

Innovation and the Futureproof Bank

A practical guide to doing different business-as-usual

Dr James Gardner



A John Wiley and Sons, Ltd., Publication

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Preface

It never ceases to amaze me how much debate the simple word ‘innovation’ can cause in an institution. Utter it, and one seems to touch a nerve. It causes argument about what innovation is, what sort should be engaged in, and whether, in fact, anyone is doing any innovation at all.

So personal is the term ‘innovation’ that I’ve found myself in the same discussions – sometimes even heated debates – over and over again. And all this happens before anyone even gets to the meat of the innovation problem: how to create the set of infrastructures and processes that let an institution do innovation, and do it predictably and reliably.

Most institutions recognise the urgent need for more innovation. They know there are emergent competitors coming from all directions: competitors who are small, nimble, and above all, innovative. There seems little choice but to out-innovate the innovators if one wants to compete effectively in the long term. But most institutions, whilst wanting more innovation, don’t know how to go about *getting* it. They might set up an innovation team, which is then tasked with discovering everything there is to know about the innovation problem, whilst simultaneously driving expansive new ideas out the door. It will not be any surprise to discover most innovation teams fail when they are given such an insurmountable challenge.

The problem is the misconception that innovation in banks is something that can be turned on, like a switch. The truth of the matter, though, is that innovation is a corporate capability that takes time to master like any other. It is a journey that can sometimes take years. But a new innovation team rarely has years to deliver results. Institutions typically get tired of waiting for their innovation payback long before a new team is anywhere close to building the process, systems, and cultures needed to find and exploit uniqueness.

Innovation and the Futureproof Bank is a book which aims to help innovation teams and their sponsors with this problem. It is my hope that by following the advice herein, new innovation groups can spend less time learning the basics of innovation and more time driving real outcomes for their banks.

Creating predictability in the way innovation is done inside an institution is only part of the problem facing innovation teams, however. Sooner or later, it becomes necessary to consider innovation from an external perspective as well. What steps must be taken to counter that upstart new competitor, the one with the disruptive channel strategy? What consequences are likely if *no* action is taken? If it is? These are questions which will sooner or later find their way to innovation teams for an answer. And the team had better be ready with structured processes for looking into the future, or miss their chance to be part of the strategic agenda of their institutions. Here, too, this book has advice for bank innovators.

The practices and techniques described herein have been used in many institutions successfully across the world. My approach was to examine the best innovation processes I could find, and stitch them together into something that any bank could usefully use to create a great innovation practice. The whole I call *Futureproofing*, a set of techniques that any institution can use to ensure that it gets the best from its innovation investments, whilst simultaneously watching (and reacting) to the innovation investments made by its competitors.

Of course, not everything in this book will be appropriate for every institution. It is my suggestion that practitioners take what is provided as a base, and modify it to take account of their institution's unique set of capabilities. If I've learned one thing about innovation whilst writing this book, it is that every bank is different, and consequently, the way it does innovation must be as well.

This will become especially evident when you read the stories and case studies I've included from institutions around the world. The way Bank of America approaches innovation in its joint venture with MIT Media Labs, for example, is quite different from the disruptive system of innovations that Caja Navarra of Spain calls 'customer rights'. These, and other, examples show just how diverse the innovation process can be.

Which brings me to thanking those who have collaborated in the writing of this book. A year ago, when I first stated on my blog that I was writing this book, I was surprised – and gratified – by the number of institutions that reached out to me with their innovation stories. Many of them have made their way into these pages. To them, and their innovators who were so forthcoming with information, I offer my thanks.

I must also thank those who have read parts, or all, of this manuscript during the writing process. Craig Libby, Innovation Engineer at what was then Wachovia. Steve Wakefield, of Lloyds TSB who tirelessly read every chapter as it was written, pointing out my many errors. And, of course, all those who feature in the case studies and other stories throughout. To these, I owe a debt of gratitude.

Thanks are due, also, to the readers of my blog Bankervision, whose constant stream of comments, support, and advice kept me believing that there was a need for this book, even when the words wouldn't come.

And finally, my thanks go to my employers, both past and present, for allowing me the freedom to innovate, the liberty to push the boundaries, and the chance to explore the very frontiers of innovation science in the banking context.

Introduction

What you will find in this chapter

- A useful definition of innovation that can be applied to an institution.
- Five key mistakes people make when they think about innovation in banks.
- A brief history of innovation in banks.
- An overview of the futureproofing process.
- An explanation of how it is that not all innovation is good.

There is no such thing as a bank that is innovative. At least, that is what I would believe if all I read was the popular press or the blogs of customers. Try this experiment: say the words ‘bank’ and ‘innovation’ in the same sentence to anyone in the street, and see if you get much more than a blank look in return.

Most people think of innovation in terms of breakthroughs of the sort one regularly sees coming from high technology companies. They rarely consider that, in their day, ATMs were breakthroughs. They don’t think of the revolution of Internet and browser technologies combining to bring banking into the home. Nor do they realise or care that many incremental changes banks implement every day – a change to the call centre interactive voice response, or the update to queue management in the branch – are in fact innovations that other industries have, from time to time, copied.

