

# **FUTURE PROOF YOUR JOB USING FIRST PRINCIPLES**



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## 1.0 INTRODUCTION

The last three years have seen Queensland experience widespread change in the public sector with cost saving strategies of the like not seen for many years. The water sector is one area under scrutiny. This has been triggered by the cost to supply safe drinking water to the community which has been influenced by the debt invested in drought proofing South East Queensland. This has contributed to the state being in a situation where the cost to service debt interest was outweighing revenue eg we were having to borrow to pay our repayments - an unsustainable situation that with the current prediction we won't be out of until 2018.

Elsewhere in the country the situation is similar; for example employees at both Holden and Toyota motor vehicle factories were asked to take wage cuts in an attempt to keep the factories open. In May Woolworths announced it would slash 400 jobs. Just recently in our own sector, Watercorp in Western Australia made the difficult decision to reduce their workforce by 300 employees, highlighting the pressure across various industries to deliver greater value for customers.

The Queensland government of the time carried out significant staff reduction in the state government sector by some 20,000 positions. Then the controversial public asset sell off issue gained momentum, and as we all know this was reportedly a contributing factor in the ultimate downfall of the government.

It seems that more and more, the government sector is being compared to the general private sector market, therefore to remain viable, various departments functions would have to be able to demonstrate market competitiveness.

It's obvious that if the same approach was to continue then no progress would be made, so something had to change. Debt is an accepted way of life across the globe, and if managed properly, it does not cause too much concern. However if you throw in a GFC and erratic Aussie dollar it then gets tricky and strategies need to be put in place to manage this issue.

Seqwater has committed to a strategy to pay down its interest liability in a realistic period which should then provide opportunity to begin to reduce its debt. To achieve this the business will have to change the way it went about things.

Improving Operational efficiency is a major focus area.

This paper explores one area of change – the 'people' part of water treatment plant operations. What changes people can implement to help the business be more efficient whilst building on our operational knowledge base to ensure the safe supply of drinking water is never compromised. In so doing, this will serve to improve creating a more secure employment environment.

Seqwater completed negotiations on its current Enterprise Bargaining Agreement in late 2013. The agreement included an incentive to receive incremental wage increases based on the successful achievement of specific savings targets.

Suggestions on savings would be considered from any area of the business and if it was agreed, the suggested savings would be realised and then included in the savings tally.

Many areas were identified from minor savings such as magazine subscriptions to more significant savings such as shutting down or reducing production from selected water treatment plants during the low demand periods. Initially as expected there were numerous opportunities to reduce costs and the savings tally grew quite quickly with the first milestone for increment increase reached comfortably.

Soon after, there was a change in the executive management with a new set of corporate focus areas created and a new cost reduction strategy was introduced aiming to reduce operational costs significantly over a four year period.

A major focus point in the strategy was to pass on the savings to the consumers in the South East by reducing the bulk water costs – something that has as of April 2015 been achieved resulting in the cost of bulk water being reduced by 12%.

I was fortunate enough to be part of a small team assembled to look into one part of the operational area of the organisation (Water Treatment Plant Operations) to investigate the existing tasks deemed necessary to ensure continuity of the treatment plants to provide safe drinking water per the organisations drinking water quality management plan.

This also included what potential changes could be made to improve efficiencies and explore methods of reducing costs by using alternative approaches to this area of operations.

This project was the catalyst behind the idea to write this paper.

*"If you always do what you've always done, you'll always get what you've always got."*

To successfully change or adapt to potential changes I thought would depend on five values:

F.I.R.S.T

**Flexible, Innovative, Resilient, Safe, Trained**

## **1.1 Flexible**

One of the first parts of the project mentioned above was to gather all of the catalogued tasks that the treatment plant operators carry out during their normal daily routine. This included, but was not limited to, tasks such as console operation, sampling and testing, preventive maintenance, site access and works control (contractor management), travelling and training to name a few.

In a lot of cases it was identified that some tasks carried out by other sections in the organisation could be absorbed into existing tasks. For example, preventive maintenance tasks in a remote area performed by a contractor that could be carried out by the operator who visits the plant each day anyway.

