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The Project Establishment Guide: probing the critical contexts for learning and teaching projects to enable their success

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Taking strategic and operational contexts into account is critical for the success of higher education learning and teaching projects. Many projects are established with only a cursory look at the strategic priorities they need to deliver, neglecting to unpack the team's assumptions and how these impact on project planning and execution. The Project Establishment Guide (PEG) was designed to ensure projects are strategically planned, operationally embedded and sustainable. PEG draws on four theoretical perspectives and incorporates five phases, each accompanied by critical questions. A participatory action research methodology was deployed in the reflective evaluation stages to investigate whether PEG assisted project success. Findings suggest that the PEG enables teams to interrogate their assumptions about their project's strategic and operational contexts. However, it also needs to be fine-tuned before it can be incorporated as a standard approach for establishing informed, strategically aligned and embedded projects that are sustainable and maintained into the future.

Keywords: Higher education, learning and teaching projects

Rationale for the Project

There is ample research to suggest that taking strategic contexts into account is critical to the success of projects (Haines, Aller-Stead & McKinlay, 2005; Llopis, 2014). However, many projects are established with only a cursory look at the strategic priorities they are required to deliver. They also fail to unpack the 'human' dimension – the team's own views of reality and how these might impact project thinking and execution (Boaz & Fox, 2014). A key concern emerging from evaluations is that project teams do not question their assumptions about the issues they were tasked to solve (Boaz & Fox, 2014; Burnes & Jackson, 2011). This leads teams to solve the wrong question or be blind to critical stakeholder perspectives (Kotter, 2018). Haines, Aller-Stead and McKinlay (2005) argue that many projects are initiated and developed in isolation, often replicating previous or concurrent projects and sequestered from strategic initiatives or operational management. Crucially, projects are also often designed and produced without consultation with key stakeholders (Hamel & Zanini, 2014). These factors provide significant consequences for budgets and the value of outcomes, exacerbated in the constrained economic climate now challenging higher education. Resolving such duplication and divided priorities thus becomes a key economic imperative for institutional projects.

The Project Establishment Guide (PEG) initiative was designed to equip teams to plan projects in an informed and focused way, maximising available resources and building on previous experiences and capabilities, both institutional and pedagogical. Projects can be instigated by governance to overcome identified gaps or in response to TEQSA and the Higher Education Standards Panel obligations but may also stem from managerial and operational requirements. Projects may also be directly related to changing and complex higher education contexts where institutions are required to be agile, responding to restricted funding environments with escalating student diversity in an increasingly digital environment. Institutions may also be subject to structural reform and change at governance and managerial levels as university leadership transforms. However, many projects remain isolated, replicating others, and quarantined from operational management or generated without key stakeholder consultation. Resolving such duplication and divided priorities is thus a key economic imperative for institutional projects. Lawson and Price (2003) for example argue that design and implementation necessitate an iterative, exploratory process but these processes are incrementally boosted if an understanding of strategic contexts is explicitly and holistically considered at project initiation stage.

Perspectives underlying the PEG approach

PEG draws on literature from a diverse range of discipline perspectives to support teams to establish a strategic 'front end' to their projects: the *Johari Window* from psychological theory (Luft, 1984), the *Cynefin Framework* from organisational leadership (Snowden & Boone, 2007), *Design Thinking* (Brown, 2019), from a human centred approach to innovation and the *Impact Management Planning and Evaluation Ladder* from education development (Hinton, 2014).

From psychological theory, the *Johari Window* (Luft, 1984) (see Figure 1), was incorporated to prompt teams to test the assumptions they are making about their project.

