Local Government Skills Forecasting Model

Qualitative findings towards closing the skills gap in the water sector in local government in South Africa – a first draft

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1. INTRODUCTION

The Council for Scientific and Industrial Research (CSIR) has been appointed by the Local Government Sector Education and Training Authority (LG SETA) to develop a model to forecast the demand and supply of skills in the local government sector in South Africa. The model will provide information to assist skills planning. The current research focus is on the water sector in local government, but it is anticipated that in future the model could be expanded to other sectors as well.

The literature review conducted as part of this study\(^1\) confirmed that there is a capacity crisis in the water sector that needs to be addressed through scarce and critical skills development. The biggest concern based on the results of the Blue Drop\(^2\) and Green Drop\(^3\) reports is at local government level and is therefore within the mandate of the LGSETA. The purpose of this report is therefore to report on local and international best practice in skills forecasting, as well as to do an analysis of the skills gaps specific to the water sector at local government level.

2. METHOD

2.1 Research design

A mixed method approach was followed to collect qualitative and quantitative data from various stakeholders.

2.2 Sample selection and questionnaire development

A national representative sample of all provinces and one of each category of local municipality per district municipality as well as a selection of district municipalities that are water service authorities were selected to be included in the sample. After the pilot testing the questionnaires were finalised, one each for an HR manager or SDF, a water resource manager or director and one for a process controller.

2.3 Data collection

Face-to-face interviews with officials in a selection of metropolitan municipalities, district municipalities that are water service authorities (WSA) and local municipalities (LM) were conducted and included interviews with: human resource (HR) managers, skills development facilitators (SDF), Directors, water resource managers (WRM), Superintendents, process controllers (PCs) and foremen, the latter where applicable (Refer to Appendices with all questionnaires). Interviews were also conducted with water board officials, and training and grandparenting service providers.

Other valuable sources of information were SDF Focus Groups which focussed on the challenges related to water sector training challenges in local government, and supporting documents such as municipal organograms.

3. RESULTS

The acquired understanding through face-to-face interviews with municipal officials of a sample of municipalities countywide was valuable and the best way to obtain primary data with this level of detail. Another option would have been to follow a web based or e-mail approach by requesting questionnaires to be completed. Given the lack of success in instances where the project team had to revert to requesting information by telephone or e-mail, the face-to-face interviews proved to be a huge success. In total, interviews were conducted in 66 municipalities, covering 30% of the country.

\(^1\) Local Government Skills Forecasting Model: Desktop study of skills demand and supply at Local government in the Water Sector, October 2015. CSIR/NRE/GES/IR/2015/0074/A


and spread over all nine provinces, including remote areas. Apart from a few political and labour related upheavals, specifically in a few areas only, the project teams were welcomed to the municipalities and officials mostly responded in a friendly and efficient way to requests for data and information.

Varying levels of data from municipalities were obtained. While the project teams opted for at least interviewing one official per LM who could fill each of the questionnaires, this balance could not always be obtained. In some municipalities interviews had to be cancelled on short notice due to urgent municipal matters and or personal circumstances (e.g. absence due to ill health or death in the family). It should also be kept in mind that the project’s data gathering cycle spanned South Africa’s popular holiday season. The skeleton staff available at all times might not have been in the best position to answer the interrogating questions. As explained above, electronic follow-ups proved not to be very successful, but some information is still coming in.

This report captures the main findings from interviews with HR managers and SDFs, as well as the SDF focus groups.

3.1 Key findings

Municipalities have a skills gap that needs to be filled in order to improve water and sanitation service delivery. Prompted to elaborate by means of various questions, respondents provided insight into the extent of the skills gap in municipalities, training issues and the day to day and longer term challenges in serving their communities.

3.1.1 Vacant positions

Vacant positions in municipalities are up to about 50% of the total staff complement, with often a large proportion being unfunded positions. Some municipalities are concerned about not finding suitable candidates in the middle and top management positions, while others showed vacant positions mainly in the lower levels. Reasons for vacant positions are mainly promotions and retirements, with reasons for resignations often being the taking up of a vacant position in another municipality with better propositions or remuneration. One cycle of advertising and appointing to fill a vacant position takes about three months. When applications for vacant job positions lack the required skills and experience base, which often is the case for senior management positions it can take six months or longer, and even years to fill a vacant position.

Problematic are the lack of applications for vacant positions and the lack of appropriately skilled applications, as well as where municipalities cannot financially afford to fill a vacant position.

Senior managerial positions in municipalities are typically three to five year fixed term contract appointments. While it has advantages in terms of performance management, the unintended consequence is instability in the municipality if a new manager is appointed every few years. Five years might be a realistic time to achieve significant change for example in a finance department, but a five year period is too short compared to the planning, design and implementation lifespan of projects in the water sector. In some cases it is reported that a lack of job security as a result of fixed term contract appointments diverts attention away from technical projects towards attempts aimed at extension of personal employment contracts. The three top management positions are the most difficult to fill and are typically employment equity positions.

Process Controllers are generally in short supply. The large number of PC vacancies reported, implies that training of PCs should be streamlined by improving the standard of theoretical and practical training for PCs countrywide.

A large number of vacancies exist amongst the general worker positions. Because of the pyramid structure of a municipal organogram the number of vacant positions should be interpreted with care. However, it is an interesting finding for a country with a high unemployment rate. The general workers
are the positions that feed the assistant plant operators and many general workers are obtaining their training through the NQF courses to be able to step into these positions. Vacancies amongst general workers could imply that the pipeline feeding the assistant PC positions are functioning well. A trainable base of general workers in each municipality is thus crucial.

3.1.2 Skills gap
Skills gaps are reported at most levels ranging from senior management to general workers and include technical, managerial, project management and other soft skills.

Staff in senior management positions mostly has the necessary skills, but in some municipalities the lack of engineering and managerial skills stood out as well as the lack of experience that is required by a person in such a position.

An even greater need is identified in the middle management group, where the workforce might have obtained the necessary qualifications for a specific position, but their experience and practical training is not up to standard. The middle management group is challenged in the sense that not only do they need all the skills required to be a manager, but they also need the academic qualifications as well as the practical experience to be able to do their own job as well as to guide the staff that they supervise. The skills, qualifications and experience of a middle management position often also have to span various sectors, especially in the smaller towns.

Engineers in municipalities and in particular civil engineers with the necessary experience are in high demand. There is an urgent call for assistance to help young qualified engineers gain the necessary practical experience to become competent to fill available positions in municipalities. This includes mentoring of young engineers to be able to register as professional engineers with ECSA.

Artisans with the necessary experience and specialised practical training as required for working on municipal infrastructure and networks and including maintenance are scarce. It is important where young qualified artisans obtain their experience, i.e. where technical people do their trade. Using electricians as an example, some employers can only provide experience e.g. on networks and not on metering, or the other way round, and then such a trained electrician will lack the combination of skill that is needed in municipalities. Similarly, municipalities need fitters, and plumbers trained in domestic plumbing do not have the practical experience to build, operate and maintain municipal networks and infrastructure. A large proportion of the municipalities do not have the veteran engineer or artisan in service anymore to guide and help the new appointees and graduates to obtain the necessary practical experience that would enable these plumbers, fitters and electricians to operate independently in future.

Skill accreditation for reticulation plumbers is lacking, and the sector awaits action.

Process controllers with a combination of the necessary qualifications and experience are in huge demand. The PCs operating the water treatment (WT) and waste water treatment (WWT) plants are in terms of law (Regulation 813 under the Water Services Act, 1997) required to be registered and classified according to the standards for classification of process controllers in line with the classification of the facility where they are deployed. Historically plant operators worked themselves up the ranks through on-the-job training. Such operators do not necessarily have the qualifications or are able to obtain the qualifications as specified in the regulations, and such PCs are assessed and classified according to the co-called recognition of prior learning (RPL) or “grand parenting” scheme. In some areas this process is reported to be extremely slow and in others a huge success.

Water quality officers with chemical, microbiological and laboratory skills are in demand. Currently water samples for compliance monitoring are send to accredited laboratories for analysis or DWS provides assistance and this should continue. However, there is a need for analytical results from WT,
WWT and network samples with shorter feedback times to ensure that the necessary action is taken on time.

Project management and personnel management skills are an advantage in most positions. People having the necessary communication skills, human relations, and other softer skills improve the general operations in municipalities. Management of people is important because municipal workers bring their personal issues to work and managers need to be able to handle their human resources well.

3.1.3 Training

The SDF plays a crucial role to facilitate the training process in a municipality. Not all municipalities, especially the smaller municipalities with a limited budget, can afford a SDF position that can focus on the training of the staff. The reporting structure in municipalities, where reporting and SDF requests have to go via the HR manager, could cause a delay or could even result in no decision taken. Whether the current reporting structure is optimal should be investigated.

Municipalities rely on LGSETA support for finding relevant service providers and sending on the information related to available training programmes. The reason for the process not always running smoothly is not clear. Perceptions exist that LGSETA have the final say in the provision of training, but municipalities fail to always see the value added. A possible reason is that on a national level, training appears to be fragmented and not well structured and planned. The respective roles of LGSETA and EWSETA are not clear and concerns about LGSETA not providing funding where required is raised.

The water sector in municipalities has specific training needs and LGSETA’s understanding of these needs could improve, in order to provide the best possible training support.

The skill and knowledge levels of training providers are not always in line with expected standards. The supply chain processes does not allow for assessing the quality of trainers. While some trainers appear to be knowledgeable, encourage discussion and answer questions satisfactory, others don’t fit the necessary criteria.

