Chapter 2
Innovation Strategy

LEARNING OBJECTIVES
By the end of this chapter you will develop an understanding of:

- the importance of innovation strategy as a framework to guide the process of change
- the three core elements of innovation strategy formulation:
  - strategic analysis – exploring where we could innovate
  - strategic choice – choosing between different options
  - strategic implementation – planning to make innovation happen
- the importance of dynamic capability and the role of innovation strategy in building this.

Why Strategy?
As we saw in the previous chapter, innovation is about creating value through change. But simply changing things in random directions can be risky – if we don’t know where we are going we may well end up somewhere else! So central to effective innovation management is a clear sense of direction: where and how is innovation going to help us move forward?

The other reason why an innovation strategy is a good idea is the resource question – even the best-endowed organization can’t do everything and so we need to be clear about what we’ll spend our scarce resources on and why.

Activity to help you think about sources of strategic advantage through innovation is available on the Innovation Portal at www.innovation-portal.info
Part 1 • Foundations of Managing Innovation

Innovation strategy can give us a roadmap for change – but it’s important to remember that we are dealing with an uncertain future. We don’t know if our technology will actually work, we can’t be sure that the market we expect will actually be there, we may be surprised by the actions of competitors or governments – in fact, the only thing we can be sure of is that things will be unpredictable. So having a map for where we are trying to go is helpful, but we need to recognize that it is open to change. It’s less an accurate GPS-backed picture of a well-laid-out superhighway and more a case of a rough sketch to help us find a way through the jungle. And as we move forward through that unknown forest, we may need to change direction and adjust our plans to cope with surprises and roadblocks on the way.

Strategy is also about making clear a vision for the future – and sharing this with others who can help shape the direction and support the journey. Whether it is mobilizing enthusiasm amongst investors, convincing the Board to back a business case or aligning the efforts of employees in a focused innovation programme, the underlying need is for a clearly articulated strategy.

What’s in an Innovation Strategy?

Putting an innovation strategy together involves three key steps, pulling together ideas around core themes – and inviting discussion and argument to sharpen and shape them. These are:

- Strategic analysis – what could we do?
- Strategic selection – what are we going to do, and why?
- Strategic implementation – how are we going to make it happen?

Let’s look at each of these in more detail in the following sections:

Strategic Analysis

Strategic analysis begins with an exploration of innovation space – where could we innovate and why would it be worth doing so? A useful place to start is to build some sense of the overall environment, to explore the threats and opportunities currently present and the likely changes to these in the future. Typically, questions here can relate to technologies, to markets, to the underlying political trends, to emerging customer needs, to competitors and to social and economic forces. It’s also useful to add to this map some sense of who the players are in the environment – the particular customers and markets, the key suppliers, and the number and type of competitors.

Within this framework it’s also important to reflect on what resources the organization can bring to bear: what are its relative strengths and weaknesses and how can it build and sustain a competitive advantage?
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(It’s important to remember that these are tools to help start a discussion – not accurate measuring devices. There are real limitations to how much we can know about an environment which is complex, interactive and constantly changing, and there are often wide differences about where the strengths and weaknesses actually lie.)

Having explored this environment, we need to understand the range of possibilities – where could we innovate to our advantage? What kinds of opportunities exist for us to create something different and capture value from bringing those ideas into the world?

Sometimes it is about completely new possibilities, such as exploiting radical breakthroughs in technology. For example, new drugs based on genetic manipulation have opened a major new front in the war against disease. Mobile phones, PDAs and other devices have revolutionized where and when we communicate. Even the humble windowpane is the result of radical technological innovation – almost all the window glass in the world is made these days by the Pilkington float glass process, which moved the industry away from the time-consuming process of grinding and polishing to get a flat surface.

Equally important is the ability to spot where and how new markets can be created and grown. Alexander Bell’s invention of the telephone didn’t lead to an overnight revolution in communications – that depended on developing the market for person-to-person communications. Henry Ford may not have invented the motor car but in making the Model T – ‘a car for Everyman’ at a price most people could afford – he grew the mass market for personal transportation. And eBay justifies its multi-billion-dollar price tag not because of the technology behind its online auction idea but because it created and grew the market.

