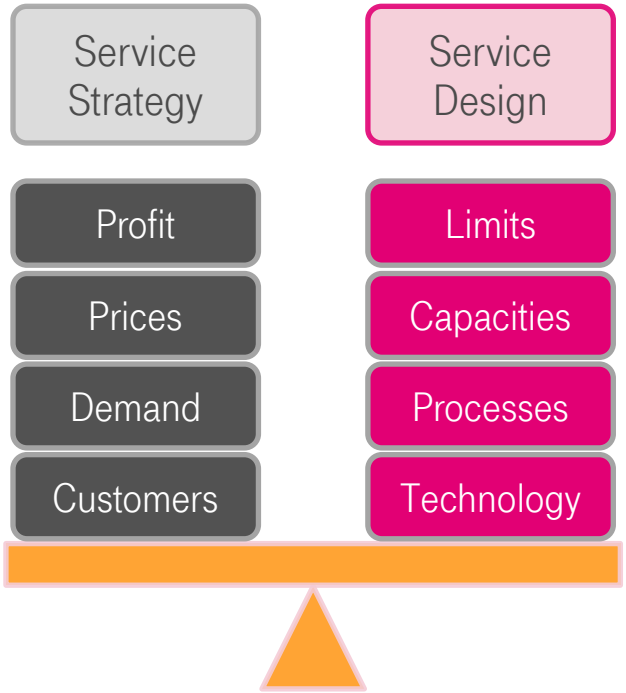
DEEP DIVE

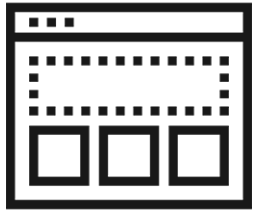
→ SERVICE DESIGN

SERVICE DESIGN - INTRODUCTION

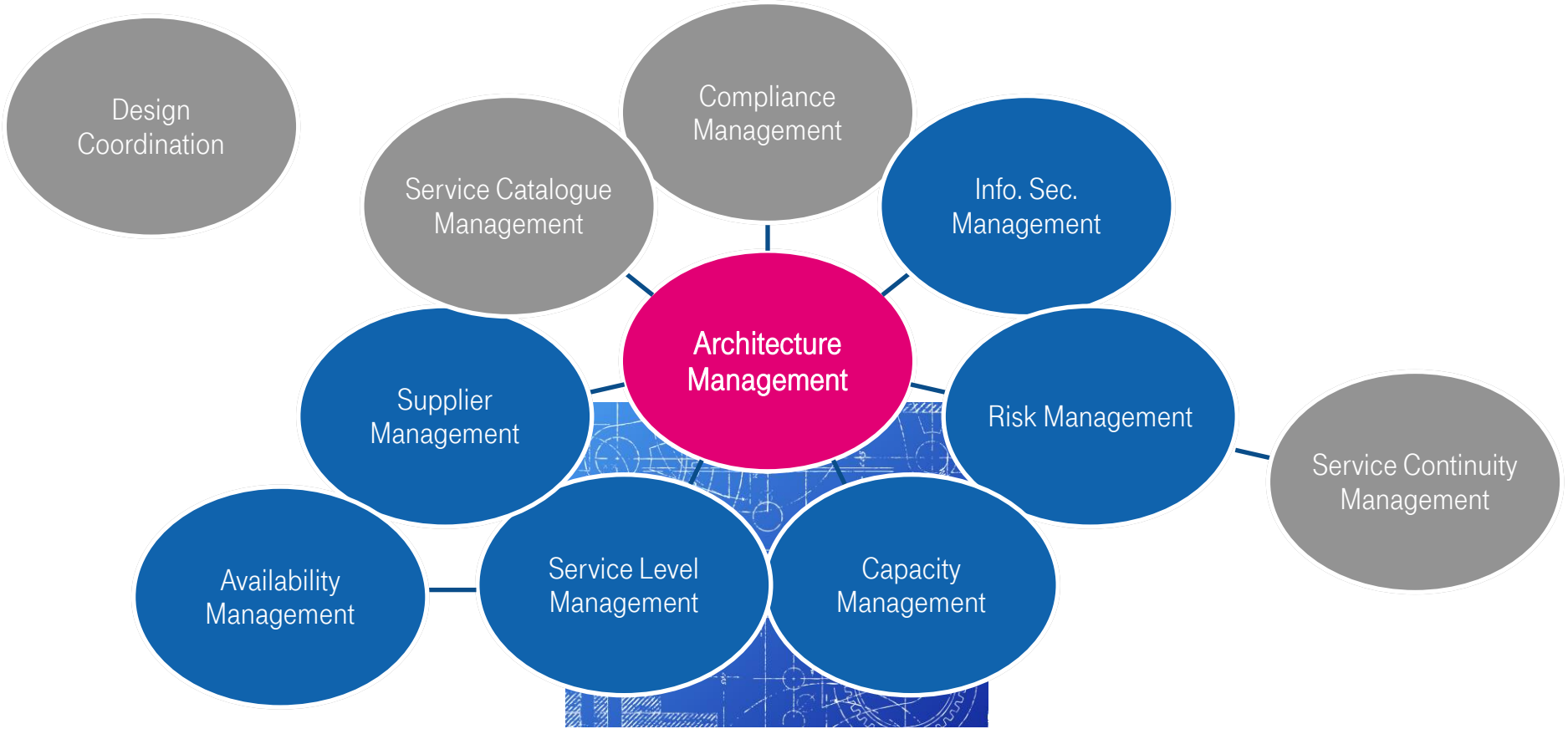
Aim of Service Design: To design new IT services.

Service Design also designs changes to existing services.





