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RIM response to the NHS innovation review

About RIM and BlackBerry
1. Research In Motion (RIM) is the company behind the innovative and award-winning BlackBerry product line. The BlackBerry family includes best-in-class smartphones and software offerings, as well as the all new BlackBerry PlayBook, the world’s first professional tablet.

2. As the organisation which invented the smartphone and now the world’s first enterprise-level tablet, we believe we have a reasonable insight into how to innovate and the factors which lead to adoption of new technology.

3. BlackBerry solutions are used by mobile healthcare professionals, patients, carers, and social care providers throughout the world. Frontline professionals use BlackBerry solutions to read and record patient records that input directly into hospital and community-based record systems; patients keep track of their conditions helping them to take more control and live independently; carers can communicate more easily and effectively; and local authorities are using BlackBerry solutions to achieve more efficient community-based social care provision.

4. Frontline professionals are integrating a variety of BlackBerry-enabled solutions including: workflow tools; digital pen and electronic forms; navigation, mapping and location based services; real-time mobile access to patient records; e-mail, calendar instant messaging and contacts; BlackBerry smartcard reader including two-factor authentication to allow secure access to records systems; lone worker safety solutions; professional reference information; mobile learning; digital dictation and pager replacement solutions

5. As well as being a leading innovator in our own right, RIM works in partnership through our Alliance programme with many other organisations to foster innovation. In health and social care, our Alliance partners include CSC, CSE, iSoft, TPP, EMIS, Winscribe, Bighand, Advanced Health and Care, Vocera, Guardian 24, Intuition Rubicon and Medhand.

6. In addition to health and social care implementations, BlackBerry solutions are also used extensively by the police, in the defence sector and more widely in local government to facilitate secure, efficient mobile working.

7. BlackBerry solutions are secure and approved for Government-use in the UK and by many other governments including the US, Canada, as well as achieving NATO approval. In the UK, BlackBerry solutions have achieved IL-3 and IL-2 clearance from CESG: unrivalled mobile security performance.

Learning from elsewhere about adoption and spread
What can the NHS and NHS Commissioning Board learn from local, national and international best practice to accelerate the pace and scale of adoption of innovations in the NHS? [Please include relevant examples, published papers or other evidence you have found useful.]

8. Align incentives so that those organisations which adopt innovation can reap the benefits. Innovation, be it a specific technology or a new methodology, almost always changes processes to
achieve better outcomes. If remuneration is process-led rather than outcomes-led then this will block rather than enable innovation.

9. Show leadership. The two critical elements to innovation are vision and implementation. Successful innovators are able to articulate their vision and also explain how to get there.

10. Prove concepts then innovate at scale. Enterprise solutions are key to the success of BlackBerry solutions. This means identifying what is important to customers and the changes that would most improve their performance. For us, this has meant delivering demonstrable and easily understood functionality in terms of improved workflow and efficiency savings underpinned by robust security and privacy that can be implemented at scale.

11. Risk management needs to be proportionate. Innovation inevitably involves risk and it is sensible to ensure that this risk is managed appropriately. This needs to be proportionate: successful adopters of innovation will introduce safeguards that relate to the size of investment and risk, taking the timescale for returns to be realised into account. There are many examples of public sector initiatives which have struggled to adopt a proportionate approach:

   a. there are numerous examples of the public sector adopting an overly burdensome approach to relatively small, low risk innovations that would have a rapid return on investment;
   b. conversely, there are also examples where large-scale projects have commenced without sufficient risk mitigation strategies.