Perhaps because their customers don’t perceive the innovation all around them, bankers have started to believe they aren’t very innovative as well. They accept that change will be slow. That they will react when the market demands they do so. And, in fact, that this represents the *prudent* course which will safeguard their institution and its customers.

But there is a problem with this, and that is the pace of change in financial services has accelerated markedly. When it was just regulators, competitors, and markets that were the issue, the glacial engine of *prudence* was entirely satisfactory. But the democratisation of the tools of financial services has changed that. Now *anyone* can do things banks used to think were safely behind the competitive barriers of their very special role in the economy. A savvy consumer is fully capable of using online tools to run a small loan book via emerging person-to-person lending sites. They can pick and choose from dozens of customer service experiences courtesy of the next generation of personal finance software. And they can make international or domestic payments, even to the unbanked, and do so instantly, pretty much without fees.

Many of the commercial, technical, and regulatory barriers which protected banks in the past are about to, or have already, fallen. Their fall brings a groundswell of new change which will utterly defeat *prudence* as a strategy. Prudence is simply too slow to react.

What is needed, then, is a business process which can predictably and reliably respond to all this change, and which doesn’t abandon the fundamental tenet of prudence upon which banks must rely. Futureproofing, the subject of this book, is one way of doing that.

Futureproofing is the process of planning what the future might bring and doing something about it. Having read that sentence, you'd be excused for imagining these pages – as so many others at present – might concern themselves with examining doomsday scenarios in which banking no longer exists as an industry. Or if you are more positive, the happy alternative where all present threats to the special economic role of institutions have been dealt with and we continue onward indefinitely. But actually, this is a book which makes only one prediction about the future, and it is one firmly based in historical fact: change is a constant, and there is nothing that can be done to stop it happening.

Once one accepts that change is inevitable, it is only a small step further to the realisation that a business process which can systematically deal with change provides assurances against many of the challenges that might arise in the future.

This book is about building such business processes. It was born from understanding that whilst innovation might be the engine that drives progress and competitive advantage, ad-hoc innovation is, well, random. That randomness, far from providing assurances for the future, is gambling without knowing the odds in advance. Since it is possible to stack the cards in one's favour, it makes excellent business sense to do so.

So, what are the characteristics of an institution that is futureproof?

Firstly, it will have systematised a focus on tomorrow. Many organisations spend the greatest part of their operational attention seeking to optimise the business of today. A futureproof institution recognises that putting structure around future consideration is the best way to avoid surprises. This book explains how such structure can be optimised into a *futurecast*, a substantive vision of alternative futures that can be used to rehearse key strategic decisions in advance.

Secondly, it will embed a business process that actively seeks out solutions for the problems of tomorrow. A futureproof institution knows that ad-hoc, random innovation is just as likely to generate bad ideas as good ones, so it puts sophisticated tools in place to eliminate the guesswork. It recognises also that this is a process that can pay its own way, and demands that each step towards tomorrow makes good business sense.

Finally, a futureproof institution explores multiple things at once. It knows that individual innovations may be successful or may not, but taken as a portfolio, the returns can be predicted with great accuracy.

But futureproofing requires a great deal of hard work. And inevitably, there are plenty of individuals in institutions who argue that the effort, capital, and organisational bandwidth involved is better spent on core businesses. They make the point that banking has been going well since its incarnation in modern form in the late 16th century, pointing to these hundreds of years of development as proof that financial services are able to respond to change without a formal process for doing so.

They would be correct in pointing this out. But now there is an emerging body of evidence suggesting that institutions which proactively and deliberately design their future are significantly superior performers in the long term. And the interesting thing is that such superior performance is almost never about the amount of money spent. Booz Allen Hamilton, who review the top 1000 corporate spenders on R&D every year [1], found there is almost no relationship at all between spending on innovation and superior financial returns. What they did discover, though, was that those companies with a deliberate innovation process – one with links to corporate strategy and customer needs – achieved up to 40% higher growth in their operating income as a result.

With arguments such as these, it is interesting that so few financial services organisations are listed as innovative. In fact, according to Boston Consulting Group and *Business Week* [2], there are only five institutions who make the top 50 innovators globally. That *any* institution is listed alongside such famous innovators as Apple, Google, and General Electric is surprising, given the widely held view that banks aren't innovative at all.

What are those institutions doing to draw the attention of *Business Week*? What they all have in common is that they've developed robust processes to help them design their own futures, and they use them to get reliable and predictable returns from their innovation investments. They are institutions whose futures are secure.

Most banks spend years building their innovation capabilities before achieving this level of mastery. Having said that, however, the basic principles that underlie success are easily understood, and the chief concern is usually operationalising them in such a way that they become a core part of doing business. It is my hope that this book will help you do that in your own institutions.

1.1 WHAT IS INNOVATION ANYWAY?

In many financial services firms, it isn't hard to find groups that are responsible for something that is, conceptually at least, innovation. It is typical that the focus of such groups be laser-sharp on the core business operations of the organisational lines that host them. In fact, in most banks, there are many innovation teams scattered across various silos, though they might not always think of themselves as being part of the innovation function.

It is hardly unusual, for example, for a group calling itself 'Business Development' to engage in new product innovation, whilst sitting across the hall a technology team looks for innovative gadgets they can shoehorn into a banking context. Meanwhile the strategy function is undoubtedly looking at new business models and new markets, and inevitably, the CEO herself is pushing along some pet projects that have an innovative aspect to them.

