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This level also takes into consideration the interests of the various stakeholders of the firm, such as the government, regulatory agencies, customers, employees, as well as stockholders. 2. Information Architecture: This level is primarily a map of the overall information needs of the firm based upon the firm's business strategy. The business strategy of the firm is translated into IS strategy through the process of IS planning. This finally, culminates in the design and development of the organizational KM system.

The IS plan, facilitates the coordination of the various aspects related to IS planning, such as the plan quality, the stakeholders requirements, plan outcome, etc. The IS strategy considered in terms of its objectives and constraints, guides the development of information architecture. The information architecture basically encompasses the application level aspects (e.

g. Business Intelligence System, Market Research System) that map the information needs on the firm's specific business needs. The development of the various applications devolves from the mapping of the business needs on specific IS-related applications. This process is also constrained by the various limitations present at the business strategy level. For instance, the viability of the proposal for specific applications could be limited by the availability of the budget requirements.

Essentially, this level is like a ' blueprint of a building' that takes into consideration the data architecture, systems architecture and computer architecture. 3. Data Architecture: The data management strategy follows from the information strategy and the business strategy.

The organization needs to make decisions about how data will serve its business and information needs. It needs to define its current and future needs for accumulation, usage, renewal, maintenance, and transfer of data within, and outside, the firm's boundaries. From a business perspective, it would need to consider issues such as: (a) Databases to facilitate structured storage of the environment data captured by inter-organizational as well as intra-organizational scans, coupled with intrinsic operational data as well as data related to the organization's external environment. (b) Data dictionaries, and query languages. (c) Usage of databases for facilitating mining of competitive intelligence.

(d) On-Line Analytical Processing (OLAP) as well as data mining for gathering data on customers and competitors; (e) Data protocols for using EDI for inter-organizational IS or for electronic integration of the firm's business processes with those of its business partners. (f) Distributed databases to provide a common view of data across the firm. (g) High data integrity and security. (h) Data warehousing that considers the firm level data requirements. (i) Data modeling tools. (j) Development tools such as CASE and Lotus Notes or Rational.

Essentially, this level aligns the various data related aspects (listed above) with the business applications (Information Architecture level), the systems related protocols (Systems Architecture), and the various hardware and software applications (Computer Architecture level). 4. Systems Architecture: This level of architecture relates primarily to the information architecture, the data architecture, and the computer architecture.

Although some authors consider communication architecture to be a distinct level, we will treat this level as a part of the other three levels. Decisions about specific systems that the firm is going to deploy need to consider the demands made by the business applications, the data requirements, and the hardware and software that will support them. Examples include issues such as the client server architecture, intranets, and the various networking protocols. 5. Computer Architecture: The computer architecture, as discussed above, relates to the information architecture, the data architecture and the systems architecture. This level is primarily made up of the specific hardware and software that constitutes the technological base for the above architectures. The choice of specific hardware and software requirements is also determined by the products available in the market and the budget allocations.

Specific ' make or buy' decisions are generally made at this level; however, they are guided by the issues at other levels. For instance, the decision to outsource the firm's telecommunication setup or data centers, although a technology decision is guided by issues such as development of proprietary know-how, and focus on the core competencies.