SERVICE DESIGN – PRIMARY BREAKDOWN



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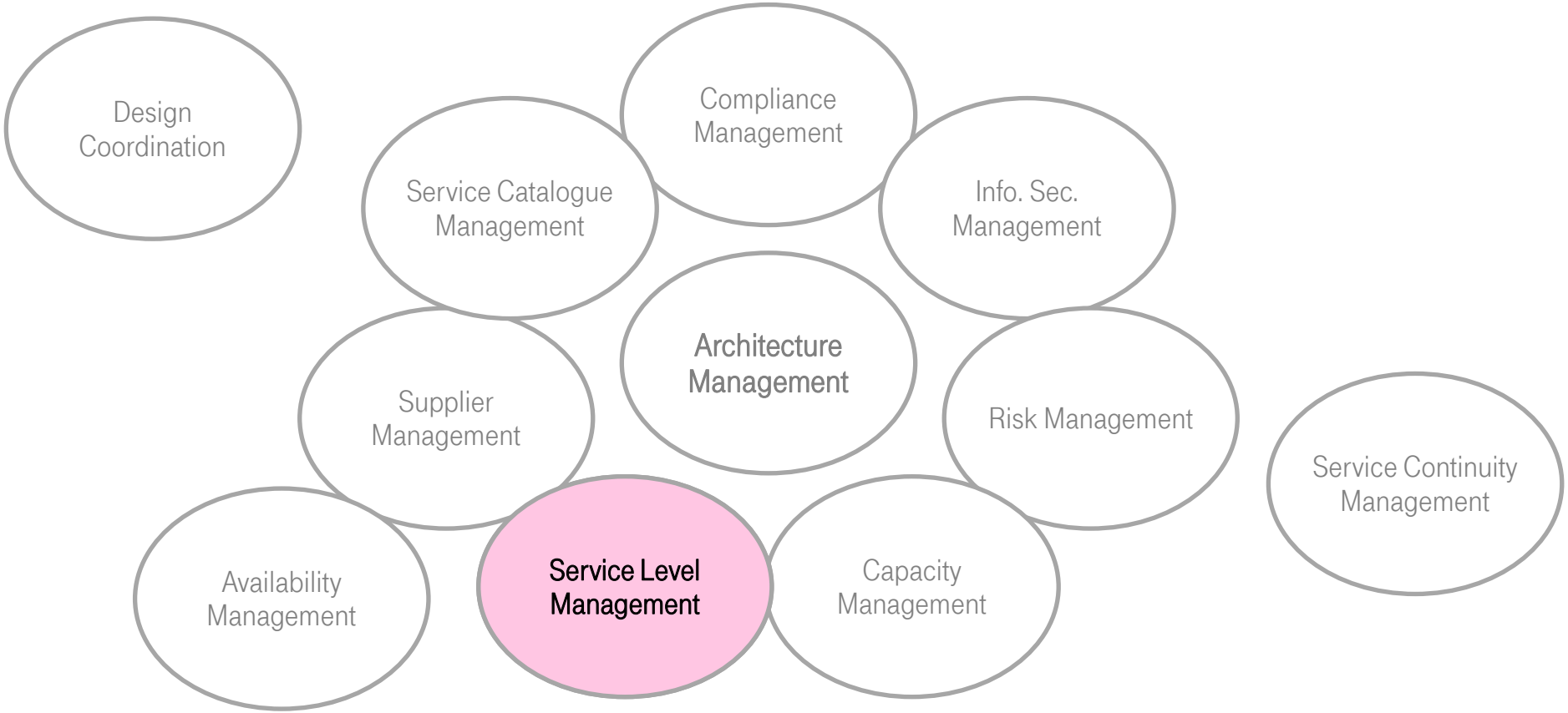
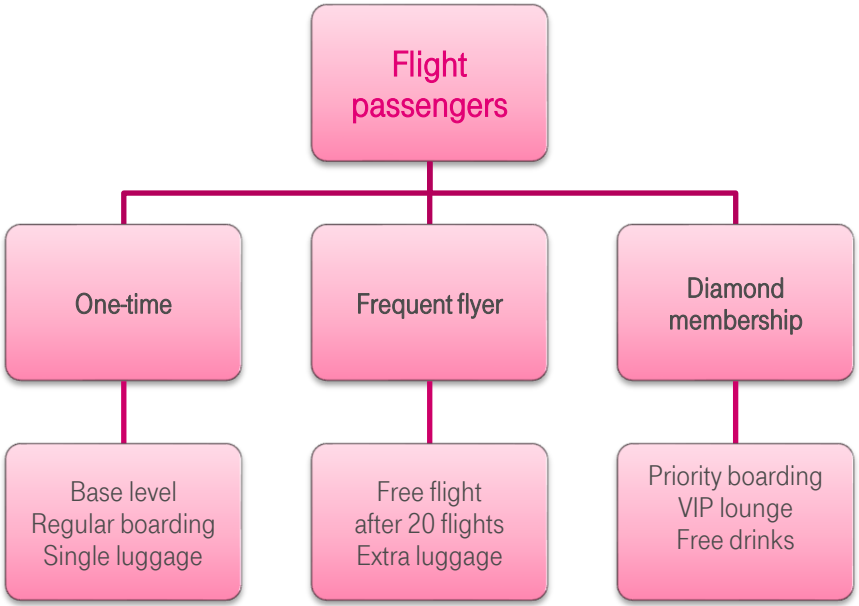
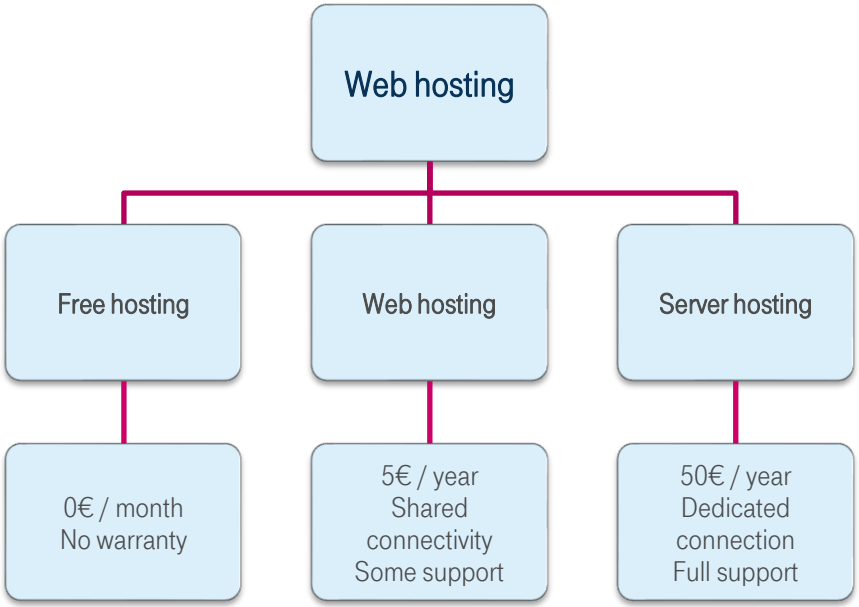


SERVICE LEVEL MANAGEMENT

Objective: Define and manage **Service Levels** at which an organization provides its services.





SERVICE LEVEL MANAGEMENT

Service Level:

A fact-based description of the contents of a service – capacity, availability, speed, number of connections...

Service Level Agreement (SLA):

A contractually **binding agreement** that a **service provider** will deliver service at or above agreed **level** to customer.

SLA is the basis for complaint resolution:

- Which limitations of the contract were breached?
- By how much were they breached?

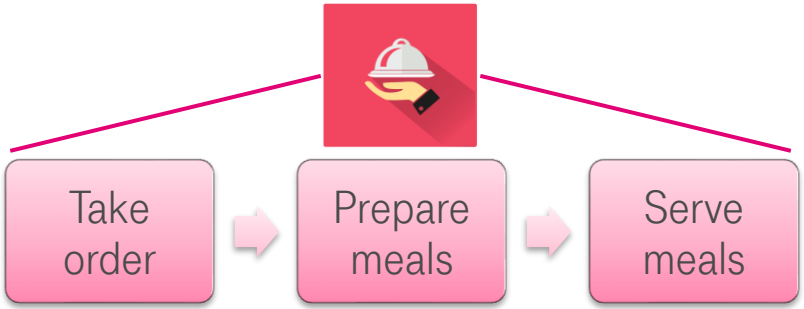
SERVICE LEVEL MANAGEMENT

Customer Agreement Portfolio:

A collection of Service Agreements with customers.

Remember: Processes are the internal realization of a service.

Single service: Multiple processes combined together



Operational Level Agreement (OLA):

Agreement between parts of an organization, defining expected deliverables of their processes.

SERVICE LEVEL MANAGEMENT

Identification of Service Requirements

- Documents customer requirements
- Requirements are then submitted to expert review

Agreement sign-off and Service Activation

- Confirms that Service Transition successfully prepared operation
- Once done, initiates Service Operation.

Service Level Monitoring and Reporting

- Collects data about service level operation and discloses the data to customer.

