

The Science Communication Conference 24th - 25th May 2004

Session1b – Transforming culture within industry

John Randle, Director of Corporate Services BASF: Communication and engagement in a science based industry

SLIDE 1

Good afternoon everyone and thank you very much for the invitation to speak at this conference.

I must admit I was rather daunted when I saw the programme and even more so when I see all the experts in science communication here today.

However, I assume that there are not many of you working in science-based industry so perhaps I may be able to offer a different, and hopefully, useful contribution.

I should say that I am speaking largely from a personal perspective but I cannot ignore the experience and evidence I have gained from a career in BASF, "The Chemical Company" as we proudly call ourselves, and my involvement in many industry-wide bodies and initiatives.

BASF, by the way, is the world's largest chemical company based in Germany.

I have also had 15 years involvement, on and off, with the British Association and will make some comments later on science communication in general from the "sidelines" as it were.

Let me start with the chemical industry.

In my synopsis I briefly described what should appear to most people to be a very successful industry based clearly on one of the core sciences – chemistry. However, the reputation of the chemical industry in this country, and in other developed countries, is at an all time low.

SLIDE 2 – MORI – Favourability v. Unfavourability

And this chart shows how we compare with other industrial sectors in this country.

SLIDE 3 – MORI – Note pharmaceuticals

The reasons for this low reputation are largely founded on the perception that we are an unethical, polluting industry; and more recently, increasing concerns over the negative affects of chemicals on human health from food and other consumer products.

It is also interesting to note that the research shows that the majority of the population seem to understand the benefits that chemicals bring to their lives

and quote cleaning products, medicines and petrol as examples. However, the proportion of the population that is familiar with the industry is only between 10 and 15%.

So we are an industry with a poor reputation, not attractive to our stakeholders who increasingly distrust us. This has implications for us in recruiting and keeping the best talent, gaining investment, retaining support from Government and regulators, as well as other stakeholders such as the public and NGOs.

SLIDE 4

You should view this as looking down the top of a spiral. We are spiralling downwards and we need to reverse this trend. We must build trust to improve our reputation and hence our attractiveness to our stakeholders.

The industry has also been going through a significant transition that has implications, not only in the industry, but which are also relevant for the subject of this conference.

There is no longer an ICI or a Courtaulds who had the ear of Government and provided leadership not only to their companies but also the industry.

The UK-based chemical industry is now almost completely foreign owned by companies with headquarters around the world. There is also a high proportion of private equity and venture capital. This has a very significant impact on investment in this country, especially investment in research and development.

We are also seeing the move of at least the commodity end of our business overseas, especially to China, and it will not be long before more speciality products follow. In addition, we are seeing our customers move overseas, sectors such as textiles, automotive, electrical and electronics.

So what has the industry been doing to address this declining situation?

Historically, the industry has significantly reduced its environmental burden and is very active in local communities but the gap between society's expectations and the chemical industry's performance has not improved.

There remains a lack of engagement between the industry and society.

SLIDE 5 (Big/Small Arrows)

The industry has focused on 'communication at' external audiences based on scientific, factual and known (at least to scientists) information.

The messages are not being received by our stakeholders whose position is founded more on emotion, fear and the unknown.

It has been rather like the British tourist abroad who shouts louder when the poor ignorant foreigner doesn't understand. While the industry has failed to recognise the misalignment between its communications and the needs of its stakeholders, others such as some NGOs have not, and the gap has been widened.

We have communication without engagement.

In 2002 the British Government set up a Chemicals Innovation and Growth Team to review the UK Chemical Industry. This team reported in December 2002 and made clear recommendations that can be broadly summarised as:

- The industry lacks leadership – and the Chemistry Leadership Council was formed to address this.
- The industry is out of line with societal values.
- Innovation is key.
- Skills issues need to be addressed.

Let me briefly discuss the second of these recommendations, the lack of alignment with societal values, as this is directly relevant to this conference.

What is called the Futures Group was formed almost a year ago by the Chemistry Leadership Council to specifically address this recommendation. This group is a representative body of our stakeholders with minority membership from the chemical industry.

The task is to improve the reputation of the industry and it has been concluded that we will not do this unless we have a vision of a profitable and sustainable chemical industry that is fully supported by both the industry, its employees and external stakeholders.

The first task therefore was to engage stakeholders and we have been having our own 'Big Debate' over the past few months where we have met a broad cross-section of our stakeholders and asked them to tell us what their vision of a profitable and sustainable chemical industry is, together with their fears and aspirations.

We are currently in the process of evaluating this hugely valuable input and should have a draft vision early in June. What I can say is that there definitely is a gap between the views of the industry and our stakeholders and we now have evidence to support this and help us formulate a long term vision.

