Stream 12 - Project Organising

Australian and New Zealand Academy of Management Conference 2016

Queensland University of Technology, Brisbane, Australia

A 'lived experienced' tool for managing and building project delivery capability

Bronte van der Hoorn

School of Management & Enterprise, University of Southern Queensland, Springfield, Australia

Email: info@brontevanderhoorn.com

Stephen Duffield

School of Management & Enterprise, University of Southern Queensland, Springfield, Australia

Email: stephen@invictaprojects.com.au

Associate Professor S. Jonathan Whitty

School of Management & Enterprise, University of Southern Queensland, Springfield, Australia

Email: whitty@usq.edu.au

van der Hoorn, B, Duffield, S & Whitty, S 2016, 'A 'lived experienced' tool for managing and building project delivery capability', in *Australian and New Zealand Academy of Management Conference 2016*, Brisbane, Australia.

A 'lived experienced' tool for managing and building project delivery capability

ABSTRACT: This paper discusses a new, integrated tool-set for project managing. This tool-set is a response to calls for project managers to be able to apply new project managing thinking 'in practice'. The tool-set integrates the project-space model and the Syllk model. Together, they bring visibility to enablers and constraints to project delivery capability, and these learnings can then be integrated into the organisation's systems to build in a tailored manner ongoing project management capability. Specifically, the tool-set highlights the hindrances to project delivery and what capabilities need to be 'wired' into an organisation to remove them. This tool-set integrates into future organisational initiatives the learnings from concrete 'lived experiences' of project managing.

Keywords: Tailoring project management | Project management tools | Lessons learned

INTRODUCTION

This paper proposes an integrated tool-set to support project managers in delivering their projects and also to adapt and build long-term organisational project management capability. This new tool-set is a response to the sustained call of the research community for new project managing tools and approaches (Svejvig & Andersen, 2015; Winter, Smith, Morris, & Cicmil, 2006). It is also response to the the number of projects that continue to 'fail' (Bloch, Blumberg, & Laartz, 2012; Liebowitz, 2015; Project Management Institute, 2014) , and the need to provide alternative tools which may better meet the realities of project work. Extant discussion of the need for new approaches and tools highlight the need for a *tailored* approach to managing projects (Shenhar & Dvir, 2007; Söderlund, 2004). This paper contributes to responding to this need by coupling the project-space model and the Syllk model as an integrated tool-set for use by project managers and their organisations. The paper provides a practical contribution to enable project managers to utilise new project management thinking (continental and systems) in their project managing. It promotes visibility in the challenges of project delivery and integrates the learning of lessons with everyday project managing practice.

Central to the integrated tool-set is the concept that project work is work for which an organisation (or individual) has some form of lack or hindered capability (van der Hoorn & Whitty, 2016). Subsequently, it is necessary to have project managing tools that enable hindrances to capability to be openly discussed and resolved. The project-space model is a tool which enables the project team to visualise these capability constraints (as well as enablers). This can then encourage discussion with relevant stakeholders and the necessary action. The Syllk model provides a method of integrating the identification of these capability enablers and constraints into the organisation's ongoing 'wiring' or configuration. In summary, the project-space model enables the capturing and discussion of barriers to project management capability in a concrete project situation. The Syllk model then enables these concrete factors to be integrated into an organisation's systems. Consequently, organisational project managing capability is being built and adapted in a tailored manner that reflects a particular organisation's capability needs.

Firstly, we will define the research problem; a brief examination of relevant literature is then provided. This is followed by the focus of our conceptual research inquiry and the introduction of foundational concepts which underpin the integrated tool-set. The integrated tool-set is then examined and the benefits and limitations outlined in the discussion. The conclusion highlights the contribution of the paper.

RESEARCH PROBLEM

In 2006, the Rethinking Project Management Network, called for new directions in project management research (Winter et al., 2006). Simplistically, it was a call for practice-driven enquiry that reflected the 'lived experience' of project work (or what actually occurs in projects) (Cicmil, Williams, Thomas, & Hodgson, 2006; Winter et al., 2006). Svejvig and Andersen (2015) have reflected on the development of the literature since the setting of these new directions. They find that whilst some progress has been made, there remains a significant gap to provide practitioners with alternative practices (or tools) to support their project managing (Svejvig & Andersen, 2015).

Another key concept that has received considerable attention in the project literature is that 'one size does not fit all'. The premise is that we cannot assume that the employment of particular project processes or tools will lead to universal project success. For example, Söderlund (2004) highlights that it is necessary to consider both the similarities and differences across various projects. Shenhar and Dvir (2007) in discussing their diamond framework, highlight that failing to realise the differences between projects can lead to project failure. Vom Brocke and Lippe (2011) discuss the changing facets of a project over time, and need for different management approaches for various situations. Based on organisational contingency theory, they argue for a context-specific approach for management. In summary, in line with the 'rethinking' agenda we propose that there is a need to develop tools that assist with the actuality of managing project work, and tools which enable a tailored approach to managing and building project delivery capability.

LITERATURE REVIEW

Project management tools

We will commence our literature review by briefly reflect on existing project management tools. Traditionally, the tools that dominate the extant project management literature reflect the planning focus that underpins the discipline (Maylor, 2001). Gantt charts, earned value management, status reports and other tools specified in the bodies of knowledge are generally associated with planning, or tracking a project against its baselines (set during planning). The agile approach reflects a shift in this thinking. Burn down charts, user stories, sprints and stand-ups are tools and processes commonly associated with this more flexible, execution-focused approach (Pries, 2011; Wysocki, 2012). A more recent tool in the literature is the project-space model that brings a focus to the holistic 'lived experience' of the project and barriers to its progress (van der Hoorn, 2016b).

