



Establishing an effective Business Continuity Management System in the desalination industry

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Foreword

The Saline Water Conversion Corporation (SWCC) is a Saudi governmental institution mandated and entrusted with seawater desalination and the delivery of desalinated water to various regions of the Kingdom of Saudi Arabia and beyond. SWCC was established in 1974 as an independent governmental institution of a legal personality.

The technology and development since its establishment continue to lower the cost of cubic meter of desalination of seawater and investing in the water desalination industry including human capital to lead the future.

Vision 2030 and their subsidiaries programs addressed water desalination as strategic pillars to meet the current and future water demand and other objectives. This means continuation of the investment, especially technologies, innovations, and human capital.

Today, SWCC is building the largest single plant in the world with capacity of more than 1 million M3/day consuming only 2.7 kw/ m3, moreover, Saudi Arabia account of 18% of total world production of desalinated water. This huge production and reliability require a hard work, alignment, systems, sustainability and environment protection.

To ensure that we have built a comprehensive business continuity management system using the latest technology, comply with international standards and alignment of all stakeholders.

We will continue to fulfill the demand for water in the kingdom and protect the environment by reducing the carbon dioxide in alignment with ESG principles, and use renewable energy and maintain the seawater salt concentration in the sea.



His Excellency Eng. Abdullah Ibrahim Al-Abdul-Karim
Governor
Saline Water Conversion Corporation

Thriving for resilience

Managing risk and uncertainty is never enough to mitigate a realized impact on the business and the people. Resilience is a key component that is becoming increasingly critical over the past and the coming years, as we venture into new territories of advancement and technology.

SWCC can only achieve global leadership and excellence through a process of continuous improvement and enhancement that enables us to realize our vision and mission. SWCC's initiatives are aligned with Vision 2030, and directly contribute to achieving some of the goals and objectives that are supported by three pillars: a vibrant society, a thriving economy, and an ambitious nation. To meet such objectives, it is clear that continuous improvement in all areas of the organization is required with razor sharp focus and forward-thinking mindset. SWCC also acknowledges that progress can only be achieved when the levels of collaboration are high across the value chain with dedicated resources and enablers.

Taking these pillars and strategic initiatives into focus, places business continuity and resilience as critical items on our agenda as we seek to ensure continuation of our operations even in the face of disruption. In striving for excellence through a process of continuous improvement and enhancement, SWCC will realize its vision by fulfilling its mission to “best meet customer needs of desalinated water more efficiently and reliably at the lowest possible cost and the highest economic return, while effectively invest in and motivate human resources, develop desalination industry, contribute to economic and social development and comply with safety and environmental standards”.

We live in a time where it is often mentioned that the only constant is change – and the pace of change is more than often faster than we anticipate. For this reason, we have embarked on a journey to ensure that we are able to identify risks of disruption and establish adequate mitigation solutions to enable a swift and timeous response to disruptions. SWCC understands the vital role it plays in the Kingdom and that millions of citizens rely on it to deliver a resource that is precious to all forms of life.

I have the pleasure to share with you this whitepaper, which seeks to highlight SWCC's journey in implementing business continuity in the field of water desalination. Furthermore, we outline some of the ongoing initiatives by SWCC and how innovation plays a role in turning risk into opportunity whilst embracing resilience by design principles.



Eng. Mansour Alzunaidi

Deputy Governor for Business Continuity & Risk Management
Saline Water Conversion Corporation



SWCC strategy

Vision

Global leadership and excellence in water desalination industry.

Mission

To best meet customer needs of desalinated water, more efficiently and reliably at the lowest possible cost and the highest economic return, while effectively invest in and motivate human resources, develop desalination industry, contribute to economic and social development and comply with safety and environmental standards.

