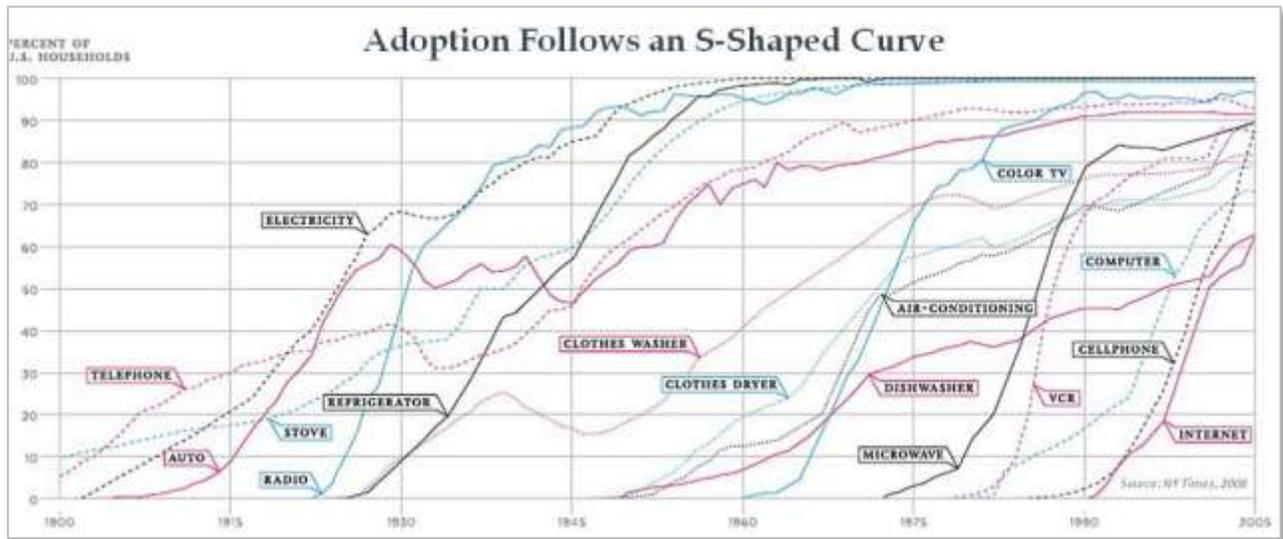


The S-Shaped Adoption Curve You Will Experience



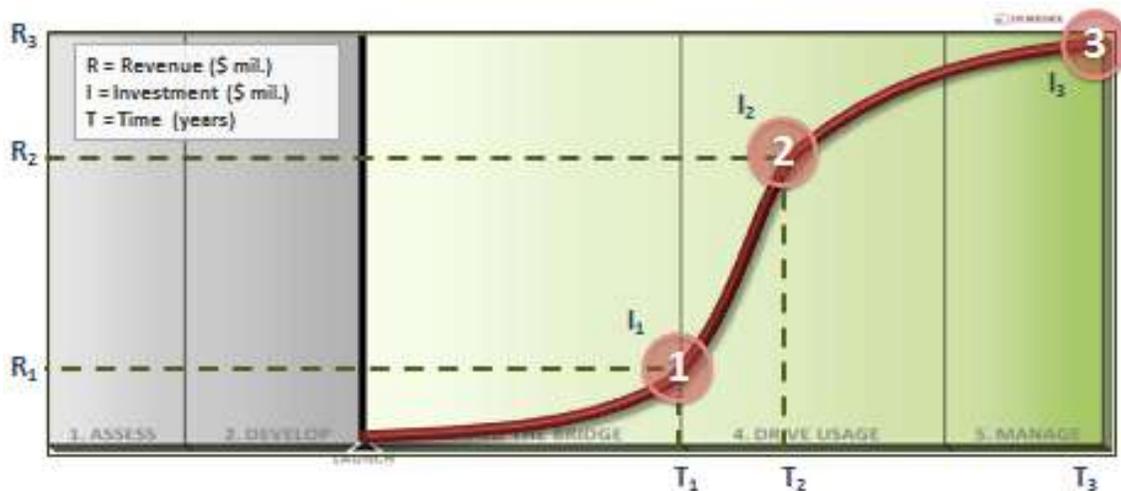
This chart about consumption (created by Nicholas Felton, 2008) is a fascinating example of the “S-shaped” adoption curve that all technologies go through on the way to broad market adoption, regardless of the specific technology.

