



Passport

Name: Bas Buchner
Age: 45 years
Family: married with daughters aged 14, 18 and 20
Leisure time: sailing and photography

Education:
 1991: Ir-degree Delft University of Technology
 2002: Dr-degree Delft University of Technology
 PhD thesis 'Green Water on Ship-type Offshore Structures'

Professional experience:
 1991-1997: Project Manager at the Offshore Research Department, MARIN, Wageningen, the Netherlands
 1998-2000: Principal Consultant Offshore, MARIN, Wageningen, the Netherlands
 2000-2010: Manager Offshore, MARIN, Wageningen, the Netherlands
 2010 to date: President, MARIN, Wageningen, the Netherlands

Initiator and / or project manager of nine different Joint Industry Projects at MARIN.

Additional tasks:

- Visiting Professor, University of Newcastle upon Tyne (School of Marine Science and Technology), England
- Secretary of the Offshore Technology branch of the Royal Institute of Engineers (KIVI NIRIA), the Netherlands
- Board member of Dutch Maritime Network
- Chairman of the Local Organizing Committee of the Offshore Mechanics and Arctic Engineering (OMAE) conference 2011 in Rotterdam, the Netherlands

Investment

"I invest a lot of time convincing the government to grant more funds to fundamental maritime research", Buchner rationalises. "Now that the funds for the innovation programme we had in the Netherlands are ending, we feel

"Idealism sprouts from the urge to have competitive advantage"

the urgency of securing continued attention for the progress achieved by the maritime industry. Nowadays, the government focuses on the chain from knowledge to innovation and presenting competitive products in the world market. In the Netherlands, we have built up extensive maritime knowledge. We

itself has built up a fruitful infrastructure in which knowledge is developed and shared. Together with knowledge institute TNO, Delft Technical University and MARIN we do a lot of research for the benefit of the industry as a whole. In-house at MARIN, we organise Joint Industry Projects (JIPs). Here, a group of companies share the project cost and all benefit of the research results. These joint projects make cooperations possible that might surprise: in a recent research project to learn more about wave energy, both IHC and Damen take part. Normally, these yards are considered competitors. It shows that it is much better to cooperate in a project than to exchange ideas at network events or conferences. Networking is good, but the relationship between to complementary or even two competing organisations gets so much more intense when information and know-how is shared in a combined effort. Collective industry support for fundamental science further manifests in the fact that 1.5 out of the 3.5 full-time professors in Maritime Science at Delft University are funded by the industry. But that is a strange situation. Now that government is focussing on the chain from knowledge to product, the time is right for the government to support more professors dedicated to maritime science. State-funded scientific institutes NWO and STW should dedicate more of their capacity to marine science as well."

Knowledge

"Through the eighty years of MARIN's existence, we have gathered a lot of knowledge. Dutch ship owners had a need for more reliable data on what kind of vessel to order from yards, of what design and characteristics. That was the reason to establish MARIN in 1932. Since the very beginning, our organisation has been private, not government-owned. We do specific research into detailed design and performance issues our clients present us with. The client is always the rightful owner of the outcome of our research. We specifically do not want to own patents on any innovation. Our clients are the ones who develop innovations with our help. Although we are involved, MARIN is not the organisation to translate outcome of research into products. Even in the JIPs, it is up to the participating companies to use the outcome of the mutual project to develop their own products."

are quite skilled in utilising the know-how and developing ships and equipment that perform in the top of the worldwide market. Yet, if we do not pay attention now as a country, we risk

"Research is fundamental to remain world leaders"

investing too little in fundamental maritime research and education. We need to do that in order to maintain our leading role in the market. During the last years, the industry

"Ten percent of our annual turnover derives from state funding. For that part, we even do fundamental studies into hydrodynamics. In the case of the JIPs, our studies sometimes have

The Vision of... Bas Buchner

President at MARIN

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From the helicopter perspective he has on the maritime industry as Maritime Research Institute Netherlands (MARIN) president, Bas Buchner praises the mutual effort to develop and share knowledge and know-how. He urges government to support the industry in which the Netherlands take a leading role worldwide.