Unsurprisingly, such diversity of focus leads directly to organisational confusion with respect to the corporate innovation agenda, if an institution is lucky enough to have one at all. And almost certainly, getting to an adequate definition of innovation that works for everyone is pretty much a hopeless task with so many conflicting priorities.

It is useful, then, to look first at common definitions of innovation. This will give us common language we'll be able to use throughout the remainder of this book.

With that in mind, it is possible to classify innovations in two dimensions. The first is the degree of newness incarnated in whatever-it-is. The second relates to the relationship of innovation to the competitive position of the firm. The latter of these two I'll get to in a moment, but first let us look at innovations based on the amount of uniqueness inherent in them.

Breakthrough, revolutionary, and incremental innovation

Innovations which are completely unprecedented are variously called breakthrough, radical, or discontinuous innovations depending on which book you read (I'll call them breakthroughs from now on). Breakthroughs have several attributes: they have few analogues to anything that has gone before, they change the rules of the game substantially in some way, they involve high levels of risk and reward, and they are inherently unpredictable.

History gives us a rich tapestry of breakthroughs to examine: the Wright Brothers with their first aircraft, the creation of the transistor, the discovery of penicillin. What do all these have in common? They were the result of years of thankless work with no guarantee of reward. But more importantly, they all changed the world. It is hard to imagine the inventors knew, when they started their work, how very important their efforts would be to those coming later.

A very common preconception is that innovation teams spend their days doing this kind of work: creation that is so substantially different from what has gone before that the rules of the game are completely rewritten. In fact, only unsuccessful innovation organisations spend *all* their time seeking breakthroughs, as will become evident later.

Nonetheless, there is a deceptive attraction to being first with something that completely changes the nature of a market or product. The rewards may be exceptionally large, and quite often result in a long-term sustainable competitive advantage as well. The downside, though, is that breakthrough innovations, no matter how clever they are, are extremely unpredictable. One cannot easily control when, or even if, one will make a return on what is almost certainly going to be a very large investment up front.

Breakthroughs have occurred from time to time in banking. When they have, they have substantially changed the playing field for everyone. One of the most famous was the introduction of computing to financial services by Bank of America.

As accessibility to retail banking services grew in the 1950s, especially with the rise of the credit card, banks began to struggle with the volume of paper processing required. It was becoming increasingly obvious to everyone that paper was going to put an upper limit on just how large an institution could reasonably grow. Computers seemed one answer, but the application of real computing to banking was substantially delayed by the fact that, at the time, the technology was primarily a scientific and military endeavour. Electronic machines had extremely limited input and output capabilities, which seemed to mitigate against their use in volume transaction processing environments.

Nonetheless, in 1950, Bank of America approached Stanford University regarding the possibility of an electronic machine for data processing [3]. At the time, an experienced book keeper could post 245 accounts per hour, or about 2000 per 8-hour work day. But growing volume was forcing the bank to shut its doors at 2 p.m. each day to deal with the paper backlog and checking accounts were growing at a rate of 23,000 a month. There were few alternatives but automation if the business was to continue its growth trajectory.

An early feasibility study was completed by Stanford University in 1951, leading to a first practical demonstration of a machine in 1955. This machine (called ERMA for Electronic Recording Method of Accounting) introduced several new innovations specific to banking. The first of these, Magnetic Ink Character Reading (MICR), addressed the input problem for volume cheque processing. Another parallel development was the creation of machines that could move paper at speed to the MICR reader. The use of transistors instead of valves made the machine practicable from a heat and power perspective. And magnetic memories were introduced to store instructions and intermediate data.

In 1956 the machine was tested for three months in a branch environment with loads that would be required of a central accounting facility. The tests were successful, leading to the acquisition of 32 ERMA machines by 1959.

The mechanisation of business – in which Bank of America was the pioneering innovator of the day – led to the rise of central accounting as the default mode of operation for banks globally. The breakthrough was so fundamental it was replicated by practically everyone else

in short order. By 1965, almost all banks in the UK and the USA were running automated machines similar to ERMA [4].

Following breakthrough innovation (classified, as before, by the amount of uniqueness involved) is revolutionary innovation. Revolutionary innovations are sufficiently superior to what they replace that they become the default choice for a significant percentage of the market. They offer substantial advantages over what has gone before, but do not, themselves, redefine existing categories or create new ones. The Apple iPhone is a revolutionary innovation. It does not create a new product category (high end mobile phones), but it enhances the concept of an integrated phone, player, and organiser device in such a way that it has become the default choice for many people. It is revolutionary because it is winning share away from incumbent products, rather than changing the way things work fundamentally.

Revolutionary innovations tend to be less risky than breakthroughs, but as might be expected, usually have less upside. The reason? Revolutionary innovations, arising from well understood areas, are far less likely to have the kinds of entry barriers that breakthroughs have. As a result, they are copied more easily. Less than a year after the first release of Apple's iPhone, companies such as HTC of Taiwan were already releasing phones that duplicated some of its best features, for example.

