02

Strength in numbers

Australia's leading subsea innovators are hunting in packs through the country's first energy resources cluster.

Everywhere we look, we can see evidence of clusters appearing in nature, from swarms of bees building honeycomb to individually fragile coral colonies coming together to form beautiful, interconnected and resilient reef systems stretching hundreds of kilometres.

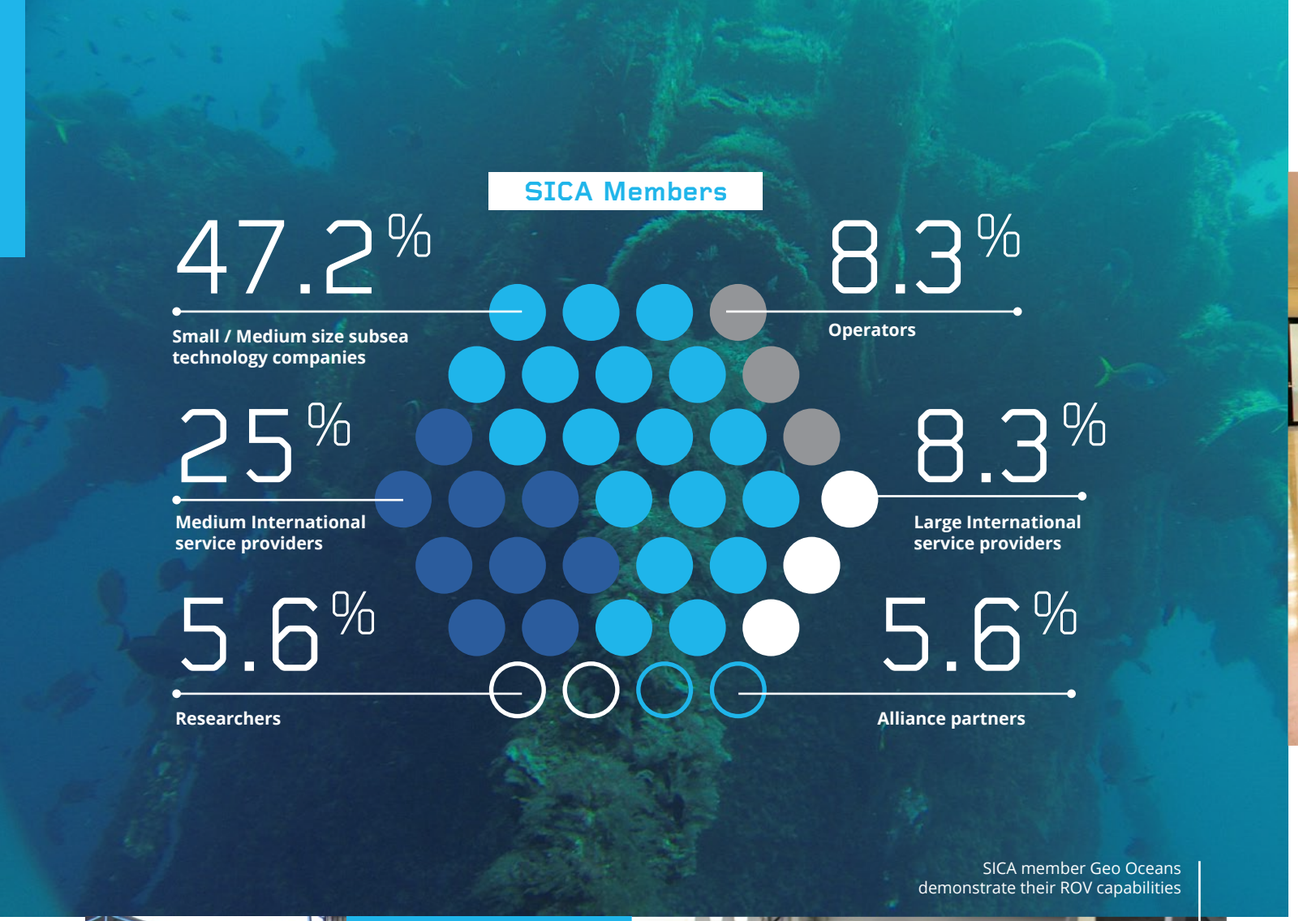
In business, however, clustering hasn't enjoyed the same natural evolution. Collaboration in the corporate world has long been commensurate to weakness, with siloed corporate strategies and cut-throat competition preaching a 'zero-sum game'. This has meant businesses are more likely to define themselves in opposition to colleagues rather than as potential collaborators towards a shared goal.

In a history of chasing commercial success and profit, the established wisdom has been simple: it's better to go it alone.

Not so slowly, however, the business benefits of clustering have started to be felt across global industries and the generational barriers to corporate collaboration have begun to thaw. Over the last decade, innovation clusters and precincts have emerged as a legitimate corporate framework, helping driving innovation and regional development. The success of the model has resulted in the European Commission actively encouraging the development of world-class clusters. Companies in the Blue Maritime Cluster in Norway, for example, demonstrated spectacular growth from 2004-2014 with the total value added increasing at, on average, 13 percent annually and reaching 23 billion NOK in 2014. As a result, more than 8000 new jobs were created in the cluster. Analysis of the Norwegian Cluster program by Menon Business Economics has further shown that participating enterprises' have experienced strong growth in value creation and productivity compared to non-participating enterprises.

