

Critical Reflections on Outsourcing for a Mobile Communications Company

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Abstract - This discussion paper reviews the developing concepts in a major telecommunication company in the Middle East. The initial problem was whether to outsource or not, but this led to reflections on decision making, systems thinking, cybernetics and many other ethical, political and professional issues. This process of self-reflection can serve as a roadmap for decision makers and stimulate similar processes in their actions. It is important that modern scientists begin to answer the question “WHY” as opposed to always solving the ‘HOW’ problem.

Keywords - Outsourcing, Decision Making, Systems Thinking, Organizational Structure

I. INTRODUCTION

The advances in technology, software and robotics have made it easier to answer questions which begin with the word “HOW” The important issue is not how to do something but WHY are we doing it? Is it necessary? What are the consequences? Does it harm the planet? These questions are being posed by the new generation (Gen Z) and serious thought must be given to them. One problem is that any answers may affect profitability or efficiency and for these reasons that are conveniently forgotten or only lip service is paid to them. This is a discussion paper that examines these questions.

Self-reflection or critical reflection are two important practices in addressing the question “why” and they are seldom used by many scientists. This paper is a discussion paper which critically reflects on running a mobile telecommunication company in the Middle East. The principal author has a senior position in this company and was faced with the problem of how and when to outsource. This problem was solved by assembling a Decision Support System but as the paper unfolds, his reflections on what is being done are discussed. It is hoped that these reflections will be of use to others in similar management positions and more ethical and moral systems can be established.

Reflective Thinking: Change is happening at a bewildering speed and contingent with this is the perceived need to make immediate decisions. This need to act decisively is certainly present in the mobile telecommunications industry but, it must be balanced by the adage that “a decision made quickly is a bad decision”. The aim of this paper is to show that reflective thinking can be most useful. To do this, different modes of thought are needed. In this way, theory can have a positive impact on practice. Ryan and Cooper (2006) [19] observed that the more alike people are in social and cultural characteristics, the more they share tacit expectations about behavior and

professional performance. Inversely, the more disparate they are, the less they understand each other’s expectations and goals for professional and social performance critical reflection facilitates introspective learning from values, beliefs, knowledge, and experiences that contribute to perspectives of one’s self, other people, and the world. Reflection is a process of self-examination and self-evaluation that improves professional practices. The roots of reflective teaching date back to Plato and Aristotle but in the current era were actively promoted in the works of John Dewey (1933, 1938) [10] [11] who maintained that reflection is an important aspect of learning from experience. Reflective thinkers act deliberately and intentionally rather than randomly and reactively. Active and deliberate reflection and analysis can often lead to formulating new strategies for changing behavior Brookfield (2004) [7] argued that without reflection there is a continual risk of making poor decisions and bad judgments. Without reflection, decision makers unquestioningly believe their actions are completely understood by the recipients and this encourages them to continue to plan on the basis of unexamined assumptions. They then fall into the habit of justifying what they do as “common sense.” “Yet unexamined common sense is a notoriously unreliable guide to action”.

A. Critical Thinking

Reflection itself need not necessarily be critical. For example, one might focus solely on the details of the process whereas critical reflection does involve reflective thinking.

Reflective thinking is a multifaceted process. It is an analysis of classroom events and circumstances. By virtue of its complexity, it requires constant and continual observation, evaluation, and subsequent action. It is not enough to be able to recognize simply what is happening. Rather, it is imperative to understand the “whys” “hows,”

and “what if’s” as well. This understanding comes through the consistent practice of reflective thinking. (McKnight, 2002, p. 1) [14]

Critical reflection involves a deeper, more intense probing form of reflection involving the uncovering of paradigmatic, structuring assumptions, but the depth of a reflective effort does not, in and of itself, make it critical (Brookfield, 2004) [7].

Reflection becomes critical when it has two distinctive purposes. The first is to understand how considerations of power undergird, frame and distort so many educational processes and interactions. The second is to question assumptions and practices that seem to make our teaching lives easier, but that actually end up working against our best long-term interests—in other words, those that are hegemonic. (p. 5)

The process is a virtuous circle. Workers can hone their reflective skills in order to critically appraise what has been experienced via practice. This in turn enables them to improve ongoing practice, by using the information and knowledge they are gaining from experience. Research suggests that this is most effective when it involves others and as a consequence the chance to collaborate and share ideas about changes, alterations and new ways of operating (Gray, 2001) [13].

