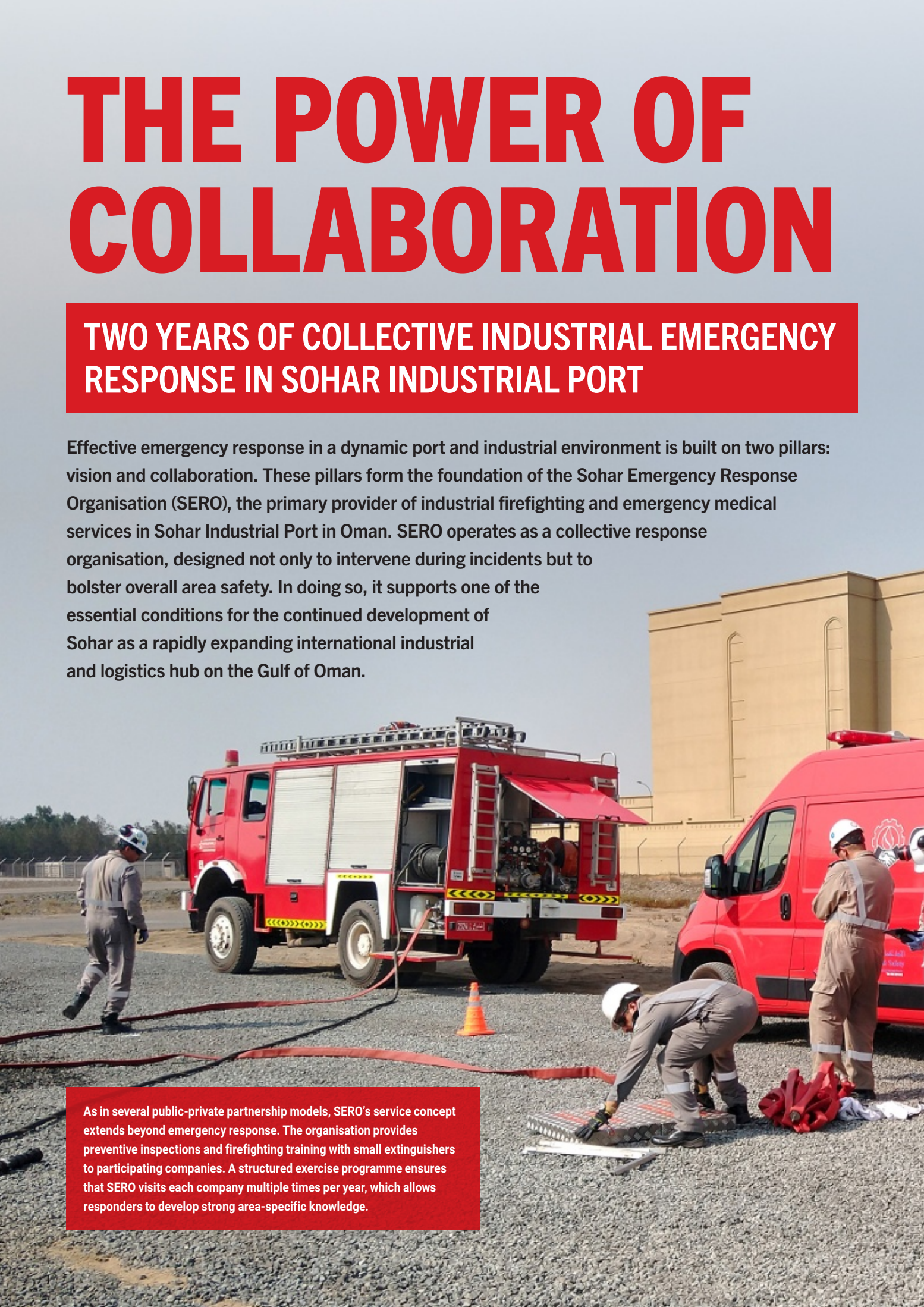


THE POWER OF COLLABORATION

TWO YEARS OF COLLECTIVE INDUSTRIAL EMERGENCY RESPONSE IN SOHAR INDUSTRIAL PORT

Effective emergency response in a dynamic port and industrial environment is built on two pillars: vision and collaboration. These pillars form the foundation of the Sohar Emergency Response Organisation (SERO), the primary provider of industrial firefighting and emergency medical services in Sohar Industrial Port in Oman. SERO operates as a collective response organisation, designed not only to intervene during incidents but to bolster overall area safety. In doing so, it supports one of the essential conditions for the continued development of Sohar as a rapidly expanding international industrial and logistics hub on the Gulf of Oman.



