Systemic project management

Yan Song
Lincolnshire, Illinois, USA

Introduction

Traditional project management theories and best practices focus primarily on managing the triangular constraints of time, budget and scope (framed in terms of concrete outputs). It has proven valuable and successful in helping organisations to recognise, plan and execute changes to ongoing operations in a disciplined and repeatable manner. However, as the global economy and society continue to become more knowledge based and integrated, this simple industrial model has become increasingly inadequate and, if narrowly focused and pursued, harmful. As for all branches of human knowledge, the problem did not result from knowledge itself but from a misalignment between the complexity of the phenomena and their conceptual representation or knowledge. There have been numerous attempts to extend the industrial model to include additional dimensions of project complexity (Cicmil, et al. 2009). The vast majority of such efforts still suffer from the same root cause of the original model: the mechanical conception of project management as dealing with objective facts (e.g. schedule and budget) on one hand and subjective constituencies (e.g. sponsors and users) on the other. There is a lot of literature on both aspects, but very little integrating the two into a coherent whole. In the author's experience, this lack of integration between the objective and subjective aspects of project management has become the single most critical risk of project success and the greatest advancement opportunity in the profession.

The author has spent more than a decade in managing and learning from large-scale projects in organisationally and culturally complex business environments. To cope with the vast complexities of real-life projects, he has had to 'borrow' knowledge and practices from many other fields to supplement traditional project management methods. Two such 'external' disciplines — systems thinking and leadership development — have proven particularly valuable. This case study describes a practitioner's perspective and technique for understanding and extending traditional project management to greater complexities that are typically encountered in an organisational setting. In this conception of and approach to project management, the practitioner (Self), the social environment (Organisation) and the professional responsibilities (Work) are treated as one integrated system. The dynamics of these relationships are shown to be the primary drivers of the health and success of the individual components, in contrast to the mechanical theories and practices of traditional project management. This new approach and associated set of methods is called 'systemic project management'. The case study is organised in the approximate chronological order in which the author developed, tested and expanded this new approach to project management, continuously learning and refining the methods through iterative integration of theory and practice. Part I summarises the core principles of systems thinking and leadership development as applied to project management; Part II lays out a step-by-step practice guide to aid project management professionals in defining, planning and executing a real-life project systemically; and Part III provides an

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example of how this method can be scaled up in a typical business organisation setting. Due to the length of this case study, only Part I and II are included in the current issue. Part III will be published in a future issue of this journal.

Part I: Core principles of systemic project management

Systems thinking and organisational learning

For most advanced practitioners in project management, organisational change is both a threat and an opportunity. By definition, projects introduce changes to the steady state of the organisation. Thus, the management of people and organisations is an inevitable part of the job for all project management professionals. The first ideas beyond the 'soft skills' literature on change management came to the author from the field of systems thinking and organisational learning as pioneered by Argyris (1990), Schon (1983), Senge (2007), Scharmer (2007) and many others. Without exception, these pioneers are theorists and practitioners at the same time, constantly inventing and refining methods to increase effectiveness. I have found the following insights and methods to be particularly valuable for project management professionals.

ST1. Thinking drives behaviour drives results

Frequently, project management professionals are surprised by how stubbornly resistant people can be to changes that they are attempting to implement in organisations, despite all the 'obvious' benefits such changes could bring. They often fail to recognise and plan for the fundamental differences between technical and adaptive changes required for their projects to succeed. Even when behavioural change becomes part of the implementation plan, they are often unaware of or unprepared for the thinking that permeates the organisational culture and shapes behaviors unconsciously. The metaphor of an iceberg is very appropriate for project managers who steer their projects into it without warning. A systemic approach to project management must have the discipline and appropriate methods to size up and accommodate for the contours of such deeper project realities throughout the project management lifecycle.

ST2. Everything begins with assumptions

Reality does not exist by itself but must be and always is interpreted by human beings. Albert Einstein made this point most succinctly nearly sixty years ago in his foreword to the republication of Galileo's classical dialogue (Galilei 1967: xvii), 'there is no empirical method without speculative concepts and systems; there is no speculative thinking whose concepts do not reveal, on closer investigation, the empirical material from which they stem'. One of the most critical challenges faced by project management professionals is the fact that a diverse set of players come into the project context with vastly different assumptions with regard to its purpose, constraints and each other's roles and responsibilities in defining and achieving eventual project success. The project manager and his or her team must find a way to surface and harmonise such vast array of assumptions within the project time window, or face exponentially growing pressure and

consequences of diverging expectations. An effective project management professional must not only deal with timeline, budget and other tangible facts, but also understand and manage the assumptions that project participants hold about them. Therefore, a systemic approach to project management begins with the assumption that everything begins with assumptions. It must also provide an effective method for surfacing and managing such assumptions.