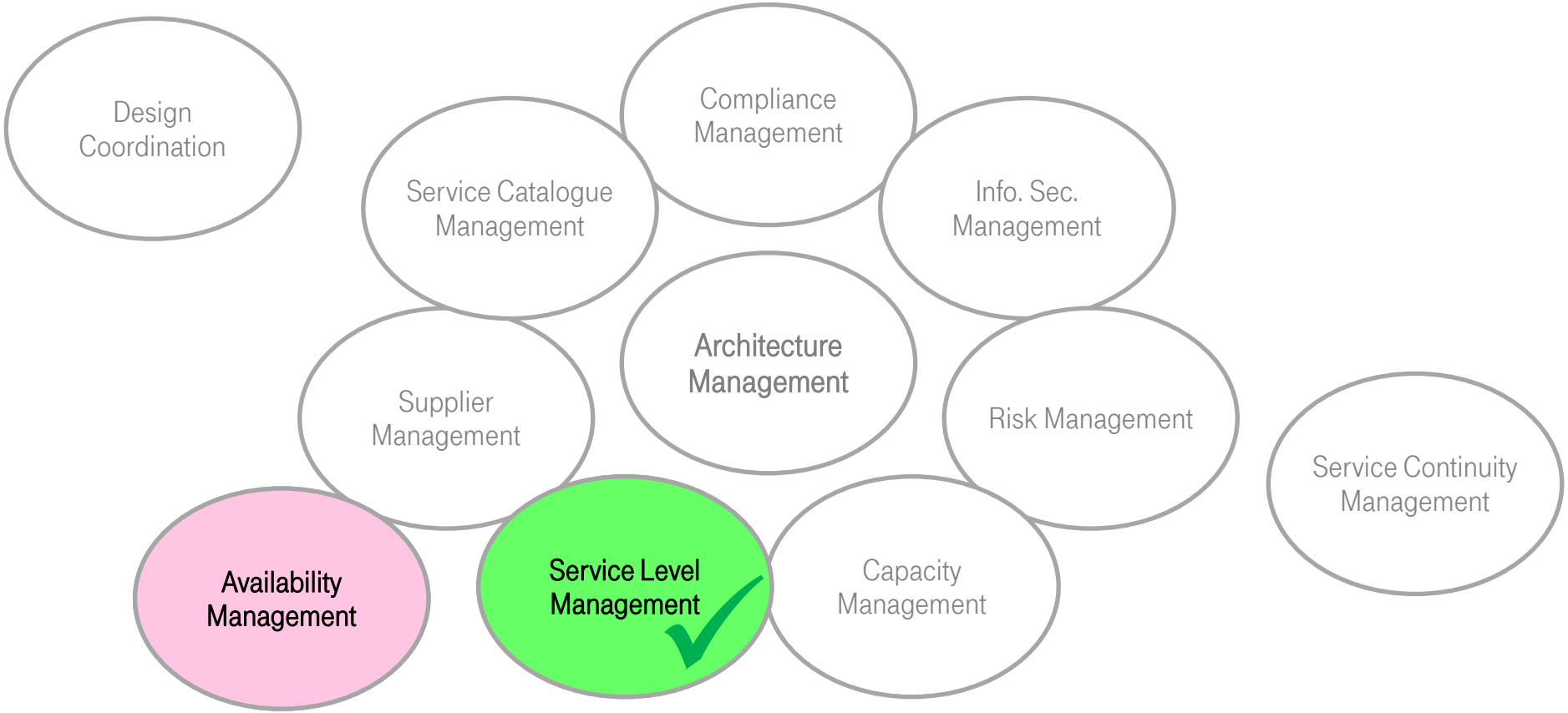
Availability Monit. & Report.

- Collects much more detailed data
- Does not disclose availability data to other parties

Maintenance … Framework

- Manages the Customer Agreement Portfolio, document templates etc.

SERVICE DESIGN – PRIMARY BREAKDOWN

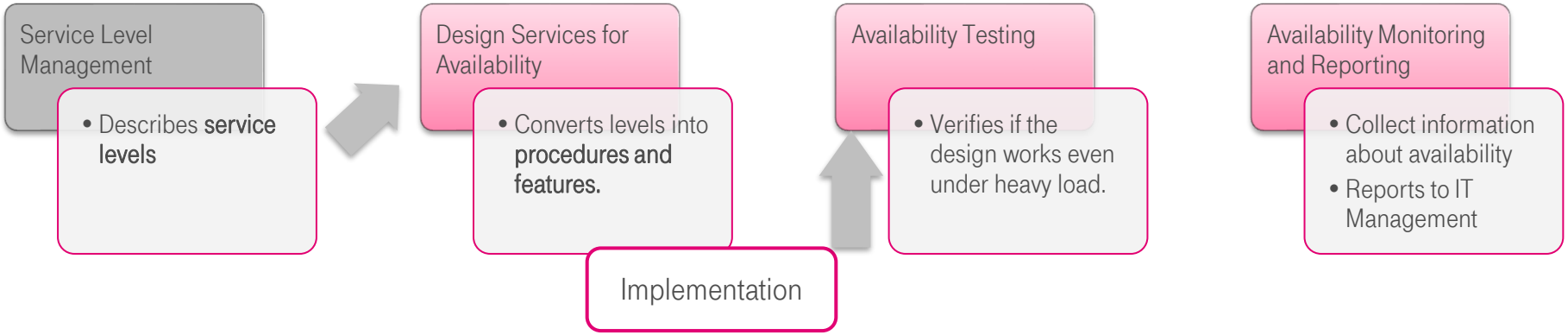


AVAILABILITY MANAGEMENT

Objective:

Define, measure, analyse and improve availability of an IT service.

Common benefits: Increased connection speed and data limits, increased reliability...



Availability Management guides other functions in order to mitigate availability issues.

AVAILABILITY MANAGEMENT

Availability Management guides other functions in order to mitigate availability issues.

Knife bluntness

- Most people simply apply greater force (= minor issue)
- Blunt knife → Risk of slipping
- Slipping knife → serious injury
- Injured chef → cannot prepare meals (= major issue)
- Professional chefs have “zero tolerance” towards blunt knives

(Focus on a minor disruption prevents a major disruption)

AVAILABILITY MANAGEMENT

Terminology of availability

Reliability

- How long can we expect a component to function without failure.
- "My reliable zippo will never fail me!" vs. "The system crashed again???"

Recoverability

- How long will it take to restore the component to operation after a failure.
- "Wait 10 seconds, then start the engine again!" vs. "Dear passengers, the flight is cancelled!"

Maintainability

- How easy is it to maintain the component (includes both: ease of prevention and of restoration)
- "Just press this button to restart it!" vs. "I need 20 people to get this back on track!"