Tools for capturing lessons learned

We now consider existing tools that are used for lessons learned as we will argue that this is a key tool for developing tailored project management capability. Common lessons identification and capture tools are: reflection, lessons learned sessions; after action reviews; project debriefings; close out meetings; post project appraisals/reviews; case study exercises; community of practices; project milestone reviews; post mortems, project histories; project health checks; and project audits (Bakker, Cambré, Korlaar, & Raab, 2011; Duffield & Whitty, 2015; Schindler & Eppler, 2003; Williams, 2007). O'Dell and Hubert (2011, p. 69) highlight that there are some typical questions that are focused on: "What was supposed to happen? What actually happened? Why was there a difference or variation? Who else needs to know this information?" It is these identification practices and tools that are often mistaken as complete lessons learned processes (Duffield & Whitty, 2015).

The literature provides numerous technology solutions of storing, recording and accessing lessons learned. However, the key is to identify the 'actuality' of what works for an organisation and constantly monitor, update, and keep it current and relevant (Duffield & Whitty, 2015; Williams,

2007). Duffield and Whitty (2015) have shown how the Syllk model represents the various organisational systems or functions (in terms of elements) that collectively drive the overall behaviour of the organisation. The Syllk model can therefore represent the required knowledge (or know-how) network of capabilities that enable an organisation to successfully deliver their project work.

RESEARCH INQUIRY

How can the project-space model and the Syllk Model be conjoined in a way that can assist with the actuality of managing project work in a tailored way, whilst also enabling an organsation to continuously adapt and build their project delivery capability?

FOUNDATIONAL CONCEPTS

Projecty: A spectrum of greater or lesser capability

Projectyness is a term in the extant project management literature (van der Hoorn & Whitty, 2016). The term is grounded in the Heideggerian conception of a project (van der Hoorn & Whitty, 2015) and highlights that work is on a spectrum of being more or less projecty. Fundamentally, what makes work 'projecty' is the lack of inherent capability to undertake the various activities that grouped together comprise that work. If we can easily undertake a group of activities, it is operational – not at all projecty. If we find a group of activities challenging it is because there is pressure on our capability – and it will be more projecty. When the term capability is used in this conceptualisation it is not just about skills or experience. Rather it is a distributed and systemic view which includes the social, culture, technology, infrastructure and process systems in an organisation (refer section: 'The Syllk model: A holistic and distribution view of capability'). Additionally, capability is not binary. An organisation (or an individual's) capability to undertake any activity is on a continuum. Therefore, work can be experienced as more or less projecty along a continuum.

van der Hoorn and Whitty (2016) use the metaphor of a rollercoaster and the experience of scariness to explain this projectyness concept (refer Figure 1). A rollercoaster is experienced as being scary because of the rider's history and personal perception of the experience. A rollercoaster that is

scary for a child is unlikely to be so for an experienced adult rider. Similarly, no work activity is inherently projecty. The activity is only experienced as project work, because the activity is not within the inherent capability of those undertaking it (van der Hoorn & Whitty, 2016).

Insert Figure 1 about here

This conceptualisation of project work being defined in terms of a paucity of capability is a significant shift to the dominant literature. It brings into focus that project managing is about managing (to varying extents) a deficit of (or hindrance to) capability. Subsequently, the expectation that the project work will run smoothly is found futile (van der Hoorn & Whitty, 2016). A projecty (lack of capability) understanding highlights that we need to be able to talk about what is hindering (as well as enabling) our progress towards a project objective. Dominant definitions with their focus on a finite duration and being temporary (Office of Government Commerce, 2009; Project Management Institute, 2013), and project management tools (such as earned value management) critically lack this capability focus. The project management discipline requires tools which enable the areas of lacking capability (or hindrances to progress) to be identified, communicated, and then (hopefully) resolved.

As per van der Hoorn and Whitty (2016), the concept of projectyness does not preclude that project management tools such as Gantt charts and work breakdown structures can be used in work that is operational. In such cases, van der Hoorn and Whitty (2016) argue that there may be some benefit to the person/s to do so. However, the experience of that work is not actually projecty, there is just a choice to use project management tools.

The Syllk model: A holistic and distributed view of capability

The Syllk view of capability (Duffield & Whitty, 2015) underpins the projecty conceptualisation of project work. As such, we will briefly introduce the Syllk model as a systemic view of capability (or 'know-how' to deliver work). The Syllk model can be described as a 'thinking tool' for organisations to map the configuration of their systems to achieve some required set of capabilities (Duffield, 2015; Duffield & Whitty, 2016; Duffield & Whitty, 2015). Drawing on systems theory, the Syllk model proposes that the 'know-how' for an organisation to undertake any activity

(e.g. deliver a good or service, hire staff, procure and pay for goods and services) is not just in the skills and experience of its people. Rather, the ability to perform any activity is dependent on an organisation's systems (learning, social, cultural, technology, process and infrastructure) being aligned (refer Figure 2) (Duffield & Whitty, 2015). The organisation's systems need to be 'wired' (coupled together) in such a way that all those systems collectively enact a capability.