The practice of sharing the results of critical thinking with colleagues can be daunting. Staff are often not accustomed to this form of interaction and in exposing their own thoughts and feelings. Working in groups and networks with fellow workers can offer the support and multiple input needed to help deal with this problem and provide evidence that the process is worthwhile, even if it feels strange at first (Urdang, 2010; Walker et al., 2013) [20] [21]. Dewey (1933) [10] discusses this requirement for open-mindedness and willingness to listen to others and act upon criticism. The key point to remember is that although much of this thinking and activity around reflection stems from academia, we are not necessarily restricting ourselves to academic thinking which tends to be more theoretical or hypothetical. What makes critical reflection on practice such a powerful tool is the combination of more scholarly theorized thinking with practitioner’s real-world experiences and learning. The synergy created by the combination of sources relies on different elements. Brockbank and McGill (1998) [6] sum this up in terms of an interaction between a practitioner’s experiences, feelings and emotions, with their activities and achievements. Ideally reflective practitioners will harness and combine the intellectual and the emotional with their operational practices. Rather than a one-dimensional response this catalyst will produce an ongoing process where thinking, acting, questioning and collaborating are brought together in a supportive combination, creating nuanced, smart responses and superior results. Such practices impact on the organizations themselves.

B. Organizational Structure

This links to way that the Mobile companies are organized. Following the cybernetic dictum that the behavior of an organization is directly linked to the way it is organized leads to thoughts about “Organizational Excellence” The overall purpose of managing an organization is to establish an effective means to get work done. It is about getting the members of the organization deliver what is required to be achieved in the most effective and efficient manner as possible. While this seems to be quite simple in words, in practice accomplishing this can provide to be highly complicated. The cause of this complication and difficulty is directly associated to the complexity of the human behavior and human relationships within the organization and across organizations (Kolzow, 2012). Organizations are composed of people, who are directly influenced by power struggle, politics and personalities that make it highly challenging to control the operations and predict the outcome of its outcomes.

In the perspective of Born, Hendrix and Pate (2017) it is difficult to define organizational excellence and even more challenging is accomplishing it. Whether it is determined in terms of market share, profitability, customer or employee satisfaction or innovation, it forms the core of the organizational goals aimed by the leaders but difficult to be conceptualized and hence found to be accomplished (Born, Hendrix and Pate, 2017) [5] . The leaders and managers in the twentieth century have continued to search for excellence just like the knights have been searching for the Holy Grail and have been undertaking alternations and changes with the process of change in the form of an incessant sequence of comprehensive interventions. Operational Excellence is always a struggle between central control and autonomy. This balance involves making political decisions.

C. Organizational Learning

The ability to react to and readily assimilate new ways of thinking and doing (i.e. change) - is clearly an advantage in today’s highly competitive business environment. Change in the organization does not automatically mean the installation of a new system (it might, for instance, be reverting to a former system, or to one with which it is already familiar). However, it is probably safe to assume that in most situations, the change will involve individuals, groups and the organization itself in something or process which is not totally familiar (and, in some cases, completely new). This can be termed the ability for the organization “to learn”. There are two types of learning - ‘single-loop’ and ‘double-loop’. Single loop learning is action and reaction and is the most common form. But Argyris and Schön’s (1974) argument was that people have mental maps with regard to how to act in situations [1]. This involves the way they plan, implement and review their actions. Furthermore, they assert that it is these maps that guide people’s actions rather than

the theories they explicitly espouse. What is more, fewer people are aware of the maps or theories they do use (Argyris, 1982). One way of making sense of this is to say that there is split between theory and action. (Cognitive Dissonance) However, Argyris and Schön suggest that two theories of action are involved [2].

The words we use to convey what we, do or what we would like others to think we do, they call espoused theory. When someone is asked how he would behave under certain circumstances, the answer he usually gives is his espoused theory of action for that situation. For example, in explaining our actions to a colleague we may call upon some convenient piece of theory. We might explain our sudden rush out of the office to others, or even to ourselves at some level, by saying that a 'crisis' had arisen with one of 'our' clients. The theory-in-use might be quite different. We may have become bored and tired by the paperwork or meeting and felt that a quick trip out to an apparently difficult situation would bring welcome relief. A key role of reflection, is to reveal the theory-in-use and to explore the nature of the 'fit'. Much of the business of supervision, where it is focused on the practitioner's thoughts, feelings and actions, is concerned with the gulf between espoused theory and theory-in-use or in bringing the later to the surface. This gulf is no bad thing. If it gets too wide, then there is clearly a difficulty. But provided the two remain connected then the gap creates a dynamic for reflection and for dialogue.

