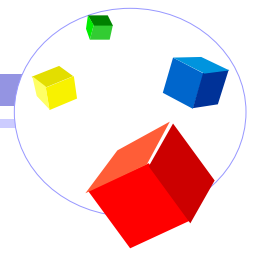


**TECHNOLOGY  
LIFECYCLE  
MANAGEMENT**

**3 REASONS WHY  
YOUR STRATEGIES  
MIGHT NOT  
SUCCEED**



**SMARKETER**  
9 JUDITH CRT  
MT WAVERLEY  
VIC., 3149, AUSTRALIA  
TEL: +61 437 352 422  
FAX: +61 3 9802 9034  
[info@smarketer.com.au](mailto:info@smarketer.com.au)  
[www.smarketer.com.au](http://www.smarketer.com.au)



# SUCCESSFUL TECHNOLOGY LIFECYCLE MANAGEMENT

Technologists understand the importance of research, good industrial design, quality-centric development processes, and simple, short documentation. So why is it that good products can fail and inferior products can succeed? It could be a disconnect somewhere in their approach to lifecycle management! In the first of an ad hoc series, this White Paper identifies key considerations for Technology, Media & Telecommunications (TMT) service providers and customers.

## Three reasons why technology strategy may let you down

### Lifecycle Management is holistic

Ever wonder why some pharmaceutical remedies based on herbs don't always work even though the benefits of the herb for particular ailments have been observed for thousands of years? Sure, chemists can identify the active constituents and separate them and synthesize them; but the power of the remedy actually comes from all the herb's constituents working together. An organic environment requires all the constituents to be present and working as a whole.

There are three common reasons why a business's approach to technology may not succeed.

1. A successful business strategy relies on both an understanding *of*, and active management *in*, lifecycle management. Businesses need to find a balance between the lifecycles of technology, product services, operations and importantly, customers. All play critical roles, but one cannot dominate the others.

2. Technology is also a determinant of infrastructure strategies. At **Smarketer**, we have identified that the three most important factors of success in infrastructure projects are process, systems, and technology. But they must all be made to work together. The important point to note here is that if your main business is selling technology, you must have an understanding how that technology enhances your customer's infrastructure strategies. Similarly, if you're buying technology, your business benefits will only be achieved from a technology that can be integrated and can inter-work with your existing infrastructure and assets. But the fit is important both functionally and financially.

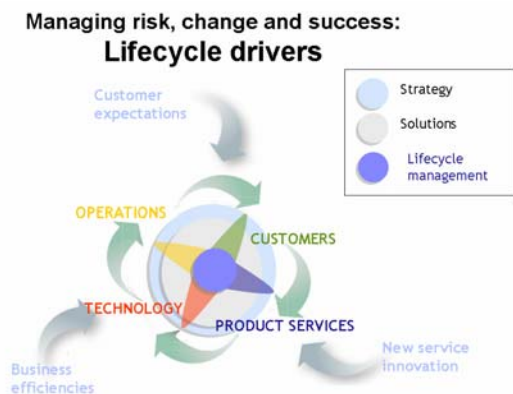
3. Lastly, technology developers start to think that basic market principles don't apply to them. In the early days of development, technology is rushed out for either market bragging rights or to boost revenue, or maybe just to meet a milestone. Very often too, the attitude is a "who cares",

particularly with respect to customer priorities like ease of use. All that seems to matter to service or technology providers is better, faster, cheaper, more powerful technology. In today's world, users and/or customers are more enlightened. The best innovation processes – and the best product services ideas – come from companies that engage the customer in the idea creation (ideation) processes. At the same time, user experience and meeting customer expectations will determine a technology's success.

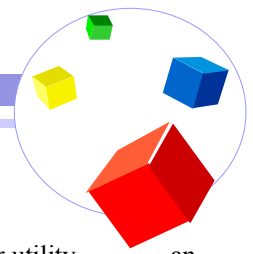
Lifecycle management is a neglected, but critical component in the TMT sector. **Figure 1** outlines the influences (drivers) in lifecycle management.

It recognizes that there are four important – and linked – lifecycles operating within the TMT environment: Customer Lifecycle; Product Lifecycle; Operations Lifecycle; and Technology Lifecycle.

An important objective in lifecycle management is the integration of products services, networks, and systems through tools, methods, people and the processes through all stages of the respective lifecycles.



