ITIL (Information Technology Infrastructure Library)

mthree Alumni Training

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- Overview
- Incident Management
- Problem Management
- Change Management
- Knowledge Management

Objectives

The aim of this course is to provide a foundation in some key ITIL principles that are used regularly within the workplace.

You will also complete some practical exercises, simulating real-life examples you may experience out in the field.

What is ITIL

- ITIL is a standardized framework around providing IT Services in a generic way.

- It was created by the UK Government in 1989 and is now used globally and continually updated.

- It covers 4 main topics:

  - Defining services

  - Defining service quality targets

  - Implementing services

  - Managing evolution

- ITIL will provide you with guidelines to follow in your day-to-day work.

Incident Management

What is incident management?

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Key Points

An incident is an unplanned interruption to an IT service or reduction in quality of an IT service.

An incident can also be an impending disruption; e.g., if disk space is filling up quickly and the server will be out of space in 3 hours.

Incidents can be detected in multiple ways.

Incident Priority

As an incident is detected, the incident management process seeks to understand the impact and urgency of the incident and act accordingly.

The combination of impact and urgency will determine the priority of the incident.

Priority	Description	Examples
Critical	Extreme business impact	Reserved for impact across multiple business lines – e.g., losing a data center
Priority 1	Major business impact	A large-scale outage impacting one business line – e.g., trading system down
Priority 2	Medium business impact	A degradation in service – e.g., payments are processing slower than usual
Priority 3	Limited or potential business impact	Usually reserved for incidents with imminent business impact
Priority 4	Often reserved for non-production impacting incidents	Usually reserved for UAT/DEV environments

The Process

The incident management process can be summarized as below:

Incident Triage

Participants

Communication

Incident Resolution

Process

Tools
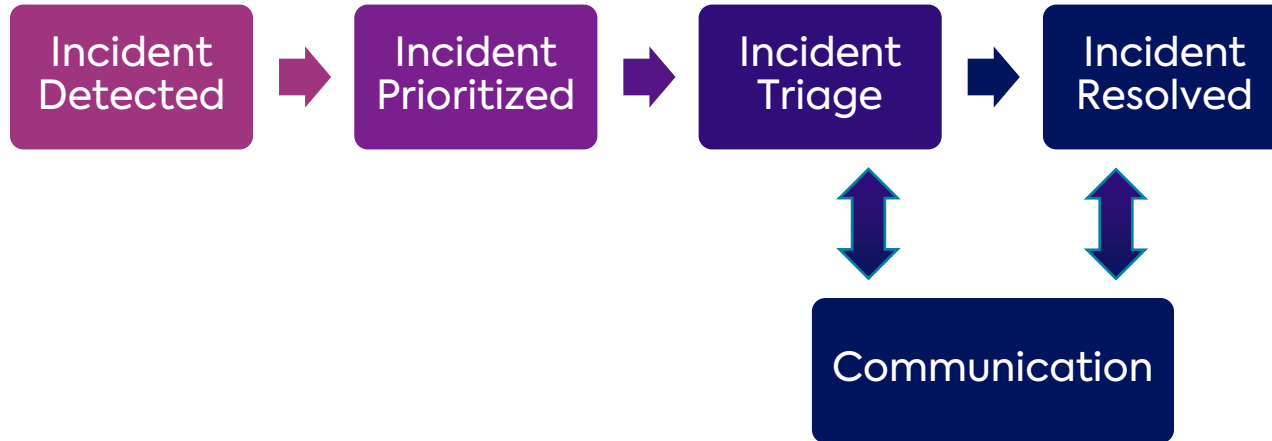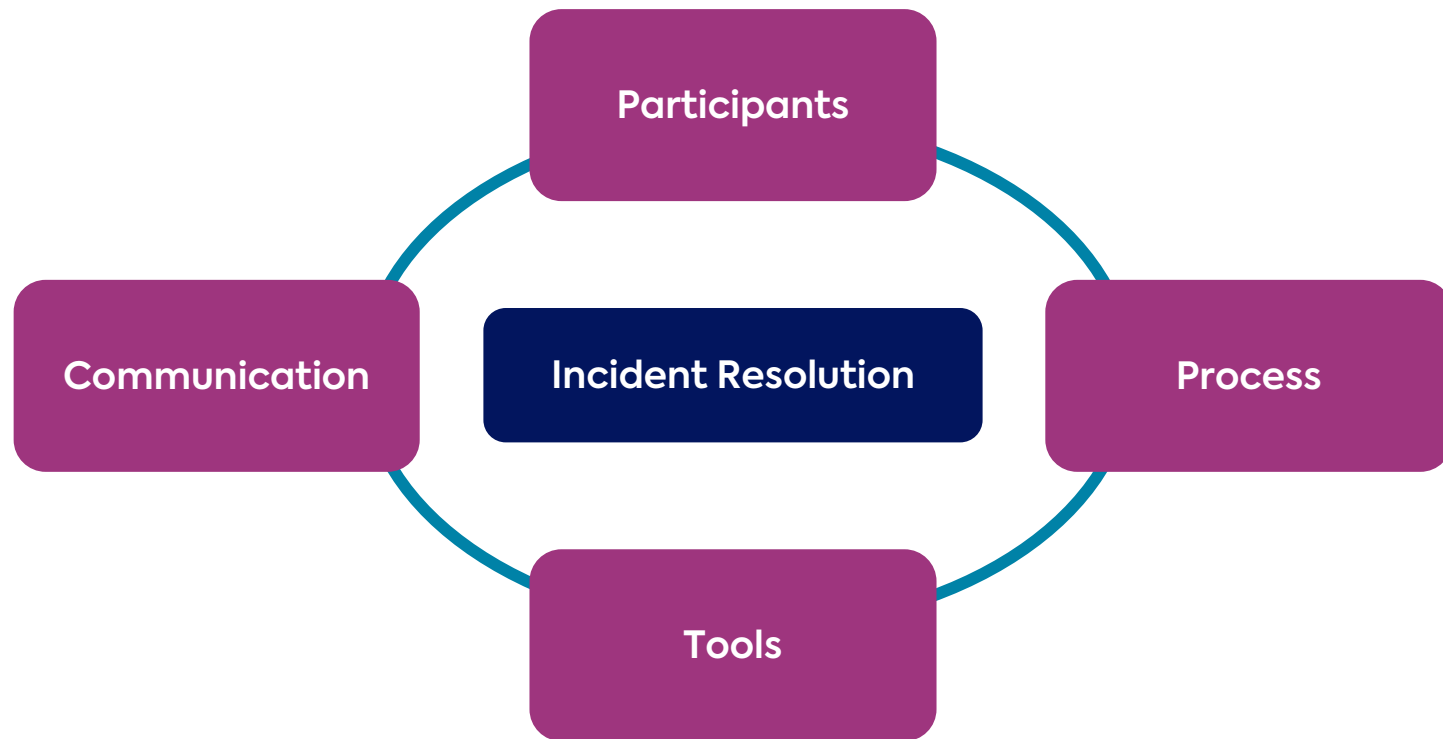
Problem Management

What is problem management?

Key Points

Follow on from the incident management process.

- **Problem**: The cause of one or more incidents. The cause is not usually known at the time a problem record is created

- **Error**: A design flaw or malfunction that causes a failure of one or more IT services or other configuration items

- **Known Error:** A problem that has a documented root cause and workaround

- **Root Cause:** The underlying or original cause of an incident or problem

Problems can be pro-active or reactive.

Value of Problem Management

A well-run problem management process provides immense value back to the business.

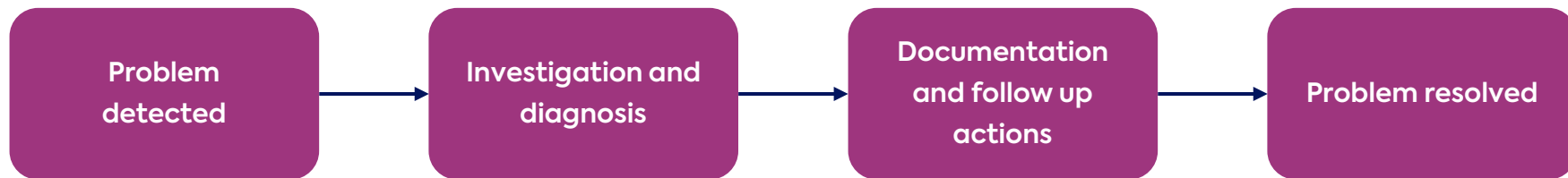| Service Availability	Decreased Problem Resolution Time	Productivity
Service Quality	Incident Reduction	Cost
	Customer Satisfaction	