Innovation isn’t just about opening up new markets. It can also offer new ways of serving established and mature ones. Low-cost airlines are still about transportation – but the innovations which firms like Southwest Airlines, easyJet and Ryanair have introduced have revolutionized air travel and grown the market in the process. One challenging new area for innovation lies in the previously underserved markets of the developing world – the four billion people who earn less than $2 (£1.20) a day. The potential for developing radically different innovative products and services aimed at meeting the needs of this vast population at what C. K. Prahalad calls ‘the bottom of the pyramid’ is huge, and the lessons learnt may impact on established markets in the developed world as well.

And it isn’t just about manufactured products; in most economies the service sector accounts for the vast majority of activity, so there is likely to be plenty of scope. Lower capital costs often mean that the opportunities for new entrants and radical change are greatest in the service sector. Online banking and insurance have become commonplace, and they have radically transformed the efficiencies with which those sectors work and the range of services they can provide. New entrants riding the Internet wave have rewritten the rulebook for a wide range of industrial games, for example Amazon in retailing, Google in advertising and Skype in telephony. Others have used the Web to help them transform business models around things like low-cost airlines, other travel services and the music business.

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Exploring Innovation Space

One approach to finding an answer to the question of where we could innovate is to use a kind of ‘innovation compass’ exploring different possible directions.

Innovation can take many forms but we can map the options along four dimensions:

- **Product’**: Changes in the things (products/services) which an organization offers
- **Process’**: Changes in the ways in which these offerings are created and delivered
- **Position’**: Changes in the context into which the products/services are introduced
- **Paradigm’**: Changes in the underlying mental models which frame what the organization does

**Table 2.1: Dimensions for Innovation**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Type of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Product’</td>
<td>Changes in the things (products/services) which an organization offers</td>
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</tr>
<tr>
<td>‘Paradigm’</td>
<td>Changes in the underlying mental models which frame what the organization does</td>
</tr>
</tbody>
</table>


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shift from craft to mass production was nothing short of a revolution in the way cars (and later countless other products and services) were created and delivered. Of course, making the new approach work in practice also required extensive product and process innovation, for example in component design, in machinery building, in factory layout and particularly in the social system around which work was organized.

Recent examples of ‘paradigm’ innovation – changes in mental models – include the shift to low-cost airlines, the provision of online insurance and other financial services, and the repositioning of drinks like coffee and fruit juice as premium ‘designer’ products. Another big shift is towards ‘mass collaboration’, which builds on social networks and communities. Companies like Lego and Adidas are reinventing themselves by engaging their users as designers and builders rather than as passive consumers. Paradigm change is also emerging around sustainability with growing concerns about global warming and the limited availability of key resources like energy and materials.

Table 2.2 gives some examples of innovations mapped onto this ‘4Ps’ model.

### TABLE 2.2 Some Examples of Innovations Mapped on to the 4Ps Model

<table>
<thead>
<tr>
<th>Innovation type</th>
<th>Incremental – do what we do but better</th>
<th>Radical – do something different</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong> – what we offer the world</td>
<td>Windows 7 and 8 replacing Vista and XP – essentially improving on existing software idea</td>
<td>New to the world software (e.g. the first speech recognition program)</td>
</tr>
<tr>
<td></td>
<td>New versions of established car models (e.g. the VW Golf essentially improving on established car design)</td>
<td>Toyota Prius – bringing a new concept: hybrid engines. Tesla – high-performance electric car.</td>
</tr>
<tr>
<td></td>
<td>Improved performance incandescent light bulbs</td>
<td>LED-based lighting, using completely different and more energy-efficient principles</td>
</tr>
<tr>
<td></td>
<td>CDs replacing vinyl records – essentially improving on the storage technology</td>
<td>Spotify and other music-streaming services – changing the pattern from owning your own collection to renting a vast library of music</td>
</tr>
<tr>
<td><strong>Process</strong> – how we create and deliver that offering</td>
<td>Improved fixed-line telephone services</td>
<td>Skype and other VOIP systems</td>
</tr>
<tr>
<td></td>
<td>Extended range of stockbroking services</td>
<td>Online share trading</td>
</tr>
<tr>
<td></td>
<td>Improved auction house operations</td>
<td>eBay</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toyota Production System and other ‘lean’ approaches</td>
</tr>
</tbody>
</table>