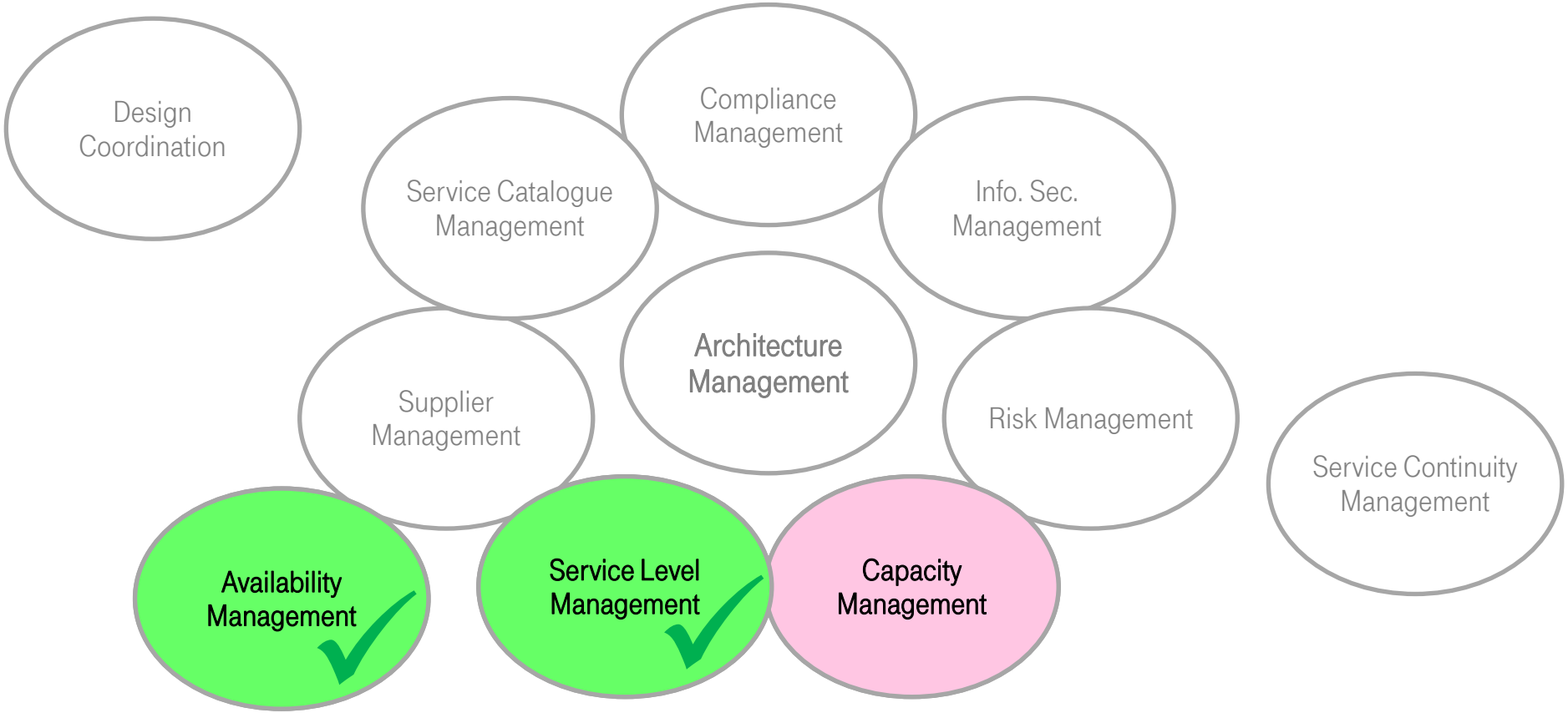
Serviceability

- (Guaranteed) Availability of a component provided by a 3rd party (vendor or partner)
- "We guarantee 99.9% availability!" vs. "Our rail network is not responsible for any delays..."

Internal Provider

External Provider

SERVICE DESIGN – PRIMARY BREAKDOWN



CAPACITY MANAGEMENT

New Year's Eve 2012 - Slovakia

Objective:

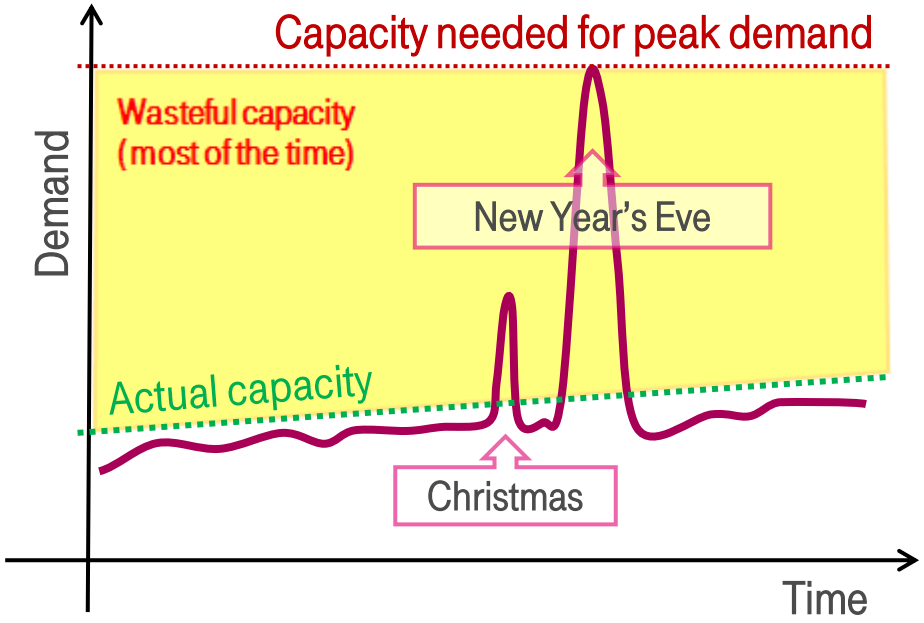
- **Ensure enough capacity of the service being provided, and of the IT infrastructure needed for all agreed service levels.**
- **Govern capacity in a cost-efficient and timely manner.**
- **Plan capacity for short- and long- term future.**

Networks in Bratislava failed!

Networks in Kosice failed as well!

Networks in entire Slovakia failed!

CAPACITY MANAGEMENT



CAPACITY MANAGEMENT - PROCESSES

Business Capacity Management

- Takes **Business Needs**
- Translates them into **Capacity Requirements**
- 1000 lunches per day → 5 stoves, 6 cooks, 10x waiting staff
- Wrong B.C. management results in insufficient capacity or paying for unused capacity

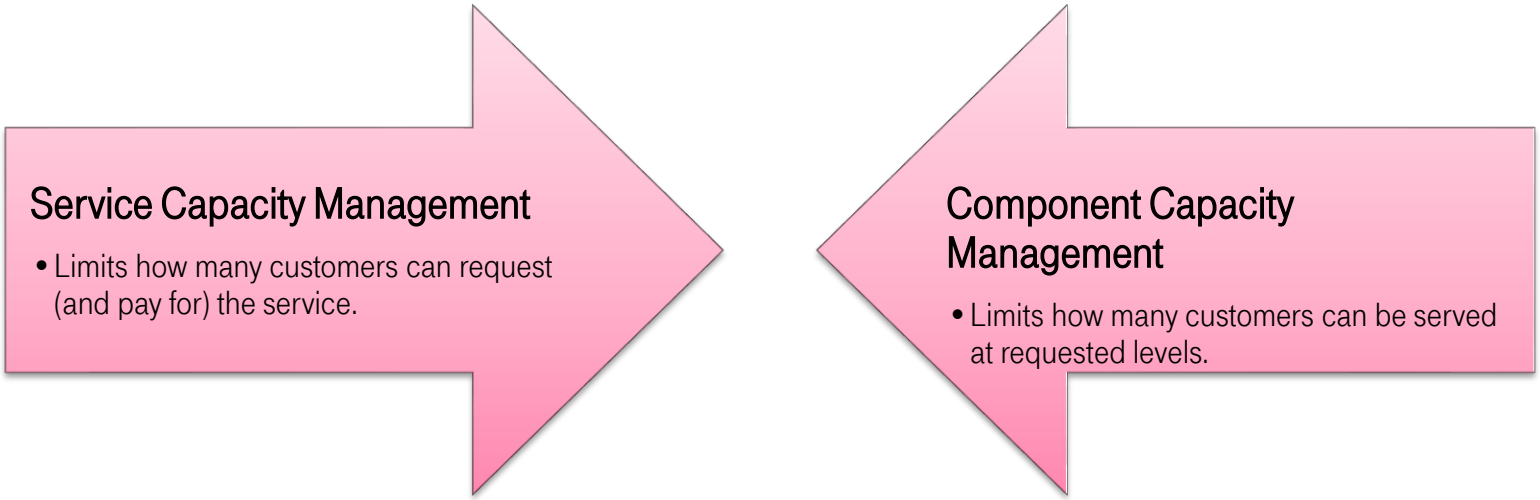
Service Capacity Management

- Handles current and future performance of the service
- Connected to **Demand Management** from Service Strategy.
- Upcoming music festival → opportunity to serve more customers → must increase capacity!

Component Capacity Management

- Focuses on **physical**, real-world **limitations** of **components**.
- Ensures we use components with optimal capacity.
- Must increase capacity → Replace 4-seat tables with 6- or 8- seat tables temporarily.

