Universitas Esa Unggul

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# TATA KELOLA TI menggunakan I.T.I.L

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Pertemuan - Sesi 11 Sistem Informasi – Fakultas Ilmu Komputer

# What is ITIL?

- Systematic approach to high quality IT service delivery
- Documented best practice for IT Service Management
- Provides common language with well-defined terms
- Developed in 1980s by what is now The Office of Government Commerce
- itSMF also involved in maintaining best practice documentation in ITIL
  - itSMF is global, independent, not-for-profit

# Key Concepts

- Service Level
  - Measured and reported achievement against one or more service level targets
  - E.g.
    - Red = 1 hour response 24/7
    - Amber = 4 hour response 8/5
    - Green = Next business day
- Service Level Agreement
  - Written and negotiated agreement between Service Provider and Customer documenting agreed service levels and costs

# Key Concepts

- Configuration Management System (CMS)
  - Tools and databases to manage IT service provider's configuration data
  - Contains Configuration ManagementDatabase (CMDB)
    - Records hardware, software, documentation and anything else important to IT provision
- Release
  - Collection of hardware, software, documentation, processes or other things require to implement one or more approved changes to IT Services

# Key Concepts

- Incident
  - Unplanned interruption to an IT service or an unplanned reduction in its quality
- Work-around
  - Reducing or eliminating the impact of an incident without resolving it
- Problem
  - Unknown underlying cause of one or more incidents

# 4 Ps of Service Management

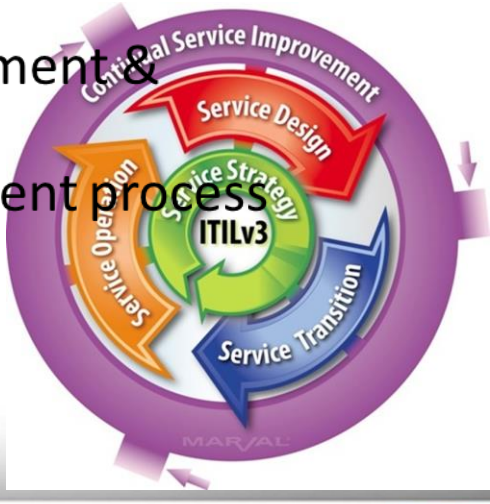
**People** – skills, training, communication
**Processes** – actions, activities, changes, goals
**Products** – tools, monitor, measure, improve
**Partners** – specialist suppliers

# Service Delivery Strategies

| Strategy | Features |
|---|---|
| In-sourcing | All parts internal |
| Out-sourcing | External resources for specific and defined areas (e.g. Contract cleaners) |
| Co-Sourcing | Mixture of internal and external resources |
| Knowledge Process Outsourcing (domain-based business expertise) | Outsourcing of particular processes, with additional expertise from provider |
| Application Outsourcing | External hosting on shared computers – applications on demand (e.g. Survey Monkey, Meet-o-matic) |
| Business Process Outsourcing | Outsourcing of specific processes e.g. HR, Library Circulation, Payroll |
| Partnership/Multi-sourcing | Sharing service provision over the lifecycle with two or more organisations (e.g. Shared IT Corpus/Oriel) |

# The Service Lifecycle

- Service Strategy
  - Strategy generation
  - Financial management
  - Service portfolio management
  - Demand management
- Service Design
  - Capacity, Availability, Info Security Management
  - Service level & Supplier Management
- Service Transition
  - Planning & Support
  - Release & Deployment
  - Asset & Config management
  - Change management
  - Knowledge Management
- Service Operation
  - Problem & Incident management
  - Request fulfilment
  - Event & Access management
- Continual Service Improvement
  - Service measurement & reporting
  - 7-step improvement process



# Service Strategy

- What are we going to provide?
- Can we afford it?
- Can we provide enough of it?
- How do we gain competitive advantage?
- Perspective
  - Vision, mission and strategic goals
- Position
- Plan
- Pattern
  - Must fit organisational culture