**Figure 1: Lifecycle drivers**



## Technology lifecycles and adoption

Traditional infrastructure management tools mainly focus on systems and technology, not processes, and usually not the applications and services that customers experience.

By adopting a bottom-up approach, businesses deny themselves the opportunity to look forward and develop roadmaps, but also to introduce product services to the market that reflect the impact on their customer's business needs.

The nature of the technology market means that new technology will travel through what Gartner defined as the *hype cycle* before it will be seriously accepted in the market (to achieve about 25% adoption). The engagement of end-users in the technology development process will significantly speed up market adoption. (The reason for this will be discussed in later **Smarketer** White Papers)

Technologists tend to overlook the interdependencies between the multitude of industry "laws" which, as with lifecycles, will impact their strategic success. All of these must be managed simultaneously. Some examples are:

- Moore's Law (The processing power of a microchip doubles every 18 months);
- Gilder's Law (The total bandwidth of communication systems triples every 12 months);
- Metcalfe's Law (The value of a network is proportional to the square of the number of nodes); and
- Reed's Law (The utility of large networks, particularly social networks, can scale exponentially with the size of the network)

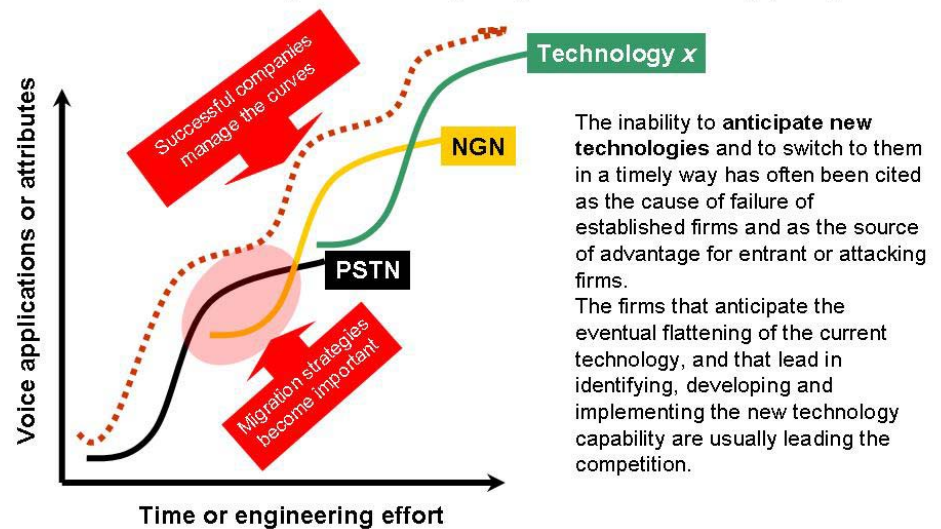
These laws are typically observations of market behaviour, or put another way, technology adoption. It's plainly logical that the rate of technology

diffusion will be affected by the value or utility an end user or customer sees in the technology. The best way to for customers to identify a technology solution's value to them is to let them help you build it into the technology in the first place!

Convergence is a case in point. The demand for traditional voice and data services has reached maturity. At the same time, the telecommunications industry is rushing to establish "next-generation services"—those services enabled by IP integration and convergence. Immense focus is being placed on the strategies, structures, processes and systems that will allow companies to quickly and effectively market and deliver new revenue-generating opportunities.

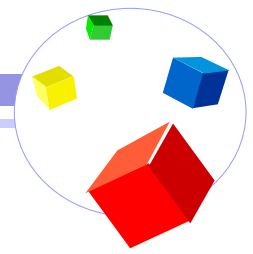
The level of intimacy between a technology company and its customers will determine future market positioning. Technology provider and user alike want to manage the technology cycles. (**Figure 2**)

## Successfully managing technology cycles



Based on Christensen, Clayton M. "The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail" (1997)

**Figure 2: Technology Providers need to engage their customers**



Your success in managing technology lifecycles is dependent on as much about where you want to be as where you've been. Planning your future business must include evaluation and plans (roadmaps) for technology, but must take into account other lifecycles as well.

## Disruption

### Evolution vs revolution

There is some discussion in the industry as to whether technology cycles are evolutionary or revolutionary. In fact this isn't a choice you make. It isn't an either or situation.

