

# Project Management Group

Graduate School of Technology Management,  
University of Pretoria



Graduate School of  
Technology Management



## Background

Project management continues to be one of the most sought-after skills in the modern professional society.

The Project Management Group (PMG) was established in 1998 at the Department of Engineering and Technology Management at the University of Pretoria to develop and offer a Master's Degree in Project Management (MPM). It subsequently expanded training to one-year certificate programs as well as multiple short courses in the field of project management.

In addition to training, the PMG participates in national and international activities related to the enhancement of project management as a recognized and effective management discipline. These activities include the establishment of project management competency criteria, active involvement in the various ISO 21500 standards and guidelines, as well as attendance and presentations at national and international conferences. As part of its post-graduate offering, various

research activities take place in the form of Masters and PhD dissertations. The research not only provides the opportunity to investigate and master specific areas of project management but also adds to the understanding, comprehension, and contribution to the field of project management.

PMG CONDUCTS  
RESEARCH TO  
CONTRIBUTE TO  
COMPREHENSION AND  
KNOWLEDGE IN THE  
FIELD OF PROJECT  
MANAGEMENT



The Masters in Project Management (MPM) at the Graduate School of Technology Management is the only such program that has obtained the Graduate Accreditation Centre (GAC) from the Project Management Institute (PMI)

# SACPCMP

The South African Council for the Project and Construction Management Professions



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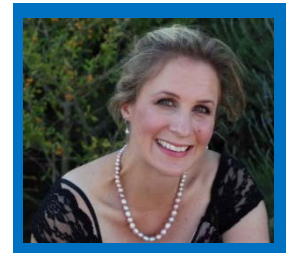
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years of  
innovation  
1987 - 2017

## Who are we?

The PMG consists of full-time and part-time staff that actively participate in their specific fields of teaching and research. The full-time staff's research focus areas are discussed hereunder.

## Dr Taryn Bond-Barnard, Pr.Eng, PMP, B.Eng, MPM, PhD Project Communication and Procurement Management

Taryn is a senior lecturer in the Graduate School of Technology Management at the University of Pretoria and has been involved in the project management industry since 2008. Before joining academia she managed software development and business process improvement projects in the public and private sector. Her current area of research focuses on the 'people-related' factors that influence project management success, computer-mediated communication in projects and various aspects of project procurement management.



## THE PROJECT MANAGEMENT SUCCESS MODEL: LINKING COMMUNICATION, TRUST AND COLLABORATION IN WATERFALL AND AGILE IT PROJECTS

Research funding: NRF Thuthuka Post PhD Grant awarded February 2017

Project success is the goal of every project. Most efforts to improve project success have focussed on the parameters of time, cost and quality in traditional waterfall projects. A previous study determined that increased trust between team members positively influences the degree of collaboration which subsequently makes project management success more likely (Bond-Barnard et al, 2014 & 2017). However, few studies have investigated the indicators of quality communication and this construct's role in determining the level of trust, degree of collaboration and perceived success of a project. It is also unclear if the role of communication in determining trust, collaboration and project management success differs between agile and waterfall I.T. projects.

## COMPUTER-MEDIATED COMMUNICATION IN PROJECT MANAGEMENT

The importance of good communication to achieve project success is frequently outlined in literature (Henderson, Stackman & Lindekilde 2016; Lehmann 2009; Müller & Turner 2001; Turner & Müller 2004). There has also been a significant increase in project communication research between 2011 and 2015 (Padalkar & Gopinath, 2016). However, the topic is still minimally represented in research in comparison to the other Project Management Body of Knowledge (PMBOK) knowledge areas. The growing popularity of computer-mediated communication (CMC) and social networking platforms such as Twitter®, Facebook®, Whatsapp®, YouTube®, Skype® and Instagram® may be changing the way in which people communicate in, on and about projects. Our research aims to investigate the influence of computer-mediated communication and social networking platforms in projects and on project management as a discipline.

