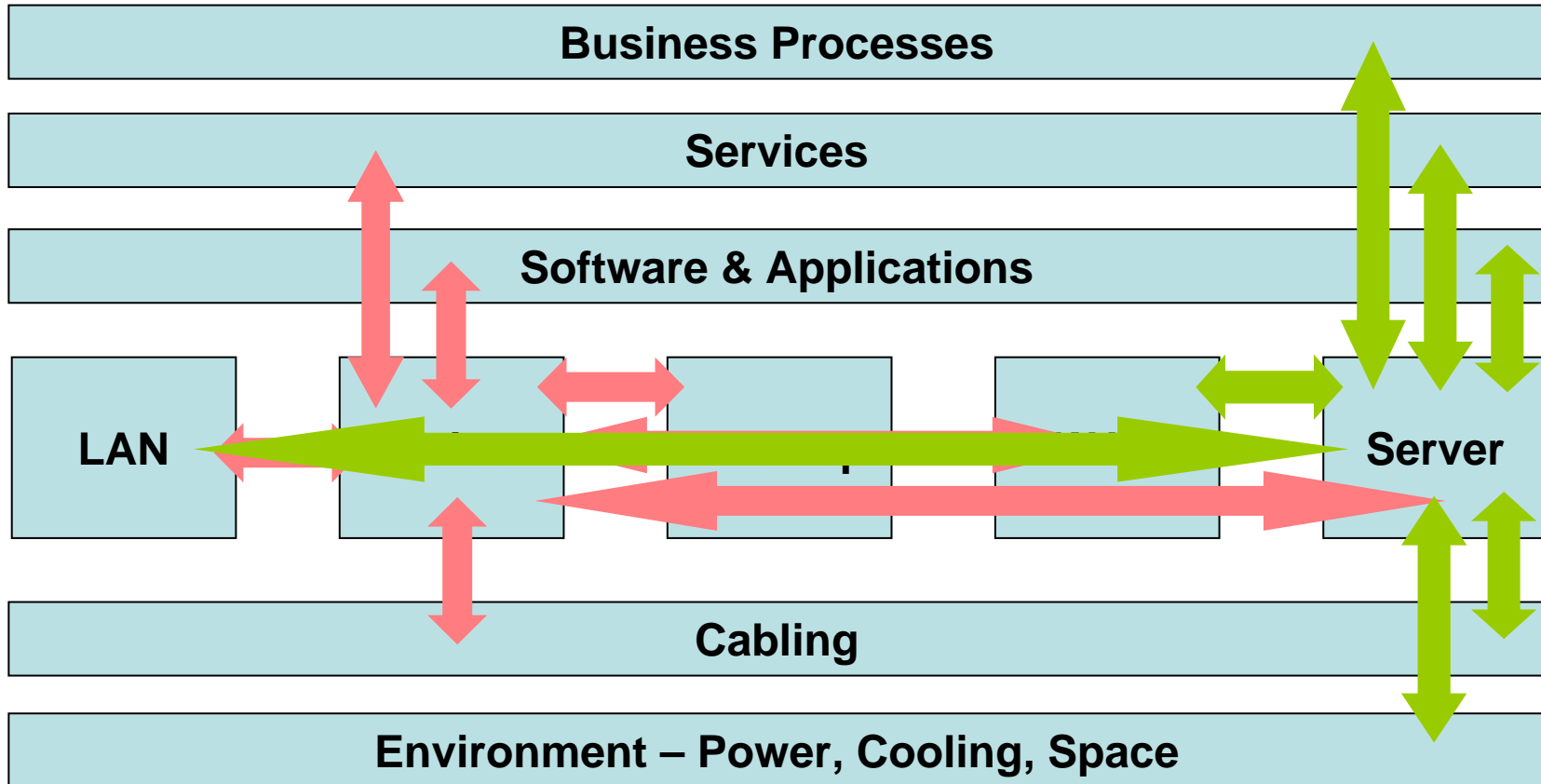
**WAN**

**Server**

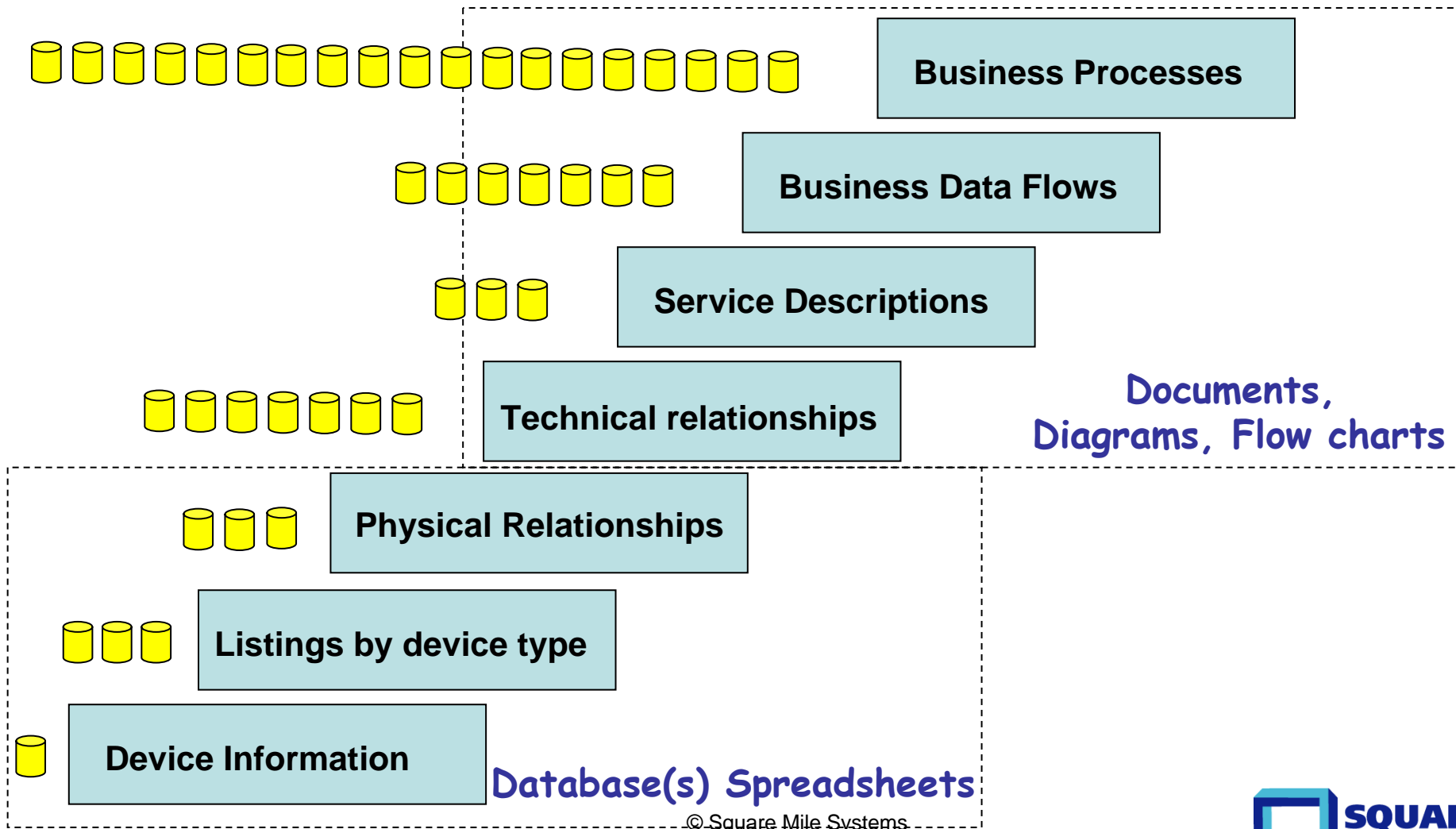
**Cabling**

**Environment – Power, Cooling, Space**

# What Data Do You Need?



# Presenting Data



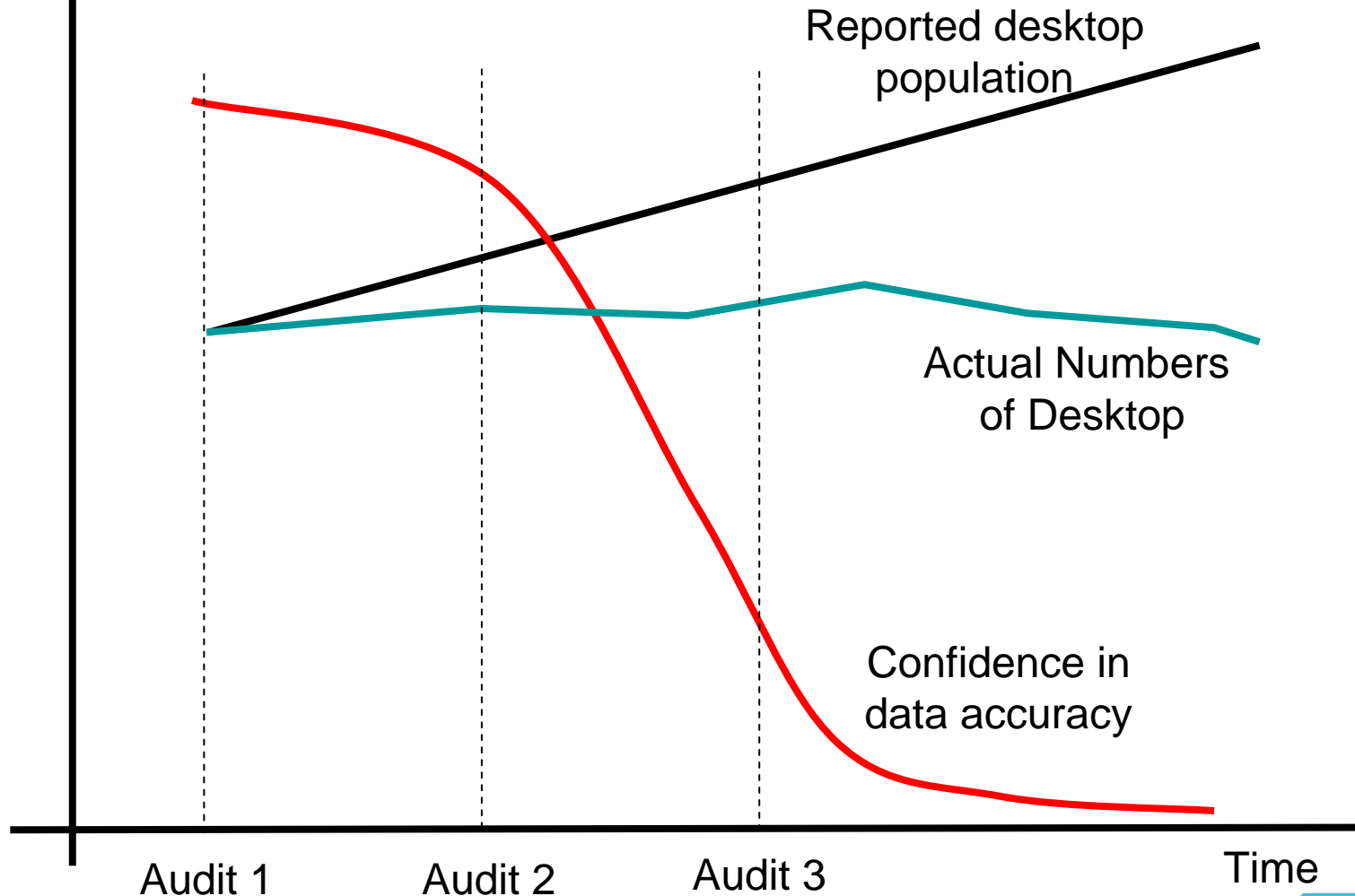
# Infrastructure Documentation

Which approach do you think is best for a long term solution, where information is shared by multiple teams?



