

# How to manage our assets in an ever-changing environment in the EMEA Region?

One of the most pressing questions for asset management is how businesses who manage assets can adapt, change, be innovative and cost-effective in a digitally enabled environment?

The world has drastically changed over the past two years, with uncertainty in the market due to the Covid19 impact and the change in needs and requirements of our clients and customers alike. Moreover, our focus over the last decade has considerably moved away from spending Capex budgets and not considering the future. We now look at the whole life cycle of projects while considering megatrends impacting us, such as sustainability, risk management, ageing assets, digitisation and customer behaviours.

The purpose of asset management can be defined as applying appropriate solutions to protect an asset's value against issues and the impact of megatrends. To achieve this resiliency, it is essential to examine each business with a fresh perspective to utilise an approach that will make a difference and mitigate some of these megatrends and issues as appropriate.

## ***Why is it important to address megatrends?***

The emergence of megatrends or in other words, "disruptions" can impact your business on several levels: Whether it be at a strategic level, where reputational damage can cause negative impacts to a business or at an operational level where ultimately an asset has failed. This can present a threat to your assets' value and performance through many reasons, such as lack of maintenance and management, poor design and construction standards, changes in technology or obsolescence.

Working in asset management for more than three decades across the region, Martin Cordwell, has used and developed common techniques that preserve asset value in organisations.

These techniques can be wide-ranging and an example of a number of solutions that can be applied include:

- **O&M review of transportation and infrastructure engineering contracts** - Technical review of asset management strategy and review/development of O&M Plans.
- **Optimisation of investments strategies for critical water assets** - liaison and development of future investment strategy for critical water pumping stations, review of maintenance strategies, recommendation for increase in capacity, development of predictive Capex and Opex investment model and concept studies for new pump station facilities.
- **Strategic review of water and wastewater assets** - Development of potential procurement strategies to determine future use water and wastewater assets:
  - Develop alternative operating models in comparison to the existing operating model
  - Include recommendations for future Sewage Treatment Plant and Reverse Osmosis plant strategy
  - Develop economic assessment/cost benefit analysis model
  - Develop recommendations for the client in terms of the next steps
- **ISO 55001 asset management implementation** - Gap analysis to ISO 55001 and the implementation of a new asset management strategy across all departments. Review and provision of strategic advice for existing asset management practices for improvement and preparation of organisation to gain ISO 55001 certification including outsourcing and supplier management, sustainable asset management, whole life management and asset management information systems.

- **Capital investment planning** - Development of a 1 and 5 Year Capital Plan for Abu Dhabi Government Entities by providing Subject Matter Expertise for the development of business processes and governance.

Based on experience and working with businesses, similar techniques are required to manage assets but the issues identified are almost never the same, hence the management of assets consists of a number of subject areas such as:

Asset advisory, asset performance and optimisation, asset operations, asset management training and strategic insights.

Asset management in the EMEA region is a unique situation as many of the built assets were constructed within the last 40 years and are now maturing, leading to the current issues and megatrends impacting these assets.

The megatrends across the EMEA region which can have a profound impact on the performance of assets, include:

### 1) **Optimising assets**

A business' concern is usually focused on asset cost and performance, the lack of asset efficiency, the future-proofing of assets and demand analysis to optimise them.

An asset owner should consider the balance between Capex vs Opex to examine the longevity of assets and how the individual assets or asset systems can be optimised. Assets are sometimes run within their lifecycle without considering the balance of cost, risk and performance. By potentially changing either the lifecycle from a Capex vs Opex point of view or examining the planning, design, construction and maintenance of the assets, performance can be enhanced through several solutions:

- Review of operational improvements and predictive maintenance
- Design reviews to ensure O&M is considered
- Whole life cycle technical review
- Spare capacity reviews

Individual projects or alignment with asset management plans that can define where optimisation is best achieved, can ultimately drive changes in asset expenditure.

### 2) **Asset sustainability**

Being sustainable is one of the biggest challenges businesses have, taking into consideration recent global events which had a profound impact on the use of our assets.

Businesses not only need to consider the cascade of the United Nations Sustainable Development Goals but their potential impact on asset management if not implemented, such as:

- Sustainable consumption and production
- Managing natural resources
- Climate change
- Present and future needs

Our region has extreme weather conditions such as heat, wind, and humidity. They can directly affect the lives of our assets and indirectly lead to higher energy costs within our asset management systems.

Examining some of the above, we can look at several solutions, such as developing suitable materials that take into climate change and the durability of materials specifications. These solutions enable selecting appropriate material options and potentially allow the most cost-effective solution for the proposed assets.

As climate change is becoming more profound in the 21st Century, we will see the need for more inspection programmes utilised to monitor assets as climate change may cause a detrimental impact on asset performance.

In the region, we have been involved in a number of projects related to damage due to extreme weather conditions and have undertaken investigations and thermographic surveys on buildings infrastructure to determine the root cause and associated remedial works.

