
Advances in Project Management Series¹

Systemic thinking as a mechanism for managing risks arising from behavioural complexity on major projects.

By Tony Llewellyn

Introduction

As projects become more complex there is a greater expectation on the project manager to resolve a new set of challenges that move beyond the technical delivery of task completion. As project leader, you must now become more skilled in the management of behavioural dynamics, and facilitating the creative input from a wide range of individuals from differing professional, technical and cultural backgrounds.

This is not a new insight. Any review of the project management literature over the past five years will pick up on the shift in the dynamics of the profession, and the need for project managers to become more adept in the use of the so called 'soft skills'. There is plenty of advice available to a project manager on how to be a better communicator. Such advice is however, of limited value unless it sits within a framework that the project team can understand and then apply with some degree of consistency. Learning to adopt some of the practices associated with **systemic thinking** may therefore be a useful starting point in learning to understand the factors that are influencing the behaviours that you see, both in your team and within the stakeholder group.

What is systemic thinking?

Systemic thinking is a mechanism for looking at a problem or issue from a number of different perspectives. The process requires a different way of thinking. The starting point is to recognise that our initial reaction to most problems tends to be instinctive and emotional. Our mental filters do not therefore seek all of the information that would be required to understand the full breadth of the issue. The process requires the thinker to slow down and ask a much broader series of questions. The purpose is to understand the impact of the different systems that have a direct and indirect effect on the situation. A systemic approach can be particularly useful in understanding the apparently complex patterns of behaviour that can be observed in people working in groups or teams. Understanding these forces therefore improves the chances that a solution can be found to potential problems that address the root cause, not just symptoms.

¹The *Advances in Project Management series* includes articles by authors of program and project management books published by Gower in the UK. Information about the Gower series can be found at <http://www.gowerpublishing.com/advancesinprojectmanagement>. See the author's profile at the end of this article.

Behavioural and systemic risk

Any discussion on systemic processes can quickly become lost in the application of the many academic theories that surround the topic. To illustrate the concept in the context of a major project, I provide the following illustration, which comes from an exercise that I undertook with a colleague in December 2014. We were asked to help facilitate a workshop with a number of experts who had many years experience of working on large projects in the Higher Education/University sector. The purpose of the workshop was to try and understand the risks that are common to developments on university campuses. The discussion focused on the different stages of a typical project and how the various stakeholders interacted both with each other, and with the project team. The top 10 risks that they identified are set out in Table 1. This was an unexpected outcome, as when we began the exercise we had expected to find a greater degree of focus on technical risks. It is also interesting to note that whilst this workshop was primarily concerned with risks associated with the construction of educational facilities, the schedule of risks would be familiar to anyone working on any major IT, engineering or mining project.

There are of course, hundreds of additional potential project risks, but the value of this ‘top 10’ is the recognition that, whilst each project is unique, the environmental conditions which affect a project’s success are often similar. Looking through the list, we identified two primary underlying sources of risk, which can be labeled Behavioural and Systemic.

Behavioural risks arise as a result of the interaction of individuals and the extent to which those interactions create positive or negative outcomes. Humans can adapt their behaviours when they recognise the benefit of doing so, but sometimes they need help in recognising the mutual advantage of a win-win scenario. Behavioural risks may also arise from the actions (or lack thereof) by individuals in key positions, who are unable to perform the role that the project requires.

Systemic risks arise from the established processes and systems whose impact on the project is not immediately apparent. Some of these factors are quite obvious once you look for the source of disruption, but many systemic factors originate from the different subcultures that exist in large institutions. The behavioural norms that arise from these different subcultures are rarely recognised by the members of the distinct ‘tribes’. The result can be conflict and miscommunication, which appears to have no rational foundation.

Key risk area (in no particular order of priority)	Some typical causes	Source
Lack of trust between stakeholders (Estates / Academics)	Low levels of mutual understanding. Internal politics.	Behavioural
Scope creep	Lack of engagement at the right time. Lack of understanding of cost implications.	Systemic

