

## **EXPLORING RETENTION FACTORS IN GENERATION Y ENGINEERS: A PETROCHEMICAL CASE STUDY**

**Dr Anne Crafford**

Department of Human Resource Management  
University of Pretoria  
012-420-3436  
E-mail: [anne.crafford@up.ac.za](mailto:anne.crafford@up.ac.za)

**Ms Corné Booysen**

Department of Human Resource Management  
University of Pretoria  
E-mail: [corne.booyesen@up.ac.za](mailto:corne.booyesen@up.ac.za)

**Mr Uresen Naidoo**

Graduate School of Technology Management  
University of Pretoria

**Mr Jonathan Parsons**

Graduate School of Technology Management  
University of Pretoria

### **ABSTRACT**

Due to the shortage of engineers in South Africa, and the challenges of retaining this scarce human resource, the aim of the study was to explore factors that would encourage Generation Y engineers to remain with their employer. Our current understanding regarding generational theory and Generation Y in particular, is almost exclusively based on survey studies and anecdotal evidence. Few in-depth qualitative studies have explored the characteristics of Generation Y, particularly with regard to retention. A qualitative case study design formed the basis of the investigation, and interviews were conducted with nineteen participants in two Business Units of a global petrochemical company. Thematic analysis was used to analyse and interpret the data. The data generated eight factors that would influence retention: career development opportunities, proper remuneration, challenging work, management, leadership and manager relationships, good work-life balance, the physical working environment, relationships in the working environment and good company image. The findings confirm, challenge and supplement what is currently believed about Generation Y employees, thus expanding our current understanding of this group. Practical implication for managing engineers are also highlighted.

### **INTRODUCTION**

Much has been made particularly in popularised social science accounts about generation theory, and specifically the implications of managing the so-called Generation Y's (Krahn and Galambos, 2014; Parry and Urwin, 2011; Twenge, Campbell, Hoffman and Lance, 2010; Macky, Gardner and Forsyth, 2008). Generation theory posits that a cohort of people, growing up in the same time frame, will share similar mindsets and act in much the same fashion, because of their shared experiences and exposure to key events (Cogin, 2012; Joshi, Dencker, Franz and Martocchio, 2010; Lindquist, 2008; Macky et al., 2008; Jorgenson, 2003). This in turn will affect work preferences and values such as communication styles, equipment needs, growth opportunities, remuneration, benefits and recognition systems (Smit, Stanz, and Bussin, 2015). Generation Y, the largest generation entering the workforce, are reported to be civic minded, confident in their own abilities, technologically savvy, team orientated, looking for meaningful work, unintimidated by authority and requiring frequent feedback and constant recognition

(Blain, 2008). If the generational thesis is correct, these differences have the potential to impact traditional retention factors, and organisations face the daunting challenge of finding innovative solutions to retain this group of employees. This can prove challenging, as company policies are generally developed by Baby Boomers and consequently neglect the needs and preferences of Generation X and Y (Karp, Fuller and Sirias, 2002). This challenge is exacerbated in situations where scarce skills are required.

One such area is the field of engineering, particularly in South Africa in which the shortage of engineers, engineering technicians and artisans is a key constraint (Daniels, 2007). Engineering is considered to be a “priority skill” and the development and retention of engineers has been highlighted as critical to ensure the expansion of essential infrastructure (South African Government information, 2007a). Currently, South Africa has too few engineers, with figures from 2013 data indicating that there is one engineer for every 3 100 people in South Africa. This is exceptionally high in comparison with other countries like Germany who have one engineer for every 200 people, and countries like Japan, the UK and USA with a ratio of approximately one engineer to 310 people (Sewchurran, 2013). A 2012 infrastructure survey suggested that 74% of local companies struggle to fill engineering positions (Seggie, 2012), and that work currently being undertaken, requires more engineers than are available, leading to a deterioration in local infrastructure and a decline in new public developments (Greve, 2011; Dhliwayo, 2009). An issue which exacerbates the problem is that engineering skills are mobile with an estimated 15 000 to 20 000 South African engineering professionals working outside of South Africa (Venter, 2012).

While some authors are skeptical about generational theory (Giancola, 2006) others such as Jorgensen (2003) point out that much of the current knowledge about Generation Y is based on qualitative experiences of authors arising from their roles as consultants, writers, speakers and trainers rather than the result of rigorous empirical research. Research regarding Generation Y arises from primarily two areas, those conducting cross-generational research to explore potential differences between generations, though the latter is in most instances quantitative. The exception being Gursoy, Maier and Chi (2008) whose work focussed on the hospitality industry in North America. The second strand of research focuses on Generation Y employees specifically, though empirical work on the latter is fairly limited (Smit, et al, 2015).

Given the current shortage of engineering skills in the country, it is vital that organisations understand the factors influencing the retention of Generation Y engineers, as this will enable more effective management of engineering talent. With the afore-mentioned in mind, the aim of the research was to explore factors that influence the retention of Generation Y engineers in the context of two business units of a petrochemical company (Hereafter know as PCC).