There is also the broader implication of learning for the organization itself. Let us consider one definition of organizational learning, as given by Probst and Buchel (1997) [15]:

Organizational learning is the process by which the organization's knowledge and value base changes, leading to improved problem solving and capacity for action.

This definition asserts that organizations can of themselves be entities with a capacity to retain information and hold their own set of values. In other words, although an organization may be regarded as being its people, the collective sum of their knowledge and experience can somehow be held within the organization to exist semi-autonomously (and thus be retained even after the individual has departed) and in a synergistic way.

Let us take the optimization of a mobile network in the telecommunication industry as an example, such a project would be triggered either through customer complaints or bad network KQIs (Key Quality Indicators). On a global organization level, it would involve the cooperation between several departments such as the Customer Service department (who will receive the complaint), the Technology department (who will investigate the reason and take corrective action till customers are satisfied), the commercial department (who in turn will assess the impact and recommend a compensation or not), the finance department (who will approve the Monetary budget and the business case) and finally the IT department (who will apply the compensation) and, to close the loop, back again to the

customer service department to check the customer satisfaction. This will involve several activities for optimizing the network performance starting from KQIs analysis, drive tests, soft actions and even physical interventions. A successful organization needs to continuously improve such a process leading to a faster response times and customer satisfaction. Part of this solution could be to automate the process such as with a SON (Self Optimized Network), in which all the past experienced are fed to a system controlled by minimal resources which can self-optimize with minimal staff intervention.

Thus a telecommunication company has the opportunity to learn from every project it is involved with because, by definition, every project (even if similar) is unique. But, this learning is not just through more automation. It concerns the integration of every part of the organization in carrying out the activity: learning is not only to do with the process but the human systems of the organization: how it goes about its planning, organizing and controlling; how it leads and develops its staff. The successful organization will retain the knowledge from its experiences for later projects and will hone its skills upon reflection on these. Internal change is also accommodated through this interaction of individual, group, and organizational structure, values and systems. Senge in his book 'The Fifth Discipline' (1990) summarizes the inter-related factors he believes are needed for [organizational] learning. The greatest factor, in his opinion, is the introduction of systems thinking.

II. THE WORLD VIEW

Organizations are in a perpetual state of change. This is because of constant external pressures and the need to innovate and adapt to new demands and circumstances. To survive and thrive, businesses have to grow. They must develop new products, expand into new markets, re-organize, re-engineer, introduce new technology and change working methods and practices. Even if this does not happen voluntarily, change may be forced upon them by competition and developments in the business, or by the political and social environment. Managers have to be able to introduce and to manage change and gain the commitment of their teams to implementing and living with the change. Change, as Rosabeth Moss Kanter (1984) [24] has suggested, can be regarded as the process of 'analyzing the past to elicit the present actions required for the future'. It involves moving from a present state, through a transition state, to a future desired state. In order to do this, one needs a method or a way of thinking that can capture all the intricacies of these states. One such method is provided by Systems Thinking.

Engineers are trained to think in a certain way. They never question this way of thinking and are maybe unaware that different ways of thinking exist. Most engineering knowledge is based on the "scientific paradigm." This is the paradigm that originated in the sixteenth century based on

the work of Descartes, Galileo and Newton. Descartes was the philosopher, Galileo the experimenter and Newton the mathematician. The Scientific paradigm is based on an analytic, deterministic, equilibrium seeking, linear foundation. Analysis is the key to any problem solving. A complex problem is “analyzed” or broken into parts. These parts are then studied, and any problems connected with them are solved. The parts and their solutions are then reassembled to provide a solution to the original problem.

- Deterministic means that the outcome is completely and unequivocally determined by the inputs. The inputs arise from the parts which have been identified in the analysis and are independent of each other.

- By balancing, it is meant that the natural state of a system is equilibrium and that if the system is perturbed in any way then it will try to revert back to that state. Newton perceived the universe as a perfectly designed clock working in harmony.

- Linear refers to cause and effect and is related to determinism. Every cause has an identifying effect, and these can be studied.

