



New Approaches to 'Big' Problems



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Famous American-Canadian 'cyberspace' writer William Gibson once said: "The future is already here, it is just badly distributed."

Complexity science is touted as being the next evolution of business thinking. It follows the principle that different problems require different approaches and it is often the obdurate business issues that cause the biggest organisational headaches. International research organisation, Cognitive Edge is using cognitive science to rejuvenate management practices to better equip organisations to address these big problems. Where traditional approaches have failed to deliver success in decision making in times of change, Cognitive Edge techniques enable the emergence of fresh and insightful solutions seen from multiple perspectives.

In this article, co-authored by Tony Quinlan, from Narrate, which is part of the Cognitive Edge network and Andrew Moore, DAV Management, together they explain why complexity science is so powerful as they delve into the benefits that can arise from such techniques. According to Andrew Moore, Customer Experience Management is key to retaining and delighting our customers, which is a must in today's unforgiving business environment. Moore believes that complexity, combined with cognitive science and the use of micro-narratives could be the answer to help positively manage these all-important relationships.

Increasing Complexity

A recent CEO survey released by global technology provider IBM found that 79 percent of CEOs felt that even if the recession is over they still expect the business environment to become even more complex in coming years. Business complexity is an issue that organisations need to somehow grapple with in today's fast changing, cost controlled world. But failure is unpalatable in our business culture and this often constrains us from experimenting with new ideas and radical thinking for fear that it might all go wrong. We worry about the consequences or ramifications of that letdown, not only on the business, but also on our own personal careers, rather than thinking positively about the potential success that innovation might bring. It's like trying to accelerate with the brake on.

But why should it matter if our world is suddenly becoming more complex as a result of issues such as globalisation, collaboration, environmental and green legislation and social media? Surely in our modern, technology savvy businesses we have management practices and theories in place that can help us deal with these complexities? The sad reality is that most of our management principles are based on outdated learning and old fashioned rules that haven't kept pace with the evolution of business today. Therefore in order to deal with multifaceted and intricate problems, instead of trying to put rigid controls and management practices around complexity, we need to learn to embrace uncertainty and to think about how we can turn this to our advantage.

The Cynefin Framework

But in order to do this we need to understand the differences between a simple situation and a complex one. This is where international research organisation, Cognitive Edge, helps to provide some explanations about how we should deal with different problems depending on whether they are simple, complicated, chaotic or complex and there is a subtle difference between all of these situations. For example can you predict with certainty the end result of a process? If you can't then the probability is that you are dealing with a complex situation rather than a complicated one. Dave Snowden, founder of Cognitive Edge defined the Cynefin framework which looks at the differences between each of these situations:

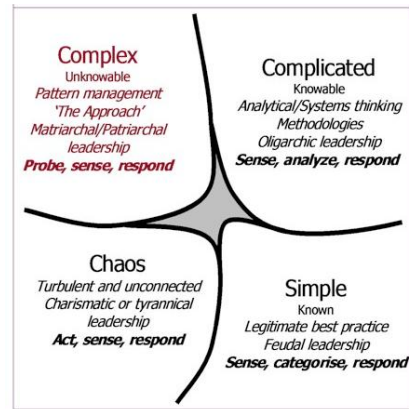


Figure 1: The Cynefin Framework

- **Simple** - cause and effect relations that are repeatable and predictable
- **Complicated** – cause and effect separated over time and space
- **Chaos** - no cause and effect relationship perceivable
- **Complex** – cause and effect coherent in retrospect but not repeatable

Simple situations

Snowden describes 'simple' as straightforward cause and effect situations. You know what is going to happen every time and you don't need to think about it. It is repeatable, predictable and you can put in place best practice and standard operating procedures to manage the circumstances. A good example of simple is many forms of customer service, in terms of the processes used to deal with customer complaints. In other words you **sense, categorise and then respond** to your circumstances.

Complicated processes

When the state of affairs starts to get more complicated, cause and effect still work but these are then separated over time and space. In addition something might get changed, but this does not necessarily change what is around it. This is where more analysis is required, more scenario planning or systems thinking in order to achieve the right outcome. And the process is repeatable and predictable – ironing out small changes at the start to produce the same end result. For example take our bank accounts system which is influenced by dynamic exchange rates. This is a complicated process that you need to think about and put a process in place but it does follow a formula. So where complicated is concerned the approach is usually **sense, analyse and then respond**. It has traditionally been when we turn to experts and consultants to help us.

