

DIGITAL FUTURE READINESS SOUTH AFRICAN FUEL RETAIL SECTOR

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The role of digitalisation as a strategy to ensure that fuel retailers remain competitive and future-ready.

The focus of this paper will be on digital readiness as it relates to asset management within fuel retail sites and how digitalisation can contribute to fuel retail organisations' competitiveness and sustainability.

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Abstract

South African Fuel Retail companies need to remain competitive and future-ready, be able to tackle current low economic growth, Political / Regulatory and social challenges and make use of new growth opportunities and optimise the scope for digitalisation. A study into Swiss manufacturing companies found that to achieve the above; a transformational change needs to happen in four dimensions of the organisation, culture, people and digital environment. The same transformational change journey is envisaged to be applicable for Fuel Retail companies in South Africa for them to remain competitive and future-ready.

There is often a critical case to be made of companies focusing on their core strategic business objectives whilst building alliances and partnerships with other organisations' whose core businesses strategically complements and support achieving their core objectives. This is referred to as maintaining partnerships and ecosystems. Ecosystems are dynamic and jointly developed facilitative 'communities' of various parties. They enable new value creation through flexible models for collaboration.

A case study will be presented of potential for collaboration between South African Fuel Retail companies with Asset Management companies as strategic partners for sustainably achieving their strategic business objectives. The focus will be on how Asset Management companies can lead the development of solutions that will ensure cost-effective, optimal utilisation of their assets whilst partnering with them along the digital transformation journey. Whilst it is common knowledge that digital transformation can take many forms beyond asset management, there are extensive opportunities for optimisation, risk reduction, ensuring regulatory compliance at the asset or facilities management level.

Presenter CV

Tshegofatso Maetle is Pragma's oil and gas sector executive. He is an experienced engineering and property development professional in the fuel retail and construction sectors.



Transforming to fuel stations of tomorrow

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1 Introduction

The South African market is home to over 4,800 Fuel Retail Stations. According to the South African Petroleum Industry Association (SAPIA), the fuel sector contributes about 6% to the country's gross domestic product (GDP) while supplying some 18% of South Africa's primary energy needs through annual sales of around 31 billion litres of liquid fuels.

Generally, fuel retailers are customer-centric at the core. They have already started responding to environmental sustainability imperatives and are adopting new measures that are shaping fuel stations of tomorrow. These initiatives include focusing on non-fuel retail activities such as food courts and customer loyalty programmes with financial or health service providers. Their business models are also shifting to support renewable energy initiatives including, but not limited to the provision of electric vehicle charge points and the installation of rooftop photovoltaic panels to completely or partially operation off-grid and many more.

One of the key questions shaping the fuel retail stations of the future are, "What strategies can be adopted to ensure that we remain competitive and future-ready?" It is clear the role that planning for any such future whilst discounting the role of digital future readiness might compromise

some of the players in the sector. Digitalisation platforms have already started to play a significant role in customer loyalty programs, management of fuel assets and training and development of fuel retail companies' staff.

The focus of this paper will be on digital readiness as it relates to asset management within fuel retail sites and how digitalisation can contribute to fuel retail organisations' competitiveness and sustainability.

Fuel retailers have already started responding to environmental sustainability imperatives and are adopting new measures that are shaping fuel stations of tomorrow.

2 Case Study

Pragma has over 15 years' asset management experience in the fuel retail sector across different countries. Some of the key asset management pain-points for fuel retailers as it relates to their stations and commercial sites include the following:

Equipment downtime

Equipment downtime that has a negative impact on customer experience.



Figure 1: For every 24 hours of dispenser downtime, on a site pumping an average of 400,000 litres per month, the business loses approximately R7,033.33 gross margin on the faulty pump. The decreased pumping capacity can further exacerbate the cost due to customer drive-offs arising from perceived poor service.

Picture credit | Tokheim Services

Equipment failure

Equipment failure resulting in environmental damage as a result of containment loss of petroleum products. The impact of such a failure is massive, including the financial loss as a result of periods of non-operations due to environmental remediation, unplanned remediation costs that typically run over a million-rand, reputational damage and the potential loss of their licence to operate.

