What does the public expect of companies involved in technology innovation?

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Learning the lessons of the past

Lessons from the introduction of other technologies, including genetic modification, nuclear power and food irradiation suggest that a more accountable, responsible and transparent approach is needed to build the confidence of stakeholders that technology can deliver appropriate products which have a positive social benefit and are safe for humans, animals and the environment.

So what does the public actually want to know?

In the first of a three phase initiative Building Confidence in Innovative Technologies, MATTER conducted a literature review of 23 publications including public dialogues on a variety of technologies (see Appendix 1) to understand in more detail what the public wants to know, from companies in particular, to give them confidence in the use of such technologies. We will then use this learning to develop an approach to stakeholder involvement and communication for companies involved in the use of nanotechnologies.

MATTER's Mike King, who conducted the study, explained: "Though the question was rarely asked directly, the study identified that members of the public were excited, but sceptical, about the potential for new technologies. But to be confident about their use, they want companies and governments to show they have been used meaningfully, that risks had been considered and anticipated and that companies communicate better about how and why they are used."

This report is structured to consider key findings of the research and then extrapolate reflections from these findings in the form of MATTER reflections, Lessons for Business and Lessons for Policy.

The key findings of this review are:

1.   Openness about when a technology is being used - a 'no brainer'

- The fundamental starting point is that when a very new technology is being used in the development of materials or products which are on the market, companies should be open about it and make that information easily accessible for their customers. Anything else can appear secretive and suspicious.

MATTER reflections

- This seems obvious but it is rarely made clear, except where the technology component is part of the branding e.g. Nano Blur cosmetic.
- Though there are a large number of products available using nano in Europe, (See this Nano Consumer Products Inventory,) a snapshot of company websites by MATTER (available on request) indicates there is virtually nothing available on company websites or social reports on where & how they are currently being used.
- This is the fundamental starting point for Responsible Innovation and though companies are nervous of being vilified for the use of what is most likely to be a harmless and useful technology, their secrecy may be counter productive.

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Learning for companies - access to information as early as possible

- Companies using nano and other new technologies should ensure the public is able to access easy-to-understand information about where and how it is being used, particularly where products are available to buy. This could feature on the company website, in its social report or on third party sites like www.nanoandme.org (pilot site).

Learning for public policy - incentivise transparency

- It is not proven that transparency increases confidence, though EC research is considering that currently and research will be available to quantify that in 2014. However, we believe that Governments should use innovative means, including if necessary regulation, to incentivise companies to disclose their use of new technologies in products, but most importantly this must be meaningful and accessible to the public.

- Discussions about stigmatising a technology over others in this way are valid. However, we whether or not there is genuine uncertainty about certain aspects of the technology or material in use, increased openness is valuable in building trustworthyness.

2.   A richer picture needed about benefit

- The review showed real concerns about why new technologies are used. People worry that scientists are doing it just for their own purposes, to see if they can; or companies simply to find new ways to relieve them of their cash. However, there was almost universal support for even the most 'futuristic' technologies where products, particularly medicines & energy-related products, had a compelling social benefit.

- There is an expectation that companies will communicate a richer picture about this benefit. People want to know what problem is being solved, how it improves on existing solutions, that the use of the technology has been thought through in the round in terms of social or environmental benefit and risk and clarity on the detail of what is the benefit to them and/or to society.

MATTER reflections

- If it is mentioned at all, the standard approach is likely to be a sales message outlining what new benefit this brings - energy saved, fewer wrinkles, more bacteria killed etc. But particularly where a technology is perceived as new and scary we believe more detail is valuable on why and how this approach is necessary, it's use and the research which goes into proving its efficacy, its safety and its superiority over existing solutions and other approaches.

- This focus is also important for governments. Demonstrating why one technology is incentivised over another, in scientific research or innovation incentives for example, requires a degree of 'picking winners' which happens anyway, why not make it more open and involve different stakeholders in that process?