(continued)
**PART 1 - FOUNDATIONS OF MANAGING INNOVATION**

**TABLE 2.2** (Continued)

<table>
<thead>
<tr>
<th>Innovation type</th>
<th>Incremental – do what we do but better</th>
<th>Radical – do something different</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position</strong> – where we target that offering and the story we tell about it</td>
<td>Improved factory operations efficiency through upgraded equipment</td>
<td>Online banking and now mobile banking in Kenya and the Philippines – using phones as an alternative to banking systems</td>
</tr>
<tr>
<td></td>
<td>Improved range of banking services delivered at branch banks</td>
<td>Online shopping</td>
</tr>
<tr>
<td></td>
<td>Improved retailing logistics</td>
<td>Addressing underserved markets (e.g. Tata Nano aimed at emerging but relatively poor Indian market with car priced around $2000 (£1200))</td>
</tr>
<tr>
<td></td>
<td>Häagen Dazs changing the target market for ice cream from children to adults</td>
<td>Low-cost airlines opening up air travel to those previously unable to afford it – create new market and also disrupt existing one</td>
</tr>
<tr>
<td></td>
<td>Airlines segmenting service offering for different passenger groups – Virgin Upper Class, BA Premium Economy, etc.</td>
<td>Variations on the ‘One laptop per child’ project (e.g. Indian government $20 (£12) computer for schools)</td>
</tr>
<tr>
<td></td>
<td>Dell and others segmenting and customizing computer configuration for individual users</td>
<td>University of Phoenix and others building large education businesses via online approaches to reach different markets</td>
</tr>
<tr>
<td></td>
<td>Online support for traditional higher education courses</td>
<td>‘Bottom of the pyramid’ approaches using a similar principle but tapping into huge and very different high-volume/low-margin markets (e.g. Aravind eye care, Cemex construction products)</td>
</tr>
<tr>
<td></td>
<td>Banking services targeted at key segments – students, retired people, etc.</td>
<td>Grameen Bank and other microfinance models – rethinking the assumptions about credit and the poor</td>
</tr>
<tr>
<td><strong>Paradigm</strong> – how we frame what we do</td>
<td>Bausch &amp; Lomb – moved from ‘eye wear’ to ‘eye care’ as its business model, effectively letting go of the old business of spectacles, sunglasses (Raybans) and contact lenses, all of which were becoming commodity businesses. Instead, the company moved into newer high-tech fields like laser surgery equipment, specialist optical devices and research into artificial eyesight</td>
<td>iTunes platform – a complete system of personalized entertainment</td>
</tr>
<tr>
<td></td>
<td>Dyson redefining the home appliance market in terms of high-performance engineered products</td>
<td>Cirque de Soleil – redefining the circus experience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amazon, Google, Skype – redefining industries like retailing, advertising and telecoms through online models</td>
</tr>
</tbody>
</table>

(continued)
Innovation type

<table>
<thead>
<tr>
<th>Innovation type</th>
<th>Incremental – do what we do but better</th>
<th>Radical – do something different</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolls-Royce</td>
<td>from high-quality aero engines to becoming a service company offering ‘power by the hour’ Service</td>
<td>Linux, Mozilla, Apache – moving from passive users to active communities of users co-creating new products and services</td>
</tr>
<tr>
<td>IBM</td>
<td>from being a machine maker to a service and solution company – selling off its computer making and building up its consultancy and service side</td>
<td></td>
</tr>
</tbody>
</table>

Each of these 4Ps of innovation can take place along an axis running from incremental through to radical change; the area indicated by the circle in Figure 2.1 is the potential innovation space within which an organization can operate.
We can use the model to look at where the organization currently has innovation projects – and where it could move in the future. For example, if the emphasis has been on product and process innovation, there may be scope for exploring more around position innovation – which new or underserved markets could we play in? Or around defining a new paradigm, a new business model with which to approach the marketplace.

We can also compare maps for different organizations competing in the same market – and use the tool as a way of identifying where there may be relatively unexplored space which will offer significant innovation opportunities. By looking at where other organizations are clustering their efforts we can pick up valuable clues about how to find relatively uncontested space and focus our efforts on these – as the low-cost airlines did with targeting new and underserved markets for travel.

**Strategic Selection**

The issue here is choosing out of all the things we could do which ones we will do – and why? We have scarce resources so we need to place our bets carefully, balancing the risks and rewards across a portfolio of projects. There are plenty of tools to help us do this, from simple financial measures like payback time or return on investment through to complex frameworks which compare projects across many dimensions. Table 2.3 gives an overview. (We’ll look more closely at this toolkit and the different ways we can make decisions under uncertainty in Chapter 9.)