Insert Figure 2 about here

Duffield and Whitty (2016) and Duffield (2015; 2016) discuss examples of an organisation having the 'know-how' to capture lessons from their projects and to 'learn' (or store and remember) these for future project initiatives. They highlight (amongst other enablers) the need for technical solutions to capture and communicate lessons; a 'just' culture which encourages sharing and avoids blame; social networks through which lessons can be discussed and communicated. The capability to 'learn lessons' (or any other activity) is distributed across organisational systems. If any of these systems are not 'aligned' (or wired) to deliver the capability (for example, lessons learned); the organisation's capability to deliver that activity will be hindered and diminished.

The Syllk model has been successfully used to initiate discussion on the distributed nature of 'know-how' in undertaking lessons learned (Duffield, 2015; Duffield, 2016; Duffield & Whitty, 2016; Duffield & Whitty, 2015). It provides a graphical representation of how the various systems in an organisation need to be coupled together (aligned) to enable a capability to be enacted. We will argue in our proposed co-joined or integrated model (refer section: 'An integrated tool-set for project managing practice') that this tool can also be used within a project (and the organisation more broadly) to understand and manage this 'lack of capability' that is central to the experience of projecty work.

The project-space model: Showing capability 'in the now'

The project-space model is a diagrammatic tool for explaining the current and forecasted enablers and constraints to a project's progress (van der Hoorn, 2016b). The conceptual basis of the tool is explained in detail in van der Hoorn (2016b). Briefly, the project-space model (refer Figure 3)

allows a project team to communicate what is enabling them (enablers) to progress towards their project objectives and what are constraints (the hindrances) to progress. There are two grids in the model – a current grid (what is happening 'now') and a forecast grid (what 'may' happen). In both these grids, factors that are enabling the work to progress are shown as green triangles and constraints on progress are shown as orange circles (van der Hoorn, 2016b). The size of these shapes indicates relative impact to progress. In the forecast grid the factors are shown where they are expected to be realised in time. The lower the factor is placed in the forecast grid the more likely it is to be realised. In the current grid, the enablers are always shown to the left of a status line. Conceptually these enablers are driving the project to the right – to completion. The constraints are on the right of the status line (preventing the project from moving to completion) (van der Hoorn, 2016b). The higher the enabler or constraint is placed in the current grid the longer it is expected to impact the project if there is no intervention (van der Hoorn, 2016b).

Insert Figure 3 about here

The project-space model has been successfully trialled in an action research case study (van der Hoorn, in press). It was valued for its ability to convey the reasons for a project's status. Also for how it directed management's attention to where action was most required to overcome constraints, and to sustain enablers to ensure project progress. The tool encouraged conversations within the project team and stakeholders about where they were being hindered and what was supporting them in delivering (van der Hoorn, in press). In the case study the project-space model was updated monthly and discussed with the senior stakeholders at their monthly board meeting (van der Hoorn, in press). In our proposal of an integrated tool-set we will propose how the project-space model can be used in conjunction with the Syllk model to assist in managing project work – work for which we lack inherent capability.

AN INTEGRATED TOOL-SET FOR PROJECT MANAGING PRACTICE

We will now propose how the Syllk model and project-space model can be used in an integrated way to assist an organisation in managing activities for which they lack the inherent capability (projecty work). Given our premise that projecty work is work for which we lack inherent (or there are hindrances to) capability, the purpose of the integrated tool-set is to identify and communicate these barriers or hindrances to progress with the hope of their resolution. Furthermore, given our research problem highlighting that a 'one-size does not fit all' approach to project work, the integrated tool-set can provide concrete information which is relevant to a specific organisation or project environment.

Simplistically, the Syllk model can provide an ideal (all be it changing ideal) of what is required in terms of 'know-how' delivery capability to deliver a given project. The project-space model is a method of identifying and discussing as the project work progresses what is the 'actual' capability required to deliver the work and what it is likely to be. Central to the integration of the two tools is that capability (in our use) is a systemic term related to multiple coupled organisational systems. Refer Figure 4 for diagrammatic illustration of the integrated model. We will now explain the steps (shown as red numerals on the figure) for a project team to use the integrated tool-set.

Insert Figure 4 about here

1. **Identify the 'ideal' capability at the start of the projecty work:** As introduced in **'**The Syllk model: A holistic and distributed view of capability', the Syllk model enables discussion and representation of the required 'know-how' to undertake an activity. In this integrated tool-set, we are proposing that the Syllk model is used to generate a discussion on what capability is required to actually deliver 'this project'. One could argue that this is the purpose of traditional project planning. However, we would propose that the focus traditionally has not been on understanding 'capability' holistically. For example, in the integrated tool-set it is not about simply identifying the number or skill set of staff required to deliver the project's objectives and estimated project duration. It is a

broader concept including the necessary processes, cultures and attitudes required to achieve the project's objective.

Pragmatically, in this step, the project team would discuss, within the framework of the Syllk model: 'what capabilities do we need to deliver this project?'. The result is the project team's best estimate of what capability they require to be successful in delivering the project. This can then inform detailed planning on what is required to set-up this 'capability network' to deliver the project.

We note that whether documented formally or not, the organisation will have existing Syllk wiring (of varying degrees of effectiveness) to enable project delivery. This will impact how any project progresses. This Syllk for organisational project management capability will be updated in step 5.

