

The Organisation (working title)

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In all phases of my work I was conscious of the need for balance, and I did my best to find balance in both the long and the short view. Broadly I think I can say that I applied the principles of balance in design, in business and in the pleasures that I enjoyed.

Olin Stephens, All This and Sailing Too, 1999.

Introduction

This document is a bricolage of articles that have a common theme – the organisation. Each chapter is short and explores one element of the organisation. These were each written over the course of 2010 to explore different aspects of organisation and address a series of challenges. Each of them at the time addressed an issue and I used them to explore alternatives. This draws on aspects of Checkland's Soft System Methodology where a system is explored via a series of perspectives which allows the system to be bounded that is to be explored. The order of these chapters is –

Organisational purpose - an early comment was that the papers did not address the purpose of an organisation. I did leave this out originally as I took the view that most organisations have an understanding of what they exist to do as it necessary in order to determine direction. I added this as a later addition as it appears some organisations do not have a clear understanding of why they exist. It is also an integral part of Ackoff's idealised design approach which is referenced in the structure paper.

Organisational structure – I believe structure should reflect purpose and this section reflects on purpose and the structure of the organisation. It looks at organisations from a bounded systems perspective and includes elements of Elliot Jaques's and Ackoff's respective works on organisation structure.

Organisational culture – this explores what defines culture and how it can be established. This is not focused on change in the traditional sense but it looks at the role of storytelling. Jack Welch the CEO of GE said "What really counts is that I'm Irish and I know how to tell stories".

Mental models – or should that be executive engagement – this looks at the role of mental models in the organisation and in particular the engagement of the executive and the formation of strategy. Leadership is about vision and direction which must be consistent with the organisations strategy. In today's environment strategies are no longer written down and handed down but are dynamic in nature.

Employee engagement – too often extrinsic motivation is the key means of employee engagement, that is larger bonuses but this ignores the lessons of the past and the value of intrinsic motivation. This section explores this and also considers the use of positive physiology to support employee engagement and motivation.

Supplier engagement – the other key element of any organisation, and no more than today in the age of outsourcing, is that of the supplier. Typically they are managed by procurement and the objective is obtaining the lowest cost. This ignores the wider issue of the both value that can be derived from good relationships and the criticality of such relationships. This section explores alternatives to the traditional approach which is based only on price.

Case study – this look at a case study about the use of A3 reporting in design governance. The original paper addressed this via process but it is reproduced here so that the organisational perspective can be explored. This was strong motivator at the time but I did not believe anyone would be interested in reading the paper if it had a lengthy discourse about the physiology motivations for the approach.

The Nobel prize winning physicist Richard Feynman said that all he brought to bear was a different set of tools. I hope you find some of the ideas and tools of interest.

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Organisational Purpose

Introduction

Ackoff saw organisations as purposeful systems (Ackoff) as they are systems that determine both the means and the ends for which they exist, that is they can determine what they can determine the what and the how. Deming also had similar views but went further in saying that a system without an aim is not a system (Deming, 1993). Therefore we can think of organisation as a systems as such they need to have a purpose for existence. When we come to discuss purpose there are a lot of words that are bandied about, such as mission, purpose, vision, objective, goal, but what do they mean and how they relate to each other?

Goldratt maintains that the purpose of commercial organisation is to make money now and in the future (Goldratt) but this is a necessity and not sufficient for organisations to survive. The need to make money is self evident and not a purpose which Stephan Haeckel made clear in discussion (Haeckel). It is similar to saying that we need oxygen to breath but we do not exist to breath. We hopefully exist for other reasons! The purpose should reflect the ideals of the organisation and define it reason for existing. Where Goldratt and Senge uses purpose of an organisation, Ackoff uses the term mission. I think of the mission statement of an organisation as encapsulating the purpose of the organisation and making it clear why it exists.

There is a need to understand the purpose of the organisation as it allows direction to be understood. Deming identified lack of constancy of purpose (Deming, 1982, 97) as the first of the seven deadly diseases that most organisations suffer from. We also see the concept in Boyd's work on manoeuvre warfare (Osinga) where he used the German word Schwerpunkt which broadly means focus/direction. This definition of mission is more common from a business perspective although Boyd used mission as meaning the contract for an engagement of an objective. He advocates the use of Schwerpunkt to link all the levels of an organisation so they can operate at their own rhythms without pulling the whole apart which can be interpreted as purpose.

The vision statement is distinct from the mission statement, where as the later is based on ideals, as it defined the purpose, the former should be concrete. The examples that Senge gives (Senge, page 138) of mission and vision statements are of "advancing man's capability to explore the heavens" versus "to land a man on the moon by the end of the decade". We can see that vision supports the mission statement and moves us in the direction but as the mission is a statement of an ideal it will never be obtained. The vision encapsulates the goal, or goals, which the organisation strives to obtain in the longer term.

Senge talks of creative tension caused by the difference between the vision and the current situation. This gives rise to a series of intermediate objectives that allow the organisation to achieve the goal. Ackoff points out that (Ackoff, page 81) the use of the terms objective and goal can be reversed, and in fact he advocates using them in the other way, but this does not matter as long as we are consistent. I have chosen to use mission (to encapsulate purpose), goal and objective as this aligns with their usage in the theory of constraints (Dettmer).

Definition

Have clarified the terms and outline the need for a mission statement that encapsulates the purpose of the organisation but we need to look at what constitutes one. Ackoff typically started his interventions by reviewing the mission statement of the organisation. This is not just because it is critical to have one to ensure that direction can be validated but also he found that most mission statements are hog wash and have little relevance to the organisation itself. The statement must be something that everyone recognised and in time associates with the organisation. He outlined five criteria by which to assess an organisation's mission statement.

- It needs articulate the reason for the existence of the organisation and its ideals
- It should articulate the means by which the organisation will pursue its reason for its ideals
- It should formulate the ways in which it will service its stakeholders
- It should meet the preceding requirements in ways that engage all its stakeholders
- It should establish the uniqueness of the organisation

Although I have seen many mission statements there are few that I think meet these criteria.

Conclusion

I hope that this has clarified the use of some ubiquitous business terms and provided a justification for a mission statement. I also hope that the criteria should allow you to assess the value of any such statements and understand where they are deficient.

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Organisational Structure

Command and control is dead. Management in the classical sense is dead. That is scary, very scary, to boards.

Ben Verwaayen, Chief Executive, Alcatel-Lucent

Introduction

An organisation is a system and therefore it has a function, or functions in the wider context, such as creation and distribution of wealth to its shareholders (a necessity but not sufficient for an organisation) but it also undertakes activities to fulfil its functions. The defining characteristics of a system are (Ackoff, chapter 1) -

1. The whole has one or more defining properties or functions – if an organisation this could be the making and distribution of money
2. Each part in the set can affect the behaviour or properties of the whole – the elements of systems are inter-connected and this connectedness means that each individual part will affect others
3. There is a subset of the parts that is sufficient in one or more environments for carrying out the defining functions of the whole; each of these parts is necessary but insufficient for the carrying out of these defining functions – not all the elements of the system such as payroll may be necessary to support the defining function and for those parts that are necessary these are a critical set needed to support the defining function
4. The way that each essential part of a system affects its behaviour or properties depends on (the behaviour or properties of) at least one other essential part of the system – the necessary parts of a system are essential and by definition they will affect other elements of the system
5. The effect of any subset of the essential parts on the system as a whole depends on the behaviour of at least one other such subset – these individual subsets of parts are also interconnected and will affect each other.

