

1.0. Chapter Overview - Entrepreneurial Capability

Quote

“All models are wrong but some are useful.”

George Box, 1976

This chapter examines nature of the entrepreneur from a number of perspectives:

1. Entrepreneurial mindset
2. Characteristics of entrepreneurs
3. Entrepreneurial skills

Who or what is an entrepreneur?

Entrepreneurs are often seen as outliers, with characteristics not frequently shared by the general population. Characteristics attributed to entrepreneurs include vision, charisma, creativity, persistence, risk-taking, proactiveness and many others. However, no researchers have succeeded in defining the ‘entrepreneurial DNA’ and some have argued that it is behaviours rather than characteristics that should be studied (e.g. Gartner, 1989).

Another hotly debated question is whether entrepreneurs are born or made – clearly an important question for those who seek to teach entrepreneurship! Daley (2013) publishes an interesting debate between two academics with differing views on this matter, but both believe the entrepreneurship education adds value. In fact, the academic who is a former entrepreneur is the one who believes most strongly in the value of entrepreneurship education.

Even those who believe entrepreneurs are born rather than made agree that education, along with experience, can improve the probability of success. Furthermore understanding how entrepreneurial people tend to think and behave is very valuable to working productively with them.

Entrepreneurship is a process, not an event and understanding that process gives greater understanding of the mindset, characteristics and skills required of entrepreneurs.

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1.1. Entrepreneurial mindset

Definition

“Entrepreneurship is the pursuit of opportunity without regard to the resources currently controlled.”

Howard Stevenson, Harvard professor, various publications

Notice this definition says nothing about starting a business. Opportunity takes many forms, but in essence, it is about creating value for others and thereby gaining some sort of reward. For many, the reward is financial wealth, for others, it may be social impact – possibly both. It may even be independence – being your own boss.

The beauty of this definition is that it focuses on mindset rather than context. Entrepreneurship can be manifested in many different ways:

- Starting an independent new business
- Starting a new venture within an existing business (intrapreneurship)
- Starting a social enterprise (often not-for-profit)
- Introducing a government initiative

With such broad scope, entrepreneurship becomes relevant to the majority not just the few.

Stevenson and Gumpert (1985) explain entrepreneurship as an extension of management, with two extremes Promotor and Trustee, as contrasted in the table below:

	Promotor	Trustee
Mindset	• Optimistic • Thrives on change - sees it as a source opportunity • Challenges the status quo • Resources are something you use	• Pessimistic • Threatened by change - dangerous • Values the status quo • Resources are something
Key question	Where is the opportunity and what resources do	What is the best use of the r

	Promotor	Trustee
	I need to pursue it?	have?
Key driver	Fear of missing an opportunity.	Fear of making a mistake.

It will be obvious from the above that Promotors and Trustees will struggle to work productively together. However, most people are somewhere in between and furthermore, understanding and valuing difference is a core skill for all types of managers.

In established, mature businesses, the Trustee mindset tends to dominate, which is why Intrapreneurs often struggle to have their ideas accepted.

Watch: Global Leaders Faculty

Ms Kay Koplovitz, Founder of USA Network discusses entrepreneurship.

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1.2. Characteristics of entrepreneurs

There has been no consensus about the characteristics of entrepreneurs, but two well-researched and established models are Entrepreneurial Orientation and Entrepreneurial Intentions.

Entrepreneurial Orientation (EO)

This concept, originated by Covin and Slevin (1989) and further developed by Lumpkin and Dess (1996) is usually applied to businesses rather than individuals and is useful for assessing whether a firm's environment is favourable to entrepreneurial behaviour. The core elements are:

- Innovativeness: emphasis on developing new products and services
- Proactiveness: leading rather than following the market; pioneering new industries
- Risk-taking: willingness to take risk and deal with uncertainty; opportunity focus

Businesses with low entrepreneurial orientation will struggle to innovate and continue to provide value to their customers or discover new markets.

Watch: Entrepreneurial Orientation (EO)

This video podcast describes what EO is, its influence on company performance and how the concept has developed.

Image: Entrepreneurial Intention

Entrepreneurial intention is defined as the intention to act entrepreneurially, usually interpreted as starting a business.

There has been a lot of research in what leads to “entrepreneurial intention” and there are several variations of the Entrepreneurial Intentions model. One version is depicted below:

Perceived desirability	Perceived feasibility
• Am I attracted to the idea of being an entrepreneur? Would I enjoy the process? • Is becoming an entrepreneur an acceptable career? (often influenced by parents, friends and general societal expectations)	• Do I have the skills and knowledge to take advantage of this opportunity? This is closely linked to entrepreneurial self-efficacy (based on Bandura).

This model demonstrates that knowledge about entrepreneurship can influence the intention to become an entrepreneur. It can demystify the idea of entrepreneurship, provide connections with actual entrepreneurs and explain the basic skills required to make a success of an entrepreneurial venture. Considerable research has been done demonstrating that education that increases perceived desirability and feasibility can lead to more entrepreneurial activity. This is often applied to disadvantaged workers, such as those made redundant by the closure of a local employer, ex-military, young people from disadvantaged backgrounds etc.

Early versions of the entrepreneurial intentions model also included another factor “propensity to act” similar to Entrepreneurial Orientation above. This has proved hard to measure and has been dropped from the research. It is, however, one of the most dominant characteristics of entrepreneurs – often described as a sense of urgency, drive or impatience to put ideas into practice. Of all characteristics, this appears to be the one most likely to be ‘born’ rather than ‘made’.

Does Entrepreneurial DNA exist?

Textbooks, articles and blogs can often give the impression that all entrepreneurs are similar, and that the same processes will work for all types of entrepreneurship. All models are by necessity approximations, otherwise they become unusable, but if they oversimplify they cease to be useful. So it is interesting to look at one model that suggests that there are distinct types of entrepreneurs.

Overview of entrepreneurial DNA	Read here external s
TEDx talk on entrepreneurial DNA	Watch he external s

A key message is that most startups will struggle to grow with only one type of 'entrepreneurial DNA', which suggests that startups founded by a team have an advantage over sole founder ventures.

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Image: Entrepreneurial skills

Definition

“Entrepreneurship is the pursuit of opportunity without regard to the resources currently controlled.”

Howard Stevenson, Harvard professor, various publications

There are several key elements to this core concept of entrepreneurship:

- ‘Pursuit’ indicates that Entrepreneurship is a process— more deliberate endeavour than a mere ‘moment of inspiration’.
- ‘Opportunity’—the concept of opportunity is central to any conception of entrepreneurship.
- ‘without regard to resources’ —entrepreneurs typically lack the necessary ingredients to bring their idea to fruition, so they must be good at negotiating to use the resources of others.

Elizabeth Chell (2013) has created a framework to understand the many skills required by entrepreneurs. The links to the definition above are apparent.

Idea identification/ creation	Capitalising on ideas
• Idea generation/ envisioning. • Opportunity recognition and means-end analysis. • Ability to acquire information about a potential opportunity, domain knowledge and associated skills. • Recognition of social/ market need.	• Awareness of environment and factors for opportunity exploitation. • Ability to garner the necessary material resources. • Ability to convince others of the value of the idea. • Networking and social embedding.
Traits/ behaviours	Managerial/ leadership skills
• Self-belief, self-awareness, trust in own judgement, etc. • Ability to manage risk and shoulder responsibility. • Ability to endure and cope with difficulties. Energy, motivation, persistence, etc.	• Ability to manage others. • Ability to overcome institutional and cultural barriers. • Ability to develop an idea as a commercial venture. • Decision-making capability.

Source: adapted from Chell (2013, p.12), Table 1.

It is noticeable that the emphasis in Chell’s framework is not on the technical skills of running a business, such as accounting, marketing, operational management and so forth. Instead, it is on cognitive skills – the way entrepreneurs think – and interpersonal skills – the way they relate to other people.

It has been observed that entrepreneurs underestimate the importance of interpersonal skills:

Definition

“Familiarity with human and organizational dilemmas of the entrepreneurial process was seen as critical to the success of a wide range of ventures. In many instances it was the *‘make or break’* ingredient in a venture’s progress to a desired level of organizational maturity and business success. In addition, entrepreneurs frequently reported that it was ‘people issues and organizational problems’ which, *to their surprise*, tended to occupy the greater portion of their time.”

Entrepreneurship is not a solo activity. Entrepreneurs depend on their ability to interact productively with others – negotiation, selling, leading and collaborating. The best entrepreneurs capitalise on their strengths and team with others to supply the interpersonal skills in which they are weak.

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- Entrepreneurship involves a mindset of pursuing opportunity.
- Entrepreneurship can be applied in many ways and is not confined to just starting a new for-profit business venture.
- Entrepreneurship is a process, often taking years to turn an idea into a model for delivering it to the market.
- Entrepreneurs focus on opportunity first and necessary resources second, whereas managers focus on resources first and opportunity second.
- Entrepreneurs are not all the same – there is no universally agreed list of characteristics. However, they share an opportunity mindset – they just view opportunity in different ways.
- Attitudes to entrepreneurship can be influenced by education.

Exercise

Read the article on BOSI DNA or view the video. Which type do you identify with most? Do any entrepreneurs you know personally fit a particular type?

[Answer here.](#)

Further reading

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Chapter 2

2.0. Chapter Overview - Challenges of Entrepreneurship

Quote

“A startup is a temporary organization in search of a repeatable, scalable business model.”

Steve Blank

What is the process of entrepreneurship and the fundamental challenges that entrepreneurship presents?

Topics covered in this chapter:

1. The entrepreneurial process: management of opportunity
2. Challenges of start-ups
3. Challenges of growth

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2.1. The Entrepreneurial Process: Management of Opportunity

As we saw in Chapter 1, entrepreneurship is fundamentally about pursuing opportunities. There are stages to this process. Not every idea is an opportunity and not every opportunity is an opportunity for you or your company. There is also a cost to not pursuing an opportunity as Kodak discovered to their cost when they chose to ignore the emerging technology of digital photography (Pachal, 2012).

Academic and entrepreneur, Kevin Hindle (2004), adapted the opportunity-based framework developed by Shane and Venkataraman (2000) as a guide to practitioners. This graphic outlines the process.

Image: The Entrepreneurial Process

In simple terms the stages are:

1. Existence: Opportunities exist whether they are recognised or not;
2. Discovery: Promising opportunities are discovered by leveraging existing skills and knowledge.
3. Evaluation: Not every opportunity is suitable for now or for you.
4. Exploitation: How to implement the opportunity (including the decision to reject it).

Example – The Apple iPhone

[Based on Pierce & Goode (2018), Ritchie (2019) and Parikh (2015)]

Existence: Convergence of technology

- Mobile phones (dominated by Nokia, Ericsson and Blackberry).
- Personal organisers (dominated by the Palm Pilot).
- MP3 players (dominated by the Apple iPod).
- Emerging desire to have mobile internet access.

Discovery: Leveraging existing skills, knowledge and resources

- iPod Touch's touch screen technology.
- Skills in developing partnerships (e.g. with music content providers for the iTunes store). This allowed Apple to partner with mobile telecoms providers such as AT&T and app developers in the App store.

Evaluation:

- The business model for mobile phones was already established and possible to imitate for a large company with bargaining power.
- Apple's brand recognition made it relatively easy to enter new markets.
- The popularity of the iPod Touch made it likely that early adopters would flock to a new Apple mobile phone.
- The iPod experience showed that content was key and would need to be included.

Exploitation:

- Apple's business model is in-house development of new ventures.

- Introduction of the App Store early in the iPhone's history provided a competitive advantage on content that lasted for years.
- It is likely that rivals such as Samsung would have identified and pursued this opportunity if Apple had not exploited it when they did.

Serial entrepreneurs – those who start, grow and sell multiple businesses – are constantly searching for new opportunities. They become skilled at scanning the environment to recognise emerging opportunities, assessing whether their prior skills and knowledge gives them an advantage and quickly evaluating the competition and the probability of creating a successful business model. When they decide to proceed, they leverage their existing resources and networks to implement quickly and efficiently.

This does not mean that experienced entrepreneurs can guarantee success. There is too much uncertainty involved in any new venture. Experienced entrepreneurs expect and accept obstacles, setbacks and even business failure. They are resilient, recovering quickly from setbacks and finding solutions to obstacles as they arise.

