Technology & Innovation in the NHS

CONSARD Ltd

Thank you for the opportunity to comment, which I do from the perspective of a small Scottish business, active in digital healthcare within UK and internationally and keen to support transformation. This Vision needs to hit the correct balance between:

- central orchestration of national top down programmes of technology modernisation;
- and the need to empower and sustain a fragile community of promising local, small-scale initiatives on a journey to scale up and transformation of care offered by the NHS.

Scotland’s strengths - and a reason for a strong and influential heritage in this area - are in part due to past competence in the former: central orchestration of national top down programmes. But to use an analogy – do we now need to build a super-tanker, or rather to establish a flotilla of nimble vessels of many shapes and sizes joined in a common purpose? The second offers the possibility of doing the job quicker, more flexibly and to greater effect. Probably we need both, but between 2017 and 2022 we will need significantly more of the second. And if this is correct, this Vision should carefully reflect on how the current modus operandi will help or hinder the emergence of a flotilla. Here are some of the areas which need to be looked at:

**A. Measuring achievement of the Vision:**

One key measures for the success of the Vision will be funding allocated *at a national level*:

- Year on year, an increasing % of total NHS spend allocated internally and externally for transformation of services using technology is expected. Such a measure – c.f. the McClelland¹ and Wanless Reports² - tests whether the NHS is or is not successfully automating business and clinical processes using technology. For instance, a 3% target of total NHS Scotland expenditure would imply a spend on internal and external eHealth / digital healthcare services in excess of £360 M. p.a.

- Year on year, levels of recurring (as opposed to grant funded) internal and external expenditure on ICT should be increasing. Increases would show for instance, that enough is being spent on basic infrastructure (e.g. to obviate risks of cyber-attack).

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² [http://www.yearofcare.co.uk/sites/default/files/images/Wanless.pdf](http://www.yearofcare.co.uk/sites/default/files/images/Wanless.pdf)
Other signs that technology really is transforming the NHS and Social Care will be present if (and the Vision should propose how to measure these):

**At or below Board level, the Vision is creating:**

- Realistic timeframes for positive returns on investment: international evidence shows that few system wide EPR implementations turn cash positive within 5 years.
- Emergence evidence of positive impact through automating clinical processes, on clinical outcomes and spread of best practice;
- Reduced unit costs for treatment and care and at a population level, provision of better targeted services or with better access.

**And at a personal level:**

- Significant patient and citizen uptake: people like or even prefer using technology enabled services and are actively involved in co-creation.

**B. Delivering effective transformation:**

Initiatives to transform health and care services using digital technology can deliver good PR - see coverage of successes with the Emergency Care Record, MyDiabetes MyWay, SCI infrastructure, and Sparra. But politicians also know that they do attract bad PR: see the press coverage of e-Care, NHS 24 Future Programme and Edinburgh RI’s EPR. And maybe because digital health is perceived as risky or less important than front line services – it is proving a lot easier to attract grant funding rather than sustained year on year revenue funding. However, all involved know that one-off funding will not of itself be enough to sustain a Vision to deliver better scaled up technology based services and outcomes for patients and citizens across Scotland.

**C. Key capacities needed**

1. **Holistic Programmes:** Significant central NHS resources are already available to deliver the existing Vision, but they do not sufficiently align with the existing Vision. More than two hundred staff are active in areas relevant to digital transformation and are employed by at least eight separately managed central NHS or SG funded organisations. Overall, this level of effort will be costing at least twenty million pounds annually. But together these, typically senior, staff do represent Scotland’s core capacity to deliver large-scale programmes. They support the NHS (Boards and IJBs), and provide strong and relevant skills and training in for instance technology, clinical and business process change management, procurement, quality improvement, finance, programme management, education and development.
However transformative activity - at and below Board level activity - is not yet happening at sufficient scale: a bottom up ‘pull’ factor is not yet present. It seems the core missing element is a bottom up desire and capacity to introduce technology into re-designed routine clinical and business practice and processes. However, we are now beginning to see increasing recognition of the potential of automated processes to deliver key benefits, matching the local priorities of managers, clinicians and governance structures…and so able to contribute to the measures set out at A. above.

For the situation to evolve, better and different mechanisms and incentives are indicated, so that NHS and other organisations involved come to accept responsibility for meeting the performance targets proposed above for the Vision. If this happens, front line staff will want to realise benefits from central change programmes and to share responsibility for meeting performance targets. A better, more devolved approach seems to be needed to:

- Identify how at a local level, to take advantage of technology advances (e.g. medical devices, IoT sensors plus algorithms on via mHealth apps in the cloud; genomics);
- Build the (business) case and then implement change in (especially) clinical practice.

One measure of success would be if by 2022, Boards had matured to a point where they could make the case for and deliver transformative digital healthcare initiatives, and without a critical dependency on external grant funding and or central support.

2. **Effective Digital Programme Management:** NHS Scotland and SG (and especially at an NHS Board level) do not seem to possess enough of this admittedly scarce and expert capacity: in some cases, the need may not be recognised. Contracted programme management resources typically brought in for larger programmes, report into public sector governance structures, which in turn may not necessarily prioritise delivery of programme specific target outcomes over broader considerations. One result can be that change management and implementation costs of introducing new technology enabled business and clinical processes especially are under-estimated. And often, such costs will not attract central funding. So, digital healthcare programmes can be launched with a critical dependency on co-funding from public sector governance structures, but during implementation, these structures are unable or fail to commit adequate or the right resources or focus. Invest to save type funding initiatives at an NHS Board level appear to be relatively unexplored territory. These are the seas on which the flotilla would sail.
3. **Risk Mitigation:** Optimism bias cf. Audit Scotland\(^3\), has been detected in business cases, and implementation plans. Risk identification and measurement needs to be improved, making it easier to take timely action on flawed, late or over-budget projects.

4. **Creating a dynamic and valued supply capacity:**

Significant procurements are centrally organised: they are often complex and long drawn out. Such procurements and a ‘once for Scotland’ approach will continue to be needed: the need for reliable, robust, and technology de-risked NHS branded services will continue at least until 2022. However, it is important to note that this procurement approach:

- Makes sense when seeking to maximise NHS Scotland buying power in the face of market concentration from some (globally) dominant technology suppliers. (Until 2022, NHS Scotland will remain a technology taker, not a technology maker / specifier).
- Tends to favour those larger businesses able to fund sustained pre-sales activity.

However, NHS Scotland also needs and currently lacks:

- An explicit intent and provision within national procurements to support the emergence of more localised solutions adapted to local clinical priorities and governance structures
  - the flotilla referred to above;
- And secondly, related piggy back lower value procurements accessible to all, but of especial relevance to Scottish SME’s.

Some recent NHS central contracts have turned out to lack the flexibility to address emerging needs and changes in technology or circumstances. Also (out of pocket) centrally contracted suppliers need to recover pre-sales costs, present as inflexible when asked to engage with NHS Scotland on joint approaches to solving problems, even if to potential mutual benefit.

From the point of view of Scottish SME’s (who could at least theoretically be more flexible), the Scottish market presents as difficult and expensive to penetrate: many Scottish SME’s currently choose to scale up their business activities outside Scotland. Also, it will be important over the next 5 years, to better respond to the view (as expressed for instance via Scotland IS) that many SMEs (but also larger suppliers) would prefer improvement in the organisation of market demand, over further investment in supply side measures. Overall, the current approach seems better suited to building tankers, rather than smaller scale boat building, but this Vision could change this.