



Be relentless, integrate and collaborate

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Shell recently announced the appointment of Maarten Wetselaar as Integrated Gas Director and a member of the Executive Committee with effect from January 1st, 2016.

Maarten is currently Executive Vice President of Shell Integrated Gas, accountable for delivering and growing Shell's global Integrated Gas business, including Liquefied Natural Gas (LNG), Gas-To-Liquid (GTL) and unconventional business outside Americas. China, Russia, Australia and Qatar are under Maarten's direct leadership as well as key gas operations in over 10 countries.

Joining Shell Downstream in 1995, Maarten worked in Europe, Brazil and Africa where he became Vice President of Finance & Information Technology.

He then moved to Upstream. He was Vice President Finance in Middle East, and Vice President Finance and Commercial for Russia/CIS. In 2009 he became Executive Vice President Finance, Upstream International.

Maarten is Dutch with an Economics degree from Groningen University and a post-doctorate degree in Controlling from VU University Amsterdam.

Maarten is married with three children. In addition to spending time with his family and friends, Maarten likes reading, music, arts, football, sailing and golf.

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In this speech, Maarten Wetselaar argues that there are three behavioural imperatives for IOCs to adopt if they are to thrive in a new energy world – a world in which much more energy is provided with far fewer emissions. He explains that IOCs should be relentless in looking for solutions outside of their traditional domain of expertise and experience. They should focus on being excellent at integration with a broad range of stakeholders. And they need to build deeper and broader coalitions than ever before.

Ladies and gentlemen, good morning.
It's a pleasure to be with you all today.

For me, there are three behavioural imperatives for IOCs to adopt if they are to thrive in a new energy world.

One, be relentless in pursuit of solutions outside of our traditional domain. Two, focus on being excellent at integration. Not just integration between technical disciplines, but with everyone involved with or affected by a project – including communities, NGOs, trade unions and other stakeholders. And three, don't underestimate the importance of collaboration.

Energy demand and climate change

So what is this new energy world, and how does it affect IOCs?

The UN climate change talks begin in Paris in 20 days' time. The hope must be that the talks result in binding agreements on cutting emissions. This would be an important step in spurring sustained efforts to tackle climate change.

No one is under any illusion – this is a massive challenge. But especially so when you consider that global demand for energy is expected to be more than one third higher in 2040, according to the International Energy Agency.

It is a global challenge and so it's going to take a collective and concerted effort to provide much more energy, with far fewer emissions. It's not just about carbon dioxide – sulphur, nitrogen oxide and fine particles also impact air quality.

Limiting carbon dioxide might be critical to the health of the planet, but let's not forget

that limiting SO_x and NO_x are critical to the health of the people who live on it.

Many positive steps have already been taken. Look at what the UAE did back in July, in announcing the end of subsidies on transport fuels.

It's critical that such efforts continue in 2016 and beyond.

Renewables will be essential in a world which meets rising demand while also addressing climate change.

But some sectors are more difficult to decarbonise than others. For example, while renewables can be used to decarbonise electricity, they can't decarbonise industries like steel and cement production.

This means that oil and gas will continue to be vital components of the energy mix.

Where do IOCs fit in?

So how does this outlook affect IOCs?

We can't continue with business as usual. Those that pursue this path will not survive. But I am convinced that we cannot only engineer our way into this new energy world. Engineering and technical innovation can help of course. But I am convinced that, above all, as an industry we need to behave our way into this new energy world. And behavioural change is difficult.

And so back to my three behavioural imperatives.

Relentlessly pursue solutions

First, be relentless in looking for solutions outside of our traditional domain of expertise and experience. This is often where real breakthroughs can occur.

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A good example of this is taking place in Oman where we made two sequential steps outside of our traditional domain to find a solution.

Petroleum Development Oman burns natural gas to generate steam, which is injected into wells to enhance the recovery of oil. This gas could be put to better use in Oman if we could find an alternative route to generate steam.

So we stepped out of our comfort zone and studied solar technologies, but the equipment was too costly. Large mirrors are needed to focus sunlight onto small receivers. These mirrors need to be a precise shape to capture the optimum energy from the sun.