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2.2. Challenges of Start-ups

Why Start-ups Fail?

Understanding the process outlined above is no guarantee that you can follow it successfully. Entrepreneurship by definition involves doing something new, which means there is invariably a lot of uncertainty involved. Entrepreneurs have to make educated guesses and proceed on the basis of reasonable assumptions.

It is generally accepted that the majority of startups fail and there is no shortage of articles that give their version of the reasons for this and how entrepreneurs can succeed, but very little of this is evidence-based.

It can be useful to look at startups from the point of view of potential investors and how they assess risk. Four types of risk generally emerge:

1. Market risk: Will customers buy the product/service?
2. Execution risk: Can the founding team make it happen?
3. Financial risk: Will the return justify the investment?
4. Technology risk: Can the product/service be delivered at the right price point?

Although the order of importance may vary, investors usually nominate Market risk as the highest, closely followed by Execution risk. Market risk is most important because if you don't have customers (or paying stakeholders in a not-for-profit), you don't have a business. Execution follows because the founders will face numerous setbacks and investors need to be confident that they have the skills, temperament and support networks that will allow them to overcome these setbacks. Investors will often say that they would rather back an A grade team with a B grade idea than a B grade team with an A grade idea.

- Market: Finding product-market fit – the right product/service for the right customer
- Execution: Building the right team to make it happen
- Finance: Finding the funding needed to launch and grow the business
- Technology: Building the right product at the right price point to deliver the right value to the customer (equally applies to services, which involve infrastructure)

Watch: Global Leaders Faculty

Mr Brian Flynn, Investor & Serial Entrepreneur, discusses the greatest challenges for entrepreneurs today.

Read: Entrepreneurs Share Their Biggest Challenges in Growing a Business - Inc.

Entrepreneurs share their biggest challenges they have faced in growing their business.

[Read here.](#) (Links to an external site.)

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Quote

“A startup is a temporary organization in search of a repeatable, scalable business model.”

Steve Blank

Overcoming challenges

This statement recognises the level of uncertainty involved in a startup. The founders don't really know who their customers are, what their product is, how they will make money and what they will need to do to deliver their solution to the market. In other words, they lack a clear business model. The entrepreneur's challenge is to transform that uncertainty into a reasonable level of confidence that a new venture is viable. The Business Model Canvas, explored later, is a way of drafting the first guess at a business model to identify the gaps and key assumptions, and thereby provide an action plan to research the gaps and validate the assumptions.

Market Risk

Watch: Market Risk

This video by Eric Ries, author of The Lean Startup illustrates how his first business failed to manage Market Risk .

It was this experience, together with attending a course delivered by Steve Blank on customer discovery, that led Eric Ries to change his ideas about how to start a business and write The Lean Startup. The Lean Startup approach combines Ries's insights on agile development with Blank's work on Customer Discovery and Osterwalder and Pigneur's Business Model Canvas innovation (Blank, 2013). all of which we will explore further in later chapters.

Any new business must offer more value to their potential customers than existing alternatives. And there must be enough customers who value what the business offers to allow it to survive and grow.

Discovering what customers value, however, is not easy. An essential starting point is to talk to customers, which is why Steve Blank developed his Customer Discovery

approach based on the mantra of “get out of the building” – in other words, leave your office and computer and go and talk to potential customers, a lesson he learned early in his career.

[Watch here.](#) (Links to an external site.)

Design Thinking is also a valuable technique in discovering customer needs, explored in later chapters.

These days social media gives you mass outreach to potential customers, but face to face conversations with a few are still an essential starting point.

Example: Thank You Water

Kimmerley (2015) reports the story of how the Thank You Group validated that a niche interest could be big enough to appeal to a mass market.

Their concept was simple – create a new brand of bottled water that retailed for the same price as existing basic brands, but donated most of the profits to developing countries for projects that would give them access to clean water.

Young and naïve, they didn’t know what they didn’t know, but this made them unafraid to contact people and ask questions. They gained mentors, suppliers and even a distributor who would place a big order. But they still struggled to get acceptance with the mainstream market. Retailers were not convinced that their customers would buy Thank You Water and doubted that the company would be around for the long term.

So the young entrepreneurs turned to social media. They gained a large following of supporters who were enthusiastic about the product. With that backing, they pitched to 7/11 and got their social media followers to flood 7/11’s Facebook page with promises to buy the product if they stocked it. 7/11 agreed to stock Thank You Water.

After that, it was a matter of applying the same pressure to the two major supermarket chains, Coles and Woolworths. It worked. Coles signed up and Woolworths followed soon after. In this way, Thank You validated both its markets: end consumers who would buy the product; and retailers who would actually place the orders with the company.

Execution Risk

Whole books have been written on building a great founding team. Chell’s entrepreneurial skills categories from chapter 1 clearly show that the range of skills involved are unlikely to be found in one person, hence the prevalence of founding teams rather than solo founders, especially for startups that aim for high growth.

Desirable characteristics of founders include:

- Self-awareness (improves interpersonal skills);
- Resilience (to recover from setbacks);
- A bias for action;
- Optimism;
- Ability to tell a great story (helps attract customers, investors and suppliers);
- Experience or access to inside information about the industry;
- Fast learners.

Desirable characteristics of founding teams include:

- Diversity (better chance of providing the range of skills required);
- Shared objectives (what they want from the business);
- Shared values (the purpose of the business and appropriate ways to operate);
- Previous startup experience (including failures).

The example of Thank You group illustrates some of these characteristics: optimism, bias for action, ability to tell a great story, fast learners. Also shared purpose and values around the cause that underpinned the business model. It also shows that lack of previous experience is not essential – fortunately as every entrepreneur needs to start somewhere.

As a business grows, the roles within it become more complex. Early employees or even founders often do not have the ability or inclination to take on these roles, so hiring and onboarding – human resources management issues – become more important. An appreciation of the benefits of diversity combined with a clear understanding of the shared purpose and values of the company help to make better hiring decisions. The message from experienced entrepreneurs is “hire slowly, fire fast”. Poor hiring decisions can undermine the performance and culture of a business.

Financial Risk

Finance for startups often focuses on raising the capital to launch or grow the business. However, financial risk is more about making the best use of capital. In the dot-com boom, easy access to capital did not stop a lot of businesses from failing.

Reducing market risk also reduces financial risk because it increases the probability of raising revenue from sales quickly. This is one of the reasons that investors focus on market risk first.

Bootstrapping is a technique for reducing financial risk by minimising the amount of capital needed to get started. Bootstrapped start-ups try to be financially self-sustaining in order to avoid the need for outside funding. Bootstrapping techniques include:

- Leasing or even bartering for resources rather than owning them;
- Avoiding office rental by working from home or the garage;
- Negotiating to use others' under-used resources at well below market price;

- Focusing on early customers to maximise cash flow.

These techniques are consistent with the Lean Startup approach.

When a business reaches the stage where bootstrapping and gifts or loans from family and friends are not enough, then the entrepreneur must turn to external sources of finance. This comes in two forms: Debt and Equity. Debt finance involves borrowing money that must be repaid-with interest. Equity finance involves selling an ownership share in the business.

The main sources of debt finance are banks, but may also be wealthy individuals or even suppliers or customers.

The main sources of equity finance are professional investors such as Venture Capital firms and Business Angel networks or Business Angels acting alone(wealthy individuals). Corporate venture capital where a company buys a stake in a new venture is also an option in some industries.

The main pros and cons of Debt and Equity finance are summarised below (based on Findlaw, 2019).

Advantages of Debt compared to Equity	Disadvantages of Debt compared to Equity
• Founders retain full ownership; • Repayments are known amounts and can be planned for; • Interest payments are tax-deductible; • Less complex – fewer regulations; • Limited interference in company strategy and operations.	• Must be repaid, starting as soon as the loan is received; • Increases fixed costs; • Some restrictions on raising additional funds; • Must provide collateral in the form of assets or cash flow (such as forward orders) or personal guarantees; • Limited 'more than money' value added. Investors frequently bring expertise, valuable networks and mentoring.

Another key difference between debt and equity is how the arrangement is terminated. Debt is over an agreed term at agreed conditions and can be exited early by repaying the loan ahead of schedule. Equity investors do not receive repayments so they need to be able to sell their share in the business to get a return on their investment. Typically this is through sale of the business, public listing (IPO) or management buyout. Equity investors will expect high growth in order to increase the value of their investment and will push the company towards an exit so they can recoup their investment.

Technology Risk

Technology-based startups are actually a small minority, although they attract a lot of media attention. Digital technology, in particular, is a strong focus for investors, because it can scale rapidly, offering early and lucrative exits if successful.

Pioneering technology clearly carries additional risks because it is uncertain whether the technology will actually work. Technology skills are clearly important to developing a product that works. However, technology risk has to be managed alongside market risk. The patent libraries of all countries are full of inventions that never made it to market because there wasn't enough interest from customers.

Conversely, strong market demand allows technology problems to be overcome because investors have confidence that if a solution can be found, it will sell – at scale and often at a premium price.

The pharmaceutical industry is a good example of low market risk but high technology risk. There is no doubt that a drug that cures cancer, for example, will sell and that patients and governments will pay a premium price for it, so the market risk is small. The technology risk, however, is massive – it involves huge investment over a long period with no guarantee of success. Even when a new drug shows promise, the clinical trials and approval period is lengthy and expensive. The rewards, however, make it worthwhile.

How Does Crowdfunding Fit In?

Crowdfunding is often seen as a means of raising capital in the early stages of a business. In fact, it is equally important in validating the market. Most crowd funders contribute because they see value in the product. The online, social media nature of crowdfunding means that high awareness of a new product can be raised before it is even launched.

A study of all campaigns on Kickstarter (an early leader in crowdfunding platforms) up to 2012 revealed that many campaigns fail to meet their goals, that good videos and regular updates are important to success, as well as the size of the campaigner's existing social network (Mollick, 2014).

In the early days, crowdfunding was based on free donations or donations in return for rewards, usually early access to the product. More recently equity crowdfunding has become available whereby funders get shares in the business in return for their donation.

Example: Who Gives a Crap

A great example of a crowdfunding campaign video is this one from Australian social enterprise Who Gives a Crap .

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- The entrepreneurial process can be characterised as management of opportunity: existence, discovery, evaluation and exploitation.
- Risks facing entrepreneurs can be categorised as:
 - Market risk;
 - Execution risk;
 - Financial risk;
 - Technology risk.
- Market risk is generally regarded as the highest risk – no customers = no business.
- Techniques such as Lean Startup and Design Thinking and Business Model Canvas help to reduce all of these risk categories.
- Bootstrapping can reduce financial risk.
- Crowdfunding can reduce both market and financial risk.

Exercise

Can you identify a product or service that failed to find a market? What could the entrepreneurs / intrapreneurs have done differently?

Answer here.

Further reading

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Chapter 3

3.0. Chapter Overview - Entrepreneurial Strategies

To establish a successful entrepreneurial business, enthusiasm alone is not enough. Entrepreneurial spirit must be matched by strategy, skill and enabling behaviours. The tools and techniques discussed in chapters 7-9 deal with these factors for start-ups. However, as noted by Steve Blank, a start-up is a temporary organisation in search of a sustainable, scalable business model. What happens once the company finds that model and switches to executing it? When it becomes a company rather than a start-up?

This topic explores the factors and strategies that enable established companies to pursue entrepreneurship:

1. Assessing entrepreneurial health within an organisation
 2. Organisational 'ambidexterity' – pursuing opportunities while attending to core business
 3. 'Blue Ocean strategy' - discovering new markets and industries
 4. Strategic focus – identifying a company's long-term strategy and areas of competitive advantage
 5. Entrepreneurial ecosystems – the local environment that surrounds startups
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Strategies

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3.1. Entrepreneurial Health

Most people can readily identify companies that they think of as entrepreneurial – for example, Google, Apple, Amazon, Virgin group. But what is it about these companies that make us see them as such? And is it real or just perception?

In general, if we want to improve our performance in any field there are two things we need to do:

1. Assess our current level of performance;

2. Undertake training, coaching, mentoring – whatever – to improve our performance

Companies are often very interested in the second part but overlook the first. A similar issue applies to corporate culture. Culture change projects abound, but few start with an honest examination of the existing culture.

