



## ACADEMIC HEALTH SCIENCE CENTRES FULL STAGE APPLICATION

### 1. DETAILS OF THE PROPOSED ACADEMIC HEALTH SCIENCE CENTRE (AHSC)

**Name of the English NHS Provider/University Partnership:**

Cambridge University Health Partners

**Name, email and telephone number of the Lead Contact for the proposed AHSC:**

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**Please list the members of the partnership involved in the proposed AHSC, including names of NHS Provider(s) and university(ies) involved:**

University of Cambridge

Cambridge University Hospitals NHS Foundation Trust (CUHFT)

Cambridgeshire and Peterborough NHS Foundation Trust (CPFT)

Papworth Hospital NHS Foundation Trust (PHFT)

## 2. ABSTRACT (250 words)

Cambridge University Health Partners (CUHP) unites a world-leading University and three high-performing NHS foundation trusts centred on the Cambridge Biomedical Campus. This partnership has contributed to the Cambridge School of Clinical Medicine being ranked in the top handful worldwide, excellent clinical outcomes and high reputation of our hospitals. The four organisations have complementary interests and the Campus provides unrivalled opportunities for capital and intellectual investments from the public and private sectors. CUHP will catalyse Europe's largest and most sophisticated biomedical community, in an English region that has the highest concentration of life-science industries outside the USA. Our aim is local integration of these unique assets to achieve global impact.

Our specific goals include (1) delivering the best possible care to our patients through continuous quality improvement (2) providing outstanding education and training for the healthcare and research workers of the future (3) making scientific discoveries that have the potential to transform human health (4) increasing the likelihood that scientific discoveries will be translated into practice. We strongly believe that progress towards each of these aims will be mutually reinforcing.

Our objectives include (1) progressive strategic alignment and integration of our four organisations (2) playing a leading role in improving health, wealth and wellbeing through effective partnership in external networks with industry and the broad health economy. We set out our plans in terms of achievements to be delivered in the short, medium and five year term that, collectively, will underpin the fulfillment of our longer-term vision

## 3. STRATEGY (4 pages)

**Vision.** Cambridge University Health Partners will be a world-leading academic clinical partnership centred on the Cambridge Biomedical Campus. It will be a global leader in improving patient care, and will deliver outstanding patient outcomes and progressively better population health. This will be achieved through innovation, the integration of service delivery, scientific research and clinical education and open partnerships with industry and other stakeholders. Not only will we provide outstanding care to our local and regional population; we will also have a global impact on human health.

**Purpose.** The purpose of our AHSC is to generate, transmit and apply knowledge for improvement in health and health care. Within CUHP, each strand of our tripartite mission (patient care, research, education) will strengthen the other to create capability and build capacity towards this purpose. Externally, CUHP will serve as a catalyst to lower the activation energy for productive interactions between industry, the NHS and academia unlocking the potential for delivering creative solutions more rapidly and effectively.

**Goals.** Our strategic goals include knowledge generation; building research capacity; fostering innovation in service delivery; embedding translational and applied research in service; promoting a service culture of systematic enquiry and openness to innovation; engagement of our people in mechanisms for developing, diffusing and applying evidence for improvement; alignment of service between partners and with the academic mission; knowledge transmission - providing a shared setting for the education, training and development of healthcare professionals and the wider healthcare workforce that is characterised by systematic enquiry and a commitment to the use of evidence in practice; contributing to a knowledge-based economy and the economic and social development for the benefit of the Cambridge sub-region, the East of England and the UK as a whole; engaging with and developing the attributes that make the Cambridge sub-region notable as a system for innovation and building on it to drive more effective translation of scientific discovery to improved health and wealth creation.

**CUHP will capitalise on the world-class research capability** in Cambridge to progressively improve care of our patients, to train outstanding researchers and healthcare professionals, and to drive discoveries that will transform the future of healthcare and create wealth. Our research capability is reflected in metrics which consistently rank the University of Cambridge amongst the top five biomedical research organisations worldwide, and by the scale of research spending and investment across CUHP, and is enhanced by our partnerships with key external organisations. In the UK's last Research Assessment Exercise (2008), Cambridge had the highest GPA (3.11) of all UK medical schools across biomedical and clinical research, and was ranked highest in the following individual Units of Assessment (UoA); Laboratory Based Clinical Subjects, Epidemiology and Public Health and Psychiatry and Neurosciences. The University anticipates that

it will return ~500 Category A FTE's in the 2014 Research Excellence Framework across UoA 1 (Clinical Medicine), UoA 2 (Public Health, Health Services and Primary Care), UoA 4 (Psychology, Psychiatry and Neuroscience) and UoA 5 (Biological Sciences). Biomedical scientists at the University of Cambridge have achieved extensive recognition for the importance of their discoveries. Amongst current employees who will be returned in REF2014, the University includes 60 Fellows of the Royal Society across biomedical disciplines, and 80 Fellows of the Academy of Medical Sciences. Within the last five years major international awards to Cambridge academics include the 2012 Lasker Clinical Medical Research Award to Sir Roy Calne for his pioneering work on liver transplantation, the 2008 Lasker Basic Medical Research Award to Sir David Baulcombe for gene silencing small RNAs, and Nobel Prizes for Medicine or Physiology to Bob Edwards (2010) for in vitro fertilisation and Sir John Gurdon (2012) for work on nuclear transfer underpinning stem cell programming. Over recent years, CUHP partners have invested strategically to create additional areas of critical mass further extending our capabilities. These include health services research, cardiovascular biology and global health. In health services research we have set up the Cambridge Centre for Health Services Research, which has rapidly achieved international recognition and was ranked second worldwide in the 2012 Global GoTo think tank report. Our strategic approach to cardiovascular research has also been successful, exemplified by Cambridge recently being awarded one of only six BHF Centres of Excellence in Cardiovascular Research across the UK, and one of only three BHF Centres for Regenerative Medicine (the latter in a joint bid with Oxford). In global health we have also achieved rapid external recognition, with Cambridge being awarded one of only five Centres for Global Health Research by the Wellcome Trust.

**World-class biomedical research facilities** are provided through the Departments of the University, and also through several cross-departmental institutes, which are largely funded through major external awards. These include (1) the Cancer Research UK Cambridge Institute (2) the Cambridge Institute for Medical Research (3) the Wellcome Trust / Juvenile Diabetes Research Foundation Diabetes and Inflammation Laboratory (4) the Wellcome Trust / MRC Institute of Metabolic Science (4) the Cambridge Institute of Public Health (5) the Wellcome Trust / MRC Stem Cell Institute (6) The Wellcome Trust / Cancer Research UK Gurdon Institute (7) The MRC / Wellcome Trust Behavioural and Clinical Neuroscience Institute. The strength in biomedical research also benefits from extensive interactions with other world-leading organisations located in Cambridge or nearby, many of which are Campus Associates of CUHP. These include the MRC Laboratory for Molecular Biology, the European Bioinformatics Institute and Wellcome Trust Sanger Institute.

**CUHP will build on its track record of achievement** as an Academic Health Science Centre since its designation in 2009. It has proved to be highly effective in driving strategic alignment across our four organisations and enabling key achievements across the tripartite mission of clinical care, research and education. Notable achievements include:

- leading the development of the Eastern Academic Health Science Network as a system wide integrator across the East of England for improving clinical care and wealth creation
- sponsorship of the University Technical College at Cambridge to provide science training for 14-19 year olds
- renewal of the Cambridge NIHR Biomedical Research Centre with a 40% funding uplift to £110m over the period 2012-2017
- attracting AstraZeneca to move its worldwide headquarters and a major research site to the Cambridge Biomedical Campus.