1. Manual – supported by automated audits
2. Automated – supported by manual audits
3. Manual – supported by both manual and automated audits

# Automated IT Audit Tools



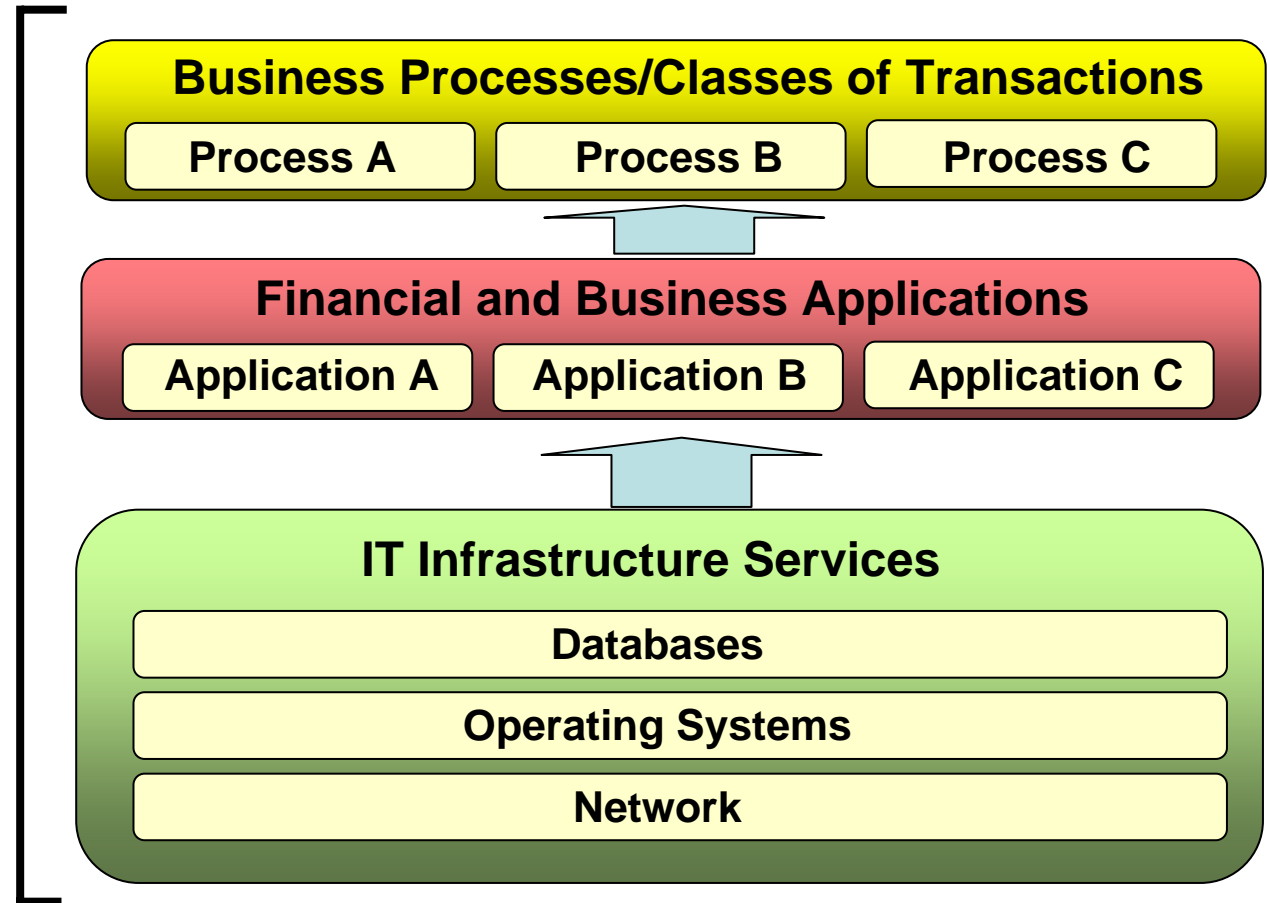
# Some Basic Factors

- Workload reduction is a goal!
- You have to be clear about project handover documentation, naming and labelling
  - How to share the knowledge
- Replace spreadsheets with databases
  - Statistics, logs, standards, multi-user
- Diagrams/drawings have standard formats
  - Physical, technical and organisational

# Understanding the Infrastructure

## Knowledge Base

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# Summary

- Managing change requires information about dependencies
- Efficient processes normally require structured data
- Retained knowledge needs to cover both technical and business aspects