## LITERATURE REVIEW

While some are skeptical about the concept of generations, it has a sound sociological basis (Parry and Urwin, 2011) and a fairly long history, with contributions from (primarily) French positivism for example Comte as well as the romantic-historicism of the Germans for example Dilthey (Mannheim, 1952). Dilthey's interest in generations arose because it provides "an internal temporal unit" for understanding time, and his interest lay in the co-existence of generations, and how dominant intellectual, social and political influences arising from the context are experienced by people of various ages (Mannheim, 1952). Mannheim (1952: 290) defines a generation as those people "...who share the same year of birth, are endowed, to that extent, with a common location in the historical dimension of the social process". He points out that:

“the fact of belonging to the same class, and that of belonging to the same generation of age group, have this in common, that both endow individuals sharing in them with a common location in the social and historical process, and thereby limit them to a specific range of potential experience, predisposing them for a certain characteristic mode of thought and experience, and a characteristics type of historical relevant action” (Mannheim, 1952: 291).

A more recent definition is that of Turner (2008: 302) who refined Mannheim's definition to a "cohort of persons passing through time who come to share a common habitus and lifestyle...and has a strategic temporal location to a set of resources and exclusionary practices of social closure" (as used in Parry and Urwin, 2011).

The origin of generational differences lies in the fact that a group of people are exposed to different socio-political experiences (Mattes, 2012) (e.g. The Great Depression, Apartheid, Civil Rights movement) which create a set of values which influence work and the expectations that people tend to have of their work life (Lub, Bijvank, Bal, Blomme, and Schalk, 2012). For this reason, Pritchard and Whiting (2014) argue that generation as a category is an important means of organising our understanding of age at work. However, the core assumptions underlying the generation thesis are not without criticism (Macky et al., 2008). There is disagreement about the delineations of the generational categories and how various aspects such as social class, gender, ethnicity and culture will influence how members of a cohort experience the same events (Giancola, 2006).

### **Defining generations**

In the table below, various propositions regarding birth dates for generational cohorts are described, along with the name of the generation as well as alternative descriptions of the cohort. For the purpose of this paper, we have relied on the most popular conception where there are several, or chosen one, if these differ. Needless to say, this will have implications for those individuals lying on the outermost edge of each cohort.

**TABLE 1**  
**GENERATIONAL LABELS AND BOUNDARIES**  
**(ADAPTED FROM PERRY and URWIN, 2011)**

Label and birth years (for the purpose of this paper)	Alternative Labels	Alternative birth years	Characteristics
Baby Boomers 1946-1964	Boomer generation, Me Generation (Gursoy, Chi and Karadag, 2013)	1946- 1964 1946 - 1962 1946 - 1961	<ul style="list-style-type: none"> <li>• Value job security and stable work environment</li> <li>• Work a defining part of self-esteem</li> <li>• Hard work and sacrifice the price to pay for success</li> </ul>
Generation X 1965-1979/80	Thirteenth; Baby Busters, (Glass, 2007), Lost generation, (Pritchard and Whiting, 2014), Xers	1965 -1976 1965 – 1980 1963 – 1981 1965 – 1979 1962 - 1979	<ul style="list-style-type: none"> <li>• Raised on "to-do"lists</li> <li>• Working to live</li> <li>• View the world with cynicism and mistrust</li> <li>• Enjoy teamwork and opportunity to learn new things, flexibility and short-term rewards</li> <li>• Skeptical of status-quo</li> <li>• Believe respect should be earned</li> </ul>
Generation Y 1980/1 -2000	Millennials (Glass, 2007), Nexters, Echo Boomers (Bosco and Harvey, 2013); Generation Next; Millennium Generation; Digital Natives (Lub et al., 2012)	1981 – 1995 1981 – 1999 1984 – 2002 1981 – 2001 1980 – 2000 1980 - 1994	<ul style="list-style-type: none"> <li>• Trusting and more tolerant</li> <li>• Well-travelled and globally educated</li> <li>• Micro-managed and believed to have poor coping skills</li> <li>• Sense of entitlement</li> <li>• "The final word is not always the final word"</li> <li>• Respect authority without worshipping it</li> <li>• Technologically advanced and intertwined</li> <li>• Accepting of diversity</li> </ul>

*Characteristics are summarised from:* Pritchard and Whiting, 2014; Gursoy et al., 2013; Cugin, 2012; Srinivasan, 2012; Lub, et al., 2012; Dharavath and Bhima, 2011; Parry and Urwin, 2011; The Bush School of Public Service, 2009; Patterson and Pegg, 2008; Twenge and Campbell, 2008; Glass, 2007; Morgan and Ribbens, 2006; Ciminillo, 2005.

In the next two sections, we will consider firstly, an overview of cross-generational research that has been done, and secondly consider what is currently accepted regarding Generation Y in the work place.

### **Overview of cross-generational differences**

The strategic human resource management (SHRM) generational difference survey (2004) found that 40% of HR professional reported intergenerational conflict and that these are centred around work ethics, organisational hierarchy and managing change. In a qualitative study, based on focus groups, Gursoy, Maier and Chi (2008) found support for generational differences, suggesting these lay predominantly in differing attitudes towards authority and the perceived importance of work in their lives. Working with the findings generated in the focus groups of the previous study, Gursoy et al. (2013) conducted an organisation-wide survey with the same company, and found company wide support generational differences in work values. Cennamo and Gardner (2008) also explored generational differences in work values in New Zealand amongst 504 people in a variety of fields including law firms,

media corporations, construction industry, pharmaceutical distribution and information technology. They found that Generation X and Y employees placed more importance on freedom and status as work values, than did the other generations. In a Belgian sample, Dries, Pepermans and De Kerpel (2008) found that job security was more important to Generation Y, than to baby Boomers and Generation X. There were no significant differences between the generations with regard to their views on career success.

