PRENTICE HALL

# INNOVATE the future

## A Radical New Approach to IT Innovation

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# 3

# The Innovation Life Cycle

Now that we know about ideas and the transformative value process necessary to decide whether those ideas should be dismissed, are worthy of becoming inventions, or maybe even are innovations, it's time to understand in more detail the types of innovation and the life cycle that innovation takes. This is important since where our idea falls in the life cycle will determine how we need to think about the idea and what next steps we take to maximize the value of the idea.

Yes, ideas that are successful (or even some that are not) do go through a life cycle. It can be that the idea is so new and radical that it is a new innovation and must go through all of the growing pains and excitement of initial innovation that then disrupts the marketplace.

It's possible that the idea, although quite innovative, is more of an add-on to an existing idea and better thought of as incremental innovation. Such incremental innovation usually starts out as positive but, when continued too long, can frequently end up as negative and ultimately destructive.

How can one tell where "positive" ends and "negative" starts? The key is the concept of **inflection points** in thinking about ideas and where they potentially fall. A knowledge of these concepts will keep the astute reader on the path of the optimal innovation life cycle. It's important to know when you are throwing good money after bad, especially when you can be putting that good money into the next disruptive innovation!

## Innovation Types

To provide a foundation for the book, Chapter 1 presented many types of invention and innovation. In total, six distinct types of innovation are discussed in this book, and they can be grouped into four categories:

- Innovations that evolve a product and impact the perceived value of the product:
  - **Disruptive innovation**: A new product that creates a shift in an existing market or creates a new market
  - **Incremental innovation**: Something that adds new value to an existing foundational product that was created by a previous disruptive innovation
- Innovations that define how a company chooses to spend its invention innovation budget:
  - **Internal innovation**: Invention and innovation that is directed internally within a company to deliver cost savings, process improvements, or other internal benefits
  - **External innovation**: Invention and innovation that is directed externally toward delivering product innovations to a consumer and a market
- Innovation that targets consumers whose lifestyle priorities do not justify the best product possible:
  - **Good enough innovation**: Creating a product offering that meets the reduced lifestyle priorities of a consumer subgroup
- Innovation that ensures that the target consumer and market are well understood before invention begins:
  - **Targeted innovation**: Clearly matching a company's business priorities with consumer priorities prior to product invention so as to maximize the transformative value of the product

## The Innovation Life Cycle

The innovation life cycle tracks the life of a single product and consists of multiple invention and innovation stages. These stages reflect how a com-

pany's actions impact the target market for the product. Depicted in Figure 3.1, the innovation life cycle consists of the following stages:

1. **Product invention**: Create the foundational product.
2. **Disruptive innovation**: Market penetration of the new product with a high consumer transformative value takes place.
3. **Incremental invention**: Add functionality or features to the foundational product.
4. **Positive incremental innovation**: Enhance transformative value.
5. Repeat stages 3 to 5 until transformative value no longer increases.
6. **Negative incremental invention**: Add functionality or features to the foundational product beyond customer acceptance levels, leading to a decrease of the product's transformative value.
7. Repeat stage 6 until transformative value equals competitors in the market.
8. **Destructive invention**: Further invention accelerates the decrease of the transformative value.

### BOB SHOULD CONSIDER

- How does this high-level definition of a product's innovation life cycle compare with our understanding?
- What stage of the innovation life cycle is our product in?
- Have we related our product development processes to the consumer's changing transformative value for our product?

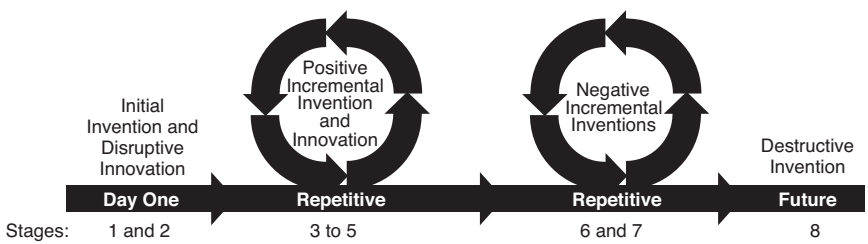


FIGURE 3.1 The innovation life cycle

## *Stage 1: Initial Invention*

The development of a successful, innovative product is perceived by many to be a highly expensive, risky, and largely random process. While reviewing the innovation life cycle in detail, we will identify activities within the life cycle that are the cause of this perception of randomness. This accumulated perception of randomness will be discussed in detail in a later chapter.

The initial invention stage starts with identifying a perceived market need. This market need is often quantified by an evaluation of the consumer's perceived value for an invention (product) that could satisfy the identified need.

Many companies utilize a sampling of the potential market to determine the needs of the entire market. The percentage of the sample that exhibits each need is calculated. This percentage of needy consumers is then extrapolated to apply to the entire market. The result is a valuation for the projected total market size for needy customers. For reasons that will be explained shortly, this extrapolation of need injects the first appearance of randomness into the innovation process.