**Strategic Competencies and Capabilities**

But we also need to consider here that we don’t have completely free choice. First of all we need to recognize that there is a degree of what is called ‘path dependency’ – what we accumulate in the way of knowledge and other resources (i.e. what we can, and cannot, do). For example, if we see an opportunity for nuclear power as a new energy source this may be an interesting possibility – but pretty hard for us to achieve if we are in the business of ice cream selling! This ‘resource-based’ view looks from the inside out and suggests some of the ways in which we could deploy our particular strengths to our advantage.³ (We discuss this theme in more detail in the next chapter.)

Strengths could be in the form of specific technological knowledge – maybe we own a patent on a key idea or have a lot of experience in a particular area. 3M, for example, has over
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one hundred years of research around the problem of coating surfaces with different materials and has been able to build its business from applying that knowledge. Intel’s core competence is around the expensive and precise technologies of semiconductor manufacturing which it has built up over fifty years, while Honda’s expertise lies in a deep understanding of engines and transmission of power – in cars, boats, lawnmowers and, its original starting point, motorbikes.

Of course, competencies may become superseded by shifts in the technological area. Sometimes they can destroy the basis of competitiveness (competence

### TABLE 2.3  Approaches to Project Selection

<table>
<thead>
<tr>
<th>Selection approach</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple ‘gut feel’, intuition</td>
<td>Fast</td>
<td>Lacks evidence and analysis, may be wrong</td>
</tr>
<tr>
<td>Financial measures (e.g. return on investment or payback time)</td>
<td>Fast and uses some simple measurement</td>
<td>Doesn’t take account of other benefits which may come from the innovation – learning about new technologies, markets, etc.</td>
</tr>
<tr>
<td>Multidimensional measures (e.g. decision matrix)</td>
<td>Compares on several dimensions to build an overall ‘score’ for attractiveness</td>
<td>Allows consideration of different kinds of benefits but level of analysis may be limited</td>
</tr>
<tr>
<td>Portfolio methods and business cases</td>
<td>Compares between projects on several dimensions and provides detailed evidence around core themes</td>
<td>Takes a long time to prepare and present</td>
</tr>
</tbody>
</table>

### BOX 2.1: PRAHALAD AND HAMEL

One view of resources – the ‘core competencies’ theory of Prahalad and Hamel – uses the metaphor of a tree. The deep roots (core competencies) allow for growth of a strong trunk and limbs (core businesses) with smaller branches (business units) yielding leaves, flowers and fruit (products and services).

Activity designed to help you explore competency mapping is available on the Innovation Portal at [www.innovation-portal.info](http://www.innovation-portal.info)

destroying) but they can also be reconfigured to enhance a competitive position (competence enhancing). A famous study by Tushman and Anderson gives a wide range of examples of these types of change.4

But it isn’t just technical knowledge – Google’s expertise is based on not only a powerful search engine but also using the data that helps it build to offer services in advertising. Major retailers like Tesco and Wal-Mart have a rich and detailed understanding of customers and their shopping preferences and behaviour.

Strengths can also come from specific capabilities, things which an organization has learnt to do to help it stay agile and able to move into new fields. Virgin as a group of companies is represented across many different sectors but the underlying approach is essentially the original entrepreneurial one which Richard Branson used when setting up his music business.

Case Studies of Kodak and Fujifilm, both of which faced significant challenges and have been trying to redeploy their core technological knowledge into new markets, and Philips Lighting, which is using novel solid state lighting technologies to enhance its already strong position in the global lighting market, are available on the Innovation Portal at www.innovation-portal.info

Case Study of Tesco and its approach to building a deep understanding of its customers and their changing needs is available on the Innovation Portal at www.innovation-portal.info

BOX 2.2: DISADVANTAGES OF CORE COMPETENCIES

There is a downside to building core competencies and capabilities: when the environment changes, it is often difficult to let them go. So much has been sunk into investments related to them and the underlying mindset of the organization is committed deeply to them – and so there is a risk that they turn to what Dorothy Leonard calls ‘core rigidities’.5 For example, one explanation for the fall of Polaroid from a key player and technological leader in the photography business to Chapter 11 bankruptcy is that it was unable to let go of its core models for the business. There is a fuller version of this case available on the Innovation Portal at www.innovation-portal.info

Strategic Positioning

We also need to think about where and how we position ourselves – and that requires an understanding of how we fit into wider systems and where we could create competitive advantage through innovation. Michael Porter’s model is a useful one here, looking at innovations in terms of how they can change the competitive position amongst a network of other organizations.6

Key questions in this kind of approach are:

- What are the key competitive forces?
- What are the barriers to entry – can anyone come into the game or are most potential competitors kept
out because of high costs, need for specialized knowledge, etc.?

