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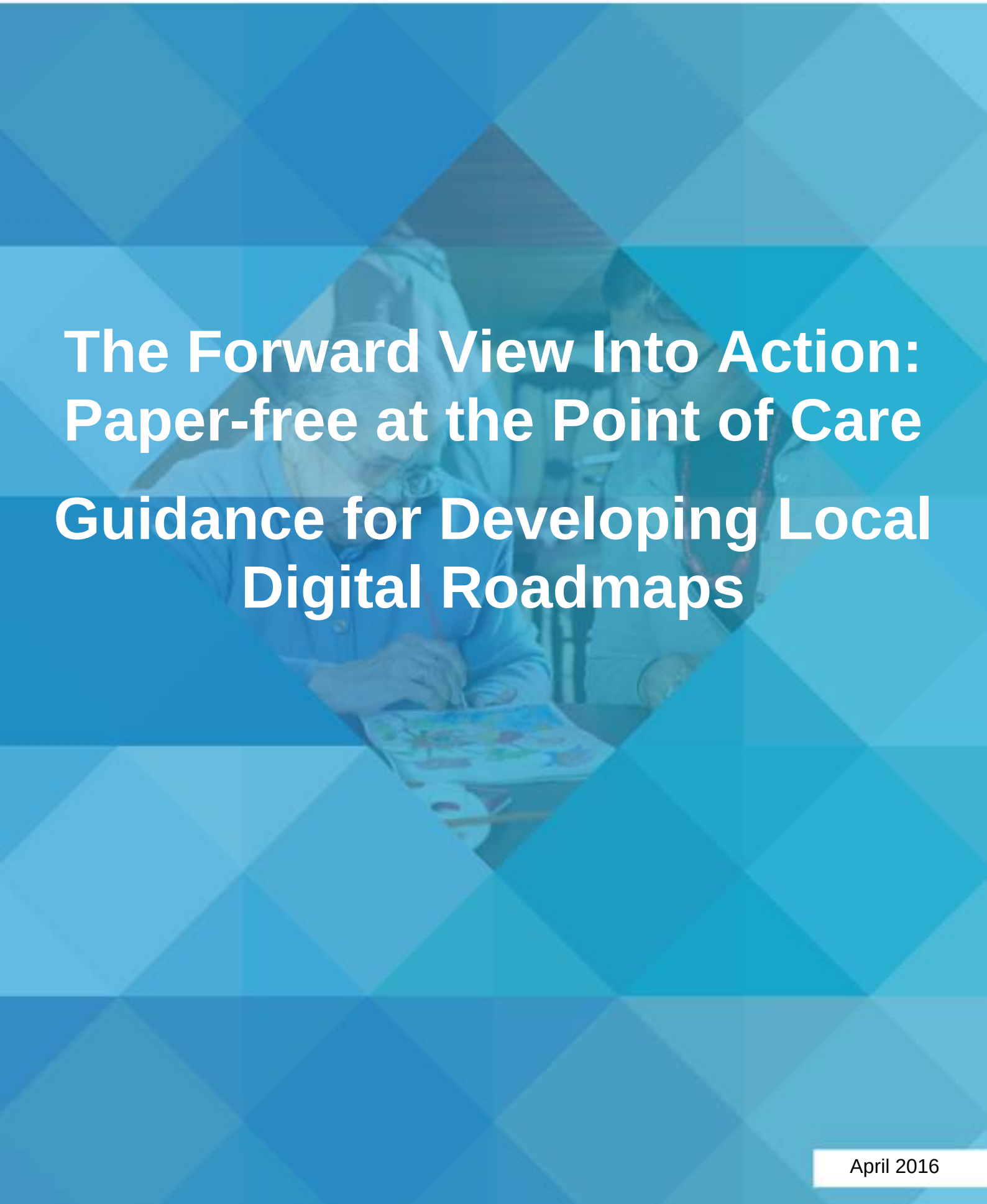

The Forward View Into Action: Paper-free at the Point of Care

Guidance for Developing Local Digital Roadmaps

April 2016

Paper-free at the Point of Care: Guidance for Developing Local Digital Roadmaps

Version number: 1.0

First published: April 2016

Prepared by: NHS England

This document is for: CCGs, Providers of NHS care, Local Authorities, NHS England Regional and DCO teams

The NHS Five Year Forward View sets out a vision for the future of the NHS. It was developed by the partner organisations that deliver and oversee health and care services including:

- NHS England
- NHS Improvement*
- Health Education England (HEE)
- The National Institute for Health and Care Excellence (NICE)
- Public Health England (PHE)
- Care Quality Commission (CQC)

*NHS Improvement is the operational name for the organisation that brings together Monitor, NHS Trust Development Authority, Patient Safety, the National Reporting and Learning System, the Advancing Change team and the Intensive Support Teams.

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Other formats of this document are available on request.
Please send a request to england.digitalroadmap@nhs.net.

Executive summary

Better use of data and digital technology has the power to support people to live healthier lives and use care services less. It is capable of transforming the cost and quality of services when they are needed. It can unlock insights for population health management at scale, and support the development of future medicines and treatments. Putting data and technology to work for patients, service users, citizens and the caring professionals who serve them will help ensure that health and care provision in the NHS improves and is sustainable. It has a key part to play in helping local leaders across health and care systems meet the efficiency and quality challenges we face.

Last September a three-step process began to enable local health and care systems to produce Local Digital Roadmaps (LDRs), setting out how they will achieve the ambition of Paper-free at the Point of Care by 2020. The first step was the organisation of local commissioners, providers and social care partners into LDR footprints. The second step was for NHS providers within LDR footprints to complete a Digital Maturity Self-assessment. Both of these steps have now been completed.

Each LDR footprint is now asked to develop and submit an LDR by **30 June 2016**.

LDRs will be reviewed in July within the broader context of Sustainability and Transformation Plans (STPs). A signed off LDR will be a condition for accessing investment for technology enabled transformation.

An LDR is expected to include the following elements:

- A five-year vision for digitally-enabled transformation
- A capability deployment schedule and trajectory, outlining how, through driving digital maturity, professionals will increasingly operate ‘paper-free at the point of care’ over the next three years
- A delivery plan for a set of universal capabilities, detailing how progress will be made in fully exploiting the existing national digital assets
- An information sharing approach

Progress in delivering the commitments and aspirations in Local Digital Roadmaps will become embedded in commissioner and provider assurance, assessment and inspection regimes going forward.

1 Introduction and context

1.1 The Five Year Forward View makes a commitment that, by 2020, there would be "fully interoperable electronic health records so that patient's records are paperless". This was supported by a Government commitment in Personalised Health and Care 2020 that "all patient and care records will be digital, interoperable and real-time by 2020".

1.2 In February, the Secretary of State announced £4.2bn of funding for NHS technology, including £1.8bn to create a paper-free health and care system.

1.3 The 16/17 Planning Guidance introduced the concept of place-based Sustainability and Transformation Plans (STPs). The STP guidance published in February 2016 stated that, in developing STP content and ensuring delivery of transformation, local health and care systems should harness the opportunities that digital technology offers. The best plans will be coherent across all elements, including 'digital'. The development of a Local Digital Roadmap is a clear opportunity for local communities to articulate how they will harness technology to accelerate change.