After identifying the market size, it is necessary to calculate the projected cost of delivering a product to satisfy the identified need. This cost is couched in various parameters related to the complexity of the product, development time, marketing expense, support requirements, and so on.

After calculating cost, it is optimal to calculate the product's perceived value to the consumer. The projected cost and the projected perceived value provide a means of comparison that is used to determine the worth of pursuing the invention process to create the new product.

Figure 3.2 graphically depicts the determination of the target market using market samples and perceived value. The figure shows that only a subset of consumers (the targeted area) will have a high enough perceived value to warrant the purchase of a product that fulfills the identified need.

Many companies would assume at this point that the perceived value is a reasonable reflection of the consumer's willingness to purchase the product. As discussed in previous chapters, it is critical that invention and innovation decisions be made based on the total transformative value, not just based on the perceived value.

In many cases, an in-depth market review will not have been performed prior to starting the product invention process. To really understand the impacts of the targeted consumer's consumption and lifestyle priorities on the perceived value, such a review is necessary and would help determine the transformative value of the product. As a result, the lack of definition of the transformative value provides the next point at which randomness is injected into the innovation process.

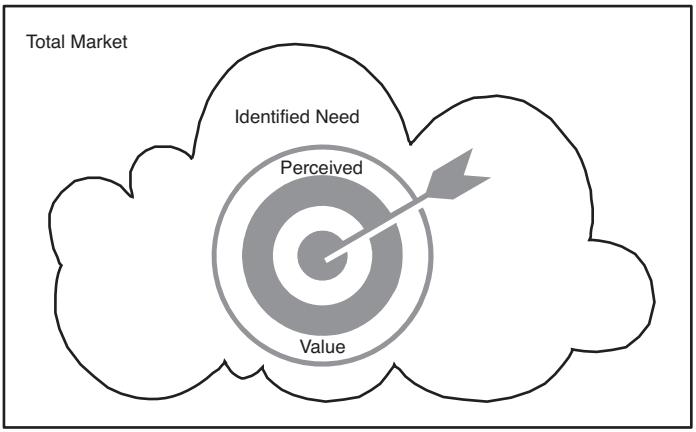


FIGURE 3.2 Target market based on perceived value

Figure 3.3 shows how the actual market for the product, when based on transformative value instead of perceived value as depicted in Figure 3.2, can be dramatically different.

At the initiation of an invention development process, we want to optimize the efforts of the development team for creating a product with high transformative value; that is, we want to maximize the size and value of the market that is willing to purchase. This requires utilizing a complete definition of the potential consumers based on a study of consumers' transformative value. Otherwise, the development team will be targeting the broader needs of the market and not the needs of the consumers who would be most interested in the product based on their lifestyle priorities. Without this focus, the probability is high

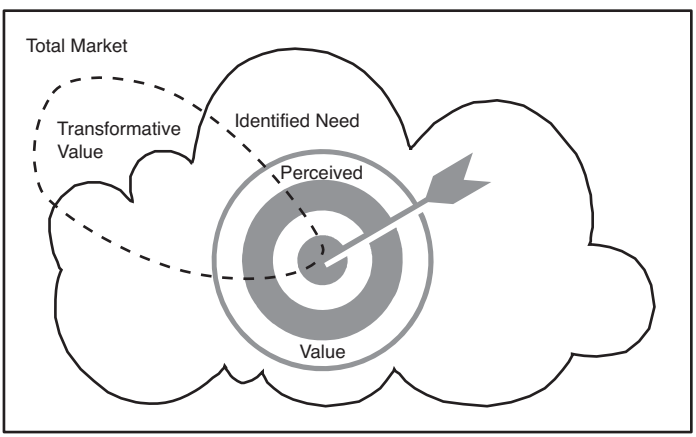


FIGURE 3.3 Actual market based on transformative value

that the development team will miss the feature/function target of the real market. By having too broad of a market definition, the invention development team injects the next perception of randomness into the innovation process.

Based on Figure 3.2, the development team will develop the invention relative to the entire target market. Some features may be dropped because of increased complexity or cost. If these dropped features push the product so that it is targeting primarily the bottom right of the target market, then the target will be missed. Figure 3.3 shows how the product could completely miss the functional requirements of the consumers who are most likely to purchase the product.

The incorrect definition of the target market also reduces the ability of the management team to accurately determine whether an invention, should it succeed in becoming a market innovation, will be an incremental or disruptive innovation. An invention that started out sounding like a market-dominating product could easily end up being a small niche product. The inability to properly project the success of a product by the management team injects more perceptions of randomness into the innovation life cycle. The increasing perception of randomness forces the management team to assume an increased level of risk in order to find a successful invention/innovation.

Many venture capital–backed start-ups fail to ever exit stage 1 of the innovation life cycle. The start-up may have a fabulous product, but the products are often poorly targeted because of an improperly identified market. In this instance, the created product delivers no increased transformative value to the targeted consumer since the targeted consumer is not the consumer who could benefit most from the product. Although the new product may be competitive, it will likely not be disruptive or even incremental to the market or the consumers.