- What is the likely threat from substitutes and different ways of delivering value in this game?
- What is the relative power of key players – customers, suppliers, regulators – and how can that shape the game?

All of these and other frameworks are useful in choosing what to do and providing a strategic rationale. They relate to how we can position ourselves in respect of the wider competing context.

**Strategic Posture: How are we going to play the game?**

Another part of that choice comes from the approach we choose to take – being, for example, a first mover or a fast follower? There are many different ‘postures’ we could adopt but we need to make sure that there is alignment between the approach we choose to take and our underlying ability to deliver on it. For example, if we want to be first movers, leading the market with new ideas, we will need a strong R&D capability. Equally, if we decide to be a fast follower then we need to have good antennae to pick up on key trends and the agility to move quickly to do something about them, by acquisition, by fast development, etc.

**Strategic Implementation**

Having explored what we could do and decided what we are going to do, the third stage in innovation strategy development is to plan for implementation. Thinking through what we are going to need and how we will get these resources, who we may need to partner with, what likely roadblocks we may find on the way – all of these questions feed into this step.

Of course, it isn’t a simple linear process. In practice, there will be plenty of discussion of these issues as we explore options and argue for particular choices, But that’s the essence of strategy – a conversation and a rehearsal, imagining and thinking forward about uncertain activities into the future.

To help do this we have a number of tools, again ranging from the simple to the complex. We could, for example, make a simple project plan which sets out the sequence of activities we need to carry out to make our innovation come alive. That would help us identify which resources we needed and when and might also highlight some of the potential trouble spots so we could think through how we might deal with them. Many tools add a dimension of ‘what if...?’ planning to such project models – trying to anticipate key difficulties and take a ‘worst case’ view so suitable contingency plans can be made.
Diversity of Strategic Games for Innovation

The MINE (Managing Innovation in the New Economy) research programme at Ecole Polytechnique in Montreal, Canada, together with SPRU, University of Sussex, conducted qualitative and quantitative studies to gain an understanding of the diversity of strategies for innovation. Almost 925 chief technology officers (CTOs) and senior managers of R&D (from Asia, North and South America, and Europe) across all industrial sectors of the economy responded to a global survey. The survey tool is available at www.minesurvey.polymtl.ca. Respondents come from firms such as Intel, Synopsys, Motorola, IBM Global Services, Novartis and Boeing. Executives were asked what competitive forces impact on innovation, what value-creation and -capture activities are pursued in innovating and what strategies and practices are used.

Games of innovation involve many interdependent players, persist over time and are strategically complex. Games are distinct, coherent scenarios of value creation and capture involving activities of collaboration and rivalry:

- Each involves a distinct logic of innovative activities that is largely contingent on product architectures and market lifecycle stage.
- They follow persistent trajectories, bound by some basic economic and technical forces and thus tend to fall into a small number of natural trajectories.
- They result in differing levels of performance. Market-creation games involve radical innovations, grow fast and display high variations in profitability. By contrast, market-evolution games are characterized by process innovations, a slower pace of growth, but good profitability.
- However, games are not fully determined by their contexts, but allow degrees of strategic freedom to interact with members of relevant ecosystems and to adopt collaborative and competitive moves to expand markets.

Clustering analyses led to the identification of seven distinct and stable groups each containing at least 100 firms that create and capture value in similar ways. Each game is characterized by statistically different value-creation and -capture activities:

- patent-driven discovery
- cost-based competition
- systems integration
- systems engineering and consulting
- platform orchestration
- customized mass production
- innovation support and services.

It’s also worth thinking through and challenging the underlying strategic concept – the business case for doing whatever it is we have in mind. Once again, building a business case or thinking through the underlying business model provides a powerful way of making our assumptions explicit and opening them up for discussion and challenge. (We’ll look in detail at the role of business models as a way of capturing value in Chapter 14, but the tools for working with these ideas are very helpful at this early strategic planning stage.)