An Australian survey conducted in the Australian Defence Force, found limited support for large scale differences amongst generations except for Generation Y who did not list "desire to stay in one place" as a reason to leave (Jorgenson, 2003). In a study of personality and motivational differences of 3 535 managers in Australia, Wong, Gardiner, Lang and Coulon (2008) found some support for generational differences. With regard to personality, the greatest differences were reported between Baby Boomers and Generation Y. With regard to motivation, significant generational differences were found with regard to achievement, power and progression, with Generation X and Generation Y presenting as more ambitious and career centred, and enjoying more demanding roles than baby Boomers. Generation Y's more motivated by an affiliative workplace, and less motivated by power than Generation X and Baby Boomers. Cugin (2012) conducted a multi-national (USA, Australia, China, Singapore and Germany), multi-generational study of work values and found differences between generations, with significant differences observed with regard to Generation Y. With regard to retention factors specifically, in a South African quantitative, cross-sectional study, Smit et al. (2015) found that performance management and recognition, and development and career opportunities were most important for both Generation X and Y, with compensation and performance management as most important for Baby Boomers and Veterans.

### **Characteristics of Generation Y at work**

Rawlins, Indvik and Johnson (2008) conducted a survey on what millennials "positively must have at work", and found that non-negotiables included a base-level salary, medical insurance and retirement benefits, geographical location and length of commute, and opportunities for growth and training. Sixteen percent mentioned a desire for creativity and innovation though at the same time, 17% indicated a desire for structure and goal orientation. In a study conducted by Bibby, Russell and Rolheiser (2009) it emerged that Generation Y tend to be more extrinsically than intrinsically motivated requiring rewards such as fringe benefits and promotions.

Twenge and Campbell (2008) note that Generation Y believe that if they worked hard at school (and university) they should be entitled to a good job, and it is the latter by which they define themselves (Lloyd, 2007), rather than the company they work for. They want to be excited by the vision of a company, and are supportive of social causes, tending to favour socially responsible companies (Valentine and Powers, 2013; Twenge and Campbell, 2008). Generation Y want to be recognised as people and acknowledged for the effort they put into their work, valuing the opportunity to make a contribution (Gursoy et al., 2013; Gursoy et al., 2008; Twenge and Campbell, 2008). However, they expect to climb the career ladder at a pace which is perceived by the older generations as being unreasonable (Twenge and Campbell, 2008).

Gursoy et al. (2008: 453) describe Generation Y employees as "great collaborators and favouring teamwork", a view shared by Bibby et al. (2009). Generation Y value the ability to be creative and "think out of the box", and inflexible requirements and rigid procedures are likely to frustrate them. They believe rules are there to be broken, and tend to question structures in the workplace for example job descriptions, dress code, inflexible working hours and employee-supervisor relations (Gursoy et al., 2008; Twenge and Campbell, 2008). These restrictions are likely to lead them to seek opportunities where they feel they will be more appreciated (Srinivasan, 2012). For this reason, Generation Y has become known for their professional mobility and constantly increasing turnover in organisations (Du Plessis, Barkhuizen, Stanz and Schutte, 2015). According to a survey completed by Erickson (2008), 30% of Generation Y employees are seeking new career opportunities at any given point in time.

Ballenstedt and Rosenberg (2008) state that one of the most important challenges faced by Generation Y is the need to have effective communication with preceding generations, often preferring technology as the means for doing so (Gursoy et al., 2013). Generation Y's look for strong leadership, clear direction and managers who will act as role models and mentors, requiring ongoing feedback and guidance from their superiors, as they acknowledge the value of knowledge in their career progression (Krahn and Galambos, 2014; Gursoy et al., 2013; Gursoy et al., 2008; Crux, 2007). Lub et al. (2012) found that opportunities for development and challenge, variation and responsibility were more important to younger workers. In contrast to previous generations, failure is seen as a motivator by this generation and an opportunity for them to improve job performance (Blain, 2008). They also place importance on work-life balance (Gursoy, et al., 2013).

Considering turnover intentions of Generation Y employees specifically, Du Plessis et al. (2015) explored the relationship between managerial support of talent management and turnover intentions of Generation Y employees. They found that talent management practices were an antecedent of perceived organisational support, and associated with an increased supervisor support. Talent management practices were negatively related to the intention to leave the organisation.

When reviewing the literature, it is clear much of it focuses on generational differences rather than an in-depth analysis of one generation (Gursoy et al., 2013; Cogan, 2012; Cennamo and Gardner, 2008; Dries et al., 2008; Gursoy et al., 2008). It nevertheless provides sufficient evidence to suggest that differences between generations do exist with regard to factors such as work values and attitudes and more detailed exploration of this area is worthwhile. However, with the exception of Gursoy et al. (2008) all these studies were survey based and do not explore contextual variance with regard to the factors mentioned, neither do they describe these factors in any detail. In addition, very few of the Generation Y studies are empirical in nature, the exceptions being Du Plessis et al., (2015); Rawlins et al., (2008) and Valentine and Powers, (2013), of which the latter is focussed on marketing and life-style segments. Lyons and Kuron (2014) in particular have highlighted the need for critical qualitative research in the areas of generations, given the complexity, perception of generational differences and limitations of existing research. Bearing this in mind, in addition to the need to retain and develop scarce engineering skills, the aim of this research was to explore retention factors amongst Generation Y engineers.

## **RESEARCH DESIGN**

### **Research approach**

The qualitative study was conducted from an interpretive perspective with the aim of understanding the perspectives of generation Y employees, how they make sense of their working environment and what motivates them to remain there (Denzin and Lincoln, 2005; Crotty, 1998<sup>1</sup>).