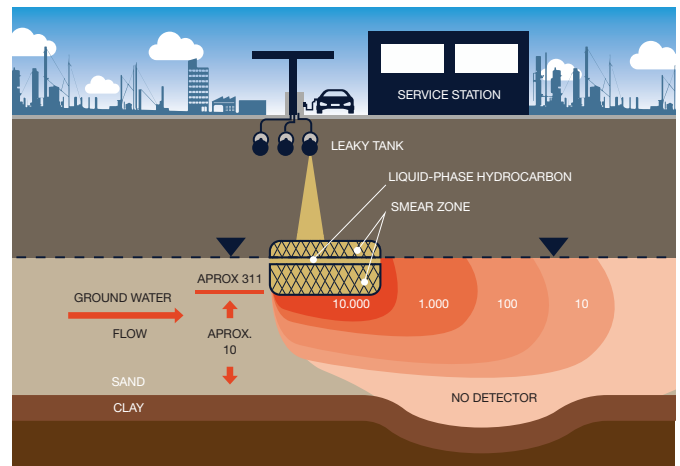


Figure 2: Environmental contamination affecting groundwater and environmentally sensitive areas can take more than five years of environmental remediation processes. The clean-up costs could escalate to over five million Rands. In one example, a fuel retailer was required to provide lifetime water supply to the affected community where its retail site experienced a major leak that contaminated a small town's water source. These costs can weigh heavily on the company's financial viability.

2 Case Study

Regulatory compliance (regarding the defined frequency of mandatory equipment performance assurance processes), liability (regarding the environmental impact of the release of any harmful hydrocarbons products) and other regulatory requirements



mineral resources

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Figure 3: Breach of Regulatory Requirements could result in heavy financial penalties, criminal prosecution of company directors and the loss or suspension of the licence to operate.

Pragma has commissioned focused improvement projects aimed at demonstrating the role that Internet of Things (IoT) platforms such as remote monitoring of assets can deliver within the asset management sphere at fuel retail sites. The remote monitoring of assets through an IoT platform can result in reduced maintenance costs due to improved initial diagnostics ensuring allocation of the correct maintenance contractors with the appropriate spare parts and route optimisation. Remote monitoring of assets enables more proactive maintenance decreasing equipment failures and the resulting losses.

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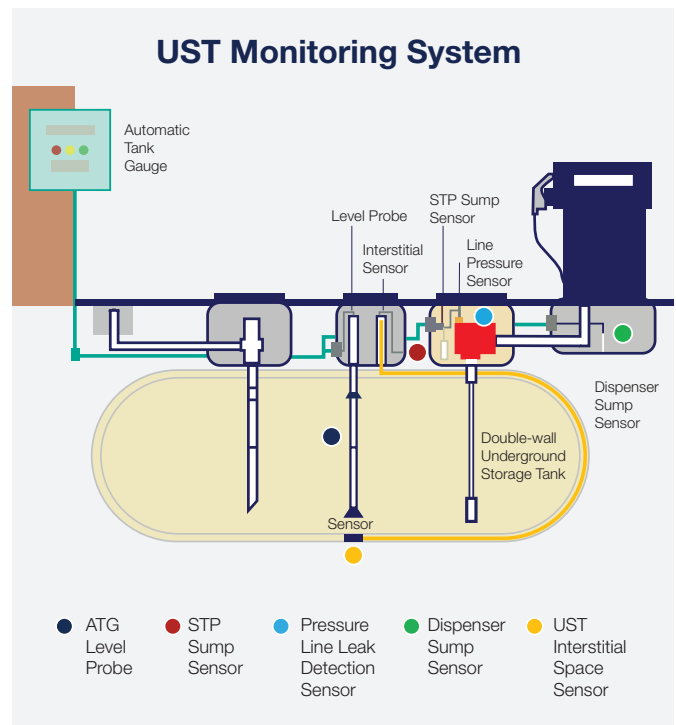
3 Digital Readiness and Digital Solutions

There is growing consensus that service stations that thrive in the future will probably look completely different to what we're used to. The transformed convenience store will include personalised offers for customers. And the site may devote additional space to new lifestyle hubs that have office space or health and fitness services.