### BOB SHOULD CONSIDER

- When determining what products to build, how do we determine the market needs that we are trying to satisfy?
- Are we ensuring that those consumers with an identified need would also be willing to purchase the product at our projected price?
- Does our marketing team provide sufficient definition of the target consumer to guarantee that the development team will hit the right target?
- Before investing in the development of a new product, have we, whether as a management team or as a venture capital firm, properly identified the target consumers of the product and the transformative value of the product to those consumers?

## *Stage 2: Disruptive Innovation*

Once the foundational product has been created through invention in stage 1, it can be taken to market with the intention of creating an innovation in the consumer's eyes. The consumer will purchase the product only if the product has a high enough transformative value. The transformative value reflects the combination of a consumer's perceived value of the product as well as a consumer's lifestyle priorities, which may impact the decision to purchase.

A product newly introduced to the market that has a tremendously successful reception is many times a complete surprise to everyone involved. Although the developers may have anticipated a good reception for the product, becoming a disruptive force within the market is a fairly rare event. The inability to predict accurately whether a product will be merely a competitive product within the market or that the product will disrupt the market is yet another point at which the innovation process appears to have random properties.

Some innovations that appear initially to be disruptive can have extremely short lives in the market. These "disruptive innovation spikes" can be caused by the company having a marketing initiative that creates incorrect preconceptions in the mind of the consumer before the product rollout. In this case, there will be an initial rush to acquire the product. But, if the product subsequently fails to match up to the early adopters' predelivery expectations, the early adopters' transformative value for the product will quickly plummet, and word will soon get around to others who might have purchased. This situation can potentially damage the product's marketability beyond repair.

The incorrect consumer perception of the product could be an intentional overstatement of the product's capabilities and value by the product's marketing group. However, in many cases the apparent disjoint between what the company is saying and what the consumer is hearing is caused by the misalignment of the company's transformative value of the product with the consumer's actual transformative value for the product. As shown in Figure 3.4, if the marketing team presents the product's capabilities in terms of the product's perceived value, consumers may very well interpret these capabilities relative to their own personal lifestyle priorities. It is easy to visualize how the presentation of a broad picture of a product's capabilities can unintentionally expand the product's impact on a consumer's lifestyle priorities.

The occurrence of disruptive innovation spikes further expands the perceived randomness of the innovation process. Disruptive innovation spikes are also another reason that executive management teams think that delivering new products and pursuing disruptive innovations is extremely risky and unpredictable.


FIGURE 3.4 Causes of disruptive innovation spike

In some cases, companies will bring a product to market that is not disruptive at all. Such products are at best competitive with existing products. In these cases, the company, through its new product, is attempting to gain joint control of product innovation within the market. This joint control can be achieved by matching the foundational features of a product that was created through a competitor's disruptive innovation.

This market entry method is probably the most common because it has the least identifiable risk. The new competitor is counting on being more innovative in the future, at least incrementally, than the already dominant competition. The new product still passes through stage 2 of the innovation life cycle, but instead of creating its own disruption, the product benefits from the disruptive innovation of an already existing product.

### BOB SHOULD CONSIDER

- Do we know whether our product should be disruptive to the market or merely competitive?
- If our product does not become a disruptive innovation, what are the risks that we face?
- Are we utilizing the disruptive product foundations of our competitors to maximize our ability to deliver an incremental innovation?
- Do we understand our target consumer well enough to market to them effectively? Are our marketing efforts presenting the best picture of our product by considering the true transformative values of our consumer?

## *Stage 3: Incremental Invention*

After a company has succeeded in bringing to market a product that becomes a disruptive innovation, the natural tendency for the company is to expand the market disruption. Expansion of the market disruption will allow the company to control the evolution of the market. Incremental inventions evolve the existing product in ways that will ideally enhance the transformative value of the product and expand the target market.

Except in cases where a company has a very small number of customers, the odds are high that there will be features requested by some customers who are completely useless to other customers. Requests for new features submitted by larger customers will almost always be rolled into the product through incremental invention, potentially causing a negative experience for other, smaller customers.

As with the development efforts in stage 1 of the innovation life cycle, the development team that is creating incremental inventions must have a firm definition of the target consumer. Otherwise, poorly implemented incremental inventions can severely damage the product in the consumer's eyes.

The marketing team should also monitor the transformative value of the product as it is being evolved through incremental invention.

**BOB SHOULD CONSIDER**

- Are we optimally performing incremental invention in order to expand the market disruption caused by our product? Or have we missed this opportunity?
- Are we damaging our product in the eyes of some of our customers by focusing too much on the requests of larger customers? Can we balance the effect?
- Is our marketing team monitoring the impact of our incremental inventions and those of our competitors on our product's transformative value?