Values

Speed, mastery, sustainability, creativity and safety

The main axes



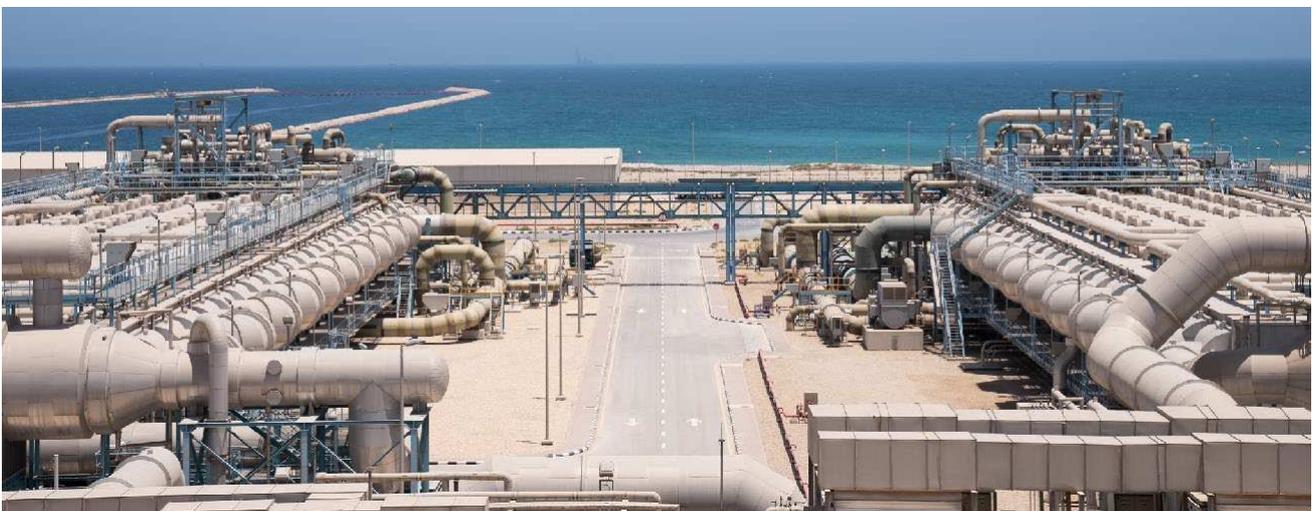
Introduction

Saudi Arabia has relied on desalinated water since the 1930s when King Abdul Aziz Al Saud, may God have mercy on him, issued a royal order in 1348 AH (1928 AD) to import two seawater distillation units. Since then, SWCC started the journey to become a leading desalinated water producer globally. Given that seawater accounts for 97% of water on the earth, it is the most reliable source of freshwater production, especially for water-stressed countries in the Middle East that rely on desalination due to their arid climate and shortage of ground water sources. UNICEF states that most water-stressed countries in the world are in the Middle East and North Africa (MENA).¹ In 2021, desalinated water for municipal usage accounted for 65% of Saudi Arabia's water supply while other resources accounted for 35%.²

Owing to high groundwater withdrawal rates and water stress, the Ministry of Environment, Water and Agriculture (MEWA) in the Kingdom set a directive of meeting 90% of the demand using desalinated water and 10% using ground and surface water by 2030. With great emphasis on Vision 2030, heightened economic activity and development across all key sectors, water requirements are growing at a rapid pace. With a high reliance on desalinati-

on to meet the Kingdom's water requirements, key vulnerabilities emerge as any adverse event which impacts water supply will result in water not being able to reach the population timeously. Whilst new urban desalination plants are being planned to overcome the water shortage, being able to recover quickly from failures and disruption is of vital importance to the industry. Sector resilience is one of the programs under MEWA's 2030 strategy to ensure that the water and wastewater sectors are continuously prepared to sustain any disruption to normal day-to-day operations.

The Saline Water Conversion Corporation (SWCC) is a Saudi government corporation responsible for the desalination of seawater, and supplying various regions in the Kingdom with desalinated water. SWCC's efforts are aimed consolidating the natural water resources in various regions of the Kingdom that experience severe freshwater shortages, through the process of desalination. Based on increasing demand and risks of water scarcity, currently, SWCC is working with a portfolio of ongoing projects worth approximately SAR 49 billion.



Key risks and challenges in the desalination industry

With water being an essential and basic human need in addition to its importance in managing the environment and sustaining economic growth, increased desalination capacity is seemingly the best option. However, the internal and external risk landscape is ever evolving, bringing with it new challenges that create roadblocks and hurdles that need to be overcome. It has become evident that being reactive to risk materialization is not enough to ensure uninterrupted service delivery to meet expectations of all stakeholders. Being proactive and in a state of readiness can be the difference between moving forward or closing the doors. Due to the high reliance of desalinated water in the region, “closing the doors” means “closing the tap” which is not an option, as this would mean a shortage of water, leading to a crisis that impacts millions of people. For this reason, it is key to assess the risks and challenges which the industry faces to ensure an adequate level of resilience with strategies and solutions to mitigate adverse impacts.

Whilst many risks and challenges face the desalination industry, the following are three key risks and challenges which have been detailed:



Energy Consumption



Environmental Impact



Changing Technology



Energy consumption

Desalination is a very energy intensive process, predominantly using energy supply from fossil fuel sources which are dependent on several variables such as global market prices and complex logistical supply routes. Investments in renewable energy is part of Saudi Arabia's efforts toward increasing the level of diversification, which is in line with Vision 2030. Increasing resilience means diversifying energy inputs to embrace sustainability and achieve other goals in parallel, such as reducing plant carbon footprint.

Whilst analyzing the risks that we constantly encounter; we may easily be blindsided by focusing all our efforts on risk mitigation instead of also looking for ways to transform risks into opportunities. For instance, despite the Covid-19 pandemic, SWCC successfully replaced desalination technologies in 2020 within small production plants along the Red Sea coast, through Reverse Osmosis (RO) technology, which helped achieve energy savings and enhanced the efficiencies within the plants. In addition, “Future units” were also part of SWCC's innovations which are mobile water desalination units, achieving an unprecedented figure in electricity consumption of 2.27 kilowatt-hours per cubic meter. This resulted in SWCC setting a new Guinness World Record title for “Lowest Energy Consumption for a water desalination plant”.



Initiatives such as these reduce costs over a period, provide lower reliance on fossil fuels for production and enable SWCC to contribute toward the Kingdom’s vision to reduce carbon emissions. On the other hand, renewable energy projects are gaining momentum globally to transition to clean energy sources. For instance, as part of Saudi Arabia’s Vision 2030 projects is water desalination using solar power, with the Al-Khafji desalination plant being powered by solar photovoltaics, providing 10 MW of electricity daily to operate the plant.³ The Ministry of Energy is working to diversify the national energy mix used in electricity production, increasing the share of natural gas and renewable energy sources to approximately 50% by 2030.⁴

This also holds true for other industrial sectors such as mining and those such as agriculture. For instance, the example below highlights a key risk and how it was transformed into an opportunity, saving the environment in the process. This also holds true for other industrial sectors such as mining and those such as agriculture. For instance, the example below highlights a key risk and how it was transformed into an opportunity, saving the environment in the process. Continuous efforts are made to ensure that desalination processes are safe and environmentally friendly and a combination of measures are undertaken to ensure that mitigations are implemented if there are any issues that arise during the process which are undetected. By implementing such initiatives and other projects, SWCC qualified its production plants to obtain environmental licenses and a certificate of environmental compliance in accordance with ISO 14001. These types of efforts give rise to the importance of resilience through innovation and sustainability efforts.