Following the development of the EAHSN we have refreshed our strategy within CUHP to focus on developing specific platforms for effective collaboration and integration between our four high-performing organisations. We have collectively determined that CUHP will deliver on those goals which go beyond the capability or capacity of any single organisation amongst the four partners; ie CUHP's focus will be on areas where joint working is essential. In addition, the four partners have agreed that wherever possible they will align their strategies and decisions to help deliver CUHP's collective vision. Our approach over the next five years can be summarised as "**local integration for global impact**". Over the first five years we have developed a coherent approach, which has identified the aspects requiring leadership from CUHP across clinical service innovation, education and training, and research governance and facilitation. This has achieved a great deal and will be developed further. We will build on our experience as to how CUHP can act most effectively across our partnership and work most productively with other components including the EAHSN in quality improvement and service innovation, and Health Education East of England in multiprofessional training. Our strategic refresh has identified three key areas that CUHP will drive forwards (i) developing the CBC to achieve its extraordinary potential for each aspect of the tripartite mission and for wealth creation (ii) increasing our philanthropic funding dramatically to enable the investment required to realise our ambitious plans (iii) transforming our capability in informatics which we see as critical if we are to excel across patient care, research, and education and integrate across these strands in the future.

## **Selected objectives of the AHSC;**

In 1-2 years we will have developed a new masterplan to develop the campus over the next 20 years as an integrated hub for healthcare, research, education and wealth creation. We will have made major progress towards full electronic patient records, increased our capability to interface complex datasets and developed an e-learning platform.

In 2-3 years we will have developed detailed plans and embarked on new fundraising campaigns probably including a "Brain Village" which will span Neurosciences and Mental Health, a state-of-the-art comprehensive clinical cancer centre, and a new hub catalysing our strengths across public health and population science.

In 4-5 years AstraZeneca and Papworth Hospital will be fully integrated into the Cambridge Biomedical Campus (CBC). There will have been a step change in research collaborations with industry, and the Campus will be a thriving hub for biomedical innovation with a well-developed enterprise culture. The individual organisations will be porous, with extensive sharing of data, ideas and educational resources. Through effective partnership, CUHP will have played a major role in reshaping the local, regional and national health economy so that it is fully fit for purpose and is sustainable for the future.

## **Summary of our six specific themes**

**1. Campus development.** The colocation of the hospital, the University's new School of Clinical Medicine and the MRC's Laboratory for Molecular Biology to a greenfield site in the 1970's enabled the very rapid development of Cambridge University's new School of Clinical Medicine to a world leading medical school, ranked no.1 in the UK in the Academic Ranking of Worldwide Universities in Clinical Medicine. Over a decade ago, CUH, the University and MRC committed to a strategy of expansion and development of the shared site as the 'Cambridge Biomedical Campus' (CBC), envisaged as a location of international stature for clinical care, research and education. This strategy led to release of land from the green belt and doubling of the campus area to 140 acres. The theme will work extensively with other organisations based on the campus and nearby, including the MRC Institutes and LMB, Cambridge Medipark Ltd, UoC Departments of Chemistry, Physics, Engineering, Maths & Computer Sciences, the Babraham Institute, the Wellcome Trust Sanger Institute, and the European Bioinformatics Institute to deliver the following workstreams. (1) Development of a new masterplan including the '2040' green belt land and a strategy for making the campus as productive, interactive and collaborative as possible. (2) Increasing connectivity to ensure that the campus provides the most effective hub possible for the extraordinary range of other organisations with complementary capabilities, including independent research institutes, biotech companies, and pharmaceutical companies. (3) Coordination and delivery of major construction projects (new Papworth, Heart and Lung Research Institute, Stem Cell Institute, enlarged Clinical Research Facility, Translational Medicine Hub, Forum).

**2. Philanthropy.** It is clear that our ambitious plans will require major investment in an environment where public finances are under extraordinary pressure. Effective philanthropic fundraising is therefore central to our success. At present, partners in CUHP have their own fundraising operations and investment plans, and we have sought support separately for research and clinical facilities. Our aim is to at least double our income from this source. We envisage that the theme will also stimulate and develop vigorous "bottom-up" engagement to create innovative solutions that will transform clinical care and our research capability. These will need to be progressively refined, developed into joint investment plans, and then prioritised. Workstreams within this theme will include (1) developing the most persuasive cases for support and determining our spending priorities across the entire research/patient care spectrum (2) optimizing our charitable structures (3) highly-effective fundraising.

**3. Medical informatics.** We have substantial strengths in informatics in Cambridge and closely associated organisations, especially in computer science, software engineering, public health, epidemiology, biostatistics and genomics. This means that we are well placed to seize the opportunity presented by computational approaches and modern data handling which will transform patient care, biomedical research, education and learning. It is also the case that the current use of electronic approaches to patient care in our hospitals is fragmented and outdated. A central feature of our current approach to patient care is the traditional case note folder. This is difficult to use effectively, easy to lose, and presents a major barrier to access for service improvement and research. Furthermore, the skills of much of our workforce, and the education and training programmes that we provide in bioinformatics are limited. The theme will address these challenges through three workstreams (1) implementing electronic health records (2) developing research informatics (3) training in medical informatics.

**4. Supporting translational research.** The alignment of CUHFT's research strategy with the University

enabled us to secure a £67m award to become one of only five National Institute for Health Research (NIHR) Comprehensive Biomedical Research Centres (BRC) in 2007. The success of the Cambridge BRC was recognised in 2012 with a very substantial uplift in funding to £110m for the period 2012-2017. Importantly, the BRC award supports research activity in the cardiovascular and mental health domains, thereby underpinning research with CPFT and PHFT and extending across the whole CUHP partnership. In 2012 we were also awarded a new Biomedical Research Unit focused on dementia, a field in which the partnership was identified as a national research leader. Over the next five year designation period we will undertake the following workstreams (1) streamlining and where appropriate integration of R&D governance processes across the organisations (2) maximising support for industry and other partnerships and for translational funding streams (3) optimising access to patient data for research (4) remodeling clinical pathways and services to support more effective R&D and improve patient experience and outcomes (5) building human capacity for translational research.

**5. Educating and training tomorrow's workforce.** Over the initial five year designation period CUHP has achieved substantial innovation in education, and has led the very successful Cambridge and Peterborough Health Innovation and Education Cluster. Specific achievements include creation of the CUHP surgical skills centre (a state-of-the art cadaveric training facility), sponsorship of the new University Technical College at Cambridge, and the creation of a CUHP endorsement framework for CPD courses. Over the next five years our workstreams will include (1) progressive implementation of technology-enhanced learning through an e-learning platform, expanding clinical simulation, and supporting on-line learning including telepresence (2) establishing a healthcare management and leadership programme (3) formation of a Centre for Healthcare Education which will include revision of selected postgraduate medical training programmes in partnership with Health Education East of England (HEEoE) to move these to world-class standard including the possibility of bridging speciality boundaries.