"Dutch ship owners are teaming up to enhance the development of the zero-emission ship, ready for operation in 2050. Ship operators and cargo handlers have not suddenly changed into campaigners, but their idealism also sprouts from the notion of significant competitive advantages they achieve by operating a no-emission ship." MARIN president Bas Buchner is happy to be in a central position to overview a lot of new technological developments in the shipbuilding industry. From there, he can add momentum to all kinds of studies and projects that aim to improve efficiency of maritime operations. "Of course, transport

over sea has always been the most fuel and cost efficient mode of transport compared to air or road transport. Still, a lot of challenges remain. Maritime research involves a very fundamental field of study in physics. The way water molecules move along the hull of a ship, that is moving with its specific hull shape through water that is constantly in motion because of waves – it is really an endless field of knowledge marine scientists are exploring, with very fundamental questions. Understanding hydrodynamics is starting point for design of virtually any maritime instrument: ships, equipment or propellers."

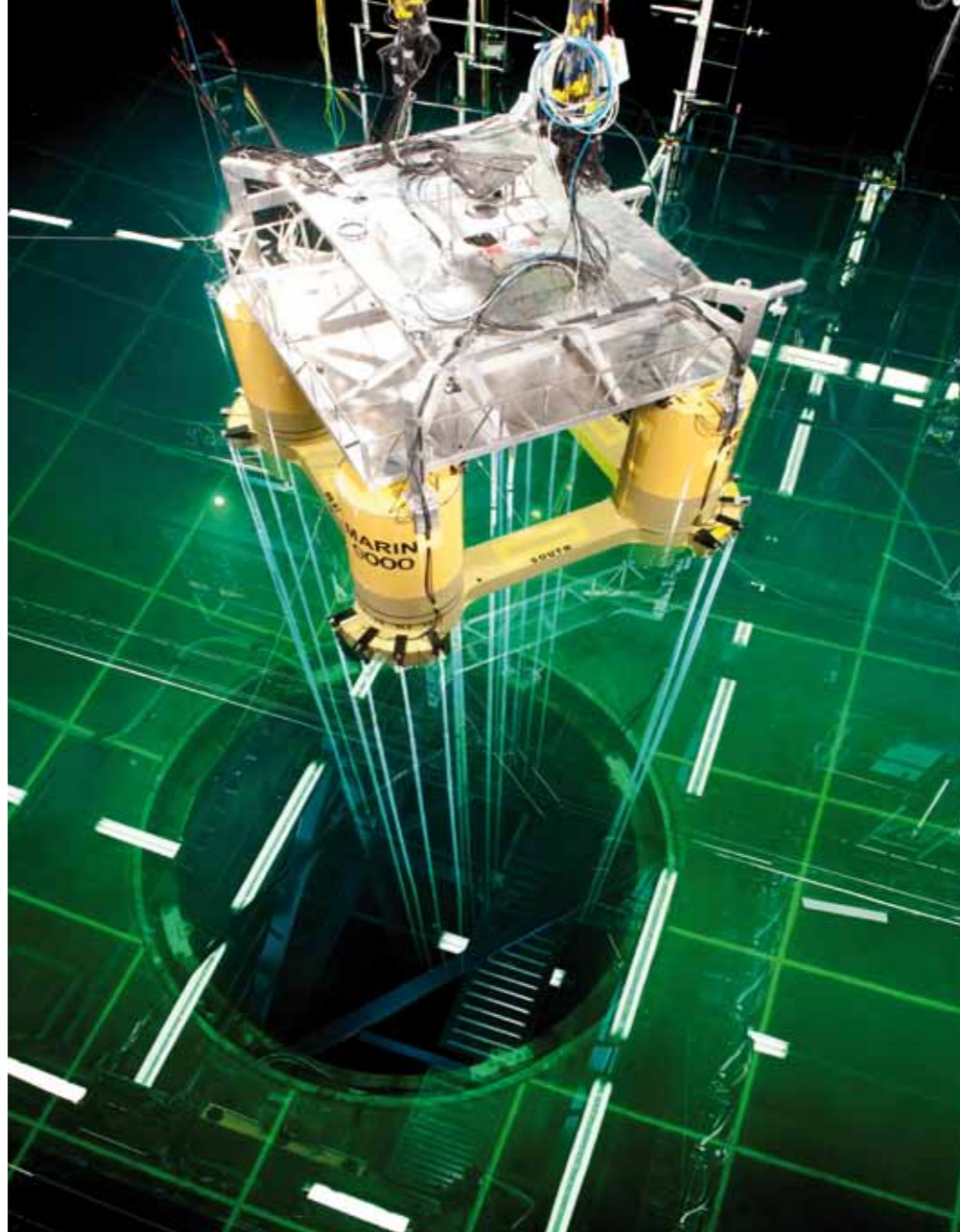


a fundamental side, but over the whole they could be considered applied science. JIPs form the next 20 percent in the MARIN budget. De major part of our activities are the projects conducted for individual companies, the other 70 percent.”