On municipal level, a number of specific training related challenges were reported:

- Municipal budgets for training are limited, especially in the smaller towns, and municipalities rely on discretionary grants to meet their training needs. However, the most notable challenge is budget constraints relating to budget allocation, rather than the availability of funds in the municipality.

- S&T costs related to attending training courses are often more than the costs of the training courses itself

- Travelling far distances to training venues are reported. Due to training service providers requiring larger numbers per class, training needs to be centralised and is not necessarily an optimum arrangement for a municipality. The possibility of rather taking the service provider to the trainees should be investigated. Especially in instances where no mentors are available, this would have added value for trainees simultaneously obtaining the practical experience on their home plants, under guidance of the service providers.

- Staff shortages is a huge challenge to training of critical staff as it is difficult to release staff to attend training if there is nobody else to look after the operations in their absence.

- Low levels of literacy, language barriers and other entry level requirements were also reported as challenges since most courses are presented in English and require at least a
basic level of reading and writing skills in order to pass. Some more advance training course also requires entry level mathematics and science. ABET was instituted to assist bridging the literacy gap, but it is reported that staff nearing retirement is often not interested in ABET or drop-out without providing acceptable reasons.

- The practical component appears to be largely lacking or insufficient in NQF courses, and it is wrongly assumed that someone back home will always be available to do the practical mentoring.

- Those PCs that got classed via the “grandparenting” scheme experienced the process positively.

### 3.1.4 Staff turnover

Staff turnover rates of the water sectors in municipalities are less than in municipalities overall. Of concern is the high turnover amongst managers, artisans and engineers, with the exception of a few specific areas, within an otherwise very stable sector.

### 3.1.5 Succession planning

Succession planning is one way to deal with skills gaps due to staff turnover and created vacancies. However, not all municipalities have succession planning policies in place and those that have do not necessarily implement those plans. Implementation of succession planning policies has challenges and a large proportion of municipalities revert to informal succession planning, which can be successful if there is someone to guide and someone who is willing to learn/absorb.

### 3.1.6 Equity targets

Municipalities are making progress, but equity targets are not always realistic and insisting on reaching equity targets can hamper service delivery. Job positions stay vacant for long periods awaiting suitable candidates, and often when filled just creates the vacancy in another municipality. Appointments to reach forced targets, creates an artificial demand which inflates the salary bills of municipalities and where higher salaries are not allowed a vacant position is created which might stay vacant for years. Understandably, sought after individuals tend to hop between positions, seek job offers with the best remuneration packages, and seldom stay in positions for three years or more.

- A certain race profile is not always achievable in a municipality. This is the case if the required municipal equity target is not representative of the local population, and especially if no applications are received that are required according to equity targets. For example, instances when no coloureds apply for a post or in another instance where only coloureds apply.

- As far as gender is concerned, the number of female workers in the W&S divisions in municipalities is steadily increasing and specifically the female plant operators, with progress also in artisan, laboratory and manager positions. Under specific circumstances woman in certain positions appears to be problematic e.g. safety concerns during night call outs, and specific types of manual labour. Overall, women in the W&S departments shape well, and in majority of cases the female contribution is valued by managers, colleagues and those being supervised alike. On the positive side, personnel in the water sector in service of several municipalities tend to stay on long, e.g. 10 to 20 years is not unrealistic. This tendency is more noticeable in some areas, but is not provincial or district specific. Having lower turnover rates, the water and sanitation divisions in municipalities compares favourably with the overall turnover rates in municipalities.
3.1.7 Outsourcing
Outsourcing appears to be a function of technologies in use, contractual arrangements with service providers of new technologies implemented at municipalities, and labour relations and legislative restrictions related to payment for overtime. A shrinking skills and capacity base in municipalities is not the only reason why certain operations and maintenance functions are contracted out.

3.1.8 Vacant positions
Vacant positions in municipalities, the reasons why these positions are vacant and the time it takes to fill such vacancies, is an indication of the skills gaps that exist.

Status quo of vacancies
Up to 50% and even more of positions in municipalities are reported to be vacant positions [A-1125-HR1] [L-DM-0218-HR1-11]. A municipality with 50% of their positions vacant explained that 40% of these vacant posts are funded job positions and the other 60% unfunded [A-1125-HR1].

Some municipalities are concerned about not finding suitable candidates in the middle and top management positions. One of the smaller municipalities has two vacancies; both are in manager positions, namely Head: Water and Sanitation and Head: Roads and Storm Water [NC-B3-0114-HR2-4].

Other municipalities showed vacant positions mainly in the lower levels, those reporting to the superintendent and lower [L-B3-1211-HR2-8]. As an example, a breakdown of the 58 vacant position out of the 84 in the W&S department show 2x plant superintendent, 8x snr PCs, 27x PCs, and 21x general workers positions vacant [FS-B3-0205-HR1-10]. Another example shows the twelve vacant positions in a municipality W&S section as follows: 1x assistant plumber, 1x handyman, 1x water tanker assistant, 1x inspector, 1x driver, 1x snr water plant operator, and 6x water plant operators [KZN-C2-0122-HR1-8]. Personnel in general worker positions are reported to be successfully trained as PCs, shifting three PC vacancies on the municipal organogram towards vacancies amongst the general workers [NC-B3-0120-HR1-1].

HR managers are not necessarily in touch with the number of vacant positions in the municipality, but knows that the technicians and PCs are the most difficult to fill [FS-B2-0204-HR1-8]. Municipalities with high vacancy rates (50% and more), reported an excessive claim for overtime which impacts negatively on the municipal budget [A-0303-HR3-19].

Reasons for vacant positions
It is not always lack of skill or lack of available candidates that are causing the desired staff complement not being in place: Personnel moving from one job position to another in the same municipality, often with promotion [WC-B3-0301-HR1-14] [KZN-C2-0122-HR1-8], retirements [L-B3-1211-HR2-8] [A-0303-HR3-19] [KZN-C2-0122-HR1-8], and termination, disabilities and medical boarding create vacant positions [A-1125-HR1]. Death as a reason for a vacant position is also a reality [WC-B3-0301-HR1-14] [NW-B1-0121-HR1-1] [L-B3-1211-HR2-8] [A-0303-HR3-19].

Resignations could be somewhat of a surprise factor, although some municipalities refer to having an unofficial “exchange scheme” with the nearest Metro, due to the better benefits the Metro can offer its employees [WC-B1-0212-HR1-9] [KZN-C2-0122-HR1-8]. A municipality goes as far as calling themselves the “training hub” of the region and accepts and works around this additional training responsibility with grace [WC-B1-1123-WRM]. While this municipality is successful in training a large number of PC on a regular basis, smaller municipalities are hard hit when e.g. a qualified WRM resigns. As a point in case, a WRM on contract at a relatively small municipality resigned to take up a permanent position in another municipality [WC-B3-0301-HR1].
Instances are reported where no candidates with appropriate qualifications apply [G-B1-0125-HR1-8] [WC-B2-1203-HR1-8] and no-one within the municipality is taking action by obtaining the necessary qualifications to be able to move up the ranks into a vacant position [WC-B2-1203-HR1-8].

Financial/ budget constraints are often posited as the reason for vacant positions not being filled [G-B2-0120-HR1-12] [NW-B1-0121-HR1-1] [MP-B4-0223-HR1-0] [A-0303-HR3-19] [FS-B3-0205-HR1-10] and also for skilled staff taking up positions in larger municipalities and the private sector which again creates vacant positions [NW-B3-0211-HR1-6] [FS-B2-0204-HR1-8]. Linked to budget constraints is the inability of a municipality to offer a competing market-related remuneration package [WC-B3-0301-HR1-14] [FS-B3-0205-HR1-10] [G-B1-0125-HR1-6] [Mp-B1-1111-HR1-7]. Municipalities often find themselves in a problematic situation and find it difficult to attract skilled staff, because the municipality’s tax asset base is not high and it is not likely to improve [WC-B3-0301-HR1-14]. In addition, municipalities can only offer what is stipulated in the bargaining council guidelines and have to compete with bigger municipalities’ remuneration packages [NW-B3-0211-HR1-6].

Several municipalities have a moratorium on the employment of new staff because of a pending amalgamation between neighbouring municipalities [Mp-B1-0210-HR1-10] [G-B2-0120-HR1-12] [A-0303-HR3-19] [NC-B3-0104] [EC-B3-0304-HR1].

Inefficient and slow recruitment processes are also reported [FS-B3-0302-HR1-2] [Mp-B1-1111-HR1-7], sometimes caused by “rompslomp” and political interference [NC-B3-0120-HR1-1].

Time to fill a position

One cycle to advertise and appoint a successful applicant in a vacant position takes about 3 months [WC-B1-0212-HR1-9] [L-DM-0129-HR1-13] [KZN-C2-0122-HR1-8] [A-0303-HR3-19] [WC-B3-0301-HR1-14]. There is a process that needs to be followed [A-1125-HR1]. Scarce skill posts are advertised nationally and other vacancies provincially [KZN-C2-0122-HR1-8]. Advertising of the position takes 21 days and the remaining days are allocated for interviews and appointment of the successful candidate [L-DM-0218-HR1-11]. If a suitable candidate does not apply as is sometimes the case for scarce skills positions, then, sometimes it can take up to a year or longer to fill a vacant position [A-1125-HR1]. It also seems to be possible to expedite the administrative process of an appointment if needed [G-B1-0120-HR1-9], but it appears to happen in exceptional cases only.