As we will see, corporate culture is a major component of an entrepreneurial company, so any business that wants to be more entrepreneurial should start by assessing their existing entrepreneurial 'health'.

A group of academics developed an approach for assessing entrepreneurial health in business through surveying its employees (Ireland, Kuratko & Morris, 2006a & 2006b). There are two parts to this assessment:

1. Entrepreneurial Intensity – how much entrepreneurial activity is being undertaken
 1. Frequency of new products and services
 2. Degree of innovativeness of new products and services
 3. Entrepreneurial orientation of management (as discussed in Chapter 1, but at a company rather than individual level)
2. Climate for Corporate Entrepreneurship – the culture that enables or inhibits entrepreneurial behaviour, consisting of various factors including:
 1. Management support for entrepreneurship and innovation
 2. Work discretion – the degree to which employees are free to choose how to do their job and the scope of their job description
 3. Rewards and reinforcement – in general as well as for innovation
 4. Time availability – for strategic thinking or problem solving

An entrepreneurial 'health audit' such as this, gives the company a baseline assessment of its strengths and weaknesses with respect to entrepreneurial capacity.

It is easy to see that the companies identified above demonstrate high levels of Entrepreneurial Intensity as they frequently release new products and services and have created new markets. In the case of Virgin Group, it regularly ventures into markets that are mature but new to the company by structuring its service model differently from competitors.

The internal climate of these companies is harder to assess from the outside, but companies such as Google, 3M and Virgin Group are known for encouraging employees to develop new venture ideas and providing seed funding to get them off the ground.

Organisational 'Ambidexterity'

Academic Julian Birkinshaw has pioneered research on the tension between efficient management of core business and the pursuit of new initiatives. He has labelled the ability to manage this tension 'organizational ambidexterity'. His work recognises that

without entrepreneurship and innovation, companies stagnate and decline, but that taken too far, the disruptive effect of entrepreneurship can undermine and even destroy the company.

In the wake of the collapse of Enron, which rocked the corporate world, he proposed a model for balancing the necessary pursuit of innovation against the potentially destructive consequences (Birkinshaw, 2003).

The model identifies the need to balance four dimensions of company operation:

- Direction:

The company's strategy

- Space:

The degree of freedom provided to business unit managers

- Boundaries:

Legal, regulatory and moral limits

- Support:

Systems and programs provided by the company to support business unit managers in doing their job.

Too much control of any of these dimensions stifles entrepreneurship; too little allows destructive behaviour to emerge unchecked.

This graphic depicts the model. Productive and positive corporate entrepreneurship is achieved by staying within the target zone.

Image: Birkinshaw's Model

This graphic depicts the model. Productive and positive corporate entrepreneurship is achieved by staying within the target zone.

The article explores how Enron failed to manage these dimensions and how, at the time, BP was managing them effectively. The subsequent example of BP's Deepwater Horizon disaster shows that management of this tension cannot be intermittent, but must be a consistent process that senior management monitor.

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3.2. Entrepreneurial Strategy

Entrepreneurial strategy concerns strategies for finding new markets – for existing products and services or unmet needs where a new product or service needs to be developed.

Blue Ocean Strategy

Definition: Blue Ocean Strategy

“Imagine a market universe composed of two sorts of oceans: red oceans and blue oceans. Red oceans represent all the industries in existence today. This is the known market space. Blue oceans denote all the industries not in existence today. This is the unknown market space.”

Kim & Mauborgne, 2005 p106

Red oceans are full of competitors fighting for market share. Blue oceans are the territory of new opportunities defined by unmet needs or unrecognised trends in customer demand.

The word ‘ocean’ suggests a large market and that is indeed the focus of the Blue Ocean Strategy authors. However, for the small business, a ‘blue pond’ may be enough to thrive. The core skill is truly understanding customer needs and what competitors offer.

The core reading article illustrates the process using the US wine industry, which Australian company Casella wines entered very successfully with their Yellowtail label.

There are three stages to the process:

1. Understand the factors on which the industry currently competes and map how the existing offerings address those factors.
2. Ask where the industry underserves and overserves customers;
 1. Reduce: Which factors should be reduced well below industry standard?
 2. Eliminate: Which factors should be eliminated altogether?
 3. Raise: Which factors should be raised well above industry standard?
 4. Create: Which factors should be introduced that industry has never considered?
3. Map a new offering which is better targeted to what customer actually want.

The following figures illustrate how this process identified the opportunity for Yellowtail wine.

Image: Stage 1

Stage 1 showed that the industry was organised around premium and budget wines with no overlap between them.

Image: Stage 2

Stage 2 questioned the traditional industry factors using the Reduce, Eliminate, Raise and Create approach. Casella wine identified that in the US market, many consumers were intimidated by the jargon associated with wine, preferred sweeter, easy-drinking wine with a fun image that portrayed it was for everyone, not just the elites or those who didn't like beer.

The findings are depicted below.

Image: Findings

Using these insights, Casella identified a strategy to enter the US market. Instead of focusing on attracting wine drinkers from their competitors, they focused on attracting those who didn't drink wine. The Yellowtail label was designed on this basis.

The positioning of Yellowtail is shown below.

Image: Positioning

Yellowtail eliminated the features that intimidated wine drinkers and focused on other factors that the industry was ignoring. They set out to make wine-drinking simple and

fun – easy-drinking (fruity sweetness), ease of selection (they offered only one red and one white) and fun and adventure (leveraged the Australian origin). It was a runaway success.

Other examples of Blue Ocean strategy include Cirque du Soleil, which redefined the circus experience by eliminating use of animals (which was starting to deter audiences anyway) and introducing the elements of theatre, such as the music, lighting and hypnotic precision of the artists.

Strategic Focus

Strategic focus is about identifying where your organisation is best placed to compete. This encompasses core skills and knowledge, but also the organisation's purpose and values. For example, it clearly makes no sense for a health food company to start a tobacco farm.

Image: Core Purpose

Jim Collins and Jerry Porras (1994) made a study of highly successful companies and identified that each of them had a clear understanding of their core purpose and values, combined with ambitious goals (which they labelled Big Hairy Audacious Goals or BHAGs) and a vivid description of what achieving those goals would be like. They used the analogy of the Yin and Yang symbol from oriental societies where the purpose and values provide the foundation that grounds the organisation (Yin) and the BHAG and vivid description provide the energy to drive it forward (Yang).

Example: Interface Carpets

In 1994, founder and CEO of Interface Carpets, Ray Anderson, prompted by reports that customers were asking about the environmental impact of their products, read 'The Ecology of Commerce' and recognised the enormous damage his business was doing to the environment.

He decided this could not continue and redefined the company purpose to deliver their products with zero impact on the environment. He set a target, known as Mission Zero, to have zero environmental impact by 2020 – his BHAG. Anderson died in 2011, but the company's mission continues and progress is reported regularly.

Anderson discovered that environmental sustainability was actually positive for his business performance and in his final years became an evangelist for other businesses to follow Interface's lead, in particular through his widely watched [TED talk](#) (Links to an external site.) and (Anderson, 2009).

Core Competitive Advantage

In a later study, published as 'Good to Great', Jim Collins (2001), explored how companies turned around their performance from OK to outstanding and developed a model for identifying strategic focus, which became known as the 'hedgehog concept'. This is based on the old fable that "the fox knows many things but the hedgehog knows one big thing".

Image: The Hedgehog Concept

The Hedgehog Concept consists of understanding three things:

1. What your organisation is passionate about?
2. What you can be best in the world at?
3. What drives your economic engine?

The intersection of these three defines the 'sweet spot' where you have a significant competitive advantage.

This combination makes intuitive sense.

- If you don't truly care about what your company does, you are vulnerable to competitors who care more.
- If you are not 'best in the world' at what you do, you are vulnerable to better competitors
- If you can't make money out of what you do, your company cannot survive.

However, finding this sweet spot requires honest and robust questioning and takes time.

'Best in the world' may sound intimidating, but it is a matter of how you define your world. Just as a small 'blue pond' may be enough for your small new venture to flourish, your 'world' maybe your local high street, or a tiny but global niche market. And 'best' does not have to involve high-tech, but maybe simply a genuine understanding of your customers, that competitors cannot replicate.

Example: Aconex (Thomson, 2017)

Australian company Aconex, founded in 2000 and acquired by Oracle in 2017 is an example of applying the Hedgehog Concept. Co-founders Leigh Jasper and Robert Philpot were school friends who shared entrepreneurial ambitions. In 1998, they leveraged their industry experience (Jasper worked for McKinsey and Philpot for Multiplex) to identify opportunities arising from the emergence of the internet to organise large amounts of complex data across multiple locations. Through his role at Multiplex, Philpot knew that the large-scale construction industry had a need for this. The pair were able to develop a clear understanding of what the industry required and the conviction that they could truly add significant value.

The pair also understood that they needed to be global to succeed because the industry was based around global hot-spots of construction. They genuinely needed to be best in the world to succeed and if they signed these major global customers, financial success would follow.

Watch: Global Leaders Faculty

Mr Justo Ortiz, CEO of the Union Bank of the Philippines, covers how to foster innovation by encouraging risk-taking.

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3.3. Entrepreneurial Ecosystems

Just as a biological ecosystem supports the plants and animals that live and grow in it, the term entrepreneurial ecosystem describes the factors that support the launch and growth of start-ups.

Isenberg (2011) identified six components of an entrepreneurial ecosystem: Policy, Finance, Culture, Supports, Human Capital and Markets, each with sub-components. These are illustrated in the figure below.

Image: Six Components of an Entrepreneurial Ecosystem

Entrepreneurial Ecosystems in Australia

[The Startup Genome project](#) ([Links to an external site.](#)) collects information from startup companies around the world to develop a rating of cities and regions as entrepreneurial

ecosystems. Unsurprisingly, Silicon Valley consistently ranks #1, however, Sydney has ranked as high as 17 and Melbourne is regarded as not far behind.

Sydney is regarded as a hotspot for Fintech and Adtech and Digital Media, while Melbourne ranks well on Adtech, Biotech and Healthcare. Both cities rank well on local and global connectedness indicating that Australian entrepreneurs are well networked and Australia is an attractive location for those with strong talent in technology and science fields.

However, both cities rank poorly on the availability of early-stage financial support and on the depth of experience, with the start-up up community generally being quite small and still young.

In the most advanced entrepreneurial ecosystems, such as Silicon Valley, mature companies support and collaborate with start-ups becoming both contributors to and beneficiaries of the ecosystem.

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- Entrepreneurial strategies for start-ups are different from strategies for established companies. Although elements of start-up strategies (such as Lean Startup) apply to corporates, most corporate strategies do not apply to start-ups.
- Corporate entrepreneurship relies heavily on a supportive corporate culture.
- Corporate entrepreneurship must deal with the tension between the core business and its entrepreneurial initiatives
- Strategic focus is necessary for successful corporate entrepreneurship. There must be an element of discipline in pursuit of opportunities.

- Entrepreneurial ecosystems support or inhibit entrepreneurial activity. These are local in nature – cities rather than nations.

Exercise

Find an example of Blue Ocean Strategy not covered in the learning materials or article and identify how it defined its new market space.

[Answer here.](#)

Further reading

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Chapter 4

4.0. Chapter Overview

An 'innovator' may be loosely considered anyone that comes up with innovation and, as such, could be just about anyone. But how true is this? Are there skills specific to the innovator?

This topic takes a close look at the innovator and examines the difference between creativity, innovation and invention.

1. Creativity and Innovation and Invention
2. Sources of Innovation
3. Innovation capacity

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4.2. Sources of Innovation

Just as entrepreneurs focus on change as a source of new business opportunities, innovators focus on change as a source of new problems and potential solutions.

Peter Drucker (2002) distilled sources of innovation into seven categories.

- The Unexpected;
- The Incongruity;
- Process Needs;
- Changes in Industry or Markets;
- Demographic Shifts;
- Changes in Perception;
- New Knowledge.

When looked at in more detail, each of these sources involves a change of some kind. Change leads to new problems (unmet needs) and new opportunities (different ways to add value through providing solutions). Towards the end of the dot.com boom, researchers surveyed the general public on their interpretation of innovation. The most common answers were 'new ideas' and 'new technologies'. As the list above shows, this is a narrow view, ignoring many other sources of innovation.