Organisations are purposeful systems as they are responsible for both the means and the goal (the end). The function relates to purpose and is what management is about whereas activities are about control which is the actual work. This distinction is very important as management is orthogonal to control. Also as an organisation is a system its function is dependent upon the interaction of its elements to fulfil its functions. In other words the whole is greater than the sum of the parts therefore it cannot fulfil its function(s) without these elements and these elements need to be considered and optimised as a whole, not in isolation. Myron Tribus (Tribus) has summarised this in his perversity principle: If you try to improve the performance of a system of people, machines, and procedures by setting numerical goals for the improvement of individual parts of the system, the system will defeat your efforts and you will pay a price where you least expect it.

Types of Organisational Structure

Elliot Jaques work in this area has been primarily to define the capabilities of the level of management in terms of time horizons. You could argue that this is an argument for hierarchies but this is missing the point. Organisations need purpose and this is given by direction. To provide direction there needs to be someone who can construct a view of a future reality that is compelling and which can be brought into by the employees of the organisation. This requires someone who has what we commonly refer to as vision; they can outline what the future will look like and articulate a roadmap for getting there. His stratum of management are summarised below and is what he refers to as a managerial accountability hierarchies (MAH). As an aside it is quite common for the people who start an enterprise not to be the person who will float the organisation and it may be the case that these people are operating at a lower stratum and cannot develop a long term view that is necessary for the growth and success of the organisation.

Stratum	Time Span of Discretion Period	Example Role
Stratum 8	50 – 100 years	Mega corporation CEO
Stratum 7	20 – 50 years	CEO
Stratum 6	10 – 20 years	EVP
Stratum 5	5 – 10 years	President
Stratum 4	2 – 5 years	GM
Stratum 3	1 – 2 years	Unit manager
Stratum 2	3 months to 1 year	First line manager
Stratum 1	1 day to 3 months	Shop and office floor

Molupe Thelejane in his master thesis (Thelejane) reviews Jaques approach and that of Weick on sense making to see if they are complimentary. His conclusion is that Jaques's MAHs enhance sense making in an organisation and therefore can support the adaptive and flexible structure that is require to meet today's demands. Hierarchies have value and will continue to exist for sometime.

This defines our traditional view of a hierarchical from a control and direction perspective. The definition of this goal and direction is the responsibility of the management (more on this in the next section). But not all organisations operate in a pure hierarchal manner and Tappin and Cave explore this in the 'The Secrets of CEOs'.

They refer to a network of interconnections which have come to be called heterarchies¹. These are over lapping hierarchies or what can be thought of as loosely coupled directed graphs. Ogilvy referred to this in the follow manner – “heterarchy represents a balance between a need for some hierarchy, combined with some need for the lateral, horizontal links in a network of relationships”. Work in most organisations rarely involves only one functional unit and trust relationships have to be established across the functional units to enable the work to be carried out. As the saying go 'trust trumps structure every time' and heterarchies are a realisation of this.

As an aside it may also be that hierarchies are a reflection of our reductionist approach to problem solving. We break things do into the manageable chunks in order to allow us to deal with complexity.

¹ The term heterarchy was first used by James Ogilvy in his *Multidimensional Man: Decentralising Self, Society and the Sacred*, Oxford 1977

Karen Stephenson's work is interesting in this area and her article titled 'Neither Hierarchy nor Network: An Argument for Heterarchy' explores the role heterarchy. Networks are not addressed separately as they are a way in which a traditional can hierarchy function and are not a different form in itself. They are supported by Jaques model as means of achieving work and problem solving.

There is one more type of structure that we needs to considered. Gerald Fairtlough in his book *The Three ways of Getting Things Done* put forward the theory that there is three and only three ways of getting something done – hierarchy, heterarchy and responsible autonomy. The later is where an unit of the organisation is given autonomy to achieve an objective. He goes on to point out that most organisations are mixture of these three styles of management. Most traditional organisation will be largely hierarchical with some heterarchy and a small proportion of responsible autonomy. This may also be mixed at different levels of the organisation. Most boards by nature are heterarchical as the members need to collaborate to achieve the objectives of the organisation. At the division levels responsible autonomy may apply but this can only be the case if there are no dependencies between individual divisions of the organisations. We should note Jack Welch quote about hierarchies as places where "everyone has their face toward the CEO and their ass toward the customer."

This leads on to the next section which considers the work of the system. The following two sections discuss a couple of aspects of structure before coming back to the systemic nature of organisations.

Responsibility versus Authority

Responsibility cannot be delegated if you are held accountable, only authority and this can be pulled. You are responsible for the commitment or promise that you have made and these define the role that you play in the organisation. This responsibility cannot be assigned to anyone else other than by the person who in turn assigned you the responsibility (you may not have been successful and your manager reassigns the task to someone else). The corollary of this is if you could delegate the responsibility that you have then there is no value in the role that you fulfil! You may assign responsibility for elements of your responsibility, such as the data architecture, but the sum of these responsibilities, your responsibility, continues to lie with you.

The challenge of many organisations is that there is often a misalignment between responsibility and authority. You may have been given the responsibility to transform a function but the function is partially dependent upon another element of the organisation for which you do not have authority, therefore there is a misalignment. Covey discusses this in his book (*Covey*) and differentiates this as the sphere of control which is contained within a sphere of influence, which in turn resides within an outer sphere within which you neither have control or influence. This leads to a lot of issues in most organisations. This can be addressed by exploitation of the heterarchical nature of organisations or through pulling of authority.

Heterarchical nature of an organisation allows trusts to be established and exploited to help achieve your objective. David Anderson explores this in his paper on collaboration (*Anderson*). In most organisations this issue of authority is addressed through negotiation, which may be realised as the negotiation of a service level agreement between the respective parties but such agreements lead to loss of flexibility and locking in of cost. The lack of flexibility comes from no need to respond till the time specified in the service agreement and the locking in of cost comes from the need to maintain a

element of the organisation to service the request in the first place. A better approach is one of collaboration which implies acknowledgement of the inter-connectness and the resultant co-dependencies between elements of the organisation.

The other alternative is the pull based authority model which underpins the Toyota management approach. This is achieved through the use of A3 reports which enable stakeholders' engagement and support. The proposed action is documented and all the stakeholders identified. It is down to the author(s) of the proposal to engage the stakeholders to gain buy in to the proposal. In this context support of a stakeholder amounts to the delegation of authority by them to empower the proposers to complete the action or task. This model works well for small incremental changes and can be very effective (see the case study at the end of this document).

Team Size

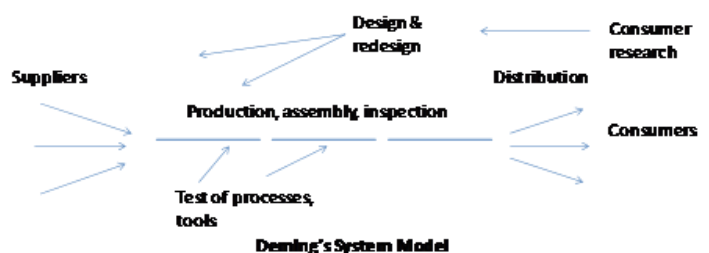
The traditional approach when designing an organisation structure is to keep the number of direct reports to five to six at each tier. Starting off with a CEO and a team of five to six covering the major divisions, finance etc, and each of these in turn having five to six reports. In an organisation of 10,000 this means that there needs to be the order of seven tiers of management. Elliot Jaques points out that there is little (Jaques, page pair 97) evidence for this. His view is that the size of a team is solely determined by the number of people that the manager can provide effective direction to, therefore team could be as large as fifty if the task(s) are simple.