**6. Service innovation and improvement.** Each of our three organisations have good clinical outcomes, and are committed to continuous improvement in the care we provide to patients. CUHP's analysis is that it will deliver the greatest benefits for society and for individual patients through a system-wide approach which is prepared to act boldly and completely re-engineer patient pathways. This is often challenging in a complex, fragmented system and clearly requires the input of many different parties. To address this, over the initial five year designation period CUHP led the development of a system-wide partnership across the East of England, the EAHSN. The innovative nodal architecture that we developed means that the network is not dominated by Cambridge or by a secondary/tertiary care perspective. Working in partnership with the EAHSN, CUHP will now be a lead contributor to system-wide approaches to improve outcomes in seven key areas based on health needs; cardiovascular disease, stroke, cancer, mental health, diabetes, chronic respiratory disorders and patient safety.

#### **How success will be evaluated.**

CUHP is driven by academic strength, ambition to translate discoveries for patient benefit, desire to train and educate the best researchers and health professionals and a restless ambition to provide the best and most cost-effective care possible. We believe that successful operation of CUHP will be a major contributor to progressive improvement across the entire spectrum of academic endeavour (**metric:** increase in the quality and quantity of highly cited publications, research grant income, outcome of national REF exercise), patient care (**metric:** improved mortality and outcome indicators in our hospitals, patient and staff satisfaction, population health indicators for our catchment populations) and educational quality across different parts of the workforce, including undergraduate and postgraduate medical education (**metrics:** include national student survey, GMC survey). Success in each domain will be evidenced through improvements in metrics for our organisations compared to peer organisations, both in the UK and across the world. Our ambition is to be world leading in all domains. Other metrics relevant to our aim to drive translation include our success in winning translational funding awards, the number and scale of collaborative projects with industry, numbers of patents granted, licensing income and the number of successful spinouts. We acknowledge that these metrics will be influenced by many parameters besides inputs from CUHP, but are in no doubt that CUHP's continued success will be a key contributor to maintaining and increasing our very strong position in most areas of performance, and driving improvement in areas where we currently do less well. Specific areas where we aim to improve are the proportion of our funding that comes from translational schemes and industry partnerships, and the perception of our medical postgraduate training.

A second approach to evaluating success will be to monitor the awareness of CUHP, and degree of engagement, amongst staff in our partner organisations and external stakeholders. In our initial designation period the main engagement of CUHP was with the senior leadership of the four partner organisations, and CUHP has primarily been concerned with high-level strategy. Our partnership is characterised by strong engagement across the senior leadership of our four partners, but the majority of the staff within the

organisations have little awareness of CUHP and what it does. Similarly, CUHP has limited visibility with external stakeholders. In the next five years we envisage that this will change dramatically in part through a concerted communications strategy, but mainly based on a track record of delivering important change. To evaluate this, we will undertake annual surveys to determine what a representative cross section of staff know of CUHP, and what it means to them. We will also systematically assess how key external stakeholders view us, and ask them to tell us what they consider we are contributing to the regional and national health economy.

#### 4. GOVERNANCE AND LEADERSHIP (2 pages plus an Organogram)

CUHP is a company limited by guarantee which was established in 2009. The Chairman and the Chief Executive Officers of the three NHS Trusts are *ex officio* directors of CUHP, as are the Vice-Chancellor of the University of Cambridge, the University Registrar and the Regius Professor of Physic. There are also three further directors, clinical academics linked with each of the NHS Trusts. The Board has an independent Chairman, currently Professor Sir Keith Peters FRS and an international advisor, Professor Louise, Gunning-Schepers (President of the Executive Board of the University of Amsterdam, and former President of the Amsterdam Medical Centre). The Executive Director (CEO) until September 2012 was Professor Sir JG Patrick Sissons, Regius Professor of Physic, and from September 2012 onwards is Professor Patrick Maxwell, Regius Professor of Physic, and Head of the School of Clinical Medicine. Programme management is led by the Chief Operating Officer, who is accountable to the Board and responsible to the Executive Director.

CUHP is led by the Executive Director, working through the Executive Group which comprises the Chief Executives and clinical academics drawn from the partners. They are supported by the COO, and a small core team, the costs of which are shared equally between the four partners. Partner engagement is embedded in the model of governance through the leadership for delivery of CUHP's workplan shared between the partners' CEOs and clinical leads, and accountability for delivery being monitored through the Executive Group, and reported monthly to the Board, both of which meet eleven times a year.

The constitution of CUHP reserves a range of matters to the members or the Board of Directors as a means of ensuring that its activities are directed towards its objects at all times and that members are not exposed to any unanticipated risks through participation.

The effectiveness of this governance arrangement is demonstrated by CUHP's delivery in its tripartite mission of service innovation, education of the healthcare workforce and research. The existence of the partnership has facilitated a cultural change between partners, focused on system-wide opportunity and benefits, which has enabled shared activity and initiatives across each of the partnership's work programmes. Importantly, CUHP has been able to harness 'bottom-up' creative thinking from the four partners by coupling this with 'top-down' assessment, prioritisation, resource allocation and buy in from the senior clinical and academic leadership.

Currently, CUHP has a director-level lead for each of the three elements of its tripartite mission.