Revolutionary innovations in banking are not that common, but have occurred from time to time. The launch of ING Direct, a Canadian innovation that opened its doors in 1997, is one example. At the time, Canadians had little choice but to choose a low-interest, fee-charging savings account from one of the incumbent big five banks. ING Direct's flagship product, a chargeless, high-interest savings account, was something quite new: it offered bare bones service to low margin customers, but did so at volume. It was immediately a runaway success. Apparently customers were over-served by the features of accounts they could get at their traditional banks.

In 1999, ING Direct opened in Australia, disrupting the industry there as they had done in Canada. Once again, the successful formula was repeated: provide a bare bones service and pass on those savings to customers. I recall being in a meeting with a senior banker in Australia at this time, during which he expressed his irritation that ING was 'borrowing' the use of his institution's channels without paying for them. His complaint stemmed from the fact that ING Direct offered a branchless service, and therefore customers were forced to use the facilities of his bank in order to get funds in and out of their ING accounts. Bankers' complaints aside, ING Direct in Australia went from standing start to the sixth largest retail bank in a few short years.

The next year, 2000, ING Direct opened in the USA, again repeating its successful branchless model, and except for some trademark 'ING Direct' cafes in key markets, remains relatively bricks-and-mortar free. It has now grown to become the largest direct bank in that country.

ING Direct is now operating in the UK, Spain, Germany, Italy, France, and Japan. Its revolutionary model that cut service back as much as reasonably possible and returned customers the savings is one that is, apparently, easy to transplant across cultures and geographic boundaries.

Finally, we come to the least new of all types of innovation: incremental, also known as continuous innovation. Incremental innovation takes what is well known and makes a minor improvement with a positive payback. Incremental innovations may not be visible outside an organisation: they are characteristically small, probably very specific to an institution's individual way of doing things, and are relatively low risk.

In many countries, it is possible to sign up for 'pre-pay' mobile phone contracts. Telecommunications firms provide potential customers with a free or low-cost SIM card, which is then

‘topped up’ with credit. Customers are allowed to make phone calls up to the value of their credit before they have to ‘top up’ again. Initially, the process of adding credit was available only through the shop fronts of the mobile phone operators, but in some countries, banks were quick to spot an incremental opportunity: allow mobile phone top ups through their ATM networks.

The business model that supports ATMs is very specific: one wants as much cash dispensed as possible, in the shortest amount of time. Ideally, one wants the customers of other banks to use the institution’s ATMs as well, since this provides a rich source of fee income. Consequently, locations for ATMs are hotly contested, and the best spots are almost always already filled with one of the ubiquitous cash dispensing machines.

Now, most opportunities to use ATMs to dispense things other than cash have a huge downside: the time taken to operate the new dispensing function is generally greater than that for cash, and consequently revenues from individual machines tend to fall. But mobile phone top ups have none of these disadvantages. Customers simply enter their mobile phone number, and the credit is deducted from their account and added to their phone automatically. It is a nice piece of new fee revenue that institutions are able to acquire from telecommunications companies.

Mobile phone top ups at the ATM are an entirely incremental innovation. They take what is already in place – the ability to dispense cash and provide minimal account information to customers – and twist it just a little to provide a new service consumers find valuable. Unsurprisingly, in most countries that do top up at the ATM, it has become a ubiquitous offering from everyone who runs ATM networks.

If you go back over these three types of innovation I’ve just covered, you will probably think of examples from your own organisation. That is not unusual: it is the hallmark of an appropriate innovation strategy that things are developed from each category. But what is not generally obvious is that a much broader definition of innovation is possible: *anything* that is not presently being done by an organisation is an innovation opportunity. Market-wide uniqueness doesn’t come into it. Innovation is the process of introducing new things, certainly, but it only has to be *new* to your institution for it to be an opportunity worth exploring.

Disruptive and sustaining innovation

As I mentioned earlier, it is possible to classify innovations in two dimensions. We’ve just looked at the first dimension: how genuinely new whatever-it-is is compared to what it proceeds. The second dimension is the way institutions and markets respond to the innovation itself. Banks react to things which are new in very different ways depending on whether the new thing *sustains* or *disrupts* their current operations. This classification was first proposed by Clayton Christensen, author of the hugely influential book *The Innovator’s Dilemma* [5]. His theory of disruptive innovation has a well-established track record of explaining why it is that companies in different industries ignore some innovations and support others. We’ll look at the mechanics of disruptive innovation in detail in Chapter 2.

In any event, a sustaining innovation is one that creates additional value for a firm by enhancing the products or services already being offered. By increasing the functional capabilities of existing offers, new customers can be reached or existing ones better served. Sustaining innovations create new value for banks organically in the short and medium terms. They do this by delivering growth along established trajectories in a predictable manner.

Although this may be a much disputed point, Internet banking is a sustaining innovation. It makes it possible for existing bank customers to use their products in new ways, and certainly with much greater convenience. Internet banking is also a revolutionary innovation: it applied the existing technologies of Internet networks and web-based browsers to the problem of self-service.

Internet banking, however, did not create a parallel industry of Internet-based competitors with much possibility of eroding banking business. Netbank, the most prominent online-only bank, was established in the 1990s, and roundly hailed as a disruptive innovation likely to change the face of banking forever. It was a sign, many thought, that the branch was dying, if not practically dead already.