This is a view that is shared by Ackoff (Ackoff) who points out that the average span of control in America is three while it is six in Japanese corporations. His view is that this is related to the number of separate activities which relates back to Jaques ideas of complexity. It is the combination of task and complexity that becomes the determinant of the size team.

This means that one to two tiers of management can typically be removed if this more flexible model is followed but most organisation typically still have six to seven tiers. A board of directors, a CEO, head of function, senior managers, manager, team lead and members.

The Responsive Organisation

The first section considered the major ways in which organisation are structured but it also noted that they are purposeful systems, that exist to fulfil a purpose. All the text above has been based on the traditional structures of organisations with separation by function, but work doesn't sit in isolation within a function of an organisation, it flows across an organisation. This flow is related to supporting the activities the organisation undertakes to fulfil its purpose and is orthogonal to the management of the organisation. This is highlighted in Deming's page 4 model of an organisation (Deming) which shows work flowing from left to right and with feedback being provided to the organisation to support enhancement of the product or service.



The traditional organisation models were of a command and control model but this model has become outmoded. This is because in a knowledge lead environment the employee is likely to know

more about the how than the manager² and the rate of change in the environment does not allow every decision to be deferred to the executives of the organisation. As Darwin said it is the not the strongest or the most intelligent that survive but the most flexible.

The organisation of today needs to be responsive to the environments in which it exists. We need a more flexible and responsive model for the 21st century. This is something that Stephan Haeckel explores at length in this book on the adaptive enterprise (Haeckel), what can be called “the market-based adaptive enterprise”. What the enterprise or organisation needs is an ability to anticipate and adapt to change in the market place to ensure its survival and longevity. This means as Ackoff says that “management should be directed at the interactions of the parts and not the actions of the parts taken separately.”

Organisations need to allow clients to pull services or products on a demand model. The organisational structure also needs to acknowledge and support directly the activities that are needed to meet this demand and to fulfil the purpose of the organisation. The purpose may remain to ‘making more money now and in the future’ (Goldratt) but it does this by providing products and/or services to its clients.

At the organisational level there are typically only a small set of discrete activities that are undertaken and the structure should support these. These are the core things that are undertaken in fulfilling the objectives of the organisation and relate to the function of the organisation. It is typical in Soft System Methodology see around 5 to 7³ and other approaches also exhibit a similar characteristic (Merrifield et al). Work needs to be considered first and the structure secondarily. The frequency of these discrete activities also need to be considered as this determines the capacity that needs to be provided by the system.

At this point we diverge as each organisation is unique (if it wasn’t then its purpose could be fulfilled by some other organisation, may be a competitor) and therefore it should be acknowledged that the organisational structure to support these activities is likely to be unique. Instead of providing a generic solution there is a generic approach that can be taken. The approach advocated is the use of Ackoff’s idealised design. The following is an introduction but a more complete description is contained in the appendices.

The approach is based on the premise that we are not good at prediction so it is more sensible to focus on how we would structure the organisation using existing technology but ensuring that the resultant design can change to accommodate changes in the environments. It does this by taking a different track and assuming that the system that exists has been destroyed. Therefore there are no existing assumptions that need to be taken into account⁴. There however are two constraints and

² Drucker noted as early as 1949 in his book, *The New Society*, that subordinates were beginning to show signs of possessing more knowledge than their superiors.

³ It is interesting to relate this to George A. Miller’s magic number of 7 +/- 2 and postulate that the number of activities is related to our cognitive ability and therefore this is why organisations and organisational elements only undertake a small number of discrete activities.

⁴ Ackoff’s maintains that our imagination is limited by unconscious assumptions that we, as adults, make. Creativity is the result of ignoring all assumptions and exploring the domain of the possible.

one requirement; namely it must use existing technology as we what to realise the design now, it must be operational viable as it must support existing law and it must be flexible, by design, to support changes in the environment. There are two phases which are -

Idealisation – the outline of the mess⁵ that exists and the specification of an ideal system, followed by design of the system

Realisation – consideration to the means of achieving the proposed design, review of resource requirements, implementation and monitoring and control

This gives rise to an organisation that is focused on the work (the necessary functions) and the structure that is necessary to support these elements. The organisational hierarchy then be built to support the lower level functions, reversing the traditional approach.

This is an approach rather than a solution, as noted above, with the structure dependent upon market demand. The knowledge of the organisations can be used to develop the idealised structure and then to work backwards, not forwards, to understand how this can achieved.

Ackoff does maintain, however, that the idealised structure typically has a number of common characteristics. These are the use of a democratic hierarchy enabled by boards, an internal market economy which avoids the need to bench mark anything, a multidimensional organizational structure that removes the need to restructure periodically along with embedded learning and adaptive support systems. It also explains why benchmarking is not very effective. When considered as systems, no two organisations are the same and therefore what works for one will not necessarily, and probably will not, work for another. Each has to find it own strategic measures that in turn can be used to derive a set of appropriate operational measures for the elements of the organisation.

This article was intended to provide a view on the existing management structures of organisation and to highlight that work flows across the traditional functional structure. Acknowledging this allows us to explore alternatives structures that provide support for the purpose of the organisation.

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Organisational Culture

Introduction

Gregory Bateson (Bateson) saw human culture as a living system arising from the integral relations of humans in communication which give rise to perspectives, values and social behaviour. He told an old story which goes: a man wanted to know about mind, not in nature, but in his private large computer. He asked it (no doubt in his best Fortran – remember this is an old story!), "Do you compute that you will ever think like a human being?" The machine then set to work to analyze its own computational habits. Finally, the machine printed its answer on a piece of paper, as such machines do. The man ran to get the answer and found, neatly typed, the words: THAT REMINDS ME OF A STORY. The abstraction that we call 'culture' is defined by the types of behaviour that we expect and stories encapsulate our culture. This theme is also picked up in story telling in organisations (Brown et al).

Mintzberg refers to culture as the soul of an organisation which holds it together and gives it life. Culture is a function of the values (what is important) and beliefs (how things work) of the people who inhabit the organisation and leads to behavioural norms (how things are done around here). It is important as it determines how people will act on a day to day basis. Sense making (Weick) in organisations amounts to developing an understanding of values and beliefs so that you know how to act and fit in with the culture. These are the true values and beliefs of the organisation and necessarily the ones that are espoused (Argyris).

Senge (Senge) quotes Hanover's CEO Bill O'Brien as saying 'In the learning organisation, the new dogma will be vision, values and mental models'. Therefore we need to look at the values that in turn will drive the behaviours that we desire in an organisation to establish its culture. For example of some core values we can look at the ones that McLaren's have defined for their organisation (McLaren) -

- **We win:** We rise to every challenge and strive for success. We maximise our chances through continuous investment, development and improvement and working as a team.
- **We make things happen:** Anything is possible. We push boundaries and challenge each other. Others watch what we do and follow our lead. We are known to be innovators and pursue opportunities for growth.
- **We take it personally:** It is personal here. We understand how each one of us contributes to the whole picture. We are professionals who take pride in our work.
- **We work together:** We achieve our goals by building positive relationships; internally across our business and with our partners and customers.
- **We enjoy what we do:** It feels good to come to work. We recognise that we work in an extraordinary environment and we are proud of our business and our brand.

These are largely what you would expect from a winning team, namely – perform (we win), challenge (we make things happen, we take it personally), collaborate (we work together) and fun (we enjoy what we do). McLaren are a company who culture reflects their values. If the culture is well understood and supports the goals and objectives of the organisation then a change in the CEO does not mean a change in culture. This is what has happened with McLaren in 2009 and recently with both Google and Apple with their respective CEOs stepping down.