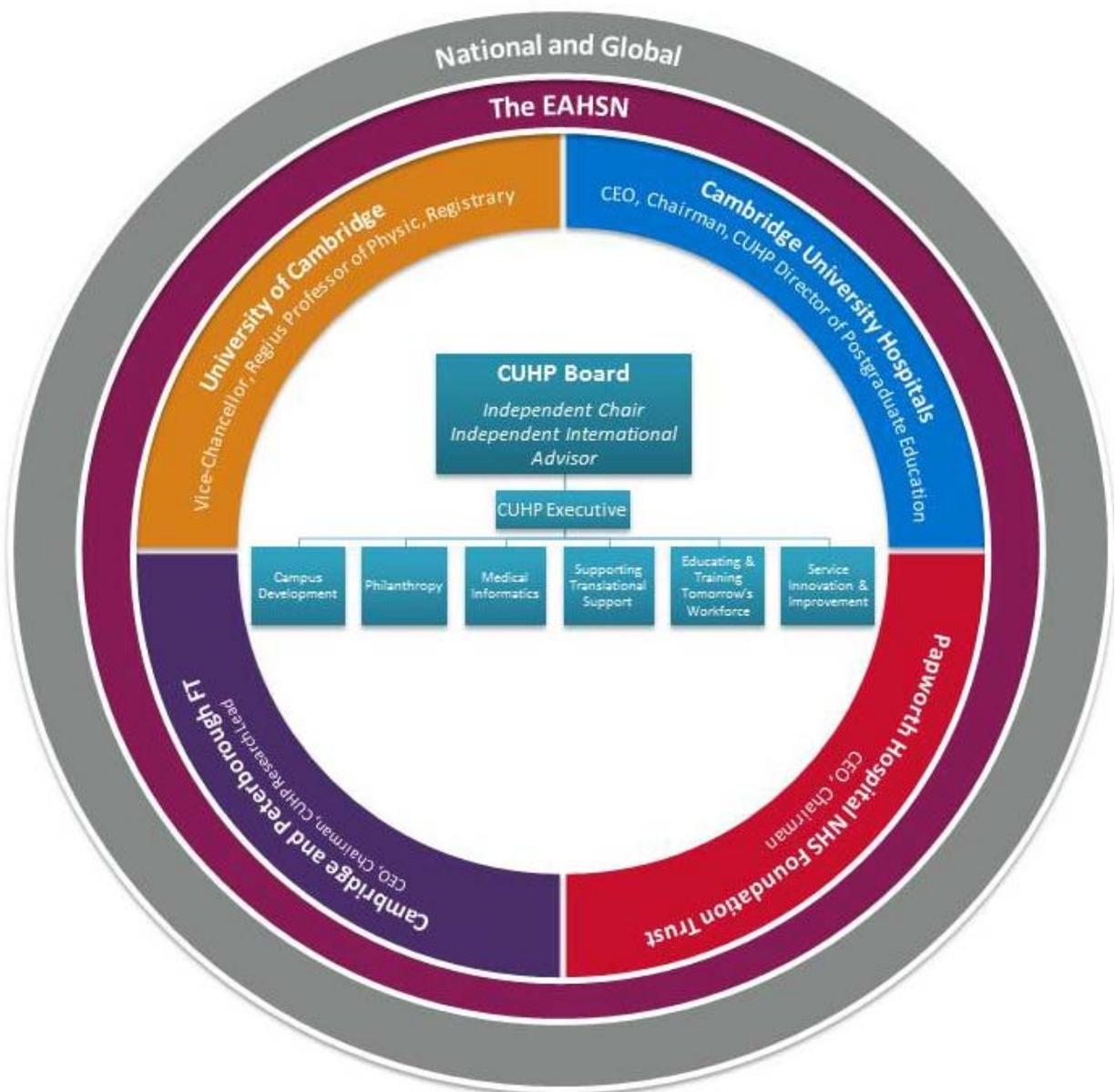
- i) **Service innovation.** Dr Robert Winter, Director of the Academic Health Science System and COO of CUHP, is lead for Service Innovation. Over the initial designation period, CUHP focused on developing a system-wide vehicle bringing together more than 20 organisations serving a population of 4.5 million to form the Eastern Academic Health Science Network. CUHP will be 'nested' within the EAHSN; the EAHSN will provide the system-wide context and approaches playing a central role in how we develop new approaches across primary care, public health, social care and secondary/tertiary care. Dr Winter is now in transition to his new role as Managing Director of the EAHSN, and we are appointing a new COO.
- ii) **Education.** Education has been led by Dr Arun Gupta, Director of Education, CUHP. CUHP also managed the £2.46m Cambridgeshire and Peterborough Health Innovation and Education Cluster under contract from NHS East of England until 31<sup>st</sup> March 2013. This supported the alignment of clinical and translational research with service delivery, supported innovation in treatment and systems analysis; the rapid uptake of innovation and research into practice. Two waves of projects focused on education and telehealth/telecare initiatives.
- iii) **Research.** Professor Peter Jones has led the research element of CUHP. This has been synergistic with other roles, as he has also been the lead for the successful CLAHRC across Cambridge and Peterborough, and in 2013 led the development of a successful bid for the new NIHR CLAHRC East of England which will work alongside the EAHSN, and will focus on enduring disability and disadvantage; dementia, frailty and end-of-life care; patient safety; health economics and patient and public involvement.

In the future CUHP's mission will continue across healthcare, clinical education and research. The CUHP Board has defined additional areas of strategic importance to the partnership which will be the focus of three additional themes through 2013/14 and beyond:

- Developing the Cambridge Biomedical Campus
- Expanding philanthropy
- Developing medical informatics

CUHP will provide oversight for each theme and a flexible project management function.

To deliver its ambitions, CUHP will continue to work through effective external partnerships. Our strategy for the CBC will be delivered with local government, landowners and major research and industrial organisations and we have a formal partnership mechanism through our Campus associates. System wide service innovation is coordinated by the EAHSN with CUHP playing a leading role both in the Cambridge and Peterborough Node and across the EAHSN as a whole. Multi-professional education and training is coordinated closely with Health Education East of England.



## 5. THEMES/WORK PROGRAMMES (4 pages per theme)

See 6 attached documents.

## 6. INCLUSIVITY AND DIVERSITY (2 pages)

### **Realisation of the full potential of talent from across the whole workforce**

A central plank of CUHP's strategy has been to encourage all staff to become actively engaged in research, service innovation, and educational initiatives. CUHP and its partners provide many opportunities for staff within the organisation and the broader community to develop additional skills.

We see particular opportunities in engaging the whole healthcare workforce in our research mission. CUHFT's Nursing, Midwifery and Allied Health Professionals (AHP) Research Steering Group provides a vehicle to strengthen the nursing, midwifery and allied health professions research capacity which we view as key to our success as an AHSC. We will do this through demonstrating that these groups can make demonstrably excellent research contributions, influencing policy and perceptions in the national and international context, and promoting the importance of applying research in practice. To provide new research leadership, The University of Cambridge has established a Chair of Nursing Research in partnership with CUHFT and the Florence Nightingale Foundation, and the Foundation Professor, Christi Deaton, will take up her post on 1 November 2013. A Research Nurse Rotation scheme has been established in partnership with the NIHR CRF, West Anglia Comprehensive Local Research Network, Eastern England Diabetes Research Network and NIHR Cambridge BioResource to encourage and sustain recruitment into clinical research nurse posts.

The Cambridge NIHR / Wellcome Trust Clinical Research Facility (CRF) provides an outstanding hub for training in clinical research for our workforce. The CRF Education and Training Manager provides service-specific training and education for all staff using the facility, and also co-ordinates inter-professional and professional development opportunities in clinical research at Departmental, Trust and National level. A two-day residential Research Skills for Clinicians course provides medical trainees in the Eastern Deanery with an introduction to experimental medicine and clinical research. The CRF is a founding member of the UK CRF Network, engaging with other NIHR infrastructure eg Experimental Cancer Medicine Centres, BRC/Us, and Research Networks to share, unify and streamline good practice through a number of workstreams. The Education and Training workstream provides a forum where Education & Training leads from CRFs can share ideas and expertise related to education and training, and determine and set the overall strategic direction for CRF related education and research related training.

Promotion of equality and diversity across the whole workforce is a strategic priority for CUHP. A particular concern nationally, which we share, has been the low number of women in senior academic positions. The Academic Clinical Women's Forum (<http://www.medschl.cam.ac.uk/research/acw/>), was established in 2010 to support both senior and junior clinical academic women. An Athena SWAN Steering Group was established within the University of Cambridge School of Clinical Medicine in 2011, with representation from the NHS, and a network of Equality Champions within all Departments and Institutes form a network that is key to promoting equality and diversity. Key achievements include achieving a 73% response rate in a staff survey across the School of Clinical Medicine, with most respondents being positive about their academic environment, but also highlighting several areas that need attention. These include communication, recruitment, induction and probation processes, appraisal and continuing professional development, and benefits, including childcare provision. A number of programmes have been initiated to address these, including workshops and surgeries, support for Association of Women in Science and Engineering (AWiSE) career events, and establishment of a 'Returning Carer's Fund'. In September 2013 we received an Athena SWAN Silver Award.

### **Strategy for meaningful patient and public involvement**

CUHP and its partners believe that involving patients and the public in our mission is central to achieving our aims. In particular, we consider that service users are a major resource in striving for the highest quality healthcare. Patients are the ones who see the whole patient journey, across the artificial administrative and institutional boundaries created by the distinctions between primary and secondary care, professional demarcation lines and health and social care. Mindful of this, our strategy is based on:

- (1) involving patients and the public at every level of our organisations
- (2) seeking input and feedback into everything we plan and do.