ST3. There is a structured pattern of change complexity

Faced with overwhelming complexity and scarce time and resources, project management professionals are frequently forced to make tough choices between various and often conflicting 'best' practices, informed by their past experience and/or mandated by company procedures and/or recommended by industry experts. Is there some overarching law or frame of reference that could be used to guide such choices? Systems thinking offers such a 'universal' frame of reference in the form of organisational change complexity. From this perspective, change is the 'normal' state of affairs in nature. Moreover, change takes place at three different levels of complexity: dynamic (time and space), social (behavioural and cultural) and generative (cognitive and developmental). Similar to the Thinking → Behaviour → Results phenomena discussed previously, this structure of organisational change complexity can be leveraged as a guide for us to take appropriate actions proportionate to the level of change complexity being introduced and implemented by the project. Upgrading MS Office for all employees does not involve the same level of complexity and efforts as restructuring an R&D organisation. A systemic approach to project management emphasises upfront understanding of such complexities and prescribes appropriate strategies and plans to facilitate necessary changes comprehensively but not excessively.

ST4. The self is a vital part of the system and change

In traditional project management methodologies and best practices, most of the attention is devoted to techniques, templates, processes and organisational structures, with much less attention given to the people who devise these and put them into practice. Such well intentioned systems, whether 'hard' or 'soft', often backfire in the hands of practitioners who are not well equipped to select and apply them in the right contexts. Worse still, when institutions take one-size-fits-all approaches and mandate the mechanical adoption of certain 'best practices', they inadvertently exaggerate form over substance. A systemic approach to project management does not advocate such simplistic approaches to meeting work and organisational demands. It insists, instead, on a third dimension, the development of the practitioner himself or herself, as part of the total equation of optimising project outcomes. The situation was best summed up by the former CEO of Hannover Insurance, Bill O'Brian: 'the primary determinant of the outcome of an intervention is the inner state of the intervener' (Senge 2006: 372). Figure 1 illustrates the interdependent relationships between organisation, work and self.

Figure 1. Inter-dependencies of work, organisation and self

Organisational and leadership development

Another powerful source of insights is the field of organisational and leadership development. Similar to systems thinking, these have been pioneered largely by theorists and practitioners of the likes of Beck and Cowan (1996), Collins (2001), Lecioni (2002), Kegan and Lahey (2009) and many others. There is such a high degree of correlation and convergence between the works from these two schools of thinkers and practitioners, one could almost say that they are climbing the same mountain from two different sides: one is more structural (systems thinking) and the other developmental (organisational and leadership development). In the end, when it comes to human phenomena, there can be no development without a structure, and no structure outside a developmental context. From the organisational and leadership development perspectives, projects are the vehicles to experiment and develop organisations and their leaders, including the project management professionals themselves, in ways that are innovative and sustainable for the organisation, individuals and their environments as a whole (Figure 1). When approached from this perspective, project management professionals could benefit greatly from the following insights.

OD1. Human development follows the path of increasing mental complexity

Psychologists (Beck & Cowan 1996; Kegan & Lahey 2009) describe human development in terms of mastering successively more complex meaning systems, in which they make sense of the world and operate within it. They have discovered positive correlations between the level of mental complexity and people's ability to live with the complexity of the environments. When we experience the world as too complex, we experience a mismatch between the world's complexity and our own at that moment. It is important that project management professionals pay attention to matching the levels of mental

complexity in their teams and organisations with the task at hand. Of course, it begins with developing the mental complexity of the project managers themselves as discussed earlier. This mental complexity theory explains the findings from another independent study of 17 behavioural attributes commonly observed in project managers (Pellegrinelli 2008). The author explained his observations in terms of four successively more complex project meaning structures held by individual project managers. They reveal the same trend of increasing mental complexity from socialised mind to self-authoring mind, to self-transforming mind as hypothesised by Kegan and Lahey (2009). The greater effectiveness of project managers at a higher level of mental complexity derives from their greater ability of comprehending and integrating the essential relationships between self, organisation and work (Figure 1).

OD2. Overwhelming complexity is a fundamental human condition

A second insight from this field of research is that most organisations and individuals are overwhelmed by the complexity of their environments, so much so that underdevelopment of mental complexity is widespread. This is no accident and reflects a fundamental condition of human existence. Projects are often created to ease the pressures and consequences of such overwhelming complexity (e.g. implementing a process change in response to new government regulations) but do not eliminate them. Project management professionals must understand this reality as a natural condition, not as an artificial barrier that they or someone in position of power could erase once and for all. It calls for adaptive versus technical skills on the part of project management professionals. Far from becoming defeatists, true leadership qualities and skills are forged only through direct experience with such realities and the capacity to discover meaning and beauty through creative participation.

