# Pro forma for potential Test Bed sites

To ensure we are able to invite the right groups to the matchmaking phase of the Test Bed Programme (<a href="http://www.england.nhs.uk/ourwork/innovation/test-beds/">http://www.england.nhs.uk/ourwork/innovation/test-beds/</a>) we are inviting local health and social care economies who think they may be able to form potential sites to put themselves forward by completing this form. The form provides an opportunity to demonstrate how potential sites meet the criteria set out in the prospectus and to confirm the real world health and social care challenge(s) they are seeking to address through their test bed programme.

Submissions should be sent to innovation.england@nhs.net by midday 12 June.

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Please confirm the lead organisation for your submission and provide a named contact, including their email and phone number

Nominated contact for the submission:

Mags Harrison, Transformation and Integration Pioneer Programme Manager, Kent County Council <a href="mags.harrison@kent.gov.uk">mags.harrison@kent.gov.uk</a> - 03000 415347

On behalf of:

Dr Robert Stewart – Practising GP and Chair of the Kent Integration Pioneer Steering Group <a href="mailto:robert.stewart@wgd.co.uk">robert.stewart@wgd.co.uk</a> - 07912 535551

Anne Tidmarsh – Director Older People Physical Disability, Kent County Council anne.tidmarsh@kent.gov.uk – 03000 415521

Please list all the partners involved, indicating where organisations are formal partners or affiliated members. Please describe how well engaged your partners are and how you plan to work together to develop a test bed.

The partners involved are the membership of the Kent Integration Pioneer Steering Group:

Name	Organisation/Job Title
Dr Robert Stewart	Chair Kent Integration Pioneer Steering Group
Roger Gough	Chair Kent Health and Wellbeing Board
Ian Ayres	Accountable Officer West Kent CCG
Patricia Davies	Accountable Officer DGS/Swale CCG
Simon Perks	Accountable Officer Ashford/Canterbury and Coastal CCG
Lorraine Goodsell	Transformation Programme Director, Ashford/Canterbury and Coastal CCG
Hazel Carpenter	Accountable Officer South Kent Coast/Thanet CCG
Andrew Ireland	Families and Social Care, Kent County Council
Anne Tidmarsh	OPPD, Kent County Council
Mark Lobban	Strategic Commissioning, Kent County Council
Mags Harrison	Programme Manager Transformation and Pioneer, Kent County Council
Andrew Scott-Clark	Public Health
Marion Dinwoodie	CEO, Kent Community Health NHS Trust
Ivan McConnell	Kent and Medway Social Care Partnership Trust
Rachael Jones	East Kent University Hospital Foundation Trust
Sarah Overton	Maidstone and Tunbridge Wells Hospital Trust
Susan Acott	Chief Executive, Dartford & Gravesham NHS Trust.
Lauretta Kavanagh	Commissioning Support Unit
Steve Innet	Healthwatch Kent

Amber Christou	Head of Housing Swale Borough Council (acting as District Lead)
Lesley Clay	Joint Planning Manager, Canterbury City Council
Alison Mills	Project Manager, Pioneer, Kent County Council
Bruce Pollington	Pioneer Chief Clinical Information Officer
Jenny Billings	University of Kent
Geraint Davies	SECAMB
Mark Lemon	Strategic Business Advisor, Kent County Council
Alison Davies	Integration Programme Health and Social Care, Kent County Council and
	South Kent Coast and Thanet CCGs
Dr John Ribchester	Clinical Lead and Chair of MCP Vanguard, Estuary View, Whitstable

This test bed will be developed through the Kent Integration Pioneer Steering Group (IPSG), which is a working group of the Kent Health and Wellbeing Board – the membership of the IPSG is listed above. This working group has been in existence for 2 years.

The formal partners are the 7 CCGs and Kent County Council, which are the statutory commissioners of health and social care for the 1.5 million citizens of Kent.

The IPSG also includes the acute, community and mental health providers as well as the ambulance trust, voluntary and social care providers, Public Health, HealthWatch and the University of Kent and these would make up the affiliated membership.

There are associated organisations that are important in making this site effective, including KSS AHSN, SEHTA (South East Health Technologies Alliance) and various international partners including the Digital Health Institute (DHI) in Scotland, South Denmark, Netherlands, Catalonia and Italy.

The Kent CCGs and Kent County Council Social Care have agreed and approved the application on 3 June 2015 and this has been endorsed by the chair of Kent Health and Wellbeing Board and the Leader of Kent County Council. The IPSG was keen for the test bed site to be developed and this was agreed and endorsed at the last meeting on 18 May 2015. This bid has been discussed with Dr Thallon, local Medical Director NHS E and approach encouraged.