2. Tracking the capability: In this step, the project-space model is used to prompt discussion regarding what is enabling capability and constraining (hindering) capability. The project-team also forecast what may (in the future) bolster or hinder capability. The Syllk model that has been created in step 1 can be used to prompt discussion and consider whether the identified 'ideal' capabilities are in place. However, the project-space model captures constraints and enablers in a pragmatic 'concrete' manner. Additionally, the project team should feel free to identify new capabilities required to deliver the project work. For example, that timeframes for executive sign offs are too slow; or rising petrol prices are jeopardising the financial solvency of the project.

3. Responding to the hindrances on capability and sustaining extant capability: Following the creation of the project-space model by the project team, it is then used to initiate a conversation with stakeholders. The focus is on highlighting barriers to achieving the project objectives and the enablers that need to be sustained. Influential stakeholders and senior management can then take steps to assist the project in overcoming constraints and sustaining enablers. It is highlighted that this is a considerably different conversation to discussing baseline deviations. It is focused on what is required to deliver 'this project', and how we ensure that an integrated and holistic capability is in place.

4. **Updating the Syllk model:** Periodically throughout the project, the Syllk model for the project should be updated to reflect newly identified capabilities required to deliver this type of work. Enablers which are deemed 'not required', should be removed from the Syllk model. This provides a record of what capability was actually required to deliver this type of project.

[Repeat steps 2 – 4 throughout the project's lifecycle]

5. **Reflection and organisational learning:** At the conclusion of the project (or key milestones), the project's Syllk model should be integrated into the broader organisational consciousness (potentially through the Program/Project Management Office). This allows for similarities in enablers required to deliver projects in this organisation to be captured and for the organisation to build its 'know-how' (capability) for project delivery. Enablers for specific project types can also be captured to provide input for the planning of similar projects. Essentially, this step is establishing the required wiring of organisational systems for a particular organisation to undertake certain activities - a 'capability network' for project delivery.

DISCUSSION

Proposed benefits of the integrated tool-set

We propose that there are several benefits to this integrated tool-set. The foundational benefit is the focus this tool-set brings to both project and organisational capability. The integrated tool-set provides a way for identifying, discussing and resolving (where necessary) the lack of, or hindrances to capability. It is our assumption that the lack of capability is one of the core features of project work and as such we require tools that enable this to lack of capability to be openly discussed and managed.

Secondly, the integrated tool-set provides a mechanism (the project-space model) for dealing with capability challenges during the current actuality of the project work. This assists in bringing visibility to constraints and hindrances and therefore increases the likelihood of successful project

delivery. Furthermore, the project-space model is complimented by the Syllk model which enables actual capability requirements for project work to be captured longer-term for broader use across the organisation. Such organisational learnings (or systemic rememberings) come from the concrete experience of project work in the organisation. It is a tool-set which assists each project in its delivery whilst also cultivating specific organisational project management capability relevant more broadly to that organisation. This integrated tool-set enables an organisation to cultivate its specifically required organisational project management capability.

We also propose that the visual nature of both these tools adds to their value. Visual communication has been widely recognised as having cognitive processing benefits (refer Nelson, Reed, and Walling (1976), Tufte (1983), Larkin and Simon (1987) and Cheng (2004)). When this tool-set is used to generate discussion, the nature of conversation is enhanced because of the cognitive benefits of the information presentation style. For example, it can assist in sensemaking across the project team and stakeholders (van der Hoorn & Whitty, In press) regarding the project's progress.

Finally, we propose that this tool-set is grounded in a systems thinking and continental philosophical approach (van der Hoorn, 2016a) reflective of the calls for new foundations and thinking in the discipline (Cicmil, 2006; Winter et al., 2006). The Syllk model is strongly systemic and the project-space model is focused on enabling the concrete now experience of a project to be communicated pragmatically. Perhaps most importantly, it provides a contribution to practitioners who would like to enact this new project managing thinking in their practice.

Limitations

It is acknowledged that the integration of these tool-sets is currently not tested in the project environment. However, both tools have been individually empirically tested (refer Duffield and Whitty (2016), Duffield (2015; 2016) and van der Hoorn (in press)). Future research to empirically test this integrated tool-set would be valuable.

CONCLUSION

In this paper we have proposed how the project-space model can be conjoined with the Syllk model to deal with the challenges of project delivery and then to incorporate this into an organisation's systems.

We propose that this is an important contribution to practice in that it brings a focus to constraints and enablers to project delivery capability. Firstly, it brings visibility of capability (hindrances and enablers) within an individual project context. It then facilities what is required to enable project delivery (in a particular organisation) to be integrated into the broader organisational systems. Over time, the organisation can build and adapt its systems to increase capability for undertaking the type of work relevant to its business. It develops (and can continue to evolve) project managing capability relevant to its business context. The tool-set is not dependent on a particular project management method, rather it is focused on the concrete 'lived experience' in a particular environment. It encourages a tailored approach to developing organisational capability in project delivery. In summary, this is a practical tool-set that allows project practitioners to enact new project managing thinking in their practice.

REFERENCES

Bakker, R. M., Cambré, B., Korlaar, L., & Raab, J. (2011). Managing the project learning paradox: A set-theoretic approach toward project knowledge transfer. *International Journal of Project Management, 29*(5), 494-503.

