Business Plan 2016-2018

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1. Executive Summary

Searching for and applying innovative approaches to maintaining the health of citizens and delivering healthcare is an integral part of the way the NHS does business. Achieving this consistently and comprehensively will substantially improve population health and improve the quality of care and services for citizens, while delivering productivity savings to meet the growing demand for services.

Academic Health Science Networks (AHSNs) have a unique role in linking different parts of the health and care systems. AHSNs were established by NHS England in 2013 to deliver a step-change in the way the NHS identifies, develops and adopts new technologies. AHSNs are predicated on partnership working between the NHS, academia, the private sector, voluntary bodies and other external partners*.

The Innovation Agency is the Academic Health Science Network for the North West Coast. We cover Cheshire, Merseyside, Lancashire and South Cumbria, which collectively have around 4.1 million residents. Within our geographical footprint we have 25 NHS providers, 15 CCGs, nine universities and a large number of life science industry partners.

Throughout its history, the NHS has faced increasing demands driven by a growing population with an extending lifespan; an increase in its own capability, fueled by advances in knowledge, science and technology; and ever-increasing expectations from the public it serves.

The NHS has responded to these demands in part through the creativity of its staff to find or devise new tools and better ways of working. However, many of the most significant advances have been made possible through the contribution of researchers and commercial organisations. NHS success in adopting innovation creates jobs and generates income from exports, enabling companies to re-invest to develop the next generation of technologies and services to address NHS needs.

AHSNs have shown that they can enable national innovation platforms, such as the Small Business Research Initiative (SBRI) for Healthcare, the Patient Safety Collaborative and the National Innovation Accelerator programme, to drive implementation and adoption at a regional and national level*. We can identify areas of greatest priority and rapidly scale those innovations which have the best prospect of improving outcomes and reducing costs within healthcare.

This business plan is the result of careful deliberation with our partners to identify areas in which we can have the most impact in accelerating the pace and reach of innovation. We are focusing on digital health and a number of clinical areas where we have expertise within the region.

The collaborative nature of our work means that we work with a number of strategic partners eg the Northern Health Science Alliance, North West Improvement Collaborative and North West Coast Clinical Network. Their plans on a page are included in this plan, as appendices. The Northern Health Science Alliance, Connected Health Cities Programme and our work with the other

three AHSNs in the North give us a strong platform to improve health outcomes for our residents.

In addition our adoption and spread work with the other 14 AHSNs allows us to accelerate products and service improvements into the NHS.

* The review of Innovation Health and Wealth
http://www.rand.org/content/dam/rand/pubs/researchreports/RR1100/RR1143z1/RAND_RR1143z1.pdf *) outlined how AHSNs and the SBRI programme (run by AHSNs) contributed delivery of the Innovation, Health and Wealth Policy.*

2. Successful first phase

Since its establishment in 2013 the Innovation Agency has delivered significant value. Notable examples include:

- Supporting the 5 Year Forward view, working with our 6 Vanguard sites on diagnostics, system modelling, leadership development and workforce planning. Assisting the bids for our two Healthy New Town sites and being a partner in developing our region's successful Test Bed site.

- Working with a range of health care partners and charities to deliver a stroke prevention and atrial fibrillation detection campaign, potentially protecting 34 people from stroke in Lancashire and 12 in Liverpool, and achieving savings for the health economy of £1.1 million in the first year after each stroke and saving £250,000 on an annual basis following this first year

- Supporting small and medium sized companies by investing £500,000 in 18 organisations through the *Innovations with Impact* competition, designed to drive adoption and access to technologies in the NHS and in social care. These projects will be evaluated and impact determined during 2016/17

- Helping to secure key partners and £1 million Health Tech Funding for a major data sharing project in Lancashire and Cumbria - going live in six organisations during spring 2016

- Playing a leading role in securing £4 million Connected Health Cities funding for the North West Coast to support the use of data to plan services for patients and citizens

- Supporting and pump-prime funding for ten Health Innovation Centres across the region including the Alder Hey Institute in the Park, which brings together innovators from different sectors to create novel sensor-based digital technologies

- Being a founder member and part-funder of the National Innovation Accelerator programme, with a first cohort of 17 fellows, delivering high impact health innovations which have already achieved sales of £7.65 million in their first year of sponsorship and improved lives of many citizens

- Driving and supporting the introduction, funding and dissemination of the 100,000 genomes project throughout the North West Coast

- Actively supporting more than 550 small businesses to engage with NHS partners. Specific support has been provided to 30 businesses resulting in adoption of new products, investment and the creation of new jobs

- Creating and supporting 50 Innovation Scouts to champion the adoption of innovations in at least 30 new locations and to introduce new methodologies, for example hackathons/open innovation technique, in six localities

- Building up strong networks and partnerships across health, local authorities, universities, housing associations and industry

- System-wide leadership of the Patient Safety Collaborative with partners across the region to build skills and knowledge about safety improvement.

Furthermore, the Innovation Agency has committed more than £3 million to engaging key stakeholders to drive partnership working and support development of the health innovation infrastructure across the region.

Over the last three years we have successfully applied to be partners in a number of European projects:

- **ALTAS** – development of a training course for health and social care staff, to enable their patients and clients to benefit from smart technologies to live independently, manage their own conditions and improve health and wellbeing.

- **STOP and GO** – 'Sustainable Technologies for Older People – Get Organised' is a Public Procurement of Innovative Solutions (PPI) Pilot project funded by the ICT Policy Support Programme (ICT PSP) is part of the Competitiveness and Innovation Framework Programme of the European Union.

- **ENSAFE** - more accessible and versatile links between the elderly person, their living environment and the support

network around them by creating elderly-oriented, network-based services aimed at fostering independent life.

- **European Institute of Innovation and Technology (EIT**) Health Knowledge and Innovation Community (KIC), a consortium of more than 50 core partners and 90 associate partners from leading businesses, research centres and universities from across 14 EU countries. The seven year programme contributes to the competitiveness of European industry, improves the quality of life of citizens and sustainability of healthcare systems. As a partner we have opportunities to establish collaborative, international partnerships with other members and bid for European funding to support projects linked to healthy ageing.

These projects bring inward investment into the North West and our work makes a major contribution to the Government policy to drive economic growth in the North.

3 Setting the plan in the context of the Five Year Forward View

The NHS England Five Year Forward View describes how the NHS must adapt to meet the increasing demands of an ageing population with the burden of chronic disease, while at the same time embracing new treatments and technologies, all within the context of constrained finances. The relentless pressure on services means that NHS and local authority providers are exploring alternative approaches to organising care, with a focus on disease prevention, ways of promoting self-care and integration of services.

Within the Innovation Agency footprint there are six designated **Vanguard** sites which will take a lead on the development of new care models acting as blueprints for the NHS. These consist of two Integrated Primary and Acute Care Systems - Wirral Partners and Better Care Together (Morecambe Bay Health Community); and two Multispecialty Community Provider Systems - Fylde Coast Local Health Economy and West Cheshire Way. We also have two acute care collaboration Vanguard sites, the Neuro Network and the Cheshire and Merseyside Women's and Children Services. In addition East Lancashire CCG are rolling out the work of Airedale Care Home Vanguard across the care homes in their geographical area.

We shall support the **Vanguards** with a specific emphasis on

- ☐ the incorporation of digital technology into the new care models and support for evaluation (Goal 4)

- ☐ enabling spread and diffusion of learning between Vanguards (Capability 1) and

- ☐ supporting regions which are not Vanguard sites with their integration plans (Capability 1, 2 & 3).

- ☐ creating safer, better care across the region

We have many examples across the region where we have already made a contribution, including Healthy Liverpool, Healthier Lancashire, and three Well North sites. We have already established a network of 'Vanguards of the North' and as the details of the care models have been emerging we have given support. During 2016/17 we will identify specific projects where we can work in partnership with the Vanguards to achieve their aims.

We have a **Test Bed** site in our region. Test Beds enable frontline health and care workers in seven areas to pioneer and evaluate the use of novel combinations of interconnected devices such as wearable monitors, data analysis and ways of working which will help patients stay well and monitor their conditions themselves at home. Successful innovations will then be available for other parts of the country to adopt and adapt to the particular needs of their local populations. The Lancashire and Cumbria Innovation Alliance Test Bed will be delivered through two neighboring Vanguard sites (Fylde Coast Local Health Economy and Morecambe Bay Health Community) supported by Lancaster Health Hub, an established NHS/university partnership comprising 10 local organisations and also supported by the Innovation Agency.

Over two years we will implement and evaluate a combination of innovative technologies and practices aimed at supporting the frail elderly, people with dementia and other long term conditions to remain well in the community, avoiding unnecessary hospital admissions (Capabilities 2 and 3). These issues present a major challenge for the area given its dispersed population and urgently needed innovative solutions. The main technology partner is Philips Health Systems who, with a number of SMEs, social enterprises and voluntary organisations will work with us to introduce a technology-enabled supported self-care programme. A robust evaluation will be undertaken using Lancaster University's internationally-renowned expertise. This Test Bed offers strong potential to build on two Vanguard sites to achieve substantial impact in an area of need and enable wider adoption of proven technology technologies

Two other areas in our region applied to be test bed sites and we are supporting them with funding and other resources to develop their aspirations and collaborations.

In addition we have two **Healthy New Town** sites. There are 10 sites across the country covering more than 76,000 new homes with potential capacity for approximately 170,000. This is an opportunity for the NHS to shape the way these new sites develop and to test creative solutions for the health and care challenges of the 21st century, including obesity, dementia and community cohesion.