Strategy at Different Levels

Strategy is often seen as something which is done by the top management team in an established organization or by the core entrepreneurial team in a start-up. But if it is to work then everyone else needs to understand the overall roadmap and feel comfortable and committed to it. There’s a lot of talk about ‘strategic vision’ – but underneath the hype there is a really important point. If others can’t see what you see (no matter how exciting and rich in potential it may be) then they aren’t likely to buy in to that strategy. There’s a need to build and share a compelling vision and to allow people to explore it for themselves, raising concerns and questions, adding their ideas and suggestions.

And that raises the big issue of communicating and sharing a strategy throughout the organization. It’s perhaps easier for a small start-up, though even here there are people outside – venture capitalists, potential partners, etc. – who need to understand and support the vision. In larger, established organizations it’s critical to give people a clear sense of direction but also to ensure that they understand and are committed to it. Many studies of innovation highlight the critical role of ‘top management commitment’ – and in part that means making sure that strategy is not simply some exciting words but that the resources and support throughout the organization to make it happen are also there.

There’s another reason why clear and communicated innovation strategy is important. While a few leaders may be in a position to set the overall direction, the actual implementation of the strategy is likely to involve many smaller projects. Ensuring that there is alignment of these so that they all create value and move the organization in the same direction is a critical part of strategy implementation.

For example, we know that there is huge potential for employees to contribute to incremental innovation, especially around the processes on which they work. Research regularly shows that this effect can have a huge cumulative impact. For example, Toyota’s position over decades as the world’s most productive carmaker is largely a result of its commitment to kaizen. This is a process of continuous incremental innovation engaging the vast majority of the workforce – on average it receives one idea per worker per week and implements almost all of these. That’s a powerful innovation engine – but it only
works if all those individual activities by thousands of employees are aligned and focused towards a common strategy goal.\(^7\)

The solution to this is to make use of approaches which have been termed ‘policy deployment’ (sometimes called ‘hoshin planning’), essentially devolving the top-level innovation strategy to lower levels in the organization and allowing people at those levels to make the decisions. This provides a strategic focus within which they can locate their multiple small-scale innovation activities. But it requires two key enablers: the creation of a clear and coherent strategy for the business and the deployment of it through a cascade process which builds understanding and ownership of the goals and sub-goals.

### INNOVATION IN ACTION 2.2

**Policy Deployment**

Policy deployment is a characteristic feature of many Japanese kaizen systems and may help explain why there is such a strong track record of strategic gains through continuous improvement. In such plants, overall business strategy is broken down into focused three-year midterm plans (MTPs); typically, the plan is given a slogan or motto to help identify it. This forms the basis of banners and other illustrations, but its real effect is to provide a backdrop against which efforts over the next three years can be focused. The MTP is specified not just in vague terms but with specific and measurable objectives, often described as ‘pillars’. These are, in turn, decomposed into manageable projects which have clear targets and measurable achievement milestones, and it is to these that workplace innovation activities are systematically applied.

For example, a major Japanese producer of forklift trucks and related machinery employing around 900 staff and producing three main product lines (industrial trucks, construction equipment and other new products) uses this approach.

Strategy is now focused on the ‘Aggressive 30’ programme, reflecting the 30 years since the plant was set up. Total productive maintenance (TPM) and indirect cost reduction are the key themes. Typical targets within the plan are:

- 1.5 times increase in overall productivity
- breakdown reduced to 10% of current levels
- streamline production flow by 30%
- reduction in new product development/introduction time of 50%.
To deliver these they have a nine-pillar structure to the programme within which the total
cost of waste is calculated and broken down into 46 areas, each of which becomes the target for
improvement activity.

Kaizen operates in both top-down and bottom-up modes. Each work group studies its
‘waste map’ and identifies a series of projects, which are led by section managers. Each section
has specific targets to achieve, for example increase machine availability from 49% to 86% or
cut work in progress from 100 to 20 vehicles.

Each waste theme is plotted on a matrix, with the other axis being a detailed description of
the types and nature of waste arising. This matrix gives a picture of the project targets which are
then indicated by a red (unsolved) or a green (solved) dot. Importantly, projects completed in
one year can be revisited and the targets increased in subsequent years to drive through continu-
ous improvement.

Making things visible is a key theme. The use of the matrix charts with their red and green
dots everywhere is a constant reminder of the overall continuous improvement programme. Also
each project is painted a shocking pink colour as it is completed so that it is clear on walking
through the factory where and what has been done – often sparking interest and application
elsewhere but at least reminding on a continuing basis.