The Unexpected

The unexpected refers to an unexpected success, failure or outside event.

Both penicillin and nylon were discovered through unexpected results to experiments.

Incongruity

Incongruity refers to a discrepancy between what is and what should be.

The Apple iPhone may be viewed as an innovation that recognised that people should not need to carry a phone, a personal organiser, an mp3 player and (later) a camera, when one device could meet all those needs

Process Needs

Process Needs refers to the identification of weak points in an organisation's operational processes and correcting or redesigning them.

Amazon recognised that, since they knew the identity, address and payment details of their regular customers, all those customers needed to do to purchase was to click 'buy'. They patented this process as one-click shopping.

Industry or Market Structure Changes

Industry or Market Structure Changes refers to significant shifts either in the industry (consisting of fellow competitors) or the market (consisting of consumers) for a company or its products.

Changes in regulation of the Australian banking industry opened up opportunities for new entrants into the mortgage market.

Demographic Changes

Demographic Changes refer to significant shifts in characteristics of populations, such as age or wealth distribution, countries of origin, education levels, religious affiliation. This drives differences in market needs and market size.

Changes in Perception

Changes in Perception refers to changes in people's attitudes towards certain products, activities and behaviours – psychographics rather than demographics.

Concerns about animal cruelty have made free range eggs a mainstream product and opened up new markets for vegetarian and vegan products.

New Knowledge

New Knowledge refers to new technological, scientific or academic discoveries that spur innovation.

'The internet' is often cited as technology discovery, but the break-through innovation was the technology developed by Tim Berners-Lee in 1990 that turned a fragmented network into the integrated one that we now know as the World Wide Web (WWW Foundation, 2019).

This diversity of sources (and no doubt others have been identified since Drucker's pioneering work), shows that innovators need to be curious about the world around them. It has become a cliché to talk about 'thinking outside the box'. However, what it really means is not being constrained narrow patterns of thought. One way to avoid such constraints is to be open to new ideas and experiences and to spend time with people from different industries and with different ways of thinking.

The work of Edward de Bono, creativity pioneer and developer of the concept of lateral thinking, based his work on techniques to disrupt established patterns of thinking to allow creativity to emerge.

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4.1. Creativity and Innovation and Invention

What is Innovation? And how does it differ from Creativity?

In its simplest form, the term innovation may refer to a new idea, or a more effective device or process. Innovation suggests improvement upon a current manner of doing something by introducing something new to that idea.

Innovation may also be seen as a means of addressing problems - the prospect of identifying problems or consumer needs and constructing a solution to those needs. Implicit within Innovation is the idea of Creativity – thinking about a problem in a different way, playing with a range of possible solutions to find the best one. It is hard to imagine producing innovation in a product or service without creativity.

Creativity may be defined as the capacity to break with currently accepted norms and ways of doing things in order to go in a new direction.

Innovation involves a similar level of departing from the norm, but importantly includes an element of execution—which in this case refers to the capacity to turn an idea into a successful product, service, project or venture.

Innovation is often viewed as synonymous with creativity. While creative individuals may be more likely to produce innovation, it is not necessarily the case. Furthermore, the two concepts are distinct in an important way.

Read: The Links between Creativity, Innovation and Entrepreneurship

Innovation specialist, Dr Anton de Waal has written this discussion paper on the links between Creativity, Innovation and Entrepreneurship, which explores some of the ideas below in more detail, illustrated with practical examples.

[Download here.](#) (Links to an external site.)

Creativity

Watch: Creativity

Famous comedy actor and member of the iconic Monty Python group, John Cleese has spent his working life in the creative industries. Based on a lifetime of experience, he identified five pre-requisites for creative thinking, which he outlines in a video talk. They are based on the idea that creativity comes from playfulness and adults forget how to play as they 'grow up'. Access the transcript of the video below.

[Access here.](#) (Links to an external site.)

- Space – A quiet space where you will be undisturbed.
- Time – A designated amount of time to spend in a quiet space. Cleese recommends about 90 minutes to allow time for your mind to quieten from everyday concerns.
- Time – Spending more time on a problem rather than seizing on the first acceptable solution.
- Confidence – The freedom to play without fear of making a mistake.
- Humour – Laughter relaxes and makes us playful. This both reduces fear of failure and opens us to playing with apparently ridiculous or outrageous ideas.

Cleese is not the only one to emphasise the importance of play. Sensing a loss of creativity in their products and processes, Lego adopted a play-based methodology since trademarked as Lego Serious Play. It involves discussing problems through building models with lego pieces and is becoming a widely adopted consulting tool with a network of accredited facilitators. For an overview of the history and concept, see Lego Serious Play (2019).

Innovation

Innovation requires that creativity be transformed into something that has practical utility. The processes described under Creativity above are clearly aimed at this result but do not necessarily achieve it. Cleese might develop an idea of a comedy sketch or screenplay, but unless he writes it, it is not an innovation. A Lego Serious Play workshop might result in practical, implementable ideas, but unless they are actually implemented, there is no innovation.

An innovation, therefore, requires a tangible manifestation of some sort, something you can touch and use or experience in the case of a service. This means that patents, often regarded as a measure of innovation, are not truly innovation unless they are also developed into products or processes (these can also be patented) that are delivered to the market. In some industries, they may be necessary, but they are certainly not sufficient.

An inventor may be a 'tinkerer' who enjoys the process of solving problems by developing physical products or writing clever code. They may be driven by personal satisfaction rather than the widespread impact of their inventions. An innovator will tend to be more focused on impact, wanting their innovation to be widely adopted.

So if Innovation requires a mechanism to deliver to the market, how does it differ from Entrepreneurship?

The main difference here is scale and sustainability. An Innovation may be small scale – developed for practical use, but only to a limited 'customer' base. The innovator may even attempt to develop a business model to deliver their innovation to market, but fail due to lack of entrepreneurial skills.

In their book 'Winning through innovation', Tushman and O'Reilly (1997) tell a story that illustrates the spectrum from invention through innovation to entrepreneurship. It takes place shortly after World War 1 and involves an invention known as 'continuous aim gunfire', which allows a gunner on a ship to adjust to the movement of the waves. This invention improved accuracy by a stunning 3000%!

- The Inventor: A gunner on a British Navy ship who had adapted his own gun.
- The Small Innovator: The commander of the ship who adapted all the guns on his ship in the same way.
- The Large Scale Innovator/ Would-be Entrepreneur: A US ensign on secondment to the British Navy who visited the ship and saw the potential.

You would think that a 3000% improvement would be an easy sell, but the young ensign found his efforts to take the innovation to 'market' (the US Navy fleet) was blocked by a range of factors including:

- We don't have a problem (we just won a war);
- Not your concern:
 - Too junior;
 - Not part of the department that deals with this.

Like many innovators, the ensign thought that resistance was due to lack of understanding when it was actually much more a matter of cultural and institutional resistance (intrapreneurs take note!).

Eventually, the ensign wrote to the US President, an extremely long shot which, surprisingly, actually paid off. The President mandated implementation of continuous aim gunfire throughout the US Navy Fleet. However, the entrepreneur had destroyed his credibility with the Navy and did not receive any credit within the organization for his ground-breaking innovation.

Watch: Global Leaders Faculty

Mr Simon Spencer, Founder of Edgelabs, explores how to effectively drive innovation.

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Innovation skills

Talent assessment company, XBI Insight analysed their database of leader competency assessment to identify the key differences between innovative and non-innovative leaders. The following five key skills emerged:

1. Managing Risk;
2. Demonstrating curiosity;
3. Leading courageously;
4. Seizing opportunities;
5. Maintaining strategic business perspective.

Managing risk

The keyword here is 'managing'. Innovative leaders were bolder in taking risks, but also more proactive in monitoring for adverse consequences and taking action to minimise risk or mitigate adverse impact where necessary.

This aligns with the Risk-Taking dimension of Entrepreneurial Orientation.

Demonstrating curiosity

Innovative leaders were driven by an underlying curiosity and desire to know more. They actively took the initiative to learn new information and to keep their skills and knowledge current, giving them the competitive edge to lead effectively, and to stimulate new ways of thinking in other workers.

This aligns with the Innovativeness dimension of Entrepreneurial Orientation

Leading courageously

Leaders were not afraid of taking tough decisions, through considering the alternatives, choosing the best option, based on the evidence and timeframe available, and committing to it. They communicated the decision and the reasoning behind it and were prepared to listen to and deal with resistance and conflict.

This has some alignment to the Risk-Taking dimension of Entrepreneurial Orientation as there is reputational risk associated with leading courageously.

Seizing opportunities

Innovative leaders were proactive in identifying and pursuing opportunities and take ownership for success. They anticipated potential obstacles before taking action, but avoid over-analysis. They were also able to change directions quickly to take advantage of new opportunities when they come up.

This aligns with the Proactiveness dimension of Entrepreneurial Orientation

Maintaining strategic business perspective

One of the dangers of pursuing innovation is lack of alignment through pursuing too wide a range and diversity of opportunities without regard for how they fit with the strategic direction and competencies of the organization.

This skill will be observed further in Chapter 6.

The differences between innovative and non-innovative leaders in the survey data are illustrated below.

Image: The Differences Between Innovative and Non-innovative Leaders

Notice that Innovative leaders are less skilled at maintaining order and accuracy. This is consistent with entrepreneurs who lack the patience for systems and processes. However, for a business to perform well at scale, order and accuracy are essential, so leaders with these skills need to be respected and appreciated by innovative leaders (and vice versa).

Watch: Global Leaders Faculty

Baroness Susan Greenfield CBD, Professor of Pharmacology, Oxford University, addresses how we should encourage students to see the world in new ways.

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- Creativity, Invention and Innovation are related but distinct skills;
- Innovation relies on creativity but additionally seeks impact at some degree of the scale;
- Entrepreneurship builds on Innovation to develop business models to take an innovation to market at scale;
- Innovation has a wide variety of sources, seven categories of which were identified by Drucker (2002):
 - The unexpected;
 - Incongruity;
 - Process needs;
 - Change in industry or market;
 - Demographic changes;
 - Changes in customer perception;
 - New knowledge.
- Innovation skills have been identified (Graham-Leviss, 2016) as including:
 - Managing risk;
 - Demonstrating curiosity;
 - Leading courageously;
 - Seizing opportunities;
 - Maintaining strategic focus.

Exercise

Think of how demographics (age distribution, wealth distribution, ethnic origin, education etc) have changed in your country, especially recently. Identify an innovation that has been developed in response to one or more of them and describe the factors that drove this innovation.

[Answer here.](#)

Further reading

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Chapter 5

5.0. Chapter Overview - Exploring Innovation

Innovation is more than inspiration. As a process, innovation can be aided, harnessed and fostered by the use of deliberate strategies, method, mindset and tools.

What form can innovation take? Is there one or many? How is innovation viewed and approached in the business world?

This topic presents the types and meanings of innovation and looks at innovation and the first mover, the importance and role of R&D in gaining competitive advantage and the strategies of diffusion and diversification and the relationship of R&D to other business units such as marketing and manufacturing.

1. Degrees of innovation
2. Types of innovation
3. 'Creative Destruction'
4. Innovation strategies

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5.1. Degrees and Types of Innovation

Innovations have different degrees of innovativeness or originality. There are various views on the number of stages in the spectrum of least to most innovative, but the least innovative is generally referred to as 'incremental' and the most innovative as 'disruptive' or 'radical'.

Incremental innovations build on existing products or services by adding small improvements or variations that are intended to be both familiar to customers, but also

novel and appealing. Fast-moving consumer goods companies are built on high volume, high-frequency incremental innovations – new flavours of food, new shapes and colours of crockery, new styles of toothpaste that focus on whitening or cavities or have candy stripes and so on.

Incremental innovations aim to retain or slightly improve a company's share of an existing market. They offer low risk but also low reward.

Disruptive innovations are ahead of customer demand, offering products or services that customers had not imagined existed, let alone realised they needed or wanted. They create new markets or completely disrupt existing markets, usually destroying the incumbents in the process, hence Schumpeter's term 'creative destruction', discussed later in this chapter.