Netbank failed in 2007. The failure, according to prominent analyst and blogger Jim Bruene, was 'primarily from poorly underwritten loans, both prime and sub-prime, and most of those originations came the old-fashioned way, through face to face broker sales' [6]. The lesson of Netbank is that whilst the reliance on Internet delivery was a novel innovation for the time, the traditional business model was still very much centre stage.

On the other hand, ING Direct, also an Internet-based bank, is extremely disruptive in any market it enters. The difference is the business model change it couples to its direct channels, represented by reducing service to the bare minimum and passing on the savings deriving from this to customers in the form of much higher interest rates.

Breakthrough and revolutionary innovations are often confused with disruptive ones. Actually, though, disruptive innovations are usually not so much about brand new capabilities, as they are about creating new value propositions. These new propositions are deceptive to an incumbent player in a particular market, who will likely ignore them as not core to their own business. They become disruptive, however, when expansion of the entrant causes the new and old value propositions to overlap.

A disruptive innovation usually starts life as a poorly performing, inferior product compared to those of incumbents. But the fact the product or service does less, means it brings with it quite a different cost and value structure than what it precedes. This is attractive to a small segment of the market, one which is probably uneconomic to a mainstream institution. The market may, in fact, be so small or so low margin that not only is it unattractive, it is actually impossible for an incumbent to enter it at all. A disruptive innovation, being less capable, and therefore less expensive, may find attractive returns in this low end space.

Over time, the disruptive innovation improves its performance, and in the end, is as capable as anything else in the market. But this time, the disruptive innovation competes against existing products from a significantly better cost base.

When UK-based Zopa became the first company in the world to launch a peer-to-peer (P2P) lending operation in March 2005, they implemented a radical concept: the 'Zone of Possible Agreement' (from which the name is derived). The term refers to that price point where both borrowers and lenders agree that a particular interest rate is fair to both sides. Zopa links both parties up at this price and facilitates the actual transaction. No bank is involved. This disruptive innovation has now been copied by companies in many countries, including the USA, Australia, Germany, and the Netherlands, and the growth of this new model seems to be gathering pace.

Initially, the facility that Zopa offered to deposit customers was significantly inferior to that of banks: depositors had a much higher risk of losing their money than they would have done using a traditional banking account. Nonetheless, a certain fringe of depositors – those early

adopters who were familiar with social networking and had an appetite for risk – began to use the service.

As with all disruptive innovations, however, the capability of the product swiftly improved. Lenders were given more tools, and much more certainty about their returns, making the product a much better fit with a wider market.

In 2008, analyst firm Gartner forecasted, controversially, that peer-to-peer lending might take 10% of all retail lending volume by 2010 [7]. Initially, I was sceptical in the extreme of this, and said so on my blog [8], but when you examine the dynamics of disruption (see Chapter 2), it is possible to see a mechanism at work that might breathe truth into the prediction.

Disruptive innovations are needed to help banks deliver robust growth in the long term. As with any long-term strategy, execution is the problem. Disruptive innovations tend to have very small returns in the beginning, insignificant compared to the main business lines of any bank. But the right disruption, given time, can grow into a business with very substantial scale, as it looks that Zopa may do. An institution able to create and nurture such innovations has, indeed, futureproofed itself. Unfortunately, as we'll see later in this book, doing disruptive innovation is probably the hardest thing a bank can do.

The difference between innovation and invention

Before we leave the definitional part of this chapter, it is useful, also, to draw out the difference between *invention* and *innovation*. Joseph Schumpeter, a Harvard economist who rose to fame through his ground-breaking work in entrepreneurship, was one of the first to make a distinction between these terms. In his conceptualisation, an invention is largely a theoretical construct, an idea with, perhaps, some evidence to prove that it can be implemented in the real world. But *innovation* takes an invention and puts it into practice. It converts what was an initial theoretic construction into something that can do useful work. Another way of looking at this is that invention occurs whenever a concept is created for the first time. An innovation takes that concept and turns it into something real, something that can make real returns.

In general, institutions do not lack invention. Most people have experienced the situation where a few people in a room with a whiteboard create lots of solutions to a particular problem. Usually few, if any, of these solutions (inventions) make it from the whiteboard to practice. It is only the small number of cases that do that are innovative. Innovation is invention plus execution. And, as you'll read later in this book, the process of *killing off* inventions that aren't going to make it is a key part of ensuring a balanced return on an innovation portfolio.

1.2 WHAT HAPPENS WHEN YOU *DON'T* FUTUREPROOF

I described how futureproofing is a business process an institution can use to ensure it correctly recognises things that might affect it in the future, and then respond in an appropriate and measured way to generate a return. One question that's often asked, however, is what the consequence of *not* futureproofing might be. Have not banks been operating, with largely the same services and a fundamentally unchanged business model, for hundreds of years?

Certainly they have, but the pace of change in banking (and in most other industries as well) has increased markedly in recent times. The upshot is that the time between a trend being noticed and its implementation by a competitor is becoming increasingly short. There isn't time to dither around before making a decision: what is needed is a system that can respond routinely to change. Change is the only constant.

Recent research proves the value of having a process that looks forward. A study of North American financial services chief executives conducted in 2007 established a link between the time senior leaders in banks spent looking at the future, and the innovation success of their institutions [9].