## PROJECT PROCUREMENT MANAGEMENT

Project procurement management is an interesting and diverse field. Project procurement involves the processes required to acquire goods and services for a project from sources external to the project organisation. It involves selection of the goods or services, selection of the suppliers, and contract administration (Dalcher & Brodie, 2007). Padalkar and Gopinath (2016) recently published a paper in which they summarised thematic trends and future opportunities in six decades of project management research. In this paper, it is stated that the procurement management knowledge area has only been minimally represented. Furthermore, one of de Araújo, Alencar and de Miranda Mota's (2017) findings (following their structured literature review of project procurement management) is that future procurement research must consider new perspectives, such as client/supplier relations, amongst others. Our research focuses on various aspects of the client/supplier relationship in projects, such as the role of organisational structures, trust, negotiation and contract types in all phases of the procurement process.



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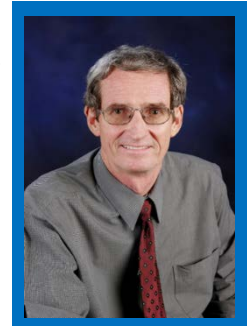


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## Prof Herman Steyn, Pr.Eng, MBA, PhD Project Portfolio, Stakeholders, Knowledge and Scope Management

Herman has been a full professor specialising in project management since 1996 and his publications have been cited more than 1300 times by other authors. His research interests include project portfolio management; project management offices; phased project planning; stakeholder management on mega-projects; vertical and horizontal leadership and project knowledge management.



Prior to joining the University, he held several managerial positions and assumed responsibility for several large and small projects, functional divisions, as well as for programs and portfolios of projects. Budget responsibility in 1990, for example, c.a. US\$168 million (in 2017 US\$ value).

### PROJECT PORTFOLIO MANAGEMENT

Research in project management normally aims at improving the management of projects; doing projects “right”. It is however wasteful to do the “wrong” projects in the “right” way. The purposes of Project Portfolio Management is to develop, from the organizational strategy, a set of the “right” projects for the organization. Portfolio management therefore links to strategic management. It is also inextricably interwoven with the phased planning of projects, especially planning of early project phases; assessment of individual projects and project feasibility; project screening; comparing and selection projects; development of balanced sets / portfolios; high-level resource planning; detailed planning and execution of individual projects; and the assessment of the business impact of individual projects. While a large body of knowledge already exists in this field, organizations still find it difficult to implement strategies via projects. Students interested in research in this field need to have access to executives involved in portfolio decisions.



### PROJECT MANAGEMENT OFFICES

Project management offices play an important role in the management of projects within many project-based organizations. There is a variety of supportive roles and functions that Project Management Offices (PMOs) play in project management and in project portfolio management. Knowledge management in project environments is a focus area of the GSTM and the role that PMOs play in this regard is currently investigated.

### STAKEHOLDER MANAGEMENT

Project success depends to a large extent on the involvement of stakeholders. The role of the executive sponsor in megaprojects is currently investigated.

### VERTICAL & HORIZONTAL LEADERSHIP

Leadership has been linked to project management for several decades. A recent emphasis is on vertical and shared leadership on projects. The role that certain project characteristics play in selecting the appropriate balance between vertical and horizontal leadership is investigated.

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## Dr Giel Bekker, Pr.Eng, M.Eng, MBA, PhD Project Governance, Methodologies and Sustainability

Giel is a Senior Lecturer in project management. He started his career in the petrochemical industry and remains actively involved in mining, building, automotive and infrastructure related projects. His research interests include project governance, audits and assurance, methodology development, and the performance of large capital projects. He is an Erasmus Mundus Scholar and taught Heriot Watt University, Edinburgh, Scotland and Umea University in Sweden. He actively participated in the development of the ISO 21500 - Guidance for Project Management groups of standards. A recipient of the Project Management Excellence Award from PMSA for Outstanding Performance in the Field of Project Execution, he co-founded Construction Industry Institute (CII) Africa Chapter and currently serves as Director.