The two sites in the North West Coast are:
Halton Lea in Runcorn covering 800 residential units, and Whyndyke Farm in Fylde, Lancashire covering 1,400 residential units. We have started to work with these sites to ensure that

digital health technologies can be supportive in improving the health of residents and we will pinpoint specific programmes of work with these sites in 2016/17.

4 Purpose

Our core purpose, shared by all 15 AHSNs, is: **To spread innovation, improve health, generate economic growth**

- **We are catalysts** for the spread of innovation at pace and scale - improving health, generating economic growth and helping facilitate change across whole health and social care economies

- **We connect** regional networks of NHS and academic organisations, local authorities, the third sector and industry - responding to the diverse needs of our patients and populations through partnership and collaboration

- **We create** the right environment for relevant industries to work with the health and social care system.

Since our inception we have responded to a wide range of local needs and agendas and contributed to several significant national and regional projects. While this has helped us to build a reputation for advanced innovation skills and expertise in the North West, it has meant our resources have been spread widely.

In the next phase, we propose to concentrate on the core purpose of AHSNs t**o spread innovation, improve health, generate economic growth** and focus on fewer areas to deliver and deliver greater impact. These areas have been identified based upon

experience to date and discussions with local stakeholders to assess where innovation can have greatest impact.

To clarify this purpose, we have re-branded the North West Coast Academic Health Science Network as:

The impact of the Innovation Agency will be measured in terms of:

- improved health outcomes

- increased the impact of every £ spent

- increased economic growth for the North West Coast and beyond, eg jobs created, contracts secured

- equal access to health innovation for citizens across the North West Coast

- development of networks and cross-sector collaborations

- increased funding and talent into the North West Coast

5 Values and citizen engagement

Values

While the focus of our work continues to evolve, we remain strongly committed to NHS core values of: *working together for patients; respect and dignity; commitment to quality of care; compassion; improving lives; everyone counts.* Within this we have created our own subset of values, which are:

- *Doing things differently*
- *Enabling partners to think creatively*
- *Being courageous in change*
- *Co-creating, co-designing, co-producing*
- *Team working*

We will continue to create an environment where innovation can flourish, enabling stakeholders to do things differently and share resources and skills across organisations, so that innovation can be created, adopted and evaluated. In addition, we will continue to support the broader development and promotion of the North West Coast as an area which houses advanced skills, systems and infrastructure for health innovation, and to enhance the success of the region for attracting investment and resource to support further development.

Citizen engagement

To date, we have involved patients and public in specific programmes, eg reducing strokes; and genomics. From April 2016 we will embed citizen engagement in all our work, including the patient and public perspective from the outset, deciding how best to support the spread of new technologies and systems.

A proposal for citizen engagement was agreed by our partnership Board following consultation with staff and key stakeholders and a dedicated post has been created to lead this work.

Digital technologies can radically transform health care services to improve experiences. Far from removing face-to-face contact, they can and should focus on improving people's outcomes and experience of health and social care, always starting with what they need and want. The digital age presents great opportunities to place more power in people's hands in relation to their health care.

The unshakeable commitment to the principle of universality means that it is critical that we reach the furthest first. If we focus on inclusion, we can improve health inequalities rather than exaggerate them. Services designed around the needs of the hardest to reach and the least digitally skilled will be easy for everyone to use.

The work will involve engaging citizens, including those from hard to reach groups, in improving their digital literacy and working with

them through our health coaching programme to ensure that 'no-one is left behind'.

We will also build the digital skills of the NHS workforce, ensuring that everyone has the basic digital skills required to support people's health needs. This will be achieved by our work on the Assistive Living Technology and Skills (ALTAS) project. We are one of four European partners developing a training course for health and social care staff, to enable their patients and clients to benefit from smart technologies to live independently, manage their own conditions and improve health and wellbeing.

Key objectives are to:

(1) develop a recognised standard, curriculum, course and qualification that will give professionals an incentive to add to their knowledge and skills;

(2) stimulate demand for and increase the uptake of innovation through stakeholder engagement and co-creation of course development;

(3) provide the opportunity to continuously update the curricula and standards by linking the professionals to a strong knowledge cluster.

Our role is to deliver dissemination, particularly in the latter part of the three-year project, to encourage uptake of the training. This project will enable us to build digital skills in our region's workforce.

The European partners are based in Spain, Denmark and Norway. The ALTAS agenda will target health and social care professionals as prospective users and commissioners of the courses.

The ALTAS project partners expect the curriculum and course to be rolled out across more regions in Europe after the 36 months, beginning with regions in Central and Eastern Europe where multiplier events will be held.

We are also part of the ENSAFE EU Project. ENSAFE aims to support more effective prevention and self-care strategies by creating smarter, more accessible and versatile links between the elderly person, their living environment and the support network around them by creating elderly-oriented, network-based services aimed at fostering independent life. The service vision is built upon a layer of existing technologies, encompassing mobile communication, environmental sensing and clinical monitoring. Within the project the technologies will be further developed and integrated into a common framework which, in turn, will provide the basis for implementing innovative services.

6 Sustainability

We regard it as essential that the North West Coast region possesses a strong, stable and effective infrastructure to attract, encourage and support external investment for innovation. This reflects our investments over the last three years, which have pump-primed additional funding into the region to build key parts of this infrastructure and a number of innovation centres. These will provide a basis for planning and delivering innovation activity, and

ensure that local organisations and citizens are able to benefit from innovative services, treatments and technologies.

7 Principal Goals

We have defined four principal goals to deliver our core purpose and will build three core capabilites to deliver these goals.

These goals have been developed by our stakeholders and reflect the areas where we can develop and spread innovation at pace and scale.

We will respond to the needs of our citizens and drive outcomes which improve patient experience, improve health outcomes and create better value for the tax payer funding the NHS.

For each goal we descibe what we will achieve over the next two years, set specific measurable objectives, show how the delivery vs objectives will move over time and describe the outcomes which will be achieved at the end of each NHS year (April to March).

Citizens will be engaged from the outset and we will be mindful to ensure the work can be sustained in the long term.
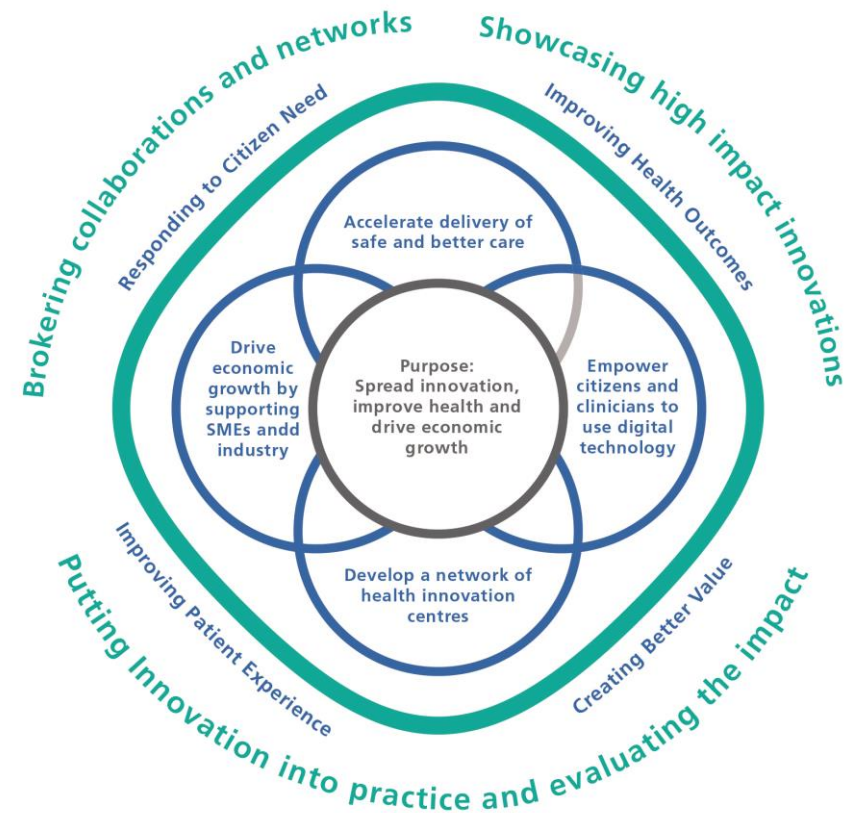
Goal 1: Accelerate delivery of safer, better care.

Delivering truly world class health and care services that are as safe as possible will require the development of a culture that give safety precedence at all times. Although there is now widespread acceptance of the need to avoid harm, progress in reducing harm has been slow. New approaches to introducing and maintaining safer and better care are required and risks need to be assessed in different ways to understand the causes of specific incidents and longer term failures.

The Patient Safety Collaborative is embedded in the Innovation Agency and will apply the organisation's ability to bring together providers and commissioners (Capability 1) to showcase (Capability 2) and drive adoption of innovative best practice (Capability 3) and also bring technology, often digital (Goal 4) into integrated solutions and to develop supportive cultures in which harm can be measurably reduced and quality improved.

In order to create a world class safety culture in the North West Coast area and beyond, a new Innovation Agency NWC Safer and Better Care Strategy is being developed. This strategy, due in the summer, is being developed with stakeholders and content experts. It will bring together knowledge and evidence, data intelligence and local expertise to determine areas of focus. Our approach is to build robust action plans around the collective commitment to:

- build skills and knowledge;
- create space and time to work on safety issues;
- identify opportunities to continually learn from each other;
- Improve patient safety leadership.

We will incorporate a focus on enabling technology in supporting and improving patient safety and better services, and incorporate this into our programme so that it is sustainable.

To deliver this strategy we will focus on accelerating change through greatly improved access to education, tools, guidance and both national and international best practice, complementing the Innovation Agency's ambitions regarding the use of digital platforms. We will develop new tools and work alongside national regulators to influence their approach to licensing organisations with regard to patient safety training and measurement. There will be a strong emphasis on collaborations, for example by working with Healthwatch on 'Enter and View' activities.