The researchers began by examining implementations of Internet banking at 169 banks, starting from the moment it dawned on leaders that online banking on the web might be important, through to its eventual near-universal roll out. They then created a statistical analysis of public statements made by bank leaders to get an indicative measure of how much time each was spending thinking about the future.

The first thing they discovered was that as a result of focusing on potential future states, banks were not only better at making predictions about the future, they were also *much* better at responding. In the study, the average time to respond to the online banking opportunity was just over four years, but the worst performer took nearly nine and a half years before they had something customers could use.

The second, more startling thing, however, was that future-looking banks not only managed to respond more quickly, but the *breadth* of their response was superior. The first Internet banking sites in particular markets were, on average, delivering just over three new innovations each to their customers, but the best of them had up to five. Clearly, the bottom line impact of such a substantial functional difference between leaders and followers is exceptionally valuable.

Whilst evidence such as this is helpful justification of the value of futureproofing processes, one doesn't need to go much further than the rise of PayPal over the last decade to understand what can happen if an appropriate strategy for responding to change is *not* part of the way institutions do business.

In December 1998, a company called Confinity was founded on University Avenue, Palo Alto. The new company set out to explore whether the most popular digital organiser of the day – the Palm Pilot – might make a good electronic wallet that could be used to beam money between owners. Just down the road, another company, X.com, was founded to look at the opportunities surrounding online payments. When the two merged in March 2000, the combined entity, renamed PayPal, swiftly became the preferred means of payment for more than half of consumers who had begun using online auctions. Two years later, when auction giant eBay bought PayPal, its valuation was \$1.5 billion. At the time of writing, it operates in 197 countries, provides payment services in 17 different currencies, and has more than 150 million accounts.

The success of PayPal was the result of the confluence of several things. Existing bank products at the time did not lend themselves to person-to-person payments. Paper cheques and direct transfers (in the countries that had them) took too long to settle in a world where auctions completed instantly, and many sellers were unable to take credit cards. Later research [10] found that payment instrument choice on eBay was influenced almost entirely by the certainty of attributes of the product being acquired (i.e., colour, size, and so forth), but in the online auction space, not only did consumers have less certainty about the product they were buying, they were dealing with uncertain individuals as well. Consumers demanded something new to go with this new shopping experience, something that enabled them to reduce all this unwanted risk when it came time to pay.

The innovation of PayPal was that it created a layer atop existing financial relationships that consumers already held. The new layer made it simple, safe, and fast to send money between people. It swiftly became ubiquitous.

As early as 2001, banking journals began to report there might be interesting things on the horizon. One went as far as to note that whilst the number of alternative payment systems was in decline, payment systems associated with inherent transaction streams (such as eBay) were thriving [11]. The publically available pre-IPO prospectus issued by PayPal around this time indicated it was processing over 165,000 transactions per day with an average value of around \$50.

Competitors, not coupled with an inherent source of transaction volume (as PayPal was with eBay), swiftly found they were unable to compete. In 2003, Citibank's C2it service closed, followed closely in 2004 by the cessation of Yahoo's PayDirect offering. Then, in 2005, Western Union disposed of its person-to-person service, BidPay.

In 2006, consultancy Booz Allen Hamilton [12] made a prediction with respect to online payment providers:

'If existing providers (predominantly the card issuers and acquirers) do not find an effective counter strategy we believe they could lose 10–20% by 2008 and in the long term up to 30%.'

In my own discussions with bankers around the world on this topic, I conclude these predictions are, if not already true, very close to being so, at least in developed markets. The online payment opportunity is one that banks allowed to slip through their fingers.

Hindsight is a wonderful thing, but the attraction of a privacy and security layer above traditional payment instruments is retrospectively obvious. The problem now is that PayPal is so large (by number of accounts, the largest financial services provider in the world) that competitive responses by banks are somewhat limited.

1.3 FIVE THINGS THAT INNOVATION IS NOT

Innovation is very much on the corporate agenda of a large percentage of financial institutions. Despite that, I am surprised how often I come across misconceptions about innovation and how it is managed.

For those whose job it is to manage the innovation agenda, this can be particularly problematic. The function can often be seen in terms of way-out things new and exciting, disconnected from the core business. When that happens, innovators are liable to get labelled: geekery of any kind rarely drives business returns. Their relevance in the strategic context gets called into question.

Recently, for example, I was approached by an individual in another bank convinced an innovation programme should be all about trying to get new gadgets into the branch. His assertion was that if we weren't doing highly visible public-facing things, the whole conception of innovation in financial services was bankrupt. This individual made a mistake one often sees: he narrowed the innovation agenda to such a degree it would be hard to make a decent return no matter how good the toys were.

For institutions that are starting their innovation journey, it is critical to dispel these kinds of myths immediately. They have a negative effect that can taint efforts for ages afterwards. Such tainting is exacerbated, unfortunately, as some organisations have experienced faulty innovation attempts in the past. Getting distance from these historical issues is critical.

Here, then, are five things people believe about innovation (and about innovation teams) that should be dispelled as quickly as possible.

Innovation is only about things that are completely new

Earlier, I discussed the difference between breakthrough, revolutionary, and incremental innovations. The former two certainly get the most attention, and consequently most people believe innovators do very little incremental. Incremental is the realm of business-as-usual. In fact, people are surprised when I tell them most returns from good innovation programmes come from incremental innovation.

