This chapter addresses the inability of current methods to factor in human and organizational issues, the high number of “one-off” solutions produced in the industry, and the inflexibility of current systems development methods. Several case studies are included that point to the value of using prototypes and having rapid customer feedback.

The goal is to blend best practices from the industry’s current systems development methods introduced in Chapter VIII, with a socio-technical approach for new product development covered in Chapters II through VII. This is admittedly an ambitious goal, and it is not intended that there be a strict adoption of the methodology proposed here. It is hoped that these thoughts will influence what we are doing today. Ultimately, the best product management and development approach for a software company will depend on the culture of that company, and will be influenced by their maturity, and the market they are in.
As argued throughout, the industry is ripe for some change. Our products need to fit better into the customer’s organizational ecology. They take too long to implement, do not address the complete business solution, and have business cases dependent on significant technology adoption. In short, they do not involve the customer early enough in the process to overcome these obstacles.

To respond to this, product development needs to emerge directly from the customer’s human, organizational, and technical requirements. Doing so will allow us to provide a strong socio-technical foundation to the development process.

Flexibility is fundamental to the process. The history of software design, from waterfall to spiral and then to object-oriented approaches, has shown a continual emphasis on flexibility. Following this trend, the framework tries to develop the ultimate “light” development process suitable for the emerging company or for mature companies venturing into completely new markets, where firm value propositions are not in place.

This discovery process depends on the established development methodologies described in Chapter VIII. SDLC and object-oriented methods are very much part of the process. A primary goal of the proposed framework is to avoid or shorten the “one-off stage” described in Chapter VIII and move quickly to more rigorous approaches as the software initiative matures. If most software companies are using limited process today, this has to be an improvement.

The Discovery Framework

The discovery framework is shown in Figure 9.1. The four parts to the process are concept, research, initial development and assessment and validation. Product initiatives compete to move through the product development funnel. As shown there may be ten product ideas at the step A and five at step B. Step C narrows the focus and applies formal development processes. It is an important gate and where investment in the idea increases. Chapter X will provide a process to compare products and determine whether they can pass this milestone.

The framework recognizes the likely maturity level of software firms and blends the needed flexibility, with the required discipline of formal development methods. Various socio-technical techniques introduced in Part I are used in steps B and C. The approach ensures attention to these principles. The Balanced Scorecard is used for the assessment and validation phase.
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