Goal 2: Develop a network of health innovation centres

Across the North West Coast, clusters of NHS, academic, local government and commercial stakeholders have formed Health Innovation Centres, seven of which have been part-funded by the Innovation Agency. Facilities are being built, existing estate is being renovated and governance frameworks are developing to attract investment and support people with the skills and passion to work together to create and drive adoption of innovation.

There are currently ten such centres across the region, all at different stages of development and with distinct purposes:

- Liverpool Bio Innovation Hub
- Chorley Digital Hub
- Lancaster Health Innovation Campus
- The Centre of Integrated Health Science, Chester
- The Accelerator, Liverpool

- The Alder Hey Innovation Centre, Liverpool
- NWC Genomics Medicine Centre
- Liverpool Clinical Laboratories
- Sensor City, Liverpool
- Centre of Excellence in Infectious Diseases Research

The Innovation Agency has played a role in supporting the development of these centres. Our approach is to**:**

- strengthen their networks and collaborations by connecting each centre to our networks in the UK and abroad (Capability 1);
- inform and support strategic planning and development of each centre;
- optimise the strategic positioning, purpose and profile of each centre;
- enhance each centre's capability to capture grants and attract investors by providing pathways for innovations to become commercially viable;
- supporting each centre to put innovation into practice which will reduce risks to investors and funders (Capability 3);

… and to **enable partnership working between centres** by:

- identifying collaboration opportunities and facilitating partnership working to strengthen impact (Capability 1);
- identifying collaboration opportunities and facilitating partnership working to capture grants and attract investors;
- projecting the combined strengths and impact to increase the total level of inward investment coming to the North West.

Goal 3: Support economic growth through SMEs and industry

Small businesses often need support to enable the adoption of innovative technologies and to secure investment for growth. Citizens who are in work are generally healthier than those who do not have jobs, while reducing unemployment will boost local economies. Achieving this goal will benefit both health and wealth objectives.

We are working in partnership with our Local Enterprise Partnerships to develop business support programmes for small and medium sized companies in the health sector. Our approach is to:

- monitor and evaluate the impact of 18 projects funded in 2015/16 for the 'Innovations with Impact' small business competition, identify barriers to adoption, evaluate the impact of technologies and disseminate those that have demonstrable impact throughout the NWC region and to other AHSNs

- provide business advice, make NHS connections to integrate products and/or services into care pathways, support evaluation design and links to experts, provide procurement and tendering advice, support business case development and clinical/market need assessments and make connections, for businesses, with Innovation Scouts and other experts

- evolve as a regional Business Connect service, an open gateway for industry to signpost to academic, NHS, science facilities, other business support opportunities and other AHSNs

- facilitate multi-stakeholder cross-sector engagement to enable collaboration between companies and with academia and the NHS

- build collaborations (see Capability 1) to develop an integrated Business Connect service for the North West Coast (and potentially the whole of the North) which will connect with overseas opportunities to attract inward investment, EU grant funding and export opportunities.

We are part of the STOP&GO EU Project (Sustainable Technologies for Older People – Get Organised), a Public Procurement of Innovative Solutions Pilot project funded by the ICT Policy Support Programme as part of the Competitiveness and Innovation Framework Programme of the European Union. The project began in April 2014, runs for 36 months and will illustrate real improvements in quality of life, care and carer programmes and hospital inpatient stays. In addition, STOPandGO will identify the PPI benefits of STOPandGO for industry and the localities throughout the process in relation to the situation before. By adopting an innovative procurement approach our pilot will show that the benefits can be translated from small populations (the pilots represent about 10 per cent of a regional target population) to wider ones, providing for scale uptake of technology and proportional reductions in the pressure on services.

Economic growth could be further enhanced if additional funding from the European Regional Development Funds (ERDF) can be secured in partnership with the Local Enterprise Partnerships to enable the Innovation Agency to provide more intensive business support to local SMEs working in the health and life sciences

sectors by connecting them to relevant NHS and social care customers. Subject to securing additional funding we will:

- build an advisory service to share knowledge of how to sell products to the NHS and social care in the UK and link businesses to experienced mentors and to sources of investment

- develop the catalogue of innovations (Capability 2) to enable local companies to promote their innovations and to ensure potential users are made aware of innovations on offer. Our links to the alumni will enable us to develop integrated commercial and service networks to drive adoption of new technologies (Capability 3)

- establish a knowledge centre for local SMEs as part of the Innovation Exchange (eg list of grant opportunities, key NHS contacts, investors, needs or areas of interest expressed by NHS customers).

We will actively target other sources of EU funding for healthcare innovation, including European Structural Investment Funds, European Institute of Innovation and Technology, Health Knowledge and Innovation Community funding and Horizon 2020 funds to bring funding for innovation into our region and to build further capacity and capability within the Innovation Agency.

Goal 4: Drive digital innovation that empowers citizens and the workforce

NHS England has set an ambitious target to make the healthcare system paperless by 2020, this vision is encapsulated within 'Personalised Health and Care 2020: a framework for action'[1], which outlines examples of how the application of technology can improve health outcomes, transform services and reduce costs. To achieve this, organisations will need to develop new collaborative partnerships, seek out innovative solutions and implement them at scale and pace across the health and care system.

Over the last year we have played a key role in shaping regional solutions and successfully bidding for funds from the Northern Health Science Alliance Connected Health Cities initiative. In 2016/17 we will continue to apply our capability of brokering collaborations and networks to attract additional funds to support partners in providing meaningful health and social care data to front-line staff, to enable them to plan and run services much more effectively.

We will drive and support the introduction of digital technology to bridge the gap between citizen demand and capacity, focusing on long term conditions such as chronic obstructive pulmonary disease, cardiovascular disease and dementia. In doing so, we will work closely with the North West Coast Clinical Network to pool our resources around some of these themes.

We will also adopt digital products from the National Innovation Accelerator that fit with this goal.

We will **accelerate the adoption of digitally-enabled self-care** by working in partnership with key stakeholders in the health, social care and third sectors, who have demonstrable capacity to drive major change within the local health economy. Our approach is to:

- ☐ use our capabilities in digital communications to engage citizens and front-line staff in the co-creation of digital solutions (Capability 1)

- ☐ harness our digital health eco-system network to stimulate digital innovation and SME market opportunities (Goal 3)

- ☐ showcase digital innovations that support patient activation and integrated care for long term conditions (Capability 2)

- ☐ apply innovation into practice to embed digital technologies within integrated care organisations / CCGs (Capability 3)

- ☐ promote citizens' digital health literacy by encouraging access to their online health records and the use of patient held-records (Capabilities 1,2 &3)

- ☐ support the adoption of digital self-care tools by developing a complementary health coaching offer (Capability 3).

In addition, through the Connected Health Cities Programme the Innovation Agency will oversee:

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[1] https://www.gov.uk/government/publications/personalised-health-and-care-2020

- implementation of a digital skills programme aimed at front-line staff to help them use data and technology to transform services

- new approaches to using and presenting data to front-line staff.

We are committed to supporting and being an integral part of the National Innovation Accelerator and we will:

- adopt and spread those products sponsored by the NIA that fit with this goal

- provide mentoring for fellows whose products are developing in the digital health sector

8 Operational Plan (Objectives, milestones and impact)

For each Principal Goal specific objectives, quarterly milestones and the impact at year end are defined. Some objectives will be refined each quarter as insight into stakeholder needs and innovation opportunities emerge.

Goal 1: Accelerate the delivery of safer, better care.

2016/17 Specific Objectives	Q1	Q2	Q3	Q4	Year-end impact
Build skills and knowledge					
1.1 Implementation of e-learning packages	Sign off sepsis out of hospital programme	Reprogramme e-learning content for Hydration and Anticipatory Care Calendar (ACC). NB ACC is a tool for social care staff in care homes. Establish e-learning platform(s)	Develop marketing approach and adoption, including setting up a framework for measuring impact	Launch and implementation.

Undertake a feasibility study for digitizing the ACC | E-learning tools available to North West Coast and shared with other AHSNs.

50 people will have used the tool in 16/17 |
| 1.2 To embed patient safety champion training in alumni. Scope and design further training taking key learning from the Q Fellows | Evaluate previous learning and impact. Define what success looks like and co-design further course. Recruit 20 previous participants | Run course delivered by commissioned partners | Undertake evaluation | Run second course recruiting a further 20 new patient safety champions | Skills and knowledge enhanced in two cohorts, 40 participants

10 proposals presented to organisation sponsors showing impact for patients/service users. |

					Evaluation report on embedded learning
1.3. To promote and endorse national Sign Up to Safety Campaign	Stock-take of progress on uptake of Sign Up to Safety across the region in collaboration with national campaign lead.	Promote campaign materials with the website and newsletters and at meetings and events	Targeted promotion to non acute providers	Secure sign up from an additional non acute trust to Sign Up to Safety	One more non acute provider trust will have made a commitment to Sign Up to Safety
Create space and time to work on safety issues					
1.4 Facilitate the development and sustainability of North West Coast Virtual Learning Networks			Produce guidelines for how the Virtual Learning Networks will operate and any funding requirements	Agree a pilot Network	Design the Virtual Learning Network model One Network agreed to pilot the model
Opportunities to continually learn from each other					
1.5 To identify and explore the barriers to safer care	Scope and review the evidence on human factors and the barriers to safer care	Synthesize evidence and plan hackathon	Hold hackathon Announce one winner Assimilate solutions pitched by finalists and disseminate to partners	Support the development of the winning solution	Barriers to safer care in the North West Coast region are identified. Evidence disseminated of the benefits a human factors approach can make to safer and better care. One winning solution being developed