Bloch, M., Blumberg, S., & Laartz, J. (2012). Delivering large-scale IT projects on time, on budget, and on value. Retrieved from http://www.mckinsey.com/insights/business_technology/delivering_large-scale_it_projects_on_time_on_budget_and_on_value

Cheng, P.-H. (2004). Why diagrams are (sometimes) six times easier than words: Benefits beyond locational indexing. In A. Blackwell, K. Marriott, & A. Shimojima (Eds.), *Diagrammatic representation and inference* (Vol. 2980, pp. 242-254). Berlin: Springer

Cicmil, S. (2006). Understanding project management practice through interpretative and critical research perspectives. *Project Management Journal, 37*(2), 27-37.

Cicmil, S., Williams, T., Thomas, J., & Hodgson, D. (2006). Rethinking project management: Researching the actuality of projects. *International Journal of Project Management, 24*(8), 675-686. doi:http://dx.doi.org/10.1016/j.ijproman.2006.08.006

Duffield, S. (2015). *Application of a Systemic Lessons Learned Knowledge Model for Organisational Learning through Projects.* Paper presented at the Australian Institute of Project Management National 2015 Conference, Hobart.

Duffield, S. (2016). Application of the Syllk model wiring an organisation for the capability of an online Community of Practice. *VINE Journal of Information and Knowledge Management Systems, 46*(2), 267-294.

Duffield, S., & Whitty, S. (2016). How to apply the Systemic Lessons Learned Knowledge model to wire an organisation for the capability of storytelling. *International Journal of Project Management, 34*(3), 429-443. doi:10.1016/j.ijproman.2015.11.004

Duffield, S., & Whitty, S. J. (2015). Developing a systemic lessons learned knowledge model for organisational learning through projects. *International journal of project management, 33*(2), 311-324. doi:http://dx.doi.org/10.1016/j.ijproman.2014.07.004

Larkin, J. H., & Simon, H. A. (1987). Why a diagram is (sometimes) worth ten thousand words. *Cognitive Science, 11*(1), 65-100. doi:10.1111/j.1551-6708.1987.tb00863.x

Liebowitz, J. (2015). IT project failures: What management can learn. *IT Professional, 17*(6), 8-9.

Maylor, H. (2001). Beyond the Gantt chart: Project management moving on. *European Management Journal, 19*(1), 92-100. doi:http://dx.doi.org/10.1016/S0263-2373(00)00074-8

Nelson, D. L., Reed, V. S., & Walling, J. R. (1976). Pictorial superiority effect. *Journal of Experimental Psychology: Human Learning and Memory, 2*(5), 523-528. doi:10.1037/0278-7393.2.5.523

O'Dell, & Hubert. (2011). *The new edge in knowledge : how knowledge management is changing the way we do business*. New Jersey: John Wiley & Sons.

Office of Government Commerce. (2009). *Managing successful projects with PRINCE2* N. Bennett & C. Bentley (Eds.),

Pries, K. H. (2011). *Scrum project management* J. M. Quigley (Ed.)

Project Management Institute. (2013). *A guide to the project management body of knowledge*

Project Management Institute. (2014). PMI's Pulse of the profession: The high cost of low performance 2014. Retrieved from http://www.pmi.org/~/media/PDF/Business-Solutions/PMI_Pulse_2014.ashx

Schindler, & Eppler. (2003). Harvesting project knowledge: a review of project learning methods and success factors. *International Journal of Project Management, 21*(3), 219-228.

Shenhar, A. J., & Dvir, D. (2007). *Reinventing project management: The diamond approach to successful growth and innovation*. Boston: Harvard Business School Press.

Söderlund, J. (2004). Building theories of project management: past research, questions for the future. *International Journal of Project Management, 22*(3), 183-191. doi:http://dx.doi.org/10.1016/S0263-7863(03)00070-X

Svejvig, P., & Andersen, P. (2015). Rethinking project management: A structured literature review with a critical look at the brave new world. *International Journal of Project Management, 33*(2), 278-290. doi:http://dx.doi.org/10.1016/j.ijproman.2014.06.004

Tufte, E. R. (1983). *The visual display of quantitative information* (2nd ed.). Cheshire Conn: Graphics Press.

van der Hoorn, B. (2016a). Continental thinking: a tool for accessing the project experience. *International Journal of Managing Projects in Business, 9*(4), 865-891.

van der Hoorn, B. (2016b). The Project-space Model: Visualising the enablers and constraints for a given project. *International Journal of Project Management, 34*(2), 173-186. doi:http://dx.doi.org/10.1016/j.ijproman.2015.10.006

van der Hoorn, B. (in press). Discussing project status with the project-space model: an action research study. *International Journal of Project Management*.

van der Hoorn, B., & Whitty, S. (2015). A Heideggerian paradigm for project management: breaking free of the disciplinary matrix and its Cartesian ontology. *International Journal of Project Management, 33*(4), 721-734.

van der Hoorn, B., & Whitty, S. (2016). Projectyness: A spectrum of greater or lesser capability. *International Journal of Project Management, 34*(6), 970-982. doi:http://dx.doi.org/10.1016/j.ijproman.2016.05.003

van der Hoorn, B., & Whitty, S. (In press). The project-space model: A tool for sensemaking in projects. *International Journal of Managing Projects in Business*.

Vom Brocke, J., & Lippe, S. (2011). *Towards a situational approach in managing collaborative research projects in IT/IS - Finding the right contigency factors.* Paper presented at the PACIS 2011 - 15th Pacific Asia Conference on Information Systems: Quality Research in Pacific.