The scientific paradigm is illustrated in this quotation from the great French mathematician, Lagrange:

The present state of the system of nature is evidently a consequence of what it was in the preceding moment, and if we conceive of an intelligence that at a given instant comprehends all the relations of the entities of this universe, it could state the respective position, motions, and general effects of all these entities at any time in the past or future

Each of the above “assumptions” can be questioned. If one is dealing with a machine, then it is possible to identify or break it down into parts. These parts are connected to each other but are also independent of each other. In this situation, analysis makes sense and indeed the success of analysis proves the point but only for machines. It is difficult to do this companies as there are many ways of dividing a company, but they are not independent they are connected. This connection has a different meaning to when it is applied to a machine. In the machine, part A connects to part B in the sense that the output of A could be the input of B. But in a company, the parts are interconnected. We are not dealing with inputs and outputs but essence. One cannot change what A is, without changing what B is. This then contradicts the linear cause and effect chain in the scientific paradigm. Each event can have multiple causes and each cause can have different effects. It is termed “non-linear” behavior and is at the basis of Chaos theory. Recent research in this area has also shown that there is no universal harmony or equilibrium. Entities exist in far from equilibrium conditions and are not guaranteed to return to a previous state. It is difficult to predict what this state is. The new term is “emergence” i.e. given a set of causes, a state (which is often not predictable) will emerge.

A. Systems Thinking

An entity that follows these new assumptions is called a System and the method of operating in this paradigm is called System Thinking. Most CTOs would be complimented if told that their company was running like “a well-oiled machine” but is this a good metaphor to use? The Ferrari SF70H is an example of a top-class machine, but it cannot learn or adapt. It can only be changed from outside. its parts are not interdependent as in a company and the machine can only do what it is designed to do. It is not agile. Comparing the company to Usain Bolt (the current Olympic champion sprinter) is a better metaphor. Usain Bolt also has quality, but he is a living system that can adjust, adapt, think and learn which is what is needed in a company.

There is an offshoot of System Thinking called Cybernetics which enthusiastically embraces systems thinking. This was used by Stafford Beer to form a discipline called “Management Cybernetics.” which focusses on the structure of organizations. Beer devised the maxim that “Structure determines behavior” (Beer 1975) [4] and so if one wanted to examine how an organization was behaving one must examine its structure. The study of Systems Thinking and Cybernetics encourages reflections on decision making, such as outsourcing, ethics, moral and politics of mobile telephone companies. Becoming a system’s thinker has been a major influence on my ability to manage effectively and especially on my decision making.

A major stimulus for the rise of systems thinking has been the development of Quantum Theory or the study of sub-atomic particles. This is because, the scientific paradigm proved inadequate to describe behavior at the micro level. At this level the objects being observed are the same size as the photons of light that are observing them. They are therefore disturbed by the act of looking at them leading to the conclusion that the actual act of observation affects the thing that is being observed. There has been much research conducted in the last fifty years as to the influence the experimenter or measurer has on the result is any circumstance. In real life or business does the measurer or measuring apparatus influence the thing that is being measured. In a typical company, various KPI’s are selected that need to be measured which is done by monitoring data. But does the choice of data and its collection influence the values produced? Are the KPI’s and the data collection independent or inter-related. If the data collection doubled or the speed of collection was increased would this affect the value of the KPIs? These are questions arising from approaching management from a system thinking view. Advances in neuroscience can have some bearing on this question, in particular three new theories.

A1. The Rational Brain

The classical theory of decision making posits that the best decisions are ones that are rational. The ability to

appeal to people's emotions can win many an argument and be a prime motivating factor for change. On a personal level we are all aware of this: the newspapers and media play on this. When some disaster is reported it is not merely the facts that we are given - we also see and hear the plight of individuals. The facts themselves may prompt us to donate for such a disaster appeal on the basis that we might expect the same in their situation but if we identify with the grief of individuals then we are far more likely to help. We relate to our own experiences too and our personal values - at the sight of a suffering child we might think of our own child and it is the feeling that motivates. Thus, actions based upon emotion are not always rational to the outsider. We might prefer to be seen to act 'rationally' as managers, but we should be aware that even in the work situation, emotions must be considered, none more so than in the event of controversial change when people might feel their interests are threatened. Fox and Amichai-Hamburger (2001) [12] offer practical methods on how to appeal to people's emotions in promoting organizational change programmes, under the following headings:

- The core messages -for instance using words such as 'danger' or 'loss' in respect to the existing situation and words such as 'progress' and 'relief' for the proposed situation. Using metaphors which appeal emotionally
- Packaging of the messages - Using a variety of the audience's senses. Managers should show their own emotions to emphasize key points and should listen to their audience, letting them express their fears and aspirations.
- Characteristics of Change Leaders - Credibility, likeableness and attractiveness are cited as the 'essential ingredients in building trust'. Also, the trust of managers towards their audience.
- Behavior of Change managers towards their audience - listen to their audience, respect their views and opinions
- The setting in which the interaction takes place - consideration of who to involve for group dynamics. The use of ceremonies to mark the beginning or end of a change action.

To summarize, this theory says that decisions should be made on rational processes alone. No emotions should be involved. Decision Making is a rational, logical, unemotional process.

A2. The Universal Model of the Brain

Recent research hypothesized the Triune brain. (Damasio 2003, 2006) [8] [9]. The triune brain consists of three parts - the reptilian, limbic and rational brain. Input to the brain comes through the five senses to the reptilian brain which deals with survival - fear, flight, etc. It then passes to the limbic brain which is also left over from our evolutionary past. This limbic brain is non- verbal and non-logical. It is the heart of our emotions. The signal is then passed to the rational part where a decision is made. The difference with the previous theory is that the decision made now depends on

the inputs from the other two so that emotion is part of the decision making. Tests on mental patients have shown that when the limbic part of the brain was damaged, their decision making was impaired. It is called the universal model as it assumes that there are specific emotions that are universal i.e. common to all.

A3. The Constructivist Model of the Brain

In 2019, this hypothesis that emotions can be related to specific areas of the brain was questioned. (Barrett, 2020) [3]. The constructivist model argues against the concept of the triune brain and posits that decisions are made by all the brain working together. There are no specific regions in the brain which deal with specific functions. There is no seat of emotions. But this theory does not play down the role of emotions. It posits that the brain is constantly constructing reasons to explain the input data and constructs an emotion to give meaning. This emotion is then part of the decision-making process. This raises questions coming decision making- can a computer program (which is devoid of emotions) make decisions and, if so, are they better than of a human decision maker.

B. Outsourcing

The problem of outsourcing provides a good example of reflective thinking. In many studies where outsourcing has taken place, the KPIs were not achieved, staff had departed, and the resulting situation was chaotic. A company can be awarded compensation but this and even previously solid contractual frameworks had difficulties in re-establishing the competitiveness of the company. The focus of outsourcing has usually been on the mechanics of making the decision - how to do it in the most effective manner- but has not addressed the problem of WHY. Should one be outsourcing at all? This is the type of reflective thought which is stimulated by taking the holistic view of System Thinking. (Kleiner 2015) [16]

It starts with examining "purpose." What is the purpose of a company? The obvious answer should be a cybernetic one - to survive in an intensely competitive market. But one must not confuse survivability with making money. Doing things in the cheapest way helps the balance of payments but is it the "best" way or the way with the most long-term benefits. If a company outsources a certain area, then it no longer needs its own skilled workers in that area and these workers will be made redundant. Admittedly, if they are skilled then they have a good chance of another job but if all companies did the same then reemployment would be more difficult. Thus, how much responsibility does the company have and how will the treatment of workers reflect and effect their ratings and eventual profit. (Wheatly & Kellner-Rogers 1996) [22]. Thus, the purpose of a company should involve the welfare of the workers as the workers are the company. Without them, the company would not exist.

These thoughts initiated a study of the various management models over the ages from the basic command authority (alpha male), to the hierarchical organization, the well-run machine to the socially responsible organization. (Laloux 2014) Initially, any such reflections would be just that – thoughts with very little consequences. But system Thinking teaches non-linear behavior and the property of emergence. (Wilber 1996) [23] As everything is connected then small changes can have large effects. Thus, a more holistic and social aware attitude may have unimagined consequences.

The coronavirus COVID-19 outbreak is causing widespread concern and economic difficulties for businesses and people across the globe. The situation is changing quickly with widespread impact and has accelerated digitalization plans to minimize human interactions and improve the responsiveness to consumer demands. The Pandemic has put the telecommunications industry under spotlight as it enabled a new level of work and lifestyle. Telecommunications providers will play an even more important role to serve market demands with secure. They need to increase their performance and agility for customers’ configured solutions anywhere in the globe. The on-going shift to remote work will drive demand for networking infrastructure and connectivity. WFH (Working From Home) through the demands of student’s learning, gaming, social networking and more have tremendously increased the usage and demands on mobile operators. COVID-19 will also test the financial robustness of companies, and many will not survive this initial phase. Almost all others will suffer significant drop in revenues, says GlobalData, a leading data and analytics company. Figure (1).