There is enthusiasm and engagement from the CCGs and KCC for the test bed site including an Internet of Things, provided it can be valuable to implement local transformation based on increasing the empowerment of citizens to take more control of their care using technology and the digital revolution.

There is serious ambition in Kent to address the clinical, social and financial challenges and a determination that all of the resources of health and social care will be brought together by 2020 using a smart specialisation approach:

- Strengthening of local innovation ecosystems and building local capabilities
- Supporting local supply chains to invest and collaborate
- Catalysing and levering the differing opportunities of social innovation
- Branding and positioning places as centres of smart specialisation

This will be aided by establishing a Kent Innovation Centre in association with the DHI in Scotland to enable innovations to be tested, to engage with industry and enable dissemination at pace and scale across Kent, nationally and internationally using our Innovation Hub communication platform and the AHSN. The Innovation Centre linked to our network of innovation labs will facilitate implementation of our Internet of Things and use of combinatorial technologies. It forms the basis of various initiatives and bids including use of structural funds/LEP and EU funding as well as bringing international innovations from Japan, USA and New Zealand – Kent Integration Pioneers is leading international work with the national programme.

The test bed site will be managed through the IPSG, allowing all of our members to participate by establishing a network of innovation sites owned by the individual organisations and facilitated by the IPSG. The members are enthusiastic to progress this bid to help address the issues of frailty and loneliness and promote digital independence. Our countywide use of the NHS number and the nationally recognised work in information sharing and intelligence will help us to move at pace.

This bid builds on the success of Kent to establish good relationships with external partners and links well with other EU bids and projects such as the Room for Life which as a result of collaboration with Zeeland allows people to try out different living environments and technology to empower independent living.

Kent has a reputation for employing technology at scale having been one of the original Whole Systems Demonstrator sites and recognises the new opportunities that being a test bed will bring.

#### 1c | Please confirm if you are working with your local AHSN, if so who is the lead contact you are working with

Paul Hitchcock
Business Development Director
Kent Surrey Sussex Academic Health Science Network
incorporating Enhancing Quality & Recovery

Email: paul.hitchcock@nhs.net

Tel: 07824 867813 Website: <u>www.kssahsn.net</u>

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## 2 Tackling real world health and social care problems

Please describe your test bed, how the members will work together, what resources are available to innovators and what sorts of innovation your locality might benefit from [500 words max]

Our test bed will comprise of a network of local innovation labs across Kent linked to the proposed Kent Innovation Centre.

Each locality/CCG has its own focus of integration of health, social care and the voluntary sector (innovation lab) which will enable the workforce to organically transform to meet the changing needs of their communities across the 1.5m population of Kent identified by the NHS number.

Our focus will be on technology meeting the needs of the frail person and promoting independence and prevention, linked to intelligent information and building community capacity. Co-design with the citizen, care professionals and their communities will be key to ownership of the transformation aimed at the older person, but also relevant to children with complex needs, people with mental health and learning difficulties, to reduce isolation and loneliness.

New technologies will promote independent living, moving from a medically dominated model of care towards supported self-care, which will include self-monitoring using wearable devices, smartphones, apps with analytics, adaptations to buildings and robotics. This will be informed and mentored by international partners with a central innovation centre that will test innovations and produce standards to enable innovators and the private sector to participate.

Members will work together in the network of "labs" which will encourage transformation at pace and scale; learning, sharing and disseminating good practice, including close collaboration with our Vanguard MCP site in Whitstable, the PMCF site in South Kent Coast and the KSS AHSN. This change management will be facilitated by Kent Integration Pioneers as a working group of the Kent HWB and communicated locally, nationally and internationally through the Kent Innovation Hub, which has won an international award.

Resources available to innovators

- Innovation labs will encourage innovators, communities and the private sector to develop local solutions in transformation, eg new living environments as in the Room for Life project
- Innovators will be encouraged to participate in the Kent Innovation Hub, which will increasingly be available to all citizens and innovators, including academics and the private and voluntary sector
- The innovation centre will encourage innovators to participate and contribute to growth and wealth generation linked to structural funds, including the adoption of technology, robotics, designed living environments, digital independence and workforce change

Our test bed site will benefit from the following resources:

- Investment in m(obile)Health including video enabled technologies
- Investment in the network of innovation labs and use of virtual technology
- Investment in the innovation centre including employment of designers
- Innovative community diagnostics and robotics
- Capability to deliver change management of our health and social care workforce locally
- Training to make care workers technology-aware
- Innovative co-design techniques to ensure communities and care professionals own transformation
- Innovative approaches to increase community capacity, including volunteering/engaging with creative arts to reduce isolation.

