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COURSE: DATABASE ADMINISTRATION AND MANAGEMENT

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ASSESSMENT ON

REPORT: SERVICE MANAGEMENT FRAMEWORKS

It is a detailed IT Service Management plan for an expanding IT technical support service business. The plan is developed according to ITIL best practices.

1. OVERALL STRATEGY:

According to the ITIL (Information Technology Infrastructure Library) framework, the main focus of the plan is to ensure efficient and reliable delivery of IT support services for the customers and clients. It can be achieved by having a clear plan about our business' goals, objectives and aligning them to our strategies.

- **Our business' goals and objectives**: Providing swift and effective resolutions for user queries with reduced downtime during services, increased efficiency and enhanced customer satisfaction.
- **An IT strategy which underpins these goals and objectives:** Implementing required software, applications, outlining the extend and needs of the business. Implement ITIL best practices including incident, problem, change, and service level management. Developing client-specific service level agreements (SLAs) and ensure consistent adherence is also a part of IT strategies.

Service strategy [i] is executed in five processes: Strategy management, service portfolio management, IT financial management, demand management, and business relationship management.

STRATEGY MANAGEMENT:

The process of aligning IT services to your market and organization is called strategy management. The outcomes of strategy management for IT services.

1) Listing the set of services provided: Reliable technical customer support with less waiting time.
    - Who are we, and who do we support?
    - How are we structured? (Operating model)
    - What services do we provide?

- What processes do we own or interact with?

2) Implementation plan for the efficiency of the services: Using a CRM for scheduling and managing inbound and outbound calls which helps
   - To plan, manage, track the customer service activities and resources
   - Setting up appointments, reminders, and confirmations with the customers
   - Adopt remote support tools to provide quicker resolutions, reducing the need for on-site visits.

3) Setting up a knowledge base:
   - Customers can find answers to common questions, troubleshoot problems.
   - Clients can access relevant and updated information when they need it.
   - It reduces call volume, improve your customer satisfaction, and empower your agents.

4) Scalability and flexibility: Ensure the help desk can scale with the growing client base without compromising service quality. Invest in cloud-based infrastructure to support remote work, expand capacity on demand, and offer flexible support hours.

SERVICE PORTFOLIO MANAGEMENT:

Service portfolio management is how the team monitors each of the services and ensures continued alignment with business goals. Service portfolio management is an ongoing process that checks actual service usage against the service strategy.

1. Outline the Help desk services offered in the business: Here, our company's clients' support is categorised as:
   - Network infrastructure support
   - Cloud services support
   - Security services support
   - POS system support
2. Document a workflow. Set SLAs and start tracking performance of each service request.

   SLA for our business:
   Priority 1: Critical: 100% outage/ need immediate attention. No work can be done at client's place.

Priority 2: High: 75% damage in the client's workplace operations
Priority 3: Medium: 50% damage in the client's workplace operations
Priority 4: Low:25% damage in the client's workplace operations

3. Performance metrics: Monitoring key performance indicators (KPIs) such as first-call response time (technician takes to provide an initial first response to a ticket), customer satisfaction scores and query resolution time (how long).

IT FINANCIAL MANAGEMENT:

In this stage we are determining the value of each of our services, running a cost-benefit analysis and identify opportunities for cost-cutting.

1) Budgeting allocates funds to keep our services running and support our overall service strategy.
2) Collection, or charging, is a process for billing customers for what services they use.
3) Value Assessment: Regularly assess the value that each service delivers to customers and the business. Adjust or phase out services that no longer provide sufficient value.

DEMAND MANAGEMENT: It is a precursor to capacity management. By analysing, anticipating, and influencing demand for your services, you can ensure you have the right capacity to deliver services effectively.

1) ANALYSIS STAGE: It involves analysis and monitoring of service desk ticket data, network usage and device usage.
2) ANTICIPATION STAGE: focus on forecasting needs, identifying trends, and making predictions about future usage.

BUSINESS RELATIONSHIP MANAGEMENT: Customer satisfaction data can be monitored by automated polling features for the customers about the services

2. SERVICE DESIGN:

It is a process of designing new services and improving existing ones. The service designers adopt a holistic and integrated approach, follow a lifecycle approach, leverage frameworks, methods, and tools such as ITIL and Agile, establish clear roles and responsibilities, implement effective governance and quality assurance mechanisms, and foster a culture of collaboration, communication, and learning.

