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Domain Selected: Process and Workflow Management

Process and Workflow Management: Business Process Management (BPM) is a management practice which encompasses all activities of identification, definition, analysis, design, execution, monitoring & measurement, and continuous improvement of business processes. Consequently Business Process Management encompasses not only the analysis and modelling of business processes but also the organisational implementation, leadership and performance controlling (Becker 2003.) Workflow management provides and infrastructure for the setup, performance and monitoring of a defined sequence of tasks, arranged as a workflow application.

Key Learnings from Process Management

A. Aimed at Improving Business Operations/ Efficiency
B. Initiatives are usually company wide and require adoption of Process Framework with Maturity Framework with common methods[#7]
C. Aimed at improvement in Process KPIs (Key Performance Indicators – how well is the process performing) [#8]
D. In Shared economy, B2B (Business to Business) Collaboration of Business Processes across Organizations is key to success [#9]
E. Continuous Process Improvements, Process Benchmarking and Process Cost-Value Matrix are key to success [#10]

Adaptation of Process Management learning in "Virtual Clinic" perspective

"Virtual Clinic" aims at re-imagining the Healthcare Business Process using Digital technologies from what exists today with an aim to make Healthcare processes more efficient with defined Service Levels. The process can be bench-marked to reduce errors and inefficiency and the hierarchy present for each workflow present in the healthcare system.

1. Collaboration across Departments and Extended Eco-system: One of the core areas is Collaboration across departments (Doctors, Patients, Billing, external labs, medical shops) associated with the hospital. This will ensure coordination and traceability.
2. Key Performance Indicators to gauge "Speed/ Agility" in Operations: A lot of human interventions will be reduced at various stages of the process, hence increasing speed in whole process.
3. Data management: It will help the hospital know about the various data in their administration and the diseases management helping to manage the staff/doctors, regulating medicines, and the hardware requirements for various diseases.

Key Learnings from Workflow Management

A. Cooperative Information Systems – User/ Customer View, Architecture View and Software Engineering View. [#1]
B. Context Aware Workflows[#5] - Scenario based Workflows
C. Knowledge based techniques increase flexibility of workflows [#6]- automation of business processes vide flow of information and documents e.g. lab reports

D. Workflow management is key to managing Business Processes and not just task automation [#2]

Adaptations of Workflow Management learning in "Virtual Clinic" perspective

In our project, we can apply the Workflow management principles i.e. User view to make the flow of the "processes" easier and dynamic based on contextual information among the staff, doctors, patients, lab and medical shops associated with the hospital. The areas that our project will be concentrating are:

1. Appointment Automation: Due to the new system, there won't be any need for manual labour for filing appointments, hence increasing efficiency.
2. Consultation Workflow: Automatic routing of Patient Consultation requests to right Doctors (Contextual Workflows based on Patient needs)
3. Chemists/ Labs: Automatic routing of prescriptions to Chemists and Labs (Dynamic and Contextual)
4. Finance/Staff Management: The admin can directly generate the bills and the reports, hence making it easier to scrutinize the diseases, bills by not involving any paper work and getting clear idea for the needs and demands for the hospital/patients (Workflow Automation)
5. Cross Organization Management: Since the complete process of the healthcare system does include cross organizations for lab checkup and medical shops for medicines, it gets the involvement of suppliers who have their own information system and processes.

Besides above, the principles of process and workflow management as understood shall also be applied in Software Engineering for planning and modelling of development activities, project monitoring and control, resource management, project benchmarking, software KPIs, adoption of practices from Software Capability Model/ CMMI and support of collaborative work.

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