Senior managerial positions typically take longer, generally 6 months, depending on the position [WC-B3-0216-HR1-8]. But instances where it took up to 2 or 3 years to fill a vacant position is also mentioned [FS-B2-0204-HR1-8]. Municipalities in some towns appear to find it more difficult to fill top management positions than others. In one specific town the Director Corporate Services position is vacant since June 2011, and the CFO and Municipal Manager positions vacant since Aug 2014 and Aug 2015, respectively. The reason for these top management vacancies is proffered that “people don’t want to come and live in a rural town” [NC-B3-0119-HR1-10]. Often, applications with the necessary qualifications and experience are received, but due to the equity policy a municipality cannot employ such a candidate and the position needs to be advertised again, or the municipality has to head hunt.

Sometimes, the filling of PC positions can also be problematic. Some municipalities take up to 6 months to fill a vacant PC position, [WC-B2-1202-HR1-6] [FS-B3-0205-HR1-10] [FS-B3-0203-HR-8]. Often it is difficult to get applications with the required PC skills and qualifications [WC-B2-1202-HR1-6], or then an applicant with matric mathematics that can be trained to become a PC [WC-B3-1209-HR1-11]. A municipality reported that due to applicants not having the right qualifications it took them 10 months to fill a PC position, which otherwise would have taken about 3 to 4 months to fill and 2 weeks if a position is advertised internally [WC-B3-1209-HR1-11]. Part of the problem was that job positions were not correctly evaluated – not enough difference between a general worker and a PC – and the municipality is now in the process of re-evaluating all job positions and to standardise across
municipalities [WC-B3-1209-HR1-11]. Normally a municipality receives about 100 applications for an advertised job, but for a PC position only about 10 applications [WC-B3-1209-HR1-11]. Sometimes when a PC position is advertised do get applications with matric, but sometimes it is necessary to head-hunt [WC-B3-1209-HR1-11].

A municipality were able to find a suitable candidate for a technical services foreman and the process to appoint someone in this position will be completed within the 3 months’ period [WC-B3-0301-HR1-14]. A general worker posts can be filled more quickly [NW-B3-0211-HR1-6], but it is difficult to get people who are already trained well [WC-B3-0301-HR1-14]. A municipality streamline the process of appointing general workers by regularly running advertisements for general workers positions and then keep the shortlisted pool for appointment as and when needed [A-0315-HR1-0].

A HR manager in Gauteng with almost 10 years of experience in the position is convinced that all positions will be easily filled as soon as they are allowed to recruit again. All positions are currently frozen during this slow process of uncertainty until a final decision is reached on whether they will become a metropolitan municipality, but no problems are foreseen in identifying suitable candidates with the necessary skills and qualifications [G-B1-0120-HR1-9].

The private sector has advantage over municipalities in the sense that they have a quick turn-around time in terms of appointing a person as opposed to a municipality [A-1125-HR1].

3.1.9 Discussion

Where a considerable amount of vacant positions are reported – with shift workers having to work 8 hours on and 8 hours off without a 16 hour break in-between due to a shortage of personnel [Mp-B1-1111-HR1-7] – the question is whether the municipal structure doesn’t allow for more positions, and if it does, what the bottle neck is in appointing additional staff?

Many municipalities reported high vacancy rates, albeit not always funded job positions. The large number of vacant positions in municipalities is an interesting finding for a country with a high unemployment rate with job creation high on the agenda, especially since a large number of vacancies exist amongst the general worker positions. Because of the pyramid structure of a municipal organogram the number of vacant positions should be interpreted with care. The general workers are the positions that feed the assistant plant operators and many general workers are obtaining their training through the NQF courses to be able to step into these positions. A trainable base of general workers in each municipality is thus crucial and vacancies amongst general workers could imply that the pipeline feeding the PC positions are functional. However, the large number of PC vacancies [WC-B2-1203-HR1-8] implies that training of PCs should be streamlined by improving the standard of theoretical and practical training for PCs countrywide and to remove obstacles that are currently hampering the training process.

The W&S section appears to be less of a problem than other sections in some municipalities, with reports in some cases of only about 5% of total vacancies being in the W&S section [EC-B3-0304-HR2-2]. From the municipal vacancy figures it can be derived that local municipalities has the potential to contribute significantly towards creating jobs in South Africa. E.g. if about 30% of a municipalities staff complement of 1800 is currently funded but vacant positions [G-B1-0120-HR1-9], then this municipality has the potential to provide jobs to 540 people who will contribute towards the municipal income through rates and taxes.

Vacant positions and especially the reasons for positions being vacant is an indicator of the level of lack of skilled candidates to take up these positions. Vacant positions created through internal promotion and retirements are somewhat less problematic to municipalities because the vacancies created could have been foreseen and action taken in time. Death, especially sudden death not preceded by ill health and resignations are more problematic. But this is overshadowed by budget
constraints in municipalities. In a few cases a moratorium is placed on filling positions due to mergers between municipalities being finalised.

One of the reasons for resignations is the seeking of permanent employment over having a contract position. Top manager positions are typically three to five year contract positions. While it has advantages to get rid of non-performers, the downside is that there is no stability in these positions. Five years might be a realistic time to achieve significant change for example in a finance department, but a five year period is too short compared to the planning, design and implementation lifespan of a project in the water sector.

Problematic are the lack of applications for vacant positions and the lack of appropriately skilled applications, as well as where municipalities cannot financially afford to fill a vacant position.

### 3.2 Detailed results

#### 3.2.1 Skills gap

Municipalities especially find it difficult to fill certain job positions. The expressed skills gap in local municipalities is explained in the sections below.

**Senior management positions**

In the top management positions staff mostly has the necessary skills [EC-B3-0304-HR2-2], but in some municipalities the lack of engineering and managerial skills stood out, as well as the lack of experience that is required by a person in such a position [G-B1-0125-HR1-6] [L-B3-1211-HR2-8]. E.g. a needs analysis have been conducted in a municipality and it shows that managerial staff (first line managers) does not meet the minimum qualification standard [A-0303-HR3-19]. The three top management positions are the most difficult to fill and is not applicable to the Water Division only. These are the posts to be filled according to the employment equity policy [WC-B3-0216-HR1-8].

Senior positions are difficult to fill when they arise because the applicants often lack experience [L-DM-0218-HR1-11]. There is also stiff competition on salaries [L-B3-1211-HR2-8]. Some of these management positions reported to be difficult to fill, in no particular order, include:

- Technical Services Manager – important to replace (last one resigned at end February 2016 to take up position in a larger municipality with more growth possibilities) and it took long to find a suitable candidate the previous round [WC-B3-0301-HR1-14]. In another municipality, after the technical manager post was vacant for more than a year, an assistant manager position was created for the available candidate so that this person could start to grow into the technical manager post, by obtaining the necessary training and experience [EC-B3-0304-HR2-2].
- IDP Manager – it is difficult to find qualified and experienced managers (resigned 29 February 2016) [WC-B3-0301-HR1-14]
- Waste Water Treatment manager – post has been vacant since 2011, mainly due to budget constraints. This post is very important especially for Green Drop. [WC-B3-0301-HR1-14]
- Assistant Director Water Quality [L-DM-0129-HR1-13]
- Director Civil Services [Mp-B3-0224-HR1-8]

**Middle management**

An even greater skills gap is identified in the middle management group, where the workforce might have obtained the necessary qualifications for a specific position, but the experience and practical training is not up to standard. The middle management group is challenged in the sense that not only do they need all the technical skills required to be a manager - the academic qualifications as well as
the practical experience to be able to do their own job – but also the people management skills to be able to guide the staff that they supervise.

A superintendent position is one of the most difficult positions to fill; a skilled person with a diploma or degree in water [FS-B3-0302-HR1-2]. It helps to alleviate the pressure on the WRM if a superintendent has the qualifications, experience and a good practical knowledge of the PC job [EC-B3-0304-HR2-2].

Foreman and superintendents also need to know what goes on in their departments; they need to be able to manage people while managing the pressure of the job. They also need to be reliable [NC-B3-0120-HR1-1]. The skills, qualifications and experience of a middle management position often also have to span various sectors, especially in the smaller towns [WC-B3-0301-HR1-14] [NC-B3-0121] [NC-B3-0115] [NC-B3-0119].

**Engineers**

There is a shortage of engineers in municipalities and in particular civil engineers [G-B2-0120-HR1-12] [KZN-C2-0122-HR1-8]. Lack of experience is an issue. Young engineers with BTech qualifications apply for positions where municipalities needs to appoint senior engineers [L-B3-1211-HR2-8] [WC-B1-0212-HR1-9]. These candidates lack the necessary experience. It is found that engineers with university degrees do not often apply for positions in the municipality and if there are then they also do not have the experience [WC-B1-0212-HR1-9]. None of the municipal officials interviewed could provide a suggestion to where these highly sought after individuals could obtain the necessary experience. However, there is an example where an attempt was made: “A few years ago the director, an engineer, Mr … had an arrangement with CPUT in order to address the experience gap; students received payment, where rotated through a 1-2 year studentship program at the municipality where these 10 students were trained. The municipality appointed some of these students but 3 already moved on [to other municipalities, 2x A and 1x B2]. [His] contract expired and the arrangement had to be stopped.” [WC-B1-0212-HR1-9] It appears to be challenging to retain ECSA registered engineers in municipalities [L-DM-0218-HR1-11].

There is an urgent call for assistance to help young qualified engineers gain the necessary practical experience to become competent to fill available positions in municipalities. This includes mentoring of young engineers to be able to register as professional engineers with ECSA.

**Artisans**

The supply of qualified artisans with the necessary experience is declining. Especially artisans with the necessary specialised practical training as required for working on municipal infrastructure and networks and including maintenance are scarce [L-DM-0129-HR1-13] [FS-B3-0205-HR1-10].