Watch: The Art of Innovation

In his popular TED talk, the Art of Innovation, Guy Kawasaki talks about innovations that 'jump the curve'. He illustrates this with the example of making ice for household use.

- Ice 1.0 was ice harvesting. Live in a cold place near a lake, wait for winter, cut blocks of ice and haul them to the customers.
- Ice 2.0 was the ice factory. This allowed ice to be made in one location at any time of year and carted to customers in blocks in trucks by the iceman.
- Ice 3.0 was the refrigerator – an ice factory in your own home!

Each iteration of the ice industry destroyed the previous one. Furthermore, no ice harvesters became ice factory owners, and no ice factory owners became refrigerator makers. This highlights the risk of not responding to new technology or new market needs. Kodak notoriously failed to jump the digital photography curve.

Another form of creative destruction is to seize control of an existing market, often known as the 'category killer'. Officeworks (modelled on the US firm Staples) is an example of this. By creating a one-stop-shop for all office supplies, it became the dominant player in a previously fragmented market and destroyed the small independent retailers. The category killer does not generally create new markets but instead changes the industry structure in favour of the single dominant player.

Types of Innovation

It may seem obvious to state that innovation may take many forms. Asking a random group of ten individuals to provide an example of an innovation, one is likely to receive ten different answers, all of which may vary in terms of their level of technology, their potential for business profit, or their overall utility.

In order to fully understand and ultimately study innovation, one must have some semblance of the different types of innovation as well as the meaning of those differences.

Keely et al. (2013) identified three broad categories which organise the study of innovation:

- Innovations in Configuration: Innovation-focused upon the innermost working of an enterprise and its business system.
- Innovations in Offerings: Innovation-focused upon an enterprise's core product or service.
- Innovations in Experience: Innovation-focused upon the customer experience.

Image: Subcategories of "Types of Innovation"

These three broad categories are further divided into significant subcategories as depicted in the graphic above. We look at each in turn, with some examples.

Configuration

Profit Model Innovation

Finding new ways to convert a firm's offerings into revenue. Doing so typically requires developing a nuanced understanding of consumer demand.

Example: Profit Model Innovation

Cemex transformed its concrete business from a commodity to a service business by recognising that a guaranteed window of delivery and flexibility to change due to project hold-ups or weather conditions was as important as the product itself (Gunther McGrath & Macmillan, 2005).

Network Innovation

The capacity to take advantage of another company's technologies, processes or offerings—in essence, any manner of connecting with others to leverage each other's assets.

Example: Network Innovation

Lego restructured its supply chain to improve both efficiency and customer service (Oliver, Samakh & Heckmann, 2007).

Structure Innovation

Innovative organisation of a company's assets in order to enhance value.

Process Innovation

The activities and operations that ultimately produce the product or service a company offers to the public.

Example: Process Innovation

Zara designed its internal operations to be able to deliver the latest fashion trends at affordable prices (SCM Globe, 2019).

Offerings

Product Performance Innovations

The enhancement and improvement of existing products, or the introduction of wholly new products and services. Innovations of this kind can often obtain customer excitement and lead to growth.

Example: Product Performance Innovations

Smartphones were initially a disruptive innovation that changed the market, but are now an incremental innovation, with minor changes to each new version.

Product System Innovations

How products and services are organised to complement and augment one another. Many innovations are not stand-alone, meaning they rely upon some other ancillary support products or services in order to operate.

Example: Product System Innovations

In 1990, the market leaders in word processing and spreadsheets were WordPerfect and Lotus 1-2-3 respectively and Microsoft's Word and Excel struggled to compete. Microsoft bundled Word, Excel and Powerpoint into MS Office, offering businesses considerable discounts and a consistent look and feel that made it easier for employees to learn each product. (Da Costa, 2018).

Experience

Service

The way organisations support and amplify the value of their offerings. Such innovations may enhance the performance or utility of their core offering, or improve the perceived or apparent value of the offering.

Example: Service

The Virgin Group has consistently been able to enter mature markets by offering more friendly and less formal service to customers.

Channel

The way offerings are delivered to customers and users. This may refer to innovations in traditional channels, such as direct store fronts, as well as electronic channels and e-Commerce channels made available via the Internet.

Example: Channel

Amazon and eBay were among the first companies to recognise that the internet offered a radically different way to engage with customers.

Brand

The way an organisation represents its offerings and itself to consumers. The goal of such innovations is to make sure that consumers associate, and remember, a distinctive and desirable image of the organisation.

Example: Brand

Thank You Group's positioning as a social enterprise doing good through purchase of everyday items allowed it to diversify into new markets beyond its original bottled water.

Customer Engagement

The way companies foster compelling interactions with their consumers. The goal is to create a desirable and memorable experience that surrounds the product or service and augments the value.

Example: Customer Engagement

Social media has given rise to new business models where founders (e.g. Jeffree Star) interact directly with their customers through videos that give the impression of having a personal connection.

The range of innovation types clearly demonstrates that innovation is much more than making improvements to a product or service. At its best, it involves challenging all the assumptions about customer needs, industry structure, core skills and activities to develop new ways to deliver value to customers and other beneficiaries.

Watch: The Types of Innovation - Tom James

An animation covering the different types of innovation such as product, process, service, business model, organisational, incremental, radical and disruptive.

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5.2. Creative Destruction

Closely linked to the concept of innovation is 'Creative Destruction', a term coined by economist Joseph Schumpeter.

The term has a broad economic interpretation, but with respect to innovation, creative destruction generally refers to radical innovation within any given market in which innovation creates new market structures that destroy old ones.

Creative destruction links closely to the entrepreneurial concept of focusing on customer needs. The market incumbents destroyed by radical innovations usually suffer from complacency about their understanding of customers and the degree of market power they possess.

There are numerous examples of creative destruction, some of which are listed here.

Example: Digital Photography

Until the early 1990s photography meant buying a roll of film, which limited the number of photos that could be taken, and when it was finished, sending it off by mail or dropping it into a store to be developed into photos. Digital photography changed that and eventually led to photos built into mobile phones, which in turn has disrupted the camera manufacturing industry.

Example: Video Streaming

For decades, Blockbuster Video rentals dominated the home video rental market in the US. Its innovation was to amass an extraordinarily deep network of brick and mortar locations throughout the country with a greater variety and numbers of videos, along with greater access to recent releases. Prior to Blockbuster's rise, most communities were served by local independent video rental businesses.

Netflix entered the video rental market as a mail order service but was quick to recognise the opportunity for faster, cheaper, more convenient delivery of content to customers through digital media. Blockbuster missed this opportunity and went out of business. Netflix not only dominated streaming but continues to innovate through developing original content.

Example: Mobile Phones

In the year 2000 it was still fairly easy to find Australians who did not yet own a mobile phone and every home had a landline phone. Now many homes have as many mobile phones as occupants and increasingly are getting rid of their landlines. The smartphone further disrupted the mobile phone market by displacing personal organisers (who remembers the Palm Pilot?) and mp3 players, edging out the likes of Nokia and Ericsson in favour of Apple and Samsung.

Developing countries are bypassing landline infrastructure altogether and moving straight to mobile technology. In rural Africa, you will often find little or no electricity, but numerous mobile phones (powered by solar chargers).

Watch: Global Leaders Faculty

Baroness Susan Greenfield CBD, Professor of Pharmacology, Oxford University, discusses how important the working environment is for innovation.

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5.3. Innovation Strategies

Peter Drucker (1985), widely considered the father of management education, conceived of four distinct entrepreneurial strategies, which despite their label of 'entrepreneurship' relate more closely to innovation:

- Pure innovation— Being a first-mover through innovation, new products, being first to market.
- Close follower— Closely following the pure innovators by creating close imitations of their products while letting them do the research and development.
- Changing values and characteristics— Creating new features for a product that fundamentally change its value proposition.
- Niche markets— Targeting customers whose needs are not being met by competition and tailor business to them.

Strategy	Examples
Pure Innovator	These are the technology innovators that specialise in leading-edge technology. Intel dominated the computer processor market by continually creating the fastest. James Dyson, a rare example of inventor, innovator and entrepreneur combining radical new designs for first vacuum cleaners and subsequently hand dryers and
Close Follower	The first commercial electronic spreadsheet software was VisiCalc, developed by VisiCorp. But the developers failed to respond to the new IBM PC platform and were quickly replaced by Lotus 1-2-3, which offered better use of the improved processing power and more features. VisiCalc as the market leader. It retained that position until overtaken by Excel when Microsoft launched its Office suite.
Changing Values and Characteristics	This is aligned to understanding customer needs and does not involve innovation in packaging them to add better value to customers. The U.S. Post Office Department made it easier to ship packages by providing various sizes for priority shipping and charging a flat rate price according to box size by weight. The value proposition was summarised by the slogan, "If it fits, it ships." increased sales by changing how their service was viewed by those that used it. It has been adopted by "Australia Post" too.
Niche Markets	These are fertile territory for entrepreneurs and small business innovators, as they are ignored by the big players. The innovation is in identifying and responding to the needs of the niche market. Australian rideshare company Shebah targets a niche market among the many rideshare services: women and kids. Shebah has only female drivers and all drivers have Working With Children checks. Not only does this give them an edge with women, but it also makes them the only rideshare provider that can transport unaccompanied minors.

Watch: Global Leaders Faculty

Prof. Robin Batterham AO, Chief Scientist of Australia (1999 - 2005), discusses innovation in large organisations.

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- Innovation varies in degree from the least innovative – incremental – to the most innovative – disruptive or radical.
- Keeley et al. identified 3 categories of innovation: configuration (4 sub-types), offerings (2 sub-types), and experience (4 sub-types).
- Creative destruction is a form of innovation that destroys existing industries and replaces them with new ones.
- The innovations that bring about creative destruction are usually generated by new entrants rather than industry incumbents.
- Innovation strategies include pure innovation; close followers; changing values and characteristics; and niche markets.

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Chapter 6

6.0. Chapter Overview - Managing Innovation Risk

Innovation is important for business performance and survival, but it is also not without risk.

While start-ups may be based on a single innovation, established businesses usually have several innovation projects underway at any time. Finding the right balance in terms of number and degree of innovations is the key to sustained strong performance. The developers of the Entrepreneurial Health audit discussed in Chapter 3 noted that the highest survival risk for organisations was too little or too much innovation – the classic U-shaped curve.

Historically Australian companies have been mediocre performers in investing in innovation, as measured by Business Expenditure on Research and Development (BERD). According to the OECD 2018 rankings (UNESCO, 2018), Australia (just) makes the top 15 countries, but has the lowest percentage contribution by the business sector, as opposed to government expenditure.

In this chapter, we will discuss aspects of encouraging innovation while managing risk.

1. Diffusion of Innovation
 2. The Innovator's Dilemma
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6.1. Diffusion of Innovation

Everett Rogers (2003) developed one of the most influential models of diffusion of innovations – that is how they enter the market.

A useful summary is provided by Robinson (2009). It outlines three main insights:

1. The qualities make an innovation spread successfully;
2. The importance of peer-to-peer networks;
3. The different segments of consumers of innovations and their specific needs.

By understanding how these factors operate, a business can increase the probability of its innovations successfully reaching a mainstream market, where the highest rewards lie.

Watch: Global Leaders Faculty

Mr Francis Gurry, Director General of the World Intellectual Property Organization (WIPO), explores how the government can help create an innovative culture.

What qualities make innovation spread?

Five qualities were identified:

1. Relative advantage: the degree to which the innovation is perceived as better than its alternatives.
2. Compatibility with existing values and practices: how well it fits with how potential users already think and behave.
3. Simplicity and ease of use: minimal learning curve to adopt.
4. Trialability: the ability to try out before making a commitment.
5. Observable results: visible results lower uncertainty and facilitate recommendations.

Peer-to-peer conversations

Adoption of innovation requires involves elements of risk and uncertainty, so consumers have to develop sufficient trust to take this risk. Recommendations from peers are highly trusted. In business-to-consumer markets, social media can accelerate peer-to-peer conversations, and key influencers also function as 'peers'.

In business-to-business markets, trade fairs and industry seminars can be used to encourage peer-to-peer conversations by gathering businesses with similar needs in one place.