Service Strategy has four activities

## Service Assets

- Resources
  - Things you buy or pay for
  - IT Infrastructure, people, money
  - Tangible Assets
- Capabilities
  - Things you grow
  - Ability to carry out an activity
  - Intangible assets
  - Transform resources into Services

## Service Portfolio Management

- Prioritises and manages investments and resource allocation
- Proposed services are properly assessed
  - Business Case
- Existing Services Assessed. Outcomes:
  - Replace
  - Rationalise
  - Renew
  - Retire

## Demand Management

- Ensures we don't waste money with excess capacity
- Ensures we have enough capacity to meet demand at agreed quality
- Patterns of Business Activity to be considered
  - E.g. Economy 7 electricity, Congestion Charging

# Service Design

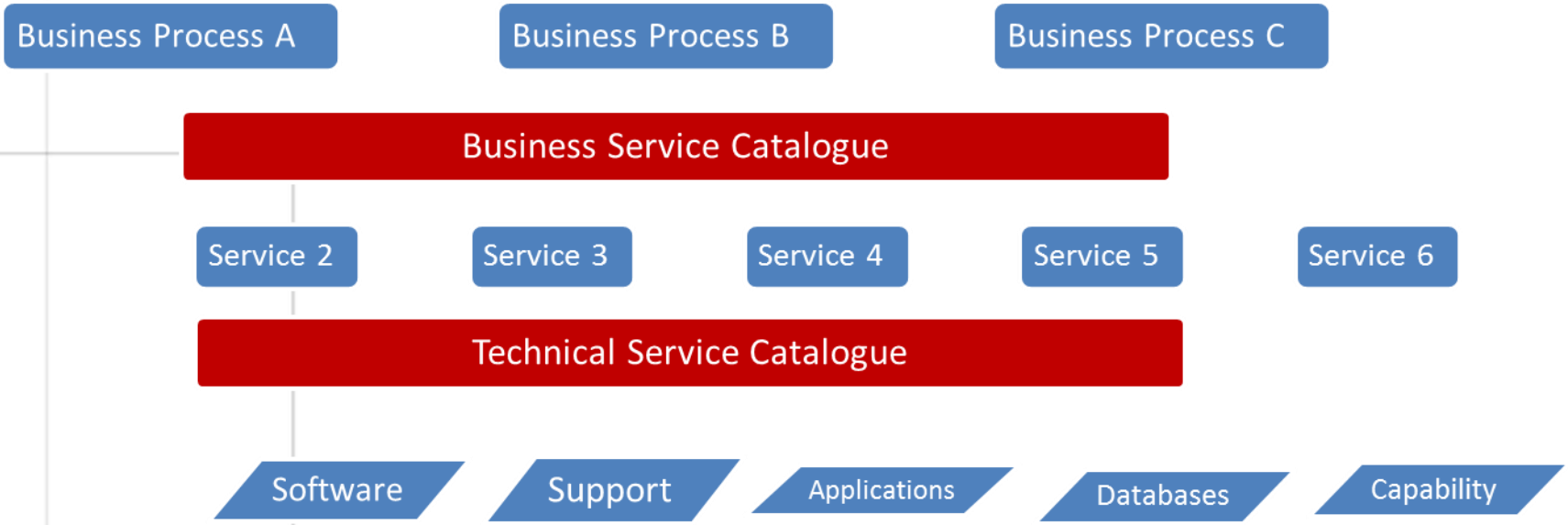
- How are we going to provide it?
- How are we going to build it?
- How are we going to test it?
- How are we going to deploy it?

## Processes in Service Design

- Availability Management
- Capacity Management
- ITSCM (disaster recovery)
- Supplier Management
- Service Level Management
- Information Security Management
- Service Catalogue Management

**Holistic approach to determine the impact of change introduction on the existing services and management processes**

# Service Catalogue




**Keeps service information away from business information**
**Provides accurate and consistent information enabling service-focussed working**

# Service Level Management

- Service Level Agreement
  - Operational Level Agreements
    - Internal
  - Underpinning Contracts
    - External Organisation
    - Supplier Management
  - Can be an annexe to a contract
  - Should be clear and fair and written in easy-to-understand, unambiguous language
- Success of SLM (KPIs)
  - How many services have SLAs?
  - How does the number of breaches of SLA change over time (we hope it reduces!)?

