



THE IMPORTANCE OF A TECHNOLOGY STRATEGY

For most companies, a technology strategy should be a fundamental component of the overall strategy, at either corporate or divisional level. In this context, technology means the science, tools, mechanisms or systems that enable your products or services to function. What it doesn't mean is Information Systems. For example, a car manufacturer uses a wide range of technologies to enable the car to deliver all of its functions and needs to understand how these will develop. What is the future of fuel cells? What will be the impact on engine design? What will be each company's role in the development? All these questions are fundamental to the strategy of the car company.

The technology strategy should "cascade" from the overall corporate strategy. I won't go into detail about developing corporate strategy as this is covered in other Sensei articles but clearly you need one and the technology strategy needs to take its context from this 'parent' strategy. In companies such as pharmaceuticals and high tech equipment manufacturers it is common for the technology strategy to inform the corporate strategy but it is usually the other way around.

So how do you develop your technology strategy? As you might expect there are several ways to do this but you may find the approach outlined below gives you a good start. The sequence we recommend has three phases – Input, Assessment and Portfolio Planning.

1. INPUT

In this phase, you need to understand what is currently happening in several key areas. Your customer and consumer habits and needs never stay static. Even some of the subtlest changes can impact future requirements for your product or service. For example, if you are an installer of telephone landlines, the rapid adoption of mobile phones in developing markets may mean your current technology is obsolete in those countries.

In addition to trends with customers and consumers, a clear understanding is needed of what drives your market and can affect your growth plans - the market dynamics, what drives the technology, what trends will most affect your business and what your competitors are doing. It is also useful to understand what is happening in adjacent technology segments. The insights provided by this research and enquiry process will enable you to build future scenarios, where you predict the shape and characteristics of the technology landscape in your business.

This is predicting the future and of course is fraught with danger, yet it is important to try and assess the likely scenarios that your organization may face and select the one that is the most appealing to follow. Predictions in consumer behavior often have a high degree of linearity, as shifting consumer buying patterns can take some time. However history suggests that the development of technologies is more likely to be discontinuous and can often follow the "S-curve" shape rather than a straight line.



Your scenario development should include predictions on disruption. What could wipe out your market completely? What emerging technology could make your product obsolete and your market disappear? It is no fun to be in charge of a business made obsolete by new technology unless you get there first! What opportunities do you have to completely change the market dynamics and win?

This stage of strategy development should include some diverse inputs, ideally from outside your company. It's very easy to remain 'within your box' constantly reworking what you already know and miss some learning or opinion which could be very valuable.

2. ASSESSMENT

Most technology assessment starts with segmentation. There are lots of options but one that I like originated with the Arthur D Little consultancy. It looks at Base, Enabling and Discriminating technologies – the descriptions are fairly self-explanatory – combined with your competitive position, categorized as *Clear Leader, Strong, Favourable, Tenable* or *Weak*. Intellectual Property, e.g. patents, is a fundamental criterion to consider in this assessment.

Coupled with a simple approach to risk and potential return, this assessment phase gives you an overview of the areas where you need to gain competitive advantage, where you need to build to compete and where you're in danger of being so far behind you may need to exit.

Once you have prioritized technologies through segmentation, you should then understand the level of technology maturity and how they will develop over time. One way to do this is through technology road-mapping, where you can group technologies and map their development over your chosen timeframe. This helps to spot dependencies and aids the next part of the strategy process.

3. PORTFOLIO DEVELOPMENT AND PLANNING

This is the phase where you decide what, when and how you will develop and apply technologies. Important considerations include your internal competencies, resources, your Must Win Battles, major technology gaps, and major technology opportunities. You should end up with a technology portfolio and plan, which provide the framework for action.

You will have an answer to the Make/Buy/Ally question for each important technology or group and from this you can derive a separate Open Innovation strategy. This will tell you which technologies you wish to source outside. Increasingly Open Innovation is offering companies much more promise. For example, Kraft quote that 98% of food-related IP exists outside their company; Procter & Gamble



estimate that there are over 200 times more relevant experts outside their company than there are inside. The potential is clear.

The final part of the technology strategy is implementation. A beautiful portfolio diagram may be comforting, but it is nothing if it stays in a filing cabinet and you carry on with business as usual. The technology strategy does not need to be complicated or overly precise. It is a tool to guide action that can contribute significantly to success in the market when you couple it with your resolve and determination to win.

Kevin McFarthing
Innovation Fixer Ltd



Kevin McFarthing runs the [Innovation Fixer](#) consultancy, helping companies to improve the output and efficiency of their innovation and to implement Open Innovation. He spent 17 years with Reckitt Benckiser in innovation leadership positions, and also has experience in life sciences.