The Process

The problem management process can be summarized as below:

```
┌──────────────┐      ┌──────────────────┐      ┌─────────────────┐      ┌──────────────────┐
│   Problem    │ ───▶ │ Investigation and│ ───▶ │  Documentation  │ ───▶ │ Problem resolved │
│   detected   │      │    diagnosis     │      │ and follow up   │      │                  │
│              │      │                  │      │     actions     │      │                  │
└──────────────┘      └──────────────────┘      └─────────────────┘      └──────────────────┘
```

- What was the root cause?
- How do we prevent?
- How do we detect earlier?
- How do we recover faster?

Change Management

What is change management?

Key Points

Goal: The goal of change management is to establish standard procedures for managing change requests in an agile and efficient manner in an effort to drastically minimize the risk and impact a change can have on business operations.

Benefits: Structured and well-planned change will help manage the risk of changing the environment and support against unnecessary errors.

Value of Change Management

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A robust change management process leads to the benefits:

IT to business alignment	Improved visibility into IT change	Productivity
Impact to business operations/stability	Adherence to regulations	Faster change implementation
	Risk management	

Types of Change

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A request for change is a formal proposal submitted by someone in the organization to alter a configuration item.

Change Type	Description	Examples
Emergency	A change implemented as quickly as possible to resolve a major incident	Deploy a bug fix to code that has broken in production
Standard	Frequent change, low risk and pre-established procedure with documented tasks for completion	A simple client configuration change
Major	A change that may have significant impact or be high risk	A software upgrade to a trading system
Normal	Requires an important change to a service or the IT infrastructure	A minor change to deploy a new version of monitoring software

The Process

The change management process can be summarized as below:

Create and log request for change (RFC)	→	Review request for change	→	Evaluate change	→	Authorize change	→	Implement

Review and close change request
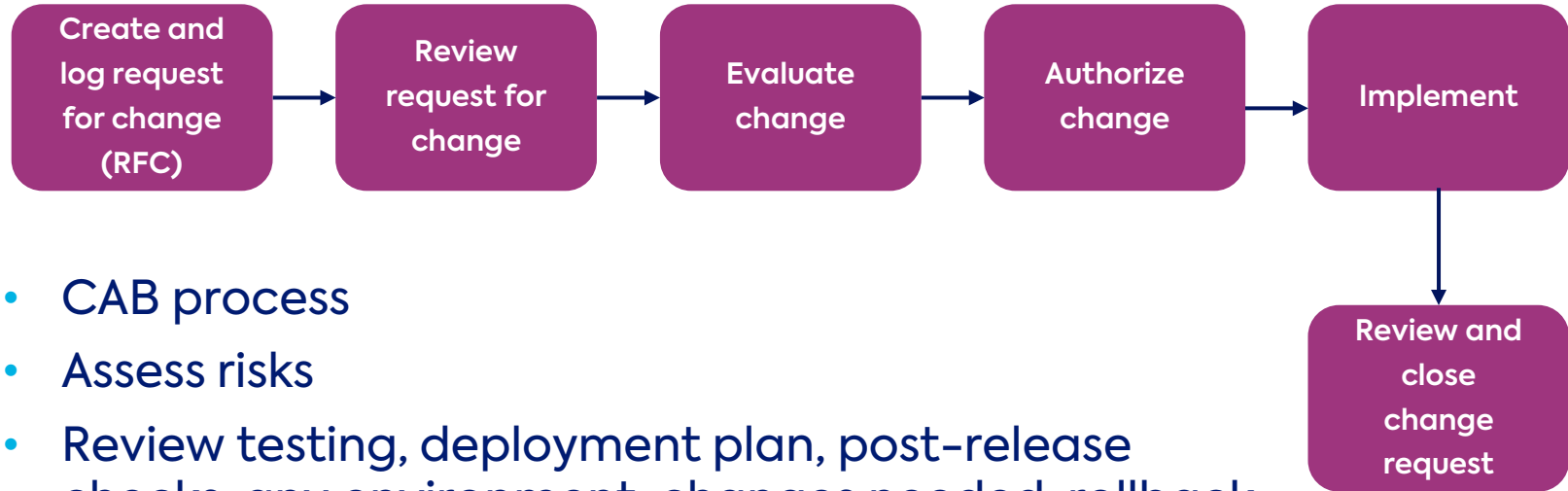
- CAB process
- Assess risks
- Review testing, deployment plan, post-release checks, any environment changes needed, rollback plan
- Check for conflict