12. Avoid duplication. Duplication is costly and thwarts innovation. Duplication typically takes place in two forms:

   a. duplication of requirements for innovators adds unnecessary cost which in turn discourages uptake. This is particularly challenging in technology: the adoption of different standards, e.g. different security requirements for the whole of government (led by CESG) compared with the NHS mean that innovators need to reinvent the wheel to achieve similar objectives. If we want to increase innovation, we should default to a single standard across government, which will have the added benefit of improving cross-departmental working which is particularly important in the case of health and social care.

   b. duplication of services adds cost. Successful innovation changes the type of services delivered and therefore creates obsolescence. Old ways of doing things therefore need to be phased out or costs will double rather than be cut. In most markets, this happens naturally as a result of commercial pressure, but there are few comparable mechanisms in the NHS.

13. Have realistic expectations. Successful innovations typically follow a pattern of initial early adopters and then mass uptake. By definition, early adopters are not the whole market and the lessons they learn are key to developing solutions which are applicable for a much wider base. Early innovation therefore typically solves a small, but important, number of problems for a discrete population
base. Expectations that innovative approaches should address every challenge for every member of the population are unrealistic and are destined to fail. Successful innovators know that rollout and adoption tends to be incremental with the scope for rapid iterations.

**Actions at national level in the NHS**

*What specific actions do you think national NHS bodies, such as the NHS National Commissioning Board, need to take to encourage and stimulate the successful and rapid adoption and spread of innovations throughout the NHS?*

14. At national level, it is important to lead by adopting the principles outlined above, i.e.:
   a. show leadership by adopting smart ways of working;
   b. ensure the alignment of incentives so that all organisations are remunerated by outcomes rather than process-based metrics. We welcome the government's approach as articulated in the Outcomes Framework but recognise that there is still some way to go here e.g. Payment by Results still creates an incentive for intervention by hospitals rather than community-based prevention;
   c. encourage local organisations to adopt scalable, secure solutions, based on existing national and international standards;
   d. ensure that any locally-facing guidelines adopt an appropriately scaled approach to risk management: this means a proportionate approach to risk so that smaller-scale investments that should produce a rapid return have a lower bar to cross and larger initiatives;
   e. avoid duplicating standards, e.g. adopt CESG-led security standards rather than reinventing the wheel;
   f. set a manageable number of objectives for NHS organisations so that they can innovate to achieve them – i.e. make sure that the pursuit of perfection does not get in the way of delivering improvements.

15. There should be a presumption of openness at a national level with a default position of sharing all standards and requirements with developers. The routine posting of specifications and objectives within the N3 walled garden puts unnecessary obstacles in the way of innovators in their quest to understand NHS requirements. This sends out the message that the NHS is closed to new ideas and partners as well as risking poorly targeted investment in innovations that are unlikely to be adopted.

16. The review paper rightly talks about creating 'pull'. At a national level, creating 'pull' is about giving end-users (purchasers) authority and confidence to purchase equipment and services that will help them deliver the business imperatives. It should be supported by clear overarching objectives that allow creative and innovative approaches to flourish. 'Pull' is thwarted by national-level uncertainty, and too many, occasionally conflicting, guidelines and targets that can also be over-prescriptive.

**Actions at a local level**

*What specific actions do you think local NHS bodies, such as providers and Clinical Commissioning Groups, need to take to encourage and stimulate the successful and rapid adoption and spread of innovations throughout the NHS?*
17. Adopt the same philosophy as identified above in the answer to national-level actions.

18. Have a clear vision about the transformation that the adoption of new technology could make at a local level. The consultation paper talks about innovation as an idea, service or product. We need to think bigger than just individual apps. When properly integrated around real-world uses, a series of integrated apps supported by a secure platform will be far greater than the sum of its parts. Integrated solutions to support healthcare professionals, carers and patients will deliver far more than individual isolated apps. For example:

a. At present, a typical community nurse's working day involves an initial journey to base to collect paperwork and obtain the day's workload. S/he then may head off back to see a patient who could well live close to the nurse's home, and begin a round of pre-scheduled visits. Meanwhile, an emergency arises which requires urgent attention, but to obtain relevant notes s/he has to go back to base and then out to see that patient. Other patients are left waiting and it turns out that at least one has to attend another appointment so when the nurse arrives, it is a wasted journey. At the end of the day, the nurse returns to base to file notes. Throughout the day, s/he has experienced the inevitable frustrations and delays that arise from working in the community without smart secure mobile connectivity. The consequences are significant waste and delay that adversely impacts patient experience. The huge variation in the number of cases seen by community nurses each day shows that it need not be like this.