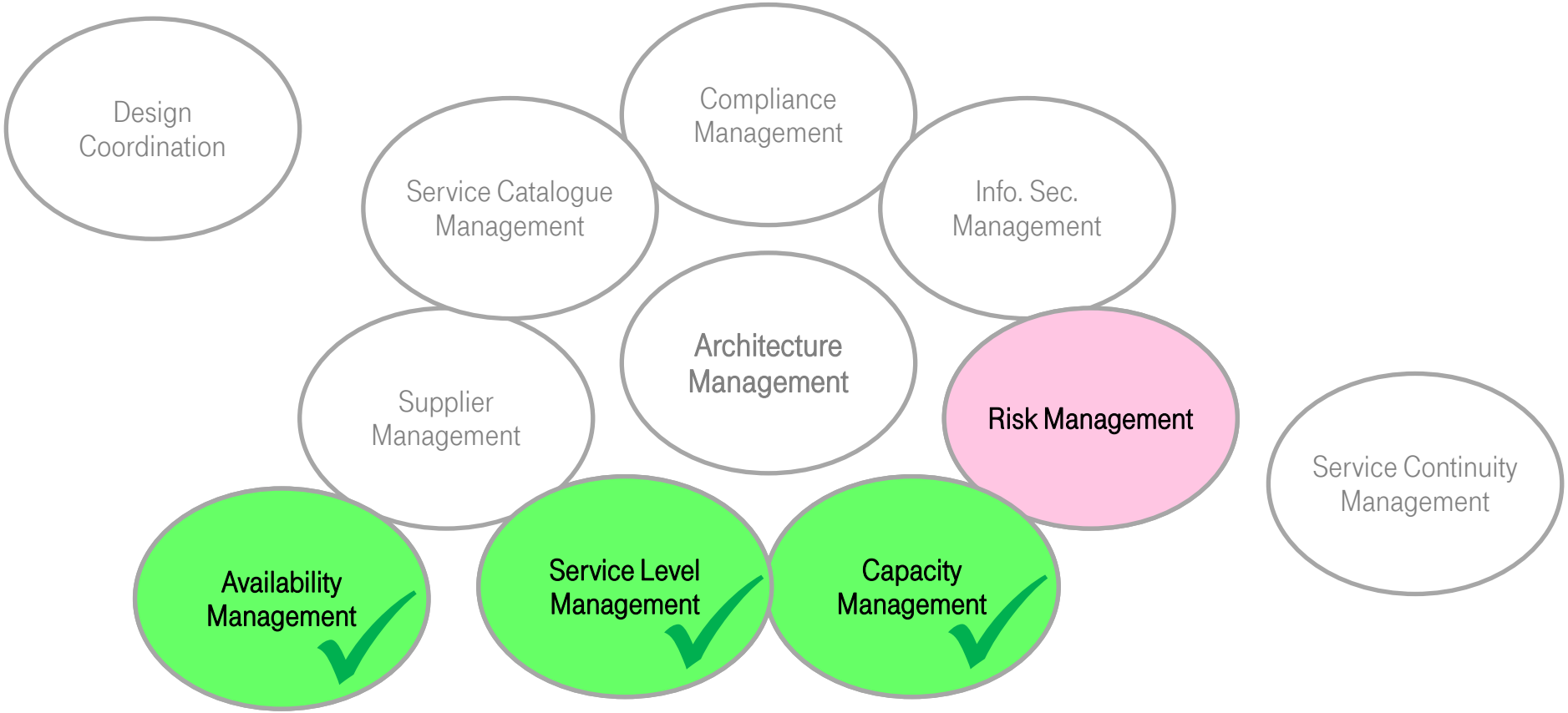
CAPACITY MANAGEMENT - PROCESSES



If you cannot even **request** the service (or your request is rejected), then the provider doesn't have **Service** Capacity.

If you did not **receive** service according to agreement, then the provider doesn't have **Component** Capacity.

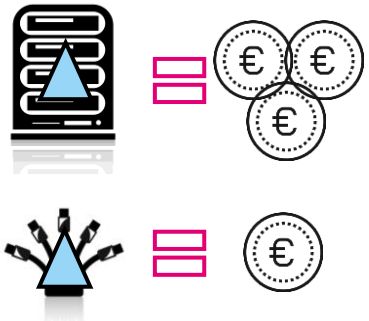
SERVICE DESIGN – PRIMARY BREAKDOWN



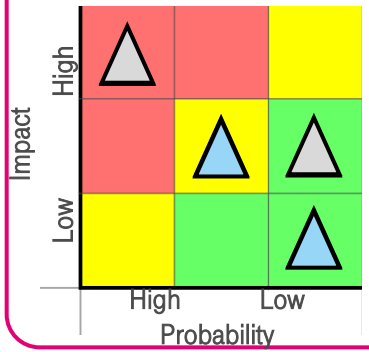
RISK MANAGEMENT

Risk Management – Assessment of **how likely** a certain **negative event** is to occur, and **what** would be the **impact** on business **if it would occur**.

Process And Asset Valuation



Business Impact And Risk Analysis



Risk Register

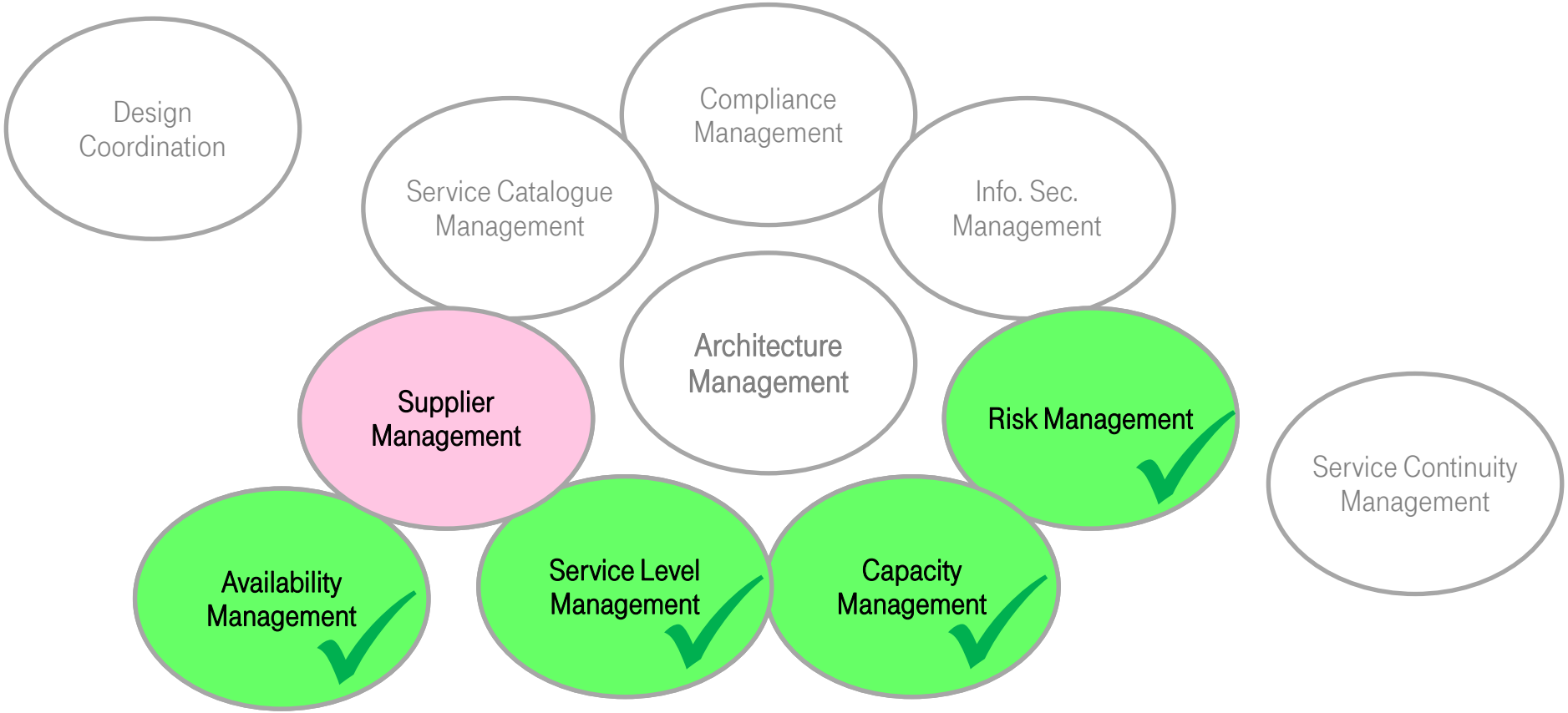
1.
2.
3.
4.