Image: Innovation User Segments

The best-known part of Everett Rogers theory, this is depicted in the graphic below and is probably familiar to many of you. The percentages attached to each segment should be regarded as indicative only.

Segments	Strategies
1. Innovators: Want to be the first to try the innovation, adventurous and interested in new ideas.	Little needs to be done to reach this population.
2. Early Adopters: Opinion leaders, they enjoy leadership roles and embrace change opportunities.	How-to manuals and information on implementation.
3. Early Majority: Rarely leaders, but they adopt new ideas before the average person. Typically need to see evidence before adoption.	Success stories and evidence of innovation's effectiveness.
4. Late Majority: Will only adopt an innovation after it has been tried by the majority.	Information on how many others have tried the innovation and how many adopted it successfully.
5. Laggards: Very conservative and resistant to change, they are the hardest group to bring on board.	Statistics, fear of becoming an outlier.

Image: Crossing the Chasm

In 1991, organisational theorist Geoffrey Moore published the first edition of his influential book 'Crossing the Chasm', which he has since revised and updated (Moore, 2014).

His theory builds on Everett Rogers diffusion of innovations model, but notes that for disruptive innovations, there is a big gap between the early adopters and the early mainstream – the 'chasm'.

Image source: <https://blog.prototypr.io/design-for-crossing-the-chasm-1c4d4c68a3f1>

The chasm model recognises that early adopters are not a good reference group for convincing the early majority when the innovation involved is disruptive. The early adopters are adventurous and excited by opportunities, whereas the early majority are pragmatists, focused on solving problems and minimising risk. The more disruptive an innovation is, the harder it is to cross the chasm.

Moore's recommendation is to find potential early majority customers who are experiencing significant pain, to the extent that they are prepared to take more risk to find a solution. Furthermore, they want a complete solution, not just a product (that might potentially give them new problems). While this involves an investment by the technology company to tailor a solution, once successful it gives them the valuable and elusive peer reference in the early majority market, which can be leveraged to attract more early majority customers.

Watch: Crossing the Chasm

The ideas are summarised in Shelley (2016) and you can hear Moore talk here about how his theory has evolved up to the most recent edition of his book (Moore, 2014).

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6.2. The Innovator's Dilemma

As seen from the previous section, disruptive innovations carry higher market risk because the mainstream market segments are harder to convince that the innovation will add value for them. But we also know that insufficient innovation is risky for a company. Clayton Christensen explored this problem in his 1997 publication: 'The Innovator's Dilemma', since revised (Christensen, 2016)

The essence of the dilemma is that established companies need to focus on keeping their customers' existing needs satisfied. Christensen refers to these as 'sustaining innovations'. They are based on improving the features of a product or service to a market that is not too price-sensitive. Taking a risk on future needs may seem less important. Furthermore, as the diffusion of innovation models show, the rewards from the early market are small and the risk of not penetrating further into the mainstream market are high. So why bother?

Start-ups, however, are not constrained by the needs of existing customers, and the limited rewards from the early market are enough to sustain a small business. Since they don't present much of a threat to existing markets, they are often ignored by large competitors. But if they succeed in breaking through and creating a new mainstream market, then it is too late for incumbents to catch up and they can find themselves out of business.

Watch: Innovator's Dilemma

The ideas of innovator's dilemma are summarised in this short video.

A crucial element of Christensen's distinction between sustaining and disruptive innovations is that sustaining innovations do not create new markets. Customers who buy the innovation no longer buy the product or service it replaced. Disruptive innovations focus on the lower end of the market, turning non-consumers into consumers and thereby creating new markets. Because of this definition, he argues that Uber is not a disruptive innovation and that the iPhone is, but not because it was a better phone but because it disrupted the PC market as a way of accessing the internet (Christensen, Raynor and McDonald, 2015).

Watch: Global Leaders Faculty

Whose job is it to be innovative within a company? Prof. Robin Batterham AO, Chief Scientist of Australia (1999 - 2005) answers this question.

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One way of managing innovation risk in an established company is to think of it as an investment portfolio, just like an investor has a portfolio of shares and bonds. A balanced portfolio varies from low risk, low reward investments (term deposits, bonds) to high risk, high reward investments (IPOs or very volatile stocks).

The core reading article (Day, 2007) explains this approach and also offers a method for assessing whether individual innovations are a good fit for the company.

The Risk Matrix

Thinking of innovation as a portfolio of investments means that risk should be assessed at the portfolio level rather than at the level of each innovation initiative.

The risk matrix provides a way of positioning each innovation according to product risk (the degree to which the innovation uses technology new to the company) and market risk (the degree to which the target market is new to the company).

The grid is presented below. The scales are based on survey questions to assess the product and market risk of each innovation, based on a scale of 0 to 5 (7 questions for product risk; 6 for market risk).

Image: Risk Matrix

The curved bands show the probability of failure – as you would expect, this increases with product and market risk. Notice that product and market risk increase at different rates. Entering unfamiliar markets is riskier than using unfamiliar technology. This is not surprising as markets are driven by human preferences, which are more difficult and more time-consuming to assess and therefore involve greater uncertainty.

Each innovation project undertaken by the company is assessed using the product and market risk questionnaires and plotted on the matrix as a circle, the diameter of which

relates to the expected reward. This allows the company to see at a glance the spread of innovation projects across the whole business or business unit.

A concentration of dots in the bottom left indicates a dangerously low level of innovation. Similarly, a concentration in the upper right indicates a dangerously high level of risk. Ideally, there should be innovations across the range of the matrix and those in the higher risk bands should be larger dots, indicating that the potential reward justifies the risk.

The Real, Win, Worth Doing Evaluation Model

The risk matrix is useful for assessing the innovation risk exposure across a company, other criteria also need to be taken into account when considering a new innovation project. Opportunity evaluation criteria for an established firm are slightly different from those for a start-up, but the framework below is also useful for young businesses with an established customer base.

It is depicted in the graphic below

Image: The Real, Win, Worth Doing Evaluation Model

The last two components of the question framework are worth digging into a little deeper.

‘Can we win?’ distinguishes between having a competitive product and having a competitive company. This is an important distinction and often overlooked. Having a clearly superior product by no means guarantees market success. The superior financial and brand recognition of competitors means that they can often shut your product out.

‘Is it worth doing?’ distinguishes between financial reward and strategic fit. Often intrapreneurs fail to make the case to top management that their initiative is worth pursuing because they do not see the overall strategy or top management preoccupations in the same way. Looking back to Chapter 3, Jim Collins ‘Hedgehog Concept’ is a way of defining the growth strategy clearly and with the support of top management, making it easier to assess what fits and what doesn’t.

Furthermore, strategic sense can – and should – also include company purpose and values. Initiatives that potentially compromise company ethos can be dangerous to public perception and internal culture. This is one of the factors that limit the effectiveness of many mergers and acquisitions.

As a simple example, a private school in Victoria used the Real, Win, Worth Doing framework to assess various ideas to add value to their students, parents and staff.

While they decided that offering pre-made dinners to parents picking up their children from after school care made strategic sense, they decided against extending this to offering the same meals to children at after school care. Why? Because a core value of the school was to promote family time. A pre-made dinner that the parents could heat and eat with their children supported this. A meal at after school care, meaning that parents and children would eat separately, did not.

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- Market response to innovation varies significantly from innovators and early adopters to the mainstream.
- The more disruptive a technology is, the harder it usually is to reach a mainstream market, but factors that aid diffusion are:
 - Relative advantage;
 - Compatibility with existing values and practices;
 - Simplicity and ease of use;
 - Trialability;
 - Observable results.
- For disruptive technologies, there is a 'chasm' between the early adopters and the mainstream.
- Established businesses face a dilemma between too little and too much innovation. Both are potentially threatening to the survival of the business.
- Innovation risk can be managed by mapping the portfolio of innovations across a business or business unit.
- Strategic questions: Is it real? Can we win? Is it worth doing? guide the evaluation of any proposed new innovation.

Further reading

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Chapter 7

7.0. Chapter Overview - Design Thinking

In recent years, Design Thinking has gained prominence, not only in areas that actually design physical products but also in process design and solving problems in general. Design Thinking is of interest to both entrepreneurs and innovators as a way to get a better understanding of what consumers need, and a way to develop more effective solutions.

Although the term 'design thinking' is relatively new, the ideas behind it have been around for many years. A core principle of design thinking is that it is human-centred – the purpose of the design process is to solve problems for human beings.

1. History of Design Thinking
2. Design Thinking Process
3. Design Thinking in Practice

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7.1. History of Design Thinking

Szczepanska (2017) offers an overview of the development of design thinking and the key people who contributed to it. The ideas below are a summary from this.

Prior to the second half of the 20th century, there was no real profession of design. There were artists and visual creatives of all kinds, but the term designer was rarely used. The term design was more associated with engineers and technologists developing physical products to solve specific problems. The digital world, of course, did

not exist then! Designers, such as they existed, were technical experts applying their technical skills to solving well-defined problems in the best way. It was an elitist world.

1960s Schools of Thought

- Design Science:

Pioneered by Buckminster Fuller, inventor and holistic thinker (famous for the invention of the geodesic dome). Design Science was a breakthrough in that it did not limit the range of expertise and it was aimed at systemic problems rather than specific products. Nevertheless, it was still elite.

- Cooperative Design:

Developed in Scandinavia, this is closer to today's concept of design thinking. The Scandinavian model was based on co-design with designers functioning as facilitators rather than experts. End-users, production workers and anyone with an interest in solving the problem was invited to participate. Note: IKEA was developing the concepts that made it a global brand around this time.

Other key actors during this time included Herbert Simon, awarded the Nobel Prize for his work on artificial intelligence, and Victor Papanek who developed principles of social responsibility into design.

Wicked Problems

Rittel and Webber (1973) coined the term 'wicked problems' which (to quote Rittel) are a: "class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing."

Read a useful overview of wicked problems below:

[Read here.](#) (Links to an external site.)

Characteristics of wicked problems include:

- Differing formulations (poverty in Australia is different from poverty in rural India);
- Each wicked problem is unique meaning any solution must also be unique;
- Multiple explanations, none of which completely explain the problem;
- Every wicked problem is a symptom of another problem;
- 'Solutions' to wicked problems change the problem space and carry a high risk of introducing new problems.

Design thinking has been seen as an approach suited to solving wicked problems because its human-centred philosophy positions are well-suited to social problems and its iterative nature adapts well to ill-defined problems.

1980s Psychological Approaches

Nigel Cross, a researcher in human-computer interaction, explicitly recognised the universality of design – that every human acts as a designer within their own life. This is important in understanding that design is a human rather than purely technical discipline.

Organisational learning expert Donald Schön drew attention to the need to recognise and reflect on confusion and ambiguity and the mindset that governs our response to it. This is important for allowing the designer to challenge both their own and others' assumptions, and to recognise biases. In effect, to address the problem often summarised as “if the only tool you have is a hammer, every problem looks like a nail”.

1990s and Beyond

As global connectedness increases and ideas spread more rapidly, more players enter the field. The influence of US firm IDEO, both as a highly successful practitioner of design thinking and an educator in its principles are acknowledged here.

As Tim Brown of IDEO points out in his HBR article and his TED talk, despite the history of design thinking described above, ‘design’ in practice had become the art of making products developed by engineers look prettier or wrapping them in a ‘shell’ that made them easier to use. The human-centred aspect had been moved to the end of the development process rather than being the starting point.

As economies in the developing world became more driven by services than making physical products, and by digital products developers were more removed from end users, a human-centred approach had clear advantages over more technical approaches. The term ‘design thinking’ took off in the 21st century and is now widely recognised by business practitioners and taught in many business education programs.

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7.2. Design Thinking Process

How Design Thinking Works?

The history of Design Thinking outlined in the previous section makes it clear that Design Thinking is a mindset. This means that for people trying to adopt Design Thinking, there is a need to be prepared to challenge their habitual ways of approaching problems.

Four Principles

Meiner and Leifel (2011) identified four principles that underlie design thinking:

1. The Human Rule:

Design thinking is social in nature and requires interaction/collaboration.

2. The Ambiguity Rule:

Ambiguity is to be embraced and preserved in problem-solving.

3. The Re-design Rule:

All design entails 're-design', which suggests an iterative process.