1.4 It is clear that 'digital' has a significant role to play in sustainability and transformation, including for example delivering primary care at scale, securing seven day services, enabling new care models and transforming care in line with key clinical priorities.

1.5 In April, NHS England published the General Practice Forward View, including a commitment to greater use of technology to enhance patient care and experience, as well as streamlined practice processes.

1.6 A number of recent and forthcoming reviews have confirmed how clinically led improvement, enabled by digital technology, is vital to driving forward increased productivity gains, identifying existing working practices that mask unwarranted variation and supporting the introduction of radically new models of co-ordinated and fully participatory care. These include publications by the Nuffield Trust on delivering the benefits of digital health care, Baroness Martha Lane Fox's work on increasing digital health literacy and access to information, Dr Robert Wachter's exploration of clinical informatics leadership, Dame Fiona Caldicott's work on behalf of the Care Quality Commission on public confidence and data management and Lord Carter's review examining operational productivity in hospitals.

1.7 Last autumn, a three-step process was initiated that concludes, as outlined in this document, with CCGs leading local health and care systems to produce Local Digital Roadmaps (LDRs), setting out how they will achieve the ambition of operating Paper-free at the Point of Care by 2020.

1.8 In the first instance, local commissioners, providers and social care partners were invited to organise themselves into LDR footprints. This work has been completed, resulting currently in 85 footprints, each with a named 'lead'. Subsequently, organisations have been asked to come together into STP footprints. From an initial analysis, STP footprints typically map to LDR footprints on a one-to-one or one-to-many basis, with a small number of cases where an LDR footprint overlaps with a number of STP footprints. In all circumstances, we would expect appropriate overarching governance and co-ordination. A mapping of STP to LDR footprints can be downloaded from the NHS England website.

1.9 In the second step, with the support of Monitor and TDA, NHS secondary care providers within LDR footprints completed a Digital Maturity Self-assessment. This step has also been completed. This analysis has been shared with providers, footprint leads in CCGs, DCO and other regional colleagues. Further information is available on the NHS England website.

1.10 In addition, digital maturity assessment initiatives in primary care and in social care (initially focused on local authorities with the intention to broaden to social care providers in the future) are underway, and the results will be shared locally to assist with LDR development as they become available. Further information is available on the NHS England website and LGA website respectively.

1.11 This guidance, and the accompanying templates/checklist, supports the third step of this process, the development of LDRs.

1.12 The Department of Health, its arms-length bodies and key partners are committed to aligning levers and incentives to achieve the ambition of being Paper-free at the Point of Care. Over the coming years, progress towards the ambition will be a key component of commissioner and provider continuous improvement, performance, regulation and inspection, and LDRs are a key foundation for this. Indeed, within a wider set of key digital delivery metrics, the CCG Improvement and Assessment Framework (2016/17) includes a metric confirming that CCGs are represented in a 'signed off' Local Digital Roadmap.

2 How can digital technology enable the transformation of health and care?

2.1 Within their Sustainability and Transformation Plans, local health and care systems are expected to address the three challenges identified in the Five Year Forward View, setting out how they will close:

- The care and quality gap
- The finance and efficiency gap
- The health and wellbeing gap

2.2 In considering how digital technology can support closing the care and quality gap, local health and care systems will want to consider for example:

- How new care models, seven-day services and effective triage (for primary care and unscheduled care access) can be underpinned by access to digital, real-time and comprehensive patient information
- How clinicians and care professionals can make more effective decisions through synthesising information from a range of sources
- How clinicians can be alerted promptly to deteriorating or ‘at risk’ patients

2.3 In considering how digital technology can help close the finance and efficiency gap, local health and care systems will want to consider for example:

- How contact time for community-based staff can be increased through mobile working
- How unnecessary diagnostics, no access visits or duplicate equipment orders can be avoided through having access to a comprehensive patient record
- How acute productivity can be improved through solutions such as e-rostering, asset tracking and blood stock management

2.4 In considering how digital technology can support closing the health and wellbeing gap, local health and care systems will want to consider for example:

- How patient-recorded information can contribute to an increased role for self-care across pathways
- How population health management can be supported through the analysis of data from across the system
- How the take-up of personal health or integrated health and care budgets can be accelerated through providing digital information and tools to patients

2.5 The submission date for LDRs has been aligned with that for STPs. STPs are expected to have a ‘golden thread’ of digital technology running through the ambitions and plans for transformation and sustainability. ‘Digital’ will feature as part of forthcoming regional development days, in the ongoing support from national teams and in the regional conversations following submission.

3 What is meant by the 2020 ambition of Paper-free at the Point of Care?

3.1 Operating Paper-free at the Point of Care is about ensuring health and care professionals have access to digital information that is more comprehensive, more timely and better quality, both within and across care settings. It's scope is defined by the following seven groups of capabilities:

- Records, assessments and plans
- Transfers of care
- Orders and results management
- Medicines management and optimisation
- Decision support
- Remote care
- Asset and resource optimisation

3.2 Information sharing underpins these groups of capabilities. The goal is that shared information will be structured and coded to support decision making, available in real-time as required and without unduly burdening the recipient. It is recognised that different local health and care systems are at different starting points and may have different local priorities. In their information sharing approach, localities should consider how they move from only viewing information through to using structured information and on to advanced decision-support. Annex 6 provides further information on interoperability principles and resources, and sections 6.31 to 6.36 set what should be included on information sharing in an LDR.

3.3 A number of local system-wide infrastructure elements underpin effective delivery of these capabilities:

- Mobile working
- Unified communications

3.4 The recent Digital Maturity Self-assessment undertaken by NHS secondary care providers is an assessment of current maturity to deliver Paper-free at the Point of Care.

3.5 The 2020 ambition will not be realised solely through the deployment of the digital technology solutions that provide health and care professionals and patients with new capabilities. Achieving maximum take-up and optimisation will also require a focus on the widest possible set of instruments and actions to enable changes to workflows and pathways, with clinical engagement, training and support paramount.

4 Why do local health and care systems need to develop Local Digital Roadmaps?

4.1 LDRs will identify how local health and care systems will deploy and optimise digitally-enabled capabilities to improve and transform practice, workflows and pathways across the local health and care system. This should lead to quality benefits as, for example, better informed clinical decisions are made at the point of care and the right medication is given in the right dose to the right patient more consistently.

4.2 It is envisaged that in turn, this leads to direct economic benefits, such as time saved by avoiding unnecessary home visits or spend on duplicate diagnostic tests that are not necessary.

4.3 Patient experience should also improve as, for example, they are asked less frequently for the same information by health professionals at different points in the care process.

4.4 LDRs will provide a short, medium and long term perspective on plans and priorities for digital technology deployment and optimisation, with a particular focus on Paper-free at the Point of Care. The identification of future aspirations will support local strategic decisions on architecture, prioritisation and investment, and assist in relationships with suppliers.

4.5 LDRs are system-wide, covering commissioners and providers of primary care, secondary care (acute, community, mental health and ambulance) and social care (local authorities and social care providers). They should identify new capabilities for all frontline health and care professionals, including medics, nurses, midwives, AHPs, social workers and care staff. LDRs can be a catalyst for closer working relationships. A system-wide view allows more effective prioritisation and targeting of resources, increased opportunities for joint initiatives, common solutions and shared expertise, and more effective decisions on where in the system benefits should be realised.