## *Stage 4: Positive Incremental Innovation*

Each customer has different business priorities. This difference makes it highly likely that different customers will perceive each incremental invention from vastly different perspectives. Some customers will consider the

incremental inventions as critical enhancements. Other customers will consider the incremental inventions as too complex, as unnecessary, or as too expensive. If a majority of customers, or at least the largest ones, consider the inventions to be valuable, then the transformative value of the product has been increased by the incremental inventions. This results in the inventions becoming incremental innovations.

In many ways, early incremental innovations can act as follow-on disruptive innovations to the primary disruptive innovation in stage 2. These follow-on disruptive innovations are similar to the aftershocks that follow earthquakes. Most of us would not consider an earthquake to be over until all of the aftershocks are gone. The same holds true for disruptive innovations followed by incremental innovations. If the incremental innovations continue to accelerate the dominance of the product in the market, then they are disruptive innovation aftershocks.

If, however, the incremental innovations do not continue to accelerate market dominance, in spite of being deemed as positive by the majority of existing customers and also increasing the transformative value of the product, then the disruptive innovation earthquake within the market has likely ended.

This abatement of the disruptive innovation aftershocks is the first innovation life cycle inflection point (inflection point A of Figure 3.5). At inflection point A, the company's new incremental inventions are just maintaining a competitive position for the product. Figure 3.5 shows the impact on market dominance when incremental invention shifts from delivering disruptive

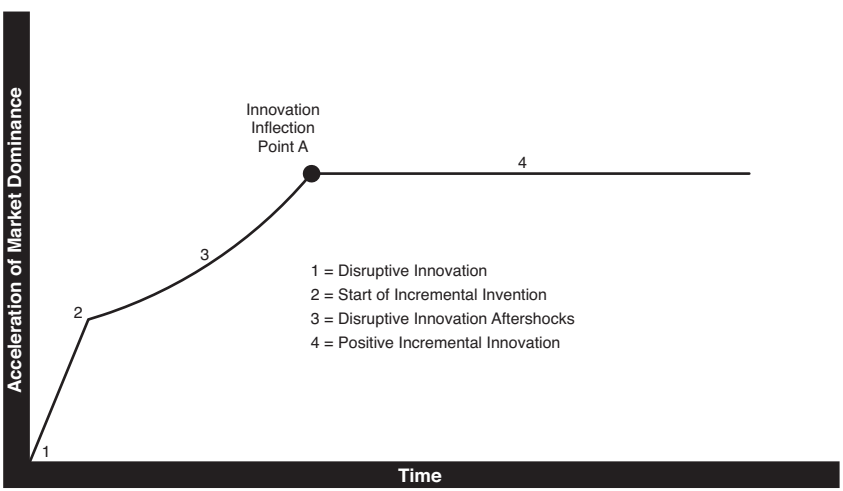


FIGURE 3.5 Disruptive innovation aftershocks

innovation aftershocks to incremental innovation. The market share may continue to grow, but the acceleration of that growth has ceased.

It is at innovation inflection point A that many companies begin to question their invention and innovation practices. There is a tendency to continue to fund product development on this existing product after inflection point A, even though the company is realizing decreasing returns to scale and quite possibly has better investment opportunities elsewhere. The management team likely does not realize that the transformative value of its product is constantly in flux. Incremental inventions can cause both positive and negative shifts in the transformative value of the product. Many of the fluctuations experienced with product sales are caused by the direct actions of the company and not by external forces. These direct actions will be discussed in later sections.

Inflection point A is also the first point where companies begin to shift resources from external to internal invention and innovation. At inflection point A, company executives see that the market growth is slowing. In response to this slowing, the team will seek to optimize internal infrastructures and to lower costs.

**BOB SHOULD CONSIDER**

- Are our incremental innovations acting as disruptive innovation aftershocks? How can we maximize this effect?
- Have we reached innovation inflection point A? What should our response be?
- How will we know whether our incremental inventions are now causing a negative shift in the transformative value of our product?

## *Stage 5: Repetitive Incremental Innovation*

Approach any experienced software developers about two software products with which the developers are equally unfamiliar. One of the products is an older, stable, well-established product. The other product is newer with stability issues and slow market acceptance. Functionally, the products are very similar. Now ask the developers which product they would want to use as the foundation for creating a reduced-functionality "good enough" product. The preference for the developers will almost universally be to utilize the newer system. Not surprisingly, most management would pick the older system.

Why are the responses different between the developers and management? Management would select the older system because of external factors. The older system is more stable in the customers' eyes. The older system has had a lot of money, time, and manpower invested into it that has made it a market-accepted product. The older product is safer to use and is less likely to cause trouble for management.

Conversely, the developers choose the newer system because of internal factors. The newer system uses technology that is more interesting and that will look good on their resumes. It's a challenge for the developers to get the newer system to work, and that will also be interesting. As depicted in Figure 3.6, each time an incremental invention is added to the base disruptive product, the internals of the product become increasingly more complex. Externally, the product is improving. Internally, however, the product is becoming harder to expand, harder to maintain, and harder to evolve.