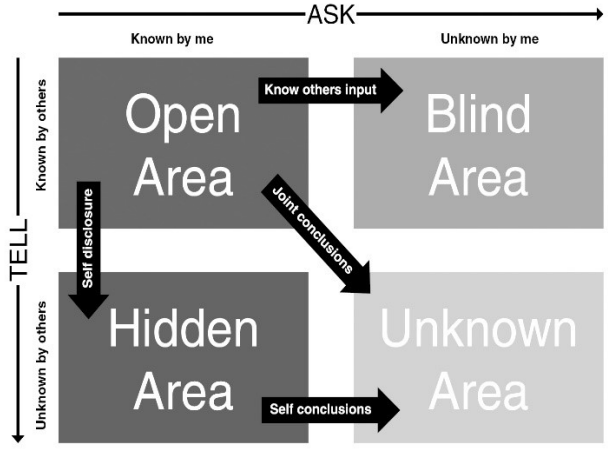

Figure 1: The Johari Window (adapted from Luft, 1984, p.60)

The *Open Area* presents knowledge that is known to both teams and others, the *Hidden Area* knowledge known by the project team but information that others are unaware of, the *Blind Area* information that others perceive but the project team does not, and the *Unknown Area* information not identified by either the project team or others (Luft, 1984). Johari's emphasis

on building one's own self-awareness and on seeking feedback, for example about the unknown, has the potential to furnish evidence that may not otherwise be considered.

Another means of initially reflecting about a project emanates from organisational leadership and decision making (or complexity science) theory. The *Cynefin Framework* (see Figure 2, Snowden & Boone, 2007) encourages teams to see things from new viewpoints, assimilate complex concepts and address real-world problems and opportunities. The framework sorts the issues facing teams into four contexts defined by the nature of the relationship between cause and effect. Four of these – simple (or obvious), complicated, complex, and chaotic – require teams to diagnose situations and to act in contextually appropriate ways. Snowden and Boone (2007) suggest that the framework enhances communication and helps teams achieve a more extensive and more objective understanding of the contexts in which they are operating. The Cynefin Framework causes a project leadership team to ask the question "How complex is the issue we are trying to solve"? Depending on the answer to this question different tools and practices are needed to understand the problem and work with others to solve it.

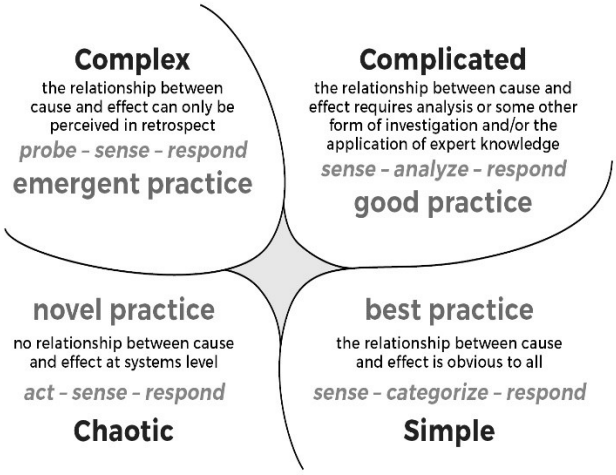

Figure 2: The Cynefin Framework by Dan Snowden (2007, cited in Stepping Higher – Reflections on the Knowledge Age, 2012)

Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success (Brown, 2009) (see Figure 3). Design thinking incorporates constituent or consumer insights in depth and rapid prototyping, all aimed at getting beyond the assumptions that block effective solutions. Brown and Wyatt (2010) advance design thinking as inherently optimistic, constructive, and experiential and able to address the needs of the people who will consume a product or service and the infrastructure that enables it. The perspective changes the way we understand the client group and our stakeholders to look at their experiences as they are, not as we would like them to be. In a project this perspective asks the project team to consider "What do you (students, staff) think about the existing tools and processes and how you use them now"? Design thinking helps to: understand the form and dispersed impact of ill-defined or 'wicked' problems; adopt solution-focused strategies; use abductive/productive reasoning rather than more familiar forms of inductive and deductive reasoning; and loop back through inspiration, ideation, and implementation more than once to help the team refine its ideas and explore new directions (Brown & Wyatt, 2010). This kind of forward thinking is sometimes overlooked in learning and teaching projects where the managerial imperatives guiding higher education focus on efficiency and costs rather than on the student experience.