Operators were also trained in basic instrument maintenance so the weekly instrument cleans and verifications could be carried out by the operators instead of being done by contractors.

These are just a few of a great many tasks that could be refined or improved to realise efficiencies.

The message here is to be flexible – there may be opportunities to economise on various tasks carried out throughout your organisation.

## **1.2 Innovative**

“We’ve been doing it this way for the last 20 years and nothing has gone wrong”.

This statement is entirely correct, in fact if you were to continue then chances are that nothing would go wrong. However, in the past 20 years there would have been a myriad of different ways invented to do it better. Innovation is one of the basic building blocks of evolution and of course without it, we would all still be drawing off sludge manually, chemical dose systems wouldn’t be flow paced, whole plants would be controlled manually – the list goes on.

Don’t be afraid to speak up if you have an idea no matter how small it may be.

It doesn’t necessarily have to cost anything to improve by being innovative – a simple procedure change or job task sequence change could be beneficial to free up some time to carry out other tasks. For example, structure your plant data sheets to match the sampling and analysis workflow, include certain maintenance tasks in your sampling rounds etc.

Does that integer number that you have been collecting each day for the last decade have to be collected daily – would weekly suffice? Does anyone actually look at the number anymore?

Do a time and motion study – challenge the way you do things

## **1.3 Resilient**

Here’s where the acronym starts to blend together – to be flexible and innovative one also needs to be resilient.

Wikipedia defines resilience as “the ability to recover from shock or disturbance”. When we need to change something to improve or even just to maintain status quo, we can go somewhere unknown or less familiar than the normal.

Being aware of what may lie ahead and having strategies to deal with it are vitally important. One of the best recourses available is a strong flexible and innovative team.

With clear and realistic direction the load can be shared and real progress made.

The “R” could also stand for “Risk”, a smart operator is aware of the risks surrounding daily movements as well as the process he/she oversees. Be vigilant around your environment and keep the risk profile as low as possible.

## **1.4 Safety**

It goes without saying we all should return home after shift without injury, be it both physical and mental. Neither do we want to deal with the pain and inconvenience or worse of being injured or witness others being injured.

If we have to change the way we do anything, it is highly important to re assess the associated workflow to identify any new or unseen hazards. This may take a little time however it could turn out to be a wise investment.

There are not too many employers that will tolerate unsafe behaviour, so this should be non-negotiable.

## **1.4 Trained**

Most water industry organisations require minimum operator certifications.

The national framework provides for multiple opportunities to broaden skills and qualifications – visit their website or enquire with your HR department for suitable certifications to build on your skill base.

Building your capability through ongoing training can only place you in a stronger position, no matter what changes occur, as the industry continues to improve its overall performance. Make yourself as attractive as you can to both your existing or prospective employer.

This should not only apply to formal certification type training - there has been articles written on the age old problem of inadequate project delivery – “operators quite often are left with unfinished or faulty equipment” and “new equipment has been installed or upgrades carried out with no training delivered as part of the project”

Get involved in the project as much as you can – ask to review the designs etc, and push hard for vendor training on any new or different equipment.

## **2.0 CONCLUSION**

Change in our industry is never going to leave us, in fact if we look back over even the last decade the rate of change has been exponential – we all have the choice to either ignore it or embrace it. Never be afraid of it!

Above all we need to prepare for it and that is the thrust of this paper

The treatment plant operator a decade ago is not the same operator we see today nor will he or she be the same at the end of the next decade and beyond.

There will be a few in the profession that will remember the days of manually operated plants – indeed there are still a few of them around. However rest assured, there will be none left in the future. As existing plants age many are being either de-commissioned or upgraded with fully automated plants that in many cases can be operated remotely.

Automated operation has dramatically reduced the need for operator intervention, therefore

it can be said it has also freed up more operator time for other duties. Indeed there may be scope to introduce more value adding tasks to the daily routine at the expense of the “do it because we always have” tasks.

No matter what the organisation you work for looks like in the future – the better prepared to demonstrate your capabilities /competitiveness the better the position you will be in.

Measure what you currently do and refine it to be the best of your ability.

As mentioned earlier – make yourself as attractive as you possibly can and you will be the one they will look at **FIRST**.