Table of Contents

Editorial ...................................................................................................................................................4
  Kalle Kähkönen

A Global System For Categorizing Projects .................................................................6
  Russell O. Archibald

The difference between Different Types of Projects ....................................................12
  Robert Youker

A Contribution to Developing a Complex Project Management BOK ........................16
  Vernon Ireland

Eyes Wide Shut: Expanding the view of portfolio management .......................................26
  Michael Young

Methods and Tools of Success Driven Project Management ........................................32
  Vladimir Liberzon

Project Management Methodologies: An Invitation for Research ...............................38
  Jouko Vaskimo

Next generation of Meeting Tools for Virtual Project Teams ........................................44
  Comelia Veil

Future Practitioners of Project Management – Are We Disciples of Stanley Kubrick or Ridley Scott? 50
  Barrie Todhunter

A Universal Management Mode for Permanent Organizations Based on Management by Projects .................................56
  Lixiong Ou

Sustainable Beauty – achieving sustainability goals by fulfilling materialistic aspirations ........................................62
  Stephen Fox

Uncertainty Management in Projects – A New Perspective ........................................68
  Agnar Johansen

The rolling wave scheduling problem solved by the real options approach ..........................74
  Giorgio Locatelli

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Future Practitioners of Project Management – Are We Disciples of Stanley Kubrick or Ridley Scott?

To peer into the future, we need to explore the tracks we have left behind as well as the prism through which we envisage what is yet to come. In this paper, the author examines the nature and historical role of project management, the forces that have defined the role of the project manager in society, and the challenges that lie beyond our immediate horizons. Stanley Kubrick provided images of inspirational projects that future project managers might one day deliver, while Ridley Scott gave us a far bleaker view of the failed legacy of project managers of the future. The author then discusses the challenges facing education and training in the development of future project managers. What are the appropriate attributes? Who are the key players moulding future generations of project managers? What are their visions of our future heroes who may be asked to manage the very existence of the human race?

Introduction
In this conceptual paper, the author explores one of the key themes of the International Project Management Association (IPMA) Congress – the Future. The project management profession has a longstanding legacy that allows us to reflect on the past what evolutionary patterns have developed, and where they are likely to take us in the future in the context of education and training for future practitioners.

An historical view of project management in human history
Homo Sapiens evolved over approximately two million years in Africa and then undertook an amazing journey over the last one hundred thousand years or so across Asia, Europe, the Americas and Australia (Loth & Foley, 1998). Motivated by the search for food, and perhaps curiosity, Homo Sapiens ventured out of the security of Africa into an unknown landscape. Evolutionary forces allowed those who managed risk well to survive and procreate and to continue the journey, while those who managed risk badly, perished. Survival strategies were passed on from generation to generation in the form of communal learning as tales, stories and folklore, until more permanent communication strategies such as drawings, hieroglyphics, writing and printing allowed learning and wisdom to be distributed across all social layers.

The availability of resources flowing from the adaptation of technology allowed those with vision and leadership abilities to conceive and orchestrate larger and more complex undertakings. The Chinese and the Egyptians built complex civilisations thousands of years ago, and the Romans spread an empire across Europe and northern Africa. Columbus recognised the patterns of the winds on either side of the equator and risked everything on a project to cross the Atlantic and to forge a new route to the East Indies. His assumptions were correct, although he discovered the West Indies to his surprise – it pays to be flexible in defining key project objectives (“Christopher Columbus,” 2001). The outcome of that one project changed the pattern of trade routes across the world forever (Law, 1986).

Such undertakings have illustrated the evolution of what we now regard as project management. Key stakeholders have articulated organisational (or national) goals and objectives, allocated responsibility for achieving those objectives to those with leadership and vision, allocated resources to facilitate the required change, developed new technologies to support the mission, identified and managed risk as best they could, and put in place an integrated strategy to see the project through to its conclusion. We are riding on the shoulders of thousands of leaders across the eons who have tested their instincts with little or no framework of knowledge, and either lived to tell the tale for the benefit of others, or disappeared without trace.

The more recent history of project management
Numerous authors (Fondahl, 1987; Snyder & Kline, 1987; Stretton, 1994; Uri & Uri, 2000) have traced the more recent history of project management from its formalisation around the time leading up to World War 2, the development of sophisticated tools for better management of time, risk and costs, and the utilisation of computer technologies for improved performance and communications amongst stakeholders. Concepts such as project, program, portfolio and enterprise project management have raised the profile of project managers across organisations or within defined project management offices to secure organisational objectives (Faulkner, 2002; Kwak & Ba, 2000).