OD3. Organisations and individuals can be and often are dysfunctional

By far the most common form of organisational dysfunction is caused by various defensive behaviours adopted to minimise the anxieties and pains imposed by the overwhelming complexity mentioned. This not only distracts the organisation from focusing on essential matters for growth and survival but also necessitates monitoring policies that consume additional energy, and erect barriers for future innovation (bureaucratisation). Projects are often initiated to correct such deficiencies on behalf of long-term interests of the collective (e.g. restructuring a sales force in response to competitive pressure). To be effective in neutralising and reversing such defensive tendencies, it is necessary but not sufficient to empathise with human suffering (often manifest as anger and/or fear). Courage and vision are needed to redirect human energy in a more productive direction. The latter are essential qualities of authentic leadership.

OD4. Development is gradual and requires both reflection and action

Perhaps the most critical quality in a project management professional is his or her mental complexity or maturity to comprehend and deal with the complexities in her or his work, organisation and environment. Such ability and maturity can only be cultivated, not

imposed or forced. The cultivation process must provide both the safety and the space for professionals to reflect on past actions, recognise future opportunities and apply their refined thinking in action. While all individuals experience such learning cycles to some degree, progressive organisations can dramatically increase learning effectiveness or the growth of mental complexity by incorporating systems thinking into job and process designs (e.g. community of practice as part of organisational design as demonstrated in Part III).

Systemic project management defined

So what is systemic project management exactly? From a practitioner's point of view, its purpose is to make and increase meaning out of performing project management activities. It consists of a set of core principles or assumptions as highlighted previously; a learning environment in which project management professionals can share stories with each other, invent new tools and methods together, reflect on and practice the new methods in action and feel connected and supported by a community of professional peers who share the same purpose; and finally, a set of practice guides and execution methods aimed at producing specific outcomes at each step of the project management lifecycle. Figure 2 depicts such a system.

Figure 2. A practitioner's perspective of Systemic Project Management

It has been the author's experience that such a system is capable of breathing in the fresh experiences of the practice field and breathing out the deeper insights of collective human learning, all under the operating conditions of real-world businesses. Over time, such a system will lead to the organic growth and transformation of individual mental complexity and deliver superior and more sustainable organisational performance. Part II of this paper explains in greater detail how the core principles and learning environment guides and facilitates the practical actions (tasks and decisions) of project management.

Part II: A practice guide to systemic project management

Set the stage

All projects are about making changes that the organisation deems important and/or necessary. The central challenge of making such changes is to align the assumptions and actions of the players involved. As a general rule, we should expect that such assumptions and actions are not aligned (ST2) unless and until they are managed. The Ladder of Inference tool (Senge, et al. 1994: 242) brings out this point succinctly. Each individual, social group or profession carries a unique set of assumptions, values and beliefs that guide their day-to-day behaviours or actions, mostly unconsciously. No human being could function without them. When they join a project team to accomplish a shared goal or outcome, they naturally attach very different attitudes, priorities and preferences to it, some major and some minor. The challenge for project management professionals is how to bring out such differences, maximise their synergy and minimise the distractions in service of achieving project success. Figure 3 illustrates such a systemic perspective of project management challenges.