Learning for companies - robust 'benefit assessments'

- The development of 'benefit assessments' - like lifecycle risk assessments, would be a useful tool to help companies understand this and facilitate better communication with their stakeholders.

- It is likely that the engagement with a variety of stakeholders may be useful to understand the benefit in the round and this should be embedded at various stages in the development process. In communicating benefit, Web based communications and media relations are likely to be the focus, with consumer hotlines also useful to answer specific questions and concerns.

Learning for public policy - incentivise socially beneficial use

○ Government should incentivise the socially beneficial use of such technologies through the development of a more robust vision both for the use of these new technologies and the way they encourage collaboration in solutions based research and through their own significant purchasing power.

○ They should support the development of benefit assessment processes and their deployment in more fully rounded approvals and licensing procedures. They may incentivise transparency and communication in this area through purchasing and award schemes etc.

3. When it goes wrong, who carries the can?

○ Contrary to our expectation, concerns about risk and safety of individual products and 'ologies' did not appear to be top of mind. But trust in the system was.

○ People want to know that **when** things go wrong, (not **if** - they are pragmatic!), someone is responsible, and liable, and has thought about how will it be put right. The public wants to be confident that someone, somewhere, is on the case to ensure that their products are safe for them to use and for the environment. The need for good mandatory regulation which is fit for purpose and it is complied with was the focus of this.

○ Though they are surprised to know that in many cases detailed regulation may lag behind the introduction of products, the public then query what processes companies and governments have in place to prove that products are safe to put on the market in advance of appropriate regulation.

MATTER reflections

○ What to do when regulation lags is essential to the successful use of these very new technologies. Transparency from companies is at the heart of delivering this confidence. It has been lacking so far in the use of nano in consumer products.

○ Where there are naturally going to be uncertainties in the introduction of a new technology companies need to find ways demonstrating what is being done to plug knowledge gaps.

Learning for companies - 'Show your workings' - be open about accountability

○ Companies need to have robust risk assessment process and accountability mechanisms which are technology specific for new technologies, not generic. Most companies have robust processes to understand and minimise these risks and hazards, but think that the public won't be interested and are concerned about what their competitors will learn from their disclosure.

○ With nanotech, early indications were that there was 'confusion' in some areas about any special safety measures needed for nanomaterials. The confidence of policy makers, ngos and customers would, we believe, be enhanced by much earlier disclosure on the steps companies have taken to address ignorance and uncertainty in new technology areas. This should focus on how they understand hazards and mitigate risks, the testing they do to ensure product safety and efficacy and the safeguards and accountability and liability in case things go wrong. They should be innovative about how they communicate and engage about this with all stakeholders.

○ Companies could improve their inclination to share their toxicology data on specific products through publicly available databases to demonstrate their commitment to safe practice to stakeholders and to add to the body of evidence on safety.

○ Good communication and quality information across the supply chain is essential to this process working effectively to facilitate the necessary traceability. Both producers and suppliers should work to ensure the information provided enables quality information and reassurance for the public, something that was and, we understand still is, lacking in some areas of nanomaterials.

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- Consideration must also be given to developing early warning procedures for potential problems and systems for mitigation and redress.

Learning for public policy - fund more innovative approaches to info sharing

- Governments must find or fund much better and more innovative ways to incentivise businesses and other research organisations to develop and share accountability mechanisms and toxicology data which is mindful of IP issues, whilst also providing useful information to add to the body of evidence about safety.

- Governments should also communicate much more effectively about their own approach to the development of effective regulation and the quality and relevance of the safety research which underpins that regulation.

- Regulators should also ensure they use the web in particular to provide much better and more accessible information on the regulatory process, its status and interim arrangements.

4.   A desire for trustworthy and independent sources of reassurance

- Information and communication from companies is important for reasons of transparency and to provide information on specific products, though perceived to be biased.

- In addition, people also know they don't necessarily have the time, the expertise or the motivation to understand these technologies or the complex products they enable; they want reassurance from independent and impartial sources about oversight of safety, veracity on claimed benefits, robustness of liability regimes and provision of information. In many dialogues the need for independent 'technology assessment' style bodies was raised.