In Australia, our subsea energy innovators are helping to lead this clustering charge and in Perth, some of the country's brightest subsea minds have come together to collaborate, communicate and form the Subsea Innovation Cluster Australia (SICA).

Backed by NERA and with important industry support, SICA is demonstrating the value of the cluster model by attracting operator interest and investment to Australian shores within the first 12 months of operation. With Australia's Inspection, Maintenance and Repair (IMR) sector expected to grow to $4.6 billion by 2020, SICA is ideally positioned to capitalise on this growth, showing the rest of the industry what is possible when innovators come together.



SICA member Geo Oceans demonstrate their ROV capabilities

Blue Zone Group's ST6 Subsea Trencher

Australian Ocean Energy Cluster

NERA is also fast-tracking the formation of a Virtual Ocean Energy Cluster that will strengthen collaboration, accelerate innovation and increase the current market of Australia's marine energy sector.

Ocean energy, primarily in the forms of wave and tidal is an emerging technological field. It shares many common difficulties and opportunities with the established offshore energy industry.

They face the same challenges of designing and deploying their equipment into the hostile marine environment where it must operate reliably despite challenges such as marine growth and corrosion. The cluster, which will collaborate with other NERA initiatives including the SICA and the TASER living lab to share learnings and opportunities.

What is an Innovation Cluster?

An innovation cluster is a group of interconnected organisations – including companies, suppliers, service providers, universities and public agencies that operate in a particular field or industry sector, usually in close geographic proximity to each other. Participants commonly have a recognised specialisation within their industry value chain and a critical mass of entities in a regional concentration that can form the basis for triggering cooperation and dynamic relations within and beyond the cluster.

Why 'cluster' isn't a dirty word

Understanding what defines a business cluster usually starts with a shared place and time. In their simplest form, clusters are groups of similar or related firms in a defined geographic area that share common markets, technologies, work skill needs, and which are often linked by complementarity or a similarity of interests and needs.

While individual enterprises can form clusters in a variety of ways, the benefits are clear. Cluster members can gain easier access to important production factors and ideas for innovation through interaction and cooperation. By aggregating their expertise, technologies, specialised resources, capital and knowledge, cluster participants can share advantages over and above those presented to sole operators including new partnerships, collaboration and fast exchange of knowledge, which fosters innovation and new ways of doing business.

Though the concept is not revolutionary (the Silicon Valley tech cluster is now approaching 30 years of development), it is evolutionary with clusters possessing many advantages that make them an ideal model to respond to contemporary business challenges.

With today's economy increasingly concerned with speed to market, price flexibility and global connectivity, business clusters provide a framework to meet these demands, benefiting their members and attracting investment. And with accesses to global markets continuing to present a major challenge to Australian companies, clusters present a huge opportunity to compete at scale and on the world stage.

For the energy resources sector and its inherently high barriers to commercialising innovation and new technology, the opportunities through clustering are also clear. The cluster business model provides the perfect framework for industry to approach the service provider, tech small business and the research community in a collaborative space. This will likely lead to better commercialisation outcomes. Innovation- and industry-focussed clusters have the potential to fuel improved commercial outcomes from industry-SME-research sector collaboration, create new business opportunities, foster strong technology and entrepreneurial SMEs.

NERA CEO Miranda Taylor believes that clusters drive a shared economic vision through innovation, collaboration and competition and provide a vehicle for small to medium enterprises, start-ups and innovators to build resilience and capacity to compete in national and global markets.

Seizing the opportunity to collaborate with energy innovators, in 2018 NERA supported the development and industry launch of SICA with a stated vision to become the Asia Pacific's centre of expertise in subsea technology and services, bringing together companies across the whole value chain.

> "NERA understands that businesses situated in strong clusters have a distinct advantage. The stronger the cluster, the more substantial the positive impact to an individual company. This is why we have supported the emergence of clusters within our sector - to harness this knowledge and work in unity to make Australia a strong contender on the world stage whilst generating skill development and work opportunities that benefit not just individual cluster participants, but the whole value chain."
>
> **Miranda Taylor,** NERA CEO

SICA member Blue Zone Group offer a range of quality subsea equipment and services

> “During SICA’s very short existence, BlueZone Group has seen greater potential access to working with the major Oil & Gas companies than in our previous 46 year history.”
>
> **Mark Musarra,** General Manager BlueZone Group

Cluster members regularly meet to discuss industry challenges

Offering size and scale through SICA

SICA was established in February 2018 by SEA with the support of NERA and continues to enjoy a growing membership base.

“Within 12 months, we have seen our membership grow from our seed organisations to 38 members and affiliates,” says Ross Waring, SICA Chairman.

