This chapter addresses issues in systems development and design of software products. The goal is to describe three problems in the industry. First, is the inability of current methodologies and practice to factor in human and organizational issues. Second, is the high number of “one off” or custom solutions that we see in practice. And third is the inflexibility of current systems development methodologies. Chapter Nine will introduce a method that addresses these observed industry issues.

We begin by describing the difficult task facing the software company when creating solutions for new markets. Next, the leading systems development methodologies used in the industry are provided for context. The state of the industry in terms of software practice maturity is then described with emphasis on the typical development approach taken for new software applications.

The Difficult Task of Creating New Products

Although, I never saw him play, one of my favorite baseball players is Pete Reiser. He played for the Brooklyn Dodgers in the 1940s. At the time, it was
thought he would be one of the all time greats. He was so enthusiastic, determined, and focused on the single objective of catching a baseball that he kept crashing into unpadded outfield walls. He was injured no less then seven times. After one particularly heroic effort in 1947, he was paralyzed for 10 days. A priest even gave Reiser last rites.

Companies breaking into new markets tend to take the Pete Reiser approach. Full speed ahead into hard surfaces and like Peter Reiser they get up and back in the field the next day (Appel, 2002). Why is breaking into new markets so hard?

• You have no customer references or credibility because the markets you are trying to break into are new to you.
• You start with very little domain experience.
• You must figure out a value proposition.
• You must develop the application often with barely proven technology.
• You have to figure out how to market it in this unknown space.
• There is a technology hangover from the Internet bust.

Introducing new technology is difficult for any company, regardless of whether the market is new for them or not. Look at Figure 8.1; you’ll see that the easiest task is when firms sell existing technology to their current market (lower left quadrant). The technology is proven and that market knows them. Selling proven technology to new customers (lower right) is the next easiest. The value proposition is proven in one market, but the credibility, commitment, sales, and marketing infrastructure all need to be established in the unknown market. But at least you have a product. It has been successfully deployed and you have a reference.

Introducing new technology to existing markets (upper left) can be positioned as product extensions. You can go to your best customers and convince them to take your new product. You have leverage and domain knowledge.

Our focus is creating new markets with new technologies (upper right quadrant of Figure 8.1). This is what emerging companies do. It is the same as steering a large ship in a deep fog without navigational support. You have only vague ideas about the most fundamental things.