As in several public-private partnership models, SERO's service concept extends beyond emergency response. The organisation provides preventive inspections and firefighting training with small extinguishers to participating companies. A structured exercise programme ensures that SERO visits each company multiple times per year, which allows responders to develop strong area-specific knowledge.

On 1 June 2025, SERO began operating from its permanent base with the official opening of the new Emergency Response Centre, strategically located within the port and industrial zone. Recent independent audits confirm that the organisation has met the quality and professionalism standards, and will continue to develop as port safety needs change. Several real-life deployments have already demonstrated the added safety value of a unified and rapidly deployable response team.

As of 2026, a ten-member operational team provides first response throughout the port and industrial zone to fires, medical emergencies and hazardous materials (HAZMAT) incidents, including chemical leaks. These services are delivered by Unity Fire & Safety, who is contracted for ten years. Sohar Industrial Port Company (SIPC), as the port manager, is the contracting authority.

A VISION FOR RISK AND SOLUTIONS

The establishment of SERO was preceded by a ten-year period of study, planning and preparation, supported by substantial expertise from the Netherlands. This cooperation is long-standing: since 2002, the Sultanate of Oman has worked with the Port of Rotterdam for the continued development and expansion of Sohar Port.

Together with Duqm and Salalah, Sohar is one of the Sultanate's three major seaports. With Sohar port's rapid growth, it plays an increasingly significant international role in the production and trade of oil, chemical products, steel and containerised cargo.

The expansion in industrial and logistics activities required a corresponding augmentation and professionalisation of emergency response within the port. Through the Port of Rotterdam as strategic development partner, several Dutch safety knowledge institutions became involved: Safety Region Rotterdam-Rijnmond, Environmental Protection Agency Rijnmond, Dutch Labour Inspection, and Kappetijn Safety Specialists.

The central challenge facing Sohar was how to reinforce emergency response capabilities to reduce the impact of incidents and to safeguard overall port safety. This is critical for attracting additional industrial investment. Many companies in the port operate within interconnected chains of dependency, sharing logistics infrastructure and, in some cases, supplying materials to one another. A major incident at a single facility – such as an uncontrolled fire at a chemical plant or tank terminal – could disrupt operations throughout the entire port and industrial zone. In addition, such incidents may have serious consequences for the safety and health of personnel and surrounding communities.

The authorities of Oman and the strategic partners concluded that the existing emergency response structure did not match the safety needs of the rapidly expanding port and industrial area. Incident response was fragmented and required better structuring and coordination. Several high-risk companies operated their own in-house fire brigades, but these functioned exclusively on their own premises. Limited attention was given to collective firefighting and emergency response across the ▶





SERO exercises include HAZMAT scenarios.

FROM VISION TO PRACTICE

The new emergency response organisation was to be called SERO (Sohar Emergency Response Organisation).

The experts charged with creating SERO, representatives of the Omani authorities and Dutch knowledge partners, considered four organisational models:

- Specialised industrial firefighting responsibilities are provided by the government
- All high-risk companies operate in-house fire brigades
- One collective industrial fire brigade serves the entire port area
- Industrial firefighting services are provided by the port authority

To evaluate the suitability of the model approaches, several collective industrial fire brigades in the Netherlands and Belgium were visited. In the Port of Rotterdam, a 'public-private' industrial fire brigade, provided by the government and industry together, has been successfully providing firefighting services to industry and public domain for nearly three decades. Similar, smaller-scale organisations operate in Amsterdam and Moerdijk harbours. In the Port of Antwerp,

entire port area. Furthermore, no specialised industrial ambulance service was available for industrial medical emergencies, and the public response organisation – the Civil Defence and Ambulance Authority – could not dedicate permanent capacity to the port and industrial zone.

An additional catalyst for change was a major fire at a polypropylene plant in March 2013. The fire caused damage estimated at USD 150 million. There were no injuries, yet the incident had a significant operational and economic impact.

In 2015, the Omani government determined that investment in strengthened industrial firefighting capacity and emergency medical services was essential. Sohar Industrial Port, together with local and Dutch partners experienced in industrial emergency response, initiated a programme to upgrade safety in the port and industrial zone. Part of that programme was establishing a new emergency response organisation. The objective was clear: develop an organisational model for delivering rapid initial response to emerging industrial incidents, limiting escalation and reducing overall impact.