4.6 LDRs will be a ‘gateway’ to funding. Where funding is sought in the future to progress towards Paper-free at the Point of Care, the associated proposals must align with the intentions and aspirations outlined in LDRs. Further information on investment opportunities is in section 5.

4.7 LDRs are also a foundation for ongoing governance of delivery.

4.8 LDRs are not intended to be a replacement for business cases. It is expected that business cases will still be required to support local investment decisions. However, a consideration in any such decisions is expected to be alignment with the LDR.

4.9 LDRs are not intended to be a replacement for individual organisational informatics strategies. The accountability for many aspects of the digital agenda will continue to reside with the boards of secondary and social care providers, or for primary care, with CCGs as commissioners of GP IT services. Commissioners will increasingly need to develop their ability to support digital transformation and strategic alignment of system-wide ambitions.

5 What funding will be available to local health and care systems to help deliver the 'paper-free' ambition?

5.1 Over the next five years, funding of £1.8bn is to be distributed across local health and care systems to drive up the digital maturity of providers of NHS and social care. The Driving Digital Maturity Investment Fund is made up of both capital and revenue.

5.2 The process for accessing and criteria for allocating this funding is currently being agreed. Some aspirations outlined in LDRs will clearly be funding dependent. This should not be seen as a barrier to their inclusion.

5.3 As the Digital Maturity Self-Assessment index demonstrated, NHS providers have made differential progress in enabling frontline professionals to operate Paper-free at the Point of Care. Some are world class across the board. Others have invested in the relevant underpinning capabilities and necessary technical infrastructure but have not sustainably improved the quality, safety and efficiency of patient care by transforming care processes and workflows.

5.4 A number of providers recognise that they haven't secured the necessary board level engagement, clinical leadership or informatics expertise that is essential to successfully deliver this agenda. Demonstrating that an organisation or a local health and care system is ready to invest effectively in the digital agenda will be a gateway to securing investment funds.

5.5 Resources will be available to help organisations and local health and care systems have the skills, knowledge and leadership to become investment ready, to deploy and optimise new capabilities, and to secure the necessary underpinning infrastructure.

5.6 2016/17 will largely be a preparatory year in relation to new funding for driving digital maturity. The focus locally should be on delivering existing and planned commitments and optimising previous investment. Local health and care systems should be developing increasingly mature governance to oversee and assure the creation of 'fit for purpose' local business cases. These must be aligned to the priorities and plans for investment in digital transformation and new care models detailed in LDRs and STPs. These local business cases will unlock national investment.

5.7 The NHS England Estates and Technology Transformation Fund (formerly the Primary Care Transformation Fund) is a multi-year £1billion capital investment programme that commenced in 2015/16. In October 2015, individual CCGs were invited to start to prepare submissions for 2016 to 2019, with further guidance expected to be published shortly. In addition to investment in technology 'in primary care for primary care', proposals will also be welcome for information sharing (interoperability) or collaboration solutions between primary

care and other settings that benefit primary care in some way, or provide access to GP-held information in other settings.

5.8 The third edition of the GP IT Operating Model is due to be published soon, and CCGs have had an 18.5% increase in 2016/17 revenue funding. The first call on this funding is the 'core and mandated' requirements, and if funding remains after they have been met, CCGs are expected to pursue a range of 'enhanced' and 'transformational' services, overlapping with LDR ambitions.

5.9 Funding proposals must align with the intentions and ambitions outlined in Local Digital Roadmaps, but inclusion in a Local Digital Roadmap is not an automatic guarantee of future investment support.

6 What should be in Local Digital Roadmaps?

General

6.1 LDRs should be submitted in the form of a narrative document with supporting templates completed. Annex 1 is a checklist for the submission, with the templates included for illustration in Annexes 2 to 5. Editable versions of these templates can be downloaded from the NHS England website. Additional supporting documents can also be submitted. Where this is the case, these documents should be cross-referenced in the checklist, clearly identifying the specific requirement to which they relate.

6.2 LDR submissions should identify who has endorsed the roadmap and which organisations have made significant contributions in the development process. Section 7 provides guidance on involvement and approvals.

6.3 Submissions should summarise the process through which the LDR has been developed. This should include a reference to how alignment has been maintained with the development of the corresponding Sustainability and Transformation Plan.

Vision for digitally enabled transformation

6.4 LDRs should include a vision for how digitally enabled transformation, will help address the three national challenges: (i) closing the health and wellbeing gap, (ii) closing the care and quality gap and (iii) closing the finance and efficiency gap. The vision should have a five-year horizon (up to March 2021).

6.5 The scope of this vision should encompass but not be limited to:

(i) Paper-free at the Point of Care

(ii) Digitally enabled self-care

(iii) Real-time data analytics at the point of care

(iv) Whole systems intelligence to support population health management and effective commissioning, clinical surveillance and research

6.6 The vision will be informed by the priorities identified by the local health and care system in the development of their Sustainability and Transformation Plan. The questions in section 2 are examples of the questions that should be considered in developing the vision, although they are by no means exhaustive.

6.7 Local health and care systems should also pay due attention to the key enablers of the vision, including digital inclusion, digital literacy of the workforce and of patients and carers, and the crucial part that chief information officers, chief clinical information officers and others play at board and senior levels in local organisations in leading the delivery of this agenda. Due regard should be paid to equalities obligations, both in terms of the Equality Act 2010 and section 14 of the NHS Act 2006.

Baseline position

6.8 LDRs should set out a summary of the current context for 'digital' within the local health and care system. This should include an overview of the digital maturity of key primary and secondary care providers and social care organisations in the system informed by the range of maturity information available (see sections 1.9 to 1.10), and a summary record of key recent achievements and key current initiatives to move individual providers and/or partners across the local footprint as a whole towards being Paper-free at the Point of Care.

6.9 Different systems will be able to progress towards operating 'paper-free at the point of care' at different rates – for example, certain organisations and systems will need to focus in the short term on having robust arrangements in place to successfully manage Local Service Provider (LSP) exit, while others will need to make a step change to address the immaturity of particular critical infrastructure. LDR submissions should identify the rate limiting factors for progress.

Readiness assessment

6.10 Successful system-wide change requires strong leadership, deep clinical / practitioner engagement and effective governance arrangements. LDRs should set out the proposed arrangements in this respect going forward through 16/17. An insight into the current state of digital leadership within individual providers is available from the Digital Maturity Self-assessments (see section 1.9).

6.11 Focusing on the deployment of technology alone without a credible change management approach – for example, the NHS Change Model - will not realise the potential of digital transformation, nor deliver Paper-free at the Point of Care. LDRs should identify the approach(es) / model(s) that will be followed across the local health and care system. Where there is variation across different organisations, LDRs should outline any plans to rationalise or blend the different approaches.

6.12 LDRs should set out the approach to benefits management and measurement across the local health and care system, including the estimation of benefits within business cases, the prioritisation of initiatives, the tracking of benefits, and the realisation of efficiency savings. Where there is a different approach being adopted across organisations within a local health and care system, LDRs should outline any plans to rationalise or blend the different approaches to enable consistent judgements to be made regarding priorities and progress.