### PROJECT GOVERNANCE

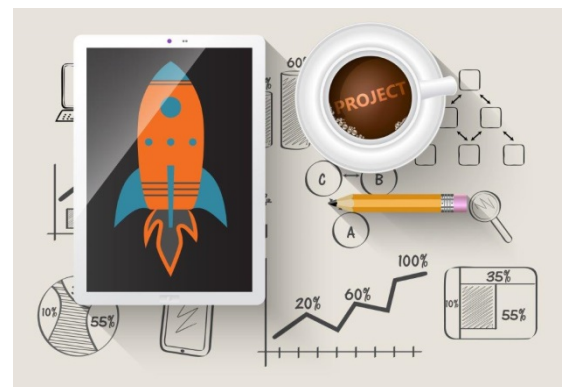
Project Governance is a set of management systems, rules, protocols, relationships and structures that provide the framework within which decisions are made for project development and implementation to achieve the intended business or strategic motivation. The development and implementation of project governance systems, structures and protocol remains a challenge in many organisations. Research in this field focus on steering committees, project sponsorship, the role and function of governance as opposed to managing and controlling as well as governance dynamics across the project life-cycle. The alignment to corporate governance, audits, reviews, assurance and the impact of the variables associated with trans-company, trans-country projects are also investigated.

### PROJECT READINESS and METHODOLOGIES

When is a project ready to progress to the next phase? Should it progress and what are the conditions for continuation? These questions forms the key inputs to the quest to develop readiness assessments to assist project decision-makers to make go-no-go decisions on capital projects. As an extension to readiness the functions, disciplines and deliverables required across the project life-cycle are defined in the quest for a complete project methodology.

### PROJECT SUSTAINABILITY

To ensure a sustainable society projects needs to address the three P's namely People, Planet and Profit. Traditionally projects were concerned with the activities between project initiation and close-out. To ensure sustainability project sponsors and associated functions needs to view the project from idea to end-of-product life. This approach confronts the project team with questions of wider society involvement, environmental changes, decommissioning and rehabilitation of project facilities and asset/product life-cycle rather than merely project life-cycles. Research in this field is fairly current and consider the broader context and complexity that impact project delivery.



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## Corro van Waveren, Pr Eng, M Eng (Mechanical), M Eng (Engineering Management) Project Knowledge Management

Corro started his career as a full-time engineer where he was involved with projects mainly in the automotive and defence industries and later became engineering consultant, project manager, assistant manager and project portfolio manager for a multiple project environment. During this time period of approximately 15 years, he was involved in structural testing, fluid power as well as the design, development and manufacturing of servo-hydraulic test equipment including control and application software. From joining the Graduate School of Technology Management he presents post graduate lectures and industry related courses as well as participating in and supervising research projects. He is a regular guest lecturer and visiting scholar in Project Management at the Tilburg University in the Netherlands teaching Project Management as topic. His research focus is on Project Knowledge Management and other project management related topics in collaboration with other colleagues.



### PROJECT KNOWLEDGE MANAGEMENT

Due to the complex, unique, and temporary nature of projects, project-to-project knowledge transfer is regarded as challenging by, and has attracted attention from both practitioners and academic scholars and is currently an active topic in project management research. The complexity of project-based environments is rooted in the execution of multiple projects sequentially and/or concurrently utilising multiple temporary teams within or across organisations. It is this discontinuous and temporary nature of teams that create problems for the rapid assimilation of new knowledge.

Research in the field of Project Knowledge Management focusses on factors that influence the sharing of knowledge along the knowledge network between projects. The mediating and moderating effects of knowledge transfer mechanism, the measurement of knowledge use. Knowledge types used in projects, post-project learning, knowledge sharing processes and models, knowledge capturing at stage-gates and other related topics.



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