

National Innovation Centre, Innovation Metrics Project – Interim Brief

1. Introduction

The purpose of this brief is to bring stakeholders up-to-date with the progress of this project, defining metrics to assess the “innovativeness” of the National Health Service (NHS), with a particular emphasis on technology adoption. Innovation has been widely researched in different sectors and countries and, as a concept globally, it has much traction. A challenge, however, is to develop clarity concerning the focus of the innovation challenge in the NHS and industry, and to develop a measurement system which is fit for purpose. This is the focus of the work undertaken by Matrix¹. A cross-sector and country literature review has been undertaken, as well as a large number of interviews and workshops with a broad range of stakeholders. These activities have focused on how different countries and industries tackle this challenge and embed solutions.

They have revealed the need to not simply to measure innovativeness of the NHS, but also to address the issues which could help to improve it.

2. Challenges and Complexities

- There are innovation case studies concerning how poor the NHS is at adopting proven innovations, but there are also case studies which indicate that this is not the case. Consequently, the NHS is looking to understand the extent to which it is poor, or whether it is improving. Figure 1 shows a diagrammatic innovation adoption curve and how it could change;
- There are many definitions of “innovation” and different stakeholders have varying understandings and focuses. The definition used in this work is detailed in Section 3 on the following page;
- There are many individuals and organisations contributing to innovation adoption decisions and implementation, e.g. industry, trusts and procurement bodies. Figure 2 illustrates these alignments and innovation roles;
- The systems driving innovativeness interact (e.g. procurement, reimbursement and commissioning); there is a need to recognise and reconcile the difference between commissioning (a major driver of innovation in the NHS) and the adoption of innovative technology (what may be seen to be a procurement decision by providers), which can enable innovation in service delivery;
- From an NHS perspective, the focus of metrics should be consistent with the policy context (primarily about innovation in service delivery), but this needs to balance the focus of other stakeholder interests (e.g. the adoption of proven technologies and the emergence of new inventions);
- Current innovation metrics typically use traditional international benchmarking of sales data: whilst important, these metrics do not necessarily provide a reliable measure of the value of innovations in the user (NHS) context; or how the ways in which individuals and organisations work together to speed up and improve the “innovative process”;
- The quality and quantity of the “evidence” concerning effectiveness, safety, patient experience and cost effectiveness in an NHS setting, for many innovations, is very variable;
- The need to recognise the innovation issue is not just about time to first adoption, but also the depth and reach of the adoption – this links to the concept of identifying what “optimal” adoption may mean in practice, which may vary in different countries;
- There is a lot of data: the key issue is to identify the metrics that matter most and identify how/ whether they should be used bearing in mind the reliability of the metrics and costs of collection.

¹ <http://matrixknowledge.com/index.php> For other papers concerning innovation and well-being see: <http://matrixknowledge.com/wp-content/uploads/innovationandwellbeing.pdf>

3. Definition

For the purposes of this assignment and reflecting the challenges above, the definition of innovation and innovating we have adopted is:

“The adoption of new-to-the-organisation or new-to-the-NHS technology products and/or service delivery processes, comprising incremental or disruptive change, and resulting in a significant improvement in patient ‘outcomes, experiences, safety and potentially cost-effectiveness”.

An implication of this definition is that the benefits of the introduction of the technology/service delivery processes are proven. This definition is adapted from the (Darzi (2008) NHS Next Stage Review Final Report).

4. Project objectives

The goal of this project is to identify practical metrics which can answer the question:

“Is the NHS becoming better at innovating, to the benefit of the public?”

Some of the elements of answering this question are:

1. What are the strengths and weaknesses in NHS innovation?
 - a. Who is good at innovating and what they are doing well?
 - b. Where are there are major gaps in the innovation landscape (which may be related to systemic failures)?
2. Is the NHS getting better at realising the benefits of innovation?
 - a. Is NHS leadership promoting ways of working to facilitate innovation?
 - b. Are the service and financial benefits of proven innovations assessed?
 - c. Are the benefits systematically realised?
3. Are NHS organisations in a good state to adopt proven innovations faster?
 - a. Do networks share information which promotes innovation activity?