During its first year, driven by its steering committee, SICA worked hard to establish a suitable governance framework. Ross explains, ‘Just like a start-up, it has taken some time to build a reputation and put a robust framework in place’.

“Towards the end of 2018, we were fortunate to have one of WA’s largest operators sign up and approach SICA with its first challenge, asking for the members to find a solution.”

This is exactly what the cluster is about – tapping into the knowledge of innovative SMEs and tech companies to provide industry, and in turn Australia, with the solutions to ensure that Australia is a leading source of knowledge and a competitive contender on the world stage.

“SICA is about the membership, it drives what we do and how we do it. We’re set up to not only promote WA or Australian business in the sector, but also provide support to the operators who are here but looking to expand into other markets and export Australian expertise,” explains Ross.

“By finding local solutions to local problem, we have the opportunity to put Australia on the map as the world leader for IMR technology, providing solutions that can be commercialised and exported globally.”

Today, SICA’s members represent some of the largest oil and gas operators in the world, leading research institutes and a selection of industry-leading advanced subsea technology and services vendors.

Sharing experiences to tackle unique problems

Operators in Australia face highly specific challenges unique to the region. It’s this environment, by virtue of its remote operations and ambient conditions that demand adaption to overcome a raft of challenges which impact on the success or failure of business ventures. This drive both operators and service companies to find novel ways to produce resources and service the industry in more efficient ways. These adaptions are happening naturally in our industry and the resulting technologies have strong international potential.

Australian operators, service companies and research institutions are now becoming recognised for the resulting specialised technology, knowledge and skills on an international level. Some of these Australian technologies are now being widely recognised as industry leading. SICA is now bringing the subsea energy industry closer together to form a community of Australia’s IMR expertise and becoming a valuable go-to place for knowledge and global solutions in IMR.

Through the coming together of operators, researchers, large service companies and SMEs to solve IMR challenges, SICA provides a broad perspective and offers solutions for challenges large and small.

For SMEs and tech companies, SICA creates an invaluable opportunity to forge connections that may otherwise be difficult to make. “One of the barriers this cluster is trying to overcome is for the small and medium companies, who are often not able to get their foot in the door,” explains Ray Farrier, SICA Cluster Manager.

An important advantage that SICA membership represents to individual companies is the ability to connect directly with operators and overcome barriers to business networking that have existed in the past. SICA member BlueZone Group has already seen this potential “during SICA’s very short existence, we have seen greater potential access to working with the major oil and gas companies than in our previous 46-year history,” adds General Manager Mark Musarra.

“By providing a one-stop shop for Perth and Australia’s operators to tap into SME capabilities, we can harness and sell the services of our members as well as provide them with more platforms to get in front of operators.”

For operators, who must continually explore opportunities to reduce costs and increase efficiencies, SICA provides a unique and rich knowledge base that enables enhanced solutions. ‘Just as you go to a food court for lunch, we strive for operators to come to SICA for IMR challenges,’ explains Ray.

INPEX is one such operator and as proud SICA member, with Andy Higgins, INPEX Vice President, Technical seeing value in the collaborative approach the cluster brings to solving industry challenges.

“Collaboration is one of INPEX’s core values and a key reason why we are proud to support the SICA initiative,” Andy said.

“Operated by INPEX, the Ichthys LNG development provides a safe and reliable energy supply to Japan and other Asia Pacific Countries and, with a planned 40 years of operations, we rely on internal and external expertise to solve complex technical challenges as they arise.

“The SICA collaborative initiative is already fostering innovative solutions to a range of subsea challenges and we believe this benefit will continue into the future and be a key part of building a sustainable oil and gas LNG centre of excellence for generations to come.

“We are also pleased that SICA fosters a cross-disciplined industry pathway for small and medium enterprises helping build sustainable local capability.”

Through industry-SME-research collaboration, SICA is helping to address Australia’s subsea challenges and raise the profile of Australia’s subsea industry regionally and globally, promoting its specialised IMR knowledge and skills and strengthening its competitive advantages. Showcasing the Australian industry to the world will offer a significant benefit to the state and federal government through increased employment and improved export earnings.

Ray Farrier tours IAS Group’s facilities

> “By finding local solutions to local problem, we have the opportunity to put Australia on the map as the world leader for IMR technology, providing solutions that can be commercialised and exported globally.”
>
> **Ross Waring,** SICA Chairman

What's next for SICA

NERA is collaborating to ensure that Australia’s cluster landscape grows and continues to harness the very best of what Australia has to offer.

SICA will continue to foster collaboration, knowledge and resource sharing, efficiency development, technology commercialisation, innovation and technology development for resource and exploitation in remote and challenging subsea environments.

The cluster will continue to provide academia with additional insights into the regional challenges faced by the industry and the opportunity to work with industry suppliers and service companies to develop innovative and practical solutions leading to value generation with high impact in the oil and gas industry.

While the initial focus of SICA is the subsea IMR sector, it is expected to expand its focus to other subsea sectors as the diversity of its membership grows, with the eventual inclusion of marine, defence, subsea mining, offshore renewables, aquaculture industries -- industries where the Australian industry displays unique capabilities and competence.