There are many well-known examples of software systems that exhibit staggering complexity brought on through years of incremental innovation. Two such software systems are those utilized by the U.S. Internal Revenue Service and the U.S. Federal Aviation Administration. In spite of making multibillion-dollar investments, both of these software platforms are so internally complex that replacing them with more stable platforms has so far proven almost impossible.

As incremental invention and innovation are repeated again and again to the same disruptive product foundation, multiple events begin to happen:

- The internal product complexity increases.
- The cost of new incremental invention/innovation increases.
- The cost of support and maintenance increases.
- The difficulty of evolving the product to new disruptive products increases.
- The customer satisfaction decreases.
- The customer willingness to fund incremental inventions decreases.
- The probability of a new simpler product arising from a competitor increases.

From the company's point of view, repetitive incremental invention complicates product development, sales, and support. But, incremental invention is the only way to continue to increase revenues from the product through increased billings to customers.

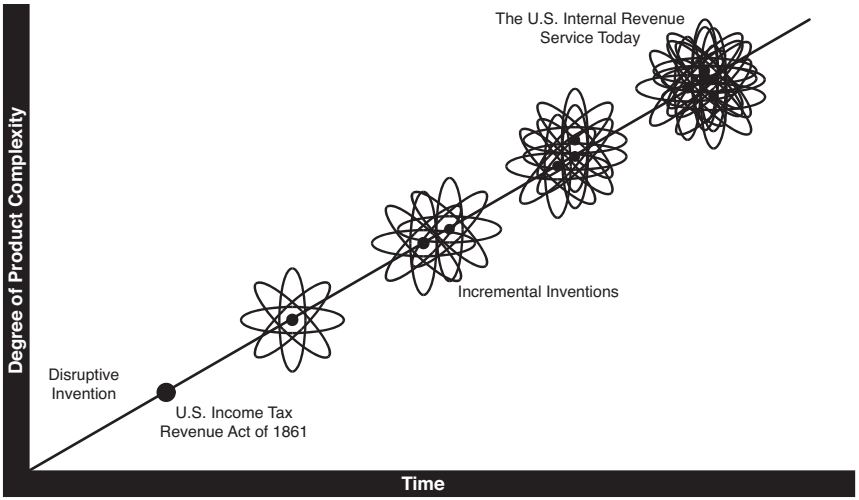


FIGURE 3.6 Impact of incremental invention on product complexity

From the consumer's viewpoint, repetitive incremental invention makes the product more difficult to understand and use and more expensive to acquire and maintain. Each time that an incremental invention/innovation passes through the innovation life cycle, the per-invention cost to the consumer is likely to increase.

**BOB SHOULD CONSIDER**

- How can we deploy new incremental inventions and innovations without continuously increasing the internal complexity of our product?
- Can we justify the costs of enforcing an internal product simplification policy? Are we considering the costs of future support, evolution, and maintenance?
- Is the rising complexity of our product increasing the cost of each new invention to the point that even our largest customers will complain?

## *Stage 6: Negative Incremental Invention*

As revenues start to decrease because of a customer's unwillingness to bear the increasing costs for decreasing value, the company will start to shift away

from external invention and innovation. Instead, the company will begin to focus on internal invention/innovation in a move to reduce costs. During stages 3 through 5 of the innovation life cycle, business pressures on the company have been increasingly shifting the company away from disruptive innovation and toward incremental innovation. These business pressures can be summarized as follows:

- **Revenue pressures**: Must increase revenue while decreasing risk
- **Customer pressures**: Need to satisfy existing, large customers through increased product features
- **Infrastructure pressures**: Need to ensure maximum utilization of existing infrastructure while decreasing costs

As we see in Figure 3.7, these business pressures suppress disruptive invention/innovation and increase incremental invention/innovation. Innovation inflection point B reflects a major change point for the product and the company. Multiple events are occurring at inflection point B (discussed in detail later), with one of the primary events being incremental invention surpassing disruptive invention.

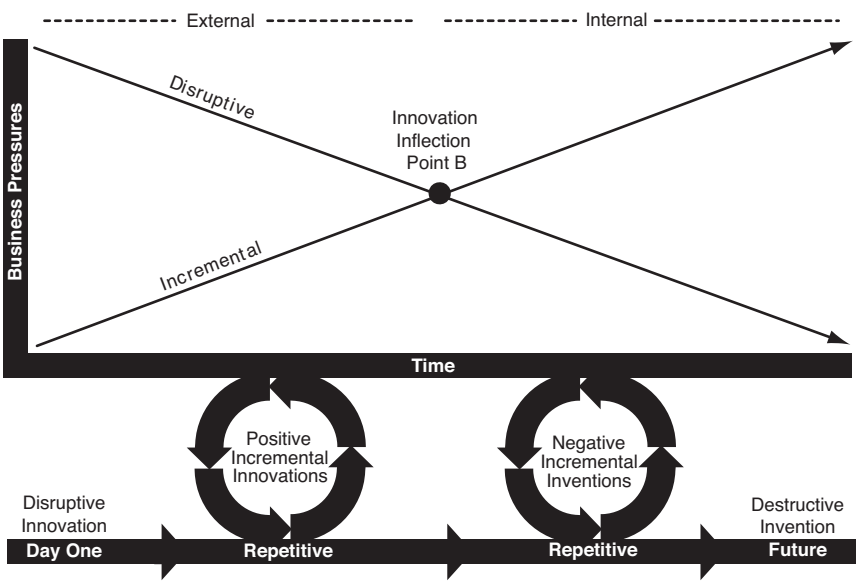


FIGURE 3.7 Impact of business pressures on innovation

Some of the actions that the company is likely to take at this inflection point include the following:

- Reduce the research and development budget
- Seek research and development alignments with the largest customers
- Increase the rate of internal infrastructure evolution
- Seek new markets and products through mergers and acquisitions
- Reduce or move the executive management team to the next product

These changes are brought on primarily by the decreasing revenues from the foundational product innovation. Each negative incremental invention tends to decrease the transformative value of the product and thereby reduce the competitiveness of the product.

**BOB SHOULD CONSIDER**

- Are our actions that impact our product driven increasingly by perceived business pressures that are not optimal for the positioning of the product in the market?
- As we shift in response to reaching innovation life cycle inflection point B, are we effectively "sealing the fate" of our product?
- In seeking short-term revenues through incremental inventions, some of which will negatively impact the long-term transformative value of the product, are we killing the long-term revenue potential of the product?

## *Stage 7: Repetitive Negative Incremental Invention*

The company will likely accelerate the rate of product incremental invention in an attempt to regain revenue growth and maintain market competitiveness. However, the ever-increasing complexity of the product and the rising per-invention cost will limit the acceptability of most of these new incremental inventions. At innovation inflection point B, as depicted in Figure 3.8, new incremental inventions start to have an accelerating negative effect on the product and its transformative value. New incremental inventions are no longer perceived as innovations.

Not surprisingly, customers are following their own innovation life cycles relative to the deployment of the product within their internal infrastructure.

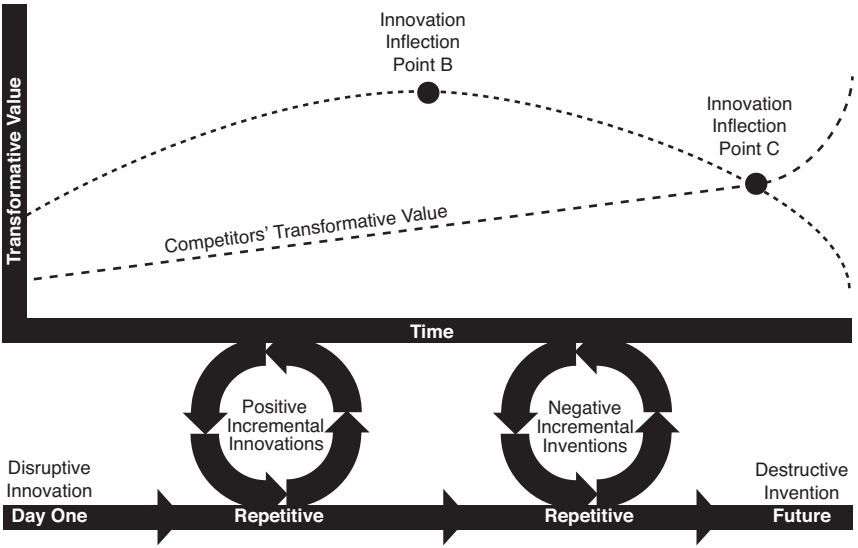


FIGURE 3.8 Transformative value throughout the innovation life cycle

These customers are continuously adjusting their calculations of the transformative value of the product relative to the transformative value of the product's competitors. As shown in Figure 3.8, innovation inflection point C coincides with the point that the product's transformative value no longer exceeds that of the competition.

As the transformative value approaches and passes inflection point C, the product's larger customers will continue to utilize the product. Cost of replacement for the larger customers is a large inhibitor to change and can artificially inflate their perceived transformative value of the evolving product. But, this artificial inflation of the transformative value will not sustain itself, and even the large customers will begin evaluating a replacement strategy.

Smaller customers, with lower costs of replacement, will begin to shift to simpler competitive products as the product's complexity begins to outweigh the product's feature set. It is at inflection point C that many customers begin to pursue an alternative "good enough" product.

### BOB SHOULD CONSIDER

- Have we considered the innovation life cycle that our customers are following relative to our product? How can we use this information to maximize customer satisfaction and retention?

- Have we passed innovation inflection point C, at which point our product's transformative value no longer exceeds that of our competition?
- Are our smaller customers replacing our product with a "good enough" alternative product? Is this an indicator that our larger customers will soon drop our product as well?