The exhaustion of the available pool of artisans appears to be mainly due to the closing of the colleges which previously ensured a steady supply of qualified artisans who also gained their practical experience while training [WC-B3-0216-HR1-8]. The current training does not appear to be sufficient or of similar quality than the “old school” NTC training where the colleges combined the theoretical work with the practical experience over several years. E.g. a person might have the artisan qualification, but not with the practical experience to be able to function in the job position [WC-B3-0216-HR1-8]. Now, through learnerships, candidates get their NQF2 and NQF3’s but then they still need to get the practical experience. The experience these artisan candidates get is not enough to allow such candidates to work on their own without safety concerns. It takes years e.g. to become a senior electrician, and having the training qualifications does not guarantee such a person is able to work independently [WC-B3-0216-HR1-8].

A municipality can only employ an artisan candidate with the necessary qualifications but lacking the practical experience, if the municipality has a senior artisan employed that can oversee the further
practical training of such a candidate. A large proportion of the municipalities sit with a dilemma, because they do not have the veteran artisan in service anymore to guide and help the new appointees and graduates to obtain the necessary practical experience that would enable these plumbers, fitters and electricians to operate independently in future [KZN-C2-0212-HR1-3].

Plumbing for domestic purposes was nationally identified as an important skills need, but municipalities need a specific kind of plumber, i.e. fitters. Thus, plumbers trained as domestic plumbers need to be trained as fitters to be able to work on municipal water distribution and wastewater reticulation networks. A government funded project is helping municipalities to train plumbers. It costs about R32000 to train a person to become a plumber. A municipality reports that the demand is overwhelming from municipal workers to become plumbers; about 10 times more than what can be accommodated by the municipality [A-1125-HR2]. (Also refer to the section on personal aspirations.) Another municipality reports that the plumbers in the municipality’s service are being trade tested and quite a few was successful [KZN-C2-0212-HR1-3].

Because sufficiently qualified electricians and fitters are in great demand [WC-B1-0212-HR1-9] [WC-B3-0301-HR1-14] [KZN-C2-0212-HR1-3], municipalities reverted to in-house training. Examples are:

- A municipality reverted to training their electricians in-house because it was impossible to appoint electricians with the necessary training/experience from outside. This municipality now has 5 qualified electricians who went through their network training [WC-B3-1209-HR1-11].
- A municipality find that there is a continuous and persistent need for fitters and appointed a training service provider (The Water Academy) to do water and wastewater reticulation training next year, and more after that. [KZN-C2-0212-HR1-3]. Due to the difficulty to fill fitter posts, in-house training is done wherever possible and practical training is also being done at the Artisan Training Academy. [KZN-C2-0212-HR1-3]

The dilemma is that municipalities struggle to retain scarce skills. Qualified plumbers and electricians often stay for a few years only in a position before moving on [G-B2-0120-HR1-12]. Salaries are mentioned as being part of the problem with some municipalities finding it difficult to compete with the private sector, neighbouring municipalities and also remuneration from private business [Mp-B4-0120-HR1-5].

Of concern is that there is no skill accreditation for ‘reticulation’ plumbers. The perception is that LG SETA hasn’t done much to help find a solution for this gap [KZN-C2-0212-HR1-3].

Process Controllers

A large skills gap lies with the people directly involved with the operating of water treatment (WT) and waste water treatment (WWT) plants. Process Controller (PC) positions are difficult to fill, because people with specific qualifications, skills and the necessary experience are needed on WT and WWT plants [FS-B3-0302-HR1-2] [WC-B2-1202-HR1-6] [NW-B3-0211-HR1-6]. Process controllers (PCs) that hold a combination of the necessary qualifications and experience are in huge demand [L-DM-0129-HR1-13], because PCs operating the WT and WWT plants are in terms of law (Regulation 813 under the Water Services Act, 1997) required to be registered and classified according to the standards for classification of process controllers in line with the classification of the facility where they are deployed [WC-B2-1203-HR1-8]. Blue Drop and Green Drop training is also needed over and above other qualifications [NW-B3-0211-HR1-6].

There is a gap in sanitation because most of the people are learning on the job. Till recently and in some municipalities still the case, it is only those people on superintendent level and up who have formal qualifications [L-B3-1211-HR1-5]. It was pointed out that not having the qualification does not
imply that a PC is not capable to do the work [WC-B2-1203-HR1-8]. In addition, people working on WWT plants are still somewhat stigmatised, because it used to be the dumping ground for non-performers and other trouble makers in municipalities.

There is a learnership programme to train PCs, but the process does not always run smoothly. Hold-ups in learnership programmes were pointed out as in part being responsible for a skills gap amongst PCs [WC-B2-1202-HR1-6] [WC-B3-0216-HR1-8], as well as lack of funding to train personnel [L-DM-0129-HR1-13].

One of the main problems is that one cannot study and become a PC and then apply for a position at a municipality. Becoming a PC is a process which needs to happen through the workplace [WC-B3-0216-HR1-8]. While the qualification for a PC class IV is a degree or diploma which can be studied, most PCs work themselves through the ranks to become a PC class V, where they can get the practical experience while they are studying [WC-B3-0216-HR1-8]. In other words, to start as a general worker and work and study themselves through the ranks of PC class I, II, III, becoming a superintendent, and so forth. The downside is that PCs that come through the ranks have the experience but not necessarily the theory. Even when they come through the ‘grandparenting’ they still need to get the qualification, and it is a challenge especially if they only have grade 3 schooling for example [WC-B1-0212-HR1-9].

The too small pool of qualified PCs is moving from the one municipality to the next [WC-B3-0216-HR1-8], depending on who is able to pay the best salary [Mp-B4-0120-HR1-5]. Other municipalities feel they are the training hub for their areas; the municipality would keep on training PCs and as soon as these PC are qualified they take up a position elsewhere, most probably for higher remuneration [WC-B1-1123-WRM]. Municipalities and especially smaller municipalities find it difficult to attract studied off candidates, because the remuneration is not attractive enough to work at a municipality [WC-B3-0216-HR1-8]. Municipalities have also reported loosing PC to water boards. Evidence of the shortage of PC class IV and V shows when advertisements for these positions attract PC class I and II candidates [WC-B1-0212-HR1-9].

Depending on the staff available at a WT and WWT plant, some municipalities put in effort with training PCs and especially helping PCs to obtain the practical experience [KZN-C2-0212-HR1-3].

**Water quality officials**

Water quality officers with chemical, microbiological and laboratory skills are in demand [L-DM-0129-HR1-13]. Some municipalities are in the process of developing laboratories but still need to appoint the staff to run these laboratories [WC-B3-12-07] [FS-B3-0205-HR1-10]. Currently water samples are sent to accredited laboratories for analysis or DWS provides assistance and this should continue. But there is a need to have a shorter feedback time on what is happening at the plant and along the networks at any given time to ensure that the necessary action is taken on time. Some PCs fulfil this basic function of measuring pH, turbidity, chlorine levels, etc. and do beaker tests on a daily basis, and some municipalities have a laboratory on the premises, but this function is far and in-between.

**Maintenance**

The W&S departments often do not have the skills to maintain infrastructure and equipment to ensure smooth operation by adhering to regular maintenance schedules [G-B1-0120-HR1-9]. The maintenance division with its artisans (qualified mechanics and electricians) is one of the critical support structures within a municipality [FS-B3-0205-HR1-10]. Sometimes scheduled operations and maintenance tasks are contracted out because a municipality do not have the capacity or the skilled staff (L-DM-0129-HR1-13).
**Basic education**

Basic education and skills are needed. New technologies and systems are introduced to streamline process operation, but in such cases computer skills and in particular maths literacy are required [Mp-B1-1111-HR1-7] [FS-B3-0205-HR1-10]. NQF Levels 1-4 are required for plant operators. It is challenging to train someone who never went to school [FS-B2-0204-HR1-8]. For those that have the skills but no qualifications, especially the older people who cannot go to school, the RPL programme is a solution [Mp-B1-0210-HR1-10] [G-B1-0125-HR1-6]. While people appear to not always be willing to attend further training, and fact that courses are presented in English, is a problem. Although English is the official workplace language in South Africa, many municipal workers in especially the lower job levels are not proficient in English to a satisfactory degree to be able to sufficiently understand course material [WC-B3-0302-HR1-10] [NC-B3-0120].

**Softer skills**

While the gap in technical skills was pointed out, other softer skills improves the general operations in municipalities: people management and human relations [Mp-B4-0120-HR1-5]; negotiation skills [Mp-B4-0120-HR1-5]; project management; communication [Mp-B1-1111-HR1-7]; leadership [Mp-B1-1111-HR1-7]. Because people bring their personal issues to work, managers need the necessary skill to be able to handle their resources well [NC-B3-0120-HR1-1].

**Over-qualified staff**

There do not appear to be over-qualified staff in many of the positions. While some engineers might not use a large component of what they have learned at universities (e.g. their design skills), the more they know the better they can interact with contracted-in consulting engineers. To what extent skills might be passively utilised comes to the fore where a water resource manager without an engineering degree expressed the need to enrol for his civil engineering degree to be able to better evaluate proposals from consulting engineers, to ensure that what is proposed is really good value for money and of the best interest to the municipality, before a tender is awarded.

On the positive side, except for the senior management contract positions, personnel in the water sector in service of several municipalities tend to stay on long, e.g. 10 to 20 years is not unrealistic [WC-B1-0212-HR1-9]. This tendency is more noticeable in some areas, but is not provincial or district specific. Having lower turnover rates, the water and sanitation divisions in municipalities compares favourably with the overall turnover rates in municipalities.

**Discussion**

In all job positions, getting the qualification-experience balance right is a challenge. While older personnel have the experience, it is often the young incumbents who have the qualifications but then not necessarily the experience [A-0303-HR3-19].