Knowledge Management

- *What is knowledge management?*

Key Points

Goal: To gather, analyze, store and share knowledge within an organization

Benefits: A well-maintained knowledge system will not only benefit individuals but the team as a whole. If implemented properly it will improve the efficiency of the team as well as allow for statistics to be run on the frequency of issues in the environment.

Value of Knowledge Management

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A robust knowledge management process leads to the benefits:

Measure the response to incidents

Increase business volume without increasing staff

Productivity

Measure the number of known errors

Increase quality of service

Employee development

Control loss of intellectual capital

Stages of Knowledge Management

Data

Raw data: facts that are available that you and your team use on a daily basis

Information

Once data has context, it becomes information: answering "who, why, what, when"

Knowledge

When you analyze information while taking into account your own experience, that information can then be used to make decisions

Wisdom

Using personal judgement, experience and expertise to properly apply knowledge in a situation

Stages of Knowledge Management

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The Importance of Runbooks

What is a runbook?

- A runbook is your "how-to" or manual guide to an application

- It contains the following information in a standard format (proprietary to each company):

  - Architecture: how the application is laid out physically and all data related to that (including diagrams)

  - How it works: how does this application run?

  - Business purpose: what does this application do?

  - Operating the application/standard procedures: day to day running of the application

  - Links to known errors: workarounds needed for this application

ITIL Relationships:
How do they work together?

There is often a relationship between change and incident.

An incident will be fully resolved by a thorough problem management process.

Knowledge management will be used to document any errors and known workarounds.

A change can be applied to fix an issue.

Incident

Problem

Knowledge

Change

ITIL Tooling

The two most popular industry standard tools used to track IT workflows are ServiceNow and Remedy.

On the left is an example incident ticket from ServiceNow.

Source: oracle.com

ITIL Tooling Examples

The screenshot on the left shows an example of a problem ticket being opened and linked to a knowledge article.

ITIL Tooling Examples

Home > IT (Knowledge Base) > Email - Outlook - Outlook 2010

KB0000024

Subscribed   ...

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Create An Email Signature

👤 Authored by Ron Kettering • 📅 2y ago • 👁 1 View • ☆☆☆☆☆

Create An Email Signature

To create a personalized email signature:

1. Open a new message. On the **Message** tab, in the **Include** group, click **Signature**, and then click **Signatures**.
2. On the **E-mail Signature** tab, click **New**.
3. Type a name for the signature, and then click **OK**.
4. In the **Edit signature** box, type the text that you want to include in the signature.
5. To format the text, select the text, and then use the style and formatting buttons to select the options that you want.
6. To add elements besides text, click where you want the element to appear, and then do any of the following:

Options	How to
To add an electronic business card	Click **Business Card**, and then click a contact in the **Filed As** list. Then click **OK**
To add a hyperlink	Click **Insert Hyperlink**, type in the information or browse to a hyperlink, click to select it, and then click **OK**
To add a picture	Click **Picture**, browse to a picture, click to select it, and then click **OK**. Common image file formats for pictures include .bmp, .gif, .jpg, and .png.

1. To finish creating the signature, click **OK**.

NOTE:

The signature that you just created or modified won't appear in the currently open message; it must be inserted into the message.

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The screenshot on the left shows an example of a knowledge article within ServiceNow.

Source: servicenow.com

ITIL Tooling Examples

The screenshot on the left shows an example of a change in ServiceNow and how the tool will automatically detect if multiple changes are scheduled at the same time impacting the same configuration item (CI).

Source: servicenow.com