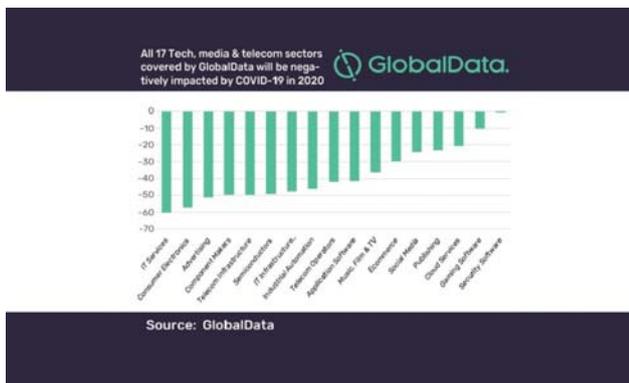


Figure 1. Impact of Covid-19 Pandemic on Media and Telecom sectors

This dramatic situation and fierce competition between mobile operators to shift their gears to survive have made the outsourcing decision even more strategic. According to Market Research (2020) [18], the global Telecom Outsourcing market was valued at USD 100.1 Billion in 2017 and is projected to reach USD 106.5 Billion by 2025, growing at a CAGR of 4.21% from 2018 to 2025. Telecom Outsourcing is seen as a solution to the management needed

in next generation networks. There are a growing number of telecom infrastructure devices, which are increasing the complexity of network operations centers. With these increasing complexities, comes telecom outsourcing. Outsourcing network operations allows for proper management of the network operation centers.

C. The Morality of Mobile Phone Companies

These thoughts on outsourcing then spread to the concept of mobile companies themselves. Are they a force for good? Should they be allowed unlimited expansion and freedom. These are moral issues. It is undisputable that there are many benefits arising from better global communication. This breaks down barriers and helps assuage hurt feelings and avoid hostilities. But it is becoming apparent that there is a downside to this – systems thinking calls this “the law of unintended consequences.” There is even a system archetype called “fixes that fail” which shows that unexpected feedback loops can undo the best intentions. In the mobile case, the freedom to easily communicate and express one’s feelings has resulted in bullying and trolls which are causing severe mental problems among vulnerable people. There is a continuing debate on the introduction of 5G technology. The advantages of 5G are immense and undeniable but there is an ethical dimension as well. With so much power concentrated in one system, the control of that system assumes god-like proportions. Ethical responsibilities are becoming a major issue in today’s global society especially in the area of data collection, cyber security and privacy.

An initial reaction is that these are only personal thoughts but if these thoughts are shared, maybe a new more social behavior may emerge. Is there perhaps a need to change the KPI’s to reflect moral and ethical issues?

III. SUMMARY

Upon reflection, reality often turns out to be different to initial expectations and helps one to decide whether our activities met expectations and requirements as planned. Personal development is on-going and changing, continuously reviewing and updating goals, vision and plan by reflecting on what has been achieved and thought about. A useful aid to reflective thinking is the creation of a personal development plan (PDP) that not only reflects current performance but looks at future developments. It serves as a guideline. What it covers is where one is now, where one wants to be (which covers short, medium- and long-term objectives and milestones), how one will get there and an evaluation of how well one is doing. This, in turn, involves setting success criteria.

This process is never ending. In the example of the outsourcing problem, the original aim was simply to look for an operational solution. One answer which was explored was the possibility of creating a Decision Support System to aid in the decision making. Using the System Dynamics

methodology, such a system was built and tested. It was validated by applying it to past cases and has made a substantial improvement to the area.

Using critical reflection has resulted in the change of information into wisdom. Wisdom to know how everything fits together, how one piece of the jigsaw fits into the big picture. This combination of information gathering, information dissemination and wisdom a prerequisite of a successful, modern manager. To paraphrase Goethe:

“ . . . *have the persistence, will and self-abnegation to acquaint oneself thoroughly with tradition while retaining enough strength and courage to develop original nature independently and to treat the assimilated elements in your own way*“ Goethe

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