Municipalities are in direct competition with large and private companies who pay lucrative salaries for someone with scarce skills and experience. It is thus easier for municipalities to pouch staff from smaller municipalities, and in the process the problem is not alleviated but just shifted to already struggling municipalities.

**3.2.2 Training**

The majority of municipalities feel that there are enough training opportunities, but that the quality, and logistical arrangements related to the training can improve. Challenges related to training are fairly universal, but small, rural and especially geographically remote municipalities find themselves to be even more challenged.
On a national level, training appears to be fragmented and not well structured and planned. The respective roles of LGSETA and EWSETA are not clear and concerns about LGSETA not providing funding where required is raised [B1-0304-HR1-0].

Several training challenges are identified, amongst others process related challenges, problems with service providers, budget for training, logistics around sending a municipal worker for training, language issues, etc. and are discussed below.

The process

In response to the question what the process of obtaining training in municipalities is, many municipal officials mentioned the workplace skills plan (WSP) which is completed for LGSETA on a regular basis. The training process in a municipality starts with the SDF sending out e-mails to representatives in the W&S department, setting out what is planned and asking for a list of names of employees who are potential trainees. The representatives approach the managers who identify the individuals in line for training and send the list of names via the same route back to the SDF [WC-B1-0212-HR1-9] [A-1125-HR1] [MP -B4-0223-HR1-0]. Larger municipalities reported that the line managers have to fill in a technical and skills-based document which is basically a request for training, and then send it to the training unit. Once all the managers have applied for training, the Head of the Water and Sanitation Unit together with labour [A-1125-HR1] decide who will undergo what training.

LGSeta provide the municipalities’ SDFs with information on programmes and service providers [WC-B3-0302-HR1-10] [A-0303-HR3-19]. Training then takes place through LG SETA recommended accredited training providers [NW-B3-0211-HR1-6], but ultimately, whether training takes place depends on the SDF, the labour unions, and the availability of funds [FS-B3-0203-HR-8].

In municipalities where training is done on a regular basis, some SDFs have built up a database of service providers and start to know who to use. The municipal procurement process entails the following: >R30k is informal tender and >R200k is formal tender [WC-B3-0215-HR2-6].

During the biennial skills audit process, municipal employees are usually interviewed and skills and talents identified [NC-B3-0114-HR2-4].

Challenges specifically related to the training process and the role of the SDF includes the following:

- SDF – the SDF plays a crucial role in facilitating the training process. If a SDF is not appointed in a municipality, the HR manager finds it difficult to cope and as a result the training responsibilities are often neglected [NC-B3-0118-HR1-14].
- The working relationship between the SDF and the HR manager is not always optimal and to the advantage of training in municipalities [A-1125-HR2]. The reporting structure, where reporting and requests have to go via the HR manager, could cause a delay or could even result in no decision taken. [FG1]
- The process of LGSeta finding potential service providers and sending on the information related to available training programmes and municipalities providing the numbers and names of those interested in the courses, does not always materialise the way it is expected [WC-B3-0302-HR1-10]. It a challenging process if the SDF has to identify the providers [FS-B2-0204-HR1-8].
- The process of comparing results from the biennial skills/training audit with the requests for training works better in theory than in practice [Mp-B1-1111-HR1-7].
- SDFs find the municipal procurement process a challenge, e.g. local service providers are preferred, but in some areas there is no service provider [A-0303-HR3-19].
Consensus about the availability of training opportunities is not reached. Some municipalities report that there are enough accredited training opportunities for people working in W&S [WC-B3-0301-HR1-14] [G-B2-0120-HR1-12], with training opportunities being provided by DWS, EW SETA, LG SETA and Rand Water [Mp-B1-1111-HR1-7] [Mp-B1-0210-HR1-10]. Others report that training opportunities are “few and far between” [L-B3-1211-HR2-8]. Some small town municipalities acknowledge the role of the DWS, but noted that they struggle to attract qualified staff [WC-B3-0301-HR1-14].

It appears that the availability of training opportunities and the ease of making use of these training opportunities are region specific. In or close to large centre, training is easily accessible to all employees, and all training programmes are accredited [G-B1-0120-HR1-9]. Municipalities relatively close to a venue where the training courses are run, e.g. a district training centre in a nearby town, also find it easy to send staff to attend training courses [WC-B2-1203-HR1-8].

Many municipalities further away from training centres propose that it would be less disruptive to overall operations if the training courses would be presented at their own municipality [NC-B1-0304-HR1-0], i.e. the small number of trainers doing the majority of the travelling, instead of the large number of municipal staff that needs to travel.

The availability of training service providers depends on the numbers available to train. Service providers are not willing to provide training to only two or three candidates in one municipality. Therefore, municipality SDFs organise training on a district level in order to get enough employees enrolled in a course. Training venues are then typically in the district municipality town, where service providers would then provide the training courses.

Most municipalities, especially those in large centre, find it is easy to obtain training: there are services providers to provide the training, and there are bursaries for formal studies [G-B3-0222-HR1-1]. However, data suggest that there is room for improvement between municipalities and LG SETA, where municipalities feel that LG SETA “want to have the final say” [NW-B3-0211-HR1-6]. It is suggested that part of the problem could be that the SETAs don’t understand the water sector and its specific training needs [NC-B1-0304-HR1-0]. Due to the short time span of this project, statements such as these could not be qualified.

Many municipalities do in-house training, especially for the softer skills e.g. presentation, negotiation, telephone skills, etc. There have been issues where some of the in-house technical training was not being accredited [A-1125-HR1].

Accredited service providers

It might be region specific, but several municipalities reported that the number of external service providers who can offer accredited training are limited [A-1125-HR2]. It is not a given that a suitable accredited service provider for a specific kind of training will be found after one round of advertising only [WC-B1-0212-HR1-9].

Some training service providers are not necessarily accredited [L-B3-1211-HR1-5]. A municipality learned the hard way when organising training courses that were not in the DWA’s data base, resulted in the training not being accepted when submitted to DWA. This municipality now source accredited service providers that provide training through EW-SETA and LG-SETA. Another municipality finds it difficult to locate suitable service providers, and that they “then have to ask LGSETA, but…” [NC-B3-0118-HR1-14].
An HR manager also tasked with the SDF function mentioned that it is not easy to find accredited training opportunities for all types of training especially for specialised artisan training, and when they do, it might be at another municipality or private company 900km away. In addition, the combination of shortage of training providers and the number of trainees needed for training to take place is not the ideal for municipalities: “… you cannot appoint service providers to train only two people” [L-DM-0129-HR1-13].

The skill and knowledge levels of training providers are not always in line with expected standards. The supply chain processes does not allow for assessing the quality of trainers [NC-B1-0304-HR1-0], and it is difficult to assess the credibility of service providers until they start with the training [NC-B1-0304-HR1-0]. Some municipalities feel that their training service providers are not skilled enough to answer questions about their local technologies and challenges, while other feel that their trainers are knowledgeable, encourage discussion and answer questions satisfactory.

**Budget issue**

Municipalities have to provide for training needs in their annual budget. There appears to be instances where training budgets are not fairly distributed in municipalities, with the municipal management and financial sector being advantaged, e.g. a fairly substantial amount is budgeted for training in a municipality, but none or very little is spent in the W&S division.

Some municipalities reported that they do not have a large budget and that their funding for training is limited [L-DM-0129-HR1-13] [G-B1-0125-HR1-6]. Therefore, these municipalities are depending on the LGSETA projects that have been rolled out which entail the awarding of discretionary grants for training [WC-B3-0302-HR1-10]. However, some municipalities noted that they did not receive any training grants during the past year [WC-B3-0302-HR1-10].

Municipalities have to pay the S&T costs for staff to attend training [WC-B3-0302-HR1-10]. Training courses are usually held in large centre, which for some municipalities are more than three hours’ drive away [WC-B3-0301-HR1-14]. The travel and accommodation is expensive [L-DM-0218-HR1-11] [WC-B2-1202-HR1-6] and reportedly forms the larger part of the total training cost package. In relation, the courses itself are not so expensive [WC-B3-0301-HR1-14]. As an example, a training course for plumbing could only be found in a town 900km away, resulting in substantial transport and accommodation costs. LGSETA only paid the actual course fee [NC-B3-0119-HR1-10].

Although LGSETA funding covers course fees, the pay-out of these funds is subjected to completion of the necessary documentation which includes proof of attendance, proof that the municipality advertised for a service provider; and the service level agreement between LGSETA, the Municipality and the service provider are submitted [NC-B3-0119-HR1-10]. Delay in fulfilling these requirements result in a delay in payment and contributes to municipal cash flow related problems [NC-B3-0119-HR1-10].