### *Stage 8: Destructive Invention*

Once a product passes through innovation inflection point C, virtually any continued feature invention added to the product will be interpreted as a destructive invention. Destructive inventions are more than just negative incremental inventions. They also decrease the perceived value of prior incremental innovations. Destructive inventions have a negative multiplicative impact on the product's transformative value.

The perceived nosedive of the product's transformative value, brought on by destructive inventions, will force customers to reevaluate the transformative value of a competitor's offerings as well. In the process of reevaluating transformative values, the customer will often shift the product's lost transformative value to the competitor's offerings and inflate the competitor's transformative value (Figure 3.8).

Once a product passes beyond innovation inflection point C, the company should cease incremental invention and move the product into a maintenance mode.

**BOB SHOULD CONSIDER**

- In the pursuit of increased revenues, are we now attempting to deploy inventions that are becoming destructive to our product's transformative value?
- Are we unintentionally adding to the transformative value of our competitor's product?

## The Innovation Life Cycle Inflection Points

As we have seen, there are three primary innovation inflection points. These inflection points are the areas within the innovation life cycle that create the

most damage to a product's future. Surprisingly, these inflection points also provide the best opportunities for the company to respond effectively and maximize the value of the product.

The three innovation inflection points are reflections of stages in the innovation life cycle at which point the company sees a negative shift within the sales of the product or market for the product. Even if product sales are still increasing, the growth rate is perceived to be falling and is similarly interpreted negatively.

The three innovation inflection points from a product's sales perspective are as follows:

A. **Market dominance growth flattens**: As depicted in Figure 3.5, the acceleration of market dominance will drop to a steady state when incremental inventions no longer act as disruptive innovation aftershocks.

B. **Customer acceptance falters**: As depicted in Figure 3.7, when incremental inventions no longer drive an increase in the transformative value, customers begin to react negatively about paying for further incremental inventions.

C. **Customer acceptance ends**: As depicted in Figure 3.8, when negative incremental inventions become destructive inventions, the transformative value drops precipitously, and customers no longer accept cost increases.

Figure 3.9 reflects how the negative impacts of the innovation life cycle can have major impacts on transformative value and shift the company's focus from external innovation to internal innovation. Each of the inflection points will be discussed in detail separately in the following sections.

**BOB SHOULD CONSIDER**

- How can we negate or at least minimize the negative impacts of each innovation inflection point?
- Is there a way to adjust the innovation life cycle so as to delay or even eliminate the inflection points?

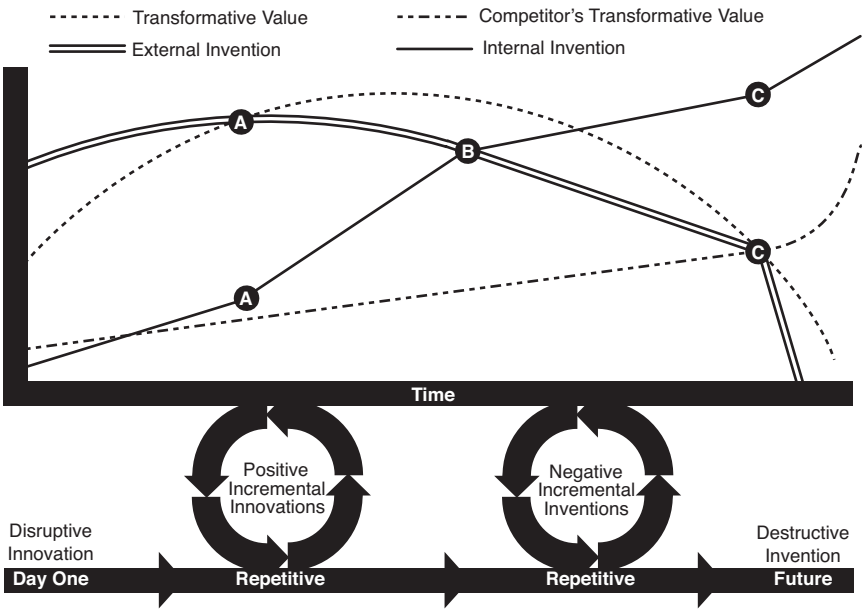


FIGURE 3.9 Innovation inflection points

## *Innovation Inflection Point A*

Innovation inflection point A (Figure 3.9) corresponds to the first time that the company will likely question the future revenue from the product. Multiple events are occurring at inflection point A:

- The market dominance growth has flattened.
- Disruptive innovation has ended.
- The positive growth of the transformative value is slowing.

In response to the perceived negative market activities relative to the product, the company will take these actions:

- Assume that the market is peaking
- Reduce spending on potential disruptive innovations
- Increase spending on incremental inventions to improve customer satisfaction and retention
- Increase spending on internal infrastructure inventions to lower costs

The following are reasons that the company reduces spending on the pursuit of new disruptive innovations:

- Perceived randomness of finding a new disruptive innovation
- Fear of decreasing revenues/need to focus efforts on current product
- Increased costs of incrementally improving the product

Ever-growing business pressures related to increasing revenues, maintaining large customers, and utilizing existing infrastructure, as shown in Figure 3.7, will further justify the company's reasoning regarding the balance between R&D spending for disruptive innovations and incremental invention.