The three NHS Foundation Trusts within CUHP have a great deal of experience in ensuring the patient voice is heard at number of levels including; the individual patient, at service level and in corporate governance level. All three Trusts have established programmes of gathering evidence of the patient experience and score well in the national patient surveys. They have a range of mechanisms for ensuring patient involvement in the development of services including through patient experience and involvement panels, patient focus groups and surveys. In addition a range of disease-specific patient groups work with Trust staff to ensure that services develop to meet the needs of their users. All three have large numbers of members, many of whom are current and former patients of the Trusts. As patient-centred organisations, the Trusts put Members and Governors at the heart of their accountability and governance arrangements to ensure that the patient voice is present and taken into account when deciding future strategy and services. Members of the three foundation trusts elect the governors who represent them on the Council of Governors and are invited to attend council of governors' meetings and annual members' meetings. Through their membership involvement strategies, members are kept up-to-date with developments in the Trusts and its forward strategy. Members can stand for election to become governors of a foundation trust ensuring the patient voice is heard clearly at a corporate governance level.

In our translational programmes it is critical that we involve patients – not just as participants, but also in guiding what we do and how we go about it. The NIHR Cambridge BRC website (<http://www.cambridge-brc.org.uk/public>) describes how patients and the public can learn about and become involved in research

across our partnership. This includes details of how to take part in research, including information on joining the Patient and Public Involvement Panel and the Cambridge BioResource, using the UK Clinical Trials Gateway, and donating tissues for research. The Patient and Public Involvement Panel includes people from all backgrounds and ages who review research studies at the development stage and provide feedback to researchers. Members review approximately 3 - 4 studies a year and documents are submitted via e-mail or post, so there are no travel costs and time is kept to a minimum. Going forwards, we will expand the scope of the PPI panel to include prioritization of research, and evaluation of outcomes. The website also provides details of the volunteer groups for the Clinical Research Facility, the experimental psychology group, and the GSK Clinical Research Facility. The Clinical Research Facility has established an innovative Children's Board; in February 2013 the children who are members joined us to discuss improvements, try out equipment and provide feedback to research teams on what it is like to take part in research.

The Cambridge BioResource (<http://www.cambridgebioresource.org.uk/>) provides a unique opportunity for the public to participate in research, provide feedback, and receive information relating to the outcome of studies. The Cambridge BioResource includes more than 12,000 volunteers who have consented to be approached and invited to participate in local research studies investigating the links between genes, the environment, common diseases and psychological function. Volunteers donate biological samples (including their DNA via a blood or saliva sample) and complete a health and lifestyle questionnaire (Stage 1 activity). This allows the selection and recruitment of volunteers to research studies on the basis of their genotype, laboratory results and/or physical characteristics (eg age, gender, body mass index) (Stage 2 activity). The resource provides researchers within the NHS, academia and industry with access to volunteers who are willing to be approached about participation in research studies, and provide the public and patients with an opportunity to register their interest in becoming involved in research. The Cambridge BioResource team recruits volunteers through displays at the hospital, shopping centres and schools and colleges, and has a mobile recruitment unit which recruits from the community, mostly through GPs surgeries. Information is also available from the Cambridge BioResource website and a newsletter that is distributed to members. The Cambridge BioResource Oversight Committee has representatives from stakeholders and volunteers, and oversees the management and scientific advisory boards. The committee monitors and evaluates the performance of Cambridge BioResource, and contributes to the continuing definition of the Cambridge BioResource's ethics and compliance standards and procedures.

Building on the success of the Cambridge BioResource, Cambridge is leading on the development of a national 'NIHR BioResource' to provide a national cohort of volunteers who wish to participate in clinical research. Through the 'INTERVAL' study, which aims to establish whether blood donors can safely and acceptably give blood more frequently than current practice, the NIHR BioResource aims to include a further 50,000 volunteers, who are interested in participating in research. The NIHR Rare Diseases Translational Research Collaboration, led by Cambridge and Newcastle BRCs, aims to harness and develop NHS research infrastructure to support patient-centred research into rare diseases. A key objective is creation of a national database of patients with rare diseases who are willing to engage in future research programmes led by academia or industry. In addition to physician-entered data, patients will be able to upload their contact details, diagnosis, and physician, who will be able to validate the diagnosis. It is planned that this should be linked to the UK Clinical Trial Gateway, in close collaboration with Rare Disease UK, and other patient groups affiliated to the Association of Medical Research Charities.

CUHFT hosts the West Anglia Comprehensive Local Research Network (CLRN), which includes a dedicated PPI Officer who leads on and promotes public involvement activities to NHS staff, researchers and lay members. The PPI Officer attends research charities' events and clinician-led events to promote the PPI message and the PPI support available from the CLRN. Through the PPI Officer, the CLRN is closely involved with PPI activities region-wide, works closely with sister NIHR Networks and is a member of several cross-network and lay organisations. For members of the public, West Anglia CLRN hosted in 2012 and 2013 two series of workshops for lay members who want to find out more about what health research involves – and how they can contribute. The workshops have been fully-booked and a third series is running from autumn 2013.

#### **Strategy for meaningful patient and public engagement**

We believe passionately that we should engage the public and patients so that they understand as much as possible about what we are trying to achieve. Our strategy for public engagement is based on:

- (1) maximising opportunities for public engagement and ensuring that we exploit them fully
- (2) working across our organisations to produce more effective coordination and greater impact
- (3) focussing our effort where there is most opportunity to add value
- (4) evaluating our performance, and learning from our experience

We have adopted a very wide range of approaches to engage patients and the public in what we do. These include open days and public meetings, presentations to patient groups, engagement with local schools, articles in print, websites, and use of local and national media. An annual public meeting attracts a very wide public audience.

Our achievements and our ambitions are featured prominently in the hospital magazine 'Matters', which is distributed around the Cambridgeshire area in Park & Ride sites, supermarkets, GP surgeries, community centres and libraries. It is also available on the web. Cambridge Evening News ran a feature on the Clinical Research Facility in December 2012, with interviews with participants and staff, and a focus on research involving children. Recent examples of features in national media include 'How star gazing can help Cancer' (BBC News), 'Breast Cancer 10 different diseases' (BBC News), 'DNA sequencing of MRSA to stop outbreak' (BBC News), 'Multiple Sclerosis New Drug Most Effective' (BBC News), 'Genetic mutations linked to childhood obesity' (Independent), 'Stillbirth' (Times). One of our staff, Dr Chris Smith (Pathology), created and runs "The Naked Scientists" which has won 8 international awards and reaches up to 6 million listeners.

## 7. CONTRIBUTION TO ECONOMIC GROWTH (2 pages)

**Context and track record:** CUHP benefits from and contributes to a remarkable local high-tech entrepreneurial environment – “the Cambridge Cluster” - which has provided a powerful paradigm of economic growth. It currently includes over 1500 technology-based firms of which over 150 are in the life science sector, and has generated over £12 bn in revenues. To date, it has produced 2 companies valued at over \$10 bn, and 12 companies valued at over \$1 bn. Of these, four are life science companies (Abcam, Chiroscience, CAT and Solexa). Humanised monoclonal antibodies and next generation sequencing are both based on inventions from Cambridge. Notably, the commercial development of these inventions also occurred in the Cambridge Cluster, representing a major contribution to economic growth.