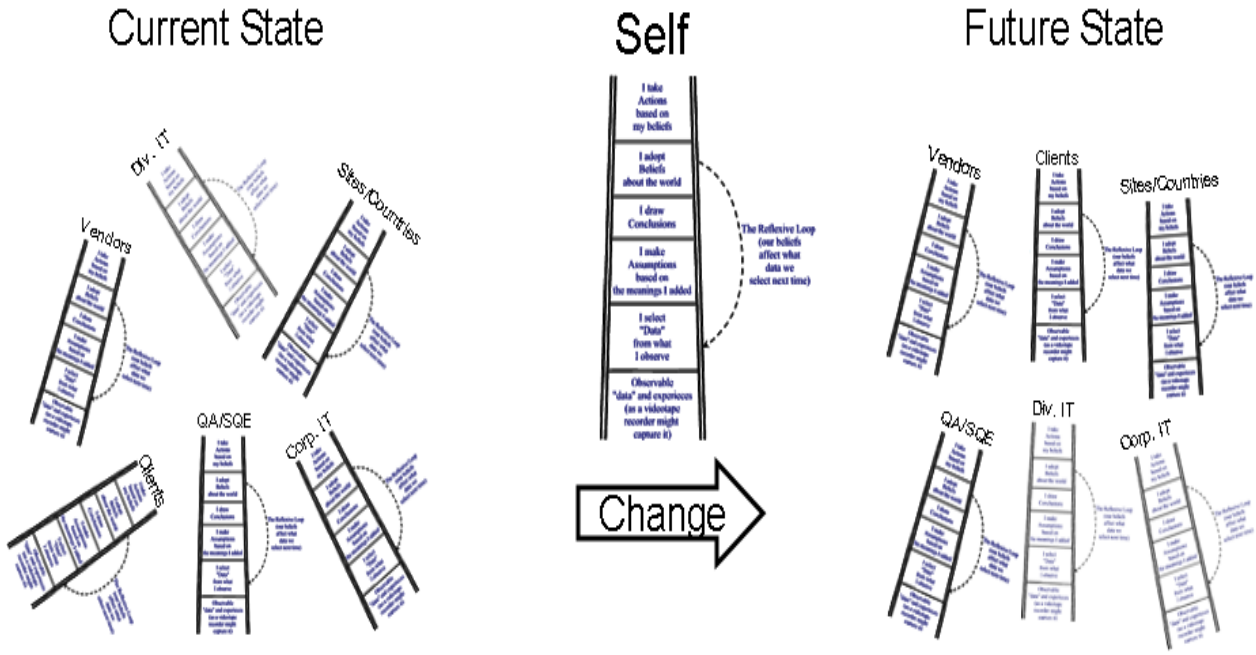

Figure 3. A systemic perspective of project management challenges

Develop the vision for change — why?

If all projects are about facilitating necessary changes with minimum resistance, then a clearly articulated vision of the future state could be a powerful force mobilising the human energy forward (ST1) or at least lessen the inertia of stagnation (OD3). When truly accomplished, it could inspire people by reducing the amount of ambiguities in the

organisation (OD2) and catching the updraft of the often hidden human developmental capacity to become mentally more complex (OD1). To tap into these multiple sources of synergy, it is necessary for project management professionals to clarify for themselves as well as other stakeholders why the intended project outcomes are worth the investment in energy and effort. For example, when pharmaceutical companies wanted their scientists to replace their paper notebooks with electronic ones, the scientists resisted since it required them to change a habit that was more than one hundred years old. Many scientists are not only used to writing and drawing on paper notebooks but also become unconsciously attached to their notebooks as a source of professional pride, status symbol and job security since all new drug patent applications must be supported by the original scientific records in their notebooks. Instead of describing electronic notebooks merely as 'cool' or modern, the project team promoted a future vision of collective creativity and identity through greater knowledge sharing and team collaboration. As can be expected, some individuals still resisted and required some push to come on board. But overall, the resistance was far lower than it could have been otherwise and, after an initial period of transition, the majority became comfortable with the new methods and began to enjoy the newfound power of greater access to knowledge and collaboration opportunities. A good vision provides compelling reasons for action; organises parts into a whole; and builds a foundation for setting and managing priorities in a changing landscape. Above all, vision generates the creative tension for change.

Assess change complexity — what?

It is not uncommon for a project to be initiated with a specific problem or outcome in mind, without recognising its full implications for and impacts on the organisation and/or operations. Such hidden complexities are the main cause of notoriously high project failure rates known in the industry. We can prevent or at least reduce project failures by recognising the underlying structures of change complexity (ST3) early in the project life cycle and incorporating appropriate change management strategies into implementation planning and execution. Table 1 outlines four different levels of changes that project management professionals often encounter and must deal with appropriately complex methods of invention.

The primary challenges of applying this framework in practice are twofold. First, the dominant organisational culture in governments and corporations today recognises only the first two levels of complexity. Whenever political or economic forces create a crisis situation, an initiative will be launched to either punish (static) those in charge or reengineer (dynamic) the existing procedures. It is politically incorrect and career threatening for anyone to probe into the social and generative causes underlying the crisis. However, there are exceptions. NASA, under intense pressure from the public and the Congress, examined the social causes of the repeated and well publicised space program disasters and concluded that 'social shortfalls are the root cause of disasters ranging from Challenger's explosion and Columbia's disintegration to airplane crashes' (Pellerin 2009: 8). The same is true for most other less visible but equally complex projects going on every day and everywhere.

The second challenge of managing the full project complexity in practice lies in the prerequisite for the practitioner to have developed appropriate levels of mental complexity (OD1) in the first place. Unfortunately, this is rarely the case. Thus, project management professionals frequently find themselves thrown into an organisationally complex (OD2) or even dysfunctional (OD3) situation that overwhelms their developmental stage of mental complexity so that they become dysfunctional themselves (OD3).