This limitation is reflected in the increasing focus on the student experience, comprising for example one of the four pillars on funding for regional universities (Bowden, Tickle, & Naumann, 2019).

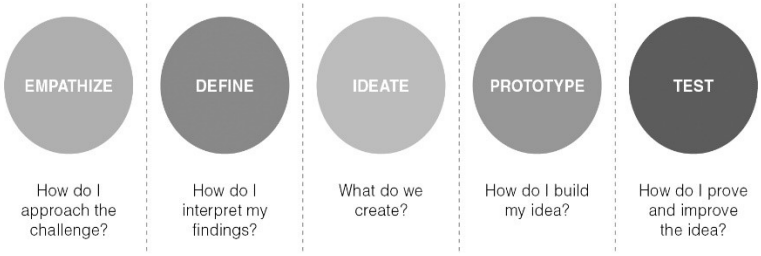

Figure 3: Five stages in the design thinking process (adapted from Brown & Wyatt, 2010)

From education development research, Hinton's model, the *Impact Management Planning and Evaluation Ladder (IMPEL)* (2014) (see Figure 4) presents a prototype which assists project teams to recognise the different types of change that can be achieved through projects, with each stage, or ladder rung, incrementally broader in impact than the last. It provides prompts for project teams in the planning stages of educational projects, as well as a cogent frame for funding agencies to enunciate expectations, make funding decisions and evaluate the efficacy of funding schemes in facilitating strategic educational change (Hinton, 2014). The ladder was integrated in the Office of Learning and Teaching (OLT, Australia) projects.

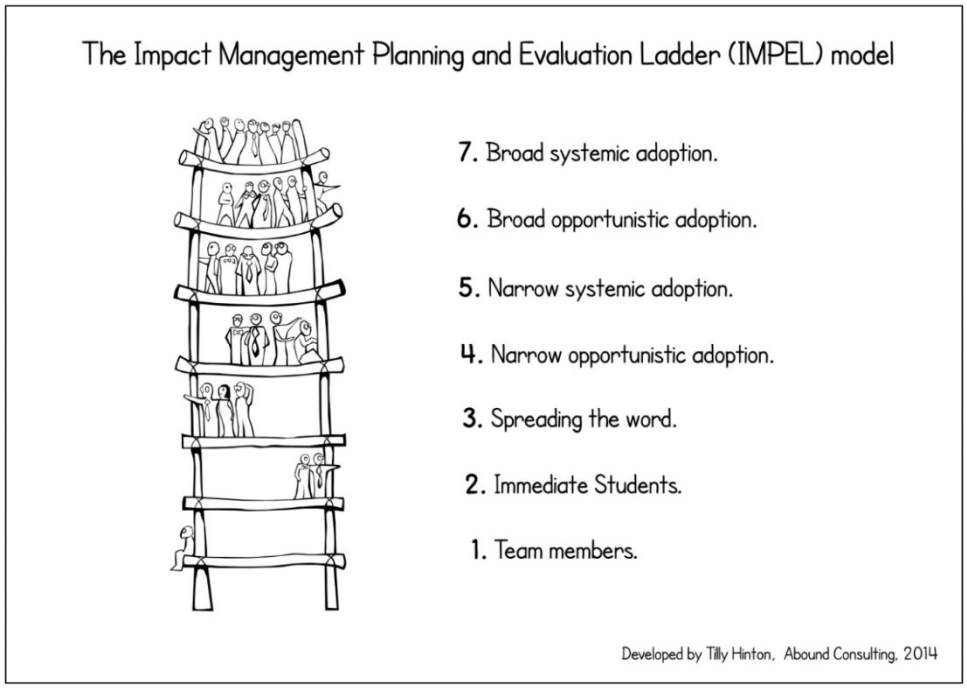

Figure 4: The Impact Management Planning and Evaluation Ladder (Hinton, 2014)

