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**ASSIGNMENT**

1. What assumptions underlie the idea that the system should be organized as a core system that implements the essential requirements, plus extensions that implement the additional functionality? Can you think of systems where this model would not be appropriate?

Core-system is a field service and a customer support management system that help the field service managers to speed up the customer service process. These processes are dealt through dispatching, routing, reporting and the automating tool.

**Assumptions**

1. Visibility assumption

Project visibility can be achieved solely through delivery of working code. Visibility of software development projects is traditionally accomplished through reports specifications and measures of quality and productivity and the working applications only seen after the developer has done a large amount of work and spent a great amount of time working on project

1. Iteration assumption

A project can always be structured into a short fixed iterations. Agile processes require developers to group required features into loosely coupled bundles that can each be addressed in short fixed fixed time iterations. Such decompositions is usually based on an implicitly imposed architecture compressing of loosely-coupled modules and is thus desirable. The assumption here is that the developing application can be broken into small discrete increments that can be developed and demonstrated in a short fixed time intervals and that after each of these iterations the customer will be able to observe additional functionality in the product

1. Customer interaction assumption

Customer teams are available for frequent interactions when needed by developers.

Some major assumptions here are that the customer is available at the time the developers need to interact with them, and that the customer can always reschedule other work so that there is time for frequent interactions with the developers. The reality is that it may not always be possible for a customer to reschedule other work.

1. Team communication assumption

Just as the customer interaction assumption assumes a certain amount of time, place, resources and availability so does this particular assumption. Time, resources and availability must all be coordinated and provided in order to allow the principle to be supported. It is not unusual to have development teams on a single project that are dispersed in aide geographical area involving many time zones

The extensions of the core-system reflects additional stakeholders concern which must be integrated with the core system

For instance is important for a medical system to maintain the confidentiality of a patient information so one extension might be concerned with access control and the other with encryption

There are several types of extension

1. Secondary functional extensions – these add additional capabilities to the functionality provided in the core-system for instance in the MHC-PMS; the production of the reports on the drugs presented in the various month would be a secondary functional extension of a patient information system
2. infrastructure extension

these extensions add functionality capabilities to support the implementation of a system on some specific implementations of a system on some specific implementation platforms e.g. in patient information system the infrastructure extension must be used to implement the interface to underlying database management system changes can be made by modifying the associated info-structure extension

1. Policy extension

This add capabilities to support organizational policies it is one of the extensions that add security feature.

1. What viewpoints should be considered when developing a requirement specifications for the MHC-PMS? What are likely to be the most cross-cutting concerns?

**Requirement specifications-**is the process of writing down the users and user requirement in a requirements document

**MHC-PMS is the Mental Health Care-Patient Management System** defined as system used to maintain information about patients receive ng treatment for mental health problems.

It makes use of a centralized database of patient information but also has been designed to run on a computer so that it can be accessed and used from sites that do not have secure network connectivity

The specification of large computer based system is a very complex process ideally the specification should only define what services the system should provide and the operational restriction on the system. The requirement specifications should be very easy and clear to understand, complete, consistency, and unambiguous and should not use structured notations, formal notation should not include implementation details and should be presented in such a way that it is understandable

**Viewpoints considered when developing a requirement specifications for the MHC-PMS**

Viewpoints are a means of structuring the collection and documentation of requirements from classes of system stakeholder. Each viewpoint represents a partial specification of the system so the complete specification is created by integrating the requirements from each viewpoint. Viewpoints may either be interact or viewpoints representing stakeholders who interact directly with the system, indirect viewpoints representing stakeholders that require information from the system or are involved with the system management and domain viewpoints that represent There are four principal viewpoints that place requirements on this system.

1. Clinical staff; Clinical staff interact directly with the system, looking up and modifying patient information. They are particularly concerned with maintaining a history of consultations and recording the treatment and medication prescribed to patients.
2. Receptionists; Receptionists interact directly with the system and use it in conjunction with a generic appointments system to record information about patient appointments. They need to record when appointments were made, the appointment date and whether or not patients attended appointments.
3. Medical records staff; Medical records staff interact with the system to generate management reports and to link information in the system with more general patient health records.

4. Health service management; these are indirect viewpoints as health service managers do not directly interact with the system. However, they do require reports generated from the system and so generate information requirements. There is no explicit viewpoint representing other computer-based systems that may interact with this system. It is assumed that any requirements of this type will come from one of the principal viewpoints. 3

**Concerns**:

Concerns are intended to represent high-level organizational goals that are often vague and poorly specified. These are important to the success of the system and so the requirements engineering process must try to understand their implications for the system. However, the nature of concerns is such that some aspects will always be vague (e.g. the notion of ‘reasonable’ costs) and subject to individual interpretation. The principal concerns in the MHCPMS are:

1. Usability. The system must be used by a range of staff, often working under time pressure and with different levels of experience using computer-based information systems.
2. Safety. Patients may cause harm to themselves or others. The provisions of the Mental Health Act must be taken into account.
3. Privacy. Patient privacy must be maintained according to the Data Protection Act and local ethical guidelines.
4. Operational costs. The operational costs of the system must be ‘reasonable’. Note that concerns reflect organizational goals rather than the goals of the different classes of system stakeholders.

Operational costs are a concern because of budgetary constraints. Note that properties such as availability and reliability are not organizational concerns although they may be important to system stakeholders. Furthermore, availability and reliability requirements may be derived from the principal organizational concerns.

1. Safety and privacy are concerns because of legislation and the negative consequence of failures which affect safety and privacy.
2. Usability is a concern because of the need for efficient working and staff retention
3. Functionality, the definition of the services that the system has to provide, is an implicit concern for all system.