Please describe the real world health and social care problem(s) that you are looking to address within 2b your test bed (note: this will be used to help match you with relevant innovators, so please provide enough information for them to understand the problem, or problems, you want their help with) [500 words max] We would welcome collaboration as a Test Bed with Innovators to provide better personalised care for

people living with multi-morbidity and advancing frailty with appropriate care available in community settings so that acute hospital attendance can be avoided.

We recognised that all too frequently acute hospital admission is not the best place to care for people in these circumstances and that hospitals find it difficult to address the issues that patients present with; as they are often not actually acute health needs, they could have been averted if tackled earlier. We equally need to address the challenge of keeping more people in their own homes as they become increasing frail.

We would also welcome approaches from innovators to better support the needs of people with learning disabilities and those with mental health concerns.

The issues presented by acute delirium as well as dementia at times of 'acute decompensation' warrant a special mention as people in these circumstances often do particularly badly from acute hospital admissions but are often challenging to look after and to keep safe in 'out of hospital' settings with any degree of efficiency. They are also much more likely to be discharged to a care home where they will stay.

As an Integration Pioneer were are seeking to accelerate improvements in all these areas and recognise the need to do much more in terms of prevention and self-care. The NICE public health guidance -Disability, dementia and frailty in later life - mid-life approaches to prevent or delay the onset of these conditions is currently in draft and once ratified, identifies which primary prevention approaches to be adopted in midlife are most effective and cost-effective to prevent and delay the onset of disability, dementia, frailty, and other non-communicable chronic conditions in later-life.

Additionally the NICE public health guidance - Independence and mental wellbeing (including social and emotional wellbeing) for older people is anticipated for publication in Nov 2015, which is tasked with advising upon what are the most effective and cost effective ways to improve or protect the mental wellbeing and /or independence of older people.

Innovations that facilitate any of this guidance at significant scale will be of particular interest including

those that address the barriers and motivators to support positive behaviours, which at a population scale would be welcome including motivational science, digital and internet technologies.

### 3 Satisfying the minimum criteria

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Please demonstrate that your site has effective leadership, with strong relationships between the participating bodies, and indicate how the test bed will be managed and where governance and alliance management systems are already in place [300 words max]

The proposed Kent Test Bed will be supported through the Kent Integration Pioneers steering group, a working group of the Kent Health and Wellbeing Board. The steering group comprises senior leadership from across all health and social care providers, all CCG Accountable Officers, Commissioning of Social care, Director of Public health, NHS England Area team, CSU, Voluntary Sector representation, Healthwatch Kent and the Health & Wellbeing Board. It also has a representation from our academic partner the University of Kent within the Centre for Health Service Studies.

There are ToR and governance structure in place for this group which is tasked coordination of the delivery objectives of the pioneer programme bid. Including

#### Integrated Commissioning:

- Design and commission new systems-wide models of care that ensure the financial sustainability of health and social care services; a proactive, rather than a reactive model that means the avoidance of hospital and care home admissions.
- Clinical Design partnerships between the local authority and CCGs with strong links to innovation, evaluation and research networks.
- Year of Care tariff financial model and risk stratification will be tested and adopted at scale.
- Integrated budget arrangements as the norm alongside Integrated Personal Budgets.
- Outcomes based contracts supported by new procurement models

#### Integrated Provision:

- Proactive models of 24/7 community based care, with fully integrated multi-disciplinary teams. The community / primary / secondary care/ voluntary sector care interfaces will become integrated.
- A workforce with skills to deliver integrated care.
- Integrated IT systems to improve patient / service user care, underpinned by personal health records that can be accessed by the individual.
- Systematise self-care so that people with long term conditions can do more to manage their own health and social care needs preventing deterioration and over-reliance on services.
- New kinds of services bridging silos providing the right care in the right place.

The Integration Pioneers Steering group has a commitment to evaluation and has involved academic partners from the onset, embedding evaluation within the creation and development of transformation through a validated evaluation framework.

# Please describe your site's current ability to share health related data and informatics across all parties and your plans to further develop this in the future [300 words max]

As a Year of Care Early Implementer, Kent is recognised as a system leader in its ability to share data having developed a person level, linked dataset across health and social care provider and commissioner dataset sets, costed at activity level.

All secondary care, community care, Out of Hours provider, Ambulance service, Mental Health and Social Care data are represented and the project has 50% of primary care data and hospice data covering a population of 700,000 currently within the dataset and anticipates the completion of this by autumn 2015. Further linkage with the voluntary sector is planned over the summer with Age UK projects and with the

Fire and Rescue Service.

