Response to NHS Chief Executive’s
Open Call for Evidence and Ideas

Respondent ID: 170

Organisation name: Dyson Limited

Type of response: Document
Context – Dyson Airblade

The Dyson Airblade hand dryer is an innovative product that has the capacity to deliver significant savings for the NHS in two ways:

- **Financial** - When compared to paper towels, the Airblade is up to 97% cheaper to operate – £78 per year, compared to £2,920 per year. Consequently, if every NHS worker in the UK used a Dyson Airblade hand dryer instead of paper towels only once every day, the annual cost saving would pay the salaries of 338 qualified nurses.

- **Energy** – The carbon footprint of an Airblade hand dryer is 74 per cent smaller than that of a paper towel dispenser. Consequently if all NHS employees dried their hands just once a day with the Airblade rather than paper towels, annual NHS carbon dioxide emissions could be reduced by around 4,800 tonnes a year. The Airblade also eliminates the landfill burden from paper towels, which are not recycled. If every NHS employee dried their hands with the Airblade rather than two paper towels just once a day, it would prevent one billion towels going to landfill per year.

Identifying Blockages – Where has it gone wrong?

The call for evidence identifies three stages of innovation; invention; adoption; and diffusion. Dyson has invented the product and succeeded in securing its adoption by individual NHS institutions, such as the University College London Hospitals, the Royal Marsden and the Royal Liverpool. However, the diffusion of the product across the NHS has been hindered by three blockages:

- **Repetition of approval**: The Airblade has been piloted by NHS Supply Chain, having passed the research and evaluation stages and has been deemed appropriate for use in the NHS by leading institutions. However, the Airblade faces barriers to entry at a local level where Primary Care Trusts or Foundation Trusts are unwilling to accept the endorsement of other NHS institutions and feel the need to re-examine the product. This duplicates the approval process, and can lengthen the period between approaching trusts and deployment by up to twelve months.

In re-examining the Airblade, one Trust required documents detailing the hygiene credentials of the Airblade, conducted a suitability for cleaning trial and required formal feedback from staff and patients. The process involved the head of facilities, a facilities coordinator, an infection control nurse and the procurement department. The process delayed the diffusion of technology by nine months.

- **Lack of clarity on procurement process**: Decentralised procurement models result in a multitude of structures, titles and responsibilities. It is often unclear who Dyson

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1 Calculations based on 2 paper towels per dry, 400 dries a day (WHO Guidelines on Hand Hygiene in Healthcare). £0.01 per paper towel against a 1600W Dyson Airblade™ hand dryer costing £0.1194 per kWh (Eurostat 2009 semester 2, March 2010). Paper towel dispenser and Dyson Airblade™ purchase costs excluded. Dry time based on NSF protocol P335.

2 Calculations based on average salary of NHS qualified nurses (£30,100; NHS Staff Earnings Estimates December 2010) and 1,413,996 NHS staff in the UK (NHS Medical Dental Bulletin 1999-2009). For other calculations, refer to footnote 1.

3 Paper towels data from Madsen report (see footnote 6): 39,000 dries per year, 5 years use. 12.48g of CO2 emissions per dry. CO2 emissions using the same data for the Airblade are 3.29g per dry based on a 10 seconds dry time.


6 Calculations based on an estimated 1,413,996 NHS Staff in the UK (NHS Medical Dental Bulletin 1999-2009). Usage based on 2 towels per dry (data from internal Dyson research – Sept 2008) in a 365 day year.
should approach on procurement, and overlapping responsibilities result in repetitive meetings. One Trust has required repeated meetings with differing officials, including facilities managers, capital purchases managers and energy managers. This has delayed the diffusion of technology. Having begun the process in November 2009, it has still not concluded.

- **Short-term budget thinking**: The short-term pressure to deliver immediate efficiencies is costing the NHS money. Innovation that can deliver significant savings is being blocked because of up front installation costs. Whilst budgets are balanced in the immediate financial year, the NHS is the long-term loser from this pressure.

**Identifying solutions**

To rectify the blockages, Dyson has three recommended solutions.

**National Solutions**

- **Suitability for use standard**: Dyson recommends a “suitability for use” standard that is universally recognised across the NHS procurement process. Ideally this assessment would be made at a national level and would translate to all levels of procurement. This would ensure individual trusts do not repeat product assessments at a local level, which significantly slows the pace of innovation diffusion. A ‘suitability for use’ standard would allow trusts to make local decisions based on cost efficiency and local need while being safe in the knowledge that the necessary hygiene requirements are met.

- **Standardised register of procurement officials**: A standardised register of procurement officials showing the point of contact for each trust would increase the clarity of procurement processes, and help organisations such as Dyson to identify who to engage with when seeking to promote innovation. If a “suitability for use” standard were to be implemented, the register would only include procurement managers. In the absence of such a standard, the register would clarify all decision-makers organisations such as Dyson should engage, including those assessing the suitability of products.

**Local Solutions**

- **More creative use of rental and leasing services**: Dyson understands the budget pressures facing the NHS and the need to identify immediate efficiency savings. However longer term budget thinking is required to maximise savings. For instance Dyson have a suite of options that would allow Trusts to benefit from long-term savings whilst avoiding up front costs. For example, leasing could cost as little as 50 pence per machine per day (based over five years, running costs not included).