Table 1. Alignment of organisational change and intervention complexities

Attention or Frame of Ref	Complexity	Blocks or Obstacles	Manifestations	Interventions
	Inertial/Static	Absenteeism, apathy (Deadwood)	Inability to follow simple instructions; absence of basic coordination; autism; chaotic fire-fighting	Task level training and monitoring (micro-management); SOP; IQ (to Re-Produce)
	Dynamic	The mentality that there is one and only one way (theirs) of accomplishing something (Voice Of Judgment)	Variations in business processes and technologies between sites, functions and even groups within a single site and function. Lack of adoption of industry best practices	Process analysis and reengineering; Making visible the opportunities and choices (to Re-Design)
	Social	The psychology of protecting my/our turf. Suspicious of any effort that might re-draw the boundaries (Voice Of Cynicism)	Strained relationships, skewed org charts; Control freaks; Bitterness towards change, often re-enforced through past experiences – failures attributed to others or "our culture"	Dialogue on problems BEFORE solving them! Acknowledge shared difficulties and risks; Explore win-win in new contexts (to Re-Frame)
	Generative	Absence of sustainable vision & purpose; Fear of losing control/prestige /market/friends (Voice Of Fear)	Self-fulfilling and self-sealing culture of low risk tolerance, low creativity, low learning capacity and low productivity	Create the space, strategy, processes and accountability to enable team learning, collaboration and creativity (to Re-Generate)

Table 1 emphasises the importance of integrating both dimensions of complexity to achieve effectiveness: the professional duty of dealing with the full organisational change complexity, and the developmental necessity of shifting practitioner's mental complexity or frame of reference. At the static level, the practitioner's frame of reference is centred on the self, aware of the organisation as the infant of the mother but has very little understanding of and motivation for work beyond what traditions and habits dictate. To deal with dynamic changes adequately, the practitioner must shift her or his frame of reference to the objective (space and time) aspects of work (e.g. budgets, costs and schedules) and understand better the organisational context that sets the boundaries for such objective criteria. It is not uncommon for a practitioner at this developmental stage to feel diminished self-importance in deference to work (quotas and deadlines) and others (e.g. supervisors and peers). Such temporary loss of self-esteem is in fact a necessary corollary of increased mental complexity on the part of the practitioner to deal with greater change complexity arising in the environment.

To make the next leap of recognising and managing social complexity, the practitioner must undergo yet another transformation, that is, shift his or her mental centre of gravity from the objective to the subjective understanding of another human being. The practitioner must recognise that there is no such thing as purely objective and all 'facts'

are interpreted and therefore biased by the assumptions and beliefs of human systems in historical and cultural contexts. To manage change is to manage the change of such natural assumptions and beliefs, and so live in history and culture. This is the core premise of systems thinking and marks a fundamental break from traditional management beliefs and practices.

A practitioner at this level of mental development no longer regards the organisation as a protective mother figure or something 'out there' but as made of other human beings just like himself or herself, with both brains and emotions, talents and weaknesses. He or she is more interested in and looks out for win-win opportunities on behalf of self and others. She or he is willing to subordinate, at least temporarily, previously narrowly defined self-interests to the greater gain of an enlarged self and the organisation. Work becomes more fun and motivating. The self takes more initiatives. Productivity rises for the organisation as a result; and a practitioner may eventually recognise the root cause of dysfunctions in projects and organisations as the lack of an authentic vision and purpose, both individually and collectively. To develop such vision and purpose, he or she must yet again shift his or her mental frame of reference from mutuality with other human beings to the natural flows in the direction of increasing cosmic complexity. History does not stand still, nor can organisations and individuals. To sustain our vitality, we must align ourselves with such natural flows by constantly reinventing ourselves and transforming our work. Our only means for this is through creativity that results in greater productivity and happiness.

The former Stanford business school professor, Michael Ray, describes this state of mental complexity as 'living with the highest goal' (Ray 2004). Professor Ray found that the most successful entrepreneurs live with their highest goals by periodically asking themselves 'who is my self and what is my work'? The answers evolve and mark a developmental path from lower to higher mental complexity (OD1 and OD4). In a phenomenographic research of project management practices in the UK, a similar hierarchy of mental complexity was found among a group of project managers: 'Higher-order [more complex] conceptions are more holistic, integrative, and encompassing than the lower-order conceptions. Higher order conceptions are linked with superior performance' (Pellegrinelli 2008).

The management implications of these findings are that in order to manage projects well, we need to assess not only the complexity of the work but also that of the worker. It is not at all uncommon that managers who make project assignment decisions lack the ability to recognise the full level of complexities in both work and the workers and unintentionally create mismatches or at least fail to prepare the worker adequately. Once assigned, the project management professional must assess carefully the complexity of his or her assignment to the extent of his or her mental complexity. The quality of the project plan and its execution is determined primarily by the alignment between these two sets of complexities. Learning occurs when external and internal conditions are such that individual practitioners are able to grow their mental complexities through interacting with the environments that are challenging but not overwhelming, given where they are

along their developmental paths. An example of optimising such learning conditions in a conventional business setting is given in Part III of this paper.

Generate effective sponsorship — who?

From the above discussions, we should be able to understand and to expect that human beings and organisations are tremendously resistant to change for systemic reasons. To make change happen or projects successful, we must generate a willingness and commitment to change at all levels of the organisation. This is neither a trivial nor an impossible task. It begins with a clear understanding of the organisational dynamics generated or induced by the complexities discussed previously.