### **Case study design**

Case study design refers to an empirical enquiry, of a contemporary phenomenon, with an emphasis on the relationship between the latter and its context (Gerring, 2007; Hartley, 2004; Yin, 2002). Dyer and Wilkins (1991: 614; 615) highlight the “deep understanding of a particular setting and “rich description of the social scene” made possible by the careful consideration of the case, allowing researchers to identify new theoretical relationships and challenge existing ones. Joshi et al. (2010) suggest that organisational context will influence the nature of generational identity as well as the nature of intergenerational interactions, highlighting the importance of contextual influence in studying a generational cohort, and value of a case study in this regard. Case study research lends itself to the study of social and organisational processes, and is widely used in management research (Blumberg, Cooper and Schindler, 2008; Hartley, 2004). This research study is a descriptive case study (Yin, 2002) meaning

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<sup>1</sup> One of our external reviewers commented on the age of this source. While we acknowledge this to be true, it represents for us a seminal source in distinguishing between the various paradigms, and we would be amiss in not acknowledging its influence on our thinking.

that it describes a subculture, in this case Generation Y, in the PCC with the aim of portraying their characteristics with regard to retention in the context in more detail.

#### Description of the case: The PCC

With operations across the world and employing 33 700 people worldwide, the company is one of the world's largest producers of chemicals and synthetic fuel using its propriety technologies. At the time the research was conducted, the company was clustered into four different business clusters, with sixteen Business Units (BU's). The research was conducted in two of these BU's operating in different business clusters. The BU's were located in two distinct geographical locations.

#### *Business Unit A*

At the time of the research, BU A employed approximately 1 400 permanent employees, with varying skill levels. Amongst these individuals were engineers who were in the role of plant engineers or had taken up management roles in the BU. Approximately 34% of these individuals were Generation Y engineers (source: BU HR consultant) .

#### *Business Unit B*

Business Unit B employed approximately 120 people, of which a large number were Generation Y employees<sup>2</sup>, as the BU's main talent pool stemmed from students who had just completed their engineering degree. The BU was plagued with a particularly high turnover rate, at the time of research, leading to a loss of tacit knowledge and execution ability within the department, highlighting the importance of the study.

#### **Data-gathering**

Data was gathered by means of semi-structured interviews and focus groups at each of the BU's. By combining focus groups and interviews, we were able to capitalise on these strengths of each, a diversity of views obtained in focus groups and the more personalised in-depth nature of interviews.

The data-gathering commenced with semi-structured focus-groups, facilitated by two of the researchers. The aim of the focus -groups was to explore local, socially constructed notions of retention as understood by Generation Y employees (Qu and Dumay, 2011; Kamberelis and Dimitriadis, 2005; Wilkinson, 2004). After welcoming group members, the facilitators asked participants to write down on sticker notes, factors which would cause them to stay or leave the organisation. Participants followed instructions and the sticker notes were grouped into broad themes and then used as the basis for further discussion.

The aim of the semi-structured interviews was to allow participants the opportunity to express their views individually on the topic of retention in a way that would be comfortable for them, and allow for insight into their working lives (Hartman, 2015). In BU A five interviews were conducted with members not included in the focus group. In BU B six semi-structured interviews were conducted (two of which were also part of the focus group). A few broad questions were posed and probing techniques were used to further explore key themes or ideas. Interviews were recorded and transcribed. The transcriptions were sent to each candidate for member checking and to gather additional data in some instances.

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<sup>2</sup> An exact percentage was not available.

## Sample

Sampling was done purposively, ensuring coverage of the Generation Y population diversity in each BU with regard to gender and race. Space does not permit as detailed description of the sample but it included 19 Generation Y engineers (9 from BU A and ten from BU B), from a mechanical, maintenance, industrial, electrical, control and reliability engineering background. One of the participants was functioning as a business track leader. Of these 15 were male and four were female. There were five Black participants, six Indian participants and eight White participants. Their ages ranged between 24 and 30, and had between 1 and 6 years of service.

## Data analysis

The data was analysed according to the principles of thematic analysis as described by Braun and Clarke (2006) to identify patterns in data with regard to factors that would influence the retention of Generation Y engineers in PCC. Phases of data analysis included becoming familiar with the data; generating initial codes; organising codes into themes and gathering data relevant to these themes; reviewing the theme in relation to the coded extracts and defining the specifics of the theme (Braun and Clarke, 2006). In each BU, the analysis led to a slightly different naming of themes, and for the purpose of this paper, these have been combined to produce a composite discussion.

## Strategies to ensure quality research

Mauthner and Doucet (2003) suggest that researchers working from an interpretive perspective should reflect on the research process, and be aware of how their own epistemological, ontological, and personal perspectives, influence the results. Two of the current authors are Generation Y employees of the PCC, and were responsible for the data-gathering. They thus have sound understanding of the context and the challenges of the engineering environment. Peer debriefing was used in data analysis as this took place in conjunction with the other researchers to discuss elements that were unclear with regard to possible interpretation. As indicated previously, transcriptions were sent to participants for member checking to ensure credibility (Creswell and Miller, 2000). To ensure replicability of the study, reporting includes details of the research process and procedures (Zhang and Wildemuth, 2009).

## FINDINGS AND DISCUSSION

The Generation Y employees at PCC highlighted the following elements as influencing factors in their decision to stay at the organisation. These are discussed in light of previous findings regarding Generation Y employees.