SDFs have clear views on the budget related training challenges in the W&S sections of their municipalities. It is clear that some innovation in the training sector is needed, including that education and career guidance in schools should improve:

- PCs did the basic training but it is still not sufficient. PCs did basic plumbing, on the job training, chlorine dosing and checking of dam levels. One of the foremen gave the basic training to all the PCs, but he now resigned (Dec 2015) to take up his own business. It seems we are not doing enough to train our water and sanitation guys. Struggling with finances; find it difficult to budget for training. Budgeted R0 for 2015-2016; 2014-2015 it was 1% of payroll, but it never materialised. 2008/9 PC training at VanderKloofDam – managed to send only 2x PCs due to shortage of staff back home. Most general workers are illiterate and courses
require reading and writing (there are 5 general workers that know how to do the [plant] operator work. [NC-B3-0119-HR1-10]

- It is a challenge if a municipality does not have sufficient budget for skills and training. The perception amongst some municipalities is that LG SETA has not been playing their role effectively and that they've hopefully have had changes of focus or attitude more recently. Hopefully now they're going to fund more readily than what they've been doing to date. [KZN-C2-0212-HR1-3]
- LGSETA appointed a company to assist with training, but people haven't gone for the training, because of acute municipality budget constraints, which included employees not receiving their salaries on time [FS-B3-0203-HR-8]
- There is a funding problem although 250K in the municipal budget for training each year. Often or mostly the blue collared workers don't get the training opportunities. Senior management (those directly reporting to Municipal Manager) gets most of the funding for travel and training. [NC-B3-0114-HR2-4]
- Several SDFs feel that they are letting the W&S staff down but that it is out of their control: Funding is not being effectively looked at as a team in the municipality [NC-B3-0114-HR2-4].
- In majority of instances there appears to be a shortfall when comparing requested funding for training with budgeted amounts for training [A-1125-HR2]. A municipal official expressed gratitude to the fact that the NQF Level 2 and 3 training are funded by DWS and the Municipal Infrastructure Grants Agency [NW-B3-0211-HR1-6].

**Logistics**

After the budget has been taken care of to send a municipal employee in the W&S on a training course, the logistical challenges still remain. The logistics of sending someone for training is two-fold:

Firstly, the logistical challenges such as travelling distances and secondly, to find someone to take over the responsibilities of the person that is on training. These logistical challenges are discussed in more detail below.

Travelling distances: Training courses are conducted in the larger centre resulting in large travelling distances, longer periods absent from work, and S&T claims which add to the financial burden of municipalities [WC-B3-0301-HR1-14]. In order to make it financially worthwhile, service providers need a minimum number of trainees per class. This results in the centralising of training and the transport of municipal workers to training venues [L-B3-1211-HR1-5], Which are mainly in the large centre, e.g. in Cape Town, Kimberley, and Bloemfontein [NC-B3-0114-HR2-4].

Absence from work while on training courses: Municipalities already under stress to have enough staff on their WT and WWT plants find it challenging to release staff from their duties to attend training courses, especially if it would take them away from their jobs for significant periods (e.g. 1 week per month for a year as is the case with the NQF courses). Due to the specialisation in the water sector, it is important that stand in personnel are available to cover for those going on training [L-B3-1211-HR2-8]. Should an unforeseen emergency situation occur, employees are forced to cancel their training, because their supervisors cannot release them from their duties to go on training [WC-B1-0212-HR1-9]? Staff in small towns typically shares responsibilities between/amongst sectors. Sharing responsibility between job positions is an ingenious manner to optimally use staff given small municipalities' limited budgets [WC-B3-0301-HR1-14] [WC-B3-0302-HR1-10]. But it also complicates the availability of such staff members to attend training courses, because not only one sector will be implicated during the course period.
It appears to be easier for the financial divisions of municipalities to send staff on training because they have more staff that can help out when someone is away for training [NC-B3-0118-HR1-14].

Entry level requirements and hands-on training

Municipality are in the process of qualifying all PCs with NQF2, NQF3 and NQF4 [WC-B2-1202-HR1-6]. However, in order to be trainable for a certain position, a certain degree of proficiency in specific subjects is a prerequisite. The lack of having acquired the necessary standard of mathematics required for the NQF courses is a problem [WC-B2-1202-HR1-6]. Unrealistic expectations can lead to failure as explained: six plant operators were sent for NQF2 and NQF3 water in 2012 and only one passed; in 2013 two were sent and none passed [WC-B2-1203-HR1-8]. For people who have no science and maths wanting to pursue engineering jobs, a municipality started the Qeda ubanga project which is funded by LGSETA [Mp-B1-0210-HR1-10].

Apart from science and mathematics, proficiency in English appears to also be essential. A large number of trainees dropping out of the NQF courses are apparently by non-English speaking course tenders who allegedly find the language barrier unbridgeable and were forced to drop out. Some workers have been at the municipality for a long time but they don’t have much schooling e.g. Grade 10, and resistance to go on training could be mainly because they battle with English: “Ek gaan maar na die woordeboek toe…die Oxford Dictionary…ek kan nie anders nie…ek glo daaraan jy moet naslaan…Weet nie of almal een het nie. Ek het twee in die huis.” “Ons kan nie van hulle verwag om dit maklik te maak nie, hulle gaan nie. Dis ’n lang proses… ons moet dit maar skryf al is dit krom en skeef, skryf dit maar in Engels…hulle verstaan wat jy sê.” [WC-B3-0302-HR1-10].

Older people with many years of experience on the job are particularly vulnerable especially since their scholastic achievements are not up to standard. However, as one manager put it: “This person is categorised as Process Controller Class 0, but this is the one PC who I fully trust to ensure good quality water to the town. He has had this responsibility for the past 10 years.” (Refer to note on grandparenting).

ABET training is often seen as a waste of time due to the many dropouts and with few municipal employees showing interest – out of a group of 200 labourers in a municipality only seven are attending the ABET class [WC-B3-0216-HR1-8]. It takes effort to get trained and it is as if not everyone realise that they would need to put in effort to get somewhere. A municipality reported that computer-based ABET started in 2014 as a trial and although it also was not very successful, there were less dropouts, most probably because the staff are interested in computers [KZN-C2-0212-HR1-3]. “…people must not say they do not have the opportunity, they just need to want to learn from the person in the post above them…” [WC-B3-1209-HR1-11].

Practical training – the hands-on experience – appears to be largely lacking in the current NQF courses. The training of people and handing out of certificates is not sufficient if the practical training is lacking; it is recommended that LG SETA needs to come up with programmes [NW-B3-0211-HR1-6] to make provision for the practical side of the training. Process controllers often go back after the one week of theory and find their plants and equipment looking different from what they have just learnt. If a skilled supervisor is not available at that point to help with the practical training, the value is lost. This does not only apply to courses for PCs, but also courses for laboratory assistants and artisans, all who need the on the ground practical experience [L-DM-0218-HR1-11]. As far as laboratory positions are concerned, a municipality has brought students from a University of Technology on board and hope that this partnership will assist with the practical training of students [G-B1-0125-HR1-6].
RPL ("grandparenting")

Grandparenting is a function of DWS as stipulated in Regulation 813 under the Water Services Act (Act No. 108 of 1997). There are instances where the DWS recommended preferred service suppliers for assessing PCs through Recognition of Prior Learning (RPL) on behalf of DWS. The classification of a PC through RPL is only valid on the plant where such a candidate was tested.

Initially there was uncertainty and a fear of losing their jobs, but the person took them by the hand and they were quite surprised to come out e.g. as a PC class III. Overall the process was experienced very positively [WC-B1-0212-HR1-9].

Discussion

While some municipalities could provide the project team with a copy of their WSP, others found it cumbersome to provide either a hard or electronic copy. The majority of municipalities failed to respond to the request, some mentioning that it will only be completed in late April 2016, which could not be accommodated by the project’s timeframes. In such cases, a request to provide the previous year’s WSP did bear fruit in a few isolated cases.

The SDF plays a crucial role in facilitating the training process in a municipality. Not all municipalities, especially the smaller municipalities with a limited budget, can afford a SDF position that can focus on the training of the staff. There was no reporting of a SDF being shared between two neighbouring local municipalities, but provincial SDF forums exist.

Municipalities rely on LGSETA support for finding relevant service providers and sending on the information related to available training programmes. The reason for the process not always running smoothly is not clear, e.g. whether suitable service providers are not available, whether municipalities misunderstand the process, and what can be done differently.

While training opportunities exist, municipalities need to look out for accreditation pitfalls as well as that the available training service providers are sufficiently knowledgeable in all areas and on all levels of the training they provide. Since the provision of training is operated as a business, maximum profit is sought and savings would result in not necessarily being flexible enough to accommodate municipal requirements.

The shortage of training service providers appears to result, in part, in service providers not accommodating the needs of municipalities, but municipalities having to arrange their schedules and arrangements according to what suit the service providers.

Depending on the geographical area, training venues could be quite far from some towns, resulting in municipality staff members having to travel significant distances each day during the course of their studies, or municipalities having to foot the S&T bills. Having to be away from home for one week a month to attend training in another town, could be problematic for single parents, especially if they do not have a strong supportive structure in place, and this would automatically exclude them from being able to move up the municipal ranks.

The possibility that more PC per municipality would be able to enrol for training at a given point in time, should the funding be available and the disruptions of taking trainees away from their workplace for extended periods not exist, should be investigated. If for example, PCs could be trained at their local municipality WT or WWT plant, then it would have the added advantage that they can immediately apply what they learn under supervision of the service providers at a plant that is familiar to them. It would also create the possibility of making the practical training part of the whole training process.
The W&S sections in municipalities experience significant training challenges. This being said, the data suggest that there could be less operational challenges related to sending officials in financial positions on training courses. E.g. the availability of staff to stand in for financial positions versus a lack of someone to stand in for a PC where the pool of available qualified PCs is understaffed as it is. In addition, an unforeseen emergency can cause staff operating in the water sector to prioritise such an emergency above the need to attend a training course.

Furthermore, the practical training and experience gap results in having not enough engineers, artisans and PCs in the available pool. A general complaint amongst the smaller local municipalities is that they lose their trained staff to larger municipalities who can pay larger salaries. The reality is that larger municipalities in turn lose their staff to the metropolitan municipalities and even immigration to municipalities or private companies oversees. The latter is a concern amongst the middle and upper management levels, especially those with engineering diplomas and degrees.