6.13 LDRs should summarise the known, anticipated and target sources of investment to support the achievement of the ambition of Paper-free at the Point of Care, encompassing capital, one-off revenue and ongoing revenue costs. Section 5 outlines the potential national sources of investment. Other sources could include local reserves or the reinvestment of benefits realised.

6.14 LDRs should provide an overview of the programme structure for 16/17 that will be delivering on the Paper-free at the Point of Care ambition, identifying the programmes / projects and their key focus.

6.15 All organisations will face challenges allocating the resources to support design, build and deployment activities in change programmes. LDRs should outline how, by working as a local health and care system, resources are to be utilised more effectively.

Capability deployment

6.16 For each of the seven Paper-free at the Point of Care groups of capabilities identified in section 3.1, LDRs should summarise the current maturity across the health and care system, informed by the range of digital maturity information available (see sections 1.9 to 1.10).

6.17 Through the template illustrated in Annex 2, LDRs should provide a capability deployment schedule. The format of the template is designed primarily for analysis across LDRs. At local discretion, LDRs may also include a visual representation or illustration of the deployment schedule, for example in a Gantt chart, ‘tube map’, fan chart or other diagram.

6.18 The capability deployment schedule should identify which capabilities will be deployed when, over a three-year horizon (to March 2019). For example:

- GPs receive structured clinical documents from acute at patient discharge from 16/17 [Transfers of care]
- Community nursing team leaders can electronically roster based on skill level and location from 16/17 [Asset and resource optimisation]
- Healthcare professionals in acute settings being automatically alerted to deteriorating patients (general wards) from 16/17 [Decision support]
- Mental health nurses can record patient information at the point of care from 17/18 [Records, assessments and plans]
- GPs can access the detailed record of any patient registered with a practice in the federation from 17/18 [Records, assessments and plans]
- Care Homes can access the summary information of a patient including medication in 17/18 [Records, assessments and plans]
- A&E clinicians can access details and condition of inbound patient from 18/19 [Records, assessments and plans]
- Social Care receive structured information from GPs from 17/18 [Transfers of Care]
- Acute clinicians (medics, nurses and AHPs) can prescribe digitally for discharge meds from 18/19 [Medicines management and optimisation]
- Paramedics can book patients into Minor Injuries Unit appointments from 18/19 [Transfers of care]

Deployment of capabilities might be phased, focusing on selected settings / professional groups / activities before others. For example:

- Clinicians in A&E can access GP-held information on medication / allergies / adverse reactions from 16/17; Clinicians in other unscheduled care settings can access GP-held information on medication / allergies / adverse reactions from 17/18
- Nurses can complete general assessments digitally at the bedside from 16/17; Midwives can complete general assessments digitally at the bedside from 17/18; Nurses and midwives can complete specialist assessments digitally at the bedside from 18/19

6.19 Future capabilities can be identified from a range of perspectives, including:

- The vision for digitally-enabled transformation – for example, by considering how 'primary care at scale' can be supported through a shared record
- The digital maturity assessment frameworks (see sections 1.9 and 1.10) – for example, by considering how maturity against 'records, assessments and plans' can be increased, exploiting the information sharing approach
- GP IT Operating Model requirements – for example, by considering how the core requirement of secure access to the clinical system outside the practice to support clinical consultation can be met
- Building on existing or proven solutions – for example, by considering how to scale up an ePrescribing solution enterprise-wide across a provider that currently only has this partially deployed
- Other policies, strategies and reviews – for example, by considering how the recommendations around 'digital' in the Carter review can be delivered, including e-rostering, ePrescribing and e-observations

6.20 At local discretion, further information may be recorded at a more granular level, against individual capabilities identified in the deployment schedule. This may include status (e.g. business case approved), solution required, benefit category, associated care pathways and settings, business change plans. This can be achieved through using additional columns in the spreadsheet template illustrated in Annex 2. As this information is not relevant to the approval process, any locally acceptable way of recording this information is welcome.

6.21 Some elements of a capability deployment schedule may be developed for a broader footprint and then 'dropped into' individual LDRs. For example, where a pan-region initiative on cancer is underway, or where urgent and emergency care is being considered for a larger footprint.

6.22 It is recognised that different local health and care systems will progress towards Paper-free at the Point of Care at different rates, prioritise the deployment of capabilities differently, and be able to articulate their medium- to long-term plans to different degrees. Within the deployment schedule, it will be expected that 16/17 milestones are already firm commitments and that there is a high degree of confidence locally that they will be delivered. It is recognised that a proportion of 17/18 and 18/19 milestones will be aspirational, dependent for example upon secured funding and local approval of the relevant business cases. The identification of future aspirations will support local strategic decisions (and engagement with suppliers) on architecture, prioritisation and investment, and through an aggregated view across roadmaps, facilitate national investment prioritisation and supplier product roadmap development.

6.23 For NHS secondary care providers specifically, based on their completed Digital Maturity Self-assessment and the capability deployment schedule, LDRs should identify the current and target future digital maturity scores for each of the seven Paper-free at the Point of Care groups of capabilities. These ambitions will be used to understand the pace and relative prioritisation being proposed locally. A capability deployment trajectory is illustrated in Annex 3, with the spreadsheet to generate this downloadable from the NHS England website. In due course, this approach will be extended to cover primary and social care.

Universal capabilities delivery plan

6.24 Every local health and care system will be expected to make early progress on 10 universal capabilities, demonstrating clear momentum between now and the end of March 2017 and substantive delivery by end-March 2018. The universal capabilities are:

- Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions
- Clinicians in urgent and emergency care settings can access key GP-held information for those patients previously identified by GPs as most likely to present (in U&EC)
- Patients can access their GP record
- GPs can refer electronically to secondary care
- GPs receive timely electronic discharge summaries from secondary care
- Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care
- Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly
- Professionals across care settings made aware of end-of-life preference information
- GPs and community pharmacists can utilise electronic prescriptions
- Patients can book appointments and order repeat prescriptions from their GP practice

6.25 In many systems, the capability will already have been deployed to some degree and the main challenge going forward is achieving more comprehensive take-up and optimisation. The potential of these capabilities has already been clearly demonstrated in some localities. Progress against the universal capabilities represents the minimum evidence that local footprints are making clear progress towards operating Paper-free at the Point of Care. Delivering these capabilities should generate rapid benefits and progress towards the twin goals of sustainability and transformation. The capabilities may require marginal local investment – but many are supported by national services, standards or infrastructure.

6.26 Through the template illustrated in Annex 4, LDRs should provide a delivery plan for each of the 10 universal capabilities. This template also sets out the defined aims for each universal capability, expressed in terms of take-up and optimisation. A further document entitled Universal Capabilities Information and Resources can be downloaded from the NHS England website, providing further information to support the development of delivery plans. It includes examples of opportunities to go further than the defined aims, case studies and storyboards, national metrics, Digital Maturity Self-assessment questions, and information on associated national services / infrastructure / standards. This document will be refreshed over time.

6.27 The delivery plan should identify the baseline across the local health and care system, which may encompass data for deployment penetration across local providers (e.g. deployed in 80% of practices), volumetrics (e.g. accessed 2500 times in Q3) and take-up (e.g. accessed for 95% of prescriptions).