### Career Development Opportunities

In line with existing research (Smit et al., 2015; Lub et al., 2012; Rawlins et al., 2008) Generation Y employees indicated they preferred an *environment with opportunities for development*. Key factors with regard to development included, wide exposure, the need for defined career paths, criteria for promotion, the engineering focus of management and managers blocking opportunities for development.

BU B consisted of many small teams each focusing on a specific aspect of instrumentation and control engineering. While this structure assisted efficient execution of projects many *Generation Y engineers feel that the exposure they obtained within these groups was very narrow*. Consequently Generation Y engineers begin to look for opportunities outside their team. One individual referred to himself as an “*experience seeking person*” and that “*being forced into a role that is not aligned with ones career path can result in people leaving.*” (Interviewee BU B).

The ***need for defined career paths with detailed requirements of the deliverables required for advancement*** was a point made by many of the candidates. One participant mentioned that he did not know what his objectives were, nor did he know when he would be ready for his next promotion. Candidates highlighted business units in the organisation which were perceived to have more structure regarding requirements for promotions, and this was preferable to them: *“I think department A does it for me. Because that structure your promotion in terms of for you to get into 5B, you need to have done A, B, C, D, E. Covered in the scope....There is structure to follow so you can understand what you need to cover”* (Interviewee BU A). Participants were also clear as to what information a career path should contain as expressed by one of them *“A path that shows me in a specified amount of time, e.g. 3 years time, I would probably be in a specific position that is at a higher level financially and in terms of responsibility”* (Interviewee BU B). The candidate went on to mention that illustrating the potential career development was to an employee *“just as important, (as) how much are they are going to pay you”* (Interviewee BU A).

Participants believed that ***promotions should be based on how long a candidate has been in a position as well as merit***, and were frustrated by superiors who were not being promoted, and thus negatively impacting their own career development opportunities: *“When you give of your best, you want to be rewarded in the end and not wait forever to be promoted etc. I wouldn’t say stick to the time limit as if it’s a rule but if the person deserves to be promoted then the time limit should satisfy those promotion criteria and you (should) not have to wait indefinitely because your superiors are not being promoted”* (Interviewee BU A). This lends support to the suggestion that Generation Y aspire to move quickly the organisational hierarchy and view the organisational structure as a hindrance with regard to career development (Twenge and Campbell, 2008).

It was also felt that the ***career paths within the organisation were very “engineering management focused”*** (Interviewee BU B), meaning that governance and project management roles were emphasised over pure technical capability. One interviewee observed that there are *“not many people to learn from technically as it is not rewarded.”* (Interviewee BU B). This has implication for training opportunities, which were regarded as an important factor especially as they facilitate growth and competence (being able to meet deliverables). It is particularly significant as previous research has highlighted the role of managers in the development of Generation Y engineers (Krahn and Galambos, 2014; Gursoy et al., 2013; Gursoy et al., 2008; Crux, 2007), and a lack of mentorship and guidance has implications for their retention. What is also significant is that many Generation Y engineers are still in the process of registration as professional engineers (with ECSA), and need the input of senior engineers to attain the level of skill required of this process. A lack of guidance at this level thus exacerbates the lack of technical skill development amongst engineers in the country.

Many participants from BU B suggested that career advancement was hindered by ***line managers blocking their employees from moving*** to other departments. *“I had an opportunity to move elsewhere but was blocked. PCC is a company where there is a lot of career opportunities unless you want to do cooking. A colleague of mine in another department has been trying to leave his manager for more than 3 years. Blocking is one of the main reasons for people leaving PCC”* (Interviewee BU B). Because of Generation Y's hunger for knowledge and eagerness to learn, being blocked by their line manager *“really takes the wind out of your sails,”* (Interviewee BU B). The consequences of being blocked in this way, is that Generation Y's mentally remove themselves from the situation, and are no longer committed to giving of their best. This can be particularly frustrating for generation Y engineers who value the opportunity to make a contribution (Twenge and Campbell, 2008).

### **Proper Remuneration**

While the importance of proper remuneration has been highlighted for Generation Y employees (Rawlins et al., 2008) the specifics related to remuneration in the context of PCC were further specified. There was a ***sense of investment regarding the time and effort spent studying at university*** (Twenge and Campbell, 2008) and participants believed remuneration should be directly proportional to this, *“I don’t feel that I am working so hard and continuing to study and everything to just be getting a plain Joe’s salary. So with all the hard work I expect to be remunerated accordingly...”* (Interviewee BU A).

The **ability to provide for one's family** was one reason why proper remuneration was seen as “*obviously a key factor*” (Interviewee BU A) for retention. “*I want to earn enough to provide my family with a decent life, to create opportunities for my children. Qualitative and quantitative time with the family*” (Interviewee BU A). The term “*qualitative*” in this context referred to the ability to have great experiences, holidays, etc. that can only be bought with proper remuneration. The term “*quantitative*” referred to a good work-life balance which would enable one to have adequate time to enjoy the qualitative experiences. Work-life balance is a key factor for Generation Y and is discussed in more detail in point 4.5.

Another reason for the importance of remuneration lies in the fact that the **business unit is not located in a mainstream city**. For this reason, there was a need to travel to mainstream cities such as Johannesburg for entertainment, and proper remuneration was needed to compensate for this, “*If I'm going to stay in a crappy place, I should have extra money to drive to Johannesburg to go and find entertainment. If I am going to stay in a crappy place and still get paid very little, then why am I staying here, because you are sacrificing a lot*” (Interviewee BU A).