MATTER reflections

- This also means these sources, such as independent research or assessment bodies, NGOs, Unions and others need to communicate more effectively, honestly and openly about the evidence from their own work in this area. One of the other 'lessons of GM' which is now being highlighted is the need for NGOs and others to base their campaigns and opinions on sound evidence - whether that be about science or public opinion - in order to demonstrate their own accountability and not mislead the public.

- Funding for such organisations (like us!) is difficult to achieve, particularly early in the development of a technology when potential supporters may not be aware of the need or the issues unclear.

Learning for companies - support independent oversight

- Engaging with other stakeholder bodies and providing clear information, either confidentially, or as part of their wider engagement is an important component of responsible technology development and building the trust of the public.

- Stakeholders can work very effectively with companies to share concerns early and work together to develop robust assessment processes, so building stakeholder confidence in the processes and technology. BASF's DialogueforumNano is an excellent example of how that approach can be beneficial for all concerned.

Learning for public policy - fund independent oversight bodies

- It is also in government's interest to have independent oversight and reassurance for stakeholders. However, small organisations do not often have the capacity to engage at the level of oversight which may be considered necessary.

- Building capacity in this area is of particular importance. A partnership between business, NGOs, and civil society to create and support independent fora undertaking technology assessment should be created. Creating new QUANGOs may be difficult, but it is important in the UK and transnationally.

5.   Don't force it on us - it's about choice

- Whilst there appears to be no consensus about communications or product labelling, much of the focus of public interest, where it is expressed, is about ensuring that those who wish to, can opt out of the use of the technology.   This is the root of much heated debate about stigmatising a safe technology; 'why just nanotech', 'if there's nothing wrong with it why do they need to know'. These are valid points, but we also believe that open engagement early will take the heat out of these debates and such transparency initiatives will be a damp squib - unless of course there are real risks and concerns which remain unaddressed.

- If the perception is (which is increasingly the case) that it is being forced upon consumers, or 'smuggled in' to products without anyone knowing, this may have a negative impact on the acceptance of the product and the technology as a whole.

- However, given the generally positive perceptions of the use of various technologies with genuine benefits noted in all the dialogues, it does appear likely that people will support or buy products if the benefit is clear and easy to understand and meaningful information is available from a variety of sources.

- This also allows customers to distinguish responsible and appropriate uses of technology with those where less rigorous assessment has been undertaken.

Learning for companies - communicate better and more honestly

- The right information, presented honestly and openly, we believe, demonstrates responsibility and helps build the confidence of the public. Product information, including labelling, is only part of the larger picture of how the public can access trustworthy information. Companies should engage openly with stakeholders and other bodies to look at innovative ways to communicate and engage.

Learning for public policy - be innovative about incentives

- Government should be innovative about the incentives and support it gives to companies and other bodies seeking to support the public choice in this area. Supporting public, private and civil society partnerships for technology assessment should be a major plank in the UK government's approach together with the promotion of international fora to support this approach.

6.   Dialogue - how will the public know they are listened to?

- It is not clear whether because the question has not been asked, or whether the public is not particularly aware they have an option, but people generally appeared more interested in having access to the right sort of information to make their choice, rather than proposing they are involved in dialogue or 'co-creation' activities.

- However, those who had been involved in dialogues were keen for feedback on their involvement and to be kept informed of the impact of their views.

MATTER reflections

- Rarely does the commissioning organisation explain the impact of the dialogue and how it has influenced their actions. This is fundamental to building trust in the system of governance around new technologies. If not, it is simply market research, in itself not a bad thing, but not what was promised to most dialogue participants.

- Bringing such outputs into multi-stakeholder fora for technology assessment would ensure greater accountability, responsibility and transparency.

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Appendix 1

Please also refer to http://debategraph.org/whatsfairtosharedebate for the context and further information on the project. Please feel free to add to the DebateGraph to make further contribution to the project.

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