I do not underestimate the task of persuading the industry that we need a significant change in culture, nor the challenge of convincing our stakeholders that we can meet their expectations.

What we have done is engaged and communicated, and most importantly listened. There is still a large gap to be bridged but we are committed in the Chemistry Leadership Council to move from talking to action and reversing the downward spiral.

SLIDE 6

I said at the beginning that I would make some comments on science communication in general. I also said that I had been involved with the BA for 15 years, on and off. The 'off' was a 5 year gap in the middle and I was surprised and shocked to find that not much had changed when I returned. I was still hearing eminent people discussing the need for more young people to study science and how the future of this country was dependent on this.

The reputation of science seems to be similar to that of the chemical industry. I was interested to read recently a contribution by Sir Paul Nurse in the New York Times where he argued that the most important question facing science in the next 25 years was how to maintain its contact with society "to ensure that it has a continued licence to operate". This is a phrase that has been used by many in the chemical industry over at least the past 5 years.

We have all also experienced the problem scientists have had nationally in getting the public to accept 'sound science'. Whether this is on GM crops, vaccination, mad cow disease or foot and mouth.

In my 'day job' I am concerned with the management of risk and there is not time here to discuss the reaction of the public to risk but their response is clearly based, to a large extent, on perceived personal benefits balanced against their criteria of risk assessment such as whether something is involuntary, unknown, uncontrollable or new and the degree to which it is certain to be fatal or catastrophic.

The personal benefits of pharmaceuticals outweigh the unknown risks and the pharmaceutical industry has a high reputation. The risks of other chemicals outweigh the unknown personal benefits and the chemical industry has a lousy reputation.

Science seems to have the same problems as the chemical industry and I could show the opposing arrow chart once more. There is still clearly a problem of engagement even with all the excellent work being done in schools, universities and the media.

I will show that chart again in a moment but there are some additional comments I would like to make from my position in the chemical industry.

We still have in this country a high number of students studying chemistry through to 'A' Level, and some of the best university teaching and research in chemistry anywhere in the world. And the latter also applies to chemical engineering.

The problem seems to be that many of the brightest 'A' Level chemistry students do not go on to study chemistry.

I expect there are people here today that can explain to me why this is so?

I have given this some thought over the past few years and have concluded there are two major problems. I am sure there are many others.

Firstly, we don't have enough chemists teaching chemistry, and here I am not so worried about academic qualifications but enthusiasm and love of the subject. Enthusiasts with passion turn people on to their subject, whatever the subject.

There is another problem in schools, and maybe in some universities, in that those advising on careers in chemistry are uninformed, or at best, poorly informed.

We seem to be putting a lot of effort into a push on the supply side, but there is an inadequate demand pull. This was recognised in the Lambert Report.

SLIDE 7

The Roberts Report was almost exclusively concerned with the supply of people with science, technology, engineering and mathematical skills.

A week ago today I went to listen to the President of the Royal Society speak at the AGM of the Parliamentary and Scientific Committee. Sir Bob May spoke with passion and forthright honesty about the problems of a reduction in the number of students studying science, but less about the need to create an appropriate demand.

This is clearly a challenge for industry but if I look at the traditional chemical industry it is not even sure of its own identity.

I mentioned it was in transition. There is one crucial aspect of this I haven't mentioned. That is, in the not too distant future, it will be largely a retail industry. It will be selling products made outside the UK, but also, most importantly, selling intellectual capital. This is where value will be created in the future.

We have formed a Chemistry Leadership Council not a Chemicals Leadership Council and we are trying to create and encourage the growth of new industry based on chemistry.

There is a tremendous future for chemistry in this country. This future is based increasingly on the interfaces of chemistry with other disciplines. It is interdisciplinary. The industry, and employers, of the future may initially be small research based companies, but why should we not have the chemical

equivalent of a Microsoft in 20 years? Or several Microsofts all based in the UK!

Secondly, one crucial missing link between the 'communication of chemistry' and the 'reception of chemistry' is our failure to persuade young people that there are brilliant and exciting careers in chemistry related science in the future.

And most importantly, that they can make money out of chemistry. They can do this now but probably not by continuing to work in a creative environment.

We need to raise chemistry to the status of law and medicine, and the same goes for the other sciences.

I believe, you, the non-chemists, are doing far more than we are in pushing the supply side. Perhaps we can contribute something with our stakeholder dialogue and our future vision of our industry. Somehow we all have to find a way of bridging the gap between the messages and the audience. We must align communication and engagement.

SLIDE 8

I believe industry needs to do more to help teachers understand the changing world of work. Science and manufacturing came together to create the industrial revolution. We have only just started the revolution based on science and intellectual capital.

And we need to be bolder and more aggressive with our communication and our science. Let's not be afraid to make money out of science.