Perhaps the most famous incremental innovator is Toyota. The volume written about this company and its rise from relative mediocrity to global dominance on the back of small, quite basic changes is monumental. Founded in 1937, the company started commercial passenger car production in 1947, and by the 1980s was consistently ranked higher than any other manufacturer in owner satisfaction surveys. Attention to detail, and making small changes to create lasting improvements, led the company to become the largest automotive manufacturer in the world by 2007. Clearly, incremental innovation can pay, even if the individual changes aren't exciting and high profile.

Convincing people that small improvements are important is a big challenge for an innovation function. A common response to the idea that innovators should do incremental is that innovators who do so are reducing themselves to optimisers.

The emergence of instrumented methods for process improvement – Six Sigma is one – has made it easy to confuse optimisation with innovation. When product-type people create a new savings account, are they actually innovating, or are they optimising the savings category based on their expectations that making the change will result in greater market share? This thin line is the principal reason people imagine that true innovators would never concern themselves with anything which fails to change the game completely.

It's easy to understand why there is this confusion, but the difference between optimisation and innovation is really quite simple: you optimise by pulling various levers you already have to get better results. Creating a new savings product is an example: one captures a greater share by varying interest rate, fees, and terms and conditions.

True innovations, on the other hand, create *new* levers altogether, or modify the *range* of existing levers. They don't just change the position of the dials, regardless of how unique the new combination is.

ING Direct, for example, changed the range of its interest rate dial on its savings account for customers by reducing its costs and passing on the savings. This let its product managers price its savings accounts in such a way that ING was able to claim large shares of markets even when it had no traditional banking presence.

Innovation is speculative and risky

Financial institutions spend a great deal of time managing risk, and indeed, it is a core capability for any bank that wishes to lend money successfully. At the same time, banks are not known for innovation, another process which would seem to lend itself to strong risk management principles. There is a reason for this, and it is that innovation *seems* to come with risks unquantifiable in advance. Banks are good at managing predictable risk, but how is one supposed to predict the success of a radical new product? Far better to commit that capital to the lending book where, at least, the statistical return generated is well understood.

It is true that the quantitative risk associated with an individual innovation is very hard to forecast in advance. Some studies have suggested, in fact, that a new product introduction is

less than 25% likely to succeed. That situation makes it *appear* as if investing in innovation is a rather poor proposition when compared to the opportunity cost of the money.

Actually, it is possible to predict – to a degree – how risky an innovation might be, and to make determinations about the likely returns. Later in this book, some of the models and other analytic tools which can be used to do that will be discussed, but the fact is, you can't always get a picture of the total risk associated with individual innovation no matter what you do.

Single innovations are risky. Which is why a portfolio of innovation investments is required.

Such a portfolio is no different from the basket of business in a loan book: some will fail, and those most likely to do so should command a higher return. Taken as a group, though, very predictable returns can be made. In fact, given a big enough portfolio, the return can be predicted pretty precisely. One invests in a range of innovations – some more, some less risky – in order to guarantee that a particular level of return is achieved.

In most cases, it is true that incremental innovations carry the least level of risk, so they are the ones that have, most of the time, small returns. By weighting your investment strategy towards incrementalism, you get lower overall returns from innovation, but much greater certainty that you will actually achieve your numbers.

On the other hand, breakthrough innovations are typically very risky. There is a lot that can go wrong: technology might need to be invented, for example, or it might not be possible to forecast the demand curve sufficiently in advance to know that the introduction will be a success. But breakthrough innovations are also the pot of gold at the end of the rainbow: they generate windfall returns when they are successful.

Let's face it, if innovation were so speculative and risky, the entire venture capital industry would be out of a job. VCs typically invest in early stage companies, most of whom will fail. Still more will persist in a kind of living/dead state – neither making nor losing money. Nonetheless, most VC firms make substantive returns for their shareholders – returns well above those available from other investment opportunities. They do it by managing a portfolio of investments.

What return is good enough? That's a difficult question, but generally, it is necessary to achieve some multiple of the institution's internal cost of capital. Obviously, if the returns of innovation efforts are less than that, questions about opportunity costs are going to rear their head. One mantra I recently heard was 'we're in the business of lending, not spending'.

However, to achieve many multiples of the internal cost of capital might involve taking an extremely high percentage of risky – disruptive, for example – innovations. A reasonable benchmark is to examine the returns of existing business-as-usual investments, and then set the bar some material way beyond. One wants to demonstrate that innovation is a preferred investment activity, whilst not accepting so much risk that it is impossible to deliver reliably.

One final point: it is absolutely key that innovation teams have a lot of activity to show for their efforts. They must have a portfolio of things going at any one time, since most will not get through the futureproofing process and generate returns. The wider the portfolio, and the better the mix of activity across breakthrough to incremental innovation, the more risk can be controlled.

One side effect of all this – which we'll discuss later – is that the innovation team will not be likely to have enough resource to do everything. It is therefore important that the innovators involved are superlative influencers: they have to be able to win support from executives to support their innovation agenda. When you go it alone, you just can't get the breadth you need to make innovation a good proposition.

