**The Importance of Business Understanding in Requirements Structuring**

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**Why Model?**

Conceptual modeling forces all participants to critically evaluate the current (and potential future) business requirements of an organization. An effective conceptual model will also provide an organization with a solid schematic of its data needs, independent of any other considerations (i.e. application programming; vendor-specific database management systems). Additional benefits include:

**Benefits of Effective Modeling**

* **A Better Final Product –** All else being equal, a finished information system based on a sound conceptual model should provide more functionality and less errors than a system lacking an effective model.
* **Increased Specificity for Experts –** An elegant model will classify components in an intuitive way allowing design problems to be decomposed and assigned to relevant experts.
* **Improved Communication Between Developers –** An effective model synchronizes common vocabulary and allows experienced developers to work at a higher level of abstraction (assuming all developers are able to “stay on the same page”).
* **Improved Communication with Others –** An effective model will also support communication between all participants: (1) analysts, (2) users, (3) experienced developers, and (4) novice developers (or developers new to a particular system).
* **Increased Domain Understanding –** The process of creating a conceptual model forces analysts to better understand the domain for a particular information system. Additionally, analysts, developers, and users who are new to a system can use the existing model to aid their understanding.
* **Guide Design Decisions –** While a conceptual model should be created independent of any “downstream” considerations, an effective model may assist developers in selecting various design alternatives to build on the underlying data model.
* **Stronger Documentation –** A strong conceptual model should encourage stronger documentation of business requirements, which could prove useful for future reference.

**Consequences of Poor Modeling**

While effective modeling can be challenging, the consequences of poor modeling (or not modeling at all!) can be severe, particularly over the longer term. A couple of these consequences include:

* **Overreliance on Application Code –** According to Todd Schraml, data architect for IMS Health, “modeled structures convey meaning; and when modeling is not done, much of the meaning can end up residing inside the [application] code”. Over time, this most likely will pose difficulties in maintaining the existing code, as well as extending the current system to incorporate additional business requirements.
* **Poor Decomposition Quality –** A substandard model will not lend itself to adequate decomposition. Inadequate decomposition could result in increased incidental processing in users of the model (lowering problem-solving performance); as well as domain confusion in readers of the model. Ultimately, this could cause users of the model to perceive a lower ease of understanding, negatively impacting their confidence in the model (and by extension, the information system).

Those are a few of the benefits of proper modeling and consequences of poor modeling. Again, the modeling process may require significant time and resources. However, over the longer term, the benefits of sounds modeling should outweigh the costs for most organizations.