In the medical technology world, our task is clear: we must determine with a high degree of confidence what the S-shaped adoption curve will look like for a given technology. Will it be slow and flat, like the dishwasher? Or, fast and steep, like the microwave? An accurate assessment is critical in order to determine:

- the strategic direction to take,
- the levels of investment to make, and
- how to interpret the adoption level we’re currently experiencing in the market

Through years of research and analysis, Dymedex has developed key insights into the S-shaped adoption curve for medical technologies. In this and subsequent Market Abstracts, we will share our experience and insights. The first is to deconstruct this curve, define the key inflection points along the curve, and explore what they mean.

The following diagram breaks the adoption curve into three key milestones and nine associated numbers: the revenue, investment and time for achieving each milestone. In essence, this enables us to assess the ROI associated with each milestone, which is critical for effective strategic planning.



LAUNCH: After much market assessment and development, a medical technology is launched commercially. Early revenue growth will be limited to the “forward leaning” early adoptive customers until and unless the needs of *average* customers are fully met. The time from launch until Milestone 1 (T1) may be days, decades or never, because Milestone 1 does not occur spontaneously. The only way to influence or “precipitate” Milestone 1 is to satisfy the needs of the broader customer base. This is imperative in order to achieve any significant growth.

MILESTONE 1: When your technology meets the user needs of the broader customer base and the market infrastructure has been established to enable widespread utilization, you will experience the high-growth period after Milestone 1. This is the time to invest in sales, promotion marketing and distribution. The slope of the curve at this point is greatly influenced by your technology’s “attractiveness” – characteristics such as its relative value proposition vs. the current standard of care, the ability to identify appropriate patients, the aggregate location of those patients, and the referral dynamics to reach the decision maker.

MILESTONE 2: No revenue stream can grow forever. Unfortunately, many medical companies underestimate how soon Milestone 2 can occur. The diagram above shows Milestone 2 well above 50% of the annual revenue opportunity (vertical axis), but all too often the adoption plateaus much earlier. This can occur when, for example, the most clear or compelling patients make up a relatively small portion of the total market potential. Knowing when and how Milestone 2 will occur has important practical and strategic implications.

MILESTONE 3: There is a theoretical maximum market size. As the first chart shows, however, the path to 100% market adoption is very slow for many technologies. Even though every executive and investor talks about “total market size,” the term is fraught with inconsistency and bedeviled by poor analysis and crude, sweeping assumptions.

Your technology will experience an S-shaped adoption curve of some sort. While this may seem simple and straightforward, it is not. Consider that each patient indication or market segment has its own adoption profile with a unique set of milestones and attractiveness features. An important challenge is to define the relevant segments, understand what controls and drives each segment’s adoption profile, and integrate them into a cohesive synthesis of strategies, priorities and investments that translate into an accurate total revenue forecast.

Many factors go into understanding and driving these curves. Without a clear understanding the adoption curve for your technology and the levers available to bend it in your favor, you can waste time and investment dollars on ineffective growth strategies. In subsequent Dymedex Market Abstracts, we will explore these and other factors in detail.

For additional information or to read other Dymedex® Market Abstracts and White Papers, see our Resources page at www.dymedex.com/resources/.

About Dymedex Consulting

Dymedex applies the “science of market development” to provide business leaders the critical market insights they need to proceed with confidence. Our proven, thought-leading tools rigorously quantify realizable revenue potential, objectively assess the barriers to full adoption, and accurately forecast growth. We provide strategic market analysis, market development consulting, and tactical market development support to medical technology companies of all sizes. www.dymedex.com