The **need to sustain a “normal lifestyle”** was also a factor why proper remuneration is important to individuals. The ability to afford groceries, housing, a car, insurances as well as social expenditure is seen as necessary to the lifestyle of a “*young person mid 20's*” (Interviewee BU A). Whilst remuneration was important, participants explained that once their current remuneration reached a certain level, the type of work and amount of free time they had became more important to them. Thus remuneration, and its usefulness with regard to motivation, reaches a peak and then other elements became more important.

Related to remuneration, **job security emerged as a retention factor** during the interview process as this allows Generation Y's financial reassurance, relieving the stresses associated with living: “*Job security means that you have less worries and stress of where the money is coming from, you do not need to rely on the market or outside factors for income*” (interviewee BU A). Being employed by a large organisation, was viewed as less risky when compared to a smaller business: “*Job security is also a good thing and with a big company you are always ensured somewhere. I have bills to pay. It's all about the pay cheque as well – I mean when it comes to job security*” (Interviewee BU A). The emphasis placed on job security by Generation Y employees was interesting in light of the perceived mobility of this group (Du Plessis et al., 2015; Basset, 2008; Erikson, 2008).

Some participants complained that the **bonus structure within PCC** was a frustration to them. As an employee's main bonus is calculated on a combination of factors (the total throughput of petrol made and the amount of injuries that occurred within the organisation) employees struggle to relate their contributions to the performance metric. This results in some employees feeling unfairly remunerated for their efforts as everyone receives the same bonuses even though some employees might not have worked as hard as others.

There was mixed opinion with regard to the importance of remuneration as a factor in retention. Participants at BU A ranked it second overall with regard to importance as a retention factor. Participants in BU B were divided on whether it was a keeping factor or not, though they clearly appreciated the comfort factor a good income provided. Even though PCC's remuneration was above the market-related benchmarks some Generation Y engineers felt that job satisfaction was more important.

## Challenging Work

In line with expectation (Gursoy et al., 2008; Twenge and Cambell, 2008), participants regarded challenging work as an important factor with regard to retention. Challenging work was defined as “*Not mundane and routine work. Challenging is not fire fighting. Challenging would be more interesting projects, just to increase my limit of thinking, give me a bigger role on projects*” (Interviewee BU A). Being in a **job which consisted of a majority of repetitive tasks was seen as a negative**, as it did not

provide participants with growth opportunities and would cause candidates to want to leave the company, *“I would leave the company if I have to do the same thing every day. So routine is something you would avoid yes” (Interviewee BU A)*. There was a feeling that candidates are not being utilised to their full potential with what they studied during their undergraduate degree, *“Yes, I can do much more. I am currently only doing about 10% of what I did when I studied” (Interviewee BU A)*. This is common challenge with engineers as much of the undergraduate curriculum focuses on design and innovation, and maintenance engineering which is what many engineers actually end up doing, is only taught at a post-graduate level.

The term **job satisfaction** was commonly associated with challenging work by candidates during the interview process. An example of this was noted when the researcher asked the candidate, *“What are the main factors for retention?”* the candidate’s response was *“A challenging role; that will be the main factor. You need to be happy with what you are doing. You need to have job satisfaction. That will be a deciding factor” (Interviewee BU A)*. Job satisfaction was defined as enjoying what one does on a daily basis, and made one want to be at work as much as one enjoys being at home.

Challenging work was viewed as **causing participants to “push themselves”** in terms of development, and brings about feelings of accomplishment and overall satisfaction to candidates. The converse of this, the lack of challenging work, is interpreted as stagnation and a lack of personal and/or professional growth, which was cited as a reason for considering leaving the organisation: *“I would leave my department, as I do not see any growth for me. I am not learning new things” (Interviewee BU A)*

In line Rawlins et al's. (2008) finding that 17% of Generation Y's 17% indicated a desire for structure and goal orientation, several participants mentioned being tired of a lack of order, in BU B in particular. Statements such as, *“I like structure and having things in order”* or *“working in a chaotic environment with poorly defined business procedures is very frustrating” (Interviewee BU B)* indicate that Generation Y understands and appreciates the need for structure and procedures. On the other hand however, the only thing worse than a chaotic environment for generation Y is where they are forced to follow procedures (red tape) which they perceive to be unnecessary (Gursoy et al., 2008; Twenge and Campbell, 2008): *“Red tape can be very frustrating to the point that you can almost lose sight of the goal at the beginning ...getting tied down with a lot of red tape will be the number one reason for leaving” (Interviewee BU B)*. Generation Y's explained that they love to work hard, fast and efficiently. Red tape and a chaotic environment thwarts their ability to do so.

#### **4.4 Management, leadership and manager relationship**

In an economy of cost cutting it has become increasingly difficult to obtain promotions, and although participants understood this, they nevertheless felt that management were not as transparent with the process as they could be. **Management were perceived as not communicating the promotion criteria** for fear of not being able to promote all deserving employees. As Generation Y's live in a world of easily accessible quantitative information they feel dissatisfied when their promotion criteria are not similarly defined. This can result in Generation Y's feeling that they are being unfairly treated and that their manager is trying to *“pull the wool over their eyes” (Interviewee BU B)*.