# Things you might find in an SLA

| | | |
|---|---|---|
| Service Description | Hours of operation | User Response times |
| Incident Response times | Resolution times | Availability & Continuity targets |
| Customer Responsibilities | Critical operational periods | Change Response Times |

## Types of SLA

- Service-based
  - All customers get same deal for same services
- Customer-based
  - Different customers get different deal (and different cost)
- Multi-level
  - These involve corporate, customer and service levels and avoid repetition

## Is it available?

- Ensure that IT services matches or exceeds agreed targets
- Lots of Acronyms
  - Mean Time Between Service Incidents
  - Mean Time Between Failures
  - Mean Time to Restore Service
- Resilience increases availability
  - Service can remain functional even though one or more of its components have failed

## Right Capacity, Right Time, Right Cost!

- This is capacity management
- Balances Cost against Capacity so minimises costs while maintaining quality of service

## ITSCM – what?

- IT Service Continuity Management
- Ensures resumption of services within agreed timescale
- Business Impact Analysis informs decisions about resources
  - E.g. Stock Exchange can't afford 5 minutes downtime but 2 hours downtime probably wont badly affect a departmental accounts office or a college bursary

## Standby for liftoff...

- Cold
  - Accommodation and environment ready but no IT equipment
- Warm
  - As cold plus backup IT equipment to receive data
- Hot
  - Full duplexing, redundancy and failover

## Information Security Management

- Confidentiality
  - Making sure only those authorised can see data
- Integrity
  - Making sure the data is accurate and not corrupted
- Availability
  - Making sure data is supplied when it is requested

# Service Transition

- Build
- Deployment
- Testing
- User acceptance
- Bed-in

## Good service transition

- Set customer expectations
- Enable release integration
- Reduce performance variation
- Document and reduce known errors
- Minimise risk
- Ensure proper use of services
- Some things excluded
  - Swapping failed device
  - Adding new user
  - Installing standard software

# Knowledge management

- Vital to enabling the right information to be provided at the right place and the right time to the right person to enable informed decision
- Stops data being locked away with individuals
- Obvious organisational advantage

Data-Information-Knowledge-Wisdom

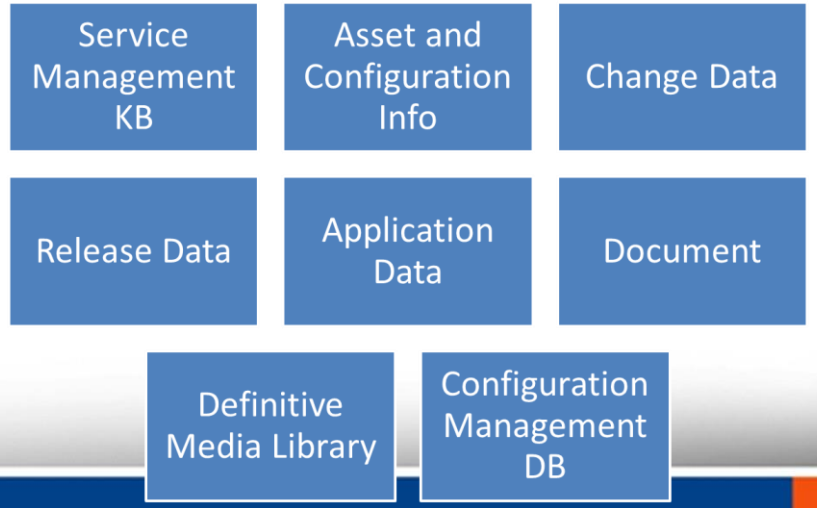

Wisdom cannot be assisted by technology – it only comes with experience!