There are eight main processes[ii] and activities within the ITIL service design stage:

- Design coordination: The objective of the design stage is met and ensure the consistent design of appropriate services, service management information systems, processes, information and metrics to meet current business needs and requirements. Steps involved in service design lifecycle stage:
  - Define and maintain policies and methods
  - Plan and design resources and capabilities
  - Coordinate design activities
  - Manage design risk and issues and improve the Service design
- Service catalogue management: Up-to-date Service Catalogue is available and accessible to all stakeholders and ensuring that all services added to the catalogue are approved through the Design Coordination process to meet business and customer needs.
- Service level management: To define, document, agree, monitor, and report on service levels to ensure that they meet customer expectations. Ensure that tools and processes for monitoring SLAs are in place and integrated with other ITIL processes.
- Supplier management: To manage relationships with suppliers (devices from PB tech, furniture from TSB living) to ensure that they deliver services that meet the agreed standards and SLAs. Sign off the contracts with the suppliers.
  Outputs of supplier management:
    - Supplier and Contract Management information system (SCMIS)
    - Supplier and Contract Performance information and reports
    - Supplier and Contract review meeting minutes
    - Supplier Service Improvement Plans (SIPs).
- Capacity management: To ensure a scalable IT infrastructure and services are provided to meet current and future demand in a cost-effective manner.
  Output of capacity management:
  - CMIS containing information required by the subprocesses of capacity management
  - Capacity plan
  - Service performance information and reports
- Availability management: Ensure that appropriate tools and processes are in place to monitor and report on service availability.
  - Monitor, measure, analyse, report and review service
  - Service failure analysis: Identifying the underlying causes of service interruptions
  - Component failure impact analysis (CFIA), single point of failure (SPOF), fault tree analysis (FTA)

  Output of availability management:

- ♦ Availability and recovery design plan, criteria and proposed service targets
- ♦ Availability, maintainability and reliability reports.

- Service continuity management: The purpose of IT service continuity management (ITSCM) is to support the overall business continuity management (BCM) process by ensuring that the IT service provider can always provide minimum agreed business continuity related service levels.

  Ensure that service continuity plans are regularly tested and validated, and that findings are used to improve service designs.

  Output of service continuity management:
  - ♦ A set of ITSCM plans.
  - ♦ Revised ITSCM policy and strategy
  - ♦ ITSCM testing schedule

- Information security management: To protect the confidentiality, integrity, and availability of information within IT services. Work with the Information Security Management team to monitor compliance with security standards and implement improvements as needed.
  - ➢ Keeping Customer's data in secured manner by following CIA triad.
  - ➢ Client privacy is managed according to GDPR guidelines

  Output of Information security management:
  - ♦ The information security policy with corporate and business governance/compliance
  - ♦ A set of security controls
  - ♦ Security audits and audit reports

3. SERVICE LEVEL MANAGEMENT ROLES AND RESPONSIBILITIES:

This ITIL process is also responsible for ensuring that all Operational Level Agreements and Underpinning Contracts are appropriate, and to monitor and report on service levels. The documents used are:

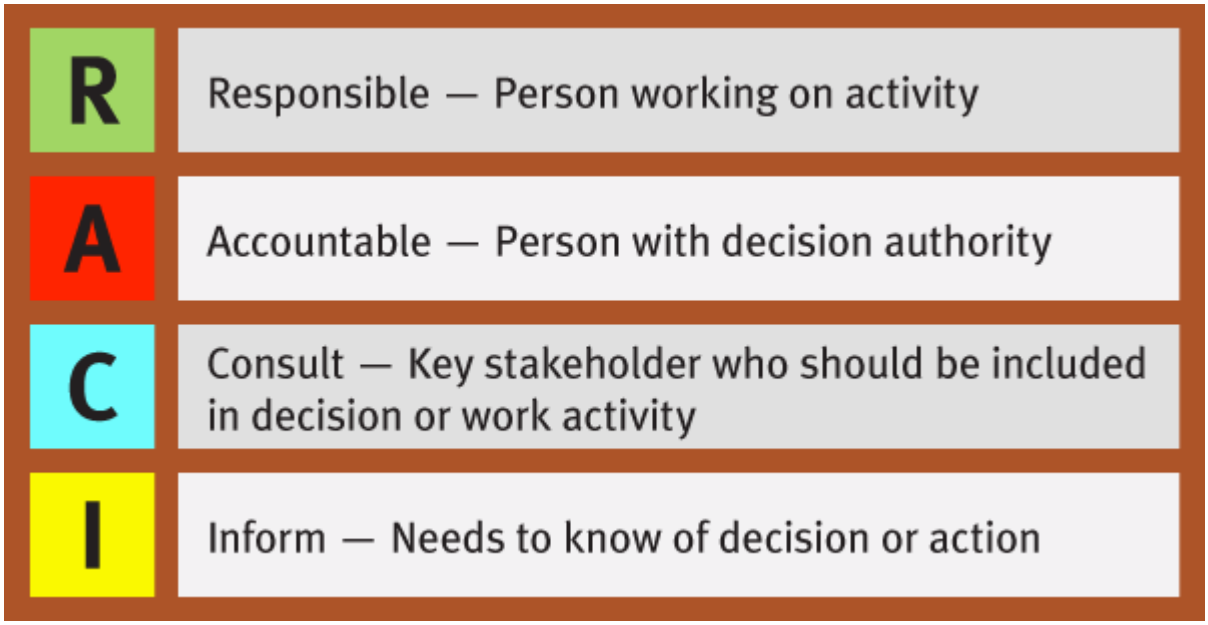
- Service Level Agreement (SLA) [iii]
- Service Level Requirements (SLR)
- Operational Level Agreement (OLA)

Roles	Responsibilities in detail
Service Level Management Process Owner	• Accountable for the definition, management, governance and improvement of the Service Level Management Process • Ensures that all stakeholders are sufficiently involved in the Service Level Management process

	• Ensures that (business) management is sufficiently informed as to the volume, impact and cost of SLAs, OLAs and UCs
Service Level Manager	• Ensures that the customer's current and future Service requirements are identified, understood and documented in SLAs and SLRs • Agreement sign-off and service activation • Negotiates and agrees on the levels of Service to be delivered with the customer (either internal or external); formally documenting these levels of Service in SLAs
Service Level Analyst	• Ensures that Service reports are produced for each customer Service • Performs gap analysis to highlight breaches of SLA targets, investigating reasons and recommending actions to prevent their recurrence • Plans and schedules the Service Performance Review meetings and document the results and actions

Table1: Roles and responsibilities of SLM

Fig1. RACI model for ITIL frameworks[iv]



ITIL Role/Subprocess	Service level management owner	Service level manager	Service level Analyst	Monitoring analyst

Maintenance of the SLM framework	A, R			
Identification of the service requirements	A, R		R	R
Agreements sign-off and service activation	A, R	R		
Service level Monitoring	A, R			R

Table:2 Based on the **RACI Model** (Refer fig 1), it is the responsibility matrix of our company

4. SERVICE DESIGN ROLES AND RESPONSIBILITIES:

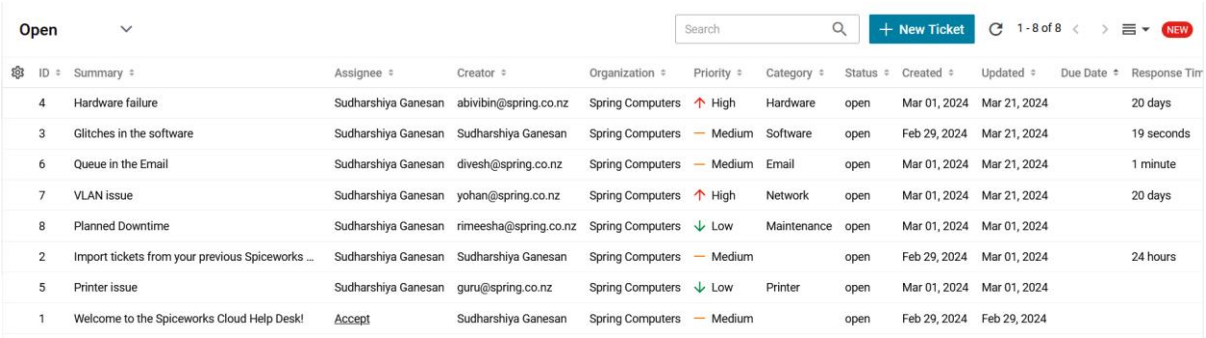
IT service designers[v] work closely with other roles, such as business analysts, architects, developers, testers, and service owners, to ensure that the design is feasible, consistent, and coherent.