It was also felt that **management was very “stick orientated” (Interviewee BU B)** meaning that Generation Y's felt they were being managed autocratically. As Generation Y's want to perform meaningful work (Twenge and Campbell, 2008), taking the time to explain the holistic picture might aid management in being perceived as being organised, open and communicative. It would also help clarify performance expectations. Participants suggested the reason for proper communication was knowing how one is performing, whether good or bad, and this is seen as vital for the employee to take corrective

action if need be. *“Without communication everything will fall apart. You need to know how you are performing so that you can identify areas to improve yourself and where you are doing well”* (Interviewee BU A). There is thus a direct link between communication and career development, discussed above.

As suggested by Ballenstedt and Rosenberg (2008) and Gursoy et al. (2008) the managerial relationship was viewed as important with participants indicating that **management must have the “ability to connect with the guys at the lower end”** (Interviewee BU B). Reasons for this include obtaining an opinion from one's manager who should be both approachable and available, and more importantly, recognition, so as to positively influence their career path, *“I would like to know that the effort I am putting in now is contributing to my career path in some way”* (Interviewee BU A). Recognition encourages motivation and renewed levels of commitment towards the job, *“It encourages me to work harder than before”* (interviewee BU A). Another candidate went on to mention, *“With recognition comes motivation and a willingness to achieve. When you work so hard to give off your best at all times, you want to be recognised for the high quality of work. Also you don't want others passing off your hard work as theirs”* (Interviewee BU A). **Candidates seek recognition on a personal level**, even a simple acknowledgement like 'thank you' and regard receiving monetary rewards such as yearly bonuses as impersonal recognition, *“We all get bonuses, it is more recognition on a personal level”* (Interviewee BU A). This is a particularly interesting finding given Bibby et al's. (2009) suggestion that Generation Y are more extrinsically motivated. It is important for managers of Generation Y engineers to take note of this in motivating these employees.

As Generation Y's want to feel that the work that they perform is meaningful they need to see how their work fits within the bigger picture within the organisation. Participants proposed that **visionary leadership is essential for long term sustainability**, and hence its importance. This is highlighted in the following extract: *“you would probably work for the company for the next 20/30 years and you want to know that the leaders have a vision for the future of the company. You want to see that the company is going somewhere”* (Interviewee BU A). However in reality, many interviewees mentioned a lack of direction and vision from management, which made them feel less motivated to come to work in the mornings. One interviewee asserted that it is very important for management to *“have the ability to sell their own idea”* (Interviewee BU B) and that *“management needs to be able to bring the horse to the water and make it want to drink”* (Interviewee BU B). As the concept of senior authority wanes with the younger generations it becomes increasingly important to find mechanisms that enable Generation Y's to buy into managements' vision and direction. One person said, *“If managers show they care about people I will be far more willing to buy into their ideas”* (Interviewee BU B). Another person stated, it was important for him to know that *“the people that make the decisions have considered my opinion”* (Interviewee BU B). Within the context of Generation Y, managers who strive to meet business needs while still keeping employees best interests at heart will receive much more buy in than managers that don't.

What is interesting about the discussion above is that it seems to contradict the prevailing belief that generation Y will only remain with a company for a year or two before moving on. There is a suggestion that Generation Y engineers will actually consider working for a company for an extended period and thus importantly need to be convinced that an organisation has long-term vision and sustainability, and the capacity for various levels of management to achieve buy-in from their employees.

### **Good work-life Balance**

The **importance of life and spending time with loved ones** was acknowledged by many of the participants (Gursoy et al., 2013). It is not company policy to remunerate engineers for overtime worked, and candidates explained they would only be willing to work the extra hours when needed but would expect

remuneration if they are to sacrifice time at home. The importance of this factor would also depend on the life stage the candidate is in, for example when participants are single and have no family commitments, they would not mind spending the extra time at work. However, once family commitments increase, so does the need or desire for work-life balance, for example one of the participants mentioned that as a single person, she did not mind “*throwing*” her entire life into work, however now that she is married and wants to have children, a good work-life balance becomes “*quite important*” (Interviewee BU A). The importance of work-life balance when starting a family was also highlighted: “*Especially (since) my wife is nine weeks pregnant, it is very exciting and your perspective suddenly changes, so I will have to spend more time with the family*”(Interviewee BU A). This has important implications for managing Generation Y engineers as individuals, and considering each persons circumstances and adjusting to these.

### **The physical working environment**

There are two elements that constitute the physical working environment, the geographical location of the PCC plants as well as the physical surroundings of the participants work space.

The PCC's plants are located in rural areas which means that Generation Y's are forced to relocate and live within (approximately) an hour's drive of a main centre. Candidates were divided on what this meant to them. While some acknowledged that remote locations have less entertainment and schooling options for children, they placed more emphasis on career opportunities and development, “*If there is opportunities and growth. You have to keep in account your quality of life in all aspects. Social, work, private time. It will be a huge adjustment, but if it is worth it, yes definitely*” (Interviewee BU A). These participants reasoned, “*as long as you have friends here*” (Interviewee BU B) and “*Johannesburg is only an hour's drive away*” (Interviewee BU B). Others were more concerned for example about the lack of high quality schooling systems (even though they did not yet have children), suggesting a strong future orientation.

The Generation Y participants expressed a clear appreciation for a great office environment, with a “Google type” layout springing to mind. It is important for them to “*create an environment that looks attractive*” (Interviewee BU B) and to work in a place “*that inspires creativity*” (Interviewee BU B). They want to work in a place that feels clean, modern, sunny, happy and has the ability to make them feel at home. One interviewee stated the following: “*We are already working in an environment where we smell fumes all day. I only wanna be here when I'm working. I don't wanna sit here just because it's not a nice environment*” (Interviewee BU B). It was further stated that if employees had nice chairs and professionally designed cubicles it would make a big impact on their job satisfaction. Generation Y has grown up in an era where their parents worked hard and earned good money. Consequently they expect the many comforts and amenities that they have become accustomed to. This is obviously context specific and would not necessarily apply to a corporate environment where a very different set of physical circumstances present themselves.