The perspectives were selected for a number of reasons. First, the *Johari Window* stimulates a wide canvassing of all potential, but possibly unknown, sources of knowledge and influence and is able to test any assumptions made about the project. Second, the *Cynefin Framework* encourages teams to see things from new viewpoints, assimilate complex concepts and address real-world problems and opportunities with tools appropriate to the level of complexity. Importantly it can reveal a project's initially simple, but potentially multidimensional complexity. *Design Thinking* helps project designers to integrate the needs of people with the possibilities of technology and requirements for business success to focus on project outcomes from the client centred experience. Finally, the *Impact Ladder* can divulge a cogent frame for the project team to clearly enunciate (to funding agencies, for example) their expectations, make decisions and evaluate their efficacy in facilitating strategic educational change at all levels of impact.

The Project Establishment Guide

Using these theoretical perspectives, the PEG was developed through PEG project team discussions and engaging in first weekly, then monthly, critical reflections. During each of its iterations in relation to new projects, the PEG was further refined and adjustments considered. For example, team members who had not been involved in earlier applications developed their understandings and increased their appreciation for the potential ways to use, interpret and apply PEG. The PEG incorporates five phases, each phase accompanied by critical questions. These questions assisted project teams to think through the decisions they need to make in planning their projects. They are not meant to be definitively answered, nor are they meant to constitute projects in themselves. They are meant as prompts to encourage project teams to consider possibilities they may not have thought about or integrated before.

The purpose of the PEG phases and questions is to aid a project team's thinking processes and reveal hidden assumptions that may otherwise dilute the impact of the project if not brought to the surface. Some questions may need to be asked a number of times as the project progresses; the context will change as work is achieved. Other questions may not be relevant. Table 1 outlines these phases, their theoretical frame and the range of critical questions that may need answering before projects move from the conceptual stage into the planning, actioning and implementation stages.

Table 1: Project Establishment Guide: Critical Questions

Phase	Theoretical Frame	Critical Questions
1. Defining purpose	Context and purpose	• What is the context for the project? • What are leaders in the context thinking and doing and why? • How will you monitor any changes in the context? • What is the project team trying to achieve and why?
	Design Thinking	• How can you gain an empathetic understanding of the end users, their needs, experiences, motivations and issues? • How will you be inclusive of the diversity of views?
	IMPEL Ladder	• What outcomes or outputs are desired? By whom?

2. Identifying Assumptions	The Johari Window	• What beliefs/assumptions/expectations underpin the project and how can you monitor these
	The Cynefin Framework	• What is the scope of the project • What level of complexity are you dealing with and what tools/processes are most effective in understanding this complexity?
	The IMPEL Ladder	• What indicators are there for a climate of readiness for change?
3. Exploring strategic contexts	The Johari Window	• What are the barriers /structural constraints to achieving change do we know/not know • What system drivers currently make it difficult for change to occur
	The Cynefin Framework	• What political, economic, social, environmental impacts/risks exist? • What approaches best suit the complexity of problem?
	Design thinking	• Which end users/stakeholders (groups, teams, projects, and other organisations) are involved and what do they need? • What initiatives are already in operation and need to be consulted
	The IMPEL Ladder	• What are strategies for engaging stakeholders throughout?
4. Investigating current practices	Literature review Bench marking Environmental scan	• What does the literature reveal? • Who can you benchmark with? • Who has done work in this area before, what results were achieved, were they sustainable? Why? Why not? • What policies/practices (accreditation requirements and regulatory frameworks) does the project need to align and comply with and apply? • Is it replicating other projects in the context?
5. Synthesising critical issues **Disseminating outcomes** **Building sustainability** **Evaluating outcomes**	Johari Window	• How will you seek ongoing feedback that keeps open transparency of thought and action?
	Cynefin Framework	• When do you need to loop back (iterate) your plans, actions, and findings? With whom?
	Design thinking	• How will you maintain and improve project materials after the project? • How will you evaluate the project? • How might project outcomes be transferred into mainstream business? • How will you keep track of project's impact? Which analytics will be useful?
	The IMPEL Ladder	• How will you maintain communication with /end-users, stakeholders through the project? • Who will be your champion and/or evaluator?