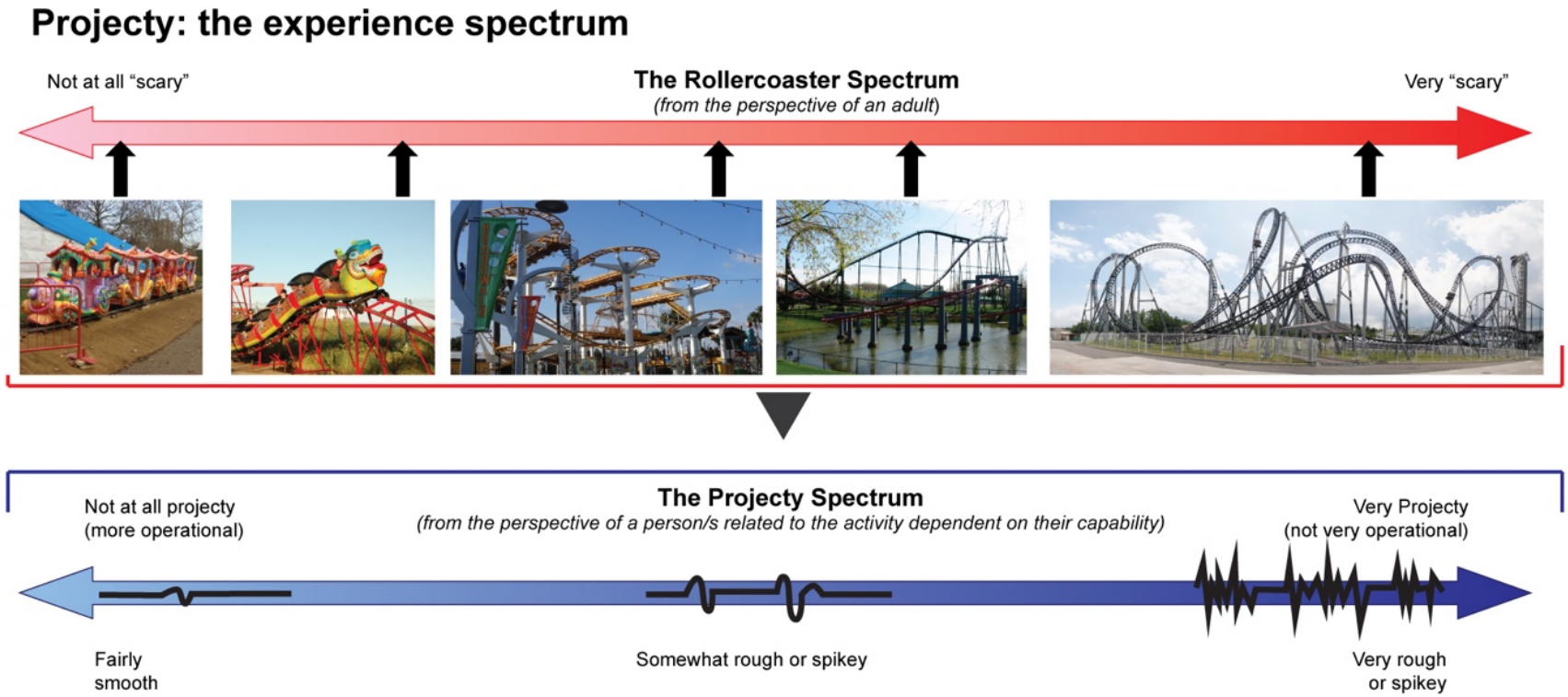
Williams, T. (2007). *Post-Project Reviews to Gain Effective Lessons Learned* Retrieved from http://library.books24x7.com.ezproxy.usq.edu.au/toc.aspx?site=JE61N&bookid=24212

Winter, M., Smith, C., Morris, P., & Cicmil, S. (2006). Directions for future research in project management: The main findings of a UK government-funded research network. *International Journal of Project Management, 24*(8), 638-649. doi:http://dx.doi.org/10.1016/j.ijproman.2006.08.009

Wysocki, R. K. (2012). *Effective project management traditional, agile, extreme* B. K. Gillingham (Ed.) Retrieved from http://ezproxy.usq.edu.au/login?url=http://library.books24x7.com/library.asp?^B&bookid=44339