Key skill sets have matured over the years from those that reflected a predominantly tools-focused role to one of coordinator and facilitator (Crowford, Pollack & England, 2005) with an emphasis on relationship management and strategic alignment. The focus has changed from the technical and quantitative processes to those more qualitative skills (Smith, 1993) that are seen as essential to achieve project outcomes. Project managers, who once mainly came from the quantitative sectors of engineering and construction, now come from a much wider range of sectors including business, health, education, science, information systems and research.

What will future projects look like?
What horizons do we adopt when we talk of the future? Using a cinematic perspective, do we look at the near future represented by Stanley Kubrick’s ‘2001: A Space Odyssey’ – a calendar date that has been and gone, but a scenario that has yet to pass? HAL has not quite taken over our future as Arthur Clarke might have thought but technology and ubiquitous computing (Lyttien & Yoo, 2002) continue to dominate the essence of future projects. In 2012 and the ‘The Day after Tomorrow’ (http://en.wikipedia.org/wiki/The_Day_After_Tomorrow) rapid climate change is the main challenge for future project managers. In ‘Blade Runner’, Phillip Dick provides a bleak view of the world where massive

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Do we travel forward to a world envisaged by Stephen Spielberg in ‘A.I.’ where failed projects in artificial intelligence have changed the landscape of society and blurred the meaning of life and death.
projects have allowed those who can afford it to leave planet Earth to live in style and safety, with those who can’t inheriting the legacy of a failed social project of multiculturalism where non-human replicants are hunted down by blade runners? Or do we travel forward to a world envisaged by Stephen Spielberg in ‘Aliens’ where failed projects in artificial intelligence have altered the landscape of society and blurred the meaning of life and death.

What message is there for future project managers in such art forms? Authors of such stories often incorporate sound research into their premise, although artistic licence tends to exaggerate time lines and story outcomes to spin out of control for the sake of drama (http://www.msnbc.msn.com/id/5058474/ns/ msn_news-environment/), but key messages remain. The conflict between the rapid and inequitable consumption of finite resources and societal expectations of increasing standards of living will be a key challenge for projects in the near and distant future. Ethical and moral views on sustainability will place demands on the economic dimensions of future projects, requiring difficult choices and decisions to be made in terms of project evaluation. What is desirable? And what is acceptable, as standards of living are inevitably fall where technology does not find ways to compensate for the diminishing availability of physical resources?

Where will future project managers come from?

Project managers will inevitably be caught in this ethical and social crossfire. Who will be the project managers of the future? Will project managers increasingly emerge from industry on a ‘learn as you go’ basis, or will the response be an apt example of its application – project managers who provide a colourful and noisy show but with little real ability to fly. An analysis of higher education for medicine reveals a comprehensive pattern of learning, moving from early stages of basic knowledge to Diploma, Advanced Diploma and Associate Degree; and industry’s expectations that highly competent practitioners would have qualifications well above Advanced Diploma level. The irony is that many of the recipients of professional certification already have competencies appropriate to postgraduate qualifications at university level. The Project Management Education Council (AIPM) uses the RegPM certification process (http://www.aipm.com.au/html/regpm.cfm) to gain considerable revenue but has always struggled with the conflict between the AQF levels of the certification (levels 4 to 6) which equates to Diploma, Advanced Diploma and Associate Degree; and industry’s expectations that highly competent practitioners would have qualifications well above Advanced Diploma level. Project managers who provide a colourful and noisy show but with little real ability to fly.

Project management as a future profession

The rights of project managers to regard themselves as part of a profession have been explored by numerous authors (Barber, 2001, p. 953; Curling, 1998; Mitra, 1999; Zerwan, 2000). Project management has often been called the ‘accidental profession’ (Stretton, 1994) and Turner (1991) and Turner (1999) explored the nexus between PM as a profession and the role of professional associations. First-generation professions of medicine, law and the humanities have matured through the development of professional bodies and sharing of ideas. Through such teaching and learning practices, consensus has been achieved in language, terminology, principles, values, and cultures which have become embedded in disciplinary and programs of study. ‘Second-generation’ professions of architecture, engineering, nursing, accounting, etc have tried to model themselves on first-generation professions. Industry-based practices have evolved into theoretical frameworks through research and have now become the domain of universities and recognised undergraduate disciplines of study. There are valid reasons for university involvement in the development of professions, including objectivity, development of best practice (Tussyekahraman, 2006), and problem solving in situations of ethical dilemmas.

Established and recent entrants to project management are not unsure whether to seek professional certification or higher education, and the advice they receive is contradictory. Professional bodies appear to promote certification processes as de facto professions on previous occasions (Whitty, 2011) and this may be an apt example of its application – project managers who provide a colourful and noisy show but with little real ability to fly. The Australian Institute of Project Management (AIPM) uses the RegPM certification process (http://www.aipm.com.au/html/regpm.cfm) to gain considerable revenue but has always struggled with the conflict between the AQF levels of the certification (levels 4 to 6) which equates to Diploma, Advanced Diploma and Associate Degree; and industry’s expectations that highly competent practitioners would have qualifications well above Advanced Diploma level. The irony is that many of the recipients of professional certification already have competencies appropriate to postgraduate qualifications at university level. The Project Management Education Council (PMEC) promotes its suite of professional certifications to attract those who have completed the AQF levels of the AQF. It does not exist yet but it should.