SERO conducts exercises together with partners from industry and the Civil Defence and Ambulance Authority.

companies maintain their own fire brigades, while operating within a legal cooperative entity. The latter is a mutual aid agreement that they work together and jointly invest in training and exercises, and equipment and logistics matters. On a large trainyard near Rotterdam, a private fire brigade is supplied by a commercial provider (Falck).

The organisation models and findings of the visits were presented to the Sultanate of Oman, SIPC and the companies of the port and industrial zone. A hybrid organisation model was selected as the best suited to Sohar. This model combines elements of the Rotterdam public-private partnership and the Antwerp cooperative models, with operational delivery outsourced to a commercial service provider.

Experience from long-standing partnerships in the Netherlands demonstrates that strong commitment, cost sharing and mutual trust at the executive and board levels are essential. All stakeholders must genuinely support the collective approach and align around a shared vision: strengthening overall area safety and ensuring the uninterrupted continuity of industrial and logistics processes within the port and industrial zone.

ORGANISATION AND RESPONSIBILITIES

The project ultimately succeeded in aligning government, port authority and industry around a shared structure, the SERO model:

- A partnership-based emergency response organisation, with costs shared between the port authority and participating companies following an agreed-upon formula
- Rapid initial response capability consisting of a standard firefighting unit and a specialised industrial unit with foam firefighting capacity
- A dedicated HAZMAT team for hazardous materials incidents
- A 24/7 staffed ambulance for urgent medical emergencies
- A 24/7 control room for dispatch and coordination
- A 24/7 Duty Officer function
- Reinforcement during large-scale incidents by the Civil Defence and Ambulance Authority and the refinery fire brigade of OQ, equipped with heavy firefighting assets

The emergency response services were tendered to the commercial

market. After a thorough selection process, Unity Fire & Safety was appointed as the service provider. The company maintains a pool of fifty industrial emergency responders who have completed a training programme tailored to the risks and scenarios specific to Sohar's port and industrial zone. From this pool, a 24/7 shift of ten responders – including a Duty Officer and control room operator – provides the first response for all incident types.

Operations commenced in late 2023 from a temporary fire station using temporary equipment. During the start-up phase, an intensive training and exercise programme was implemented to build competence across a broad range of industrial scenarios, including HAZMAT incidents. On 1 June 2025, the project reached an important milestone with the ceremonial opening of the new SERO headquarters.

The opening ceremony was performed by H.E. Eng. Saeed bin Hamoud bin Saeed Al Mawali, Minister of Transport, Communication and Information Technology, and was attended by senior representatives of the port authority and industry. ▶





The new Emergency Response Centre, opened in 2025.

ADDED VALUE

As in several public-private partnership models, SERO's service concept extends beyond emergency response. The organisation provides preventive inspections and firefighting training with small extinguishers to participating companies. A structured exercise programme ensures that SERO visits each company multiple times per year, which allows responders to develop strong area-specific knowledge.

Because SERO maintains continuous 24/7 readiness and regularly trains

alongside the companies, SERO has developed a thorough understanding of operational processes and risk profiles within the port. Close cooperation ensures that during actual incidents, all parties can coordinate rapidly and operate with a shared understanding. As a result, collaboration runs smoothly and incidents are brought under control efficiently.

Safety Region Rotterdam-Rijnmond and Kappetijn Safety Specialists conduct annual audits to verify compliance with response requirements and quality

standards. Initial audits confirm that SERO is operating largely in accordance with its intended design, providing a solid foundation for further development and refinement.

The authorities of the Sultanate, SIPC and the participating industries agree that the collective response organisation delivers high-quality and cost-efficient services, supporting shared safety ambitions and underpinning the continued growth of Sohar as a leading industrial and logistics hub on the Gulf of Oman. 🔥



Model of Sohar Industrial Port at the visitor centre.



For more information, go to www.kappetijn.eu



WRITTEN BY

Dick van Roosmalen

Dick has been affiliated as a consultant with Kappetijn Safety Specialists since 2018. His educational

background in chemical engineering included research at Eindhoven University of Technology and at the Massachusetts Institute of Technology (MIT) in Cambridge USA. He is an active consultant on a broad range of projects for public fire services and industry, including the development of the organisational plan for SERO in Oman.