Methods of evaluative data collection and analysis

A participatory action research (PAR) methodology was deployed in the PEG Project's implementation and reflective evaluation stages. MacDonald (2012, p.36) defines PAR as a dynamic educative process, "an approach to social investigation, and an approach to take action to address a problem or to engage in socio-political action". PAR's strengths stem from a recognition that it is a research approach that is value orientated and able to address issues of

significance. It also allows participants to become active contributors in meaningful decision-making which, in turn, encourages their capacity development and building (McTaggart, 1997). MacDonald (2012, p.43) adds that "PAR is seen as transformative, an empowering process whereby researchers and participants co-create knowledge while developing a sense of community, educating each other by negotiating meanings and raising consciousness". In educational research, Carr and Kemmis (1986) suggest that a goal is that participants gather understandings of their situation by conducting research into their own practices, understandings, and situations.

A range of methods for data collection have been used in PAR projects. MacDonald (2012) suggests that researchers and participants need to collaborate to establish the appropriate methods of data collection and that at least three methods are used to transcend the limitations of each individual one. This also serves to allow data triangulation during data analysis and interpretation stages.

This paper reports on a research study which investigated how the PEG was implemented and used in two universities: Auckland University and the University of Southern Queensland (USQ), during 2018 and 2019. At Auckland University it was applied in post graduate executive education programmes where students were required to develop initiatives/projects in collaboration with their places of employment. At USQ, PEG was used in learning and teaching initiatives/projects conducted by both academic and professional staff. In both universities the PEG teams employed focus groups, participant observation and interviews as their data collection methods with the following questions asked in the preliminary stage:

- What were the intended results of your initiative? (What was planned?)
- Did the PEG assist you to consider aspects of your project planning that you might otherwise have neglected? (What did it reveal?)
- What have been the actual results thus far? (What really happened?)

Evidence of outcomes and effectiveness

Auckland University

At Auckland University, in New Zealand (NZ), an extensive study was conducted with the application of the PEG in Executive Education programmes for professional Managers in medium to large NZ businesses and the public sector: for example, the NZ Defence Force, Vector, the biggest supplier of gas and electricity in NZ and Vodophone. The PEG project was conducted over two years with the PEG applied to the projects that participants undertake through the life of their five-month modular programme. As part of the standard set up process for the participants' individual action learning projects, the PEG was used to help participants think through how they could successfully set up a project in their organisations that spanned across several business groups and impacted external stakeholders. The PEG was integrated into the planning materials used in participants' projects. In the first module, participants were strongly urged to use the PEG in their thinking. During the following two modules they were asked questions about what they were finding and how asking those questions had changed the way they designed and ran their projects.

During the second Module it became obvious that instructions in Module One needed to be changed. Although the program team thought they had been clear about the use of PEG as a guide only, some participants slavishly answered every question and seemed pleased to have 'ticked the boxes'. Others found some of the questions too difficult to answer or they did not

allocate time to find out the correct answers. Still others found out insights that benefited their thinking. For example, participants noted:

> I discovered that someone had done great work on this same question two years before. When I found their stuff it meant we didn't have to do a whole lot of work that I had planned in. (Manager from one of NZ's leading power companies)
> I realised that we were missing a whole group of people that no one has ever thought to ask before! (Manager from the NZ Defence Force)

Learnings from the first iteration of the PEG Project in 2018 included the following reflections:

1. The PEG in its first iteration was too complex with too many questions that for a business focused audience was too far out of their normal thinking that it confused them. Learning: Keep it as simple as possible.
2. In certain projects depending on their purpose, each of the theoretical models can comprise a stream of work in itself e.g. projects to design new products, services or business models should be run as design thinking projects not just have this model. This does not preclude the other frameworks being applied. For instance, it is still important to know the level of complexity or where blind spots might exist. Learning: Different models may play more of a role in a project than others. This is not a prescriptive practice but an informative one.
3. As the project progresses, the questions can be asked again and again as more information comes to light. In some projects stakeholders emerged that had been 'hidden' at the beginning of the project and blind spots appeared that no one was aware of until well into the project. Learning: Plan to iterate the questions at regular intervals.
4. Many of the participants in the programme cited the lack of time and too many priorities as the reasons for not paying more attention to the PEG questions. Keeping them simple and shorter in number helps them not be overwhelming. Learning: Less is best.

In 2019, the PEG Project team, in consultation with the Executive Education Programme, interrogated the findings from the previous year. As a consequence, the PEG questions were refined and inserted into Programme Materials Guides and the participants were provided with more detailed guidance about implementing PEG in their projects in Module One. The programme team took a more standard approach to reviewing progress through the programme modules so that participants could gain multiple perspectives (academic, peer, business leaders) on their issues. The PEG questions were not identified as a separate process and were therefore less intimidating.

Participants' projects were of a higher standard in the second year due to a range of further revisions in the support provided to participants. Not only had the programme team, in consultation with the PEG team, simplified and reiterated the importance of PEG related information, the programme team also consulted with participants' Managers. The programme team encouraged participants' Managers to work with and support their staff on their projects and to clarify and reiterate to staff how they could build their capacities through the use of PEG. As a result, participants paid more attention to the PEG's critical questions and reported that there was increased value and time-saving potential as the PEG had helped them to balance intellectual rigour with business pragmatism. In turn, in 2020, the PEG team, in consultation with the programme team, will further refine PEG and its application to participants' projects to guide participants' initial thinking around their projects. Particularly key is the PEG's capacity to encourage participants to identify the value of seeking different perspectives, locate any blind spots and focus on understanding stakeholder needs and impacts.

University of Southern Queensland

In 2018 the PEG was employed in a number of projects at the University of Southern Queensland. These projects centred on academic integrity, Moodle analytics, and employability projects conducted by both academic and professional staff. The PEG, participants disclosed, prompted them to identify their assumptions about their project's strategic and operational contexts. One participant noted that she had not realised there was a whole section dedicated to supporting students and that this section was a key stakeholder. The PEG assisted her to build on the strengths of her project by ascertaining who the key stakeholders were, how to acquire their feedback and ways to incorporate and then 'close the loop' with this feedback. In 2018, there were five academic integrity projects being duplicated in different sections. This finding demonstrated how important it is that teams collaborate across the university to consolidate institutional effort and enhance strategic sustainability. Other projects, participants observed, had been developed without consulting relevant Policy and Procedures, or without an awareness of institutional structure/accountability. Participants' evidence in these projects confirms PEG's capacity to improve cross-institutional knowledge and collaboration, ultimately revealing how the PEG can empower teams to make more informed and contested decisions about their projects.

During 2019 a preliminary study was conducted in the School of Humanities and Communication where the PEG was applied to a Majors' Revitalisation Project to ensure that discipline participants work effectively together and produce sustainable outcomes. Initially this project was implemented without the PEG. However, following three meetings of the first major, discipline participants realised they were not clear about their intentions, were at cross purposes and that project aims and objectives were neither agreed nor well understood. As a consequence, the PEG Team used the PEG principles and critical questions to guide the discipline discussions and ensure they included all the data they required (see Table 2). The discipline participants probed their expectations and decisions as a team to ensure their assumptions were transparent and that all stakeholders were consulted. As the first major to undergo the revitalisation process, the discipline participants evaluated PEG's inclusion in their revitalisation process. The findings revealed that the use of PEG had assisted the discipline participants to think through the project, more clearly understand its purpose and had augmented its outcomes. The PEG team used the findings from the discipline participants to ensure that PEG was implemented as a first step by subsequent discipline teams in the revitalisation process.