4. The Tangibility Rule:

Ideas should be made tangible in order to facilitate communication and social problem-solving process.

Various models applying this philosophy have evolved, but the dominant ones today are the 5- or 6-stage model taught at the Stanford d-School and Hasso-Plattner-Institute and IDEO's 3-stage model.

Hasso-Plattner 5-Stage Model

The 5-stage model is explained well in this blog from interact-design-org.

[Read here.](#) (Links to an external site.)

As the graphic below shows, the stages form an iterative rather than linear process. There are iterations both within and between stages.

Image: Hasso-Plattner 5-Stage Model

The 6-stage version of this process expands the 'Empathise' stage into 'Understand' and 'Observe'.

The table below summarises the stages

Stage	Process Description
Empathise	Gain an empathetic understanding of how the problem is experienced by those it affects, how they think, feel and behave. Observation offers significant insights as thoughts are often subconscious and observed behaviour can help to bring them to the surface. Important: This stage involves human contact, not secondary research
Define	Pulls together information gained from the empathise stage to define core problems and a problem statement from the perspective of those experiencing the problem. If necessary, return to the Empathise stage to gather more information. Important: Don't define the problem from the point of view of your business or your idea
Ideate	Generate possible solutions, with an initial emphasis on quantity rather than quality, to fill the 'idea space' as widely as possible (divergence). Then use ideation techniques to explore and test your ideas to reduce the list to those that best address the problem (convergence). If the process reveals a lack of clarity about the problem, go back to Define.
Prototype	Develop simple, inexpensive versions of the solution that can be tested on users (called 'minimum viable product' in Lean Startup). Prototypes help reveal the technical constraints of solutions and to confirm that you have user needs and accurately defined the problems from their perspective. If not, go back to Define.
Test	Based on everything learned so far, create a working solution. At this stage, it is expected that new insights will continue to emerge, resulting in changes to the design. Any major misalignment that emerges, however, indicate the need to return to earlier stages.

IDEO 3-Stage Model

The IDEO model can be summed up as:

- Inspiration – Empathise and Design stages.
- Ideation – Ideate stage.
- Implementation – Prototype and Test.

Image: IDEO 3-Stage Model

As the graphic above shows, the process is more complex, with sub-stages within it.

Design thinking takes time and can be frustrating. IDEO visualises the journey of a project like this:

Hope gives way to frustration as the design team grapples with understanding and defining the problem and identifying solutions, but when insight is reached, confidence builds rapidly.

Image: Double-Diamond Model

Design thinking is often described as a 'kite' model because it involves first divergence and then convergence. The double diamond model, developed by the Design Council and also known as the 4D model, expands this into two stages.

The first diamond is about designing the right thing – understanding the problem you are trying to solve. The second diamond is about designing things right – a solution that actually works.

A full design thinking process takes, but insights can be gained very quickly through talking with and observing end users – just as Steve Blank (chapter 1) emphasises the importance of 'getting out of the building' to talk to prospective customers. This is important for entrepreneurs and innovators, to avoid building solutions based on a poor understanding of customers' needs.

Watch: Global Leaders Faculty

What is 'Design Thinking'? Mr Simon Spencer, Founder of EdgeLabs, answers this question.

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7.3. Design Thinking in Practice

Although the concepts of design thinking are not complex, putting it into practice is not so simple, especially for those from technical backgrounds where the tendency is to want to get on with building the solution.

Watch: Product Development Process - Observation

In this video, IDEO co-founder, David Kelley highlights the importance of observation to understanding problems.

Similarly, Clayton Christensen famous milkshake marketing story demonstrates how observing what customers actually do is much more powerful than marketing analysis and focus groups (Nobel, 2011) [has an embedded video of Christensen telling the story].

Tim Brown's widely read article (Brown, 2008) and widely watched TED talk focuses on how design thinking is much more than making products look appealing. Watch the talk below:

[Watch here.](#) (Links to an external site.)

He provides detailed examples of how design thinking has revolutionised business operations and opened up new markets:

- Kaiser Permanente changed the way handover was done between shifts by nurses and saved time while improving service and patient safety.
- Design thinking helped bicycle manufacturers identify an entirely new market for lapsed cyclists.

- Aravind eye care took a holistic approach to eradicating needless blindness among India's rural poor, which eventually led to starting a manufacturing plant and becoming the biggest manufacturer of intraocular lenses in the country.

These breakthroughs were only possible through taking a holistic approach and understanding the needs of the people for whom they were designing.

Accounts by those who have learned the design thinking process help to understand the journey. Amir Ferhatbegovic (2018) provides a well-researched blog about the process of studying and applying design thinking, which also gives an excellent overview of the theory.

Katja Tschimmel's conference paper (2012) discusses how innovators can adopt design thinking, combining theory with practical tools for putting the design thinking process into practice.

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7.4. Chapter Summary

- Design thinking is a problem-solving approach that focuses upon desired future states and results rather than precise problem definition.
- It is especially useful for tackling particularly challenging problems, such as broad economic, political or environmental problems.
- There are four primary rules to design thinking:
 1. The Human Rule;
 2. The Ambiguity Rule;
 3. The Re-Design Rule;
 4. The Tangibility Rule.

- Design thinking involves five stages: empathise, define, ideate, prototype, test.
- These five stages can be grouped into three: Inspiration, Ideation, Implementation;
- Design thinking involves divergence and convergence – to create choices, then make choices.
- It is an iterative process, not a linear one. It is frequently necessary to go back to a previous stage based on new insights.
- Design thinking relies on human interaction and visual, tangible presentation of solutions – it cannot be done from an office desk.
- Design thinking is holistic, focusing on the systems within which solutions must operate, resulting in more holistic solutions, combining products and services.
- Design thinking is well suited to social entrepreneurship because it involves all stakeholders.

Exercise

Identify and report on a situation, from your own experience or from research, where design thinking was applied to develop a superior solution. Conversely, you could identify a situation where design thinking was not applied but would have been beneficial.

Avoid examples from the prescribed reading materials.

Answer here.

Further reading

- Ferhatbegovic, A. (2018), 'Applied theory of design thinking' [blog] <https://blog.usejournal.com/applied-theory-of-design-thinking-c3509c7c1dce> (Links to an external site.)
- Nobel, C. (2011), 'Clay Christensen's Milkshake Marketing', *Harvard Business School Working Knowledge*, Feb 2011, <https://hbswk.hbs.edu/item/clay-christensens-milkshake-marketing> (Links to an external site.)
- Szczepanska, J. (2017), Design thinking origin story plus some of the people who made it all happen, *com*, <https://medium.com/@szczpanks/design-thinking-where-it-came-from-and-the-type-of-people-who-made-it-all-happen-dc3a05411e53> (Links to an external site.)

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Chapter 8

8.0. Chapter Overview - Business Model Canvas

Quote

“A start-up is a temporary organisation in search of a sustainable, scalable business model.”

Steve Blank

What is a business model and how is it different from a business plan? What is the Business Model Canvas and why is it useful?

This topic clarifies the concept of business modelling and introduces the concept of the Canvas as a tool for planning and innovation development and steps through the process of completing the nine areas of the Canvas.

1. Business models versus business plans
2. The Business Model Canvas
3. The Lean Canvas
4. Using the Canvases

Business models and Business plans

Although you may hear arguments that the business plan is obsolete and has been replaced by the business model, the fact is that both still have their place.

The Business Model

A business model represents how the business operates. As noted by Magretta (2002), business modelling first took off when use of spreadsheets became widespread. The flexibility of spreadsheets allowed entrepreneurs and businesses to build a fairly sophisticated financial model of the business, which could rapidly be adjusted as circumstances changed or to explore different scenarios.

The spreadsheet also highlights that models are driven by assumptions. Your spreadsheet model is only as accurate as the values you plug into it. If you have based your financial success on a price that customers won't pay, or sales volumes that the market won't support; if you have underestimated your costs, then your model might look great, but your business is unlikely to thrive.

As Magretta (2002) and others (e.g. DaSilva & Trkman, 2014) have noted, the fact that flawed business models were used to raise millions of dollars for businesses that failed, does not mean that business modelling as a concept is flawed. Garbage in = garbage out.

A good business model should document your assumptions and, in the case of spreadsheets, model the effects of those assumptions *while recognising that they are assumptions*.

For an established business, those assumptions are more likely to be accurate, because they are based on evidence. For a start-up, they will mostly be inaccurate, which is why the emphasis is on validation. Established businesses are still vulnerable to false assumptions, however – in particular the assumption that past history will accurately predict the future.

Magretta (2002) asserts that a business model is not the same as a strategy. Competitors within the same industry may adopt very similar business models, but have different strategies – in particular regarding the customer segments they target.

The Business Plan

One way to think of a business plan is as a snapshot of the business model at two points in time - now and in a desired future – with a plan for getting from now to then.

A business plan contains specified actions, quantities, timelines and milestones. A business model does not.

If you want to get a bank loan, you will need a business plan, not a model. If you are looking for equity capital, investors will be interested in your business model, but they will still want to see a plan. What are you going to do with the money you raise and how will it offer a return to your lenders or investors?

Again, assumptions are important. If your plan is not believable, it will not be successful in raising capital. Plans to guide internal projects must also be based on credible assumptions.

If asked to produce a business plan for an external stakeholder, pay attention to the format they ask for. Just like a resume that is not in the requested format, a business plan will be discarded without reading if it isn't structured as requested – demand for capital always exceeds supply.

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8.1. The Business Model Canvas

The Business Model Canvas (BMC) was developed from research on a business model design by Alexander Osterwalder as his PhD thesis, supervised by Yves Pigneur. Together they published Business Model Generation (Osterwalder & Pigneur, 2010), which has since become a bible for entrepreneurs and business innovators alike.

The BMC allows an entire business model to be represented on a single page, showing how the components fit together. This makes it easy for teams to see and debate the model without flipping through multiple pages. It is also easier to understand for those who are visual, conceptual thinkers rather than verbal, detail-oriented thinkers.

Image: Business Model Canvas

The layout of the BMC is shown above. There are also editable templates available, including from originators of the BMC.

[Download here.](#) (Links to an external site.)

The BMC consists of 9 elements. How they fit together is simply explained in this short video, which is also embedded in this SlideShare presentation posted by Osterwalder “Burn Your Business Plan”. The SlideShare emphasises that your first draft business model is basically guesswork, based on hypotheses (assumptions) that need to be validated.

[Read here.](#) (Links to an external site.)

Example: Business Model Canvas

Examples are always valuable in understanding a new concept. In this video, Osterwalder explains the Business Model Canvas, illustrating each component with specific business examples.

As you watch these videos, you will notice that although we are used to reading from left to right, the BMC always gets started on the right-hand side. This is because a viable business model always depends on attracting customers. Until you have validated the market need and that your proposed solution adds value, there is no point in exploring activities, resources and partners.

As well as modelling proposed new businesses, the BMC can also be used to analyse and document the model behind an existing business. It can be useful to practice this to become familiar with the concepts of the BMC.

Example: LinkedIn Business Model Canvas

For example, the image above shows the business model behind LinkedIn. The colour coding is a useful way of highlighting which value propositions, relationships, channels and revenue streams apply to each customer segment.

It can be hard to identify key partners, resources and activities for an independent start-up, which is one of the reasons the Lean Canvas was developed (next section). However, for a new venture in an existing business, these already exist and it is valuable to document which of these can support the new venture.

Important Note: The BMC documents the operational business model. It does not include start-up costs and capital raising. These should be left out of the Revenue Streams and Cost Structure.

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8.2. The Lean Canvas

The Lean Canvas was adapted from the BMC by author, blogger and serial entrepreneur Ash Maurya. While an admirer of the BMC, he felt it placed too much emphasis on some factors and not enough on others.

Read: Why Lean Canvas vs Business Model Canvas?

In this article, Ash himself explains how he recognised a need for this version of the canvas and how it can be utilised effectively.

[Read here.](#) (Links to an external site.)

Image: Lean Canvas Template

The Lean Canvas template is shown above.

Source: <https://leanstack.com/leancanvas>

The main difference between the BMC and the Lean Canvas is the unpacking of the Value Proposition into three components:

1. Problem
2. Solution
3. Value Proposition

This reflects the entrepreneur's need to truly understand the customers' problems before designing solutions, in line with Maurya's mantra "Love the problem, not your solution".