Defining Culture

Weick and Sutcliffe (Weick, Sutcliffe) put forward a view that culture is a 'has' (set of behaviours) that becomes an 'is' (the values and beliefs). This means that behavioural norms should be thought of first and that the values and beliefs will be derived from them. This is consistent with Covey's saying of 'start with the end in mind'. This was probably the case for McLaren as it is highly unlikely that they sat down when they formed the company and said these are the value and beliefs that we want to operate by. These have been derived based on what they found underlie the types of behaviour that has allowed them to succeed and excel in motorsports.

This is why for many organisations the values and beliefs that they claim are merely platitudes and not reflective of the behavioural norms. They are ones that have been defined as part of the engagement of a consultancy and although they are espoused they are not the ones in uses within the organisation. The values and beliefs need to be derived from the behaviours that the organisation finds desirable and resonate with people engaged in the organisation. Nothing undermines this quicker than senior management behaviour this is not consistent with the values and beliefs of the organisation which in turn leads employees to question the espoused values and beliefs. If you have openness as a value this about more than just have an open door policy. It is about accepting and acknowledge the value in candour as it allows difference perspective to be put forward and to understand what is going on in the organisation on a day to day basis.

Storytelling uses anecdotes and metaphors to help establish and reveal the values and beliefs of the organisation. This aids sense making and helps people understand what is expected of them. There is a story about Gordon Bethune, the CEO who managed the turnaround of Continental Airways, which shows the power of the metaphor. He was talking to employees about the bonus they would all receive if planes departed on time. One employee asked why the bonus was being paid to all employees when a number were not involved in the handling of planes. He pulled up his sleeve and pointing to his watch asked which part of it was redundant. This made the point eloquently that everyone is part of the organisation and they either succeed or fail together which aligned with and enforced the core values that he wanted for the organisation.

Cultural Change

The traditional model of change is that it must be instigated and supported by senior management and that is largely imposed on an organisation. Culture cannot be changed in such a way as it challenges people beliefs which are very deeply held. It was noted earlier that Weick and Sutcliffe believe culture is a 'has' that becomes a 'is'. To effect cultural change the 'has', or behaviours, need to be changed and this creates a creative tension⁶ with the existing beliefs. If this is reinforced through stories then this continues to challenge the belief and it creates the opportunity for change at the individual level. It becomes easier for the person to change their personal beliefs than to challenge or change the behaviour. In time the beliefs (how things are done) become aligned with the behaviour and values (what is important) are re-evaluated.

⁶ This is a central idea of Senge's which is about managing the gap between your vision and reality.

This needs to be enacted at all levels of the organisation so that behaviours are consistent with the values that the organisation wants.

The use of symbols can be very potent here as they act as link for metaphors and anecdotes which in turn can be used to highlight the behaviours that are desired. Gordon Bethune used the symbol of the watch to reinforce this and wrote an employee article that stressed that all the parts are necessary and although everyone thinks they are the most important, to keep it running all parts must be treated well.

Closing Notes

Culture of an organisation is important as it intangible and not easily replicated. This means that it can be a competitive advantage or a disadvantage. This is born out be examples such as Southwest Airlines who have a strong culture and ensure everyone understands it which in turn aids sense making and supports productivity. It becomes a virtuous circle.

The use of storytelling along with anecdotes and metaphors helps convey the culture of an organisation to the employees of the organisation. Culture can be changed but it needs to be done via small changes (Maurer) and the values and beliefs need to reflect and support this. These small changes can be encouraged via demonstrating the correct behaviour and supported through the use of stories.

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Mental Models and Reality

Introduction

Mental models have been known about for a long time but the concept was first written about by Kenneth Craik in his 1943 book *The Nature of Explanation*. Senge (Senge) refers to them 'as deeply ingrained assumptions, generalisations, or even pictures or images that influence how we understand the world and how we take action'. They allow us to deal with complexity as we can predict the result of our actions. An example is the traditional telephone as we expect there to be a dial tone and if so we can enter a telephone number. This will result in a ring or engaged tone and if the person is available a connection that allows us to talk to them. If the device changes then our mental model have to change. With most modern we do not pick up the phone and check for the dial tone, instead we dial the number we want to call and then press the call button. Reality has changed so our model has to change to allow us to use the device.

These are simple models that we are all know about but a lot of our mental models are deeply engrained as Senge notes. Recent research (Roberts) has indicated that we have less trust in people if their accent is different as we struggle to understand them. Chris Argyis points that although people do not [always] behave congruently with their espoused theories [what they say], they do congruently with their in use models [their mental models] (Argyis). He has found that people's behaviour is consistent with their mental models and it is not related to heritage or geographical location.

This at first may be difficult to understand but not if we look at the work of the English philosopher Gregory Bateson (Charlton). Bateson believed that we do not experience anything directly but that we receive input as reports which are filtered through our presuppositions, selective habits and assumptions formed from personal and cultural experience. The psychologists Baron and Misovich have a similar view as they note that we start with knowledge of the direct experience but as we start to name what we have seen, the names take over as descriptions of what we have experienced⁷. The name if a thing is not the thing itself, but a classification of it. Therefore it is impossible for people not to have some sort of basis as all information is being filtered and this filtering is based on an individual's mental models.

It should be noted that models are also representation of reality and not reality itself, therefore there will always be a difference – as the saying goes the 'map is not the territory'⁸. The problem comes when the model does not adequately reflect reality or is out of date, as a map can be, and therefore there is a disconnect which results in the wrong response. Senge relates the story of Detroit executives visiting a Japanese production plant and one later remarking that he had not been shown any real factories as there was no work in progress stock piled on the shop floor. The executive's mental model of what a factory did not allow him to see that the Japanese had developed a different approach to manufacturing. This new approach that would in time lead to them overtaking American in terms of market share for car sales.

⁷ Weick and Sutcliffe in their book on high reliability organisations explore the idea of delayed classification to enhance learning from the experience.

⁸ Coined by Alfred Korzybski

Scenarios and Strategy

Senge quotes Bill O'Brien CEO Hanover as saying 'In the learning organisation, the new dogma will be vision, values and mental models'. Mental models are important and will become more important as they have a strong influence over how we behave and respond to challenges. To ensure that we understand that our mental models are relevant we need to be able to test them. For this we can use scenarios (Schwartz and Cornelius et al) which allow us to evaluate proposed alternatives.

The practice of scenarios came out of Shell's strategic planning group and allowed then to move to move from being one of the smaller oil companies to become second only to Exxon during a period of instability in the oil industry. They are projections of potential realities and allow the indicators of change to be established. In doing so they allow organisations to validate their current mental models and to recognise indicators of when they may no longer hold. Although we can use SPC (Statistical Process Control) to predict the output of a stable process, with a degree of reliability, we cannot do the same with businesses. The past is not a good indicator of the future as 'all things being equal' doesn't hold. What we can do though is generate a set of scenarios that may be valid and to gain an understanding of what changes would bring them about. The idea of validity versus reliability is also a central theme of Design Thinking (Martin). They should not be regarded as a means and not an end in themselves.

When Shell started using them they would generate a large number of scenarios but they later realised that is only necessary to have three or four. This amounts to our current view of reality plus or minus one based on the key determinant e.g. the regulatory climate, cost of money etc. It is beyond the scope of this paper to provide anything other than a brief introduction to scenarios but there are a number of very good books that cover the subject in detail such as Schwartz's *The Art of the Long View*. Michael Porter also provides an outline of the approach to the development of scenarios in his book *Competitive Advantage* (Porter) based on the five competitive forces that shape an industry.