	Low levels of accountability. Unrealistic aspirations.	
Poor communications	Lack of recognition of time required to maintain connections. Information not passed up or down the chain as required. Silo cultures One way communication, little feedback.	Systemic and behavioural
Lack of rigorous challenge	Power imbalance between sponsor and project team. Problems and differences of opinion not voiced in time to prompt change before cost are incurred.	Behavioural
Project funding patterns & funders imposed constraints	Lack of predictability of long term finance for capital projects. Need for multiple sources of funding.	Systemic
Institutional change outside of project parameters	Regulatory or adoption of alternative practice, new external funding arrangements, new strategic initiatives. Sustainability.	Systemic
Personality types of users and stakeholders	Lack of comprehension of different styles of psychological profiles which affect communication. Lack of team motivation.	Behavioural
Underestimating the need for pre-delivery process	Impatience to start. Lack of understanding of the need to put good set-up practice in place. Lack of recognition of the disruption to the on going business of the university.	Systemic and behavioural
Poor briefing	Lack of ability to articulate what is going to be required. Lack of challenge in the briefing. Lack of understanding of the design interpretation.	Systemic and behavioural
Changing stakeholders	Change of senior people leading to a lack of consistency of decision making and a change in priorities.	Systemic

Table 1. A schedule of the top ten risks identified by a panel of experts working on Higher Education or University projects.

The Spheres of Influence as an analytical model

So how can you actually apply systemic thinking in the context of managing complex behaviours in a large project? As mentioned above, the starting point is to recognise the need to look beyond the immediate obvious, and consider the factors that sit behind the problem or issue. This requires slowing down and taking the time to reflect on what has happened and what is happening. In essence, you need to ask a different set of questions. This is an exercise that you can do by yourself, but it also works effectively if you involve other members of your team.

My partners, Will Karlsen and Adrian Wheeler (2014) at the Fairlight Project, have come up with a visual graphic that helps illustrate the concept of what they have termed the ‘Spheres of Influence’ (see figure 1). Each sphere represents a different aspect of a person’s interaction with an organisation either at a personal, interpersonal or team level. The organisation also sits within a wider sphere in which it must react and interact with its stakeholders. In trying to understand why an individual or even a team is behaving irrationally, the systemic approach prompts you to consider the influence that all five spheres may be having on the situation.

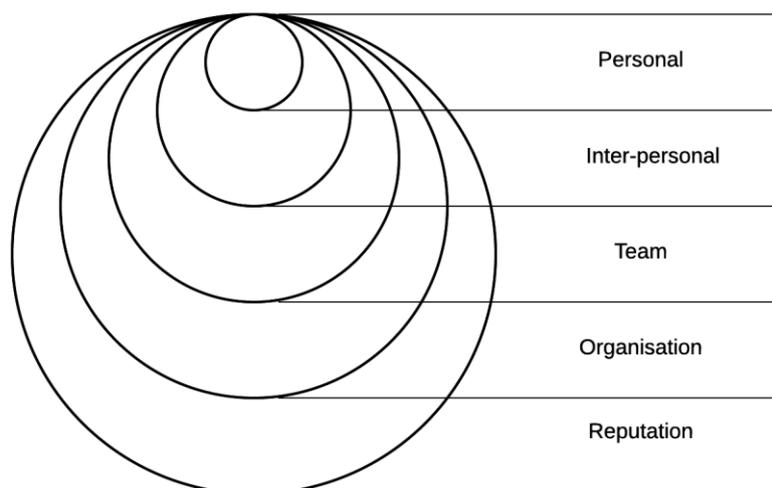


Figure 1- The Spheres of Influence - (with permission from Karlsen and Wheeler)

The core idea is that most large problems need to be looked at through the lens of all five of the spheres. Each lens prompts a different perspective enabling the viewer to see the issue from different sides, providing a rich source of data with which to decide a course of action. It is a mechanism to prompt the secondary questions that may help reveal deeper issues. For the purposes of illustration, let us pick an example of a communication problem between the team and an individual representing the project sponsor. Walking away from an angry exchange, you might be tempted to dismiss the other person as being inadequate for his role. By apportioning all of the blame on your perception of his inadequacy, you limit your options in trying to rebuild any form of working relationship. A systemic approach, based on the *Spheres of Influence* model, would prompt you to ask a series of additional questions before you reach the conclusion that the client was simply a fool.

Your initial focus in this conversation has been through the *Interpersonal* sphere, so the systemic process requires that you now park the emotions raised by your latest encounter and that you try to take a dispassionate review of the situation through the other lenses. So let us begin with the *Personal* sphere. Do you understand your own personal motivations and drivers? What part did you play in the early interactions with the sponsor, and why might he have had difficulty in understanding your rationale and logic. Recognising your own emotional drivers is important if you wish to influence others. The personal traits that drive you to be a successful project manager may also sometimes get in the way of your ability to connect with others who have a different set of motivations. If you have never done this type of self-exploration before, I would highly recommend finding a coach or mentor who can help you look below the surface and recognise your own behaviours. You will be considerably more effective as a communicator once you become more aware of how others perceive you.