The Lean Canvas also has a stronger focus on competitive advantage and measures of progress.

While the BMC always starts with the right-hand side, the sequence of the Lean Canvas is less obvious. As we have emphasised in this subject, understanding the problem is central to getting a correct solution and a viable business model. This clearly involves identifying customer segments, but Customers are on the far right and Problem on the far left. Ash Maurya has published a helpful blog on this topic. Follow the link below to read the blog.

[Read here.](#) (Links to an external site.)

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8.3. Using the Canvases

Business model analysis

As mentioned earlier, the Business Model Canvas can be used as an analytical tool as well as a way of developing a model for a new venture. The same applies to Lean Canvas in understanding the early stages of a start-up. What was the initial problem? Value proposition? Early adopter? Unfair advantage? Etc.

For the Business Model Canvas, in particular, there are many examples of completed Canvases for well-known businesses available online. These are useful in understanding how the canvas works, but treat them as opinion only!

New venture business model development

At what point in exploring your start-up or business innovation idea should you use a Canvas? The consensus is (Osterwalder, Maurya and Steve Blank all agree) that you draft a Canvas as soon as you identify a potential way to take the innovation to market.

Of all the entrepreneurial tools and techniques discussed in this subject, the Canvas is the most iterative. It is a living document, representing your latest hypotheses about the business model. Every time you validate or modify a hypothesis, your canvas should be updated, just as you would update a financial model spreadsheet.

The key is to recognise that your first draft of the BMC or Lean Canvas is mostly guesswork and to identify the most significant assumptions or guesses you have made. These are the areas you need to test first, so that you do not waste time, money and energy on a business with a flawed model.

There will always be uncertainty in entrepreneurship, so your model will always contain assumptions. However, there is no point in living with assumptions when they can be validated with some simple and inexpensive research and experimentation.

Watch: What is The Lean Startup? - LaunchSpark Video

This video describes the Lean Startup philosophy, what a minimum viable product is, how the build-measure-learn feedback loop works, and the advantages of the model.

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8.4. Chapter Summary

- A business model evolves and changes over time. A financial business model can evaluate various scenarios
- A business plan is anchored at a point in time and is most valuable in gaining financial support.

- The Business Model Canvas consists of 9 elements and captures a company's business model on a single page.
- The Lean Canvas modifies the BMC keeping the same layout, but modifying the contents of some sections.
- Both canvases represent an operational model. They do not include pre-launch activities and costs or investment capital.
- Both canvases, but especially the BMC, can be used to analyse existing businesses.
- The Lean Canvas has advantages in focusing on the problem a new venture seeks to solve.
- The BMC has advantages in modelling a new venture within an existing business, which already has key resource, activities and partners that the new venture can use.

Exercise

Find a completed Business Model Canvas or Lean Canvas that has been published online. Critique the model and reflect on how useful it was in understanding how the business works.

Answer here.

Further reading

- Leanstack blog - <https://blog.leanstack.com/> (Links to an external site.)
- Strategyzer blog - <https://www.strategyzer.com/blog> (Links to an external site.)

References

DaSilva, C. M. & Trkman, P. (2014), 'Business model: what it is and is not', *Long Range Planning*, 47 (2014) 379-389.

Osterwalder, A. & Pigneur, Y. (2010). *Business Model Generation: a Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, NJ: Wiley.

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Chapter 9

9.0. Chapter Overview - Lean Startup Theory

Quote

“If you are not embarrassed by the first version of your product, you’ve launched too late.”

Reid Hoffman, Co-Founder of LinkedIn

This topic explains Lean Startup theory, its foundation in software development and its current application to the entrepreneur and innovator.

It examines the ways in which innovation is incentivised and protected and the application of the Social Enterprise Model.

1. The Lean Startup Approach
2. The Lean Startup Method
3. Minimum Viable Product
4. The Pivot

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9.1. The Lean Startup Approach and Method

The Lean Startup Approach

In Chapter 2, we examined the challenges of entrepreneurship and ways to overcome them. The Lean Startup ideas were introduced and the widely-read article by Steve Blank in Harvard Business Review (Blank, 2013) explained the background and the elements that came together to create the Lean Startup approach.

The three core elements outlined by Blank (2013) were:

- Customer Discovery (Blank)
- Business Model Canvas (Osterwalder)
- Lean Startup method (Ries, 2011)

Blank and Ries were motivated by trying to reduce the failure rate of startups and, even more importantly, to reduce the time, money and energy that it took to get to failure. If you fail fast, you lose less. If you learn from failure (and you always can), then you start your next venture with an advantage.

Because of this, the Lean Startup movement has a very high emphasis on learning. If failure is defined as finding out you were wrong about something, then it's an opportunity to find out the right – or more often better – answer. Failure is an opportunity to learn. Learning from it is optional. Lean Startup insists on learning from failure (and success).

The Business Model Canvas was included as an effective way to write down a draft business model in a way that could be easily understood at a glance and so used as a basis for discussion.

Startup founders are (or should be) always looking for evidence that their idea works. This means being open to finding evidence that it doesn't. Lean Startup aims to improve the effectiveness and speed of this search.

The Lean Startup Method

Eric Ries (2011) documented the Lean Startup method based on his expertise in agile development (software) and what he had learned from both successful and unsuccessful startups. We met Ries in a video Chapter 2, talking about how his first venture failed to understand the market.

That video is part of an hour-long talk given by Ries at Stanford University in 2009 (see Further Reading). He began that talk by [debunking some myths of entrepreneurship \(Links to an external site.\)](#), the most significant one being that a startup is just a scaled-down version of a company. Ries described a startup as:

“a human institution trying to start something new under extreme conditions of uncertainty”

- ‘Human institution’ reminds us that a startup is made up of individual human beings, with all their flaws, emotions and biases.
- ‘Start something new’ reminds us that a startup by definition is treading a path that hasn’t previously been travelled. Add ‘inexperience’ to the human institution.
- ‘Extreme conditions of uncertainty’ reminds us that the sort of planning and operations that an established business can do are pointless.

The fundamental idea of the Lean Startup method is to identify assumptions, work out which ones are most critical and find fast, inexpensive ways to test them.

Read: The Lean Startup

An excellent summary of the ideas in ‘The Lean Startup’ book is available at the link below.

[Read here.](#) (Links to an external site.)

Lean Startup Principles

The Lean Startup approach is based on 5 principles

1. Entrepreneurs are everywhere

Not just in garages, but in corporations, charities and even governments.

2. Entrepreneurship is management

But not the same as traditional business management.

3. Validated learning

The job of a startup is to learn what your customers want, so you can build a sustainable business. Learning should be done in a scientific way.

4. Build-Measure-Learn

The core of the method, this is the way validated learning is carried out.

5. Innovation accounting

The tools that measure progress. Different from traditional business KPIs.

Since the publication of 'The Lean Startup', Ries has found customers for his ideas in many different fields, validating that entrepreneurs are indeed everywhere. Established companies have recognised that their innovation processes were often not based on good validation and, in some cases, took so long that the market had shifted before they developed their solution.

Build-Measure-Learn

Like every other technique in the entrepreneur's toolkit, this one is iterative. You don't build, measure and learn just once, but many times. Furthermore, you build start the loop with specific learning in mind – testing one of your hypotheses about your startup.

The two types of hypotheses are:

1. Value hypothesis: What do your customers value? (want, need).
2. Growth hypothesis: How will your startup grow? (what drives new sales).

Value hypotheses always come first – you can't grow until you understand what value you are offering.

Image: Build-Measure-Learn Loop

The build-measure-learn loop is depicted above.

- Build involves a product or service – something the customer can experience.
- Measure involves data resulting from testing the product.
- Learn involves interpreting the data to gain new insights, which guide the next version of the product.

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9.2. Minimum Viable Product

Quote

“The goal of an MVP is to test fundamental business hypotheses (or leap-of-faith assumptions) and to help entrepreneurs begin the learning process as quickly as possible.”

Eric Ries, The Lean Startup

The Minimum Viable Product (MVP) is what you build to start the Build-Measure-Learn loop. It is important to understand that the MVP is not necessarily anything like what you envisage the final product will be. Its purpose is to learn.

There are some standard types of MVP:

Testing Interest MVP

What	Objective	Example
A video or landing page that describes what your product will do and invites interested customers to register for more information.	Find out if people interested enough to give their contact details.	Dropbox started with a 4-minute video. Watch it and read about how it worked below. Read here. (Links to an external site.)

Concierge MVP

What	Objective	Example
A service that will eventually be automated but initially delivered personally.	Through keeping a handful of customers happy, learn what they value and how best to deliver it. Then scale.	Food on the Table (similar to Australia's Hello Fresh) started with founders personally visiting customers, discovering what they liked and providing them with ingredients and recipes to cook at home.

'Smoke and Mirrors' (aka Wizard of Oz) MVP

What	Objective	Example
Similar to Concierge MVP, but without human interaction. The concierge is hidden behind the technology, but behind the scenes, a few individuals do the work manually.	To test a hypothesis that customers will buy what you are selling.	Zappos, an online shoe store, started with the founder taking photos of shoes, putting them on his web site and personally buying and mailing them whenever he got an order. Read more here. (Links to an external site.)

Australian company Living Fundraisers started with the concept of providing an alternative to selling chocolate to raise funds for schools and kindergartens – an

obvious clash with the message of healthy eating. Their first product idea was a seed-growing kit and their MVP was an advert in a catalogue of fundraising options sent to all schools. When they got orders, they started making the product! Launched in 2009, they have dozens of products and serve thousands of schools around Australia.

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9.3. The Pivot

Pivoting is when you discover that a significant assumption is incorrect and you need to change your business model. The popularity of Lean Startup has meant that its vocabulary has been widely adopted and the word 'pivot' is often misused.

The 'pivot' concept comes from the idea of keeping one foot planted and moving the other to face in a different direction. You keep what you learned from your testing (planted foot) and use it to develop a new strategy (moved foot).

This graphic below explains it well.

Image: Lean Startup Pivot

A pivot is not a change to the nature of a product or service. Nor is pivoting giving up and starting a completely new venture.

Pivoting is not something that happens frequently in the journey of a startup. It is a considered decision, based on evidence (usually of customer needs) that clearly indicates that a change of strategy is needed.

Well-known companies that pivoted (from the core reading) include:

- Flickr: Discovered their role-playing game site was actually a photo-sharing site.
- Instagram: Their social check-in app was actually mostly used for photo sharing, so they focussed on doing that one thing well.
- Pinterest: Nobody was using their mobile app for shopping, but they were creating and sharing wish lists.

A frequent type of pivot is a change of customer segment, often from business-to-consumer to business-to-business or vice versa. RefLive, an Australian smartwatch app for football (soccer) referees struggled to sell to referees. But the data it gathered was valuable to governing bodies, who became the target market. And along the way Rugby Australia asked for a Rugby version!

See the video on their home page below:

[Watch here.](#) (Links to an external site.)

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9.4. Chapter Summary

- The Lean Startup approach combines three elements: Customer Discovery, Business Model Canvas and Lean Startup method.
- The Lean Startup method aims to test hypotheses quickly and cheaply to avoid building products that customers don't want.
- There are five principles of Lean Startup:

1. Entrepreneurs are everywhere;
2. Entrepreneurship is management;
3. Validated learning;
4. Build-Measure-Learn;
5. Innovation accounting.

- The Build-Measure-Learn loop is the core of the Lean Startup method, and depends on testing hypotheses through actual customer interaction.
- The Minimum Viable Product is the outcome of the 'Build' step – the minimum required to test a hypothesis.
- Measure requires collecting data from the MVP experiment and analysing it.
- Learn requires interpretation of the data to decide to continue (Persevere) or change strategy (Pivot).
- Pivot is a decision to change strategy without abandoning the original vision.

Exercise

Find and explain an example of an MVP or pivot not included in the learning materials.

[Answer here.](#)

Further Reading

- [Video] 'Evangelizing for the lean startup' (58 mins). Talk by Eric Ries at Stanford in 2009. <https://ecorner.stanford.edu/videos/evangelizing-for-the-lean-startup-entire-talk/> (Links to an external site.)

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