6.28 The delivery plan should set out the ambition for 16/17 and 17/18 with respect to the defined aims for each universal capability. For example, for the universal capability of 'GPs can refer electronically to secondary care', the defined aims are:

- Every referral created and transferred electronically
- Every patient presented with information to support their choice of provider
- Every initial outpatient appointment booked for a date and time of the patient's choosing (subject to availability)
- [By September 2017 – 80% of elective referrals made electronically]

Some local health and care systems may go beyond the defined aims. For example, they may be in a position to automatically incorporate elements of the GP record into the referral letter.

6.29 The delivery plan should list the key activities that will be undertaken by quarter in 16/17 and 17/18. These may encompass technical deployment, uploading of data, engagement and training, local protocols and agreements, and changes to workflow and pathways. Where local health and care systems choose to use an alternative technical solution to the national services / infrastructure / standards available, then a rationale should be provided.

6.30 The delivery plan should set out proposals for evidencing progress towards the defined aims for each universal capability. These can be based upon a combination of national and local metrics, potentially alongside other evidence.

Information sharing

6.31 Addressing the care and quality gap and effectively supporting new care models and place-based transformation will require services to be built around the needs of patients. Health and care professionals will need to access and share information, alert, task and notify across care settings. For example:

- GPs receive structured clinical documents from acute hospitals at patient discharge [Transfers of care]
- Clinicians can perform medicines reconciliation and contra-indication checking at point of patient admission [Medicines management and optimisation]
- Care professionals are prompted take proactive action for deteriorating patients [Decision support]
- Professionals involved in the care of a patient in crisis can co-ordinate their care through a shared care plan [Records, assessment and plans]

6.32 The NIB Interoperability Strategy outlines the sharing of information within and across localities through open interfaces (open APIs) based on open standards. An initial step in the strategy is the opening up of primary care systems to support integrated workflow and access to records. Further information on this 'GP Connect' initiative will be released shortly.

6.33 A template is illustrated at Annex 5 for capturing how the information sharing approach will be developed over the next three years, articulating how such capabilities would be enabled. Examples of information sharing approaches are provided on the NHS England website.

6.34 Some LDR footprints may choose to work with neighbouring footprints in developing and implementing a joint information sharing approach.

6.35 To facilitate the sharing of information, LDRs should set out plans to achieve, by the end of 16/17, a common information sharing agreement, with all providers in the local health and care system signed up. Due consideration should be given to the lawful basis for information sharing to take place.

6.36 LDRs should summarise the current status regarding adoption of the NHS number across the local health and care system (informed by digital maturity information as described in sections 1.9 to 1.10), and where gaps exist, identify what steps will be undertaken in 16/17 to address them, and if relevant, what gaps are likely to remain going in to 17/18.

6.37 To extract the most value from the sharing of information, a number of information coding standards should be rolled out across the local health and care system. LDRs should set out plans and milestones for the adoption of the following standards:

- SNOMED-CT to support direct management of care
- Dictionary of Medicines and Devices (dm+d) to describe all medicines and devices

6.38 Annex 6 provides further information on interoperability principles and resources.

Infrastructure

6.39 To fully exploit the Paper-free at the Point of Care capabilities, an effective mobile working infrastructure – devices, authentication, user interfaces tailored to the device, connectivity and mobile device management - is required. In addition to mobilising professionals within their normal place of work, this will provide them with the ability to work in other care settings, patient homes, residential homes and other potential touch-down points across the community.

6.40 LDRs should summarise the current status of the mobile working infrastructure across the local health and care system (informed by digital maturity information as described in sections 1.9 to 1.10).

6.41 LDR submissions should confirm that individual providers have plans to further develop their mobile working infrastructure, although the detail does not need to be provided. If appropriate, system-wide initiatives to develop the mobile working infrastructure should be described.

6.42 Health and care professionals from different organisations should be able to collaborate through traditional mechanisms such as telephony and e-mail, and increasingly through emerging mechanisms including instant messaging, video- and web-conferencing, presence solutions and enterprise collaboration tools. The Health and Social Care Network will be an enabler of this in the future.

6.43 LDRs should summarise the current status and future plans to improve collaboration between professionals from different organisations within the local health and care system.

6.44 LDRs should summarise any current or planned initiatives to share infrastructure across the local health and care system. Examples may include shared data centres, joint support arrangements or joint cloud initiatives.

Minimising risks arising from technology

6.45 The National Data Guardian review of data security is underway. This is expected to produce a set of leadership responsibilities and data security standards – for example, that a strategy is in place for protecting systems from cyber-threats based on a proven framework such as Cyber Essentials, and that unsupported operating systems, software or internet browsers are not being used within the IT estate.

6.46 LDRs should confirm that robust plans, policies and procedures are in place for organisations across the local health and care system to minimise risks to patient safety and organisational reputation associated with the use of technology. Where this isn't the case, LDRs should set out the planned steps to get there. The relevant areas are:

- Data security
- Clinical safety
- Data quality
- Data protection and privacy
- Accessible information standards
- Business continuity and disaster recovery

6.47 GS1 standards incorporated within barcodes and RFID are increasingly used to provide improved patient safety, deliver greater regulatory compliance and drive operational efficiencies. Local Digital Roadmaps should confirm that providers are moving forward with the adoption of GS1 standards where appropriate.

7 Who should be involved locally in developing and approving a Local Digital Roadmap?

7.1 Representatives from commissioners and providers, both from health and social care within an LDR footprint should be involved locally in developing and approving an LDR. CCGs are expected to coordinate this development process, ensuring Health and Wellbeing Boards are engaged. Clinical, transformation and informatics communities should all be strongly represented. In addition, key suppliers and patients should be involved in the development process.

8 What further support will be available for developing and delivering a Local Digital Roadmap?

8.1 NHS England regional Digital Technology teams are available to offer support on LDR development. They can be contacted as follows:

- London Region – Mike Part, Regional Head of Digital Technology, mike.part1@nhs.net, or Steve Buck, Programme Manager (Local Digital Roadmaps) sbuck@nhs.net
- Midlands and East Region – Paul Fleming, Regional Head of Digital Technology, paulfleming@nhs.net
- North Region – Janet King, Regional Head of Digital Technology, janet.king@nhs.net
- South Region – Nicola Costin-Davis, Regional Head of Information & Transparency, or Aasha Cowey (nee Greensmith), P&I Senior Support Manager, via england.pandisouth@nhs.net

8.2 At a national level, further resources will be developed / collated and disseminated on an ongoing basis through the NHS England website. Any local resources with potential for wider dissemination should be forwarded to england.digitalroadmap@nhs.net.

8.3 A programme of national, regional and virtual events will be developed to enable commissioners and providers to engage with new resources and to learn from each other.

8.4 NHS England, NHS Improvement and the Health and Social Care Information Centre are currently developing a capacity and capability building programme, to enable local health and care systems to successfully exploit previous, current and new investment in digital technology. In 2016/17, the support offer will focus on:

- Building a composite picture of the digital activity in each geography and using that to inform the targeting of the support programme
- Ensuring that value for money from committed IT spend is realised and maximised through the optimisation of existing Technology Fund and new care model initiatives
- Supporting investment in high impact, quick-win, productivity and quality digital technology interventions using central capital funding available for the financial year
- Ensuring that digital technology is an integral part of place-based sustainability and transformation plans through the creation of effective LDRs
- Building a learning system that enables graduated levels of support to be offered

8.5 The latest information on resources, events and other support will continue to be accessible through the NHS England website.