1.6 To lead the National AHSN Sepsis Cluster	Consider outcome of Evidence Review commissioned from the CSU Plan and deliver national sepsis cluster event to review the NHSE Improving Outcomes for Patients with Sepsis Report, and showcase first national sepsis elearning module developed by the Innovation Agency, Health Education England and the Sepsis Trust Attend Cross-System Sepsis Board (NHSE)	Create a dissemination plan for the evidence review Develop plan to encourage other AHSNs to adopt the elearning module, support implementation of professional training across care settings spread best practice to improve communications between care settings, as part of the national cross-system sepsis AHSN action plan	Present plans to AHSNs and identify early adopters	Hold national sepsis event to showcase best practice and gather evidence of AHSNs' requirements of NHSE	Built collaborative approach to sepsis nationally. Host one national cluster event Host one national sepsis showcase event
Medicine Optimisation To support the adoption of evidence into practice of innovative products, approaches and solutions to support the Royal Pharmaceutical Society principles of Medicines Optimisation, driving improved outcomes and/or efficiencies The RPS principles are: Making medicines optimisation part of routine practice; Evidence based choice of medicines; Safe use of medicines; and Aim to understand the patient experience					

1.7 'Closing the Gap' Project to assess the impact of the introduction of a specialist clinical pharmacist into a primary care setting, targeting patients who are predicted to have medicine related issues

Collaboration with ABPI, Northern HSC Trust, Wessex AHSN and Eastern AHSN | Set up training programme

Identify two GP practices and agree governance arrangements

Select 50 patients for case management

Run retrospective data analysis | Implement intervention activities by the specialist clinical pharmacist linking with the primary care team and targeting patients who are predicted to have medicine related issues | Continue intervention | Continue intervention

Data collection; evaluation and write up

Dissemination of learning | Improved health outcomes evidenced quantitatively in reduced Healthcare Resource Utilisation (HRU) and qualitatively by Patient Reported Outcome Measures (PROMs) |
| 1.8 Run a Diabetes Summit targeting people with diabetes who drive for a living | Confirm members of collaboration and commence planning | Plan event

Undertake pre-event communications | Hold summit | Review and disseminate findings | Target 40 delegates

A set of recommendations that can be driven forward by members of the collaboration |
| 1.9 Roll out of 'Refer to Pharmacy' project which aims to improve the transfer of patients from hospital to community pharmacy, to at least one acute hospital site | Agree programme of awareness raising across the region | Identify second adoption site | Carry out diagnostic of implementation requirements and develop project plan | Commence implementation | Project adopted by an additional acute site

Sign up of 40 community pharmacists |

1.10 Introduce the Open Prescribing platform in primary care	Agree programme of awareness raising across the region	Identify potential site	Carry out diagnostic of implementation requirements and develop project plan	Commence implementation	Platform adopted by at least two practices Quantifiable savings made in either high cost low volume medications or high volume low cost medications
Treating back pain The STARTback programme aims to enhance the management of back pain and improve patient outcomes.					
1.11 STaRTback programme rolled out in at least three CCG locations in about 60 GP practices (to build on the 94 GP practices already using the programme in Liverpool)	Identify three areas for implementation and set up governance arrangements	Begin implementation plans with three sites Plan an evaluation of the programme, agree evaluation parameters	STaRTback programme underway in three locations	Evaluate and prepare for further rollout in additional three CCG areas in 2017/18 Complete evaluation	STaRTback rolled out in about 60 GP practices and evaluated
1.12 Corporate Partnership in development with two organisations	Identify organisations which will support our programme objectives	Identify joint working opportunities and resources	Embark on work programme	Deliver work programme	Deliver work programme
Reducing Stokes caused by Atrial Fibrillation (AF) - the focus of the AF programme will be using technologies for detection. The programme's success measures include: to reduce the number of strokes caused by AF by 5% in two years; for the NWC this will equate to 100 strokes and a saving of £2,331,500 by March 2017					

1.13 An improvement work programme planned across the NWC in at least 50 practices	Planning and resources identified for the AF collaborative programme. Introduce and co-design the programme which includes technology	Plan and deliver programme in a minimum of 25 practices	Recruit wave 2 – additional 25 practices. Deliver programme	Deliver programme	Review and Deliver programme in 50 practices – more practices recruited
1.14 Provision of a dashboard to all CCGs	Introduction of CCGs to the dashboard through three key groups – Mid Mersey Stroke Board; North Mersey Stroke Board and Lancs Stroke Board	Identify key areas for the collaborative		Impact data collected from first site Support the development of the programme	Impact data collected from first site Support the development of the programme
1.15 Technologies (Alive Cor, MyDiagnostick and Cardiocity) adopted in at least 13 CCG areas (to build on the 7 CCG areas into which we have already rolled this technology out)	Identification of GP sites for focus through CVD Leads and dashboard of areas which will benefit from support	Deliver technologies in AF collaborative in 25 practices	Deliver technologies in AF collaborative in 25 practices	Deliver and evaluate programme	Deliver technologies into 25 practices, review and look at identifying practices for next wave of recruitment

1.16 Two formal agreements signed with regards to corporate partnerships and work plans delivered	Identification of resources needed to deliver a AF collaborative programme across the NWC	Support the development of an implementation plan with our partners to adopt new innovations	Deliver programme	Deliver programme	Two agreements in place Deliver work programme
Patient safety leadership					
1.17 To build skills and capacity in middle managers and improve knowledge regarding the cultural influences on patient safety	Partner with AQuA to recruit 25 middle managers from a variety of settings (with Executive sponsorship)	Hold workshops which will focus on safety problems encountered in practice and related cultural norms preventing delivery of safe care	Training delivered to further 30 middle managers in teams if possible	Evaluation of impact	55 middle managers will have completed the course, met their learning objectives and pledged a follow-up when they return to their organisation

To act as system leaders in creating a health and care culture for safer and better care and to develop a strong impetus to embed safety as a primary focus of all service delivery.

Goal 2: Develop a network of health innovation centres

2016/17 Specific Objectives	Q1	Q2	Q3	Q4	Year-end impact
2.1 Define how the Innovation Agency will work with each centre	Agree to establish agreements with each centre	Specific objectives defined within agreements populated for more than two centres	Specific objectives defined within agreements populated for more than four centres	Specific objectives defined within agreements populated for more than nine centres	All ten agreements in place and a report of delivery where relevant; two case studies showcasing specific achievements and strong feedback from leaders of

					centres recognising the role of the Innovation Agency.
2.2. Optimise the strategic positioning, planning and development and communications strategy of each centre and of the collective network	Strategy paper for two centres developed to define the unique positioning of each centre together with a development plan	Strategy paper for two centres developed to define the unique positioning of each centre together with a development plan	Strategy paper for three centres developed to define the unique positioning of each centre together with a development plan	Bring leaders of each centre together to understand the unique positioning of each centre, identify collaboration, develop a collective positioning and communications strategy	Strong strategy and business plan for each centre and for the network
2.3 Enhance each centre's potential for success in capturing grants and commercial investment	Identify all grant opportunities and develop a short list of all income generating opportunities for each centre	Submit applications for at least two inward investment opportunities	Submit applications for at least two inward investment opportunities	Submit applications for at least two inward investment opportunities	Generate inward investment of more than £0.5 million with 10 per cent to support Innovation Agency sustainability
2.4 The spread and adoption of personalised and genomic medicine in collaboration with the North West Coast Genomic Medicine Centre (NWC GMC)	Work in collaboration with the NWC GMC and UCLan to undertake an evaluation of the Genomics England 100,000 Genomes Project, Genomic Medicine Centres	Identify areas of best practice relating to the role of clinical pharmacology Provide strategic leadership and programme	Develop clinical pharmacology adoption proposals Provide strategic leadership and programme management and adoption and	Consult on proposals for clinical pharmacology Provide strategic leadership and programme management and	Evaluation completed and results reported to NHS England, publicised and adopted across all GMC. Spread of the 100,000 genomes testing across the region

	National Service Evaluation Consent Process and Patient Documentation Research Project Provide strategic leadership and programme management and adoption and support to the GMC and the 100,000 Genomes Project	management and adoption and support to the GMC and the 100,000 Genomes Project	support to the GMC and the 100,000 Genomes Project Proposals for exporting the work discussed and, if agreed a project plan is developed for roll out in 17/18	adoption and support to the GMC and the 100,000 Genomes Project	

Given the emergent nature of the ten health innovation centres it is difficult to predict how they will each evolve and how best the Innovation Agency can best support them in 2017/18, as much will depend on what is achieved in 2016/17. As such, each memorandum of understanding (MOU) will be reviewed and refreshed in light of progress made and specific objectives and deliverables developed accordingly.