### 3.2.3 Staff turnover rates

Generally, staff turnover is about 5 to 10% in most municipalities and less in the W&S divisions [NC-B3-0120-HR1-1] [WC-B1-0212-HR1-9] [L-DM-0218-HR1-11]. Staff turnover in municipalities amongst W&S staff is mainly due to retirements, but also people passing on, a few resignations and dismissals [WC-B3-0216-HR1-8], and also contract positions of senior managers coming to an end [WC-B1-0211].

In an extreme case a municipality reported that their staff turnover is very low, and although the turnover of PCs is the highest, they normally stay in a position for 30 years [FS-B3-0203-HR-8]. Other municipalities also reported that personnel in the water sector normally stay on for a longer period and that 10 to 20 years is not unrealistic [WC-B1-0212-HR1-9] [FS-B3-0302-HR1-2].

High turnover is reported amongst managers, artisans and engineers [Mp-B4-0120-HR1-5] [NC-B3-0118-HR1-14] [WC-B1-0212-HR1-9], with typically 3-5 years or less in a position [Mp-B1-1111-HR1-7] [A-0303-HR3-19].

General workers with qualifications Gr8-12 have the highest turnover [FS-B3-0302-HR1-2]. Municipalities also report that it is the younger people that tend to leave and job hop [G-B1-0125-HR1-6] [A-1125-HR1] [G-B1-0120-HR1-9] [L-B3-1211-HR2-8]. Especially young skilled black women are quite sought after by the private sector [A-1125-HR1].

A fair number of municipal human resource managers could not provide staff turnover rates. It is uncertain whether this figure is not calculated or just not readily available at the time.

Data also suggests that possible reasons for higher turnover rates could be due to interference from councillors. This is derived from the fact that low turnover rates are explained by the mayor being the only one who is allowed to interface with the municipal manager and that there thus are no interference with tenders, contracts and appointments which allows the municipality to function as it should in the best interest of the community.

### Discussion

The water sector in municipalities appears to be a stable sector with staff turnover in the Water & Sanitation (W&S) divisions being much lower than amongst the rest of the municipal staff pool. The fact that the staff turnover amongst managers is high in an otherwise very stable sector is of concern. The relationship between staff turnover and contract positions has not been investigated. However, that the impermanence of a contract position can influence a person’s decision to move on could not be ruled out. As a municipal officer explained, there is no permanence in a young upcoming well qualified professional’s career if he is in a contract positions at such a young age and that no one can blame him for moving to a permanent position in a larger municipality [WC-B3-0301-HR1-14].
Being scarce skills, artisans and engineers is reported to move to better propositions in the private sector as well as in other municipalities. Although movement of skill between municipalities should not be seen as a loss to the sector, municipalities will have to rethink strategies to retain younger people and in the process get some return on their training investments.

3.2.4 Succession planning

Some municipalities have a succession planning policy in place [WC-B2-1202-HR1-6] [G-B2-0120-HR1-12], and others don’t [L-DM-0129-HR1-13] [NC-B3-0120-HR1-1] [EC-B3-0304-HR1-1] [NC-B3-0119-HR1-10] [Mp-B1-1111-HR1-7]. Some municipalities do not have any formal arrangement for succession planning, but it happens through informal arrangements [KZN-C2-0122-HR1-8] [FS-B3-0203-HR-8] [A-0303-HR3-19] [WC-B3-0302-HR1-10]. A large number of municipalities also mentioned that although they have a succession planning policy in place, it is not implemented [L-B3-1211-HR1-5] [NW-B3-0211-HR1-6] or that the implementation thereof is a challenge [FS-B2-0204-HR1-8], or not applicable to their unique circumstance where the majority of employees that retire are unskilled staff [Mp-B4-0120-HR1-5]. Mentioning is also made of the succession planning responsibility being escalated down to departmental level where mini succession plans should be developed and implemented [G-B1-0120-HR1-9].

Other options than succession planning policies are also proffered as solutions to the skills gap in municipalities. For example, that organisational change in municipalities is needed [L-DM-0218-HR1-11]. An unemployment graduate’s programme has the potential to bring young trainable people into the municipality, but the means to appoint them are not always there [NC-B1-0304-HR1-0]. The implementation of talent management programmes tends to be financially challenging [G-B1-0125-HR1-6].

Informal succession planning arrangements, for example, could be a foreman and PC working with and learning from a well-qualified technical manager who is willing to share his knowledge [WC-B3-0301-HR1-14] [St'b] or other arrangements that make provision for younger staff members to shadow an experienced employee [EC-B3-0304-HR2-2]. Another municipality sends staff for mentoring training so that they can implement succession planning. [FS-B3-0205-HR1-10]

The importance of succession planning is also learnt the hard way. When a foreman passed away no one could take over his job and those that stayed behind neglected a few essential tasks with a resultant drop in water quality results [WC-B3-0302-HR1-10].

Another municipality embarked on a process to get a post evaluation system in place in the municipality. With this system in place, possible successors for each of the job positions can be identified, as well as what the qualification gap for succession planning for a specific job is. If a suitable person or persons are identified internally, the job is advertised 12 months in advance of someone’s retirement. The successful applicant is then mentored for one year in the new post, e.g. attending meetings and taking part in the decisions that are taken, after which he/she will be 50% equipped for the new position. All this is happening while the successful applicant still has to do the work of the current job position. [WC-B3-0216-HR1-8] When no one internally has the minimum qualification to be able to take up the proposed position, then the external advertising can only be done 3 months before retirement of the person currently in the position. The down side is that a suitable candidate might not apply [WC-B3-0216-HR1-8] and an appointment cannot be made in time.

It is possible that a person is afraid that the one being trained to take over his job might make his skill redundant or prematurely replace him [Mp-B1-1111-HR1-7]. For someone nearing retirement, or already retired and just helping out in an acting capacity, this fear should not exist. Such circumstances creates ample opportunity for willing “trainees” to learn, and should not necessarily be formal to derive the most value. For example, under the supervision of a retired acting infrastructure manager, foremen are learning how to do various tasks. Although formal training to accompany this practical learnership would be of advantage, the foremen are not eager to enrol in formal schooling
and it is suspected that the courses being in English could be the reason [WC-B3-0302-HR1-10]. (Also refer to training section and language barriers.)

Age

Some municipalities reported that their staff complement as far as age is concerned is well balanced with sufficient experience amongst the older people and a fair group of younger people being employed [EC-B3-0304-HR2-2] [WC-B1-0212-HR1-9]. Others are fully aware of an aging skilled workforce [WC-B3-0215-HR2-6], especially in the management and artisan positions [G-B1-0125-HR1-6], but also amongst the PCs who were still trained on the job and who have many years of practical experience.

To address the issue of an ageing skilled staff complement, municipalities have talent management and succession planning policies in place, and Treasury has a graduate technologist and engineers programme. However, training programmes have challenges and weaknesses and often are difficult to implement and maintain. Young trainees cannot just be appointed to learn. A job needs to be advertised first, and then such a person cannot just be sent on training, because there is a job that needs to be done. Municipalities have to work around these constraints [A-1125-HR1]. Challenges are in part due to financial constraints [G-B1-0125-HR1-6], but also due to the dedicated attention that is needed from people employed in W&S. (Also refer to the training section; challenges related to sending a person for training differs between, e.g. the finances department and the W&S department.)

As an example for the implementation of a succession planning policy is; a municipality realises that they will have to start develop an individual’s skills because there is not a suitable equity candidate in the municipality that will be able to take up the position when the superintendent, who is already in his 50s, retires in a few years’ time [WC-B3-0216-HR1-8]. Other mentorship programmes, where older skilled people embarked on helping qualified young artisans to gain the necessary experience through mentorship programmes were met with resistance from unions and the names of the programmes was changed. It is not clear what caused the unhappiness and detail is not available [G-B1-0125-HR1-6]. Retired people want to work with people who want to be ‘shadowing’ them [A-1125-HR1].

Discussion

Succession planning is one way to deal with skills gaps due to staff turnover and available vacancies. However, not all municipalities have succession planning policies in place and those that have do not necessarily implement those plans. Challenges related to the implementation of succession planning policies are mentioned, and a large proportion of municipalities revert to informal succession planning. Informal succession planning can be successful if there is someone to guide and someone who is willing to learn/absorb.

Following through on formal succession planning processes is the ideal to ensure people are available to fill vacant positions as they become available. However, very successful and enriching informal forms of succession training are reported. It is not so important on what level in the municipality succession planning is managed or what it is called; what is important is that a skills gap is not left behind when someone leaves a municipality, whether with ample warning or none.

While an ageing workforce is not the only reason why succession planning should be in place, replacing someone retiring is the one area where there is sufficient time to plan for a smooth takeover.

3.2.5 Equity targets – race and gender

Mostly, officials interviewed expressed no concerns about race and gender in the W&S sections of their municipalities [WC-B3-0216-HR1-8] [L-DM-0129-HR1-13] [NC-B3-0119-HR1-10]. Employees are mainly appointed based on their qualifications and experience.
**Race**

The majority of municipalities did not mention any concerns about race. While a municipality reported that transformation is slow [G-B1-0120-HR1-9], others found that conforming to the equity employment ratios are challenging, resulting in vacant positions for extended periods and those staff already on retirement or in other positions taking up acting positions [Mp-B1-1111-HR1-7] [Mp-B3-Dip] [WC-B1-0211-DW] [WC-B3-1207].

Some municipalities are short on white PCs; the majority is coloured, thereafter black males and females, but no whites apply [WC-B1-0212-HR1-9]. Another municipality reported that they cannot really employ all races because the area’s population is almost exclusively black and white, and that on top of that, the white candidates are scarce [L-B3-1211-HR1-5].

