**Description for the enterprise:**

Marks and Spencer (M & S) is a high street retailer specialising in food. It sells fresh food imported from various parts of the world under the common brand M & S. Being a retailer business it uses a range of information system to conduct its day-to-day operations. Firstly, it receives the fresh products (cold chain) form M & S warehouse and staff process it using **Deliver Processing System (DPS)**. Then the staff manually display the products in the store. Customers purchase this product and the store uses a **Transaction Processing System (TPS)** to track the progress of daily revenue through sales of food. The system supports barcode scanning of product, payment system with cash or cards and prints the receipts through a printer. Likewise, the system is capable of handling various loyalty cards schemes, store gift cards, voiding the transaction and training staff in the till.

Besides, the store uses a **Decision Support System (DSS)**, which aids the manager decision on future orders on food delivery based on current purchase models of the store. This operates by providing statistical projection of future stock and current sale model. For the current stock level and operation of the store the system uses **Central Store Stock Management (CSSM)** system.

Likewise, it uses **Management Information System(MIS)** to create a report of a staff member about their transaction behaviour. This provides the manager of performance data of a particular staff member. The manger could use this to generate a report and send it to higher management when needed.

Finally, the business is using **Customer Relationship Management Systems**, which requests customers to give feedback on their visit to the store. Besides this system allows the store to communicate with its customer through email, phones.

Zachman Framework:

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| Zachman Framework | Why (Motivation) | When (Time) | Who (People) | What (Content) | How (Function) | Where (Network) |
| Vision (Guidelines) | | | | | |
| Scope (Contextual) | 1. Convenient food hub in a busy hospital like Royal Berkshire Hospital | 1. Identify the deadline/ completion date | 1. Identify the customer base, (who will the store be serving? like mostly hospital staff and patients) Stakeholders, Roles in the organisation (Organisation chart) | 1. List of products, customer information, transaction details, warehouse info | 1. List of products, transaction detail. | 1. Identification and description of organisation & warehouse location |
|  | Design (Standards) | | | | | |
| Enterprise and Environment (Conceptual ) | 1. Identify the business goal, steps and store daily/ monthly targets | 1. Identify the required steps to complete the process on time. | 1. Organisation chart, service that allows a customer to pay in terminal | 1. identification of the nature of store products (e.g. quantity and food department) | 1. Conceptual activity model of the retail working process (used to describe the processing, receiving and selling stages) | 1. Structure and interrelationship of store facilities with web-based desktop application (Store launcher) that is used to run the store services. |
| Store Information System (Logical)/ system engineer | 1. Identify the functional requirement of the business | 1. Action plan covering the process and timeline of steps required E.g., charts, timeline | 1. Creating store information system human-system interface architecture | 1. Characteristics of entities like warehouse order details (food department, quantity, variant, the delivery time of lorry) | 17. Application architecture/ software model. used to identify and describe a software system and process | 18. Connectivity and distributed system architecture (Logical section of running services like delivery management system, gap scanning etc. ) |
|  | Implementation (Standards) | | | | | |
| Store Information Technology (Physical design) | 19. Identify the technical requirement of IS of the business | 20. Developing a information system and conforming requirements are met. | 21. Creating store information system human-system interface description | 22. Physical data model, database languages, web programming language statements | 23. Requires system architecture design. describe techniques of information system and data exchange between various system | 24. Store information system network detailed architecture like a server |
| Store Information Components (Modules and subsystem) | 25. Responsible for making system works when the store is open and every part of services are working properly. | 26. Setting hard deadline fairly to test and release the system prior of making it live | 27. System security & its architecture | 28. releasing the data into the database using various database languages | 29. Develop system, Code statements, control blocks, DBMS stored procedures, etc | 30. Physical data network components, communication protocols like release the system in the store and train staff to uses system in computer and handheld terminal (HHT) |
|  | Operation (Standards) | | | | | |
| Functioning Store Information System | 31. Provide quality fresh food to the customers by bringing it from the warehouse on time. | 32. Deploy the function system by pre-set date. | 33. Store staff running daily shifts serving customer and managing store, deliveries, payment using provided desktop application and terminals. | 34. Functioning database, knowledgebase, contacts | 35. Releasing the software system in the store | 36. Day-to-day operation in-store using the delivery system, CSSM food system, etc. |

Description of framework cells:

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| --- | --- | --- | --- | --- |
| **Cell** | **Row** | **Column** | **This cell is appropriate for standards, models and descriptions which:** | **Examples of standards which may fit this cell:** |
|  | Scope | Why | Address customer service and food stock across store boundaries. | A standard method to quantify customer service in the store |
|  | When | Identify and describe the fundamental store events | A standard characterization of essential store and food delivery events useable by store staff and warehouse workers |
|  | Who | Identify the essential components of the store | A standard method for identifying the key organizational components of the store information system and the standard description developed by this method. |
|  | What | Identify and describe the important store services and warehouse (delivery) information. | A designation of the principal information  components in food store. |
|  | How | Identify, describe, and regulate important store product information and delivery process. | A standardized designation of the fundamental processes shared by food store |
|  | Where | Identify and describe the global entities involved in delivering service by the store | A standard identification and description of  individual and organizational participants in the store operation |
|  | Enterprise & Environment | Why | Identify the business goal and objectives like daily/ monthly sales target. | A standard method for quantifying the value of individual satisfaction and its contribution to  organizations. |
|  | When | Determine the order and timing for the processes of fundamental store information services. | A standardized process modeling methodology or a conceptual process model which could be a standard for a group of similarly functioning food store |
|  | Who | Identify and define the roles of individuals  Related to the store. | A standardized workflow modeling method, or specification which could be a standard for similarly operating food delivery organizations. |
|  | What | Define and describe the essential types of  information required for operation of a food store | A standard method for semantic description, narrative or conceptual data model useable for  food delivery for the store. |
|  | How | Identify and describe the fundamental retail working, management, and support activities in a food store. | A standardized activity modeling methodology or a conceptual activity model standardized for organizations which operate in an essentially identical manner. |
|  | Where | Specify and describe the layout of store facilities and their interconnection with the information system. | A standard functional schema for the organization and linkage of facilities within an  organization. |
|  | Store Information System | Why | Relate to the functional requirements and the test and acceptance criteria for a store information system. | Standards for information system project life cycle management, testing, and documentation, along with standard functional requirements shared by similarly functioning organizations. |
|  | When | Detail the methods used to describe or descriptions of processes and event sequences within the enterprise. | Standard methods for specifying events and timing at the logical level and a specification for event sequence which could be standardized for similarly functioning food store. |
|  | Who | Detail the methods used to describe, or the description of the functioning architecture for the interaction of individuals with the store  information system. | Standard methods for specifying the architecture of the human-computer interface, and descriptions of such interfaces used by similarly  functioning food store. |
|  | What | Detail the methods used to prepare a logical data model, or the non-technological description of the data used for store operation in an enterprise. | Standard methods for preparing logical data models, and logical data models useable by similarly functioning food store |
|  | How | Describe the structure of software to support the store and food delivery processes. | Standard methods, techniques and software components for food store |
|  | Where | Describes the communication architecture supporting the store systems | Standard methods and techniques for representing information system linkages within the enterprise |
|  | Technology Model | Why | converts store functional requirements into system operational requirements. | Standard high-level technical specifications of system operational requirements. |
|  | When | Technical design of store information system control and timing structures. | Standard technical specifications for store information system control mechanisms. |
|  | Who | Technical descriptions of the interaction of individuals with the store information system. | Standard practices for the human-system interaction in store information systems. |
|  | What | Detail the methods used to prepare a physical data model, or the technological description of  the data used for store information system in an enterprise. | Standard methods for preparing physical data models, and physical data models useable by similarly functioning food store. |
|  | How | Specifies the technical design of a store information system, including structure, language, database and communication  components. | Standard specifications for program languages and communication protocols. |
|  | Where | Details the technical network architecture of a store information system | Standard practices for representing network architecture along with standard architectures for networks supporting similarly functioning food store |
|  | Modules and subsystem | Why | Description of technical requirements for store  care information system function. | Standard rules and specifications of end  conditions and means to obtain results. |
|  | When | Timing descriptions of the components of store information systems. | Standard timing and machine cycle descriptions and definitions. |
|  | Who | Identification of individuals and their access to specific components of the store  information system. | Standard definitions and descriptions of individual roles, data access and system operation permissions. |
|  | What | Physical data definitions, fields and addresses  for store information and operation . | Standard metadata for technology specific  implementations of store information. |
|  | How | Descriptions or scripts for component level applications in store information systems. | Standard “programs” and similar structures such as relational database stored procedures for information systems that support similarly functioning food store. |
|  | Where | Description of the physical network components as nodes and linkages. | Standards for specification of node addresses and the protocols for communicating among  nodes. |
|  | Functioning Enterprise | Why | Definition of the business and operational strategy of the store. | Standards for store information system outcomes and quality assurance of food delivery processes. |
|  | When | Schedule of releasing tasks and operations. | Standard timelines and cycles for store and delivery tasks such as approving delivery, verifying stock using the information system by the deadline. |
|  | Who | The store staff/ team running the daily shifts | Standard list of providers and practitioners performing their responsibilities. |
|  | What | Description of store information. | Standard specification of store information |
|  | How | Release and actual store and food delivery activities. | Practice guidelines, accepted practices, and activities and outcomes required by regulatory  authority. |
|  | Where | The store and provider network. | Standard procedure in information system like for delivery processing and CSSM food system. |