The approach has been nationally recognised as having created a powerful commissioning tool, http://www.nhsiq.nhs.uk/resource-search/publications/population-level-commissioning-for-the-future.aspx

The dataset can be used to identify a capitated budget for target cohorts, but also to identify matched control groups for service evaluation in a whole place context.

A Cube dashboard has been developed to enable in-depth multivariate views of the data so a wide range of reports can be swiftly constructed.

Further development is with the Personal Social Services Research Unit (PSSRU) where an evaluation of the Year of Care Tariff will be conducted.

Added to this, the multi-method evaluation framework developed within the Centre for Health and Social Studies (CHSS) will capitalise on this dataset further by testing the process of linking the sets to variables such as quality of life, experiences of seamless care, service utilisation and self-management at the patient level, providing tracked information on what processes brought about what changes and movements through the system for individual patients. Such information will contribute towards understanding future service utilisation, cost and outcomes with detailed reference to how services are provided to produce such outcomes.

Please describe the scale of your site – including the population size covered –Please describe how and over what time frame the test bed will reach an appropriate scale which will enable robust evaluation that is statistically significant [300 words max]

Our site will cover 1.5 million citizens of Kent

Kent already has in place nationally recognised advanced intelligence information systems relevant to our Year of Care program, led by the Kent Public Health team and informed by our Kent Chief Clinical Information Officer

We have agreement to use an evaluation framework in two sites developed by the University of Kent using EU funding and covering a population of 300k on an "Action Based Research" and want to extend this across Kent over the next two years. They will be focusing on a Kent network of innovation labs to transform the workforce to meet the changing needs of our population, learning from our international partners and using technology and robotics to enable change.

The initial sites will go live by September and will enable co-design/co-creation for local implementation and will inform the developing network in an incremental way that enables spread at pace and scale, engaging a further 600 000 by April 2016. Our evaluation framework is outcome based to actively inform and redesign our services with the citizen at the centre. Full evaluation will be available by 2017/18 at the latest but interim analysis will be available by April 2016 and provided by the University of Kent which will be statistically significant.

As a test bed site, this common evaluation framework will be resourced and form part of the action learning research reporting to Kent Health and Wellbeing Board There are other components of evaluation based on working with Newton Europe that can demonstrate already statistically significant transformation and efficiency of social care. This will be linked to an associated but separate analysis of acute admissions at the William Harvey Hospital has been agreed as a national evaluation site

Also, partnerships are already being developed at a European level through the Health and Europe Centre and internationally with significant appetite for mHealth collaboration. Added to this, the evaluation conducted by CHSS forms part of a successful Horizon 2020 project 'SUSTAIN', which has synergy with the aims and objectives of Kent Pioneers, so that the analysis will be informed by broader European learning.

3d

Please demonstrate that you have a commitment to conducting real world demonstrations of combinatorial innovations in live clinical settings – including evidence that you have buy-in from clinical leaders and front line staff. What mechanisms exist to enable combined innovation across multiple partners? [300 words max]

Kent has strong leadership through the Kent Integration Pioneer program including the appointment of Kent Chief Clinical Information Officer to maximise benefit of information sharing across organisations.

There was much discussion at a meeting on 24/2/15 with Simon Stevens in Kent looking at the 5yfv with the clinical (CCG) leaders stating that there was much enthusiasm to change the models of care in several localities in Kent.

All areas in Kent have been holding summit meetings over the past year where local stakeholders have been discussing what integrated care should look like and this has included providers, commissioners of health and social care and district councils. There is a large amount of evidence documenting the commitment to innovate in multiple (combinatorial) ways.

Real world implementation in clinical settings can be demonstrated by the implementation of integrated discharge teams in North Kent, interoperability platform in West Kent, Integrated Care Organisation development in South Kent Coast, Dementia Friendly Communities and neighbourhood teams in Canterbury and Ashford, GP sharing information across practices in Folkestone, establishment of emergency visiting paramedic practitioners and developing an "Ageless society" in Thanet. These have only been achieved by using different innovations across multiple partners including HealthWatch and full engagement of clinicians.

Kent County Council has an efficiency partner engaging over 100 staff in the design, implementation and transformation of social care involving 100 staff, which has been very successful.

Kent has local health and wellbeing boards to bring together local stakeholders and front line staff in combining approaches and technologies across multiple partners.

Kent HWB has repeatedly shown the drive from clinical CCG leaders to innovate and change care including participation in YoC and personalised budgets - KCC innovatively implemented the Kent Card several years ago to enable citizens to take control of their social care budget.