Assessment of Required Risk Mitigation

Risk Owner

Risk Management Support

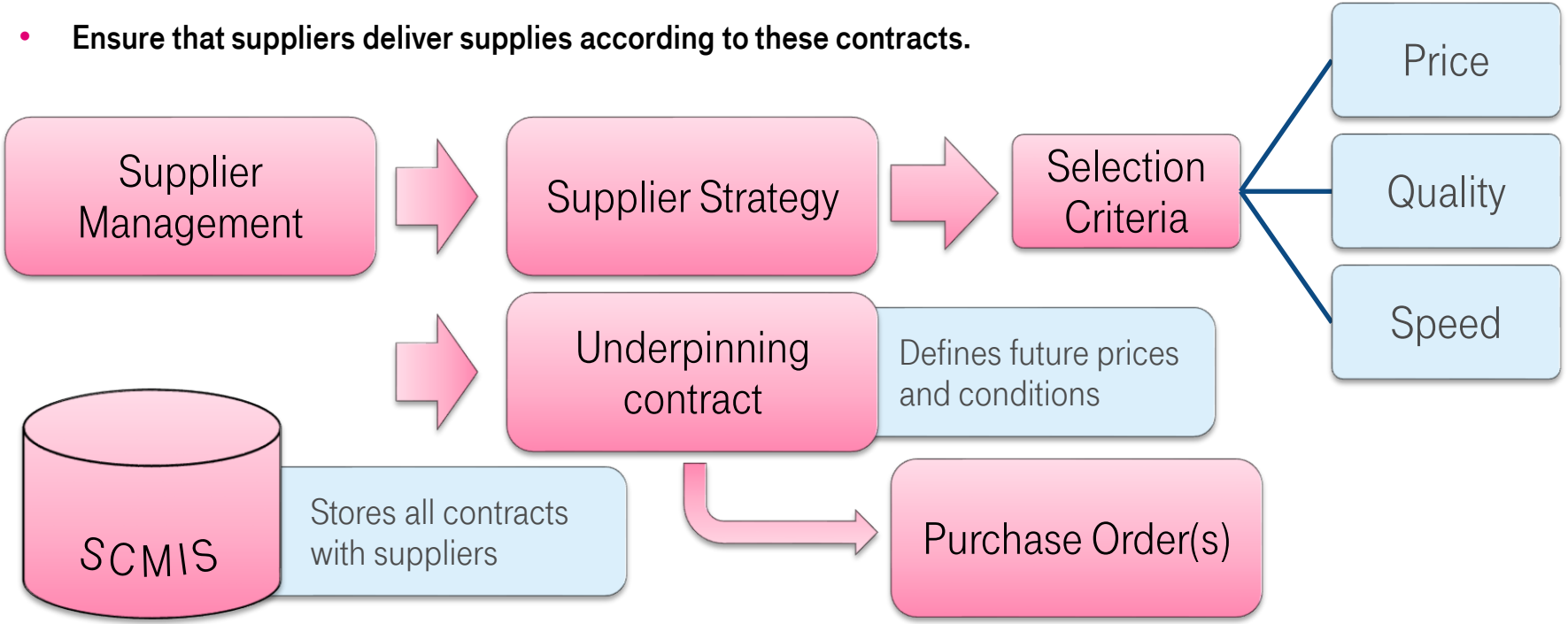
SERVICE DESIGN – PRIMARY BREAKDOWN



SUPPLIER MANAGEMENT

Objective:

- **Ensure supplier contracts are set up and maintained to support the needs of business.**
- **Ensure that suppliers deliver supplies according to these contracts.**



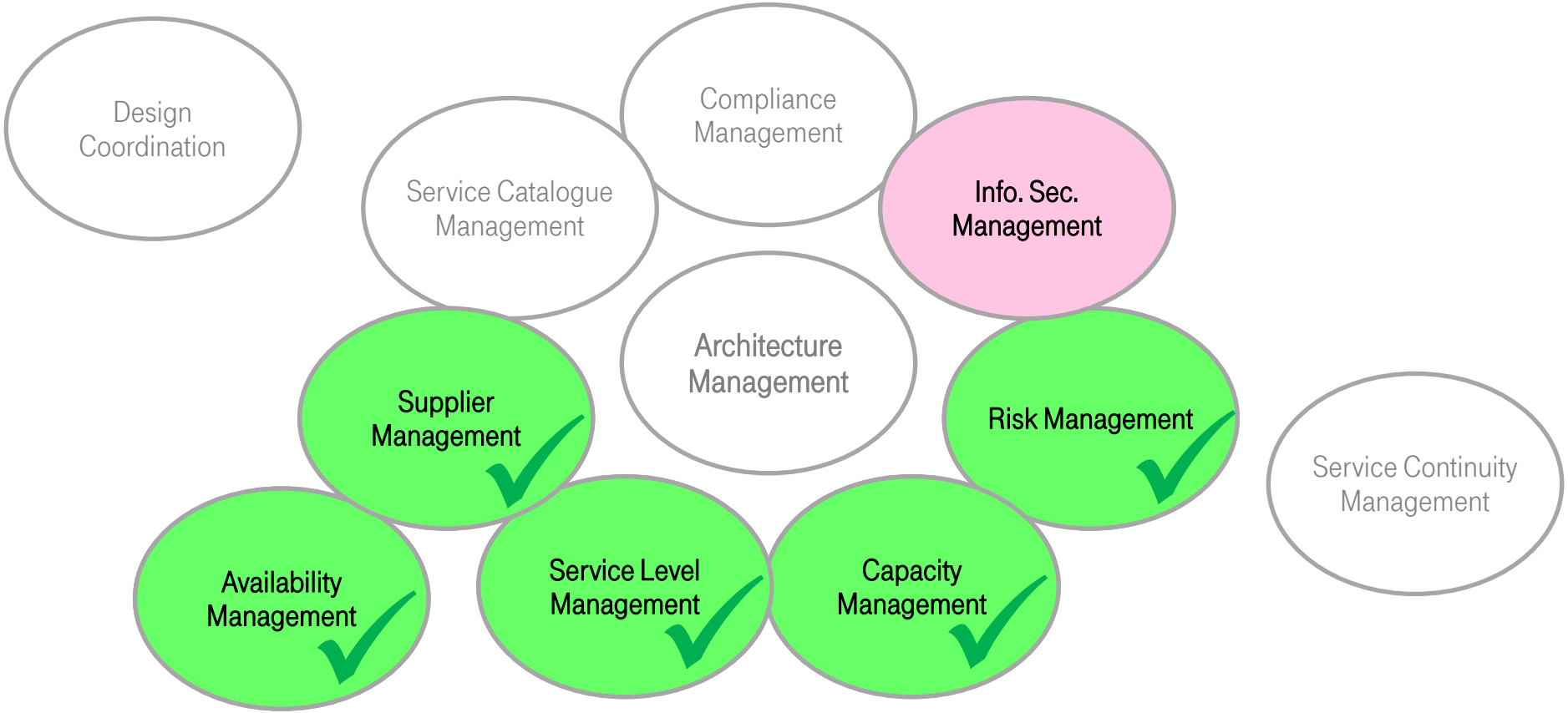
SUPPLIER MANAGEMENT

Providing the Supplier Management Framework	• Produces the **Supplier Strategy** • Standardizes the way for procuring services and assets
Evaluation of New Suppliers and Contracts	• Evaluates possible suppliers • **Selects suppliers** that best fit our business needs
Establishing new Suppliers and Contracts	• **Signs contracts** with selected suppliers