By the turn of the century scenario planning was ranked as the number one planning tool amongst corporations polled by the Corporate Strategy Board (Ogilvy). Scenarios allow an organisation to be effectively be 'inoculated' against market changes as it develops an understanding and strategies for dealing with not only desirable but also undesirable changes. A recent note by McKinsey (Bradley) based on a survey of executives, indicated that the majority (52%) only had one view of the future. It is not surprising that many companies suffered in the downturn of 2008 as the majority had not considered alternatives. Ray Ozzie's *Dawn of a New Day* (Ozzie) is an interesting example as it not only amounts to the outline of a scenario, that of continuous service and connected devices, but it is visionary in nature. The idea is simple and a good example of what makes ideas stick (Heath).

We are moving to a time when strategies are not longer written down as the rate of change is too large and does not provide the time to define, approve and deploy. This is a point made by Mintzberg in *The Rise and Fall of Strategic Planning* (Mintzberg). An alternative is to define the strategy as a commitment (the concrete vision) and a series of principles and tactics that provide guidance and the approach to realisation of the strategy. This is an approach adopted from Chris Potts' work (Pott). The realisation of the commitment is achieved via a series of separate initiatives each which must have clearly defined objectives. This approach not only provides a basis to provide

alignment but also to ignite the creativity of the people engaged in the initiative (more on this in the next paper).

Executive Intent

A common approach to support execution of the initiatives would be to enshrine the objectives in a series of balanced scorecards. This approach has a number of issues as it does not support rapid changes in strategy, that is agility, and it also enforces a reductionalist approach as the objective is broken down based on directorate⁹. To avoid these issues the approach that organisational theorist Karl Weick defined that can be exploited. This based on the concept of an executive intent script that can be used to establish the purpose of an initiative (Weick). There is a similar concept in maneuver warfare, that of Auftragstaktik, which broadly translates as mission/contract. The executive intent script is -

- Here's what I think we face.
- Here's what I think we should do.
- Here's why.
- Here's what we should keep our eye on.
- Now talk to me.

Gary Klein (Klein) translated this into the acronym, STICC: situation, task, intent, concerns and calibration. Ideally it is the programme or project sponsor who should be the person who writes this summary of the objectives. The separate components are

Situation – this is the landscape, what we face. This provides the context which is important – it may be something as simple as your competitors have introduced a new product which has the potential to reduce your revenue and impact the organisations profitability

Task – this is what I believe we need to do. What is that we propose to do in response to the situation?

Intent – what is the purpose of the task that I propose? This is the primary objective of undertaking the task and may be something along the lines we what to become the preeminent financial institution in a particular market segment.

Concerns – these are the issues that we need to take into account.

Calibration – the now talk to be me. This may cover areas such as resourcing, timescales and financial constraints. Once addressed the onerous is on the subordinate to deliver.

There is a similar concept embodied in Checkland's SSM (Soft Systems Methodology) (Checkland). In this the PQR formula – Do P by Q in order to contribute to achieving R is used to outline the problem. This formula is intended to answer the question of what? by how? and why? This is slightly different to Weick's approach as the how is outlined as part of the problem definition which is a little different to the task. This is subtle difference and in most cases should not be significant but should be noted.

⁹ There is also the need to update the balance score cards if an initiative is cancelled, which does happen!

The approach of focusing on the task leaves the how to the people you are entrusting to deliver the solution. This allows them to use their imagination in the how and ensures both that their creativity is brought to bear on the problem and also is more engaging. If someone is engaged then they take ownership and can feel pride in the outcome.

Conclusion

This paper has shown how mental model can be deeply ingrained as Senge suggests and that they do not always reflect reality. This can lead to problems as our approach or response can result in the wrong action. To address this we need to be clear on what we are looking to achieve and we need to understand what indicators will allow us to determine if your mental models are incorrect and inadequate. This will enable us to identify when your mental models may compromise our objectives and allow them to be surfaced and revised.

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Employee Engagement

Introduction

Employee engagement is an issue for most companies. In *Now, Discover Your Strengths* Buckingham and Clifton highlight that only 20% of Americans feel that they use their strengths on a daily basis. Pink in *Drive* mentions that Gallup surveys indicate that 50% of employees are not engaged at work and that 20% are actively disengaged. He goes on to quote McKinsey and Co that in some countries it can be as little as 2 to 3 percent of the workforce as highly engaged in their work. To support engagement people have to be motivated and there is now a body of evidence that extrinsic motivation, money etc, can provide short term gains but in a number of instances and in the longer term they have the opposite effect. To increase engagement we need to appeal to intrinsic motivation. This theme has been explored in the past in Herzberg's *One More Time: How Do You Motivate Employees?* (Herzberg) and Dweck's *Mindset: The New Psychology of Success* (Dweck). This is important as a lot of work is now of a creative nature where extrinsic motivation can lead to reduction in productivity and low employee engagement.

Balanced score cards have become a common management tool in the last decade. Art Schneiderman developed the approach while working for Analog Devices and introduced them to members of a research study in the early 90s which included Robert Kaplan. It was Kaplan and Norton who introduced them to the world in their 1992 article on the balanced score cards. The concept is that alignment of purpose and objectives across an organisation can be achieved by specification of objectives and goals at the various levels of an organisation. The CEO will outline his objectives and in turn each of his direct reports will take a lead from this and outline how they will contribute to supporting this and so on down the organisational hierarchy. The approach has been refined with the advent of strategic balanced score cards.

The use of this type of approach misses the point that the employees work within a system and the outcomes are a function of the system. Also it tries to decompose the system into a series of attributes (financial, customer, process and learning and growth) and assumes that these can be changed without affecting each other. Since this is a system everything is connected and therefore the system must be changed. We would be better off acknowledging this and changing the system. This goes back to the teaching of Deming and his page 4 diagram of a system. His philosophy was to focus on the quality of the product ensuring that the customer gets the best product/service that the organisation can deliver. This leads to a chain of consequences as better products lead to lower costs through reduction in defects or service calls, leading to higher productivity, which in turn leads to higher market share due to higher quality and lower prices, which leads to stability and growth of the business and ultimately more employment. This can only come from engaging the organisation's employees. Most companies also view employee performance based on a Gaussian or normal distribution although this is never the case. It implies that half your people fall below the norm in terms of performance but this is just a comparative analysis. Harvey points out that objectively evaluated performance, in his experience, is normally bi-nominal in nature (Harvey). That is to say most people are competent in the role that they fulfil but there are typically a few who are not. It is these people who should be the focus of evaluation to find out why they are not performing the role they are engaged in adequately. It may be that they lack the skills, motivation or are not interested in the role.

Pink explores this and the implications of SDT (Self-Determination Theory) for intrinsic motivation. SDT was developed initially by Edward Deci and Richard Ryan at the University of Rochester and is based on positive psychology. Martin Seligman is quoted by Buckingham as saying that he found over forty thousand studies on depression but only forty on the joy, happiness or fulfilment. This approach argues that there are three innate psychological needs – autonomy, competence, and relatedness (purpose). If we assume that the hygiene factors that Herzberg identifies such as remuneration are addressed then these innate needs to be addressed to improve intrinsic engagement. This work aligns and builds on the earlier work of Herzberg and Dweck and highlights the productivity gains that can be made if these three key principles are addressed. Autonomy relates to ability to determine the task to some extent, competence relates to the opportunity to development a high degree of mastery in a task or area and relatedness relates to feeling of contributing to the purpose or vision of the organisation. These are simple concepts but the benefits of addressing them have been shown to be significant as both gmail and Google Talk came out of the autonomy Google gives their employees.