The future of project management education

There is limited control of providers of education and training in spite of national quality control authorities in both sectors. There is little consistency across the training models employed by registered training organisations (RTOs), and there is inconsistency and duplication across the university sector in development of project management programs. The new Australian Qualifications Framework (Australian Qualifications Framework Advisory Board, 2011) will not eliminate this problem due to incorporation of the requirements of graduates (and postgraduate) qualifications and the lack of guidelines on exemptions for work experience as credits into tertiary study.

Competencies that will be the key to future successful projects relate more to generic attributes and ‘softer’ skills, as these are essential in the articulation of project outcomes to meet the needs of disparate stakeholders. Project managers will not depend on high levels of skill in the use of traditional tools – they will depend on the management of people. Traditionally, the development of such leaders has been the domain of universities where an emphasis lies on facilitation of skills in leadership of diverse teams, development of ‘fuzzy’ environments through research, availability of infrastructure and a focus on ‘higher learning’ skills.

Third-generation professions such as project management have attempted to leap over that stage and bolt on professional ‘wings’ that allow them to fly with the minimum of training and formal education. Jon Whitty has used a similar example to illustrate the development of professions, where traditional training programs have attempted to jump over the management of people. Traditionally, the development of such leaders has been the domain of universities where an emphasis lies on facilitation of skills in leadership of diverse teams, development of ‘fuzzy’ environments through research, availability of infrastructure and a focus on ‘higher learning’ skills.

Part of the problem is also created by the lack of a consensus between educators in the tertiary sector. Historically taught at postgraduate level, we now see the creation of undergraduate project management programs in universities (http://www.rmit.edu.au/programs/bp208), producing practitioners who may not have spent any significant amount of time in the workplace. This is offset to some extent by the increasing adoption of ‘work integrated learning’ (WIL) (Ohrel, 2004) in university programs, and this should be expanded significantly to capture workplace experience.

Similar industries are concluding that an undergraduate degree is a clear indicator of an aspiring profession. The Financial Planning Association has recently committed to a minimum entry requirement for professional recognition as a Personal Financial Planner of an appropriate Bachelor’s degree (http://www.fpa. asn.au/default.asp?action=article&ID=21638). Educators in the area of project management must put aside their competitive tendencies and share practices and resources to ensure that future graduates meet the expectations of all stakeholders. Where is the ‘International Project Management Education Council’ or its equivalent? It does not exist yet but it should.

At this stage, the profession of project management has multiple competency frameworks developed by multiple organisations. The AIPM developed the Australian National Competency Standards for Project Management (NCSPM) (http://www.aipm.com.au/html/pcspm.cfm) in the 1990s and these have been revised over the years. The PMI has published the Project

Project managers of the future will find it increasingly more difficult to access education and training due to workplace constraints. Physical attendance at universities and other places of higher learning will become more difficult, creating more demand on the utilisation of technology for access to learning activities. The need will be for more flexible learning opportunities but what is ‘flexible’ in pedagogical terms (Laurillard & Margetson, 1997; Moran & Myringer, 1999)? The profession of the future will demand quality project management education that is flexible in terms of place and time, and wrapped around a pedagogical framework that is consistent from one institution to another (Todhunter, 2009).

Unfortunately, there is considerable waste and duplication in the development of learning resources, most of which already utilise a common industry framework such as the Guide to the Project Management Body of Knowledge (PMBOK) (Project Management Institute, 2008). Synergies are largely untapped in terms of the multiple cohorts of project management students across the world, who could undertake learning activities in team-based environments that would reflect an authentic project management workplace of the future. There are challenges in such models though, and assessment practices and critique of the evaluation of the learning outcomes can be difficult to coordinate (Centre for the Study of Higher Education, 2002; James, McInnis, & Devlin, 2002).

**Conclusion**

This paper commenced with a reflective view of the evolution of project management— the drivers, the practitioners, the stakeholders and the outcomes, with projects progressively contributing to a cumulative body of knowledge. This platform provided the basis for developing a project management framework, and processes that have become formalised in contemporary methodologies. A view over the horizon has highlighted the changing nature of projects resulting from social and economic pressures and rapid technological advancement. The changes will impact on the profile of future project managers who will come from different backgrounds, have different attributes, demand more extensive education and training, and require different professional skill sets to manage the complexity and scope of future projects. Social and professional expectations will place greater demands on higher education to provide appropriate teaching and learning environments to cater for the needs of our future project managers.

**List of references**