### **Relationships in the working environment**

Not surprisingly, the participants highlighted the important of working relationships (Bibby, et al., 2009; Gursoy et al., 2008) but these had a specific meaning for the engineers in this study. The **social environment was regarded as particularly important** by Generation Y employees, who suggested they “*want to be in a collaborative environment*” (Interviewee BU B) and to work “*with people who I enjoy working with*” (Interviewee BU B). Interviewees emphasised the fun side of work, suggesting that good relationships with other members in the department was seen to “*make the work much more pleasant and easier*” (Interviewee BU A). **Teamwork was emphasised for two reasons**. The first is that it enables team members to learn and develop from each other's experience, supporting the need for development. The team work orientation allows one to get support and guidance when needed thus enabling tasks to be accomplished, “*quicker, safer and more efficiently when working in a team*” (Interviewee BU A). Development within a team allows more junior engineers to learn from senior members of the team thus growing and developing within one's own career path. This is significant in the context of the

engineering profession which sets rigorous standards for professional registration, and where the consequences of mistakes can have serious implications for production and loss of revenue, as more particularly the safety of employees. In this environment, safety is a priority and non-compliance with necessary standards has grave consequences for professionals. Secondly, the Generation Y's appreciated the team support and the opportunity to add value: *"I enjoy the culture, the team support, feeling that you add value as an individual within the team"* (Interviewee BU B). *Engineers, like other professionals are socialised into a culture of contributing to society in a meaningful way. The team environment provides a safe place in which to further this part of professional life.*

### **Good Company Image**

In contrast to the suggestion of Lloyd (2007) that Generation Y define themselves by their job rather than the company they work for, participant's expressed a desire to be working for a company with a good image and reputation, *"Since I started studying it was the one company I wanted to work for. Because of its reputation – Good company image"* (Interviewee BU A). Working for a company which has a good image is seen as a direct reflection of one's own image as an engineer to anyone outside of the organisation. Pride in one's employer is further increased when one feels the company is making a positive impact on the country, as the company's achievements are directly associated with the employee's own achievements. Furthermore one wouldn't want to be associated with a company with a bad reputation, for example a company which has had excessive amounts of fatalities, *"I wouldn't want to be associated with a company who was killing employees"* (Interviewee BU A). While Lloyd's (2007) article (like much Generation Y literature) is largely anecdotal, this difference may be context specific and related to the nature of the profession. An engineer's reputation as a professional is critical, and unprofessional conduct can lead to de-registration and loss of livelihood. Reputation is greatly enhanced if associated with a company that is renowned for engineering innovation and excellence, and a sound track record with regard to occupational health and safety. A sound safety track record would also be viewed as socially responsible, an important factor for Generation Y employees.

### **CONCLUSION AND RECOMMENDATIONS**

Understanding young workers will be essential in being competitive in attracting the best qualified applicants (Cogin, 2012). While many of the themes identified in this study echo what is currently believed regarding Generation Y employees, they present a more detailed understanding of these factors as they relate to engineers in South Africa, and as such add to our current understanding of managing Generation Y engineers. While in some respect the findings confirmed expectations with regard to Generation Y employees, the engineers in this study did suggest elements that were unexpected and counter intuitive to some engineering stereotypes. One of these was the importance of job security for engineers in a field where Generation Y are believed to be highly mobile and frequently considering moving jobs. This is particularly interesting given the context where a shortage of professional skills exists, and where one would assume a wide range of possibilities with regard to job choice. Secondly the importance of company vision, as Generation Y engineers may consider a long-term relationship with an organisation if the vision is clearly articulated and they motivated to buy-in, by understanding how their work contributes to its achievement. Thirdly, the importance of the physical environment and geographical location, and the impact this may have on retaining Generation Y employees, as they consider the long-term implication for their families. Finally the importance of personal recognition, even a simple thank you, may be as important to Generation Y engineers assumed to primarily extrinsically motivated.

The findings also present some important practical implications for managing Generation Y engineers, both from the perspective of the organisation as well as their managers. Organisations should strive to ensure there is adequate technical expertise amongst managerial staff to guide and develop Generation Y engineers, as well as making provision for the time to do so. These could form a part of the performance management system and criteria against which engineering managers are evaluated. Given the importance of organisational vision, top management should ensure this is clear and meaningful to

ensure Generation Y engineers will buy-in into it. With regard to career development, clear direction and structure should be provided as well as the opportunities offered by exposure to various sections of the organisation. Furthermore, managers should remain approachable and demonstrate care for Generation Y engineers (something that is perhaps counter intuitive in light of many stereotypes of "the typical engineer"). This means inter alia recognising the contribution of Generation Y engineers. even if this means saying a simple "thank you". Managers should also ensure they develop strong mutually supportive relationships amongst Generation Y engineers as these provide a source of mutual development and guidance, and can play an important role in professional development. Finally, managers should understand the importance of the personal context and family situation into account when managing engineers.

The limitations of the study include those usually associated with case study research and the results can be generalised analytically to other similar cases and contexts. The findings would thus have value for organisations in engineering related environments, especially those which play an important part in preparing engineers for professional registration. These findings would also have value for large engineering organisations with similar constraints with regard to physical and geographical location.

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