An Alternative

The question comes how can we support these principles and provide a replacement for balanced score cards. For this we can look at Haeckel’s exploration of Flores work on commitment-based-management. What this focuses on is doing the right thing and not just doing the thing right. It defines a role in terms of commitments and accountabilities. The principle is that commitment is provided with respect to the customer with clearly defined success criteria. This focus on what the role should achieve and not the activities that typical make it up, that is it is descriptive versus a prescriptive approach (therefore increasing autonomy). This is based on addressing three key areas – desired outcome, customer and outcome. The individual role can be described in the following manner -

In my role as [role name], I am accountable to [customer] for [outcome]. The conditions of satisfaction are [deadline, measure etc].

- Outcome – this describes what is desired to be achieve instead of the tasks that must be undertaken
- Customer – describes the ultimate customer that desires the outcome which is not necessary the employee’s manager.
- Conditions of satisfaction – this could be delivery of a project or it could relate to time or cost

This approach supports an element of autonomy as the employee is responsible for how the outcome is delivered. Since the employee has discretion over how the individual tasks and how they are delivered they are free to develop their mastery. It also makes clear the purpose as it makes clear who the beneficial customer is and what success looks like. This approach support intrinsic motivation. Haeckel give an example of a typical role that was task (process) based and was one page long that had been recast using this approach. This result in a role description based on three outcomes that were desired along with relevant success criteria. Not only does this approach support intrinsic motivation it is also shorter and more concise.

Role: Solution Architect		
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Outcome	Customer	Conditions of satisfaction
Development system solution	The project manager, development and engineering groups	Design is delivered to the agree timescales, supports the requirements, compliant with relevant standards and policies and is acceptable to development and engineering groups
Development of design knowledge	Architecture group	Documentation of the design knowledge in a standard manner that is assessable to other architects

There is a large body of research that supports SDT. Similarly the practices commitment based management has been widely used. Both of these provide a sound basis for an alternative to balanced score cards. This provides an approach that supports intrinsic engagement but does it provide a viable replacement for the balanced score card? It can address the majority of what is traditionally contained in a balanced score card - financial, customer, process along learning and growth but we also need to address culture and strengths. Culture covers the beliefs, values and assumptions that should be pervasive in an organisational and makes clear the organisational purpose. The other aspect is development of an understanding of individual strengths in support of the development of mastery.

“Culture is the soul of the organization — the beliefs and values, and how they are manifested. I think of the structure as the skeleton, and as the flesh and blood. And culture is the soul that holds the thing together and gives it life force.” Henry Mintzberg

Culture should be invasive and make the purpose of the organisation clear to ensure alignment.

Conclusion

In writing this paper I also looked at Drucker’s *Managing Oneself* and it was obvious that he encompassed the same ideas that underlie SDT and that these had guided his life. He advocated knowing your strengths and developing these (mastery), being true to yourself (autonomy) and being guided by your values (purpose?). He believe these will be critical to individuals as we move into the twenty first century as career development will become the responsibility of the individual and not the organisation. This means that although this paper has approach the subject from one of employee engagement it must also be recognised that this will become increasingly important for the individual themselves.

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Supplier Engagement

Introduction

A lot of large organisations have moved to an outsourced delivery model that may be for product or services and need to consider an engagement model. This third party supplier could also be an internal supplier, which is another department. This model is not new but a lot of companies struggle to make such models work effectively and experience problems with the level of service, cost and timeliness of delivery.

This paper outlines an approach that is based on Deming’s management philosophy (Deming) which has been successfully exploited by the Japanese such as Toyota. This approach acknowledges point 4 of Deming’s philosophy – *‘End the practice of awarding business on the basis of price tag. Instead, minimise total cost. Move towards a single supplier for any one item, on a long-term relationship of loyalty and trust.’* This may sound strange but think about it – it amounts to nothing more than mapping an internal model, that of a department or team providing a service, onto a formalised supplier relationship. As David Anderson points out (Anderson) there is a need to stop negotiating and start collaborating and this is also a point that Carlisle and Parker make in their book (Carlisle et al).

Carlisle and Parker provide a number of reasons why manufacturing organisations are not competitive and identify the supplier relationship as one of the main sources of competitive advantage. Michael Porter makes a similar point (Porter) that due to the linkages between suppliers and organisations this is not a zero sum game and is a relationship in which both can gain. What needs to be acknowledged is the interdependent nature of the customer and supplier. This is a symbiotic relationship where the parties are partners – partner is derived the anglo french *parcener* which is based on the latin *partitio*. Most engagement models don’t acknowledge the symbiotic or the co-dependent nature of a partnership.

Customer supplier relationship behaviour can be explored through the red-blue game, sometimes call the prisoner’s dilemma. In this game win-win and lose-lose behaviours are awarded +3 and -3 points and the win-lose variations +6 for the winner and -6 for the lose. The evolutionary biologist Richard Dawkins in the article ‘The Nice Way to Survive’ looks at the different strategies and their ultimate outcome over a number of iterations. What has turned out to be the most successful strategy is that of TFT (tit-for-tat). In this strategy one party starts out playing red in the hope of a win-win outcome but will play the opposite of the other competitor if they don’t. This simple strategy gave the most successful long term outcome.

		Side B plays:	
		Red	Blue
Side B plays:	Red	A Win (red) +3 B Win (red) +3	A Win (blue) +6 B Lose (red) -6
	Blue	A Lose (red) -6 B Win (blue) +6	A Lose (blue) -3 B Lose (blue) -3

The concept of the organisation as a purposeful system was introduced earlier in this document. A purposeful system is one in which the system can determine both the means and the ends to achieve the goal of the system. This gives rise to four combinations of means that and ends that can be considered. With respect to your supplier you ideally want agreement on means and ends so that you cooperate to achieve the goal of the organisation. If there is agreement of the means, use of the supplier product or service, but not the ends, then you are in collaboration. If there is agreement

only of the end and not about the means, the exploitation of the product or server, then you are in competition. If there is no agreement of the ends and the means you are certainly not in cooperation. It is interesting to note that the constitutions of both America and Russia were similar in terms of the ends but they differed in terms of means.

Ends/Mean	Compatibility	Incompatibility
Compatibility	Cooperation - compatibility of both ends and means	Collaboration – incompatibility of ends but compatibility of means
Incompatibility	Competition – compatibility of ends but incompatibility of means	Conflict - incompatibility of both the ends and means

The following sections look at the elements of a more effective engagement model that acknowledges interdependence of the parties.

Carlisle and Parker observation is that an ability of a person to persuade another to do something that you want them to do is entirely dependent upon their perception of your willingness to help them meet their needs. Any such model is dependent upon trust and how do we built trust- we give trust before its due and check that commitments are met (Harvey). Trust is not something that can be enshrined in a legal agreement as it must be built. What is interesting is the current coverage of Serco behaviour to their supplies in the press. What is notable is the degree to which their major competitors have disowned their behaviour (Hurley et ala).

The Xerox example quoted by Carlisle and Parker (Carlisle et ala, 108) is an example of a company that moved from focusing on cost to one focused on quality, design and then cost. Cost is validated by benchmarking to understand what price should be. In this example the company benefited over five years be a reduction in product cost by 50%, simultaneously reduced working inventories by 75% and supplier quality rejects by 80%.

The points addressed below are those that are needed to support such a model.