2017/18	Q1	Q2	Q3	Q4	Year-end impact
2.5 Define how the Innovation Agency will work with each centre	Evaluate the progress made by each HIC in 2016/17 and redefine the memo of understanding (MOU) accordingly for all seven HICs	Specifics within MOU agreements populated for seven centres	Delivery of specific objectives with each HIC	Delivery of specific objectives with each HIC	Report of delivery vs each MOU where relevant, four case studies showcasing specific achievements and strong feedback from leaders of centres recognising the role of the Innovation Agency

2.6 Enhance each centre's potential for success in capturing grants and commercial investment	Identify all grant opportunities and develop a short list of all income generating opportunities for each centre	Submit applications for at least three inward investment opportunities	Submit applications for at least three inward investment opportunities	Submit applications for at least three inward investment opportunities	Generate inward investment of more than £1 million with 10 percent to support Innovation Agency sustainability

Goal 3: Drive economic growth by supporting SMEs and industry

2016/17	Q1	Q2	Q3	Q4	Year-end impact
3.1 Support SMEs and collaborate with corporate industries through Business Connect resulting in regional collaborations / projects / grant funding or revenue	Business Connect gateway established (via website). All business enquiries responded to within one week and signposted as appropriate. Three businesses supported to establish collaboration	All business enquiries responded to within one week and signposted as appropriate. Five businesses supported to establish collaboration	All business enquiries responded to within one week and signposted as appropriate. Six businesses supported to establish collaboration	All business enquiries responded to within one week and signposted as appropriate. Six businesses supported to establish collaboration	20 businesses supported to establish collaborations with NHS, social care and / or academic partners. Ten jobs secured / created and £0.5m funding secured for SMEs or to fund collaborative projects
3.2. Establish collaborations to accelerate business growth defined within a partnership agreement or contract between a business, the AHSN and local	One collaboration established with written agreement and project plan in place	One collaboration established with written agreement and project plan in place	Two collaborations established with written agreement and project plan in place	Two collaborations established with written agreement and project plan in place	Six collaborative agreements in place. Specific impacts will be determined within projects but will include, eg: • Grant funding secured

partners. These will be substantial projects including (but not limited to) co-creation of new products, industry secondments into the AHSN, product evaluations and commercialisation, whereby each party will have a clearly defined role and specific deliverables					• Number of new products developed • Number of industry secondments into the Innovation Agency • Number of user trials and product evaluations • Revenue for businesses from new to market innovations
3.3 Monitor and evaluate the 18 projects funded in 2015/16 as part of the Innovations with Impact programme	Review all projects and write case studies for those completing. Showcase those with positive impact (see Capability 3) through Innovation Exchange and develop strategy with business for wider dissemination	Review all projects and write case studies for those completing. Showcase those with positive impact through Innovation Exchange and develop strategy with business for wider dissemination	Review all projects and write case studies for those completing. Showcase those with positive impact through Innovation Exchange and develop strategy with business for wider dissemination	Review all projects and write case studies for those completing. Showcase those with positive impact through Innovation Exchange and develop strategy with business for wider dissemination	All 18 projects completed and evaluated. Case studies in place and strategies developed for those with positive impact for wider dissemination (eg with regional partners, through the national network of AHSNs or with EU partners)

Further objectives will be added to the plan as European funding is secured for specific programmes that will deliver economic growth and / or innovation.

Goal 4: Drive digital innovation that empowers citizens and the workforce

2016/17 Specific objectives	Q1	Q2	Q3	Q4	Year-end impact
4.1 Work with stakeholders to develop content for the new interactive website	Use our Ecosystem to generate digital health content Promote key Twitter hashtags eg: #datasaveslives #HealthApps4me #digitalhealth	Use our Ecosystem to generate digital specific content	Develop online case studies and patient stories, eg More Independent, PKB, Perinatal app, How am I today app	Create links with digitalhealth.net and similar message boards. Develop a Testbed specific story	A diverse range of relevant content is published on the interactive website and is regularly accessed by visitors
4.2 Create a catalogue of digital solutions	Use our network of Innovation Scouts and others to establish catalogue items	Use digital communications in combination with stakeholder PPI networks to develop citizen stories associated with the catalogue	Use CHC stakeholder events and networks to build momentum around the catalogue	Use our digital communications expertise to create a citizens community of interest network in digital health	We have a catalogue of digital solutions that is content rich and validated with citizen, staff and supplier reviews

4.3 Mobilise the Connected Health Cities programme	Develop the second level plans with delivery partners. Agree a contractual framework with the NHSA hub and delivery partners	Front line CHC engagement events underway. Data mapping and discovery underway. Develop a technical Ark sandpit environment	Alignment of regional information sharing agreements. Expanding the scope of online information governance tools	Test regional data federation approaches. Seek out opportunities for alignment with the GMC	The CHC programme is actively supporting stakeholder priorities, with delivery partners engaged in developing new approaches to front line data usage and presentation
4.4 Develop the capabilities for digital transformation within our stakeholders' workforces	Work with Lancaster University and other delivery partners to develop a digital health skills escalator. Map out the learning opportunities within digital health, ie ALTAS, Tinder Foundation, etc	Enroll a first cohort of front line staff on to the digital health programme at Cumbria University	Engage front line staff through communications and workforce development to co-create a virtual digital health academy. Harness the online resources offered through the Innovation into Practice platform to help the alumni to collaborate on innovation	Collaborate with Health Education England and delivery partners to develop a blended learning approach to digital health transformation for front line staff. Link material and resources into our digital platform	There is a cohesive programme of blended learning in place for digital health innovation that is accessible to front line staff, demonstrable through its adoption
4.5 Work with	Map opportunities to	Seek out digital	Map out the data	Deploy digital	Patients on long term

integrated care organisations / CCGs to develop digitally enabled pathways of care for long term conditions	integrate digital health technologies into existing transformation programmes. Identify an evaluation methodology to measure the impact of digital health on patient activation	solutions that respond to specified requirements. Prioritise solutions that give patients access to electronic healthcare records or which create patient-held records	flows associated with candidate digital solutions. Link requirements to Objective 3 Q4 Measure baseline patient activation within cohort pathways	solutions alongside health coaching to improve digital health literacy and patient activation. Undertake a post deployment evaluation	condition pathways report higher level of activation that is attributable to the use of health coaching combined with digital health technology
4.6 Identify digital solutions that are recognised to improve patient safety	Harness our digital communications expertise to capture and diffuse digital innovations in patient safety	Use social media and data visualisation techniques to engage citizens in patient safety issues, eg twitter hashtags. Vimeo, YouTube, blogs, Facebook pages, infographics	Identify digital patient safety technologies for inclusion in our online catalogue, ie capture reviews and stories associated with their use	Work with delivery partners to embed patient safety into the CHC work streams. Explore the human factors associated with digital health that impact on patient safety	Digital solutions that promote patient safety are included within the catalogue
4.7 Monitor the number of health coaching interactions that are delivered across the	Establish the programme	Begin roll out and evaluate, make changes where necessary. Set targets for	Monitor numbers and outcomes via case studies	Monitor numbers and outcomes via case studies	Numbers of citizens and staff involved in health coaching sessions

region		delivery			

9 Organisational capabilities

We have identified three core capabilities which are needed to drive delivery of our principal Goals:

Capability 1: A broker of collaborations and networks

The Innovation Agency has already had much experience in developing collaborations and networks. The skills required are included in job descriptions and as selection criteria to appoint staff. We employ four staff to specifically manage communications and events. The Innovation Agency has developed social media platforms via Twitter, Youtube and LinkedIn which are used to drive traffic to new content on the website; but recognise that the level of staff skills and engagement with social media across the region varies. We have also developed a strong network of Innovation Scouts - a cadre of innovators working within the NHS system in the North West Coast who are committed to driving widespread adoption of innovation.

We will develop our capability to broker collaborations and networks by:

- ☐ Developing a communications and engagement strategy, with a clear prioritised stakeholder mapping resource

- ☐ Supporting development of our staff to improve their skills to broker collaborations and networks, and to strengthen their digital networking skills.

- ☐ Increasing the impact and reducing the number of face to face events in order to make better use of delegates' time.

- ☐ Increasing the use and effectiveness of digital communications. Our intention is to create a centre of excellence for digital communications. We will strengthen our digital platforms and skills, and then support our subscribers to improve their digital communication capabilities. We will learn from the success achieved by the Mayo Clinic Social Media Network and others to develop our website and social media networks, link to other existing platforms and, where needed, build new platforms. We will strengthen content and showcase high impact innovations (described in Capability 2).

- ☐ Having developed our digital communications platforms and skills, we will enable widespread adoption and spread of digital communication capabilities for the Health Innovation Centres, integrated care systems and SMEs we support in the North West.

- ☐ We will expand and deepen the knowledge and experience of our Innovation Scouts network to develop a broader Innovation Forum of innovators and experts.

The impact of how our capabilities develop will be measured in terms of face to face meeting impact, engagement on our digital platforms and in stakeholder perceptions captured in the national AHSN stakeholders survey. In the longer term we will measure the extent to which subscribing organisations engage to develop their digital communication skills.

Capability 2: Showcasing high impact innovations

Building on this capability we will build an information platform, which will become a trusted source of knowledge and advice about innovations which are of proven efficacy, and which would most likely deliver local benefit. The platform will be established as a catalogue of innovations housed within an information system. The catalogue will be broadly inclusive, however to guide our stakeholders we will prioritise innovations with the greatest potential to deliver impact.

We will:
- Highlight innovations which have demonstrated impact locally and are supported by NHS or social care stakeholders in the North West Coast

- Highlight innovations which have demonstrated impact in other regions and are endorsed by other AHSNs

- Highlight digital innovations which match specific needs to drive improvement in the management of long term conditions (see Goal 3).

The information platform will also capture learning about how to implement improvements and how to make connections with those who have already adopted innovations.

Each quarter we will bring together a senior multidisciplinary peer review panel of respected leaders in the North West Coast, including an NHS chief executive and finance, medical, nursing and operational directors; senior academics and senior Local Enterprise Partner staff members. This panel will assess innovations using a standardised protocol (see Capability 3) and will highlight innovations which have the greatest potential to contribute to the delivery of the four Innovation Agency goals.

This small number of innovations (about one per quarter) will be assigned an Innovation Agency 'kite mark' and will be supported by a communications campaign to highlight the potential impact which can be achieved.

We will build the information management system to create a system to match NHS and commercial stakeholders. Both groups will be able to register a profile describing their 'need' or their 'offer' and the system will link them together. This will be a supporting platform for rollout of national initiatives and innovations.