Through effective use of asset management, several techniques can be applied throughout the lifecycle of the asset to mitigate this risk, including:

- Operations and performance management
- Resource management
- Energy and sustainability audits
- Asset performance monitoring
- Technical Due Diligence

This can be undertaken from either a strategic or operational level. Our team has delivered studies in the region which examine these studies, such as:

- Condition investigation for internal switchable glass failure
- Condition assessment for local housing
- Condition investigation for air tightness and water tightness
- Planned Preventative Maintenance surveys
- Strategic review of water and wastewater assets and buildings
- Capital Investment Plans, planning
- Review of operational preparedness for infrastructure

### **3) Funding**

Funding and the prioritisation of funding is key to existing and future asset development. This can be balanced between Capex vs Opex or to fund the rehabilitation of assets. Especially during the last two years, businesses have looked in-depth at their budget requirements as the demand for assets have significantly changed.

As asset portfolios have consolidated, asset re-purposing has been undertaken at several levels, such as changing an existing building's purpose from a retail development to a commercial function. Investors are also looking at selling their assets off and are reinvesting in new sustainable solutions, which in turn will lead to sustainable assets.

As Covid has had a large impact on businesses, consideration has been given to mothballing of assets which refers to the deactivation, storing, and preservation which can be utilised at a later time. Before utilisation, the assets will require due diligence to make sure they are fit for purpose and are still viable for the business.

The prioritisation of funding is critical to a business where funding is limited. Assets can be prioritised based on their need, location, or demand and based on the budgetary requirements of the business. It will depend if the focus is on Capex, Capex rehabilitation or Opex funding.

We are increasingly working with government entities in the water and energy sector where we provide insight on efficient expenditure for the asset base, including forecast data relating to Opex, demand revenues assets and Capex projects.

#### 4) Digitalisation of Asset Systems

The use of digitalisation in asset management is wide-ranging, from the use of drones to undertaking surveys to creating digital twins, which can mimic real-life impacts on assets. It may also be key for new strategies in funding optimisation, improved maintenance and productivity. The demand for technology in asset systems is noticeably getting more popular in the region.

The advancement in technology in capture this information has led to a digital revolution where the correct data and utilisation of systems has fundamentally changed how businesses operate.

There is an increased integration of improved data and understanding that data is transforming businesses and providing more value to assets owners. This enables companies to understand how their assets perform in the real world and is helping them make informed decisions to drive change. In the next ten years, asset management will be revolutionised throughout the whole asset life cycle and that assets themselves will become 'smart' and possibly manage and repair themselves through artificial intelligence and machine learning.

We have worked with a range of solutions that can help a business adapt to these changes and look towards the future of assets management:

- Automated inspections using drones
- Decision analysis and enhanced decision support tools
- Data architecture development
- Systems usage analysis and optimisation
- Integrated asset management models, incorporating BIM
- Decision support tools for auditing, modelling (digital twins), analytics, maintenance, planning

#### 5) Customer Services

Assets are utilised by an end-user directly or indirectly and the use of customer data and feedback is becoming more valuable to asset owners. Asset management systems should allow customers and stakeholders alike to be aware that the assets they utilise are performing correctly and help them in their day to day lives.

Whether the asset is a highway or a utility supplying a residential building, effective asset management and customer feedback can lead to improvements such as increased asset performance, customer data collection, and enhanced reputation of the business that owns the asset. A customer lifecycle should be considered within the asset management system, where a customer can report an incident or have a query about assets they use either online or over the phone. The system should allow seamless use of data to either deal with the reported incident or provide customer feedback within a defined timescale and close the loop.

The data gained from customers is invaluable for businesses that want to improve how they operate or improve their image across a broad audience. Solutions that can be adopted to enhance customer expectations include:

- Data lead analysis of customer management
- Circular approach to customer service and accountability
- Defined asset performance and reporting

Ultimately, the interaction between an asset owner and a customer can lead to significant service improvements and an increase in revenue as repeat business is performed through good customer relations and a defined asset management strategy.

## **Benefits from good practice**

Due to a fast-paced and constantly changing economic environment in the EMEA region, our outlook on solutions is always evolving. With a flexible and adaptable approach, benefits can be created that will help businesses recover or re-purpose their assets:

- Potential Opex and Capex savings over the lifecycle of assets
- Data collection cost savings with a consolidated approach
- Higher return on investment through defined funding
- Business will meet the evolving needs of existing and new clients
- Building a sustainable asset management system assessment capability
- Achieve recognition of attainment within industries, with regulators, customers and investors
- Joined-up & structured process
- Improved maintenance strategies
- Informed asset investment decisions
- Managed risk
- Join select list of global companies

According to Boston Consulting Group report “Global Asset Management 2021: The \$100 Trillion Machine”, the size of the Middle East’s asset management industry grew 11% from 2019 to 2020. The Middle East is a very resilient market especially after surviving significant disruptions. Regardless, we are constantly facing new realities where each asset management initiative is shaping a new path in this field and driving impactful change, especially when some of the megatrends are considered.

### **About Martin Cordwell:**

Martin, is a civil engineer with over 30 years of experience, including 15 years in the Middle East, will help to consolidate and provide defined asset management solutions to clients in the region which will include strategic delivery and digital solutions, whilst utilising GHD's global Asset Management capabilities. Martin will be responsible for providing technical advice for whole life asset solutions for strategic, tactical, and operational delivery, business case development, risk analysis, asset optimisation, and capital and operational investment planning in his new role. This will enable GHD to offer our clients more robust and smarter solutions for asset management, engineering and digital solutions moving forward.