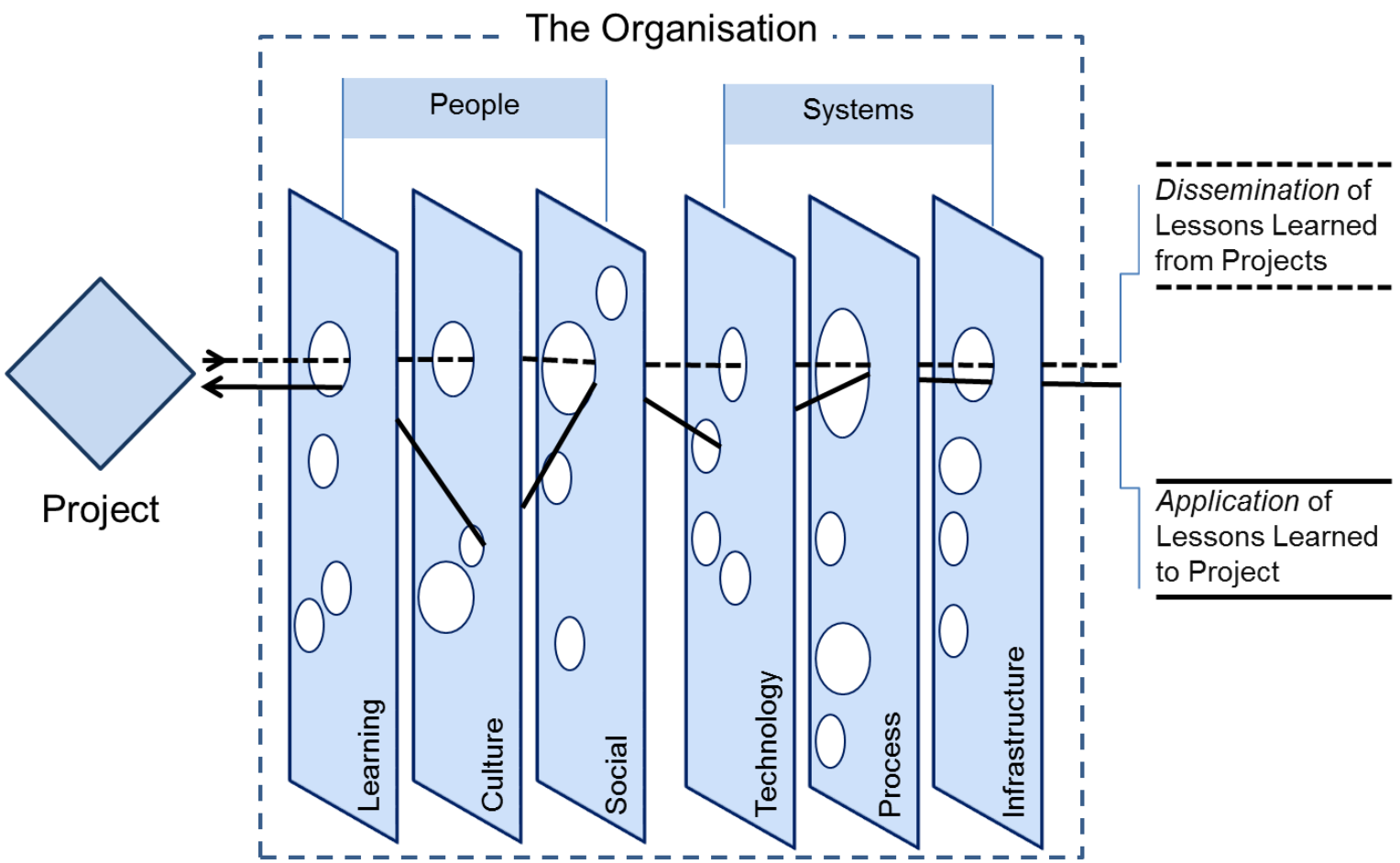
FIGURES

Figure 1: The projecty experience spectrum using the metaphor of a rollercoaster and scariness



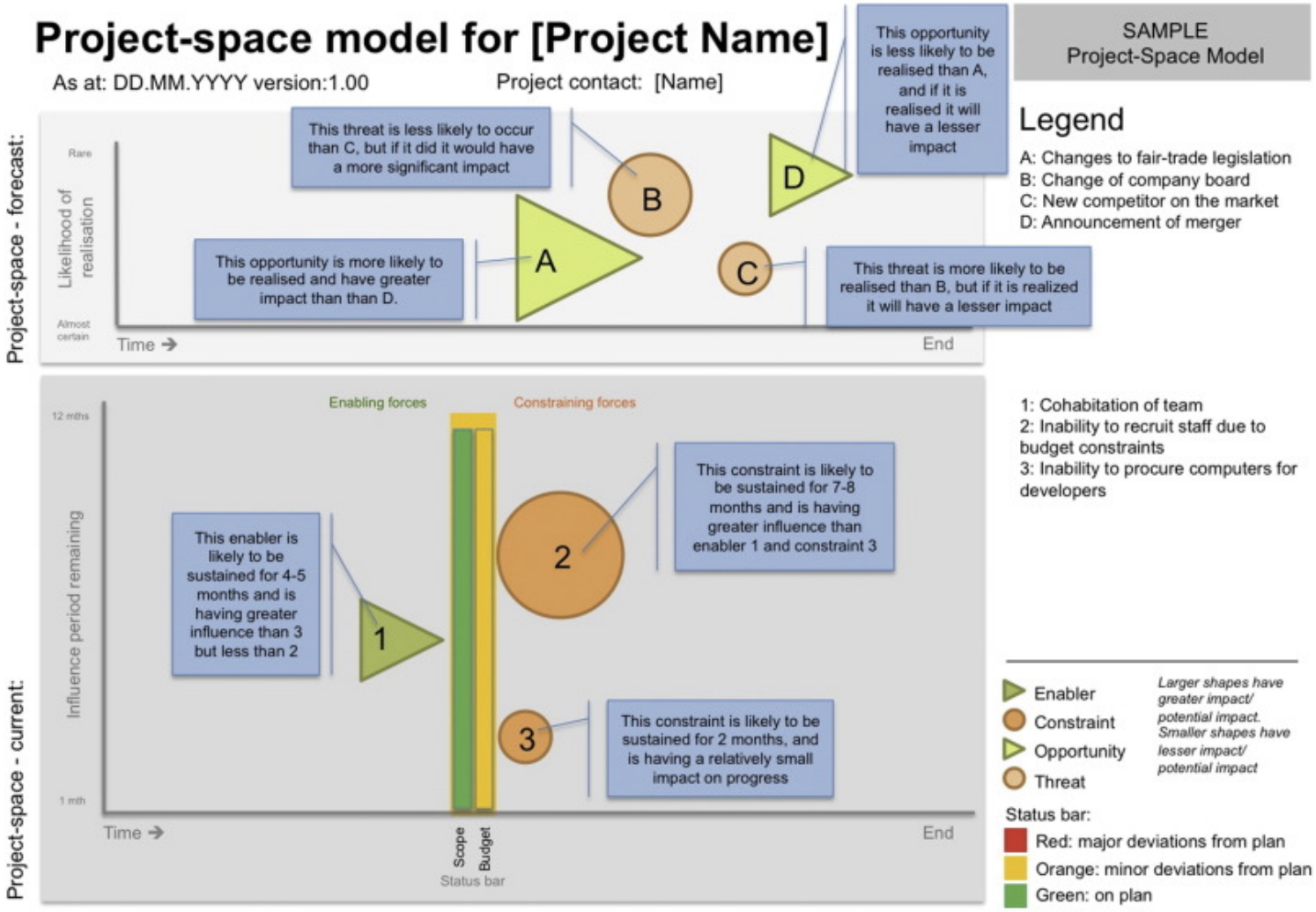
Source: van der Hoorn and Whitty (2016, Graphical abstract)