Transforming the Retail Network and Asset Portfolio

Fuel retailers need to consider how to consolidate and optimise the network to extract maximum value from their traditional assets in the face of decreasing returns. The concept of connected assets has become critical to the survival of the business as it directly contributes to cutting operational and maintenance costs. Pragma has piloted different remote asset monitoring concepts that contribute towards ensuring proactive maintenance plans are implemented. Currently, the concept of asset health monitoring is being evaluated for implementation targeting proactive monitoring and identification of leading trends that lead to loss of primary containment. This will require monitoring the performance of the assets using IoT platforms and detailed analysis of asset performance.

Below is the graphical representation of Asset Health Monitoring for Loss of Primary Containment prevention:



Source: <https://www.commtank.com/tank-articles/underground-storage-tank-monitoring-systems/>

These digital initiatives will result in bringing to life the performance of fuel retail assets that are currently generally operating in a fragmented and isolated manner not allowing for proper performance analysis and resulting in incidents that affect reputation and financial position of fuel retailers.

3 Digital Readiness and Digital Solutions

Developing New Capabilities and Expertise

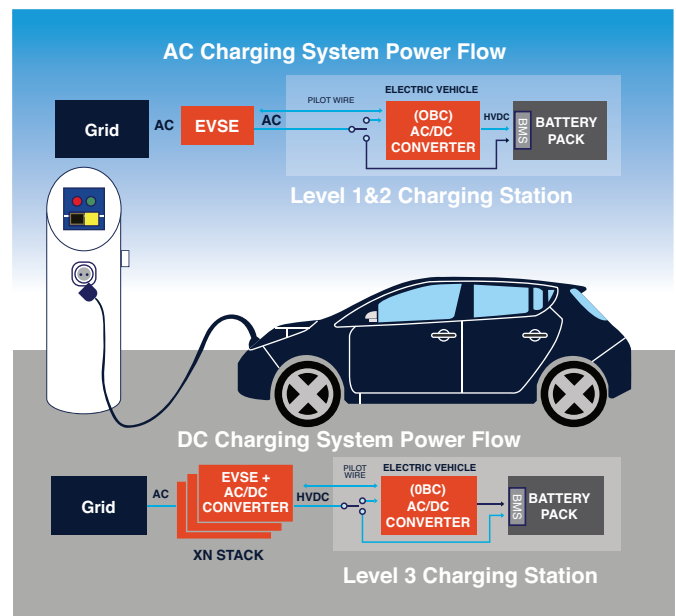
To successfully meet the challenges ahead, fuel retailers need to up their game in several areas.

First, they need to hone customer-centric capabilities, including ways to understand the needs and demands of on-the-go consumers. This entails investing in and developing new digital functions, technology capabilities, and expertise in verticals such as logistics. To succeed in these efforts, companies must expand their industry and functional expertise in such areas as digital product development, Artificial Intelligence (AI), blockchain and IoT. They should attract and retain new talent, including data scientists, user-experience designers, and software developers.

Second, they must ensure that the organisation can master heightened levels of complexity, including building and managing an ecosystem of partnerships. At the same time, fuel retailers need to build an operating model that can run an increasingly complex business. From an asset management perspective, the concept of connected assets should be implemented within the greenfield and brownfield project phase and not as an add-on maintenance after-thought. Project implementation teams have to connect with the maintenance team in evaluation of the asset full lifecycle.

Third, they need to embrace agile ways of working to drive innovation. Under the agile approach, companies can deploy cross-functional teams to innovate, test, and learn

quickly. They should be willing to embrace a new, disruptive, fail-fast culture that allows the organization to innovate via quick sprints. By doing so, the company can identify customer pain points, develop fast prototypes and minimum viable products to address those needs, and quickly gauge market fit and desirability before scaling up. Example is current rollout of Electric Vehicle Charge points that Pragma is partnering with one of its Fuel Retail Customers to implement the project and develop fit for purpose asset care plans for these new assets.



Source: <https://circuitdigest.com/article/electric-vehicle-on-board-chargers-and-charging-stations>

Shifting toward an agile mindset will be a major challenge for many traditional fuel retailers, since they have spent decades using the standard “waterfall” engineering approach to major projects. But making this shift will be critical to successful innovation.

4 Conclusion

As the future begins to take shape, the implications for fuel retailers are both clear and severe. Fuel retailers no longer have the luxury to wait and see what happens. Rather, they must move now to leverage digital technology and expand into fast-growing, adjacent value pools. In markets where the changes are most dramatic, remaining relevant will require a complete reimagining of the service station.

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