SUPPLIER MANAGEMENT

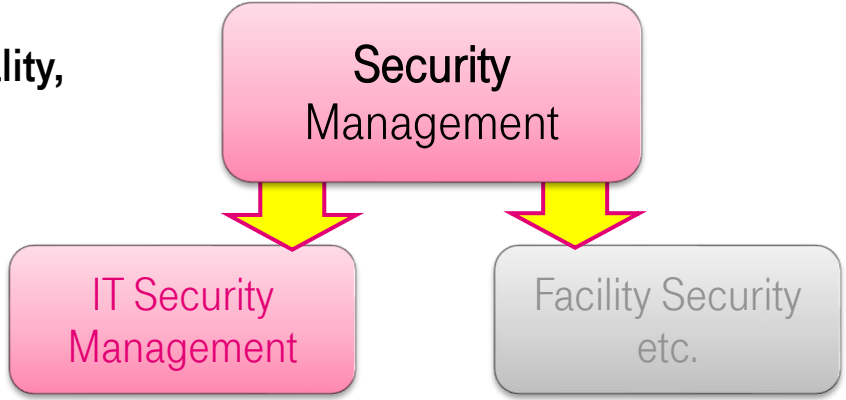
Processing of Standard Orders	• **Day-to-day ordering** of services and goods from suppliers
Supplier And Contract Review	• **Evaluates** if **suppliers** are fulfilling their contractual obligations • **Evaluates** if **contracts** are still aligned with our needs.
Contract Renewal or Termination	• Evaluates if contracts are still needed. • **Decides** on either **renewing or terminating** the contract

SERVICE DESIGN – PRIMARY BREAKDOWN



IT SECURITY MANAGEMENT

IT Security Management aims to ensure confidentiality, availability and integrity of data, information, and also the IT services as a whole.



Confidentiality – only accessible to authorized users

Availability – accessible whenever authorized users request them

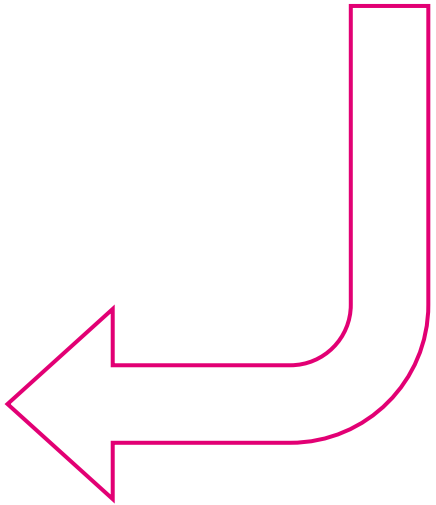
Integrity – data cannot be damaged or modified without authorized user's permission

IT SECURITY MANAGEMENT

ISO 27 001
Information Security Management

Investigation after security breaches:

- How was data secured?
- Who had access to data?
- Were security audits regularly conducted?



- Information security standard
- Non-conformity ➔ violation of Due Diligence
  ➔ Customers could seek financial compensation

IT SECURITY MANAGEMENT

Design of Security Controls

- Designs rules and procedures for information protection.
- Designs security tests.

Security Testing

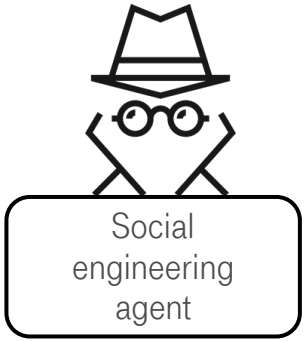
- Reviews **all** security mechanisms using security tests.
- *"If a security test didn't reveal any flaw, you didn't test thoroughly enough!"*

Management of Security Incidents

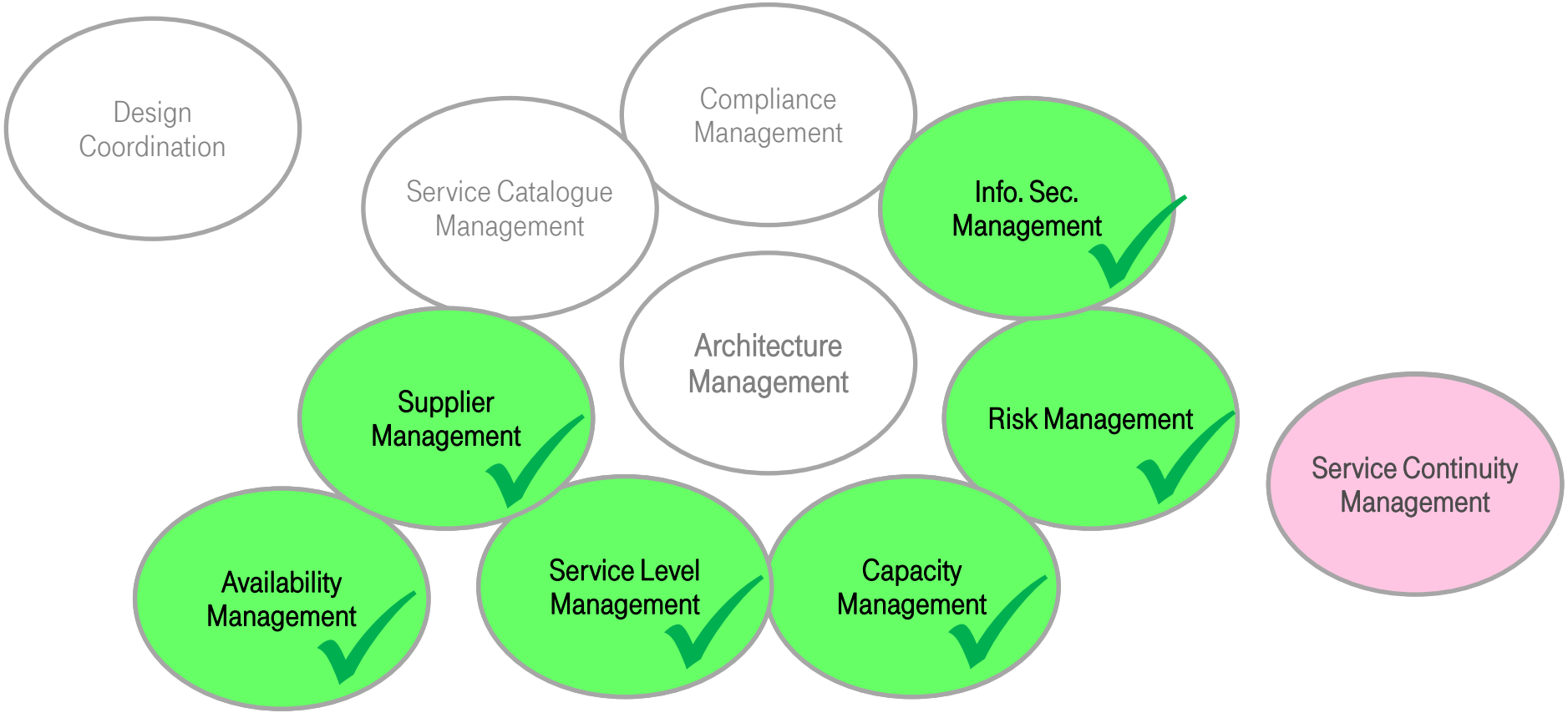
- Detects security incidents and deals with them: Hacker attacks, data theft by employee, loss of access codes...
- Experts must be empowered to perform big-impact actions.