Figure 2: The Syllk model: a systemic view of capability



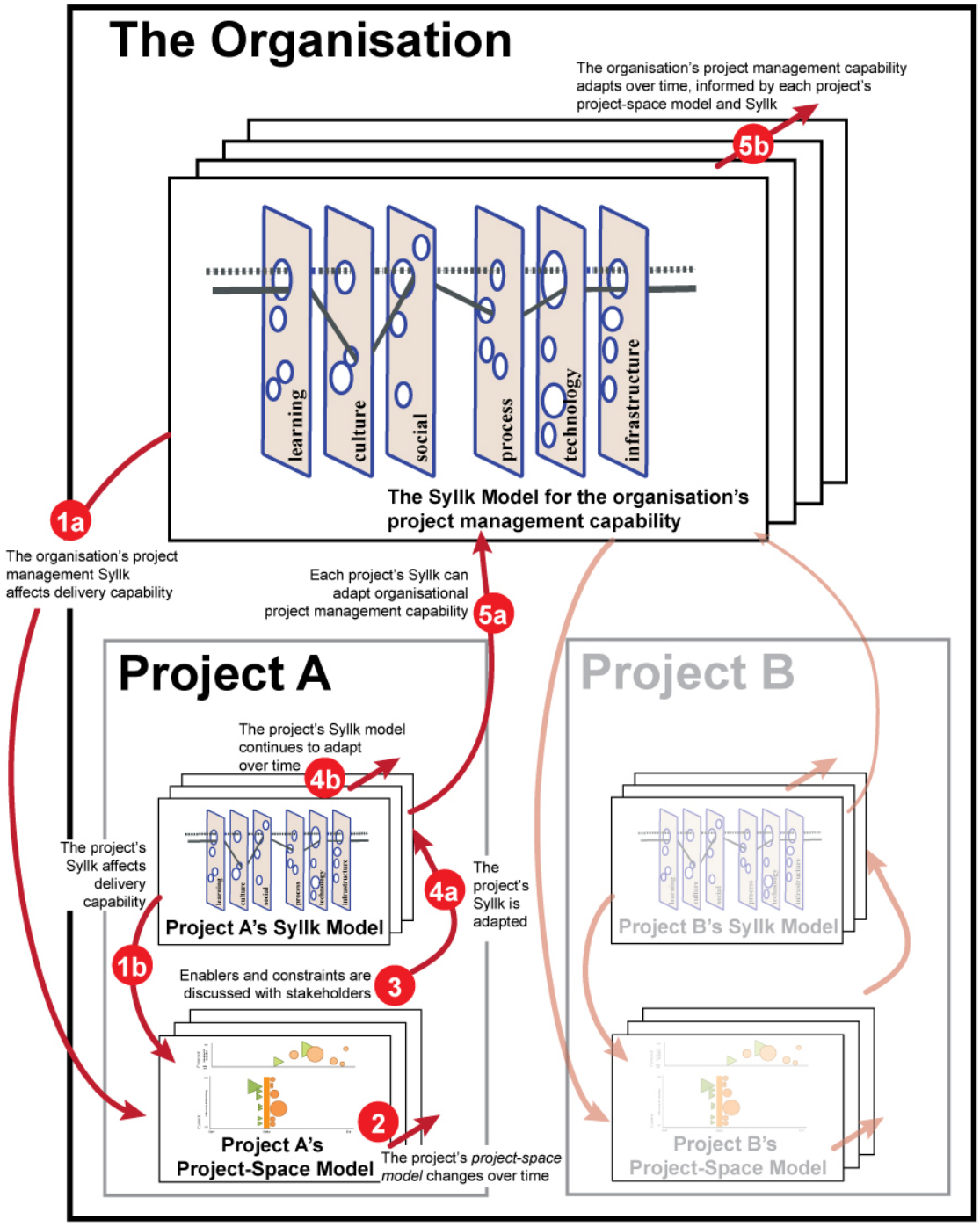
Source: Duffield and Whitty (2015)

Figure 3: Example of project-space model



Source: van der Hoorn (2016b, section 6)

Figure 4: Integrated tool-set to identify (lack of) capability and provide a tailored approach to organisational project delivery capability



Note: Numbers in red circles correspond to the steps in the paper (refer section:'An integrated tool-set for project managing practice')