Vision and Values

The first step to supporting such a model is outlining the organisational vision and values. The vision (Senge) is concrete and the values determine behaviour which in turn defines the organisational culture. This amounts to outlining the organisational strategy or direction which ensures that the parties understand what their respective objectives and responsibilities are. As noted above the willingness of the other party to meet your needs is dependent upon their perception of your commitment to meet their needs. The values are important also as they allow the parties to understand what they can expect from each other.

This shared understanding of objectives is very important as the product or service needs to allow these to be met. On the part of the customer, if the product or services does not support the organisational objectives then the time and cost of using the product or service will be higher. For the supplier if their offering does not support the customer’s needs it will need to be modified and if this is not aligned, in turn with their needs, strategic advantage will be undermined. A shared understanding of objectives ensures that needs of the respective parties are acknowledged and considered.

Quality

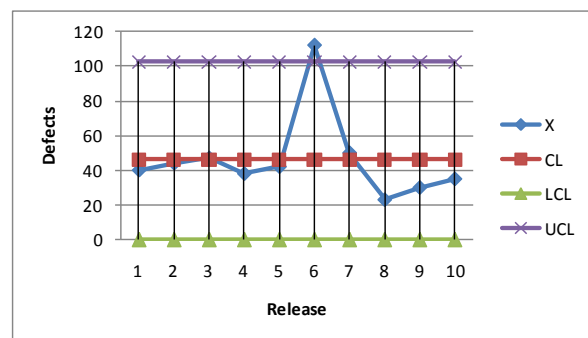
Quality is important. There was a recent example where a company had gained a one percent reduction in maintenance costs from a supplier. When the average daily cost and burn rate for the system delivery was considered this annualised reduction amounted to around five and half project

days, therefore the project would have to slip only around two months for the cost benefit over the projected live of the system to all but wiped out. Quality is important as it allows you to protect the project schedule and ensure that the business objectives are met.

To address quality it is necessary to use SPC (Statistical Process Control) (Wheeler et al) to ensure that key elements of the process, whether this is to built a product or deliver a service, are in statistical control. If a process is not in statistical control then it needs to be brought into statistical control before it can be improved. Once and only once it is in control can you start to improve a process. Therefore make small changes if the process is not in statistical control and major changes only if it is (Wheeler, appendix b). This may seem counter intuitive but a process must be stable before it can be improved. If a process is not stable then is not possible to quantify the improvement as it could be just an aberration.

The time it will take to address quality issues that may exist will dependent upon the scale of the issues, the nature of the issues, the maturity of the organisations and the level of commitment. I know of one instance that defect leakage was reduced to zero in six months (this means that customer testing uncovered no defects) and another where the service went from worst to best in nine months (Anderson).

The key metrics will dependent upon the product or services that is being provided. The above reference gives some ideas with respect to software services. The example to the right is a capability chart (see Wheeler page 46 for a discussion of natural process limits) of defects for a series of software releases. In this example the number of defects for release 6 lie outside the natural process limits. This means that something unusual has happened and needs to be investigated.



Design Support

In an organisation where delivery is undertaken internally the design of the system is part of the process. As part an outsourcing model this responsibility is split between the partner organisations typically with architecture being retain internally, to ensure strategic alignment and design being undertaken by the supplier. To ensure that the organisation knows how to exploit the product they will also develop knowledge of the product. These people are the product specialists who know how the product has been implemented and customised for the organisation. They are also typically a bottleneck as they are limited in number and their knowledge is gained from experience. Since their knowledge comes from experience of the unique implementation of the product in the organisation they are difficult to replace.

In the revised model the product development should be aligned with the organisation strategy and should be configured not customised. This means that there is no need for product specialists as the supplier can provide the necessary skills.

Cost

This aspect of the relationship needs to be considered but in the model outlined in this paper it is not the primary determinant of engagement. Cost covers all the aspects of the purchase, delivery, operation and maintenance of the service or product. The purchase cost of a system is normally no more than twenty five percent of the cost of the system over its life time. This tends to be focused on as it is easy to quantify the costs but much more difficult to objectively address quality and strategic value. The latter are also not the concern of the purchasing element of the organisation.

The organisation needs an understanding of the cost of a product or service. Benchmarking can be used to provide an indicative cost but should be accepted that such an approach is based on a number of assumptions. Each organisation is unique and therefore its individual needs need to be taken into account when considering cost. It is one of the points why cost is not the primary determinant as it is very hard to use benchmarking to provide an objective assessment. It can only provide a relative assessment of the cost of a system.

Another aspect to consider is that cost is typically based on cost or activity based accounting. In cost and activity based models the cost is broken down into a series of components such as repair and an element of the overall fixed and variable cost proportioned to this activity. This is again a generalised model as it is largely impossible to proportion the true cost of an activity to individual products or services. Again this can only provide a relative assessment.

Ownership

Another aspect that needs to be addressed is the ownership of the relationship and the question is who is the ultimate beneficiary? If the ultimate beneficiary is the customer then from the organisational perspective their proxy is the business therefore they should own the relationship. This does not mean that they need to be involved in the day to day dealings but that they need to be involved in the governance of the relationship.

Closing Thoughts

Historically companies relied on suppliers for non-core services but with core elements of the business now typically being outsourced relationship management is becoming critical to the overall success of the organisation. The large percentage of companies suffer some form of disruption and the nearly half of the majority of these fail to recover and don't last another five years (Decker). This means that suppliers are critical to the long term viability of an organisation. The principles of such a model are not significantly different from existing but it is more an issue of the mental model. The suppliers must be regarded as part of the organisation and involved in a more strategic manner.

This paper is not finished. The intention is to expand this based on feedback and to provide more examples to substantiate the aspects of the model.

Further Notes

There was a recent article (Outlaw) that pointed out that just over half of the largest UK companies make use of escrow agreements to provide access to the product source if the supplier fails. Although this paper has advocated a single supplier model based on Deming's philosophy this does not mean that unnecessary risk needs to be taken and such agreements should be in place.

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Case Study - Use of A3 Reports¹⁰ in Design Governance

Introduction

We were looking to establish a design authority as part of the governance model for a large integration programme. I had run a couple of such bodies over the preceding years and was familiar with their function and operation. They act as the conscious of the organisation to ensure the integrity of the solution from a holistic perspective and as such typically have a membership drawn from all the functional areas involved in the programme of work.

One issue that I had had with the operation of these bodies is ensuring effective decision making without getting bogged down in endless detail and discussion. I should note that discussion is essential and but there has to be a structure to ensure that a conclusion is reached. To address this issue I wanted to see if there was a more effective way of making decisions but one that also ensured that all voices were considered.

Approach

A3 reports were something that I was aware of from my research into lean manufacturing and development processes but it wasn't until a conversation with Clarke Ching [ref 1] who mentioned Sobek and Smalley's orange book [ref 2] and how useful he found it that I considered using them. This started me thinking that may be this would be an effective way to support design governance. I was also influenced by Mankin's HBR [ref 3] article on making decisions from two perspectives - one is that decisions need to be made based on the all the information that is available and that all options needs to considered. He quotes Brian Pittman, then chairman of Lloyds TSB, as saying that you need to understand what you have rejected as much as what you are approving.

This provides a structure for design proposal and a framework for development of the solutions but I also wanted to wrap into this some of Barbara Minto's thinking [ref 4]. Her pyramid approach is widely used within the consulting community and provides a structured approach to outline the situation and complications that needs to be addressed. This provides the structure to the framing part of the A3 report - left column as it normally referred to. The contents of these sections will be the background and then the current situation which includes the complication, the issue. The background is important and often overlooked. It is important as it provides the context and the starting point. In Minto's approach she then goes on to answer the questions that the situation/compilation have given rise to until they have all been addressed. Here I decided to draw on Dialogue Decision Process to ensure that all voices are considered to support the decision making process.