Environmental impact

Whilst desalination is an effective method to provide safe, usable water for large populations, eliminate problems in the food supply chain and contribute to economy stabilization, adverse environmental impact caused through chemical waste disposal may be devastating.

Challenge	Carbon dioxide emissions are the primary driver of global climate change which impacts all forms of life and threatens nature.
Risk	Adverse impact to our environment, economy, health, societies, and natural resources, due to increasing amounts of carbon emissions that enter the atmosphere.
Solution	Through its various initiatives to reduce carbon emissions, SWCC has set a target of reducing 34.7 million tons of carbon dioxide emissions by 2024 and among, other has developed a technology to absorb emitted gases and them into investment products, such as methanol. ⁵ Furthermore, SWCC has replaced many thermal technologies in desalination plants with environmentally friendly technologies (revers osmosis).



Changing technology

Future innovation initiatives underway by SWCC involve the usage and application of solar panels which is carried out with an automated cleaning system with the highest efficiency in the region and Middle East for future mobile systems. SWCC is currently constructing a production plant and transmission system in Jubail which will use 20% renewable energy in relation to total power consumption. As a result, it is critical that risk assessment be continuous and risk mitigation occur in near real time by performing Single Point of Failure (SPoF) analysis. Environmental, health, and safety risks are significant in an industry that not only uses environmental resources to produce safe water but also distributes this water for consumption. If any medium to high risks materialize, the consequences will be severe, resulting in serious reputational and financial damage, not to mention the impact on the population groups that rely on the valuable resource. Organizations in such key industries will be able to activate strategies and solutions that reduce such impact with sound risk assessment practices that filter through to BCM plans and procedures.

Whilst energy consumption and environmental impact showcase how fluid the risk landscape has become, a changing technology landscape fetches even more risks that must be addressed. Desalination technology is constantly evolving with a focus on enhancing efficiencies and reducing energy consumption. In 2019, total water production from desalination in the Kingdom involved 40% through the Multi-Stage Flash (MSF) process, 45% by Reverse Osmosis (RO), and 15% by use of Multi-Effect Distillation (MED).⁶ Membrane performance, changing seawater conditions and the drive to increase efficiencies and sustainability efforts are sparking innovation and enhancement in the technology space for desalination. A new generation of desalination plants are on the horizon with innovative solutions that may create a shift in industry focus. Whilst MSF and RO are by far the most widespread technology used globally, newer technologies that use less energy and decrease production times may be at the forefront before we know it. SWCC won the Global Best Water Desalination Company Award 2021 in the international competition organized by Global Water Intelligence (GWI).



“We live in a time of scientific innovations and unprecedented technologies, and these technologies can bring huge benefits, and at the same time they may result in new challenges, such as changing work patterns... as well as increasing the risks of cybersecurity and information flow. This requires us to address these challenges as soon as possible to avoid them turning into economic and social crises.”

_____The Crown Prince, His Royal Highness_____ **Prince Mohammed bin Salman bin Abdulaziz Al Saud**



SWCC has also developed environmentally friendly Reverse Osmosis (RO) technology, which remarkably contributed to doubling the production and supply of desalinated water in addition to energy recovery technology. Resilience is evident throughout the organization and technology resilience is a big-ticket item in such an evolving landscape. With new systems and technology come new vulnerabilities that may be exploited in the ecosystem. The cyber security threat to industrial operations has evolved and rapidly expanded over the last years. In 2021, Saudi Arabia achieved a new global achievement by ranking 2nd out of 193 countries in the world, and the first place at the level of the Arab world, the Middle East and Asia in the Global Cyber-security Index, issued by the United Nations specialized agency for information and communication technologies.⁷ This demonstrates the commitment that stakeholders in all spheres of the Kingdom are undertaking to ensure that people, assets, infrastructure and key sectors are protected. SWCC shares this commitment due to the important role that it plays in the water sector. Since desalination plant operations have become reliant on automated processes, it is imperative that adequate safeguards are implemented to protect the organization against cyber threats and increase its cyber resilience posture, protect the organization against cyber threats and increase its cyber resilience posture.

SWCC's contributions and initiatives

SWCC's position as the world's largest desalination organization places it on the global stage, with other desalination organizations looking to it for innovation and guidance to achieve the highest levels of quality and excellence. SWCC has launched a number of initiatives both locally and globally to expand its efforts in innovation, enhancement, and collaboration.

Among other events and conferences held by SWCC on a periodic basis, SWCC recently hosted the "Future of Desalination International Conference", which was the first global gathering of its kind that discussed the prospects and solutions of future water in the world in order to develop the industry and research initiatives. The event was attended by policy makers, innovators, operators, contractors, developers and technology suppliers from all around the world.