Service Knowledge Information Management System is crucial to retaining this extremely valuable information

# Service Asset and Configuration

- Managing these properly is key
- Provides Logical Model of Infrastructure and Accurate Configuration information
- Controls assets
- Minimised costs
- Enables proper change and release management
- Speeds incident and problem resolution

## Configuration Management System



# Service Operation

- Maintenance
- Management
- Realises Strategic Objectives and is where the Value is seen

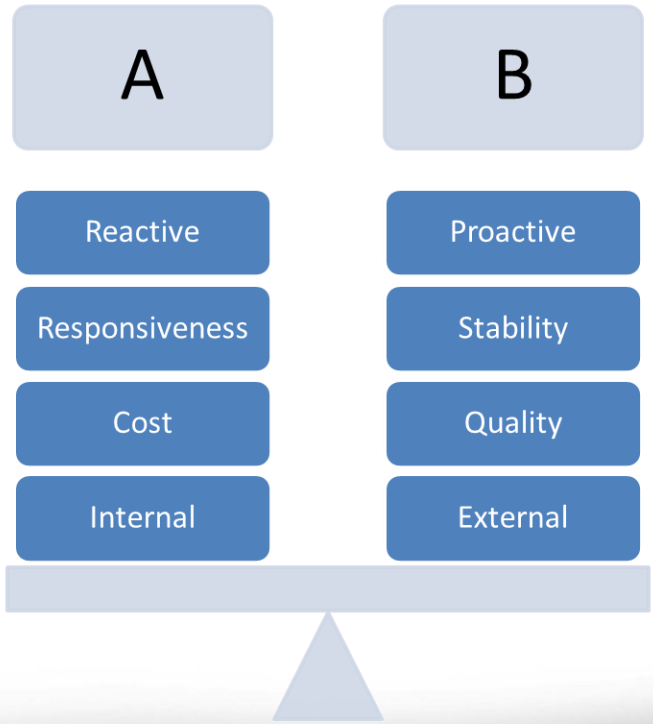
## Processes in Service Operation

- Incident Management
- Problem Management
- Event Management
- Request Fulfilment
- Access Management

# Functions in Service Operation

- Service Desk
- Technical Management
- IT Operations Management
- Applications Management

## Service Operation Balances



## Event Management

- 3 Types of events
  - Information
  - Warning
  - Exception
- Can we give examples?
- Need to make sense of events and have appropriate control actions planned and documented

## Incident Management

- Deals with unplanned interruptions to IT Services or reductions in their quality
- Failure of a configuration item that has not impacted a service is also an incident (e.g. Disk in RAID failure)
- Reported by:
  - Users
  - Technical Staff
  - Monitoring Tools

## Request Fulfilment

- Information, advice or a standard change
- Should not be classed as Incidents or Changes
- Can we give more examples?

# Problem Management

- Aims to prevent problems and resulting incidents
- Minimises impact of unavoidable incidents
- Eliminates recurring incidents
- Proactive Problem Management
  - Identifies areas of potential weakness
  - Identifies workarounds
- Reactive Problem Management
  - Indentifies underlying causes of incidents
  - Identifies changes to prevent recurrence

# Access Management

- Right things for right users at right time
- Concepts
  - Access
  - Identity (Authentication, AuthN)
  - Rights (Authorisation, AuthZ)
  - Service Group
  - Directory

# Service Desk

- Local, Central or Virtual
- Examples?
- Single point of contact
- Skills for operators
  - Customer Focus
  - Articulate
  - Interpersonal Skills (patient!)
  - Understand Business
  - Methodical/Analytical
  - Technical knowledge
  - Multi-lingual
- Service desk often seen as the bottom of the pile
  - Bust most visible to customers so important to get right!