Dynamic Capability

One of the problems in innovation strategy is that it can easily look simple. The process we’ve
been describing – of strategic analysis, selection and implementation – seems straightforward
and logical. Unfortunately, the world doesn’t work like that and the evidence is clear: simple
models of strategy that assume a rational process and easy availability of information don’t
work very well. Instead, we need to see the process as one of incremental learning, probing
and exploring, with the actual strategy being constantly adjusted and refined.

Equally, our ability to move is constrained by many forces: the underlying trajectory and
our prior commitments (path dependency), the patterns of innovation within a particular
sector or the local or national innovation system. So models which emphasize strategic position-
ing and achieving competitive advantage may not always be appropriate, and these days
there is much discussion of the idea that competitive advantage is only ever transient, that it
won’t last.

Our approach in this book is to follow a helpful direction set by David Teece and col-
leagues around the idea of ‘dynamic capability’. This sees three key components of an inno-
vation strategy:

• competitive and national positions (technology and intellectual property, as well as its
customer base and upstream relations with suppliers)
• technological paths (the strategic alternatives available to the firm, and the attractiveness of the opportunities which lie ahead)
• organizational and managerial processes (the set of routines which define ‘the way we do things around here’).

The core role in innovation management is ‘appropriately adapting, integrating and reconfiguring internal and external organizational skills, resources and functional competencies towards a changing environment’ (p. 537). In other words, strategic innovation management is all about constantly reviewing and reconfiguring routines and asking three key questions:

Of the routines which we have:

• Which should we do more of, enhance and develop?
• Which should we do less of, or even stop?
• Which new routines do we need to learn and embed to cope with new features of our innovation environment?

We'll look at this theme of dynamic capabilities in more detail in the next chapter.
Summary

- Innovation involves uncertainty and risk, and no one has infinite resources. So it makes sense to have a clear sense of direction and a framework within which to make decisions about the changes our organization will make.

- Innovation strategy is not about writing a document or report so much as having a framework for discussion and alignment.

- Innovation strategy is not a detailed plan and an uninterrupted, linear progression so much as a flexible learning process.

- At the heart of an innovation strategy are three core questions:
  - Analysis – what could we do?
  - Selection – what are we going to do (and why)?
  - Implementation – how are we going to do it?

- There is a core role for leadership in innovation strategy to provide vision, direction and sometimes to stretch the organization in terms of its goals.

- Innovation strategy needs to be shared and communicated so that everyone in the organization understands and can contribute.

- Innovation strategy is about building the capability to work in a complex and changing environment. So it is about building routines – capability – to make innovation happen, but it is also about being able to adapt and change those routines as the world shifts. This is ‘dynamic capability’.

- Dynamic capability involves working with the organization’s paths, processes and positions.

Further Resources

Comprehensive and balanced reviews of the arguments and evidence for product leadership versus follower positions is provided by G. J. Tellis and P. N. Golder: Will and Vision: How latecomers grow to dominate markets (McGraw-Hill, 2002) and Fast Second: How smart companies bypass radical innovation to enter and dominate new markets (Jossey-Bass, 2004) by Costas Markides. More relevant to firms from emerging economies, and our favourite text on the subject, is Naushad Forbes and David Wield’s From Followers to Leaders: Managing technology and innovation (Routledge, 2002), which includes numerous case examples.

For recent reviews of the core competence and dynamic capability perspectives, see David Teece’s Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth (Oxford University Press, 2011), Joe Tidd’s (editor) From Knowledge Management to Strategic Competence (Imperial College Press, third edition, 2012) and Connie Helfat’s Dynamic Capabilities: Understanding strategic change in organizations (Blackwell, 2006).
Part 1  Foundations of Managing Innovation


The renewed interest in business model innovation, that is how value is created and captured, is discussed in *Strategic Market Creation: A new perspective on marketing and innovation management*, a review of research at Copenhagen Business School and Bocconi University, edited by Karin Tollin and Antonella Carù (John Wiley & Sons, Ltd, 2008). There was a special issue of the journal *Long Range Planning* on innovative business models, volume 43 (2 & 3), 2011, and a compilation of articles re-published in the *Harvard Business Review* on Business Model Innovation (2012).

References

### Chapter 2 • Innovation Strategy


**Quizzes** to test yourself further are available online via the Innovation Portal at [www.innovation-portal.info](http://www.innovation-portal.info).

**Summary of online resources for Chapter 2** – all material is available via the Innovation Portal at [www.innovation-portal.info](http://www.innovation-portal.info).

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