



EPCA Speech, September 2005, Theo Walthie

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Thank you for that introduction, and for the opportunity and honor to share my thoughts with so many leaders in the petrochemical industry.

Today, I've been asked to pose the question: Do We Need Chemicals? Perhaps the best way to answer that is to imagine a world without them. Let's take a look.

(show video clip)

Follow-up Commentary

The products that are created through chemistry are all around you. In fact, they **enable our way of life**. Without chemistry, our world would cease to exist and so would many of the products and technologies that keep us strong, healthy, safe, connected, active, creative and inventive. So yes, I'm of the opinion that we **do** need chemicals.

I'd like to spend the next 10 minutes talking about:

- The versatility and benefits of chemicals
- The value of the chemical industry
- Sustainable development, and
- Future success and innovation

Having been in the chemical industry for 35 years, I continue to be amazed by the versatility of chemistry.

This industry is unique because it is not confined to using any single raw material such as metal or wood.

Our industry takes a seemingly endless source of molecules, rearranges them and gives them functionality and purpose in products that meet the needs of society.

The benefits of chemistry are all around you – from chairs, pens and paper to high-tech computers and televisions, to fresh food and water, to floors and roofs, to a variety of personal care and medical products.

More importantly, though, the chemical industry is **part of the solution** in addressing the many issues faced by society – from fresh water to energy efficiency and climate change.

- For example, many of our industry's products reduce weight, noise and emissions in cars; and improve fuel economy and safety in the transportation industry—whether that be in the air, on our roads, by rail or on the water
- Our products prevent food spoilage, enabling distribution chains to reach people in remote areas.
- ...they deliver pure drinking water worldwide at a lower cost, improving water quality and availability for millions
- ...they protect crops and enhance overall nutritional value while also addressing health issues
- ...they save, enhance and extend lives in the health and hygiene arena.
- ...they improve the energy efficiency of homes and appliances
- And think of it... the electronics revolution, the explosion of communication technologies, the entire process control industry would not exist without chemistry and chemical products.

Chemistry and technology also are being used to optimize the use of fossil fuels and develop alternative energies. For example,

- Cogeneration is widely applied in our industry because we need power and steam for our processes and it is the most energy efficient way to achieve this. In Dow for example, cogeneration delivers around 70% of Dow's electricity worldwide.

- The EU chemical industry has reduced its specific energy consumption per unit of output by 35% in the last 20 years.
 - My own company, as well as others, support research into hydrogen fuel cells. At Dow, we are helping General Motors to accelerate the technology so that fuel cells can power our plants – and someday our cars – which in turn will further reduce general as well as greenhouse gas emissions.
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The list goes on and on, and we should be proud of the contributions made by all those engaged in this industry, including many of you here in this audience.

For more than 150 years, the chemical industry has been an integral and valuable **part of society**, originating right here in Europe. In fact, 12 of the top 30 chemical companies are headquartered here.

Today, we are a \$2.2 trillion global industry including pharmaceuticals.

We employ more than 10 million people and 50 million more in support businesses worldwide, offering among the highest paying jobs in all of manufacturing.

We are growing in the range of 2-5 % a year—at slightly less than 1 times GDP in mature geographies, and more than 1.5 times GDP in emerging ones.

And the emergence of these geographies are themselves creating new opportunities!

But more than just sheer numbers, it's an industry creating products that meet society's needs.

We do our work with the greatest attention to environment, health and safety.

In fact, a typical worker in the chemical industry is one-and-a-half times safer than in general industry, including retailing.

Over the years, we have also significantly lowered emissions and increased our energy efficiency despite growing production rates.

By 2002, for example, production in the EU 15 had risen by 38% since 1990, while total energy consumption increased by only 2.5% and CO2 emissions fell by 8%. GHG emissions have been dramatically reduced by more than 20%, and CO2 emissions per unit of production have even decreased more than 40% since 1990.

And remember 1990 is the official start date of Kyoto. The European chemical industry has delivered almost one third of the EU's total Kyoto target. This progress is great, but it's taken us and our industry long to get to where we are today. And we have not done nearly a good enough job to explain the accomplishment and thus are not seen as part of the solution and a key contributor!

The path forward must engage society as a whole – which brings me to sustainable development.

There is an inextricable link between chemistry and sustainability – a combination that some may question, but one that I feel strongly about.

Rising social expectations ... a more connected world ... longer life spans ... growing populations ... urbanization... concerns about global warming ... water scarcity ... political extremism.

These are just a few reasons why no company can afford to focus solely on economic success, but must balance it with environmental and social responsibility wherever it operates. Our success is intertwined with that of our customers, employees, communities and the environment.

However, as you know, the chemical industry is not highly regarded by the public. What we see as the science of chemistry improving people's lives ... the public largely perceives as uncaring scientists developing ever more chemical compounds that pose a danger to society. This perception in turn undermines our ability to contribute, grow and even our ability to innovate.

Despite our progress with Responsible Care®, and no matter how sound the science or how great the benefits of our products, the public is often misinformed and suspicious. This has driven increased scrutiny of chemicals to the point where we are often presumed guilty until proven innocent. Misguided public policy will bring higher operating costs, less innovation ... and worse.

The natural balance of risk and reward is being moved to an extreme position of 0 risk and 0 tolerance for risk. In such an environment innovation can not take place. This is partly our fault as an industry. We haven't been very forthcoming or proactive in our efforts to educate the public about the value and safety of our industry and products. To counter this, we must take a more proactive stance ... by engaging in activities that increase understanding of our industry, our safety record, and the value that our products bring to society ... and by taking steps to enhance our public image.

This means:

- Becoming more transparent and visible about what we do – such as sharing information with the public that raises awareness of our safety record and products through company web sites and community meetings. Or by reaching the next generation by partnering with education, supporting science museums and more.
- We also need to collaborate more with industry groups that highlight the benefits of our products, and to speak with one voice – such as CEFIC in Europe, ACC in the U.S. and APIC in Asia.
- We need to have our downstream industries with us, and we must focus more on the end-product solutions that we enable society to use. We have to help these industries position their products in the public domain without abandoning the chemical industry.
- We need to engage more with the public, too, through volunteerism and support of various good causes – such as Habitat for Humanity or nature reserve clean-ups or foundations to support community needs.
- Furthermore, we need to educate government about our industry as well ... it is surprising how little they know about our industry in terms of products, investment, jobs, wages, benefits and all of the positive things that accrue to chemistry. We can't expect better policy unless policymakers truly understand what we contribute ... and the only way they'll understand is if we tell them.

This understanding, in turn, will help us, as an industry, invest more in innovation to help deliver solutions that society is needing.

Looking ahead, I see a future full of potential for society and for the chemical industry as we continue to drive breakthrough innovation.

Biotechnology, nanotechnology, advanced carbon technology, and synthetic materials are just a few new areas of discovery.

I believe our industry and our science still hold the key to many breakthroughs ... but to get there from here – and achieve **sustainable** innovation -- we must deliver a rich flow of product breakthroughs from our R&D pipeline. That means recommitting ourselves to our roots in technology and science ... establishing specific targets ... investing wisely in high-growth opportunities ... and bringing R&D closer to markets and customers, so that the solution truly meets a market need.

There is no doubt in my mind that the chemical industry can be a catalyst for profitable and sustainable growth, and achieve favorable public perception in the 21st century.

The chemical industry is an integral part of society, and we are part of the solution to the challenges and opportunities ahead.

If we do it right, the question “Do We Need Chemicals?” will be replaced with “Chemicals. We Can’t Live Without Them!”

Thank you.

(Show Video Clip)