Chaos

Where chaos is concerned you can't see any discernable cause-effect patterns. This is where people are just interacting with each other but there is no controlling influence. It is all disorder and pandemonium. You can't see what is going on but you know you need to take action, to intervene in order to create some stability. Often this is crisis management, where you **act** first, **sense**-check and then **respond**.

From the diagram of the Cynefin framework, there is an important point to be made about the Chaotic domain. The transition between most of the main domains is a progressive transition: simple processes become more complicated to take into account changes, etc. Between the Simple and Chaotic domains, however, there is no transition – there is a cliff-edge. Processes that have been repeating predictably over a period of time often fail to notice that the environment around them is shifting – moving the process to the left, towards the Chaotic domain. At a particular point, that shift tips into Chaos – complacency has led to a crisis where dependable processes are making the situation worse, not better.

Complex environments

Complex situations arise when there are many small causes that interact and interweave to produce an end-result, but no one cause is dominant. People affect their environment and are in turn affected by it. Small changes at the start are magnified (not cancelled out as they are in a complicated situation). With the benefit of hindsight you might be able to see where, when and why things have happened and how you could have dealt with a particular situation but at the time it was erratic and novel – and processes to prevent it next time will miss, because the next time it will happen differently. The patterns are hard to read because the environment is continually adapting and changing and you can't measure it at a point in time – it is constantly evolving. This is known as a complex adaptive system.

Complex situations frequently occur when you are dealing with people because they are inherently unpredictable and often driven by emotion. Faced with these conditions **probe, sense and respond** is the way to understand your situation. One way of measuring the diversity between complex and complicated is to ask whether you can predict with certainty the end result of the process (and by the way 'hope' doesn't count!)

Although we have just described four different situations and given four different ways to address each as to how you could approach each one, the problem is that you can't simply put each of these conditions into a box and assume that everything will be the same as it always has been. All too often the boundaries blur and if you are not attuned to the environment shifting then suddenly what was once classed as simple or complicated has now changed so much that everything that you do to categorise or analyse the circumstances simply doesn't work anymore. You have got stuck in a pattern and now the world doesn't work that way - and in a business context this leaves management panicking. A classic example is social media and the impact this has had on customer service and complaints.

In the good old days a person would phone a customer service desk and if an agent didn't pick up the call, no one would ever know – bar a very dissatisfied customer who might complain to friends and colleagues over a drink in the pub. Now the customer with the complaint can broadcast this lack of service in seconds across Twitter and via blogs and 'me-too' dialogue can erupt immediately, which the customer service team is powerless to prevent and suddenly needs to move very quickly in order to calm or diffuse the situation. An organisation's reputation can be destroyed in seconds, which is why marketing departments are now placing a close watch on Twitter and its tweets.

Open To Interpretation

In particular, soft or people-based issues are hard to nail down with accuracy which is why they are deemed as complex. People's actions or thinking will be different depending on the timing and environment they're in – and these differences may dramatically change the effect of what we do. So small differences are not smoothed out, but magnify and combine.

How one person feels on a particular day could be down to whether they got out of the wrong side of the bed and got stuck in traffic on the way into work. Or they could wake up feeling fantastic, and therefore this produces a completely different outlook and a completely different set of results when surveyed because that day they happen to have a positive mind frame rather than a negative one. So if you are trying to measure customer experience and how positively a customer feels about an organisation this can be incredibly hard to achieve using established survey or research tools.

Another factor is that abstract values and issues that we talk about as being universal – and universally understood – rarely are. It is important to remember that abstracts are not communication, and words or phrases like value for money, or responsiveness are very difficult to measure and quantify but often these are the areas that need to be improved in order to take a company from a mediocre to an outstanding performance. For example what do words like integrity, openness and honesty really mean? If someone is passionate for example – one person could interpret meaning to this in a totally different way from another. Even the dictionary definitions are vague – *'Passionate: having or expressing strong emotions.'* One could ask how strong, what sort of emotions, how were they expressed? It really is open to interpretation.