We will measure the development of this Capability platform by monitoring the implementation of key milestones, including:

- definition of system scope and identification of provider

- desk-top research to identify the first wave of recommended innovations

- first meeting of the expert panel and first 'kite-marked' innovations communicated across the North West Coast

- the number of, and extent to which kite marked innovations are adopted and their local impact

- qualitative feedback from NHS stakeholders and from companies who have received the endorsement.

Capability 3: Improving skills in adopting and evaluating innovations

This Capability package will be developed around a branded methodology for putting innovation into practice encompassing, culture and leadership, knowledge and skills for project planning, management and evaluation. It will encompass key aspects of understanding human factors, change management, network development, and evaluation methodologies.

The platforms within the Capability package will draw upon the wide range of professional skills and experience housed within the Innovation Agency, and from the Agency's access to a range of established tools and systems. Drawing upon these assets, we will develop a distinctive Innovation Agency-branded approach which can be used by stakeholders to build their organisational capability for putting innovation into practice and evaluating the impact.

We will:
- Develop a core set of innovation processes and tools, and integrate them into a branded education and information package for use by subscribing organisations

- Seek CPD accreditation for the package

- Establish a financial and operational framework to enable non-subscribing organisations to use the package

The Capability package will include a platform of skills and methods for evaluation, which will link closely to platforms for partnership development, project planning and adoption. The Capability package will be designed to enable the interdependence between these platforms to be demonstrated, and the value of integrating them into a coherent strategic plan for each project to be readily appreciated.

The evaluation platform will also provide a tiered framework for identifying appropriate evaluation approaches, tailored according to the scale, scope and purpose of each project, and for identifying other partners, either locally or elsewhere, with potential to further support robust evaluation and/or to enable added value to be derived from this process.

All Innovation Agency staff will be trained in how to guide stakeholders in the use of all platforms within this Capability package, and will know how to signpost external staff to colleagues and organisations with relevant expertise within the North West Coast as appropriate. We will invite the Innovation Scouts to join the initial educational cohort and elect to become accredited facilitators.

10 Organisational Development Plan

In order to deliver these principal Goals, we have identified three core organisational capabilities which will be developed. The table below outlines the plan to develop these capabilities.

Capability 1: A broker of collaborations and networks

2016/17	Q1	Q2	Q3	Q4	Year-end impact
1.1 Develop a clear communications strategy with a stakeholder map	Develop the strategy in consultation with staff and stakeholders	Approval of strategy by the Innovation Agency Board	Roll out actions	Roll out actions	Clear strategy in place, with implemented actions
1.2 Reduce the number and increase the impact of network events	Introduce a gatekeeping process to force greater analysis of how an event will lead to measurable impact. Establish mechanism to measure impact	Review compliance to new process and manage performance of compliance and quality of objective setting			Reduced number of events to no more than three per month Increased impact measured against target set before events

| 1.2. Build a centre of excellence for digital communication | Review the Mayo Clinic and other examples of best practice, define which elements will be adopted over the next seven quarters (objectives then to be refined accordingly) | Launch Innovation Agency on Facebook. Develop training package and pilot by training all internal staff, associates and Scouts to use and contribute to all platforms. Publish learning from review of how digital platforms can drive spread and adoption of innovation | Develop external training programme to address the needs of service providers and commercial stakeholders (income generating) | Pilot external training programme with 20 external delegates | Twitter follows increase by 30 per cent to more than 3500.

Facebook follows/likes grow to more than 500 and engagement more than five per cent.

Website visits increased by ten per cent to more than 2,200 per month.

More than 30 internal staff, associates and Scouts trained

20 external stakeholders trained

Improvement vs previous year in all areas of the AHSN stakeholder survey |
| --- | --- | --- | --- | --- | --- |

Capability 2: Showcasing high impact innovations

2016/17	Q1	Q2	Q3	Q4	Year-end
2.1 20 High Impact Innovations included in the catalogue	Test and populate the on-line Innovation Exchange platform with 10 proven innovations Develop innovation pathway and underpinning resources. Develop innovation approvals protocol with key stakeholders Create a communications plan for the launch and release of endorsed innovations Launch Phase 1 of the Innovation Exchange	Establish and convene the High Impact Innovation Review Panel who will agree the criteria by which innovations are reviewed and award Innovation Agency kite-marks where appropriate Compile directory of NHS and commercial partners' interests to facilitate matches with innovations showcased	Aim to generate 10 matches between the innovations and partner /organisations identified needs Convene Review Panel	Publish a further 10 proven innovations Convene Review Panel	Fully functional on-line tool generating identification of innovations for local adoption and business support opportunities 20 proven innovations uploaded 10 matches made between innovations and partners Innovation pathway developed and approved. Three Review Panels taken place

| 2.2 Tool being proactively used to identify innovations for local adoption (supported by Capability 3) | | Putting Innovation into Practice programme launched | Monitor level of interest in each innovation and generate targeted messages to support adoption | Innovations adopted in at least 10 locations | Evidence of plans to adopt proven innovations by partners

10 locations will have adopted a new innovation |

2017/18	Q1	Q2	Q3	Q4	Year-end impact
2.3 40 High Impact Innovations included in the catalogue	Evaluate the online tool. Create plan for enhancements	Publish a further 10 proven innovations		Publish a further 10 proven innovations	Fully functional online tool generating identification of innovations for local adoption and business support opportunities 40 proven innovations uploaded
2.4 Tool being proactively used to identify innovations for local adoption (supported by Capability 3)					Evidence of plans to adopt proven innovations by partners

Capability 3: Improving skills in adopting and evaluating innovations

2016/17	Q1	Q2	Q3	Q4	Year-end
3.1 Develop the online programme to support our partners in putting innovation into practice	Produce first version of the programme Produce a communications plan for the launch Initial discussions regarding CPD accreditation Begin training all Innovation Agency staff	Launch the programme Project plan in place to secure CPD accreditation Staff training session held	Monitor use of the programme Complete training for all Innovation Agency staff	Roll out training to Innovation Scouts Quarterly refresher sessions for Innovation Agency and Innovation Scouts	Fully functional online programme, tested by Innovation Agency staff and being used by at least three of our partners All Innovation Agency staff have completed training One refresher session run
3.2 To establish a programme of webinars to collaborate and to share knowledge and best practice	All programme managers to be trained in delivering webinars	One webinar per programme area of work each year, first webinar held. Begin knowledge transfer and best practice webinars, first webinar held	One further programme webinar Further knowledge transfer webinar	Two further programme webinars Further knowledge transfer webinar	Regular participation in our ongoing programme of webinars to raise awareness and support the adoption of innovations Seven webinars held

3.3 Ensure all our partners benefit from the expert support to adopting innovations that we can offer, including through our Innovation Scout Network	Establish an Action Learning set for the Mental Health Innovation Scouts Innovation Scout development event	Begin collection of case studies from the Innovation Agency staff and our Innovation Scouts Work with the Innovation Scouts to identify areas of need where proven innovations can be adopted, for example Emergency Care Checklist, Affecting Patient Safety Tool, E-Referrals, House of Memories, CCG Incident Reporting Tool, AF Dashboard, Open prescribing platform, AliveCor, Refer to Pharmacy, FloHealth, etc Innovation Scout development event	Design a dissemination programme, begin dissemination Innovation Scout development event	Release of second case study Innovation Scout development event	Routine dissemination of case studies, two case studies released New innovations adopted in 10 sites across the North West Coast Minimum three Mental Health Innovation Scouts participating in the Action Learning Set, meeting three times and adopting a new innovation at each site Four Innovation Scout events

3.4 Establish and convene a North West Coast Innovation Evaluation Steering Group (IESG), comprising selected operational and academic leaders, to develop North West Coast strategy and planning for evaluation	Critically review existing frameworks for evaluation Identifying key approaches and operational models to be used Defining the terms of reference, and the professional and legal status of the Innovation Agency evaluation platform Assess feasibility of funding for Innovation Agency evaluation coordinator for the region	Map evaluation capability in public and private sector across North West Coast Identify Innovation Agency evaluation partners Establish partnership agreements with each Innovation Agency evaluation partner to deliver high quality, independent evaluations to NHS and private sector in return for fees Identify a programme of evaluation work for 2016-2017	Finish the work of the IESG Establish Innovation Agency Evaluation Advisory and Review Group Launch Innovation Agency evaluation capability platform Begin initial evaluation projects Appoint Innovation Agency evaluation coordinator, if feasibility has been proven	Develop educational materials for Innovation Agency evaluation platform	Generate robust and comprehensive data to inform smooth decision-making for adoption of innovations by local NHS organisations Support smooth collaboration and joint working between NHS and business sector across North West Coast Enhance national / global reputation and profile of North West Coast as a location for health innovation Enhance capability of local NHS organisations for addressing and routinely using evaluation within an integrated process of putting innovation into practice

3.5 Create a financial and operating framework to allow non-subscribing organisations to benefit from accessing the programme			Establish demand for the programme and its unique selling points	Explore business model for making the programme available to non-subscribing organisations	Clarity the business model and likely demand

2017/18	Q1	Q2	Q3	Q4	Year-end impact
3.6 Develop the online programme to support our partners in putting innovation into practice	Evaluate uptake and effectiveness of the online programme Quarterly refresher sessions for Innovation Agency and Innovation Scouts	Undertake enhancements Quarterly refresher sessions for Innovation Agency and Innovation Scouts	Quarterly refresher sessions for Innovation Agency and Innovation Scouts	Quarterly refresher sessions for Innovation Agency and Innovation Scouts	Enhanced, CPD accredited, online programme, tested by Innovation Agency staff, being used by our partners and available to non-subscribing organisations 4 Refresher sessions run
3.7 Establish a programme of webinars to collaborate and to share knowledge and best practice	Evaluate uptake and effectiveness of webinar series.	Refresh annual programme in light of evaluation and agree number of webinars	Implement refreshed programme	Implement refreshed programme	Increase alumni who regularly participate in our ongoing programme of webinars to raise awareness and support the adoption of innovations Completed agreed number of webinars