SWCC has many planned and ongoing initiatives and collaborations with many entities in different sectors such as research and development, localization, manufacturing, mining and public sector, among others. For instance, KUTEC Salt Technology was engaged to cooperate in the field of zero brine and a development agreement was entered into with Sandia Laboratories of the US Department of Energy in the research and development of innovative membranes for reverse osmosis. With the objective of strengthening the frameworks of cooperation, an MOU was established with the International Water Association (IWA) to include desalination as part of its agenda and enable the sharing of expertise studies and innovation. The Kuwait Institute of Science and Research (KISR) and SWCC are collaborating on creating research projects to localize the desalination and membranes industry to contribute to sustainability efforts and develop human resources through joint training programs.

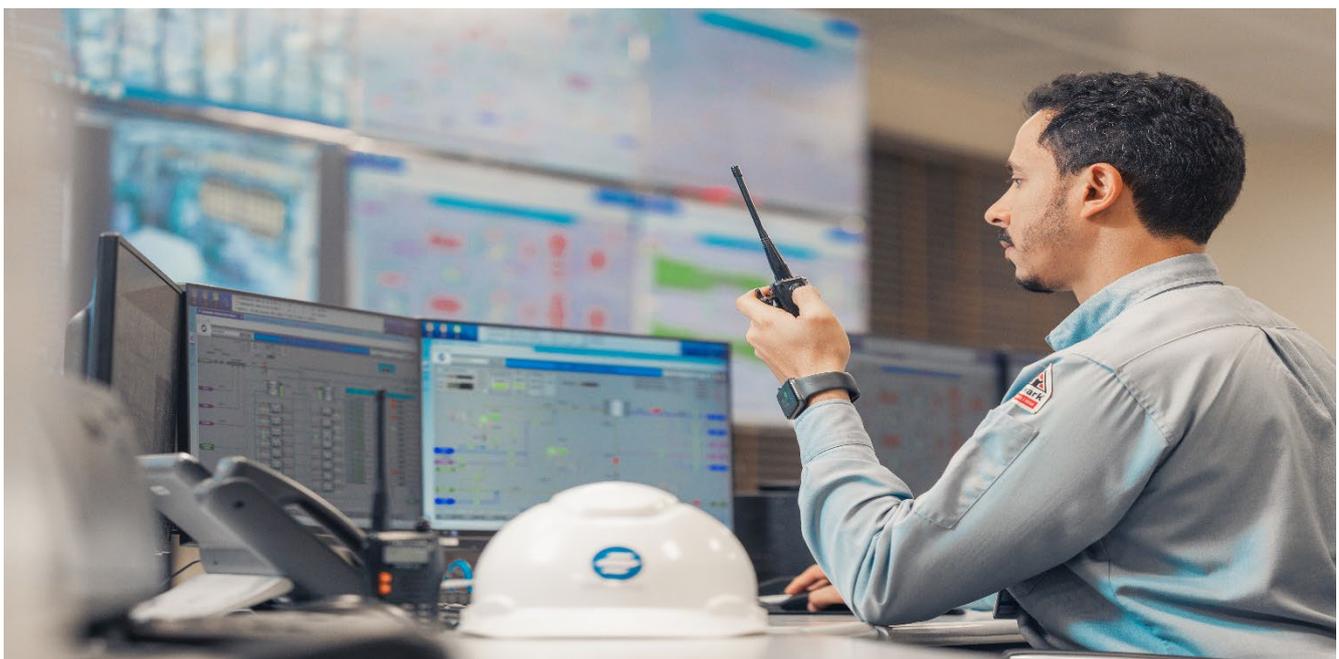
SWCC has also partnered with Maaden to improve technology and utilize clean energy in desalination, demonstrating SWCC's commitment to continuously enhance its efforts in reducing its carbon footprint in coordination with other industry players. In recognizing that "smart resiliency" may be achieved through advanced technologies such as Artificial Intelligence (AI) and the Internet of Things (IoT), SWCC signed an MOU with Emerson Technologies to explore opportunities in sensing, software, analytics and data management to continue SWCC's digital transformation journey.