CUHP draws on Cambridge Enterprise (CE), a wholly owned subsidiary of the University of Cambridge whose mission is to help University inventors and innovators make their ideas and concepts commercially successful. CE is one of Europe’s leading technology transfer offices, engaging with a wide range of individuals and organisations to disseminate the results of Cambridge’s research through commercial channels, by coupling the outcomes of fundamental research with proof of concept funding and best practise technology transfer activities. During 2012 CE completed 84 licenses generating £9.1M income from licensing, consultancy and equity transactions. Collectively, since records began in 1995 CE portfolio companies have raised £1 bn in new and follow-on funding leveraged from initial activities by CE. CE Life Sciences Technology Transfer managers have over 30 years of commercial pharmaceutical, biotechnology and business development between them, coupled with an equivalent level of experience within the academic technology transfer sector.

The NIHR Cambridge BRC is a complementary component of our knowledge transfer capability. Since its inception in 2006, 44 patents have been filed, 25 patents have been granted, and £347,000 of income has been generated from 67 licenses. Two spinout companies have been launched. Health Enterprise East, which is our NHS Innovation Hub, is hosted by PHFT, has generated £183,000 from external commercial parties for work with the three CUHP trusts and 12 patents or design rights. Inventions include the **Cambridge 3D CS Controller** (computer control device for orientating 2D images in 3D datasets), **ICM+** (A software tool for research neurointensive care), **MaculaRisk** (a prognostic test for eye disease), **KidzEyez** (a visual perimeter assessment system), **VAD TET** (a ventricular assist device), methods to assess **cortical bone thickness** accurately and predict fracture risk, and production of cell culture **models of human disease** using iPS cells.

CUHP has made a further contribution to the growth agenda through provision of clinical leadership to the Technology Strategy Board’s Small Business Research Initiative (SBRI) since 2009, with a total of 11 competitions (734 applications) in health related projects, and 66 contracts awarded with a value of £17.6 million. As a result of this, EAHSN will lead on SBRI for NHS England. Two SBRI competitions have been held in 2013/2014 with themes of End of Life Care and Medicines Management. Eight further SBRI competitions are being developed to be launched in September 2013, including one with the Wellcome Trust Sanger Centre on Research Tools. The EAHSN will also work with all the 14 other AHSNs on other determined clinical themes and the development of the SBRI programme so that there is maximum engagement of the other AHSNs and AHSCs in developing this work to open doors to the NHS for SMEs.

### **CUHP’s forward strategy and ambition for contributing to economic growth:**

**(1) The campus.** Central to CUHP’s strategy is to develop the CBC as a unique environment for innovation by bringing together healthcare professionals, businesses and academics in very close proximity. We believe that this will drive creativity and productivity, with real benefits for each component. This vision, coupled with the critical mass of world-class science and patient care on the site, has led to AstraZeneca deciding to relocate to the CBC and invest ~£300 million. As the site develops, all stakeholders are committed to making the organisations permeable and maximising interactions between our staff. Importantly, GSK have a longstanding presence on the site, with the GSK Clinical Unit Cambridge being embedded in CUH. Our vision is that CUHP should have extensive open interactions with a diverse range of industrial partners, rather than a small number of restrictive partnerships. In addition to large companies, we are determined to attract small and medium sized enterprises to the campus, and there are advanced plans for an incubator building offering flexible, competitively priced facilities. We will also use the campus to foster cross-disciplinary interactions, bringing solutions from maths, engineering and physical sciences to medical problems.

**(2) The regional environment.** Complementing the CBC there are many nearby science parks and other facilities which make this one of the best locations for life science innovation in Europe, with major UK and global economic impact. CUHP’s strategy is to make interactions across this local environment as effective as possible. An example of our commitment to maximising the potential of the regional environment includes UoC becoming a partner in the Stevenage Biomedical Catalyst (SBC), the UK’s first open innovation bioscience campus. SBC is pioneering a unique culture to drive early stage biotech, pharma and Medtech

developments. UoC has located a number of translational drug discovery projects to its SBC laboratories. These projects aim to convert validated targets to de-risked, investable assets. The challenges of developing a concept from drug target to drug candidate extend beyond the traditional boundaries of academic research, and the location of projects to SBC allows them to benefit from access to industrial expertise and facilities, including compound libraries, medicinal chemistry and high throughput screening.

**(3) Sustainable therapeutic innovation.** A broad agenda to which CUHP is determined to contribute is developing a sustainable model for pharmaceutical innovation, which has been a very important part of the UK economy and faces major challenges. One dimension of this is ensuring that the academic base in the UK in general, and Cambridge in particular, works effectively with industry to discover new targets and develop therapeutic interventions based on them. A critical challenge is the prohibitive expense of bringing a new medicine to market. In partnership discussions with the pharmaceutical industry there are many issues which can be tackled to improve this. First, the challenge of predicting whether engaging a particular target will be effective in human disease, and whether there will be undesirable on-target effects. Second, the benefits of a personalised approach to medicines, aiming to identify patients who will receive the maximum benefit and/or be at lowest risk for undesirable effects. Third, the potential for developing new treatments in rare diseases. Fourth, the desirability of adaptive design of clinical trials to make them more efficient. Fifth, identifying reliable early signals of meaningful response (or lack of it). Sixth, the possibility of adaptive approaches to licensing new medicines. Seventh, the complexity and delays involved in undertaking industry sponsored clinical trials in the NHS. Eighth, the potential power of clinical information from the NHS. Ninth, the importance of demonstrating real world effectiveness and value for money of new medicines. In almost all of these domains CUHP should be in a position – often with other partners – to make a real difference to each of these issues. Specific examples include Mendelian randomisation combined with longitudinal cohorts to determine on-target efficacy and unwanted effects, volunteers who can be recalled by genotype from the Cambridge Bioresource for physiological and experimental studies, Bayesian approaches to adaptive trial design, and our leading role in the NIHR Rare Diseases network bringing together patients, academic and clinical expertise, phenotyping and –omics approaches.

**(4) Developing our accessibility and capability, including approach to identifying and managing intellectual property.** In addition to attracting industrial partners to the CBC we aim to continuously improve our accessibility to potential partners, to develop the desire of our staff to translate and commercialise the fruits of the research, and to ensure that they have the skills and support that will help them to succeed. CUHP works with two key organisations to manage and exploit intellectual property, Cambridge Enterprise (CE) and Health Enterprise East (HEE). CE engages with researchers across CUHP to assist them in determining whether their ideas represent a commercial opportunity, putting in place appropriate intellectual property protection, seeking suitable commercial partners, establishing the commercial terms and concluding exploitation agreements. CE also provides a service to facilitate the provision of consultancy services by University staff. In addition CE Seed Funds provide a source of funding. HEE, the NHS Innovation Hub for the East of England, supports the development of innovative new products and services in the NHS. HEE provides a broad range of services to CUHP, providing expert advice, funding and support to NHS innovators to translate their ideas into practice. In addition, HEE provides consultancy services to technology based companies. A key strategy of HEE has been the use of ‘Innovation Scouts’, based within CUHP to identify new innovations generated by CUHP staff, and present evidenced-based innovations from elsewhere for adoption and diffusion within CUHP. An independent evaluation of NHS Innovation Hubs in September 2012 by PA Consulting cited HEE as being the most productive NHS Innovation Hub, in terms of accelerating the development to market of innovative MedTech products and services. A formal agreement sets out how CE and HEE will provide technology transfer services to CUHP, in order to ensure that all potential opportunities are captured and managed appropriately. CUHP initiatives that are underway to further improve our capability are the development of an “IdeaSpace” on the Campus, and a new Office for Translational Research.