How Can I Understand More About My Customers?

What do we mean when we talk about customer experience? The idea of a 'customer experience' was first introduced by two authors, Joe Pine and Jim Gilmore, in a Harvard Business Review article in 1998. They suggested that successful businesses influence people through engaging, authentic experiences that render personal value. With products becoming commoditised, price differentiation no longer sustainable and customers demanding more, companies must be focused on delivering superior customer experiences as the single most important aspect in achieving success.

Customer experience is an organisational mindset. It's not something a business buys; it's something a business develops. It refers to the totality of experience that a customer has with a business, across all channels and touch-points. Though the business community increasingly recognises the importance and power of customer experience to drive innovation and positive financial results, most companies have not successfully embraced it. This is because becoming customer experience-driven is not easy. It's more than just embracing the power of design, or building empathy for your customers by observing them. Truly embracing customer experience is a process, one that requires fundamental shifts in how your business behaves and is organised.

As they do not understand customers and customer experiences, most organisations are focused on selling products and services. As a result, they are divided into separate silos for R&D, manufacturing, sales, marketing, distribution and customer service. The end result is a fragmented and unresponsive customer experience, delivered to a target audience defined by a marketing tool that was developed for a market environment that no longer exists.

To understand more about what will delight the customer, what is needed is deep understanding of customers' real perspectives and experience. But this is where traditional forms of research tools fail, particularly if you are trying to get at softer issues or to better understand moods and trends within your customer base. Traditional tools tend to show us only what we are looking for because the questions are skewed in such a way that they steer respondents down a particular path. Questions are geared towards what you want the outcome to be or what your database system can actually cope with.

More often than not the answers you get from more traditional forms of research are based on averages, so these are probably completely out of context and don't provide a complete picture. We create structure and surveys around what we think the problem is and this means that we often miss the elephant in the room i.e. the real problem and, frequently, the real, easily-implementable, high-value solution. If you are using such research tools to understand customer patterns and customer behaviour in order to provide a better service to your users, this could be taking you down a blind alley.

This begs the question as to why do we do this form of research in the first place? Do the numbers just help to justify the case or justify ourselves? Do they really help us to measure our success with customers? The answer tends to be that this is as much as we were able to do – and fitted with how we ran our business. Today, however, our thinking about business is changing, and alternative methods of understanding customers are opening up new opportunities to increase customer loyalty.

Let Me Tell You A Story

In such customer related situations, where you are trying to get to the nub of real issues and negative/positive input from customers, this is where we believe free comment and narrative are extremely powerful. New approaches based on “micro-narratives” (fragments of qualitative information) give unique insight into what the customer actually meant, rather than forcing them to comply with an answer regime that doesn't equate to what they really felt.

Why narrative? It's a natural human process, sharing stories helps us to make sense of situations and this is an inherently human way of expanding our knowledge. If we tell stories of good and bad experiences, others not only learn from these stories, but they retain the knowledge much longer because these stories carry context, knowledge and meaning. But how do you get to that level of granularity and is there a practical way to capture those all-important customer experiences at the time when they happen? There is – and a way to get feedback within hours to highlight the issue. The timeliness of the new approach makes it all the more valuable - wouldn't it be better to understand how that disgruntled customer feels immediately rather than survey them three months down the line when they may have already switched to another brand?

Cognitive Edge research techniques focus on capturing the micro-narratives of people's day to day existence (such as conversations in the supermarket checkout queue or around the office water cooler) through which organisations can filter their decision making. This can be blended with a wide variety of data from other, more traditional sources in both structured and unstructured formats. The resultant data is then indexed by the participants themselves based upon some points of orientation that help make sense of a situation – these are known as signifiers. The signifiers are a way for participants to add meaning – and prevent others from inadvertently misinterpreting the customers' stories.

A Radically New Technique

Stories and their associated signifiers are subsequently entered into Cognitive Edge SenseMaker™ for analysis. SenseMaker is a software suite, a way of capturing and analysing vast amounts of nebulous or 'fuzzy' data. This can vary enormously from customer complaints to impact measurement for the Internet. It is extremely broad in its range but SenseMaker has the ability to spot patterns that could be buried in thousands of small stories. A dataset is produced and everything is tagged and certified, and this is then analysed for these emerging patterns.