Why business continuity is of vital importance

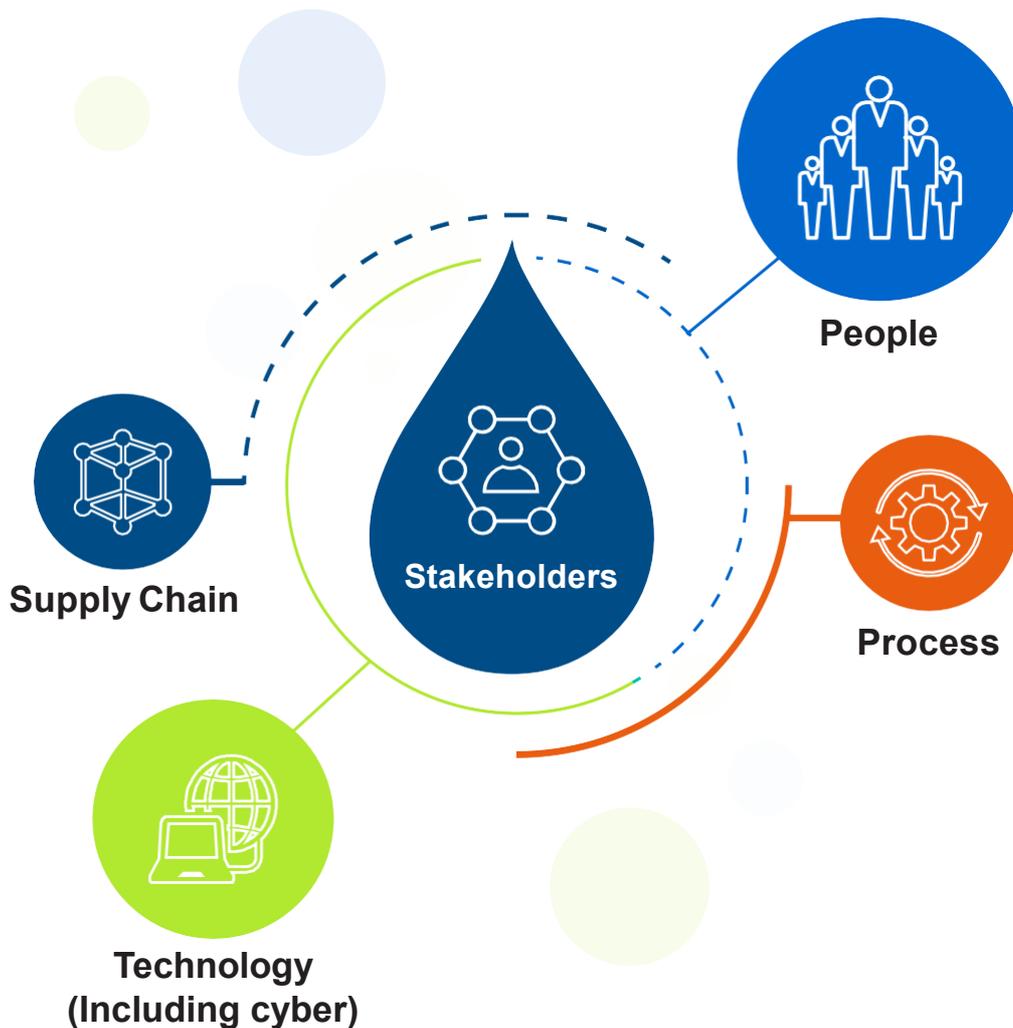
The Covid-19 pandemic rapidly spread around the world and disrupted the lives and livelihoods of all communities, causing considerable challenges to vulnerable people. The government of KSA demonstrated targeted efforts to contain the spread of Covid-19. Prior to Covid-19, organizations considered the pandemic scenario as either rare or unlikely to occur considering the history of pandemics globally. This consideration had changed quickly, with pandemic planning quickly becoming the top of the agenda for many organizations – especially those in the industrial sector with people-intensive operating models. The government of KSA took noteworthy steps to contain the spread of Covid-19 by implementing a range of measures to mitigate the impact, in a timely and structured approach. The government invested more than 7% of Gross Domestic Product (GDP) to reduce the adverse impacts of the pandemic on the economy, key sectors, and individuals.⁸ Business Continuity planning focuses on the impact of disruption instead of the causes of disruption. This way, organizations can apply response

and recovery capabilities to a broad range of scenarios. As we continue treading on the path of economic activity resumption, it is vital to recognize the importance of health risks, especially when it can have a domino effect on industries which are heavily reliant on the workforce to ensure sustained production. This becomes even more important when the organization provides an essential service or product, such as safe drinking water. The renewable water sources of the Gulf Cooperation Council (GCC) are low and declining due to the region being one of the driest and water scarce in the world. The Kingdom has limited reserves of nonrenewable groundwater which are being rapidly depleted. A similar challenge is encountered by GCC countries, among others. These types of statistics elevate the importance of desalination to ensure that water demands are met, and the natural resource is provided timeously to the regions' population, making business continuity of vital importance. This also forms the basis for continued innovation and enhancement of how the process of desalination is

