

Utility Is Success by Vall Iliev

Inventors come to a product development and management (PDM) company because they want to make their idea a reality. Their goal is to draw on the PDM's resources to commercialize the invention and bring it to the market. Thomas Edison, one of the world's most prolific inventors, had this goal as well. He used the term "utility" for what is known today as commercialization. "Anything that won't sell," Edison said, "I don't want to invent. Its sale is proof of utility and utility is success."

Like Edison, the inventors who transformed the American economy dedicated themselves to making real products needed by thousands of people. Charles Goodyear, for example, was determined to develop rubber to help prevent the all-too-frequent drowning of sailors. He believed that life jackets made of rubber fabric would be better than the clumsy cork vests used in the 1830s, and he envisioned inflatable life rafts made of rubberized canvas. Goodyear's discovery of the vulcanization process enabled manufacturers to work with different forms of latex (then called "gum elastic") that did not become rigid in the cold of winter and sticky in the heat of summer. Many years after this inventor's death, Frank Seiberling used Goodyear's name for the tire company he founded in Akron, Ohio.

Edwin Land's invention, the instant camera, did not arise from the type of life-or-death problem that haunted Charles Goodyear. Instead, Land was inspired by a request from his three-year-old daughter, Jennifer. On a family vacation in Santa Fe, New Mexico, Land took a photo of her with his Rolleiflex camera. Jennifer couldn't understand why she had to wait to see her photograph. Later that day, Land took a long walk by himself and said he had formulated the answer by the time he returned "except for those details that took from 1943 to 1972." In 1948, the first salable instant cameras were all purchased within hours. By 1965, Land's company had sold four million instant cameras. As it turned out, millions of people were just like his daughter, Jennifer, and bought a Polaroid camera so that they could see their photos without delay.

Today, medical practice often employs another type of image – showing the chemical composition of the human body. Yet Dr. Raymond Damadian invented magnetic resonance imaging (MRI) only over the strong opposition of eminent scientists and academics, who were sure he was a "crackpot and a charlatan." Damadian persisted in developing his ideas, however, because he wanted to find a cure for cancer, which had taken the life of his grandmother. Cancer cells differ from healthy cells in their chemistry, but until Davidian's MRI came into use, the only way to identify them had been to look at them through a microscope and recognize their shape. Once he found that MRI could detect cancer cells, Damadian tried to get funding to build a machine big enough to scan an entire human being, not just a small sample of cells. For this, he said, he was called "a screaming lunatic." His academic funding was reduced, and the National Cancer Institute refused any support. Scrounging for money, friends and family begged for dollars wherever they could. The

scanner Damadian finally built, which demonstrated the ability to detect cancer in the human body, is now in the Smithsonian Museum.

Through all their struggles, these inventors had a strong focus on their goal, and, in most cases, a group of helpers or a team to support them. To meet the demands of the U.S. economy in the twenty-first century, inventors can call on the resources available to them through a PDM company. Successful commercialization means problems solved and desires met, multiplied thousands of times.

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