ROLES AND RESPONSIBILITIES OF A SERVICE DESIGNER:

- A service designer focuses on end-to-end interactions between a business and their customers, ensuring that the business satisfies customers both before and after getting support from our team.
- They can deliver and manage IT services that create value for the business and customers, as well as improve the quality, efficiency, and reliability.
- They can increase the agility and flexibility of IT services to respond to changing needs and take advantage of new opportunities.
- They can optimize the use of resources while mitigating risks and issues that may affect the design.
- Service designers carry out research to understand customer behaviour, create new processes for optimising user experience and solve any design problems that may hinder user and employee experiences.

Service designers organise three main types of business resources:

- **People/Partners:** Employees and customers affected by its processes, such as business partners and investors. Here, the creator, category and the organisation (Client) are the people involved and affected.



Open

Search | + New Ticket | 1 - 8 of 8 | NEW

ID	Summary	Assignee	Creator	Organization	Priority	Category	Status	Created	Updated	Due Date	Response Tim
4	Hardware failure	Sudharshiya Ganesan	abivibin@spring.co.nz	Spring Computers	High	Hardware	open	Mar 01, 2024	Mar 21, 2024		20 days
3	Glitches in the software	Sudharshiya Ganesan	Sudharshiya Ganesan	Spring Computers	Medium	Software	open	Feb 29, 2024	Mar 21, 2024		19 seconds
6	Queue in the Email	Sudharshiya Ganesan	divesh@spring.co.nz	Spring Computers	Medium	Email	open	Mar 01, 2024	Mar 21, 2024		1 minute
7	VLAN issue	Sudharshiya Ganesan	yohan@spring.co.nz	Spring Computers	High	Network	open	Mar 01, 2024	Mar 21, 2024		20 days
8	Planned Downtime	Sudharshiya Ganesan	rimeesha@spring.co.nz	Spring Computers	Low	Maintenance	open	Mar 01, 2024	Mar 01, 2024		
2	Import tickets from your previous Spiceworks ...	Sudharshiya Ganesan	Sudharshiya Ganesan	Spring Computers	Medium		open	Feb 29, 2024	Mar 01, 2024		24 hours
5	Printer issue	Sudharshiya Ganesan	guru@spring.co.nz	Spring Computers	Low	Printer	open	Mar 01, 2024	Mar 01, 2024		
1	Welcome to the Spiceworks Cloud Help Desk!	Accept	Sudharshiya Ganesan	Spring Computers	Medium		open	Feb 29, 2024	Feb 29, 2024		

- **Processes:** refers to procedures conducted by both employees and customers like creating tickets, maintaining time frame to resolve the issue based on SLAs like Tickets on high priority(critical) should be fixed before 3 hours from the time the ticket is created. Set the timer to monitor and remind the time left to finish the ticket.
- **Products:** refers to the goods and services that a business is using. For example: Service now, ticketing software, Remote desktop application..etc. Using a right software for each process involved in the service for the clients.

5.CHANGE MANAGEMENT PROCESS:

It is a practice of ensuring that changes in an organization are smoothly and successfully implemented and that lasting benefits are achieved by managing the human aspects of the changes.

Change management helps accomplish change in the following ways:

- Establishing a framework to manage the change process
- Prioritizing necessary changes to properly allocate resources
- Incorporating relevant information for smarter decision making
- Involving necessary stakeholders from dev and IT for approvals
- Incorporating testing of changes, to avoid incidents
- Streamlining and improving the flow of changes to deliver value more quickly

Best practices of change Management:

1. Build out self-service request types for the standard changes in your service management software
    - Add text to clarify the purpose and scope of the standard change request
    - Capture important fields, such as the system, application, or service that's being changed
    - Create automation rules to auto-approve the change, transition statuses, and notify staff with updates

2. A change advisory board (CAB) is tasked with assessing the technical and business implications of change requests.
3. Using tools to automate the processes. Can try many online change management templates like Jira service management change management.
4. Prioritise collaboration: A transparent platform equipped with tools like Confluence, integrated chat and video conferencing, and customizable workflows allows everyone to jump in and do their part, their way, with full context.
5. Using Chaos and resilient engineering which focused on testing resilience by breaking or shutting off components of a product or service and addresses all possible stressors on a system—pushing the system with high user counts or high traffic.