The shifts toward increased internal and incremental inventions that occur at inflection point A will create a landslide effect that will ultimately drive the product through all remaining stages of the innovation life cycle.

**BOB SHOULD CONSIDER**

- At innovation inflection point A, is the market actual peaking, or is something else causing market dominance to flatten?
- Should we consider expanding disruptive invention rather than decreasing it?
- What actions should we take with our customers at inflection point A?
- Should we consider alternative markets at inflection point A despite that we are still disrupting the current market?

## *Innovation Inflection Point B*

Innovation inflection point B (Figure 3.9) is aligned with the first time that the customers are seriously reacting to continued price increases for ongoing incremental inventions. Multiple events are occurring at inflection point B:

- The company's market percentage has ceased to increase.
- Positive incremental innovation has ended.
- The transformative value ceases to increase and may begin to fall.

In response to the shift of customer viewpoints, the company will take these actions:

- Assume that a new disruptive innovation is needed
- Implement companywide invention/innovation business practices to try to identify a new disruptive innovation
- Shift spending toward incremental inventions that duplicate a competitor's incremental inventions
- Reduce staffing levels and management layers
- Increase spending on internal infrastructure inventions to lower costs

The actions of the company for inflection point B create little change unless the company wins the innovation lottery (as described in Chapter 1). The company shifts to a more competitive incremental invention model because of the following reasons:

- Perceived randomness of finding a new disruptive innovation.
- Poor understanding of the decreases in transformative value. It is assumed that the rising transformative value of a competitor's offerings is the cause.
- If the customers do not like the company's incremental inventions, then they must like the competitor's.

As was true at inflection point A, increasing business pressures at inflection point B will further limit the effectiveness of any targeted response to the drop in the product's transformative value.

The landslide effect started at inflection point A will accelerate following inflection point B.

**BOB SHOULD CONSIDER**

- At inflection point B our product's transformative value begins falling while our competitor's transformative value continues to rise. Why is this, and how can we counteract it?
- We are focusing the entire company on identifying new disruptive innovations as well as positive incremental innovations. Will this succeed?
- Our competitor's products appear to have more "whizbang" than our product. Yet, we have substantially more functionality. Do we need to rebalance our whizbang versus functionality equation? Is it too late at inflection point B?

## *Innovation Inflection Point C*

At innovation inflection point C (Figure 3.9), the customers now openly refuse to pay for new features and are balking at the high yearly maintenance costs. The product has already reached an unacceptable level of complexity and cost. Multiple events are occurring at inflection point A:

- The company's market percentage is decreasing.
- The mirroring of a competitor's incremental inventions has failed.
- The transformative value of the product is plummeting.
- The transformative values of a competitor's offerings are still high.

In response to the collapse of customer acceptance, the company will take these actions:

- Assume that the product has run its course
- Shift the product into a maintenance mode
- Reduce staffing levels and management layers
- Reduce infrastructure costs through outsourcing and offshoring
- Attempt to sell off the product

Basically, the landslide that started at inflection point A and accelerated at inflection point B has finally buried the product at inflection point C. Because of the staggering complexity of the product, there is little hope that it can be dismantled and reassembled into a new disruptive innovation that delivers a competitive transformative value.

**BOB SHOULD CONSIDER**

- We are preparing to place the product in maintenance-only mode. Is this the only move available to us?
- Why are our competitors, who we had dominated previously, now surpassing us?
- How can we maximize the long-term value to the company of our product in spite of passing innovation inflection point C?

## The Optimal Innovation Life Cycle

As we have seen, the current innovation life cycle (Figure 3.1) has some serious shortcomings. Increasing business pressures and the perceived market changes at the innovation inflection points will force the executive management team to make decisions that minimize risk and maximize return from the existing product and internal infrastructure.

Figure 3.10 depicts the optimal innovation life cycle. By proper management throughout this optimal innovation life cycle, it is possible to avoid the landslide effect of the previously described innovation inflection points. We will discuss how to implement the optimal innovation life cycle and how to utilize it to your company's advantage in later chapters.

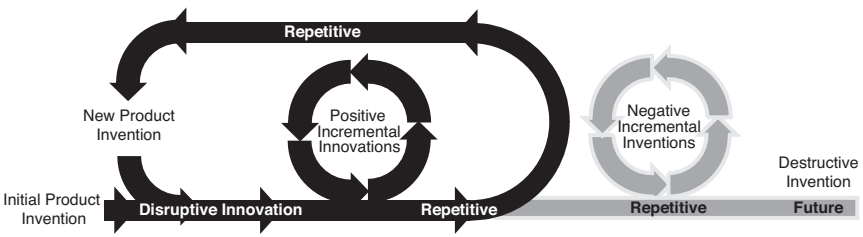


FIGURE 3.10 The optimal innovation life cycle

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