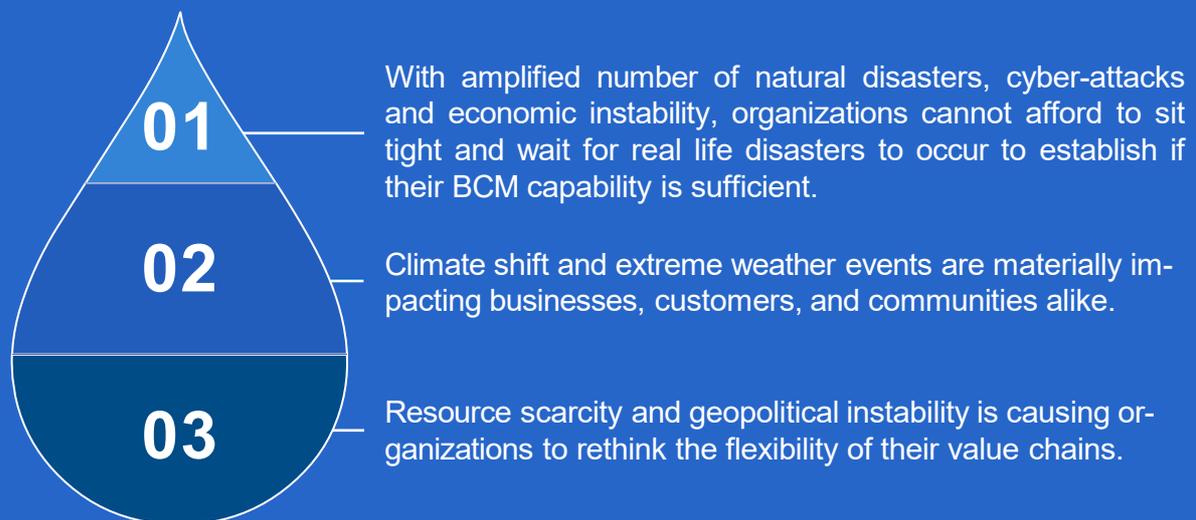


executed, how it impacts the environment and the measures taken to ensure sustainability. In 2021, it was reported that the number of desalination plants in KSA was more than 40 and plans were already in place for future construction. Globally, total capacity is around 80 million m³/day with the Kingdom's capacity being more than 12 million m³/day.⁹ This demonstrates that desalination is becoming more and more important as ground water sources decline on a global level. The repercussions of an unexpected freeze in production are undeniably high. As mentioned earlier, 65% of Saudi Arabia's water supply in 2021 was produced from desalination plants in the Kingdom.

Unplanned downtime which is caused by a disruption can translate to major revenue losses, reputational damage and even more importantly impact the population due to water shortages. This may lead to a health crisis which may have unimaginable impacts to food security and various spheres of the economy. Considering some of risks that the industry faces along with its level of criticality, having a robust business continuity and resilience capability is of paramount importance. Business Continuity Management (BCM) focuses on the factors that influence how an organization's capability is established, most particularly people, process, technology, and the supply chain.



What are some of the drivers of having an effective BCM capability?



Since desalination is a process that provides access to an essential resource that sustains life and may be used as inputs in other industries, its importance of being able to recover timeously become an elevated agenda item.

What are the key steps to establish an effective BCM capability?

Business Impact Analysis (BIA)

Desalination is a process that consists of several steps depending on the method used. It is critical that each critical process be assessed using a BIA to determine the impact of its unavailability over time by:

- ◆ Determining the impact based upon impact categories such as operational, environmental health and safety, reputation, and stakeholder confidence in addition to legal and compliance.
- ◆ Assessing the impact of process unavailability, so that the organization can determine the Recovery Time Objective (RTO) for its critical processes.

- ◆ Other key requirements that enable the process are also assessed and documented such as people and skills, systems and applications, workspaces, equipment, vital records as well as internal and external dependencies. By performing the BIA, the organization can determine its recovery priorities and understand its requirements.

Risk assessment

We encountered some significant risks and challenges early on. While critical processes are evaluated to determine recovery objectives, key organizational functions such as information technology, cyber, facilities, and human resources are also evaluated for continuity risk



Corporate risk

- Loss of life
- Loss of asset
- Reputation damage
- Social media attack
- Regulatory breach
- Fraud
- Product tampering



Operational risk

- Natural hazards
- Extreme weather
- Geopolitical events
- Terrorism
- Climate change
- Loss of access
- Major incident
- Pandemic



Technology risk

- Loss of data center
- Failure of communications
- Connectivity
- Data loss
- Cloud failure
- Network integrity
- Vendor failure



Cyber risk

- Hacking
- Data theft
- Compromised process control
- Compromised identify and access management
- Phishing
- Advanced persistent threats



Supply chain risk

- Failure of supplier
- Loss of natural resource
- Failure of logistics partner
- Loss of utilities
- Joint Venture issues
- Component recall



Environmental risk

- Red tide
- Jelly fish attacks
- Danger to marine life
- Emission of air pollutants
- Chemical discharge

To determine risk ratings, risks are identified, analyzed, and rated using a risk matrix. These are known as “disruption related risks”, and they are concerned with what could halt production or cause a delay in critical areas of the organization. Continuity risks are associated with five common risk categories that almost every organization faces.

Looking at the big picture, there are risks and challenges which may be transformed into opportunities, such as reducing energy con-

sumption, limiting the impact on the environment, and ensuring that technological change is not placing the organization on the back foot by continuously enhancing. On the flip side of the coin, organizations in all industries are facing day-to-day risks such as loss of data, hacking, failure of a supplier and so on and so forth. So, what is the relationship between these risks? Say for example a new technology is implemented for production systems that greatly enhances efficiencies and reduces production time. With this new technology comes

new vulnerabilities which may be unknown and lead to vulnerabilities being exploited. Imagine the impact of such an event on an industrial or new Supervisory Control and Data Acquisition (SCADA) system – changes made by a hacker with access may impact plant safety and even lead to loss of life. Therefore, it is important that risks are continuously identified and assessed to ensure the correct mitigating actions are carried out.

Supply chain risk is a very important aspect in the industrial sector which may have hidden Single Points of Failures and cause major disruptions. The supply chain in such organizations may be a large or the largest part of its value chain and should be critically assessed to ensure that recovery mechanisms are established. SWCC has also made efforts in localizing the desalination industry in cooperation

with the Local Content and Government Procurement Authority (LCGPA). Five key trends which impact the global supply chain today are:

- 1. Logistical disruption**
- 2. Production delays**
- 3. Increasing technology investment**
- 4. Commodity pricing**
- 5. Workforce and labor**

In understanding the business impact, risks and threats, organizations can translate these requirements into Business Continuity Plans (BCPs) and procedures by identifying adequate strategies and solutions to enable recovery efforts.