9 What is the process beyond submission of LDRs?

9.1 In line with the outline process for Sustainability and Transformation Plans, a series of regional events are planned for July 2016, providing the opportunity to test the plans that local systems have submitted. In addition to this, it is anticipated that national and regional digital technology teams will be mobilised to review submitted LDRs. Further details of the review and sign-off processes will be published in due course.

9.2 To support transparency and openness, the final versions of the Local Digital Roadmaps should be published locally. NHS England will develop a mechanism to ensure that roadmaps from across the country are easily accessed.

9.3 NHS England will coordinate an aggregate-level analysis of the roadmaps, and the development of insights from this analysis, and make this available.

10 What are the key dates in the development process?

10.1 The key dates are detailed in the table below. All dates are 2016 unless otherwise stated.

April / May	STP regional development events
30 June	STPs and LDRs submitted
July	Review and approval of STPs and LDRs
Autumn	Local publication of LDRs, followed by national collation

11 How will delivery progress be measured and monitored?

11.1 A new CCG Improvement and Assessment Framework for 2016/17 has replaced the existing CCG assurance framework and CCG performance dashboard. The framework incorporates two indicators relevant to Paper-free at the Point of Care. The first is confirmation that the CCG is represented within a 'signed-off' Local Digital Roadmap. The second is a composite indicator covering digital interactions between primary and secondary care. It consists of four components that can be mapped directly to the universal capabilities.

11.2 Additionally, work is underway to develop national metrics to cover the full set of universal capabilities. Currently, as set out in section 6.30, local health and care systems are expected to evidence their progress against the universal capabilities through using a combination of national and local metrics.

11.3 The digital maturity assessment initiatives detailed in sections 1.9 to 1.10 are expected to be repeated on an annual basis, providing a further indication of progress for local, regional and national audiences.

11.4 Local health and care systems are expected to set out their capability deployment milestones by year, as detailed in section 6.18. This will enable local systems to review actual versus planned progress at year-end.

11.5 Local health and care systems are expected to set out their universal capability delivery plan activities by quarter, as detailed in section 6.29. This will enable local systems to review actual versus planned progress at quarter-end.

11.6 All of the information detailed above will be used to inform the improvement and support dialogue between CCGs and NHS England DCO teams. NHS England is also liaising with NHS Improvement and the CQC over how this information can be used going forward in framing the development support offer, performance assessment and inspection of providers.

12 How will Local Digital Roadmaps be iterated in the future?

12.1 Local health and care systems will want to develop and improve their local LDRs on a rolling basis.

12.2 Future versions may address gaps that exist in initial versions – for example, extending coverage to encompass smaller providers. They may respond to evolving local priorities as new models of care emerge and current clinical processes are reviewed – for example, identifying a new capability for deployment in 18/19 or re-phasing the deployment of one already on the schedule from a current to a subsequent year. They will need to flex to respond to funding and business case decision making processes, and take into account the latest assessments of digital maturity.

12.3 Future versions will wish to reflect and respond to new strategies, policies and reviews. For example, a children's digital health strategy, a new strategy for nursing, midwifery and care staff, and an updated GP IT operating model are all under development currently. The digital technology landscape and marketplace will also necessarily evolve over time.

12.4 It is essential that all communities are given an opportunity to learn from the best. There will be an increased focus on capturing and disseminating best practice, lessons learnt, both positive and negative, and improving the overall knowledge management and understanding as to how digitally enabled transformation takes place. Additional guidance reflecting this will support local health and care systems develop more comprehensive LDR in the future.

Annex 1 – Checklist for submission

Guidance				Response	
Element	**Requirement**	**Section**	**Templates**	**Response ref**	**Comments (where applicable)**
General	Identify who has endorsed the roadmap	6.2			
General	Identify which organisations have made significant contributions in the development process	6.2			
General	Summarise the process through which the roadmap has been developed	6.3			
Vision	Vision for digitally enabled transformation	6.4 - 6.7			
Baseline position	Overview of digital maturity of key primary, secondary and social care providers	6.8			
Baseline position	Summary of key recent achievements	6.8			
Baseline position	Summary of key current initiatives	6.8			
Baseline position	Identification of rate limiting factors	6.9			

Guidance				Response	
Element	**Requirement**	**Section**	**Templates**	**Response ref**	**Comments (where applicable)**
Readiness	Set out leadership, clinical engagement and governance arrangements	6.10			
Readiness	Identification of change management approach(es) / model(s) to be followed	6.11			
Readiness	Identification of approach to benefits management and measurement	6.12			
Readiness	Identification of known, anticipated and target sources of investment	6.13			
Readiness	Overview of programme / project structure for 16/17	6.14			
Readiness	Outline of how resources can be utilised more effectively	6.15			

Guidance				Response	
Element	**Requirement**	**Section**	**Templates**	**Response ref**	**Comments (where applicable)**
Capability deployment	Identification of current maturity for each of the 7 PF@PoC capabilities	6.16			
Capability deployment	Capability deployment schedule	6.17-6.18	Capability deployment schedule		
Capability deployment	Capability deployment trajectory (secondary care)	6.23	Capability deployment trajectory (secondary care)		
Universal capabilities delivery plan	Current baseline (for each universal capability)	6.27	Universal capabilities delivery plan		
Universal capabilities delivery plan	Ambition (for each universal capability)	6.28	Universal capabilities delivery plan		
Universal capabilities delivery plan	Key activities (for each universal capability)	6.29	Universal capabilities delivery plan		

Guidance				Response	
Element	**Requirement**	**Section**	**Templates**	**Response ref**	**Comments (where applicable)**
Universal capabilities delivery plan	Rationale for using alternatives to national services / infrastructure / standards (for each universal capability)	6.29	Universal capabilities delivery plan		
Universal capabilities delivery plan	Proposals for evidencing progress towards the defined aims (for each universal capability)	6.30	Universal capabilities delivery plan		
Information sharing	Information sharing approach	6.33	Information sharing approach		
Information sharing	Plans for a common information sharing agreement with all providers signed up	6.35			
Information sharing	Current status of adoption of NHS number / steps to address gaps / gaps that will persist into 17/18	6.36			