Security Review

- Regular review of all rules, procedures and personnel.
- Findings from review → Design of Security Controls



SERVICE DESIGN – PRIMARY BREAKDOWN



SERVICE CONTINUITY MANAGEMENT

- Part of “Business Continuity Management”
- Deals with restoration of service after a disaster (fire, flood, sabotage, terrorist attack...)
- **Proactive** and **reactive** SCM
  - **Proactive** reduces the probability of a disaster, plans for a recovery after a disaster, and tests these plans.
  - **Reactive** is applied after a disaster

Objectives:

- Provide advice and assistance on issues related to ...
- Maintain a set of plans for ...
- Minimize costs of ...
- Analyze impact of changes on ...

} ... continuity and recovery

- Ensure implementation of proactive measures
- Negotiate and contractually bind suppliers for the required recovery capability

SERVICE CONTINUITY MANAGEMENT

Components of a Continuity Plan:

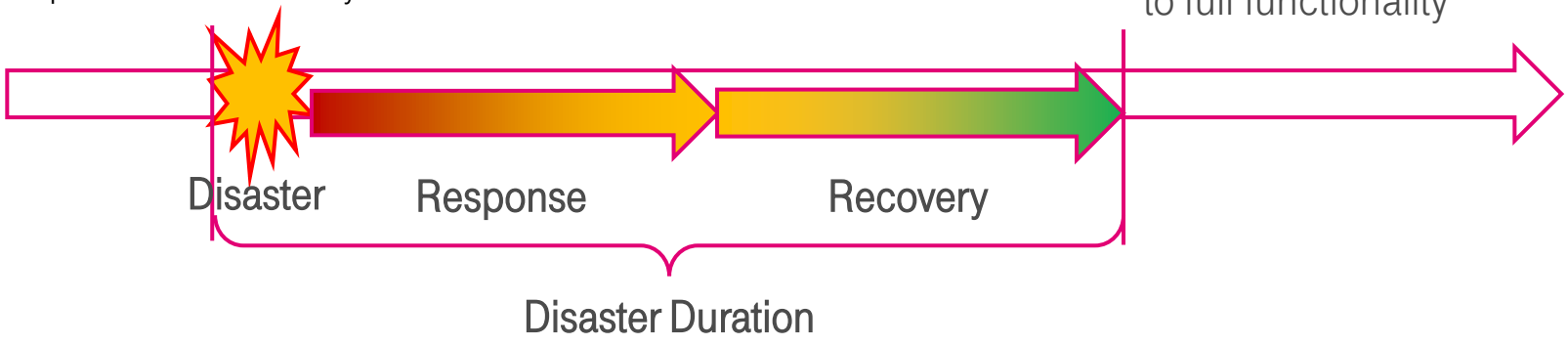
- Risk assessment
- Business Impact Analysis
- Prevention
- Recovery Plan
- Training and Drills
- Multiple communication systems available

Response:

- Evacuation, fire-fighting, medical attention for the wounded etc.

Recovery:

- Sequential effort to bring the service/business back to full functionality



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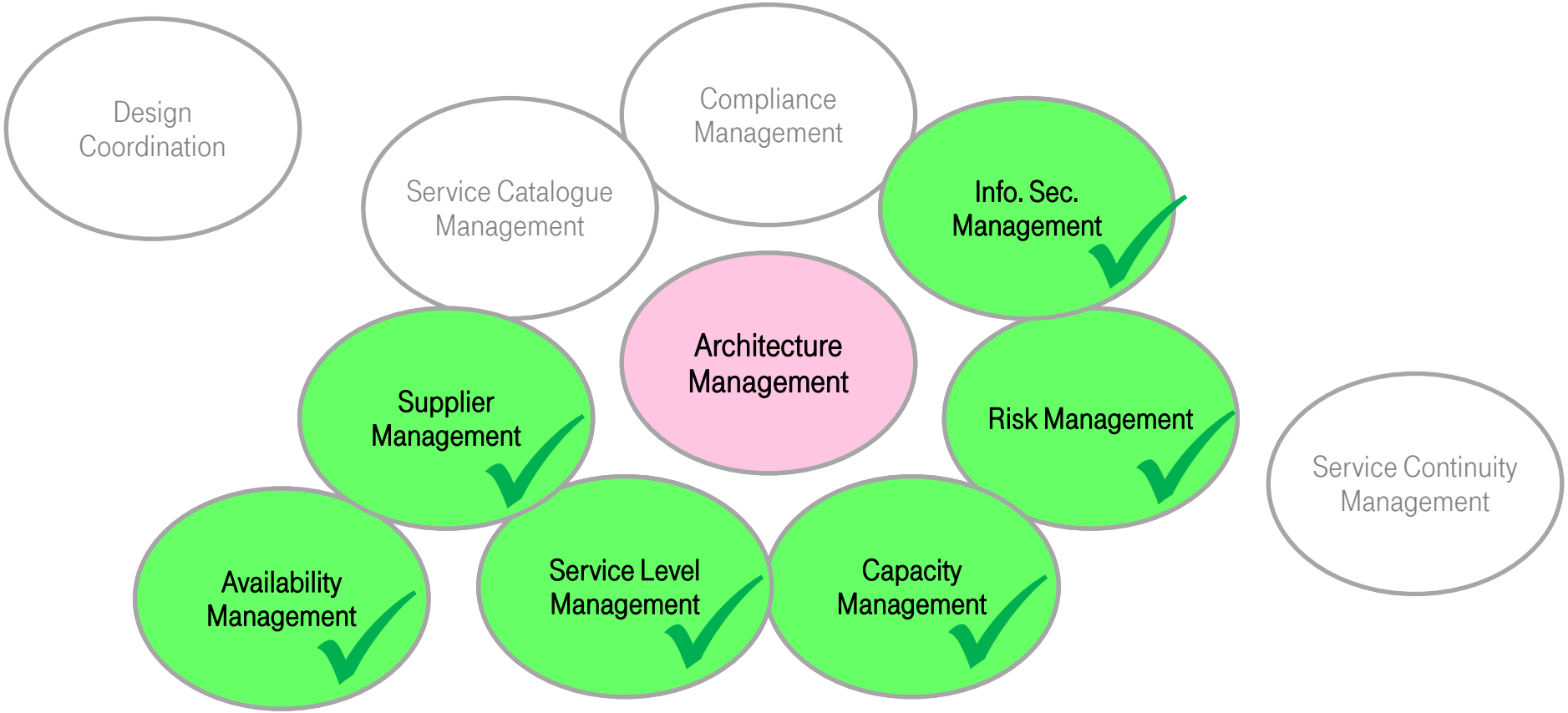
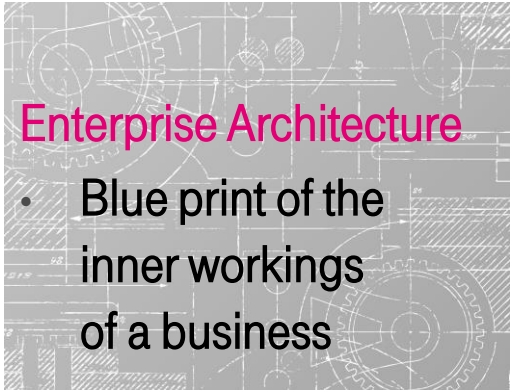


ARCHITECTURE MANAGEMENT

- Building Enterprise Architecture is a complex task requiring inputs from many experts.
- If current architecture doesn't meet service requirements, it must change.



Change Request to Enterprise Architecture

- Documentation of all details of the desired change
- Submitted to Service Transition for implementation

ARCHITECTURE MANAGEMENT

Application Framework

- Rules and principles, guidelines and standard
- Aims to make use and reuse (of infrastructure) easier, standardized and predictable

Non-IT example:

Old practice: Each new car model developed “from scratch” – engine, transmission, chassis, steering…

New approach: Modular Platforms: universal platforms that can carry many different sizes, weights, engine types etc.

In IT: SharePoint-based tools, misc. game engines etc. are *application frameworks*.

DEEP DIVE

→ SERVICE DESIGN