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

Respondent ID: 206

Organisation name: Association of Institutions concerned with medical Engineering

Type of response: Email
On behalf of AIME (www.aime.org.uk) I am submitting some brief comments for the Innovation Review. I am aware that several other related organisations are also submitting comments so I will confine ours to 4 general, but very important points:

1. **The Main Inhibitor**

One of the key items to come out of the G7 GHAP meetings held a decade ago (set up by the minister of the G7 nations and a number of other nations) was the common view that whilst three components impacted on the uptake of new technology (the technology itself, the people involved and the organisation) the impact of organisational issues was the dominant inhibitor. Little has changed to make this view as successful adoption of new technology will "change the way things are done" - i.e. significant innovation will impact on organisational structure.

2. **Stages of innovation**

The division of implementation into the stages of invention, adoption and diffusion is, for major innovation, has the potential to cause failure by oversimplifying the step between adoption and diffusion. The requirement to develop transferrable skills, to provide for training, support and a framework for applying the innovation into different situations consumes substantial effort and has significant budget implications. The use of technology readiness levels with essentially 9 levels is well used in areas such as aerospace and defence and is described in numerous documents for example (http://esto.nasa.gov/files/TRL_definitions.pdf)

3. **Global application**

The NHS is unique but to be world class it must be willing to take on innovation from elsewhere. At an international level there are many appropriate 'players' and their needs to be engagement if ideas from elsewhere are to be utilised. These may be from other nations approaches to issues (innovation is likely to contain contain new technology and novel application) in both the health field and in other areas. The US DOD healthcare is in many senses similar to the NHS and they have a very innovative technology approach (www.tatrc.org). However lessons can be learnt from a wide array of other industries and even the retail industry offers expertise in data mining/warehousing, i.e. identifying patterns from seemingly unrelated usage figures!

Success in this area will need careful coordination and in international dealings there is a need to be seen at "National" so both acquisition of information and its dissemination need to be planned across the whole NHS.

4. **The vision**

Incremental innovation is acceptable and relatively easy to implement (it is likely to be contained within one department). Radical/disruptive innovation will result in changes in departmental boundaries and cross trust initiatives - supporting such initiatives in a period of financial constraint produces real problems.

As indicated in the comments above coordination across the NHS is paramount if succes is to be maximised. Potentially this is a move from bottom up to top down and will need tactful application to be successful! However "silos" will inhibit the diffusion of successful prototypes into wider applicability.

I wish you well in consolidating and applying the comments!

John Erbetta

AIME is the Association of Institutions concerned with medical Engineering (www.aime.org.uk) and is broadbased across many engineering institutions. The author, John Erbetta has wide ranging experience of medical engineering and represented the UK on the series of meetings set up by the G7/8 ministers to look at the impact of The Global
Information Society on Health (GHAP) back in the late 1990's, was a member of the Government sponsored team looking at Telemedicine in South Korea and is currently one of the Royal Academy of Engineering's group looking at Biomedical Engineering, as well as being the outgoing chairman of AIME.

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