Oshry (2007) wrote a humorous and insightful book, *Seeing Systems — Understanding the Mysteries of Organizational Life.* He divides the organisation roughly into three layers: the tops, the middle and the bottoms. The attitudes and behaviours of each group are very much determined by the different existential challenges faced at these levels: the tops must cope with the enormous complexities imposed by an uncertain environment, e.g. market competition or government regulations and feel overwhelmed; the bottoms must follow orders and feel ignored and suppressed by those at the top; the middle must hold things together by making endless promises and compromises with both the tops and bottoms, and feel stressed all the time.

A project is usually initiated to address a particular pressure point caused by such underlying dynamics but quickly and surely comes face to face with the much larger and uglier reality of the organisation. Project management professionals use ‘scope creep’ to describe the phenomenon of discovering ever-deeper layers of challenges engulfing the problem that the project is initiated to solve. There are rarely clear-cut boundaries between what is intended and what is required. That is why projects are so unpredictable and are such slippery slopes even for the best in the field.

Instead of trying to beat the organisation into submission (an impossible task in any case), systemic project management advocates aligning the project objectives, tasks and execution with the direction of energy flows of the organisation. Specifically, project management professionals should become facilitative leaders (Schwarz 2002) who connect all the important parts of the organisation with the project goals and objectives (vision). They can do this more effectively by breaking down the complexity of the project into manageable chunks for the tops to assign priorities and delegate responsibilities to the middle; they can energise the bottoms by listening empathetically to their pain points and creating opportunities for them to receive visibility and rewards; and they can ease the stress for those in the middle by creating and communicating realistic resource plans and assignments that connect the priorities of the tops with the actions of the bottoms. By surfacing, negotiating and resolving the ambiguities and discrepancies among all stakeholders with regard to the objectives, tasks and execution of the project, the project management professional increases the efficiency, effectiveness and harmony of the organisation. That is the true meaning of effective sponsorship. Effective sponsorship is never perfect but aims at greater perfection by actively

minimising the task and mental complexity gaps for those involved in the project, both up and down the organisational ladder. For example, never escalate a technical issue to senior management that a subject matter expert can resolve. Do stand up and defend scope reductions when resources are spread too thin between multiple priorities. Table 2 shows an example where such facilitative responsibilities of project management have operated successfully within the organisational management structure.

Table 2. An example of embedding project governance within organisational management structure

Role	Responsibilities	Time Dedication
Executive Sponsor	• Business Vision • Funding	• 1% Senior Executive • 5% Program Mgmt
Business Owner	• Cross-Functional Alignment/Accountability • Best Practice Development & Adoption • Implementation Strategy • Partner/Vendor Relationships and Services	• 5% Executive • 25% Program Mgmt
Functional Owner	• Plan/Manage Business Priorities/Capacity • Designate Business Decision Maker (s) • Define Future State Processes & Policies • Approve System/Function Requirements • Plan UAT and Training • Project Planning and Tracking	• 25% Management • 30% Program Mgmt
Subject Matter Experts and/or Super Users	• Assay Flow & Template Design/Testing • Thought Leader / Change Agent • Provide Peer Support • Execute UAT & Training	• 75% SME • 20% Program Mgmt
Analyst	• Author & Facilitate Requirements Doc. • Design, Build & Demo Templates • Provide Integration and Technical Support	• 100% Analyst •20% Program Mgmt

Create a measurable and flexible course — when?

Once the vision (why), the terrain (what) and the players (who) are understood, the next project management task is to define a path of least resistance to goal achievement. Traditional project management techniques such as work breakdown structures, cost and schedule estimation are still very valuable, but with a twist. Today's work places are characterised by high complexity and fast pace of change driven by globalisation and technological innovation and specialisation. To accomplish anything in this environment, one must be articulate and precise about the details. Yet one must also remain flexible and ready to change course based on new insights that continuously emerge from project execution. Thus, it is not at all unusual to see the scope of an R&D project redefined every a few months, depending on the creative outcomes of the team. Therefore, agile project management is all the rage these days in the business scene. Figure 4 shows an example of a work breakdown structure of a packaged software implementation project at a global pharmaceutical company:

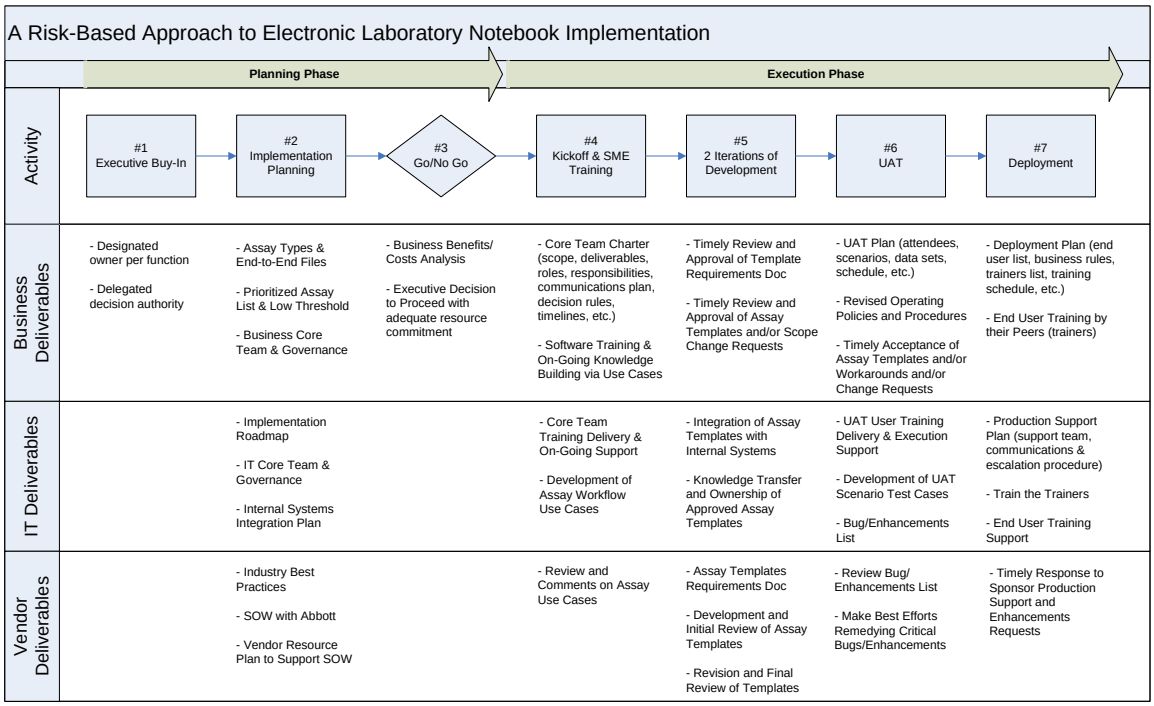

Figure 4. An example of a work breakdown structure of package software implementation

The key challenge of the project is to balance the speeds of learning the capabilities of new software and its implementation. In an environment of numerous competing priorities, it is not a trivial matter to steer the optimal course. The clarity of vision, understanding of change complexity and quality of sponsor relationships developed previously dominate execution decisions and outcomes to a much more than any resource, cost or schedule management techniques.

Empower teamwork — how?

There are probably few subjects more confusing and controversial than empowerment and teamwork. Lecioni (2002) describes the “five dysfunctions” faced by teams. More importantly, he traces the root cause of all team dysfunctions to the lack of mutual trust. Members of a high performing team must be able to trust each other in order to have rigorous and constructive debate over real issues of substance. The internal commitment generated by such open exchange becomes the foundation of objective accountability that delivers outstanding results. Lecioni’s work helped to remove a thick veil over many misconceptions about teamwork and cleared the way to answering the central question: what exactly increases trust in teams? The former Harvard and MIT professors Argyris and Schon (1974) studied teams in various organisations and identified the two most dominant value systems that best explain observed behavioural patterns. The author of this paper has expanded on their original models based on research in other related fields (e.g. philosophy and psychology) and the results are shown in Figures 5 and 6.