3.8 Ensure all our partners benefit from the expert support to adopting innovations that we can offer	Horizon scanning exercise to identify the least 10 innovative approaches/ techniques	Review dissemination programme in light of exercise	Ongoing provision of best practice examples	Ongoing provision of best practice examples	Routine dissemination of best practice intelligence 10 new innovations discovered
3.9 Evaluation platform	Quarterly review of evaluation platform	Quarterly review of evaluation platform	Quarterly review of evaluation platform		Generate robust and comprehensive data to inform smooth decision-making for adoption of innovations by local NHS organisations Support smooth collaboration and joint working between NHS and business sector across North West Coast Enhance national / global reputation and profile of North West Coast as a location for health innovation Enhance capability of local NHS organisations for addressing and routinely using evaluation within an integrated process of putting innovation into practice

3.10 Create a financial and operating framework to allow non-subscribing organisations to benefit from accessing the programme	Develop a communications plan for the launch. Launch programme	Monitor uptake	Monitor uptake	Begin collection of case studies	

Appendix 1

Connected Health Cities (CHC)

Connected Health Cities (CHC) is a £20 million programme in which the North West Coast is one of four pilot sites in the North of England, funded by the Treasury and deployed by the Northern Health Science Alliance (NHSA) which is a partnership organisation funded by a range of NHS, academic and Academic Health Science Networks in the North. The programme is part of the Government's commitment to the Northern Powerhouse. It is part of the Health North partnership which has a range of initiatives designed to develop skills and attract funding to the North focussing on life sciences, research, development and innovation. This programme will help support our ambition to drive economic growth and deliver internationally competitive, population-based, health science capability.

The CHC programme aims to be the first civic partnership that exploits data fully to:

- Drive public sector reform for better health and care by providing actionable information to:
    - NHS commissioners
    - NHS social care providers and their partners
    - Public health professionals and their partners
    - Researchers levering funding and feeding national investments
- Create region-wide health science trusted by citizens
- Accelerate business growth for the digital health revolution.

We have a wealth of information in the NHS and social care, and our ambition is to harness this information for the good of our citizens. We need to bring together data-sets from across two clinical pathways, linking them and housing them safely; engaging with our citizens to help us do this; providing the analysis, support and co-design of outputs with our clinical communities and supporting frontline staff to be able to use the information to improve care.

Two care pathways

We have selected two key care pathways to develop as our exemplars for the region within the Connected Health Cities programme - **Chronic Obstructive Pulmonary Disease (COPD)** and **reducing alcohol misuse.**

Using a range of methods we will bring together stakeholders to define data and informatics opportunities to re-engineer or support services.

We will gather the perspectives of academia, clinicians and service providers, commissioners, local authorities, voluntary sector, industry, patients and the wider public. This process will benefit from established multi-disciplinary networks (eg the *Liverpool Alcohol Research Alliance*, which hosted a first meeting of potential contributors to the alcohol theme for CHC in September 2015) and events such as our Ecosystems series, where data/informatics engagement has been included to support this project.

A key focus will be to break down the silos that exist between people, sectors and their current data resources – opening up opportunities to develop more effective use of information to support delivery of care, cross-agency working and research. Existing national (eg NICE) and local guidelines and policies will help to identify relevant pathways and interventions. We will construct an inventory of people and organisations and map their data collection, storage, analysis and reporting activities with respect to services – using this knowledge to support local Ark development.

Chronic Obstructive Pulmonary Disease (COPD)

COPD is the fifth biggest fatal disease in the UK, killing around 25,000 people a year in England. It is a disease of the lungs that is characterised by airflow obstruction or limitation. It is now the most widely used term by clinicians for the conditions in patients with airflow obstruction who were previously diagnosed as having chronic bronchitis or emphysema or chronic unremitting asthma. The airflow obstruction is usually progressive, not fully reversible (unlike asthma) and does not change markedly over several months. It is treatable but not curable; early diagnosis and treatment can markedly slow decline in lung function and hence lengthen the period in which a patient can enjoy an active life. It can be caused by a number of factors, including smoking and exposure to occupational or environmental hazards such as toxins, fumes and gases.

Numbers of deaths from COPD increase with age, as the lungs become more obstructed over time. In the UK, deaths from COPD are very low in the age range 0-40 (less than 500 per year) but much higher in the 75+ age range for both males and females (about 20,000 per year).

There are around 835,000 people currently diagnosed with COPD in the UK and an estimated 2,200,000 people with COPD who remain undiagnosed, which is equivalent to 13% of the population of England aged 35 and over. Data from the World Health Organisation (WHO) shows that premature mortality from COPD was almost twice as high in the UK as in the rest of Europe (EU-15) in 2008 and premature mortality for asthma was over 1.5 times higher. Premature mortality for COPD and asthma has decreased in the last decade in parallel with the European (EU-15) average for both men and women but the gap between the UK and the European (EU-15) average has not changed. This difference is particularly marked for females: death rates from respiratory disease for females in the UK are about three times higher than those for females in France and Italy.

Although deaths from asthma have plateaued at between 1000 and 1200 deaths a year since 2000, it is estimated that 90% of deaths are associated with preventable factors. Almost 40% of these deaths are in the under 75-age group. Asthma is also responsible for large numbers of hospital admissions, the majority of which are emergency admissions.

In the North West there is a higher proportion of people diagnosed with COPD than many other areas of the UK, and we are second only in numbers to the North East. In 2013/4 there was 2,489 people diagnosed with COPD (per 100,000) vs 1,656 (per 100,000) in the South East of England.

Our work in the area through the Connected Health Cities programme will enhance the ability of clinical staff and commissioners to improve the care pathway and ultimately outcomes for patients in our region.

Reducing alcohol misuse

Consumption of alcohol in the UK has increased by 19% over the last three decades, with around 10.5 million adults in England drinking above sensible limits and 1.1 million having a level of alcohol addiction. Health problems associated with alcohol misuse are diverse, involve multiple care pathways and place a substantial burden on the NHS. In 2006/7 alone, alcohol was estimated to have accounted for £2.7 billion of NHS expenditure. Over three quarters of this sum related to acute hospital care and 14% to ambulance services.

The spectrum of alcohol-related emergencies presenting to acute hospitals includes the effects of intoxication (eg collapse, injuries caused by falls, accidents or violence), alcohol withdrawal and damage to various organs including the liver, pancreas, heart and brain. Alcohol excess is also a risk factor for various cancers and plays a role both as a cause and consequence of psychiatric illness. This diversity of health problems may be associated with an equally complex range of social issues for the individual, such as employment, benefits, housing and homelessness;

and their family and friends, eg safeguarding of children, domestic violence; and wider society through road traffic accidents and crime.

At the point of care, alcohol misuse is often associated with a lack of engagement with health and other services, including failure to accept advice or referral for treatment, missed appointments and poor compliance with therapy. In acute situations, front-line workers may be unable to extract essential information from patients during routine history taking, reflecting impaired communication due to lack of motivation, intoxication, reduced consciousness or as a result of acute or chronic confused states. This lack of information can impair or delay decision making.

Given this complexity, it is self-evident that strategies to reduce alcohol-related harm require effective collaboration between multiple agencies including primary and secondary health care, psychiatric services, public health, social care and local authorities, the criminal and justice system and the voluntary sector. Co-ordinated interventions are needed to support the prevention of harmful drinking, the identification and treatment of alcohol dependency and the provision of care pathways for established alcohol-related conditions.

The broad topic of alcohol misuse has been identified as a source of particular health and social burden for the North West Coast. For example, in 2013/14, Blackpool's population had the highest rate in England for alcohol-specific admissions among men, mortality from liver disease and claimants of benefits due to alcoholism.

Appendix 2

We are focusing on a number of other clinical programmes – the rationale for this focus is outlined below.

STarTBack – reducing back pain – refer to Goal 1

More than 70 per cent of the population will experience a significant episode of back pain during their lives. Back pain is the most common reason why middle aged people visit their GP, with one in 12 adults presenting each year with this complaint, representing an estimated annual cost to the NHS of £4.2bn. Back pain is the second most common reason for sickness absence from work and for persistent disability among adults under 65.

Current guidelines promote a 'one size fits all' approach in which, after the small minority of patients with potentially serious causes for their pain have been identified, the rest are managed as a single group under the label of 'non-specific low back pain'. We know that most cases of back pain will be resolved regardless of the course of therapy, while some do not get better, no matter what treatment is delivered. Therefore, current treatment approaches in the NHS mean that a substantial proportion of back pain patients are over-treated, while a significant number fail to get the right treatment and go on to suffer long term pain and disability.

The challenge for practitioners is to be able to classify back pain according to their risk of persistent pain and then to target them to appropriately matched treatments. STarTBack provides a model of stratified care for low back pain where patients are screened for risk of chronicity. The STarTBack prognostic screening tools place patients with back pain into three risk groups and then matched pathways are put in place to target the right treatment to the patient.

Medicines optimisation – refer to Goal 1

Medicines play a crucial role in maintaining health, preventing illness, managing chronic conditions and curing disease. They remain the most common therapeutic intervention in healthcare. Medicines optimisation is about ensuring that the right patients get the right choice of medicine, at the right time. By focusing on patients and their experiences, the goal is to help patients to: improve their outcomes; take their medicines correctly; avoid taking unnecessary medicines; reduce wastage of medicines; and improve medicines safety.