3e

Please demonstrate that you will be able to move at pace and complete rapid and robust evaluations – including making swift decisions during the development of the test bed to ensure its success [300 words max]

As we already have a fully linked dataset covering 700,000 people this means that the data collection methods need to conduct large scale robust evaluation are already in place. Developing and refining the dataset is part of the continuous improvement process.

The Pioneer programme has a formal link with the Centre for Health and Social Studies, University of Kent as its evaluation partner and the Kent Year of Care Programme has formal links with the Personal Social Services Research Unit, University of Kent. As complete dataset exists from April 2014 for 700,000 people this means a control group can be identified and benchmarking activities undertaken at project initiation. Secondary Users Services (SUS) data flows with a 2 month time lead so that 'whole system difference' can potentially be identified at this time scale enabling rapid cycles of Plan Do Study Act improvement methodology. This work will be supported by the CHSS evaluation framework and central to the success of developing a rapid approach to evaluation is its implementation science approach. This approach centres on combining the skills of a broad stakeholder group with evaluation data obtained through a responsive multi-method design, and using the results to shape the initiatives towards and agreed set of personcentred outcomes. Data will be gathered through a core set of established metrics and validated surveys, which will enable a robust body of evidence to quickly emerge. This will enable comparisons to be made

across sites, and inform how roll-out of initiatives happens, facilitating the transfer of good practice at pace and scale.

#### 4 Dissemination and evidence

How will you make the results and evaluation of the test beds available to others? Please describe how will results be shared and disseminated. [300 words max]

The test bed site sitting under Kent Integration Pioneers (KIP) will use its internationally recognised established Innovation Hub concept to disseminate and share learning to transform care, locally, nationally and internationally.

By establishing a network of innovation labs across Kent (in collaboration with the Vanguard and Prime Ministers Challenge sites), we will harness the passion of clinicians to empower transformation of services and workforce, based on the changing needs of our communities by codesign with our citizens. In this way innovation labs can learn from each other, preventing the need for reinvention, and will be reported through the Kent Health and Wellbeing Board of which the KIP is a working group. It will also be shared with the national Integration Pioneers and Vanguard sites as well as our international partners

Evaluation and Information Intelligence is key and the KIP will work with the University of Kent (evaluation) Kent Public Health (nationally recognised excellence in information intelligence e.g. Year of Care) and Newton Europe (efficiency partners already working to transform social care and investigating acute admissions in A&E).

Our site will capitalise upon workstreams within Horizon 2020 (EU) funded project; SUSTAIN which includes targeted dissemination activities and a deliverable roadmap.

Findings will be promoted at an early stage through targeted dissemination to various groups:

- Service users
- Health and social care managers and professionals
- Third sector
- Commissioners
- Policy makers

In this way, best practice can be disseminated across the wide stakeholder group in an action based research to move from a medically dominated model towards supported self care focussing on frailty and improved use of technology.

The road map will consist of an electronic and interactive guide developed from the evaluation evidence to improve existing services and support decision making for future integrated care.

To the best of your knowledge, has your proposed test bed clinical need been successfully addressed in any other global context? [300 words max]

Kent has a reputation for innovative use of technology, eg Whole System Demonstrator site for telehealth and telecare. Now is the time to build on this, using the digital revolution to implement our Internet of Things. Elements of our tests bed has been addressed in other global contexts described below but not in the combinatorial way that our site will bring together.

Kent International team includes our Brussels office and the International Health Alliance – we are an international leader for the NHS and Social Care looking at innovative global approaches to transform services with a focus on technology with the citizen at the centre.

Kent has been working with a series of international partners for several years to be outward looking, sharing innovations and good practice, which have formed the basis of our test bed site and informing our bids for international funding and co-operation:

- Denmark mentoring to implement innovation/living labs, transforming care
- Scottish Digital Health Institute partnering to implement a Kent Innovation Centre to design/evaluate technologies
- Catalonia working to implement their knowledge around mHealth
- Netherlands designing different community solutions and linking to the opportunity of bringing creative arts to decrease exclusion and improve capabilities Room for Life project
- Swedish Innovation Pioneers instigated our Innovation Hub to link innovators at all levels
- New Zealand working to promote information sharing and implementing care plans across all organisations with the citizen at the centre
- Japan linking technology, robotics, diagnostics, focussed on the oldest population in the world
- USA has interesting models of care, eg care navigators working alongside GPs and care professionals

#### Active associated partners:

SEHTA (South East Health Technology Alliance) links to 1300 members in 20 countries linked to 800 SMEs looking at promoting local businesses

KSS AHSN facilitating dissemination, innovation and transformation

Oliver Wyman facilitating international cooperation and linkage to the USA