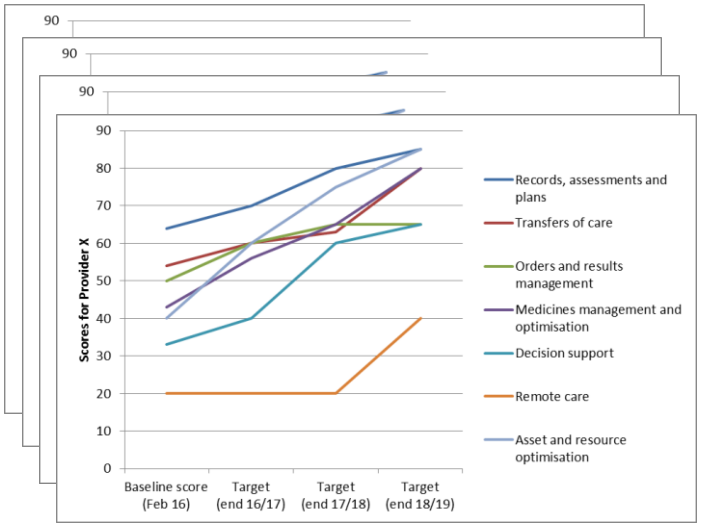
Guidance				Response	
Element	**Requirement**	**Section**	**Templates**	**Response ref**	**Comments (where applicable)**
Information sharing	Plans and milestones for adoption of information sharing standards	6.37			
Infrastructure	Current status of the mobile working infrastructure	6.40			
Infrastructure	Confirmation that individual providers have plans to develop their mobile working infrastructure	6.41			
Infrastructure	Description of system-wide initiatives to develop the mobile working infrastructure	6.41			
Infrastructure	Current status and future plans to improve collaboration between professionals from different organisations	6.43			
Infrastructure	Summary of current or planned initiatives to share infrastructure	6.44			

Guidance				Response	
Element	**Requirement**	**Section**	**Templates**	**Response ref**	**Comments (where applicable)**
Minimising risks arising from technology	Confirmation that robust plans, policies and procedures in place across the system to minimise risks / steps to address gaps	6.46			
Minimising risks arising from technology	Confirmation that individual providers are moving forward with GS1 adoption	6.47			

Annex 2 – Capability deployment schedule illustration

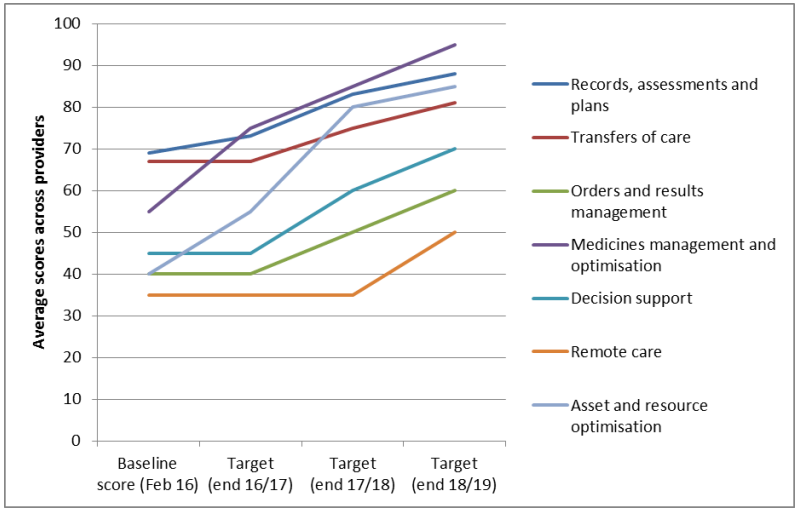
Capability				Locally defined attributes ->		
Who	**What**	**Year**	**Capability group**			
A&E clinicians	Can access GP-held information on medication / allergies / adverse reactions	16/17	Records, assessments and plans			
Clinicians in other unscheduled care settings	Can access GP-held information on medication / allergies / adverse reactions	17/18	Records, assessments and plans			
A&E clinicians	Can access condition and details of inbound patients	18/19	Records, assessments and plans			
GPs	Receive structured clinical documents from acute at patient discharge within 24 hours	17/18	Transfers of care			
Clinicians in secondary care	Can prescribe and administer medicines digitally at the point of care for all inpatient wards	16/17	Medicines management and optimisation			
Clinicians in secondary care	Can prescribe and administer medicines digitally at the point of care for all outpatient prescribing	17/18	Medicines management and optimisation			
Etc.						

Annex 3 – Capability deployment trajectory illustration (secondary care)



Scores from individual providers can be aggregated across the local health and care system

Baseline scores are taken from the Digital Maturity Self-assessment



Annex 4 – Universal capabilities delivery plan

Universal capability	Capability group	Aims (in terms of take-up and optimisation) [and specific16/17 targets where applicable]
Professionals across care settings can access GP-held information on GP-prescribed medications, patient allergies and adverse reactions	Records, assessments and plans	• Information accessed for every patient presenting in an A&E, ambulance or 111 setting where this information may inform clinical decisions (including for out-of-area patients) • Information accessed in community pharmacy and acute pharmacy where it could inform clinical decisions
Clinicians in U&EC settings can access key GP-held information for those patients previously identified by GPs as most likely to present (in U&EC)	Records, assessments and plans	• Information available for all patients identified by GPs as most likely to present, subject to patient consent, encompassing reason for medication, significant medical history, anticipatory care information and immunisations • Information accessed for every applicable patient presenting in an A&E, ambulance or 111 setting (including for out-of-area patients)
Patients can access their GP record	Records, assessments and plans	• Access to detailed coded GP records actively offered to patients who would benefit the most and where it supports their active management of a long term or complex condition • Patients who request it are given access to their detailed coded GP record
GPs can refer electronically to secondary care	Transfers of care	• Every referral created and transferred electronically • Every patient presented with information to support their choice of provider • Every initial outpatient appointment booked for a date and time of the patient's choosing (subject to availability) • [By Sep 17 – 80% of elective referrals made electronically]
GPs receive timely electronic discharge summaries from secondary care	Transfers of care	• All discharge summaries sent electronically from all acute providers to the GP within 24 hours • All discharge summaries shared in the form of structured electronic documents • All discharge documentation aligned with Academy of Medical Royal Colleges headings

Universal capability	Capability group	Aims (in terms of take-up and optimisation) [and specific16/17 targets where applicable]
Social care receive timely electronic Assessment, Discharge and Withdrawal Notices from acute care	Transfers of care	• All Care Act 2014 compliant Assessment, Discharge and associated Withdrawal Notices sent electronically from the acute provider to local authority social care within the timescales specified in the Act
Clinicians in unscheduled care settings can access child protection information with social care professionals notified accordingly	Decision support	• Child protection information checked for every child or pregnant mother presenting in an unscheduled care setting with a potential indicator of the child being at risk (including for out-of-area children) • Indication of child protection plan, looked after child or unborn child protection plan (where they exist) flagged to clinician, along with social care contact details • The social worker of a child on a child protection plan, looked after or on an unborn child protection plan receives a notification when that child presents at an unscheduled care setting and the clinician accesses the child protection alert in their record
Professionals across care settings made aware of end-of-life preference information	Decision support	• All patients at end-of-life able to express (and change) their preferences to their GP and know that this will be available to those involved in their care • All professionals from local providers involved in end-of-life care of patients (who are under the direct care of a GP) access recorded preference information where end-of-life status is flagged, known or suspected
GPs and community pharmacists can utilise electronic prescriptions	Medicines management and optimisation	• All permitted prescriptions electronic • All prescriptions electronic for patients with and without nominations - for the latter, the majority of tokens electronic • Repeat dispensing done electronically for all appropriate patients • [By end 16/17 – 80% of repeat prescriptions to be transmitted electronically]
Patients can book appointments and order repeat prescriptions from their GP practice	Remote care	• [By end 16/17 – 10% of patients registered for one or more online services (repeat prescriptions, appointment booking or access to record)] • All patients registered for online services use them above alternative channels

Universal Capability:	
Capability Group:	
Defined Aims:	

A. Baseline

Please summarise the current baseline across your local health and care system. The data may encompass deployment penetration (e.g. deployed in 80% of practices), volumetrics (e.g. accessed 2500 times in Q3) and take-up (e.g. accessed for 95% of prescriptions).