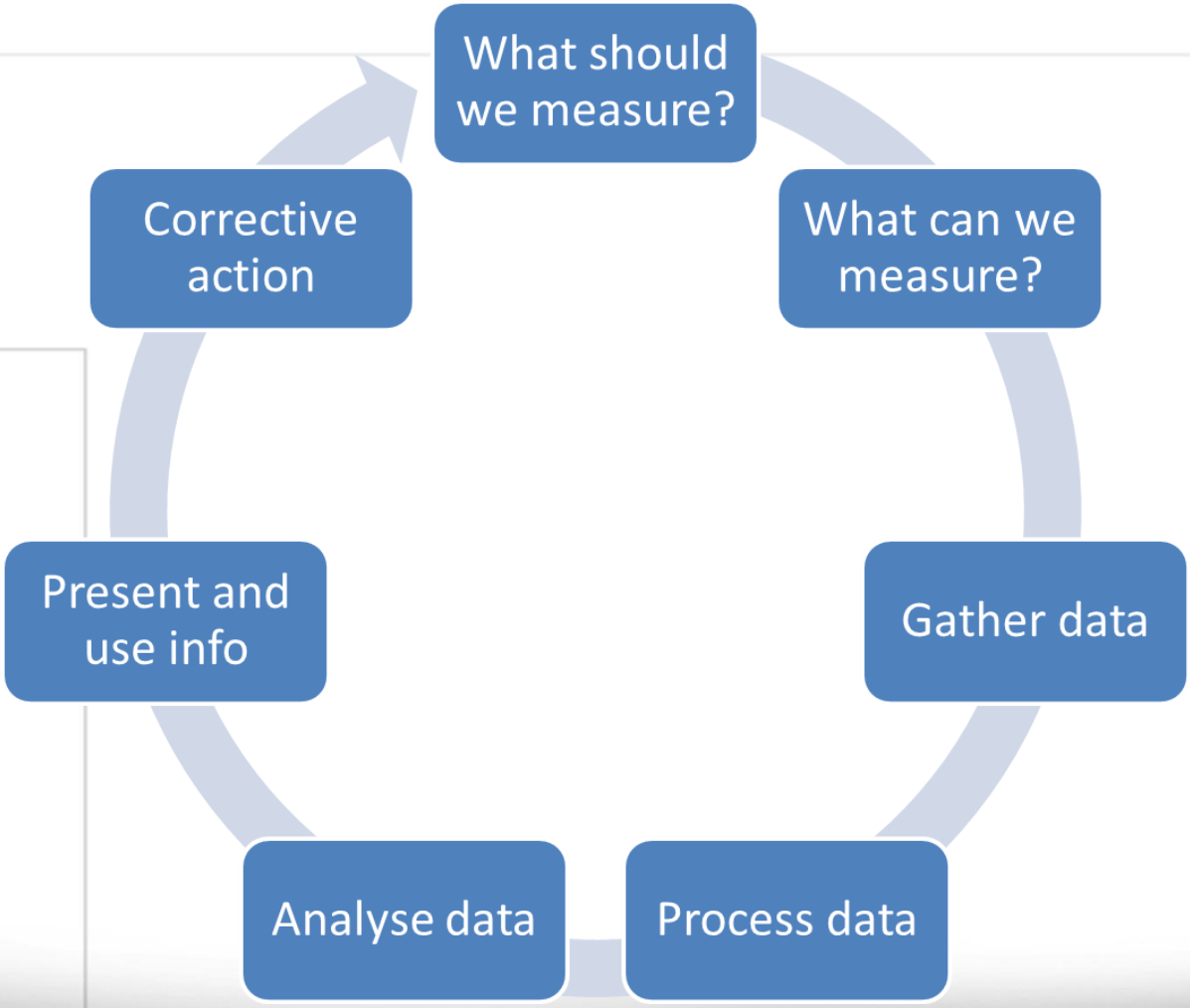
# Continual Service Improvement

- Focus on Process owners and Service Owners
- Ensures that service management processes continue to support the business
- Monitor and enhance Service Level Achievements
- Plan – do –check – act (Deming)

## Service Measurement

- Technology (components, MTBF etc)
- Process (KPIs - Critical Success Factors)
- Service (End-to end, e.g. Customer Satisfaction)
- Why?
  - Validation – Soundness of decisions
  - Direction – of future activities
  - Justify – provide factual evidence
  - Intervene – when changes or corrections are needed

# 7 Steps to Improvement



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