“Research projects like the ongoing experiments towards development of efficient air lubrication for inland barges include a lot of parties. The ship owner, the designer, the yard and MARIN participate in such projects. They all invest time and money. It is our commitment to keep developing advanced

“The whole chain in the maritime industry invests in research. Government should add to that”

technology at the forefront of international maritime know-how. As an industry, we owe that to the Dutch reputation and of course we secure our own future. We have built the infrastructure for technological and scientific development. The minister wants to maintain established structures. I think we may expect the government to support the fundamental part of the research projects. If we have such projects with the whole chain of the marine manufacturing industry involved, why wouldn't the government add 50 percent of the budget to facilitate the fundamental research involved?”

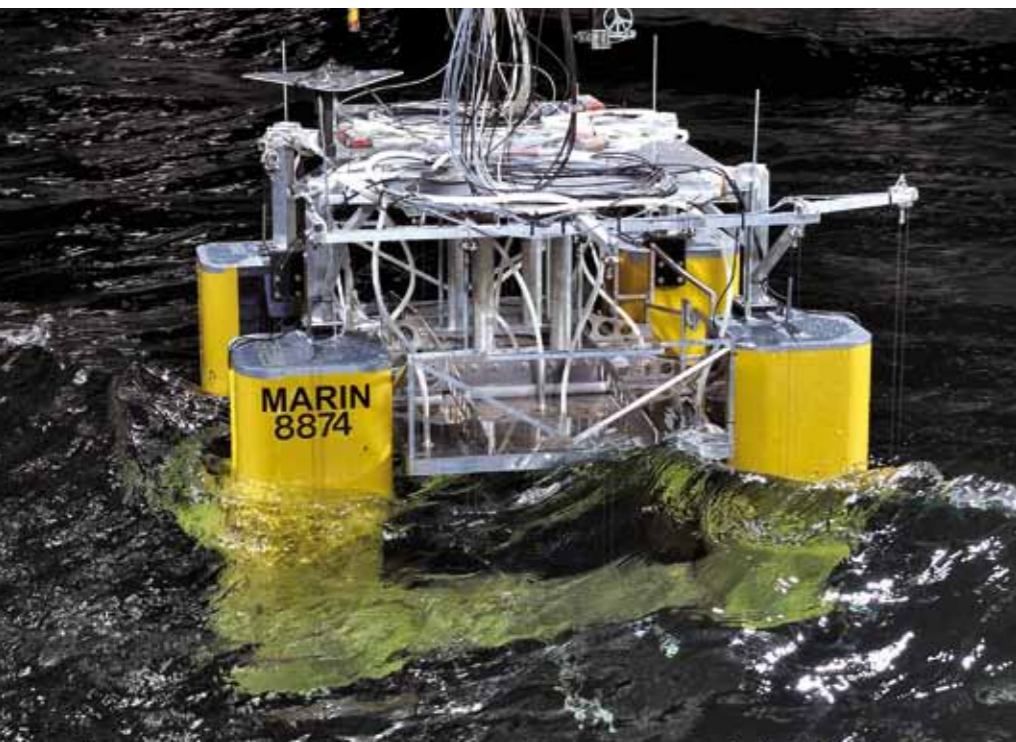


Tension Leg Platform model test

“Marine know-how not only applies to shipping, it also helps securing future energy demand. Energy supply from offshore oil and

gas production is obvious, but we have also been studying the possibilities of gaining energy from the sea waves for some three years now. We will soon start a JIP to further investigate this possibility. This project will involve industry leaders like Damen, Vuijk Engineering, Imtech, Delft University and MeteoConsult. The method we are investigating now is actually a side effect from my own PhD-thesis. That was about green water flushing over ships. Aim of my studies was to understand the dynamics of spray water and waves coming over, to better avoid that aboard ships. In the wave energy project, we want the opposite to happen. We have developed a parallelogram-shaped model, that appears to take a lot of green water in waves. An example of inverted engineering. The water on top of the model will flow through a drain, where it powers a generator. We are still studying the model. When we achieve a point in which the price per kilowatt-hour will equal the price of offshore wind energy, I consider the project a success.”

Hans Buitelaar



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