B. Ambition

With reference to the defined aims set out above, please set out your ambition in the grid below. Remember that 'clear momentum' is expected in 16/17 and 'substantive delivery' in 17/18. Also note that you can go further than the defined aims – examples are provided in the Universal Capabilities Information and Resources document.

Year	Ambition
16/17	
17/18	

C. Activities

Please detail the activities you propose to undertake, by quarter, in the grid below. Separate activities should be separated out as separate bullet points. At the time of submission on 30 June 2016, any activities for 16/17 Q1 should be complete.

Quarter	Activities
16/17 Q1	•
16/17 Q2	•
16/17 Q3	•
16/17 Q4	•
17/18 Q1	•
17/18 Q2	•
17/18 Q3	•
17/18 Q4	•

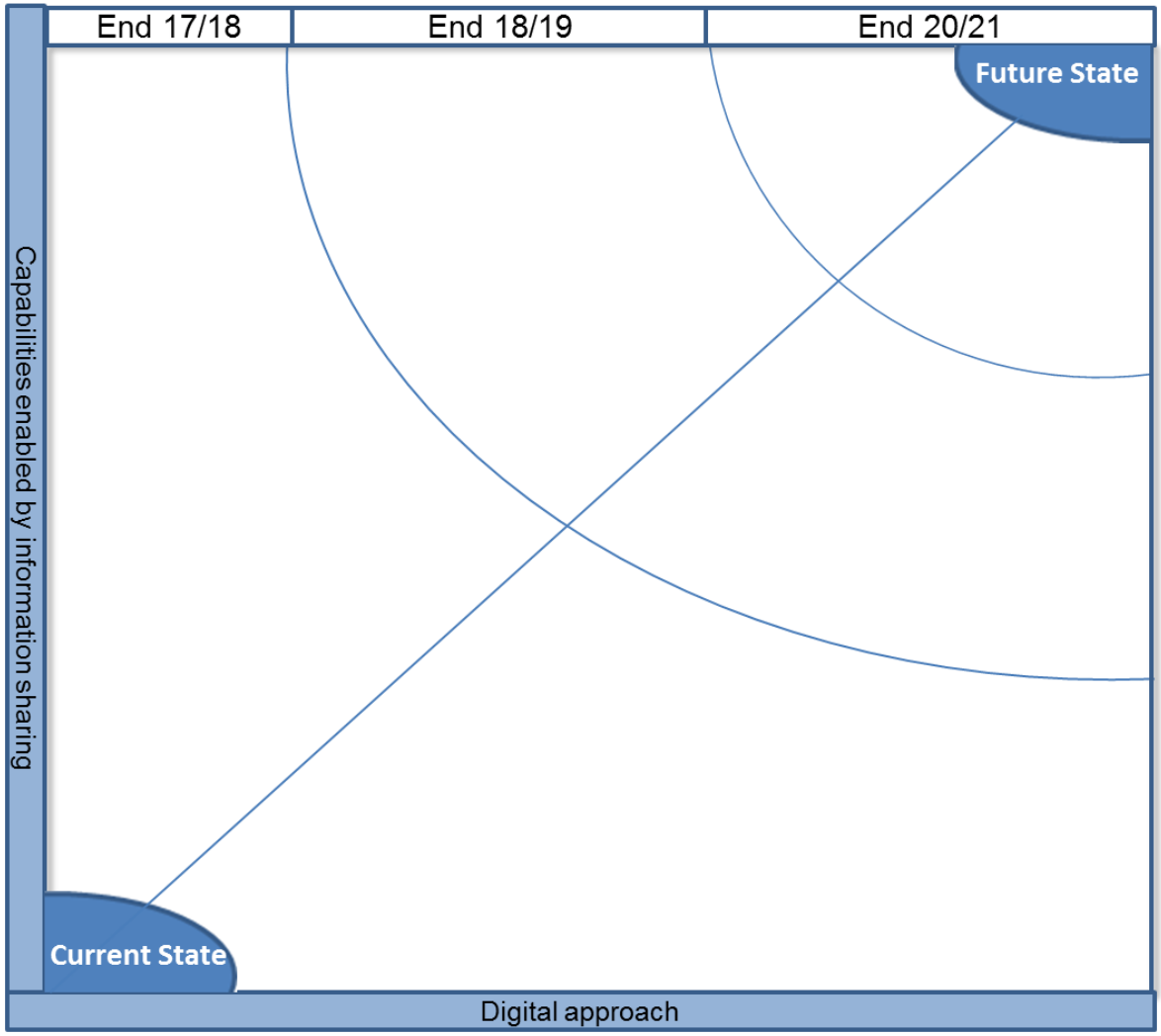
D. National Services / Infrastructure / Standards

In progressing the universal capabilities, if you are proposing to use alternative solutions to the national services, infrastructure and standards, please provide a rationale in the box below.

E. Evidencing Progress

Please set out your proposals below for evidencing progress towards the defined aims for the universal capability, as set above. Your response should be informed by any national metrics available, as described in the Universal Capabilities Information and Resources document.

Annex 5 – Information sharing approach



Annex 6 – Interoperability principles and resources

Interoperability – the ability of systems to exchange information and to use the information that has been exchanged – will be based upon a primary patient identifier, the NHS Number, and on systems sharing information through open application programming interfaces (open APIs) based upon clinical and industry standards. This will support clinicians in: the sharing of documents at the transfer of care (such as discharges, referrals); having real-time access to specific parts of the clinical record (such as medications); and the sharing of information as part of their workflow (such as tasks or notifications). Interoperability is relevant to local, regional and national level information sharing - for example, nationally contracted systems (such as GP systems) linking with local shared care records and patient-facing services as well as providing universal access to key information through the Summary Care Record (SCR). This approach and open interfaces are being developed in conjunction with the wider chief information officer (CIO), chief clinical information officer (CCIO) and vendor communities as part of the Code4Health Interoperability Community. Further information on the national approach to interoperability and resources to support the development of a local information sharing approach can be accessed through the NHS England website. These resources include:

- The Interoperability Handbook, a practical guide setting out a range of approaches and solutions for interoperability, and identifying relevant technical standards, policy and guidance
- The Open API Policy
- Additional resources such as clinical scenarios for information sharing (the 'why') and a starter OBS (the 'what should we procure') [to be published shortly]

The national approach to interoperability is summarised in the National Information Board (NIB) Interoperability Strategy as set out in Appendix 3 of the NIB Workstream 2.1 Roadmap.

To enable effective information sharing, the NHS number must be used as the primary identifier within a local health and care system wherever appropriate, and should be used as early as possible within a care pathway. Further information on the NHS number is available through the HSCIC website.

In developing the information sharing approach, due regard should be paid to guidance issued under sections 263 and 265 of the Health and Social Care Act 2012.

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