## 8. STRATEGIC PARTNERSHIPS & WORKING WITH NIHR-FUNDED RESEARCH INFRASTRUCTURE (2 pages)

CUHP engages across the full range of NIHR infrastructure to support all stages of research, providing an effective environment for the translation of basic medical science discoveries into experimental medicine and clinical research studies, and through later stage clinical trials into the implementation of research for the benefit of patients.

The **NIHR Cambridge Biomedical Research Centre (BRC)** works in partnership with other NHS organisations and universities, including other BRCs and Biomedical Research Units (BRUs), research councils, research charities and industry to establish NIHR infrastructure that will advance collaborative translational research. Papworth Hospital is an important partner in the Cardiovascular and Cancer themes, and CPFT provides leadership and support for the Mental Health, Brain Injury and Repair, and Dementia and Neurodegeneration themes. The **NIHR Cambridge Experimental Cancer Medicine Centre** is complementary to the NIHR Cambridge BRC, and aims to develop molecular prognostic and diagnostic tests to aid treatment decisions, focusing on genetic predisposition to cancer and the identification of high risk groups. The Cambridge BRC is a partner in the **NIHR Translational Research Partnership (TRP) in Joint and Related Inflammatory Disease**.

The **Cambridge NIHR / Wellcome Trust Clinical Research Facility (CRF)**, operating 24h / 7days with overnight accommodation, together with a daytime / 5 days Clinical Investigation Ward, provides outstanding facilities for experimental medicine and clinical research studies. Uniquely, the CRF and CIW contain metabolic measurement technologies, including the recent addition of a 3T MR scanner dedicated to magnetic resonance spectroscopy, appetite laboratory and nutrition resource, a research endoscopy suite, and an area dedicated to intravenous treatment including cancer chemotherapies.

CUHP partners support the **NIHR Research Design Service (RDS) for the East of England**, and CUHFT is represented on the RDS Regional Management Board. CUHFT hosts the **West Anglia Comprehensive Local Research Network (CLRn)**, the **West Anglia Cancer Research Network**, and the **Eastern England Diabetes Research Network**, and is a partner in the **East Anglia Dementia and Neurodegenerative Diseases Research Network** and the **Thames Stroke Research Network**. CPFT hosts the **East Anglia Mental Health Research Network regional hub**. The close working between the NIHR Cambridge BRC and NIHR Research Networks, fostered by the involvement of key researchers in both the BRC and Networks, ensures an effective environment for the transition of translational research activity into later stage clinical trials.

The **Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for Cambridgeshire and Peterborough** is hosted by CPFT and currently forms a collaborative partnership between the University of Cambridge and a consortium of NHS and Social Service organisations, which include the CPFT, NHS Cambridgeshire, NHS Peterborough, and Cambridgeshire County Council. The University component includes the Department of Psychiatry, the Institute of Public Health, the Judge Business School and the Engineering Design Centre. The CLAHRC focuses on the application of research to every day practice in mental health care. Full funding has been approved for a new **NIHR CLAHRC East of England** to be hosted by CPFT and aligned to the EAHSN. The CLAHRC, together with the Evaluation and Implementation theme within the NIHR Cambridge BRC, ensures effective transition of research through to the later stages of implementation. In addition, the **NIHR Cambridge Healthcare Technology Co-operative in Brain Injury** was established in 2013 to catalyse NHS 'pull' for new medical devices, healthcare technologies and technically-dependent interventions into practice both nationally and internationally.

CUHP provides leadership and support for a number of national NIHR programmes. Building on the success of the Cambridge BioResource (see section 6) Cambridge has led the development of the **NIHR BioResource**, established around BRCs at Imperial, King's / Guy's and St Thomas', Kings / South London and the Maudsley, Oxford and UCL / UCLH and the Cardiovascular BRU in Leicester. The NIHR BioResource provides a national cohort of volunteers from the general population and patients and who wish to participate in clinical research. The **NIHR Rare Diseases Translational Research Collaboration (TRC)** which is led by Cambridge and Newcastle, aims to link existing research infrastructure across NIHR BRCs, BRUs and CRFs to deliver greater impact in translational rare disease research than would be possible by the individual parts. The Cambridge BRC is also a partner with Oxford, Guy's and St Thomas', Imperial College, and University College London in the **NIHR Health Informatics Collaboration**, which aims to enable an environment where the NHS, academia, industry and patients work collaboratively to build and capitalise on informatics within the NHS.

### Other strategic research partnerships

CUHP organisations have a very broad range of strategic research partnerships, including the following.

- The **MRC Laboratory for Molecular Biology and MRC Units** located in Cambridge. The University and

hospitals have very extensive collaborations and a highly effective strategic interface with the 'intramural' MRC research organisations located in Cambridge. In several cases the Director of the Unit holds an MRC Chair within the University of Cambridge (Biostatistics Unit – Professor Sylvia Richardson, Cognition and Brain Sciences Unit – Professor Sue Gathercole, Mitochondrial Biology Unit – Professor Massimo Zeviani). There is extensive involvement of MRC investigators in translational research programmes, PhD training, external seminar programmes, joint research grants etc. A particularly exciting development is the University investment of £8m in laboratory space within the new Laboratory for Molecular Biology; this space is being used in conjunction with the LMB to enable outstanding University investigators to benefit from the world-leading environment and to drive the translational interface.

**NHS Blood and Transplant (NHSBT)** is the Special Health Authority that provides blood, organs and associated services to the NHS. NHSBT has a major research collaboration with CUHFT and the University of Cambridge with a dedicated building on the Biomedical Campus and research programmes which address fundamental questions concerning the national approach to blood, tissues, organs and the feasibility of stem cell and regenerative medicine approaches to replace current approaches.

**The Wellcome Trust Sanger Institute (WTSI)** and **European Bioinformatics Institute (EBI)** are located at Hinxton, only 8 miles to the South of the CBC. There are extensive collaborations, shared PhD programmes and cross-faculty appointments – Ludovic Vallier and Nicole Soranzo have joint appointments and key UoC investigators have associate and honorary faculty positions at WTSI (including Jackson, Odom, Ouwehand, Peacock, O'Rahilly, Vidal-Puig), and group leaders at WTSI have clinical appointments at CUHFT (including Campbell, McDermott, Vassiliou). An outstanding example of a joint programme is the Deciphering Developmental Disorders programme (DDD) led by Helen Firth (CUHFT) and Matt Hurles (WTSI).

Other key partnerships include:

**Local:** The BBSRC Babraham Institute has extensive research programmes in epigenetics, cell signalling and healthy ageing with excellent collaborative links with UoC. Local strategic partnerships with industrial organisations include GSK's Clinical Unit Cambridge (secondments, research studies), PA Consulting (including development of the Cytosponge), Microsoft Research (including development of the SenseCam).

**Regional:** University of East Anglia and Norwich Medical School. This is the other medical school in our region, and we work in a highly effective partnership to improve multidisciplinary education, and develop complementary academic strengths. Collaborations include CLAHRC East, public health and health economics, and the Clinical Academic Reserve strategic partnership with the local health economy.