Disruptive technology is a phrase coined by Clayton Christenson to describe a technological innovation, product, or service that uses a "disruptive" strategy, rather than a "revolutionary" or "sustaining" strategy, to overturn the existing dominant technologies or status quo products in a market. By contrast, a "revolutionary technology" introduces products with highly improved new features into the market. This is the innovation that most often replaces the incumbent. In addition, a "sustaining technology or innovation" improves product performance of established products. Sustaining technologies are often incremental; however, they can also be radical or discontinuous.

Carlota Perez's\* research provides us with assurances from history that if we can get to understand the technology cycles, we can plan to successfully manage through them. (Figure 3). Another important observation from her work is that some technology

“revolutions” have led to rapid business growth.

In order for a company to get to the point where they can plan and implement growth and innovation strategies, or exploit and leverage market opportunities, they will need a good grasp of the disruption in their technology environment. This means tying the infrastructure threads together: technology; customer; product services; and operations.

It remains important to understand your business strategy in the context of the interacting lifecycle forces because that helps you develop both the roadmaps and strategies that will determine your future. **Smarter can help.**

## Business cycles and technology lifecycles are historically entwined

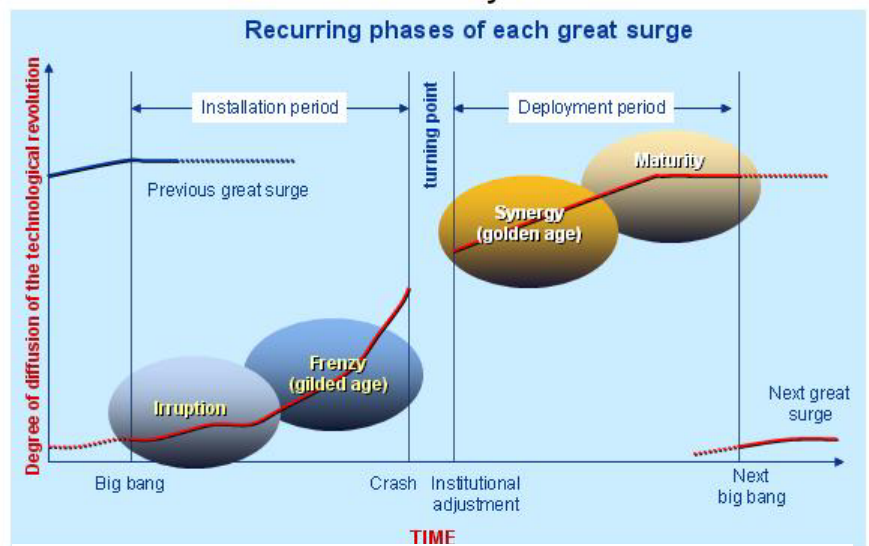
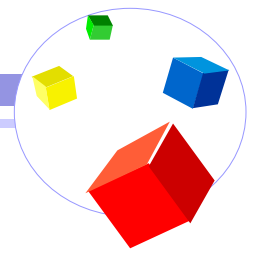


Figure 3: Technology revolutions (Carlota Perez)

\* Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages. Cheltenham, UK and Northampton, MA: Edward Elgar Publishing, 2002



## Conclusion

Technology is not a mutually exclusive financial or strategic decision. It is not an isolated program. Technology providers and technology consumers alike are affected directly and indirectly by overlapping and inter-dependent lifecycles.

Whatever your strategic business objective; innovation; growth; productivity; cost reduction – lifecycle management should be adopted be considered as an important business function.

Change and disruption are inevitable, but companies that understand the process can harness it and benefit from disruptive growth. To benefit from disruption and create new growth businesses, managers need help to make counter-intuitive decisions. And to guide them, **Smarketer** has developed a tool kit which includes a set of principles for successful disruptive innovation.

**Smarketer can help you join the lifecycle dots.**

### Contact Smarketer

If you would like to get in contact with us or learn more about our lifecycle management services, please send an email to [info@smarketer.com.au](mailto:info@smarketer.com.au) and we will get back to you as soon as possible.

Alternatively you could contact the following principal of Smarketer:

Peter Humphreys

**Telephone:** 0437 352 422

**International:** +61 437 352 422

**Facsimile:** +61 3 9802 9034

[peter.humphreys@smarketer.com.au](mailto:peter.humphreys@smarketer.com.au) or [peter.humphreys@bigpond.com](mailto:peter.humphreys@bigpond.com)



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