b. By integrating a range of BlackBerry-enabled solutions that are available now, the nurse’s day could have been far more efficient, much less stressful and achieved a significantly improved patient experience, all with enhanced care quality.

c. That same nurse begins the day at home by picking up a work schedule that the team supervisor has pushed to each community-based member of staff’s BlackBerry smartphone. The patient list is chosen on the basis of clinical requirements and each nurse’s route is optimised to ensure the minimum possible travel time while ensuring that patients’ appointment windows are going to be met.

d. The work schedule includes relevant patient details including case history, location details and other key information. The BlackBerry uses its inbuilt satellite navigation capability to plot a route to the first patient of the day. On arriving, but before entering the patient’s home, the nurse reviews case notes and also activates the lone worker safety capability on the BlackBerry which keeps base up-to-date with location details and sets a likely appointment duration after which an alert would automatically be raised.

e. On entering the patient's home the nurse uses BlackBerry-enabled digital pen and paper to record notes, which are seamlessly and securely transferred to base without even having to take the BlackBerry out of the bag.
Meanwhile, the team supervisor has identified this nurse as the most appropriately qualified professional to deal with an urgent case. The day’s work schedule seamlessly updates, including patient records and GPS-enabled navigation which leads directly to the new appointment. Meanwhile the next patient on the list is notified that a different nurse will pick up previously scheduled appointments to ensure all patients will still be seen on time.

All of these solutions are available now and deployed in real NHS settings. The digital pen and paper solution alone has saved £200,000 per year for midwives at Portsmouth NHS Hospitals Trust. When community-based teams are free to integrate the full range of solutions then the real benefits of innovative technology will be realised. More information about Portsmouth NHS Hospitals Trust’s successful deployment of BlackBerry-enabled digital pen and paper can be found at http://uk.blackberry.com/newsroom/success/portsmouth_hospitals_nhs_trust.jsp

19. Other examples of successful innovation using BlackBerry solution in the NHS include:

   a. mobile access to patient records and use of a voice-guided GPS system to assist Northern Doctors Urgent Care deliver out of hours services more efficiently – http://uk.blackberry.com/newsroom/success/nduc.jsp

   b. deployment of a BlackBerry-enabled tool to provide real-time information of donor availability for liver transplants by University hospitals Birmingham – http://uk.blackberry.com/newsroom/success/universityhospitals.jsp

20. Proving operational value from innovation is particularly challenging when no baseline performance statistics exist. Local NHS organisations should therefore be encouraged to collect baseline performance innovation before adopting new innovation so that value can be measured. This should not be at the expense of delaying the adoption of innovation but rather it should be embedded in the ethos of all NHS organisations.

**Actions by NHS partners**

*What specific actions do you believe others, such as industry, academia, patient groups or local authorities, could take to accelerate adoption and spread, and what might encourage them to do so?*

21. RIM works closely at a national and global level with industry bodies and government organisations to help define best practice standards. We strongly welcome a competitive environment and recognise that there is a responsibility on all organisations involved in the development of standards to ensure that these are platform neutral and do not duplicate existing approaches.

22. Through our Alliance programme, we are working closely with many partners to create new solutions which we believe will meet NHS and wider health care needs. We are keen to widen participation in that programme to bring new innovative solutions to the NHS.
Any other comments

Do you have any further comments about accelerating the adoption and spread of innovation in healthcare?

23. RIM would be pleased to work with the DH and NHS to address any of the areas identified in this paper. We welcome this review's open approach in thinking about how to improve innovation in the NHS.

Further information

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