Table 2: The Majors Revitalisation Guide

Revitalisation Principles	• Strength-based • Evidence-based • Sustainability • Graduate employability • Industry applicability • Integrate with wider USQ stakeholders and resources
1. Contextual analysis (The Cynefin Framework)	• Analyse institutional data on load retention, progression • Student evaluations • Incorporate institutional and Faculty plans directives/directions • Integrate accreditation policies/procedures • Check against AQF
2. Market sector intelligence and analysis (Design thinking, Cynefin)	• Utilise market intelligence report • Sector analysis • Benchmarking (regional universities, nationally)

	• Employer analysis/industry consultation/industry fellows
3. Who are our students? (Design thinking)	• Student demographics, psychographics • What do students need to know and do? • Defining first year experience • Student engagement • Who will be our graduates? • How are they different
4. SWOT analysis (Johari window)	• Focused on the Major's strengths/weaknesses/opportunities /threats (Completed individually, collated and group discussion)
5. The major's "brand" (Design thinking)	• Vision for the major • Pathways: to and from first year and into post-graduate • Mapping and alignment of program objectives
6. Structure (Impel/Cynefin)	• Relationship to other majors and to degree • Core/capstone courses? • Avoiding duplication across major/s • Mode of offer/intensives, etc.
7. Curriculum design (Impel/Design thinking)	• Mapping and alignment of course and program objectives, etc. • Assessment mapping and alignment • Learning management systems consistency • Teaching and learning approaches and strategies • Mapping and alignment of graduate qualities • Integration of portfolio, WIL, etc.
8. Accreditation requirements (Impel/Design thinking	• AQF, course specifications, accreditation timelines and processes
9. Communication/dissemination of revitalised major	• School, Faculty and institutional marketing • Be explicit about benefits/ careers in the major • Understand market segments and target these • Take advantage of contacts (Facebook discipline groups, etc.)

Conclusions and next steps

While preliminary investigations yielded positive findings, there were also some misconceptions. For example, some participants at both Auckland University and USQ assumed that the answers they supplied must be correct and applied consistently despite a multitude of individual and role identities, institutional power struggles, different disciplinary backgrounds and terminology. Over the course of several iterations, where the PEG was incorporated into their projects, participants observed that they not only lacked familiarity with the PEG's reflective practices, they often found these to be difficult or at least unfamiliar processes. The PEG project teams reasoned that this was because participants were not used to thinking conceptually or critically questioning their habitual, or usual, assumptions about project development. Participants were also not used to putting forward-planning into practice as their customary modus operandi was to get the project completed, under budget and in minimum time. Future dissemination of the PEG would need to be framed within an appreciation that it is the *consideration* of the critical questions and their capacity to reveal hither to undisclosed information which is important, not the answers per se; that responses could necessarily differ, needing to be amended or fine-tuned throughout participants' projects. The value that PEG adds to projects also requires expectation management with regard to its benefits as opposed to any discomfort caused by engaging in relatively unfamiliar processes; a cost investment-cost shift.

Follow up research is underway. The Executive Education team at Auckland University is using the PEG Guide to assist programme participants design their strategic projects within four

executive programmes. USQ will continue to evaluate the effectiveness of the PEG's inclusion in the Majors Revitalisation project and assess its applicability in subsequent discipline decision making and curriculum design. Once this research has been conducted, and if findings warrant it, institutional support will be sought to incorporate the PEG as a standard approach to establishing informed, strategically aligned and embedded projects that are sustainable and maintained into the future.

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