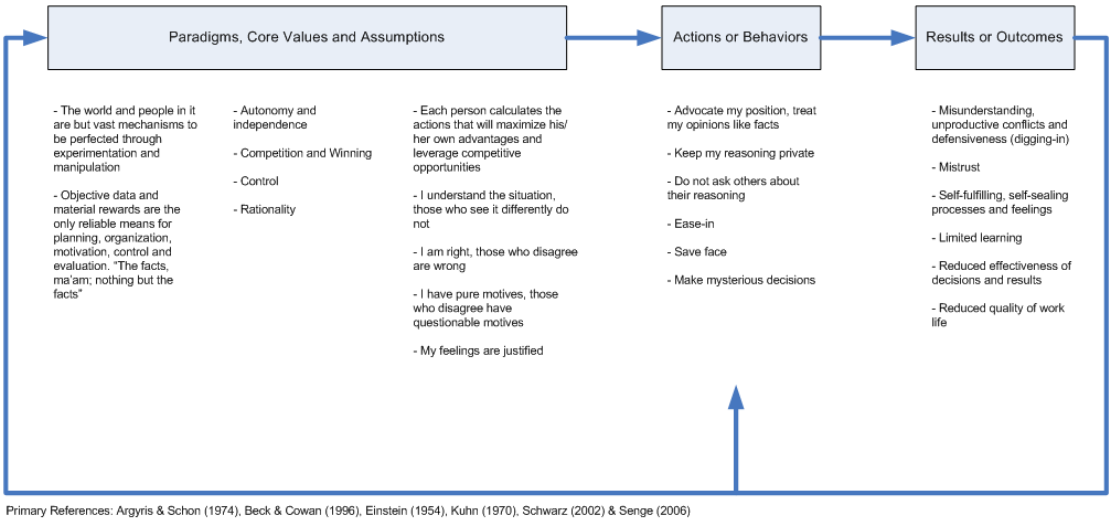

Figure 5. Model I or unilateral control

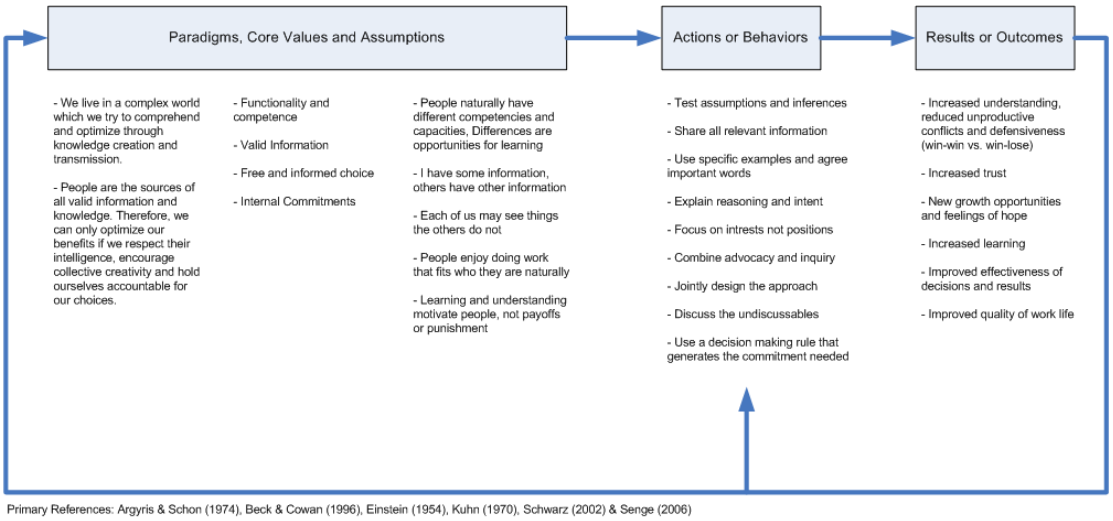

Figure 6. Model II or mutual learning

Under these lenses, trust is not a first cause or genetic attribute between special people but a collective sign of healthy team dynamics. There is no shortcut to developing trust within a team. It can only be achieved by influencing and changing individual behaviours and, more importantly, the underlying thinking or value systems from unilateral control to mutual learning. More recent works by Kegan and Lehay (2009) have further extended this line of thinking and have made it even more practical to apply these systemic insights to real-world situations. The key challenges and levers of empowering teamwork parallel those of assessing change complexity and managing sponsorship discussed previously. A change from Model I to Model II behaviour and thinking requires a shift in mental frames of reference from dynamic to social and generative complexity. It is transformational in nature and can only be achieved through dialogue and cultivation, 1% at a time. As may be expected, the greatest opportunity for intervention is when the team is first being formed. The mental complexities of team members, especially the team leader, play a much greater role in the quality of teamwork than any subsequent team-building processes and/or exercises could accomplish. The latter is best facilitated under settings of community of practice discussed in Part III.

Manage transitions — where?

The ultimate goal of a project, no matter how important and successful, is to make the host organisation perform better after the project is done. Therefore, it is critical to plan for the integration and transition of new capabilities well before the project resources are exhausted. It usually involves including key operating personnel in designing the future, testing new products and processes, and in training development and delivery. It is common and understandable for existing operating personnel to be initially sceptical of or to even reject the changes brought about by the project, perceiving them as disruptive to an already overflowing workload. It is critical that they are treated as a key stakeholder in the sponsorship and team development and management processes discussed previously.

When managed well, the project prepares the organisation and enables new capabilities as farmers do with the soil, the seed and the young crops.

Last but not least, the project may be finished but work continues. A reliable indicator of project success is not merely how many problems it solves but also how many new opportunities are discovered in the process. Thus, a successful project almost always generates a great deal of momentum for more work, usually with a larger scope. As a matter of fact, this is what distinguishes industry leaders from followers — one creates, while the other responds to new challenges.

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About the author:

Dr Yan Song has more than ten years of experience managing large scale and complex business projects at several Fortune 500 companies, including his current employer, Abbott Laboratories. He has a successful track record of applying the principles and methodologies of organizational learning and systems thinking to maximize the returns of business investments in people, processes and technology. Yan received his PhD in physical chemistry from the University of Wales in 1989.
Email: yan.song@abbott.com