6. SERVICE TRANSITION PROCESSES

IT teams move new or updated services from the development environment to production. It uses the service knowledge management system to ensure the changes provide value to the business. It helps IT teams identify hidden risks, clarify roles, share knowledge before it is necessary, plan for contingencies, and assist customers with the changes. The ITIL service transition process consists of the following steps:

- Planning and coordination: Defining activities for service transition after change management
- Change evaluation: It addresses significant changes to critical business systems, such as customer relationship management or payment processing services.
- Release and deployment: Major releases may include hardware and software components or new features. Emergency releases require immediate attention and can include temporary patches or workarounds.
- Service validation and testing: It ensures the quality and reliability of the service in the business environment among competitors.
- Knowledge transfer: This is especially critical for support teams, who need to respond knowledgeably to unforeseen issues. Good knowledge transfer decreases downtime and helps eliminate user frustration.
- Release closure: The release closure step clearly defines the end of the project. It also allows teams to review the process from an experienced perspective.

7. PROPOSED SERVICE DELIVERY:

Modern IT service delivery also requires enhanced application performance monitoring (APM), cloud infrastructure monitoring and AI driven analysis of all event, metric, trace and log data from a centralized console to optimize and improve performance, system health and speed of service resolution.

The proposed service delivery is:

- Provision of accounts (e.g., email, storage) for new users.
- Credential resets, including password resets.
- Requests for new hardware, like a laptop or phone.
- Repair requests for various end-user equipment (such as a jammed printer).
- Implementation of a new software or cloud service package in response to user needs.
- Requests for additional storage resources, either on premises or in the cloud.
- Requests to initiate cloud-based computing services.

Best practices for service delivery:

- Defining KPI like page load speed, network uptime, help desk ticket resolution time, mean time to repair by a field technician in collaboration with service continuity management.
- System/tools to monitor these KPI- visible to both employees and management
- Developing workflows that emphasize meeting and exceeding KPIs: Hold departments and individuals accountable for achieving the required results.
- Reporting KPIs regularly, during daily scrums
- If KPI is not met as expected: Identify ways to improve operations, service support, timeliness, optimization, operational level agreements. Etc

Service delivery tools:

- Help desk tools for service requests, ticket management and escalation eg: Salesforce, Zendesk
- Service catalogue management tools
- Knowledge management tools: Preferably cloud storage for some tools. Eg: Saas
- Configuration management tools
- Performance management tools
- Log management tools

8. INCIDENT MANAGEMENT (TROUBLESHOOTING):

Management of unplanned event or service interruption and restore the service to its operational state.

When teams are facing an incident, they need a plan that helps them:

- Respond effectively so they can recover fast.
- Communicate clearly to customers, stakeholders, service owners, and others in the organization.
- Collaborate effectively to solve the issue faster as a team and remove barriers that prevent them from resolving the issue.
- Continuously improve to learn from these outages and apply lessons to improve a service and refine their process for the future.

Key activities in the IT incident management process:

1. **Identify** an incident and log it: These incident logs (i.e., tickets) typically include:
    - The name of the person reporting the incident
    - The date and time the incident is reported
    - A description of the incident (what is down or not working properly)
    - A unique identification number assigned to the incident, for tracking

2. **Categorise the incident**: Analyse the data of the incident for similar trends and patterns and prevent future incidents. Then categorise the tickets like Hardware issues, software issues, security issues, POS system issues
3. **Prioritise**: Start by assessing its impact on the business, the number of people who will be impacted, any applicable SLAs, as well as the potential financial, security, and compliance implications of the incident.

    SLA for our business:
    Priority 1: Critical: 100% outage/ need immediate attention. No work can be done at client's place.
    Priority 2: High: 75% damage in the client's workplace operations
    Priority 3: Medium: 50% damage in the client's workplace operations
    Priority 4: Low:25% damage in the client's workplace operations

4. **Respond**:
    - Initial diagnosis: Level one helpdesk team works on the incident if they can't, log all the information and escalate to level2 team
    - Escalate: Level2 Helpdesk team takes the logged data and continue with the diagnosis process
    - Communicate: Shares internal and external stakeholders who get affected by the incident.
    - Investigation and diagnosis: This goes till the nature of the incident is identified.