Business Continuity Plan (BCP)

The BCP establishing a response structure ensures that the organization has a well-documented and well-understood mechanism for dealing with an incident, regardless of its cause. The response structure establishes command, control, and communication systems to assist the organization in managing the incident and minimizing the disruption's impact. For example, there are numerous stages in the desalination process, such as water intake, water treatment, water storage, and so on. There may be Single Points of Failure that go undetected in each of these engineering processes. As a result, performing the appropriate risk and impact assessments, and then transforming those into strategies and solutions that become workarounds and are well documented in a BCP. This can mean the difference between continuing to operate and "closing the doors".

Testing and exercising

Many organizations make the mistake in thinking that having a BCP is enough. This misconception leads to organizations into being "great on paper and poor in practice". Testing and exercising BCPs are the best measure of assessing adequacy and effectiveness. Tests and exercises should be based on a well-crafted scenario. Scenarios should also be relative to the industry such as those centered around environmental risk, and industry specific scenarios so that testing is highly practical and as close to real as possible. Testing the "generic" scenarios such as cyber-attacks and fire hazards are no longer enough as there are other scenarios which keep evolving based on the nature of the organization and the industry that it operates within.

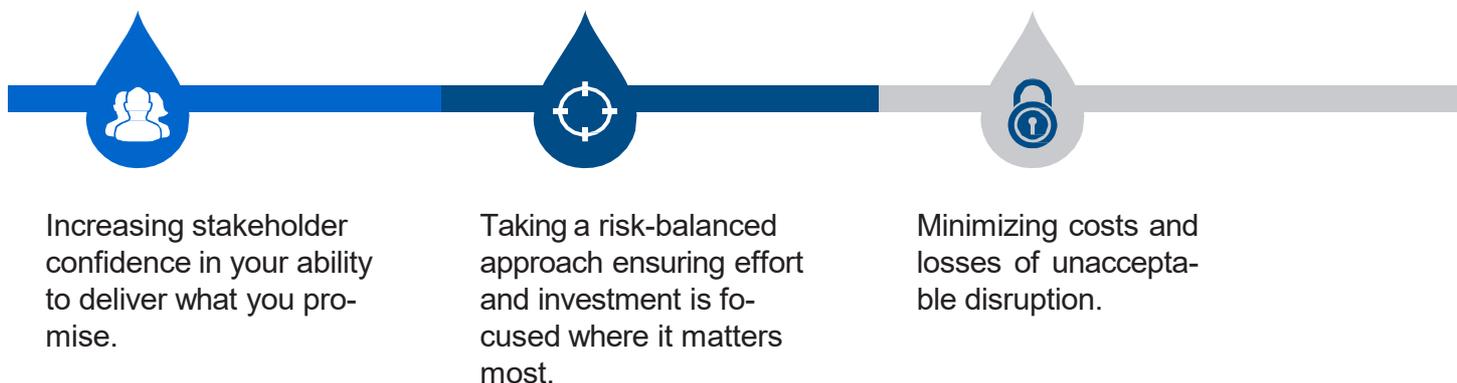


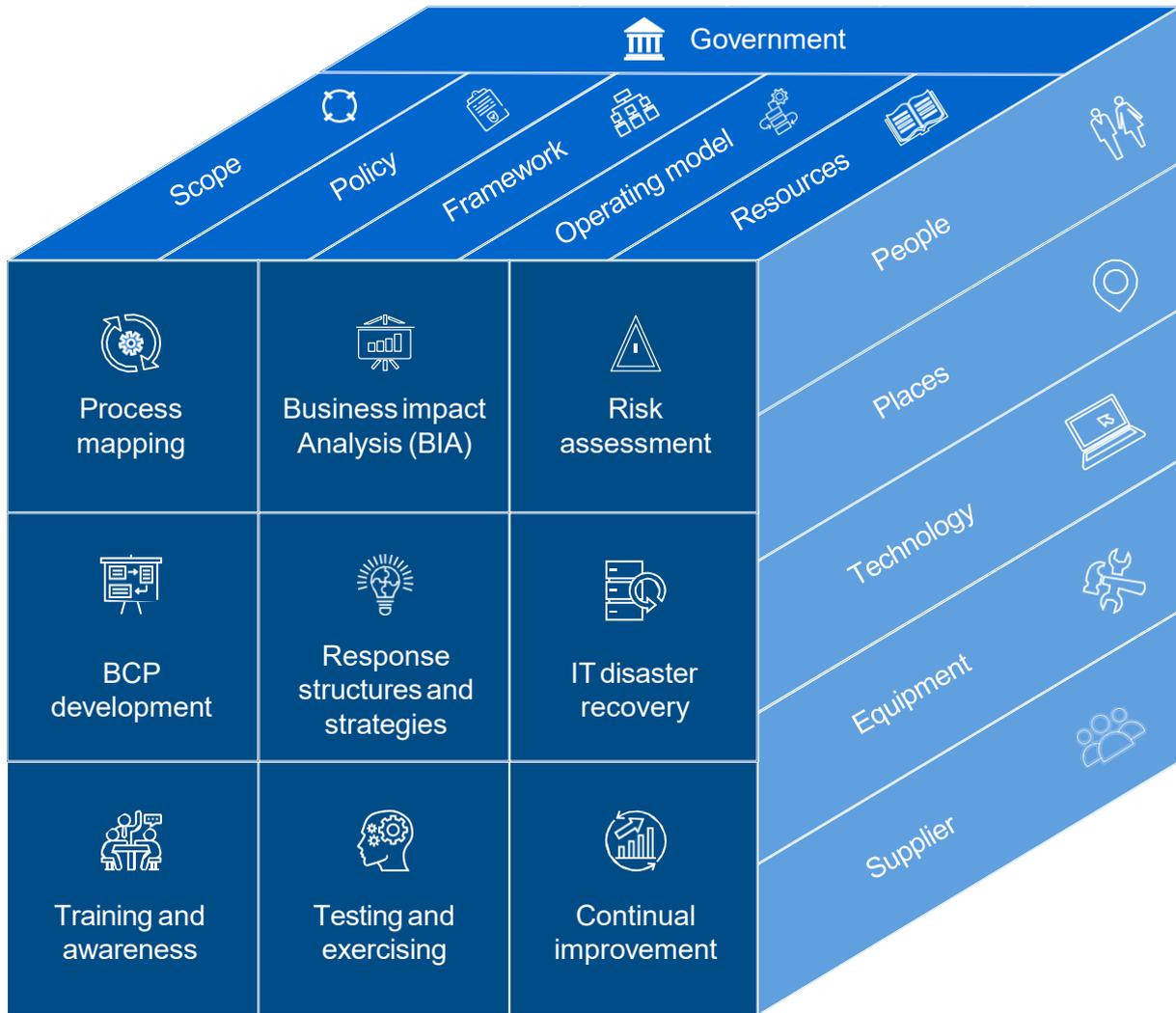
Methodology for Putting Business Continuity Management Systems in Place