**Gender**

Currently, female staff in the W&S sections of municipalities is mainly employed as administrative staff. Some municipalities did express concern that they are slow in recruiting women and that there are no women currently in their W&S section. But equity issues are now taken into account when they interview and recruit [EC-B3-0304-HR2-2]. Overall, all the more females are getting trained and appointed as PCs [WC-B1-0212-HR1-9] and foremen [WC-B3-0302-HR1-10]. On artisan level females are starting to apply for positions and those appointed appear to be coping well [WC-B1-0212-HR1-9]. Women have also been appointed in water quality, laboratory, engineering services and managerial positions [WC-B3-0302-S1] [WC-B1-0211-S1] [WC-B3-0215] [Mp-B1-1111-HR1-7] [WC-B2-1126] [NC] with great success. The female artisan supply is still low in plumbing, for example [A-1125-HR1].

Although good progress is made to appoint females in the W&S divisions of municipalities, the profile is still skewed towards males. In some cultures it is still difficult for men to accept a female manager [NC-B3-0114-HR2-4], but largely male colleagues are praising their female counterparts’ contributions [WC-B3-0302-PC1] [Langeberg]. Many women were given general worker jobs and are happy in those [NW-B3-0211-HR1-6]. Others appointed at the plants complain about not being given enough responsibility.

However, there are concerns about women not being able to do equally hard labour as men [Mp-B1-1111-HR1-7] or cannot go on night call outs due to safety concerns [G-B1-0125-HR1-6]. The reality is that work in the W&S operations and maintenance section of a municipality is labour intensive and concerns exist about service delivery being affected [A-1125-HR1]. There are a few reports of ill feelings among women getting the same pay but when it comes to the hard labour they stand on the side and is labelled as being ‘lazy’ [Mp-B1-1111-HR1-7], but some managers gave examples where female general workers outperform their male colleagues [NC]. As a female PC put it, she just needs to think smarter, because she is not physically as strong as the men, and therefore she needs to keep the machinery oiled so that it is easier to operate. The problem thus appears to be more related to a few specific types of tasks, e.g. the loading of heavy equipment.

**Discussion**

Most municipalities have an approved employment equity plan and are getting there with respect to numbers. While equity is the ideal, equity on all terrains is not always realistic and in some instances an insistence to reach employment equity targets can hamper service delivery. Job positions in municipalities stay vacant for up to years awaiting suitable candidates to apply and in cases where head hunting was successful just create vacant positions in other municipalities, and often smaller and more vulnerable municipalities.
While women in the W&S departments shape well, there are certain circumstances under which it appears problematic to have women in certain positions, e.g. safety concerns during night call outs, and when it comes to specific types of manual labour.

The number of female workers in the W&S divisions in municipalities is steadily increasing and specifically the female plant operators, with progress also in artisan, laboratory and manager positions. By far the majority municipal workers appear to value the female contribution, managers, colleagues and those being supervised alike.

3.2.6 Contracting out/outsourcing

Where the skills and capacity for maintenance and fixing of pumps are lacking in municipalities, these services are then contracted out [FS-B3-0203-HR-8] [L-DM-0129-HR1-13]. Some municipalities report that all maintenance is done in-house [FS-B2-0204-HR1-8], or that at least most of the routine maintenance is done in-house and only the most specialised tasks such as the maintenance and fixing of certain brands of pumps contracted out, or only electrician work [Mp-B1-1111-HR1-7]. Other municipalities reported that they do not have the skilled staff anymore to do maintenance and fixing of e.g. pumps, and that the pumps these days are anyway sealed that does not allow or necessitate their teams to work on them. There are also municipalities that have a well-staffed maintenance team, but the team appears to be only used for fault identification after a call has been logged on one of the plants, and that a specialised company is then contracted to fix the problem [A-0316].

Due to issues resulting from excessive overtime claims, amongst others legislative restrictions around allowable overtime payments, some municipalities find it easier to contract out certain services [A-1125-HR1].

For smaller municipalities it does not make sense to keep someone in a position if the municipality does not have enough work to keep such a team busy fulltime. In smaller towns general electrician and plumbing tasks are often also contracted out to the local suppliers of these services [WC-B3-0301-HR1-14].

Some of the modern technologies and supporting infrastructure need to be serviced and repaired by the original supplier’s maintenance teams. In such instances municipalities have to contract these services out. Increasingly, the maintenance of pumps is also considered to become a highly specialised task [L-B3-1211-HR2-8].

Accredited laboratory services are not considered a contracted out amount, because it needs to be an impartial group who performs the compliance testing.

Discussion

Outsourcing of operations and maintenance is not solely dependent on the availability of skills and capacity in municipalities. The degree to which municipalities contract these tasks out is rather a function of technologies in use, contractual arrangements with service providers of new technologies implemented at municipalities, and labour relations and legislative restrictions related to payment for overtime. Of particular concern is the availability of maintenance teams which reverted to fault finding only and then bring in the contracted teams to do the actual maintenance and fixing of faulty equipment. Whether the skills base is shrinking due to the abovementioned reasons or whether contractual arrangements are entered into because of skills and capacity shortages in municipalities, needs to be investigated further.

A shrinking skills and capacity base in municipalities is not the only reason why certain operations and maintenance functions are contracted out.
3.2.7 Success stories
Several success stories related to training in the municipal water sector were recorded. A few examples are mentioned below:

In one municipality, 17 unemployed youth and one permanently employed staff member were trained to NQF 3-level after submitting the WSP to the LGSETA [FS-B3-0302-HR1-2].

In another municipality, the training unit of the municipality provides two levels of accredited technical training: skills development (internal training and short courses of up to 25 days) and technical training (short courses, skills programmes, learnerships, of which the latter can take up to three years). Recently the budget for accredited training for an extended period has been approved, which means that they can now offer this training for the next few years [A-1125-HR2].

Training successes from other municipal departments were also recorded and is included here for their value as a learning example. Through the Municipal Finance Management Internship Programme, interns are appointed to a municipality for a two year period. This programme is driven and funded by National Treasury and the municipality is monitored during the process. The municipality has now permanently employed one of these newly trained interns with great success [WC-B3-0216-HR1-8].

3.2.8 Feedback – parting question
The majority of respondents indicated that there is a need for feedback at the end of this project. Main questions are about how the information will be applied and used, and what benefit will feed back to the municipalities. Such feedback from LGSETA to the municipalities is essential. Feedback in the short term will also have long-term benefit in the sense of future co-operation by municipalities in research projects.

Parting comments include the following:

- The Project Team is looking forward to see how this study will come to fruition [WC-B3-0216-HR1-8]
- The Project Team hopes the project will address skill shortage [A-0303-HR3-19]
- The Project Team hopes that payment of discretionary grant by LG SETA will improve as it put burden on the municipality (LG SETA usually takes time to pay this money) [A-0303-HR3-19]

4. CONCLUSIONS AND RECOMMENDATIONS
Several measurements as reported provide insight into the skills gap in local municipalities in South Africa. Vacancies are high in almost all job positions in the water sector. Skills gaps exists in especially the middle management, and PCs, with the practical experience lacking in artisans, engineers and PCs. Staff turnover rates in the water sector is relatively low compared to the rest of the municipal structure, but the high turnover amongst managers, artisans and engineers, has a devastating effect on service delivery in municipalities. Municipalities are making progress towards reaching their equity targets, but they also report that it is not always realistic.

In order to address the skills gap in municipalities, adequate and efficient training should be in place. Several entities/organisations have a role to play and a good understanding between these role players are needed to ensure that training provision is optimum. In addition, the various challenges pointed out should also be addressed to help streamline the process and to ensure that resources are optimally utilized.

From the qualitative findings the following can be derived that LGSETA can build on to improve service delivery to local government:
LGSETA’s understanding of the water sector in local government needs to improve, as well as what its specific training needs are.

LG SETA needs to come up with programmes to make provision for the much needed practical side of the training. The practical side of the NQF courses are lacking, depending heavily on supervisors at plants to take over this role, and where such a mentor is not available, it leaves a gap.

Artisans (electricians and plumbers/fitters) have the same problem where they have acquired their theoretical qualifications, but the advertised job positions require experience. Municipalities need a specific practical experience which cannot be acquired elsewhere.

Skill accreditation for reticulation plumbers is lacking, and the sector awaits action.

There is an urgent call for assistance to help young qualified engineers gain the necessary practical experience to become competent to fill available positions in municipalities. This includes mentoring of young engineers to be able to register as professional engineers with ECSA.

Language appears to be a barrier to enrolling, staying enrolled and successfully completing theoretical training courses. Innovative ideas are needed to help familiarise workers with English terminology related to their workplace, e.g. a set of posters that portray sketches of e.g. plant infrastructure and processes with descriptions in both English and the local language. Such visual display might foster unconscious learning and help to break down the mental barriers and fears of studying in a language other than their mother-tongue.

Bring the trainers to the municipalities and do not take the trainees to where it is convenient for the training service providers. Currently LGSETA funds some training opportunities, but the S&T component which municipalities need to bill, especially those in remote areas with the smallest budget available, are often more than what the training cost. In addition, service providers are not willing to provide training if they cannot make sufficient profit by training a minimum number of ‘students’ at a time. While these training opportunities can be seen as networking events, it should not be the main purpose, because there are other networking opportunities. It is more important that trainees get the hands-on experience on their specific plants so that they can link the theory with the practical operations at their municipal plants.

Other areas where LGSETA can contribute include the speeding up of “grandparenting”

Provide training certificates promptly

Reduce ‘rompslomp’ (red tape), and

Help reduce the stigma to working in WWT.

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- The LGSETA who funded this project and thus showed dedication to encourage, streamline and improve training at local government level in South Africa
This was an enriching experience for the project team.