There are four guiding principles for medicines optimisation:

Principle 1: Aim to understand the patient's experience
Principle 2: Evidence based choice of medicines
Principle 3: Ensure medicines use is as safe as possible
Principle 4: Make medicines optimisation part of routine practice

Reducing strokes due to Atrial Fibrillation (AF) – refer to Goal 1

Atrial fibrillation means the heart is not pumping blood effectively and regularly around the body. Irregularity of the heart beat may lead to pooling in the atrium of the heart which can potentially form clots if it is not pumped at a regular rate. This increased risk of blood clotting means that a clot can be released and in some cases may travel to the brain and cause a stroke.

In the North West Coast there are 14,600 strokes per year. One in five strokes is due to AF, which is a total of around 3,000 per year in the region. A sufferer is 50 per cent more likely to die if the stroke is caused by AF and for those who survive they are likely to experience high levels of disability. It costs the UK economy approximately £8bn when you include NHS, social care, carer costs and loss of income, equal to around £0.5bn in the North West Coast.

Personalised medicine – refer to Goal 2

This programme is focused on the North West Coast NHS Genomic Medicine Centre and rollout of the 100,000 Genomes Project across our region.

The aim of the programme is to ensure that we deliver the right treatment, for the right patient at the right time, at the right price. By sequencing whole genomes we can ensure earlier and more precise diagnosis of cancers, rare diseases and infectious diseases. Exact identification of the medical problem allows a customised treatment for each patient which means, in many cases that a cheaply priced drug can be used or we can be more focused in the application of high cost drugs.

Citizens who participate in the 100,000 Genomes Project form a cohort of people who are consenting for their data to be used for NHS and research purpose and therefore form a rich source of patient involvement and information for the NHS. NHS England are producing a Personalised Medicines strategy in summer 2016.

Reducing infection – refer to Goal 2

Healthcare associated infections:

Around 300,000 patients a year in England are affected by a healthcare associated infection (HCAI) as a result of care within the NHS. HCAIs pose a serious risk to patients, staff and visitors and can incur significant costs for the NHS. As a result, infection prevention and control is a key priority for the NHS.

Infectious Diseases:

Building on the work of the very successful centres of excellence within the North West Coast, this programme aims to:

- Foster engagement, collaboration and partnership between health/social care, industry and academia for the design, development and/or evaluation of new products and technologies within the field
- Advise on the potential efficacy of new products and technologies and prioritise their likely impact and value, for implementation across the North West Coast
- Enable active engagement with the Innovation Agency by the NHS and university professional community
- Link smoothly, as appropriate, with other elements of Innovation Agency infrastructure and activity.

Sepsis:

It is estimated that around 123,000 cases of sepsis are reported each year in England. An estimated 37,000 deaths are associated with the condition – which is more than the number who die from lung cancer. Building on earlier successes, work will continue to broker collaborations that showcase high impact innovations that reduce the incidence of sepsis regionally and nationally.

Mental health – refer to Capability 3

The Five Year Forward View for Mental Health published in February 2016 clearly illustrates a re-energised commitment to reducing the rate of mental illness across the UK. Within the North West Coast work will continue on developing a community of interest/learning-set approach, that will bring key NHS, educational and business innovators together to share, spread and support adoption of innovations in mental health.

Dementia – refer to Capability 3

Dementia UK figures shows that, in 2013, there were 815,827 people with dementia in the UK. 773,502 of these people with dementia were aged 65 years or over. This represents one in every 79 (1.3%) of the entire UK population and one in every 14 of the population aged 65 years and over. In 2015, this equates to 53,300 in the North West Coast.

Appendix 3

Integrated care and new models of care

In our region we have a number of integrated care/new models of care sites, the definitions for which are outlined below.

Vanguard sites

Establishing vanguard sites for new care models was one of the first steps towards delivering the Five Year Forward View. The focus is to accelerate the design and implementation of new models of care. To be successful in being designated Vanguard status, the health and care system needed to demonstrate evidence of existing innovative work, a high level of ambition, good understanding of their population needs, a clear vision for improvement and effective partnership working.

Healthy New Towns

The background: Britain loses more than 130 million working days to ill health each year; 19 per cent of children aged 10 to 11 are obese; only 21 per cent of children play outdoors compared to 71 per cent of their parents when they were children; a quarter of adults walk for less than nine minutes per day and physical inactivity is a direct factor in one in six deaths.

The Healthy New Towns programme aims to inform thinking and planning of every day environments to improve health for generations to come.

Options to be tested at some of these sites include fast food-free zones near schools, designing safe and appealing green spaces, building dementia-friendly streets and ensuring people can access new GP services using digital technology.

Test beds

A test bed site is a unique collaboration between a group of commercial innovators and the NHS. They seek to address three important problems that have constrained the impact of innovation in the NHS. Firstly, innovations are often implemented in isolation from each other, and from the infrastructure on which they depend. Next, there is a comparative lack of robust evidence about the effects of innovation in the

real world as opposed to experimental or research settings. And finally, innovations are often introduced on top of existing working practices and infrastructure often leading to the innovation adding cost with little or no gain in value.

Working with Lancashire and South Cumbria Innovation Alliance Test Bed
We are part of the Lancashire and Cumbria Innovation Alliance, which over the next two years will enable frontline health and care workers in Lancashire to use a range of technologies and interventions to support frail and elderly and people living with long-term conditions and dementia to be cared for outside hospital, to improve their care.

The bid for Test Bed funding was backed by the Innovation Agency, with support in putting together the proposal and in introducing some of the commercial partners. The AHSN will continue to support the Test Bed by connecting innovators with health and care providers; and with helping to spread the lessons learned so that other areas benefit.

This Test Bed is focused on supporting frail elderly people with dementia and other long term conditions to remain well in the community and avoid unnecessary hospital admissions. Keeping people well in the community will increase the quality of care provided and patient outcomes, create capacity within hospitals, and release efficiencies by reducing the input required from wider health and social care services.

Morecambe Bay and the Fylde Coast are the chosen locations for running the Test Bed as they have already been chosen as vanguard sites – areas that are testing out new models of care and approaches to find new and better ways of caring for people.

Appendix 4

North West Coast Clinical Network

We work closely with the restructured North West Coast Clinical Network, formerly the Strategic Clinical Network, who moved into offices adjacent to the Innovation Agency in March 2016.

While their business plan is still under development, for 2016/17 the mandated national priorities for Clinical Networks, to support delivery of national programmes are:
- Mental health, including dementia and CAMHs
- Cancer
- Maternity
- Diabetes
- Urgent and emergency care (with a focus on CVD transformation)

Clinical Network support teams may support other local priorities where resources can be identified locally

Appendix 5

*Establishing the North as an internationally
recognised health science system*

nhsa
Northern Health Science Alliance

Goal 1: To act as an advocate for the **health research conducted by our members**

Goal 2: To act as a **front door for industry** conducting **health research in the North**

Goal 3: To **secure funding** by leveraging the North's **health research strengths**

Goal 4: To drive **economic growth** across the region and UK

Supported by our recognised capabilities:

1. **A trusted broker** between our 20 members and the public and private research community.	2. Experts at establishing **multi-centre / party projects** with best of breed infrastructure across the North.	3. Experts at helping **multi nationals and SMEs develop research strategies** with NHSA members.	4. Dedicated to supporting the development **of the North as an active research cluster**.

Clinical programmes – *Ageing, Precision Medicine, Health Data Analytics , Population Health and Digital Medicine*

Appendix 6

North West Learning and Development Collaborative

We are one of five organisations who are working together to develop and support leaders, to enable the transformations necessary in health and social care to deliver the health and wellbeing for citizens in the North West.

These five bodies, named below, have formed a powerful development resource, established over a number of years, which gives a comprehensive leadership, quality improvement and development service to organisations involved in health and social care across the region:

• **NHS North West Leadership Academy (NHS NWLA)**
• **Innovation Agency – formerly the North West Coast Academic Health Science Network**
• **Greater Manchester Academic Health Science Network (GM AHSN)**
• **Advancing Quality Alliance (AQuA)**
• **HEE North West Local Office**

Our collaboratiion has created a connected set of partners who have well established, formal and informal relationships. The depth and breadth of these relationships enables alignment of combined skills and resources to tackle the challenges facing the North West health and social care economy.

All of the development work undertaken by the development bodies in the North West is designed to transform the way we meet the needs of the population and improve outcomes, creating the cultures necessary to deliver the vision outlined within the 5 Year Forward View.

The Collaborative works to support the development and enhanced capability to create the relationships, strategies and cultures to realise the ambitions of the 5 Year Forward View, along with partners in other sectors. The agreement is that wherever possible, development will be undertaken together with colleagues from across the health and social care system building relationships, networks and learning together.

The graphic below has been developed as an online tool to illustrate the **North West Learning and Development Collaborative:**
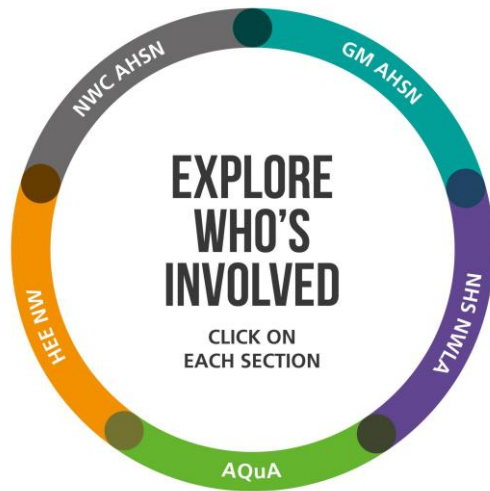
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