Another use of *Personal* sphere is to try and work out the drivers and motivations of the project sponsor. What is his professional background? Does he appear to be an introverted or an extroverted thinker? Does he like to focus on the big picture or does he tend to quickly immerse himself in the details? Since you cannot read another persons mind, all you can do is look for clues that would help you understand more about what is going on under the surface that might explain the behaviour of your antagonist.

The next step is to look at the situation from the perspective of the wider group, of which the sponsor is also part. The *Team* sphere is concerned with the dynamics of the collection of individuals that interact with each other on a regular basis. So does the sponsor have sufficient information to be able to appreciate the different technical and personal challenges that add complexity to the project? What happens when other members of the team interact with the sponsor, and what is the team's collective attitude to him? Has he become a scapegoat for other frustrations and tensions arising from the project? Ideally, at the start of the project you will have worked through a checklist of actions to engage with the project stakeholders. Go back over the checklist. Which elements were glossed over at the start of the project that may need revisiting?

One of the challenges when working on a major project is that it is easy to become absorbed in the details of the project and to forget what is happening in the outside world. The *Organisational* sphere invites you to pull back from this internal focus and to understand what is happening in the sponsor's institution. All large organisations, whether public or private, are struggling to cope with fast changing and unpredictable environments. What are the forces of change that are affecting your sector, and how are they having an impact on the sponsors day-to-day activity? More importantly, what are the internal politics of the organisation, and how does its culture distort the behaviours of the individuals who work there?

The *Reputational* sphere forces you to pull back even further to consider the impact on organisational behaviours created by external stakeholder groups. These are usually a mix of customers, shareholders or even taxpayers. As organisations get larger, their public profile expands, and so they must maintain a greater level of care over their perceived reputation.

This concern can lead to some unusual behavioural patterns. These external forces create pressures inside the organisation, particularly at leadership level. The pressure for listed companies to hit quarterly earnings targets is a great example of behavioural distortion, as the need to hit short-term financial targets can often have an adverse affect on projects which require a long term perspective.

This exercise might take an hour or so of internal thought, or several hours of external research, depending upon how much information you already have. Once you have worked through the progression, you should have a much deeper understanding of the root causes of the behaviours that you are experiencing. Any actions that you decide to implement now have a greater chance of achieving a solution that allows the project to continue to reach a successful conclusion.

Any discussion on human behaviour is limited by the degree of context that one is able to apply to a real-life situation. The above example may therefore feel slightly artificial. My purpose however is to encourage you to first of all recognise that your initial emotional reaction to people-based problems is likely to restrict your ability to see the wider picture. There are other systemic models using different terminologies, which are less concerned with behaviour, and more focused on unraveling complex tasks. The Spheres of Influence model is therefore just one mechanism that might help you explore the range of factors that affect how an individual, or a team, behave.

Conclusion

The management of complexity will increasingly become one of the core skills of the project manager. In the 21st century having the toolkit to be able to react to rapidly changing systemic conditions is likely to become essential to your success as a leader, manager or team coach. Studies consistently show that project success is fundamentally connected to the ability of the project team to adapt their behaviour in line with the environment in which they are working. Systemic thinking is therefore much more than an academic concept or theoretical idea. Using a systemic model can help you explore the situation in a methodical and dispassionate way. If you can work out what is really going on 'under the surface' you significantly improve your chances of finding an effective solution.

About the Author



Tony Llewellyn

United Kingdom



Tony Llewellyn is a specialist in interpersonal dynamics and the effectiveness of project teams. He is a partner in the Fairlight Project LLP, a business that focuses on behavioral change in organisations going through periods of transition.

Originally training as a surveyor, he has spent over thirty years working on major construction projects. In 2011, Tony resigned as a director of Aecom and extended his expertise into coaching project teams. He is a strong exponent of the need for teams to understand complexity and to spend time planning how behaviors that will allow the team to work through periods of change and pressure.

Tony is a visiting lecturer at the University of Westminster where he runs a masters module on Developing Effective Project Teams. He has also recently written a book titled Performance Coaching on Complex Projects which is published by Gower.

Tony fills in his spare time running slowly over long distances, and is currently training for the 2016 London Marathon.