The patterns that emerge are doubly powerful – first because the pattern is supported by the numbers. Large volumes of micro-narratives give rigorous and reliable statistical results; and second because beneath those patterns, the micro-narratives themselves illustrate the meaning – and often the simple solution. The results are therefore extremely powerful and often sway leaders who were previously fixed in their opinions. That's because once you get to look at a real example of a problem described by the person experiencing it, you see it in a completely different light. The qualitative data – whether complaints, stories, examples - are very natural and highlight differences, similarities and, often, surprises in peoples' outlooks.

This provides you with tools so that you can understand an audience, such as your customers or employees, on their terms and because the stories happen very naturally, you are able to capture unique insight that might otherwise have been missed.

A Case In Point – A Sales Force Project

To put this into context, outlined below is an example of how this works in practice. We undertook a sales-enhancing project for a recent client. This organisation was about to re-focus on an existing product, but had been given clear guidance by friendly customers that they would have more faith in the product – and more importantly would buy more – if the sales force themselves had more faith in the product. A global organisation, the salesforce were not fluent in English and we therefore were dealing with multiple languages – an important point, as we did not want to restrict the research by insisting on using English to gather information.

In the space of a fortnight, we worked with almost 100 sales representatives in a dozen cities to get under the skin of their relationship with the product. Working in local groups, they shared examples of good and bad sales experiences and they signified these examples to add meaning. By the end, we had recorded almost 200 stories (most in languages we did not understand, but did not need to at this stage) and had gathered well over 1500 perspectives on those stories – in ways that allowed us to analyse them.

What emerged from analysis using SenseMaker were – contrary to some of the early assumptions – a series of clear results that informed different organisational areas. For example, specific sales training needs were spotted; the predominance of a particular difficulty with the product (but not the expected one); issues around the value proposition for the branding team to work on; and particular issues that informed negative media stories. In addition, the very process of consultation had dramatically improved the engagement of the sales force.

A new communications plan was produced to address the real issues in the sales process rather than the standard organisational assumptions, and key stories provided both context and content. Sales training was involved once the client could see which part of the sales process was proving most challenging. A new value proposition was developed to reflect the unique combinations of what information swayed customers and where it came from the same value proposition also combated areas that undermined the product's brand.

Examples of how some reps had dealt well with objections were identified within the data and then it was a simple matter to translate the handful of important stories and share them with the entire salesforce. Previous approaches would have needed to translate all 200 stories for analysis – a lengthy, time-consuming and costly process.

From a simple intervention, we were able to analyse the attitude of the sales representative, their skill set and their product knowledge and more. And the recommended solutions were both more obvious and easier to implement.

The benefits went beyond the salesforce, as local product managers were able to deepen their understanding of local marketing issues. Induction for new brand managers will be faster and more effective in future.

In Conclusion

In today's tough economic climate, the customer is king. Hanging on to those all important customers is critical for most organisations – there's plenty of evidence to prove that new customer acquisition is much more costly than retaining existing ones. You really need to understand what your customers are thinking and the Cognitive Edge solution is geared to providing that level of knowledge. If you want to get under the skin of your customers, to know what they really think about your organisation, products or services and to hear and understand them clearly amid all the noise, this complexity-based approach will provide the answers you are looking for.

The good news is undertaking such a programme of discovery won't break the bank. Indeed, working on small, focused projects is a positive advantage – allowing you to do more with less and see where easy changes can improve your ROI. With built in fast feedback loops you will be able to get the benefit of true customer insight quickly, enabling the early detection of opportunities to develop and threats to eliminate. Often the earlier these are seen, the cheaper the solutions – and the greater the potential for competitive improvement. And, since the process is repeatable, you can move on to transform your business in other areas.

In our world today, competition is fierce. Everyone is vying for the customer's attention by few are seeking to truly understand their customers. By embracing this approach you'll not only get a level of insight into what your customers really think about you that other techniques can't provide, but you'll also be able to detect those early trends, both positive and negative, that can have such a huge impact on your organisation. Better customer understanding, greater potential opportunities and fast response – all elements that will improve your bottom line.

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