- Resolution and recovery: it may take for operations to be fully restored, since some fixes (like bug patches, etc.) may require testing and deployment even after the proper resolution has been identified.
- Closure: To maintain quality and ensure a smooth process, only service desk employees are allowed to close incidents after verifying with the users.

9. EVENT MANAGEMENT REQUIREMENTS

ITIL event management practice focuses on observing IT services and configuration items (CIs), i.e., IT infrastructure components important for delivering a particular service. Configuration items range from configurations, computers, and connectors to networks and servers. A Configuration Management Database stores all the details about the CIs and dependencies between them. This information supports event management by providing insights about configuration items and their relationships and dependencies, both physical and logical.

Best Practices:

1. Involve internal experts: At the goal-setting stage, when developing the processes and determining the rules for event evaluation, it's helpful to involve as many team members as possible: system administrators, application developers, service delivery managers, SLA managers, and security analysts.
2. Ensure agents have resources to respond: How easily each person can access the resources they need for the response.
3. Automation tools: Network devices like routers, switches, and firewalls can generate logs, track traffic, and provide real-time performance data. If you want more information, you will benefit from specific monitoring tools.
4. Analyse the events: Pay attention to the reporting capabilities of the ITSM or workflow management tool that you're using and relate the events (event correlation)
5. Doublecheck if you receive monitoring data from IT suppliers and set criteria for event identification and prioritization.

10. REQUEST FULFILLMENT OBLIGATIONS

The service request lifecycle is an orchestrated journey that transforms a simple query into a resolved issue, all while prioritizing customer satisfaction. This journey consists of several stages:

- Initiation: The journey begins with the user's formal request, initiated through their preferred channel, whether it's a user-friendly self-service portal, a quick email, or another method.
- Logging: Upon receiving the request, it is meticulously logged into the system, where it is assigned a unique identifier—a ticket to a streamlined service journey. This step is pivotal for tracking progress and maintaining a comprehensive record for future reference.
- Categorization and prioritization: At this point, the request is categorized to clarify its nature. Simultaneously, it is prioritized based on its urgency and impact.
- Assignment: This stage is about precision, ensuring that the request reaches someone with the exact expertise needed for quick resolution.
- Fulfilment: Here, the assigned team member or individual works their magic, employing the required skills and resources to comprehensively address the request. It's the phase where problems find solutions and the real transformation occurs.
- Communication: Regular updates on the request's status are provided, fostering transparency and building trust. This step underscores the commitment to keeping the user well-informed.
- Resolution and closure: The request is resolved, and the solution is communicated back to the user.
- Feedback and evaluation: While the journey may end, the improvement process remains ongoing. The user actively seeks valuable feedback, offering insights into their experience.

Best practices:

1. Ensure user-eccentricity.
2. Streamline process: removing unnecessary steps, automating routine tasks, and ensuring the entire process is as lean and agile as possible.
3. Implement effective categorization: It aids in quick identification, correct routing, and prioritization of requests.
4. Foster clear communication with the users throughout the service request
5. Improved efficiency and reduced human errors: Automating routine tasks and workflows reduces manual effort and speeds up resolution times.
6. Regular updates of service catalogue ensure that the services offered are relevant, current, and meet the evolving needs of the users and the organization.
7. Prioritize security and compliance
8. Analyse and report on performance
9. Integrate Service delivery with incident management, problem management and change management.

10. Encourage sharing of knowledge, best practices, and learning from each other's experiences. A collaborative environment can lead to more innovative solutions and efficient problem-solving.

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[i] https://www.atlassian.com/itsm/itil/service-strategy

[ii] https://www.lucidchart.com/blog/understanding-itil-service-design

[iii] https://wiki.en.it-processmaps.com/index.php/Service_Level_Management

[iv] https://wiki.en.it-processmaps.com/index.php/Service_Level_Management

[v] **https://www.linkedin.com/advice/0/what-roles-responsibilities-service-designers-transition-sua1f**