Metrics are being identified to assess these questions and are expected to be used primarily by:

Principal Metrics Users	Purposes
The Department of Health - Department of Commissioning and System Management	<ul style="list-style-type: none">• Monitoring the effectiveness of the commissioning system in enabling effective innovation across the NHS• Identifying systemic problems in innovation• Identifying improvements in the quality improvement system
Arms length bodies, regulators and procurement agencies	<ul style="list-style-type: none">• Assessing the extent to which their contribution is valued and changing• Refining the ways in which they operate
Strategic Health Authorities (SHAs)	<ul style="list-style-type: none">• Reviewing effectiveness of policies/support in delivering innovation and change locally and between SHAs
Primary Care Trusts (PCTs)	<ul style="list-style-type: none">• Assessing effectiveness of commissioning activities• Identifying the best performers from their range of providers
NHS Trusts	<ul style="list-style-type: none">• Benchmarking performance of their organisation against other similar or leading organisations
Medicines Management and Technology Strategy Group (MMTSG) and industry sponsors	<ul style="list-style-type: none">• Using available data to assess and improve areas of weakness in performance of the NHS as a world-class customer, and them as world class innovators

5 Achievements/activities to date

5.1 National Innovation Centre (NIC)²

The NIC is identifying a simple set of organisational and system indicators (metrics) to assess whether the NHS is getting better at adopting proven technologies. These indicators will use data from the Healthcare Commission³, and other organisations, to make this assessment and will have relevance for all stakeholders on the innovation value chain. The NIC is also developing a way for organisations to assess the risks, costs and benefits of innovation, enabling these different organisations to assess the “value” or benefit to the NHS and organisations of different innovations.

5.2 MMTSG

The MMTSG Metrics work stream is developing an output metric. Their approach at present is based on a list of 8-10 indicator technologies as proposed by industry and recommended for adoption by NICE.

5.3 NESTA

NESTA is undertaking a major project on developing an “Innovation Index⁴”, covering the whole economy. This is likely to focus primarily on the factors which support an improved capacity for innovativeness, rather than attempting to measure innovation per se.

6 Next Steps

1. Process to develop the metrics: there is a need to develop and agree metrics which meet the dual objectives of indicating actual innovation performance across NHS organisations and the factors which will enable innovativeness. A key part of the process needs to be the buy-in of stakeholders into the approaches and metrics to be used. The NIC will be looking to work with SHAs to test and validate the metrics.
2. Developing innovation output measures: the most likely form of metric is one based on a “basket” of indicator technologies. Four major issues remain to be resolved: the number and range of technologies needed to cover the range of locations of service delivery (home, community and hospital); the delivery specialisations of provider organisations; the need to cover non-technology innovation which is being adopted by the NHS; and the metrics to be used. For the latter, it is proposed that a metric along the lines of “population benefit that could be realised” should be used, rather than crude sales.
3. Developing innovation leadership, process and culture measures: this will involve the use of measures based on the literature and consultation to date. There are two key domains – those reflecting innovation leadership, autonomy, use of resources, culture, organisational process and decision-making, and those focusing on the availability, use and sharing of information concerning specific innovations (both explicit knowledge, e.g. effectiveness information, and implicit knowledge, which is easier to share through networks and informal communication). The precise indicators will be chosen based on the availability and reliability of source data, and the perceived quality of linkage to innovativeness of the organisation.
4. Validating the metrics: having agreed in principle what the form of the metrics will be, there will be a validation stage in SHAs, PCTs and NHS Trusts to determine how and which metrics will be used, cognisant of the risk in using the various measures, especially if indirect estimators are being used. This should take three months.
5. Full roll-out programme: it is anticipated that there will be some improvements required to the metrics identified following the validation process. Once this has been dealt with, the aim will be to have the metrics programme rolled out across the whole NHS as soon as possible. It is anticipated that there will need to be a process which receives and acts upon problems and questions arising from users of the statistics; and which also looks at changing the indicator technologies on a regular basis so that the metrics remain indicators of system improvement, rather than driving the adoption of particular innovations.