SWCC has recognized the importance of BCM in alignment with its mission “To best meet customer needs of desalinated water more efficiently”. SWCC has enhanced its BCM capability in alignment with ISO 22301:2019 which is the gold standard for BCM that has international recognition and provides broad coverage, addresses business risk and is management system based. The journey began with understanding SWCC’s key products and services and their relationship with internal and external dependencies, applications, tools and utilities. The aim was to establish governance, understand requirements, and then formulate the right strategies and solutions to develop appropriate plans and procedures which support recovery efforts and then ensure adequate testing.

With the support of KPMG, together with our internal BCM Team, we were able to:

- ◆ Establish governance through BCM policies and develop an end-to-end framework with defining the roles and responsibilities of various interested parties.
- ◆ Conduct Business Impact Analysis (BIA) workshops which focused on quantifying the impacts if disruption were to occur. This enabled us to identify and protect what mattered the most.
- ◆ Conduct Risk Assessments (RA) to understand risks and threats that are disruption related.
- ◆ Identify strategic options for recovery of SWCC resources (premises, people, process, technology, and suppliers) based on the results of the BIA, RA and any other gaps.
- ◆ Facilitate development of the Business Continuity Plan (BCP) to cover relevant BCM scenarios and risks to effectively and efficiently co-ordinate the response to a disruption and able to continue critical services in a timely manner. This also included IT Disaster Recovery and Crisis Management.
- ◆ Plan testing and exercising to allow plans and procedures to be tested to measure their effectiveness and determine areas which needed corrective action. This also included defining a continual improvement framework.
- ◆ Conduct training and awareness workshops to ensure the right people are familiar with what they need to do in a disruption to carry out their duties and meet recovery objectives.





Improved safeguarding of organizational brand/reputation.



Captures insights that can be used to inform strategic decision-making and risk management.



Ability to respond confidently to regulator and stakeholder requirements.

SWCC's glance on BCM

Through enhancing and implementing best practices in relation to sound business continuity management, SWCC has identified some key factors which we believe represent the cornerstones of business continuity management. These factors ensure the continued development, review, update and enhancement of SWCC's business continuity capability and are summarized below.



Top Management Commitment

Leadership and Commitment play a very important role in the establishment of the BCMS to ensure that policy and objectives are defined and are in alignment with the strategic direction of the organization. This support demonstrates to all stakeholders of SWCC that the establishment of a business continuity capability is integral to contribute to its vision and mission.



Level of Maturity

At all levels of the organization and its structures, SWCC recognizes that the maturity and understanding across key stakeholders, especially employees, plays a vital role in ensuring the ongoing enhancement of the BCMS. This level of maturity includes ensuring the continued training and awareness of stakeholders which contribute to prevention, response and recovery mechanisms established. In doing so, our people are able to act with confidence and ensure their efforts directly enable the achievement of our objectives and targets.



Technology Enablement

The use of Artificial Intelligence (AI), Internet of Things (IoT) and other technology advancements within our processes and activities enable us to create "smart resiliency" and contribute to the automation of resiliency across key functions. Technology was previously seen only as a business enabler, however, it is evident that technology is an enabler and a partner in ensuring service delivery and excellence. For instance, IoT sensors are able to gather real-world data about water flow, such as temperature, pressure and chemical composition. In addition, interconnected IT-OT systems can self-diagnose and alert potential malfunctions. The use of advanced technologies enables a greater level of consistency in the achievement of objectives within the BCMS based on the high degree of reliance placed on systems and applications to deliver on our vision and mission. These technologies enable SWCC to identify risks and mitigate them to ensure continued service delivery and business continuity.



Embedding BCMS

Requirements and expectations should be embedded within the organization to enable "resilience by design". SWCC believes that BCMS objectives and activities should be factored in to key functions, ensuring that BCM requirements are considered when designing or implementing major changes, ensuring that continuity capabilities are designed within any new processes or solutions. Further to this, requirements should be factored into employee and department KPIs for BCM activities which will empower employees to complete key tasks and build a level of commitment towards the tasks and activities associated with the BCMS.

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