Measurement is hard

Having just read the discussion of the previous section, you'd be forgiven for thinking the only innovation measure that makes any sense at all is return on investment. As I've mentioned a number of times already, unless you are creating new revenue (even if indirectly), there isn't much point in doing innovation. And the ultimate goal of the whole futureproofing process is to protect the ability to create future revenue, after all.

The reason that people think measuring innovation efforts is hard is because it *is* hard. One big problem is this: you create something new on the basis of some future return. There is inevitably a time lag between the moment of investment and the payback. The delay between investment and payback can, in real terms, be some years. This gap disconnects the innovation effort from the actual business outcome. Waiting years to know how well an innovation programme is performing is rarely acceptable to those who make the decisions about funding.

Another problem with metrics that focus only on matters financial is that they tend to make it impossible to do anything, no matter how important, that doesn't come neatly associated with a convenient cash return. Some innovations – those which drive productivity improvements, for example – are notoriously difficult to associate with hard numbers. If you have only cash-based metrics, you are likely to get only cash-based innovation. This results in leaving a great deal of opportunity on the table.

It is necessary to have measurements that touch every stage of the futureproofing process. Without defining the futureproofing process now (it is covered briefly at the end of this chapter and much more extensively elsewhere in this book), there need to be four kinds of measures. Firstly, you need to know how good you are at spotting the trends that matter to your institution. Secondly, having come to a good idea of the future, your idea-harvesting mechanism needs to be instrumented. Thirdly, you have to be able to measure how all these ideas get coupled to execution, and finally, what actual results were achieved.

Having metrics that touch every stage of the futureproofing process is important because it enables an institution to *optimise* the futureproofing process as it goes along. It is almost never the case that everything will work efficiently first try. Pulling levers to optimise is a functional necessity to ensure that an institution makes the returns it needs from its innovation efforts.

Finding the 'mega-hit' is the best way to success

I've lost count of the number of times I've had to disappoint someone when I've told them that the role of innovation programmes is *not* to do work that results in breakthroughs because they *might* be blockbusters. Innovation programmes must be about delivering predictable returns if they expect to continue in times bad as well as good.

This is an important point. In the course of research for this book, I spent a great deal of time with innovators in banks around the world, both those that were successful and those not. One key theme emerged: the average time an innovation team exists is about 18 months. Those that last longer have done so because they've managed to deliver predictably, and we'll be talking about the processes needed to get to that point later in this book. All the rest were cancelled because they failed to generate sufficient returns to justify the resources they were consuming.

With this in mind, everyone imagines that if they were to create a mega-hit, another Google, say, their careers would be made. And they'd be right. But how often does that perfect

storm of technology, business model change, and consumer need happen? Answer: very, very infrequently.

Mega-hits, or the breakthrough disruptive new, is what many people imagine when they hear the word 'innovation'. The fact of the matter, however, is that real disruptions, the ones that result in long-term competitive advantage and windfall returns, don't happen all that often. Later in this chapter, I'll look at the history of disruptive and breakthrough innovations in banking. There have been some, of course, but they tend to be few and far between. Arguably, there have been only a few *really* disruptive innovations that have made a significant difference. The rest have largely been variations on a theme.

An innovation strategy that seeks returns only through disruptive breakthroughs is usually a very bad bet given how irregularly the financial services industry has actually experienced them. A far better approach is to concentrate on revolutionary and incremental opportunities.

But even revolutionary innovation has its challenges. I once had someone come up to me and explain that he'd just joined the bank and wanted to do 'revolutionary innovation'. The problem was that what he really wanted to do was *talk* about doing innovation and have someone take his ideas and implement them. Some of the things he was talking about actually *were* revolutionary. But the problem with all of them was that we'd have had to break through some pretty big barriers to execute.

Firstly, they were expensive. Revolutionary and breakthrough innovation almost always is, and money does not grow on trees. The more money you have to find to invest in a particular innovation, the less tolerant you can afford to be about risk.

But secondly, the more revolutionary something is, the more support one has to generate with stakeholders. As we'll see throughout this book, the process of doing this is a question of influence. Influence is the goodwill one has previously developed with potential sponsors. It is a scarce resource that is consumed during the process of shepherding an innovation to the point where it gets the green light. Influence and money, by the way, are often interchangeable.

So, even revolutionary innovations should be considered carefully. Does this mean that innovators should ignore them entirely? Of course not, but such investments have to be considered in the context of everything else the innovation programme is doing. A well-balanced innovation strategy will likely spend most of its money doing incremental work, certainly, but there is plenty of scope to invest in breakthrough or revolutionary innovation once the bills are paid.

Incidentally, I'm anticipating much feedback on this point. In many cases, at conferences and elsewhere, people have specifically challenged the view that banks should concentrate on incremental innovation, suggesting that incremental should be everyone's day job. Real innovation programmes, they opine, should be about changing the game. The view taken in this book isn't necessarily in disagreement with that. It doesn't matter where the innovation occurs, so long as it does. The formal innovation team might not specifically focus on it, but when you take an institution as a whole you'll likely find that most of the return on innovation investments is coming from incremental.

Ideas are the thing

Schumpeter really hit the nail on the head when he contrasted invention and innovation. It is way easier to invent than to innovate, and that's because inventing is an extremely creative, exciting exercise. Innovation, on the other hand, is mainly about hard work. It's about execution, or in other words, actually doing things.