Here comes the tricky part. To maintain this shape, the mirrors need to be resistant to strong desert winds. And they are too fragile to withstand these winds.

So we had to make a second step out of our traditional domain and look at other industries that deal with fragile objects that need sunlight, but require protection from other elements. And we found the solution in the tomato. Or, as some in the audience might prefer, the tomato (*American pronunciation*).

Tomatoes need plenty of sunlight to grow, but in many climates cannot deal with other aspects of the weather. Which is why the industry builds greenhouses around them.

Together with a company called Glasspoint, we developed the idea of building an industrial greenhouse, which houses the mirrors, and keeps out the wind and dirt. Shell provided funding for this project.

Today, this solution is producing substantial amounts of steam for injection and an expansion is on the cards.

For me, the most significant benefit of solar panels being used to produce steam is that some natural gas will be freed up for other

uses, from powering local industry to generating revenue by being exported.

Integrate

On to my second point.

The need for deep “vertical” expertise and competence – which the oil and gas industry has always had – is being supplemented more and more by the requirement to be excellent at integration.

I don’t mean integration between various technical disciplines – this has always been important in our industry. I’m referring to integration with a broad range of stakeholders: neighbours, societies, partners, customers and other industries.

Shell is focusing on this kind of integration in Brazil. As part of the Parque das Conchas deepwater oil project, we work together with fishermen to find ways to mitigate the potential impact of our offshore activities on their fishing.

And we’re also focused on an integrated approach in Canada. Last week we launched the Quest CCS project together with our partners Marathon and Chevron, which will capture one million tonnes of carbon dioxide a year. This carbon will be stored more than two kilometres below ground.

While this project was being developed, Shell set up a panel, in part, to address all concerns regarding the impact of a CCS project. It’s made up of members of the community – from a High School principal to an agricultural insurance advisor.

The panel asks tough questions and puts Shell employees on the spot on all aspects of the project. Then, when they’re satisfied with the answers, they go back into the community to boost collective understanding.

Collaborate

And now to my final point: the importance of collaboration.

“For me, the most significant benefit of solar panels being used to produce steam is that some natural gas will be freed up for other uses, from powering local industry to generating revenue by being exported.”

“The need for deep “vertical” expertise – which the oil and gas industry has always had – is being supplemented more and more by the requirement to be excellent at integration.”

An old African saying says: if you want to go fast, travel alone. But if you want to go far, travel together. This is more true than ever for our industry going forward. We will need to build deeper and broader coalitions than ever before to promote and implement the solutions that get us to the New Energy World.

A local example of this is the Emirates Foundation. Shell has been closely involved with this organisation for more than a decade. It has delivered a number of projects which help young Emiratis in everything from studying science and maths to developing their careers.

The other example of collaboration I'd like to highlight is taking place in Germany.

Electric cars powered by hydrogen fuel cells could play an important role in meeting growing energy demand with lower carbon dioxide emissions.

You've got a chicken and egg situation. Car manufacturers will only invest in development vehicles if the refuelling structure is in place. And, in turn, fuel suppliers like Shell will only invest in infrastructure if there is demand for hydrogen fuel from customers.

The solution happens when vehicle manufacturers, fuel suppliers and governments work together to make hydrogen an attractive option for consumers.

In Germany, Shell is working with the government and five companies to accelerate the use of hydrogen-fuelled electric vehicles. We plan to install hydrogen fuelling pumps at around 400 locations across the country by 2023.

This project is all about stimulating demand. We're showing German people a 'live' example of how hydrogen-fuelled cars really work, and what the customer experience is.

A very similar dynamic is playing out on the nascent but fast growing "LNG-to-Transport" sector where fuel suppliers like Shell build deep coalitions with ship-and truck builders, ports, transporters and regulators to get away from the chicken and egg dilemma and seed a very promising business that will be part of the long term energy future.

Conclusion

Ultimately, these projects demonstrate what is possible when these new behavioural imperatives, in synch with a strong focus on innovation and sustainability are placed at the heart of any strategy and initiative. It's good for business. And good for society.

They are the tickets IOCs need to gain entry into the new energy world we're embarking on. A world that is worth being part of.

Thank you.

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