² <http://www.nic.nhs.uk/Pages/Home.aspx>

³ <http://www.healthcarecommission.org.uk/homepage.cfm>

⁴ <http://www.innovationindex.org.uk/>

Figure 1: Scope for improvement in the adoption curve

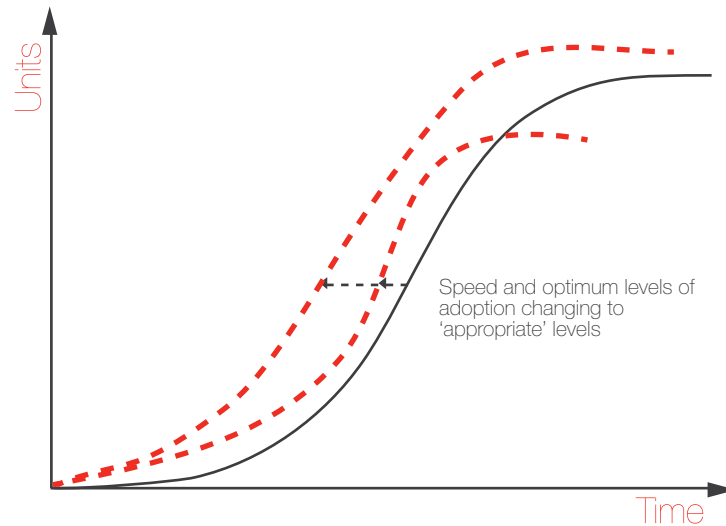
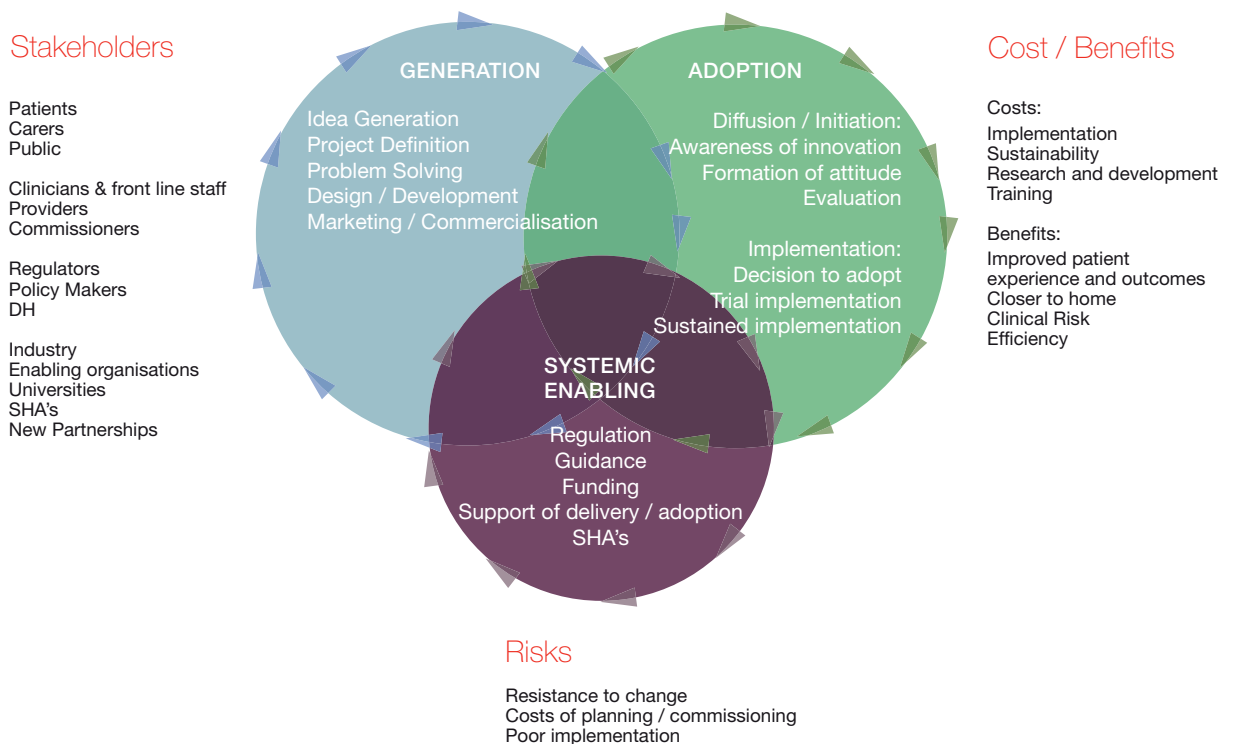


Figure 2: Stakeholders in the Healthcare Innovation landscape and the main innovation roles



For further information please contact Andrew Beale or contact one of our offices:

Email: andrew.beale@matrixknowledge.com

UK office

Matrix Knowledge Group,
Epworth House, 25 City Road,
London, EC1Y 1AA, UK

Tel: +44 (0)207 684 5777

US office

Matrix Knowledge Group International Inc
155 Gibbs Street, Suite 527, Rockville,
MD 20850, USA

Tel: +1 301 543 8999

Indian office

Mega-ace/Matrix Partnership
B 68 Mittal Tower, Nariman Point,
Mumbai 400 021

Tel: +91 22 2281 2298

Website: www.matrixknowledge.com