As part of my research I had also had come across Vincent Barabba use of a technique developed by Stanford Research Institute in the 1970s called Dialogue Decision Process¹¹. I could find little material on the web with regards to the approach and found the best reference to be the chapter on

¹⁰ The term A3 Report comes from the size of the paper and the fact only that the report uses only one side a single sheet of paper.

¹¹ In fact this can the technique can be traced back to Ron Howards original work in the 1960s on decision analysis and the formation of the SRI's Decision Analysis Group in 1966.

leading contained in his book [ref 5]. This jelled with me as what he was advocating was using changes in the decision process to improve the governance of an organisation. His experience is that this has a profound effect on the operation of an organisation, far more than any structural changes. I was also during this period reviewing the draft for David Anderson [ref 6] forthcoming book on Kanban based system delivery in which he mentions a similar experience that he had Coris through making changes to the work prioritisation process. The CEO had noted a much more open interaction between his executives and believed that the changes in the development process prioritisation had had this effect.

The DDP process is based on active engagement of the stakeholder to ensure that all the key decision criteria are identified and this is consistent with the philosophy of A3 reports where in the stakeholder management is undertaken as part of the development of the proposals. The presentation is based on the key decision criteria that are relevant to the stakeholders and may include criteria such a delivery and cost. These will differ from organisation to organisation and proposal to proposal. The key is to ensure that all options are presented and analysed. Evaluation of the original options may result in another being identified based on the decision criteria – this is the dialogue part of the process where the stakeholders are engaged.

The use of DPP is primarily intended to ensure stakeholder engagement but I also believe it is effective at avoiding group think as all parties' options are evaluated. Alfred Sloan said - "Gentlemen, I take it that we are all in complete agreement on the decision here. Then, I propose that we postpone further discussion ... to give ourselves time to develop disagreement and perhaps gain some understanding of what the decision is all about."¹²

Option/Decision Criteria	Decision criteria one	Decision criteria two	Do-ability	Cost
Option 1 - description				
Option 2 - description				
Option 3 - description				

Dialogue Decision Process Table

Although DPP does not, itself, require a recommendation, as this is supposed to come from the discussion, I prefer there to be one as this ensures that the proposer has developed the options sufficiently to feel confident in recommending one. This is also consistent with the original concepts of A3 reports. A3 reports support a pulled based authority model [ref 7] which is consist with acceptance that you cannot delegate responsibility - you can only delegate authority.

The rest of the A3 design proposal follows a typical structure with an implementation and outstanding issues sections. These are important as they outline how the proposal will be realised and therefore ensure that delivery has been considered and that there is an open disclosure of any outstanding points. The later is important from two perspectives – one we are focusing on making a decision based on good enough information as we will never know everything and secondly we are being open about

Title	Author: Date: Version:
Background	
Current Situation	
Analysis/Proposal	
Implementation	
Outstanding Issues	

A3 Report Outline

¹² Herodotus, writing in the fifth century B.C., reported that the Persians used a version of Sloan's techniques to prevent group think - whenever a group reached a decision while sober they later reconsidered it while intoxicated.

anything that we have not considered in detail and that therefore could lead to change. This later point is also important as standard A3 do not contain assumptions as these are typically just design points that have not been resolved yet and therefore they are just get out clauses.

Experience

In practice this approach has worked very well, allowing a cadence to be established that was lacking from previous forums and proving scalable as the functional leads provide the proposal review. The author presents the proposal and it typically takes 10 to 15 minutes. Decisions have to be unanimous and if not the proposal is deferred and the action assigned the proposer to address any points raised. Over a period of six months the large majority of proposals have been accepted due to the level of due diligence the process ensures. There have been only a couple of proposals deferred one to allow time for one of the design authority members to consider the proposal in more detail and one that need to be revised. What is more significant is that no additional options for evaluation were indentified from discussion. This is significant and it is the first time that I have seen this happen over this period of time.

I have had the comment that this is just design done properly. It may well be the case but the effect has been significant as we have been able to move forward with a high degree of confidence that is typically lacking from such programmes. I also found out from Hal Macomber's talk at the Sept 2009 UK Lean Conference [ref 8] that the lean construction industry has been using A3 reports to investigate design options over the last couple of years so there are other people who have had success with such an approach.

To date this approach has only been used to explore the design element of delivery but as with Toyota's use of the A3 report I believe it could be extended. This could include proposals for configuration and release management and these are future directions to be explored.

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Retrospective

This approach worked as it introduced a heterarchy to the decision making process by ensuring everyone had a vote. It also supported a pull based authority model as the authority was invested in the body. Although endorsement did not commit the project to delivery, as the body was not a budget holding body, it generally ensured that the right thing was done. In the rare instances where this proved impractical (I can think of one instance) the right thing had been identified and could be actioned at a later time. There is GDM (Global Decision Making Methodology), out lined in Geri and Ronen paper on the rise and fall of cost accounting, which provides a standardised approached

based on a set of strategic measures but this is not applicable for two reasons –one these are primarily operational decisions and are not be taken by executives, and two it is rare to find an organisation that has a clear idea of strategic measures.

H. A. Simon proposed (Ronen and Pass) that executives should function as satisfiers and not optimisers. Optimisers are people who want to evaluate all the options without regards to time while satisfiers are satisfied with a reasonable solution and do not strive for the optimal solution. This approach endeavours to encourage and support a satisfier aligned approach. The optimal solution also tends to lead to local optimisation and does not take into account the larger picture. By ensuring that context is provided the approach also helps consider the wider picture.

One of key issues we found was that people consider the template just that, a template that need to be filled in and not a guide. The use of DPP (dialogue decision process) requires the author to consider what is critical from the stakeholder perspective and use these to provide an evaluation of the options. This was addressed through coaching which is critical to support of such initiatives.

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Closing Thoughts

In writing this I have come to realise that learning and in particular what Argyis refers to as double loop learning within organisation is extremely important. This is because I have realised that double loop learning allows mindsets to be challenged and changed. Single loop learning allows the existing system to be refined and improved but not fundamentally changed which may require a paradigm change. We are starting to see this move into the mainstream and Stan Lester has articulated a framework that supports ongoing learning. If you cannot do this you are stuck to continue to fine tune your business model, but like the story about the American automotive executive in the mindset paper, you will not understand the value in alternative models and your business is destined to decline. The American's attempted to copy the Toyota approach but without understanding the cultural changes that are necessary. They took a mechanistic reductionalist and not a systems based approach and were therefore doomed to failure. It is interesting to note that Toyota shocked analysts in 1997 when they stated that they wanted to achieve 10% from other businesses by 2000. They like all businesses that have withstood time continue to challenge themselves.

These papers were not written with computer systems as a focus but as the systems, that are the organisation, become more complicated there is potentially a need to increase the complexity of the former. This comes from consideration of Ashby's requisite variety principle¹³ of systems design which basically states that in order to support more inputs a system must have more responses. A good commercial example is MBNA who foresaw the need to be able to apply different brands to consumer cards and developed a system that supported customisation through configuration. This has led them to becoming the world's largest independent MasterCard, Visa and American Express Credit Card issuer.

I wrote the original articles to explore issues that I encountered in delivery within typical organisations. Words are something that I have always struggled with as I didn't talk until I was nearly four, and I am mildly dyslexic, but I hope that I have been able to relate ideas of value in this document and my errors in grammar don't distract from the value.

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