

Driving dredging forward

Talking exclusively to *DPC* ahead of his keynote speech at CEDA Dredging Days 2017, the new IADC president, Frank Verhoeven, discusses the industry changes and drivers that will provide a strong foundation for future opportunities

Lisa Maher, *DPC* editor

► **To understand the future opportunities** open to the dredging community, it can be useful to briefly consider the strong foundations on which it is built. The technical papers presented at CEDA Dredging Days reflect the latest technology, equipment, and processes available to the industry – and contribute to technical development and innovation.

“Past developments took place by virtue of both an enormous increase in dredger size and capacity, and improvements in specific parts of the equipment – such as cutting devices,” the new IADC president, Frank Verhoeven said.

Such developments generated new markets, for example, large reclamations, such as Dubai and Singapore, with the new generation of (jumbo) trailer dredgers. Another market was opened by the possibility of much deeper dredging and the accuracy with which sites could be dredged, through a combination of advances in instrumentation and automation.

In addition, Verhoeven said three key developments occurred in the dredging industry over the past few decades – the first was the move by dredging companies into design and construct contracts – such as at Maasvlakte 2, where the contractor was given the desired end result and had to come up with a way to achieve it. Formerly the client would use consultants to come up with a design to develop or extend the port, and employ contractors to carry it out, while retaining overall control. Now dredging contractors can do it all.

The second driver was the much higher priority given to safety – a huge step-change was made by giving special attention to

safety behavioural programmes, rather than years of just focusing on personal protection equipment (PPE) and safety procedures.

The third main historic driver was increased in-depth environmental knowledge, covering such areas as emissions monitoring and sustainability. These three key developments have had concomitant effects, such as increasing the numbers of civil engineers, environmental, and safety specialists employed.

Verhoeven strongly believes the developments, advances, and changes made have put the industry in position to take advantage of new markets, new technology, and new opportunities as they arise.

Possibilities abound

“Industry developments have led to possibilities of further broadening activities for our sector – renewables, environmental activities (dredging and treatment), and more specialised dredging scope. These have all challenged and will continue to change companies,” he added.

“All companies, large or small, are having to adapt. What we have learned is that we must design, as well as carry out construction. And what we now know and have done, means dredging companies are frontrunners in the world on environmental issues. As a result of large research programmes set up in the Netherlands and Belgium to gather knowledge of all environmental aspects, it has become possible to design in conjunction with the local environmental situation, rather than overriding it. “Now we can carry out projects anywhere, no matter how sensitive, because we can measure and monitor. We have moved from the environment being a

negative factor hampering a project to it becoming a positive integral part of the project’s design, build and results,” he told *DPC*. Companies will change further as current industry drivers continue to catalyse changing needs. Verhoeven listed five such drivers. “First and foremost, turnover in the industry is determined by world trade, which generates capital and maintenance dredging for ports, harbours, and inland waterways.

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Frank Verhoeven, IADC president

“A second driver is the oil and gas market – its rise saw increased opportunities for our industry and its downturn similarly affected contractors. Climate change, with its consequent sea level rise, is a third. For many years, people have been leaving rural areas to live in urban ones, often on the coast with limited spatial opportunities to expand, so reclamation offers possibilities.

“Tourism and cleaning of contaminated sites are the last two industry drivers and, while the turnover from these may be limited, they have huge importance for societal welfare,” he added.

Building new markets

Some 30 years ago, attention to the environment was limited in day-to-day life

and most dredging companies did not take environmental factors into account. Over the decades, however, attitudes have changed alongside the technology and equipment processes until, Verhoeven feels, the industry is probably the best positioned to advance into newer markets, such as offshore, renewables, deepsea mining, and more.

“Even around coral reefs,” Verhoeven said, “we now have the knowledge and expertise to evaluate and prevent effects on flora and fauna.”

With the additional paperwork required by increasing safety and environmental legislation, there has been an attitude shift within marine engineering companies. “Now it’s not just personal experience and care, but also care for colleagues and the wider environment,” he told *DPC*.

All this, combined with ongoing technology developments, has given the industry impetus to continue to change and evolve – and be quick to spot opportunities as they open up. “Outsiders don’t realise just how skilled the dredging industry is.”

In terms of port expansions, he believes these will continue to accommodate deeper-draughted vessels, however, “further vessel size increases are likely to be limited”.

For deepsea mining, new technology may allow equipment to reach ever-deeper depths, to retrieve materials at a cost-effective price.

“What will be needed are flexible vessels that can be used in different markets. New markets will require a tailored combination of size, plus strength, plus automation, plus instrumentation,” Verhoeven told *DPC*.

He concluded, “This industry is in an excellent position – it has the knowledge and the capability to assess the risks.

“It also has the ability and willingness to take on such risk. Companies must continue to change and innovate – or they will not survive.” □

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