**National:** the Global Medical Excellence Cluster is a partnership between Cambridge, Oxford, KCL, UCL, Imperial and QMUL which is currently organising a Rare Disease Partnership with Pfizer. We have extensive partnerships with UCL, including utilisation of the Stevenage Bioscience Catalyst and a Wellcome Trust Strategic Award for neurosciences in psychiatry. Additional strategic partnerships are with Oxford (regenerative medicine, bioinformatics) and Manchester (cancer imaging).

**International:** We have a limited number of strategic research and education partnerships with other major research-intensive institutions. For example, we have a decade long partnership with Yale initially centred on vascular biology, now broadened to immunology, neurosciences and stem cells involving annual exchange visits. A-STAR (Singapore) and National Institutes of Health (Bethesda, USA) both have biomedical PhD training programmes with Cambridge.

We also aim to contribute to policy internationally. CUHP, along with other academic organisations is a sponsoring organisation of the All Party Parliamentary Group on Global Health, which aims to focus on the underlying, cross-cutting global health issues and to connect the interest, impact and knowledge of parliamentarians with the expertise and experience of the wider global health community.

Finally, we are committed to building capacity in less developed countries. The "Addenbrooke's Abroad" project was established in 2006 in response to increasing recognition within the NHS and CUHFT that engaging with resource poor countries has benefits for patients and health care workers both overseas and in the UK. The aim of Addenbrooke's Abroad is to support positive, sustainable change in healthcare by facilitating international partnerships with hospitals and health organisations in the developing world. To achieve this, Addenbrooke's abroad supports staff and students to make practical contributions through volunteer service.

## 9. WORKING WITH THE NHS ARCHITECTURE (2 pages)

In 2010 CUHP took a strategic decision to develop an Academic Health Science System, engaging primary care and local hospitals, including Peterborough, Hinchingsbrooke and West Suffolk. The objective was to promote the tripartite mission of CUHP across a more integrated health and care system, to include primary care, building a culture of innovation and cross organisational working in the greater Cambridge and Peterborough health economy. In September 2011 CUHP was invited by the Department of Health to lead a discussion paper, "From Academic Health Science Centres to Academic Health Science System", the essential concept being the formation of a group of Academic Health Science Networks across the NHS in England. Many of the ideas advanced in this paper were incorporated into two reports "Innovation Health and Wealth" and "A Strategy for UK Life Sciences", published in tandem, December 2011. CUHP has continued to play an important strategic leadership role in the NHS, contributing to the development of AHSNs nationally, providing advice on the licence between the AHSNs and NHS England and in the "network of networks" for AHSNs.

CUHP has consequently played a leading role in development of the Eastern Academic Health Science Network (EAHSN), an extended network serving a population of 4.8 million in the East of England. Members include acute and mental health trusts, primary care, clinical commissioning groups, Health Enterprise East and patient-led service user representatives. The formal prospectus <http://www.eahsn.org.uk/publications/EAHSN-Prospectus-and-Business-Plan-2012.pdf> described a novel, highly-devolved model reflecting the strengths of four natural clinical and biomedical communities (termed nodes) in Cambridgeshire and Peterborough; Norfolk and Suffolk; Hertfordshire and Bedfordshire; and Essex. Mapping onto established clinical and biomedical communities has facilitated the active engagement of primary, secondary and tertiary care with commissioning organisations and social care, promoting an environment of local ownership and partnership. The EAHSN has now been established as a not-for-profit incorporated entity. A Board of Directors has been appointed, chaired by Professor Sir Michael Rawlins, formerly Chairman of NICE and currently President of the Royal Society of Medicine and Chair of the UK Biobank. The Vice Chair is Stephen Thornton, currently Chief Executive of the Health Foundation. Other appointments include EAHSN Managing Director, Dr Robert Winter, formerly Director of the Academic Health Science System and COO CUHP and Sally Standley, currently Director of Service Innovation, CUHP, as the Accountable Officer for the Cambridgeshire and Peterborough node, facilitating direct links between CUHP and EAHSN. The two additional Directors from the Cambridgeshire and Peterborough node are Professor Martin Roland, Professor of Health Services Research, University of Cambridge and Stephen Graves, Chief Executive Officer of West Suffolk Hospitals NHS Foundation Trust. Dr Arun Gupta, Director of Education of CUHP is a member of the Cambridgeshire and Peterborough node of the EAHSN. The Cambridgeshire and Peterborough node is fully engaged with primary care and its single Clinical Commissioning Group allowing large scale changes to be made across the health system.

The four partners of CUHP will continue to be major contributors to the EAHSN programme, individually linking through the Cambridgeshire and Peterborough node. CUHP will also have close links with the EAHSN through the newly designated CLAHRC East of England, and its Director, Professor Peter Jones, Professor of Psychiatry, University of Cambridge, a director of CUHP. CUHP will thus deliver improved outcomes for patients and the NHS through a tripartite collaboration with the EAHSN and the CLAHRC, all working together to address the identified shared priorities: patient safety; non-communicable diseases (including cardiovascular, cancer, diabetes and chronic respiratory disease) and dementia and mental health. Each of these themes has clear objectives and deliverables led by a multidisciplinary Clinical Study Group, consisting of clinicians from primary and secondary care, clinical academics, public health, commissioners, service users and professional programme managers. In parallel, CUHP will focus on developing its position as a world leading academic health science centre delivering innovation in biomedical discovery, education and training, and advanced patient care focussing on the Cambridge Biomedical Campus - all of which will be of benefit to the wider EAHSN.

This model with CUHP nested within the EAHSN delivers the following:

- It is clear from the outset that our AHSC is a distinct entity from the AHSN, with functions and roles that are complementary, each with specific core objectives
- It has avoided dominance of the EAHSN by CUHP. This has encouraged the greatest possible engagement and ownership by all EAHSN members in a non-hierarchical organisation based on four natural clinical communities, recognising that successful networks are owned and run by their members
- It has enabled the EAHSN to draw on the learning from CUHP's experience of working across the health system in research, education and training and network based improvement programmes, to the benefit of the whole EAHSN.

CUHP has extensive interactions with other AHSCs and other AHSNs, which will be developed further.

CUHFT was instrumental in forming the Shelford Group of major teaching hospitals which has proved highly effective, particularly in benchmarking multiple indicators. An established research partnership between CUHP and UCLP involves a Strategic Award from the Wellcome Trust for a neurosciences in psychiatry network. Two evolving relationships are:

- The development of an effective cluster centred on London. UoC, Oxford, KCL, Imperial and UCL have worked together as the Global Medical Excellence Cluster (GMEC) which led the development of Imanova as a national facility for molecular imaging research, and is now addressing interfaces with major pharmaceutical companies across the rare disease landscape.
- The development of a national approach to rare diseases and bio-resources. The Cambridge BRC has also played a major role in developing a national approach to rare diseases and bio-resources.

Pharmaceutical companies, research, healthcare innovation and capital investment are all increasingly mobile across the globe. For Cambridge and the UK to compete we require effective joint working to ensure that our strengths and capabilities are not constrained by intra-national inefficiencies and unproductive competition. To this end, CUHP will work effectively with the NHS, academic and industrial organisations. Building on our current initiatives we envisage a major role for CUHP in interfacing with other AHSNs to increase the effectiveness and capacity of the overall “network of networks”, and to coordinate a national approach to rare diseases which is world-leading.

## 10. INTEGRATION OF RESEARCH, HEALTH EDUCATION AND PATIENT CARE (3 pages)

Translation of basic research into world-class clinical and applied research is a central aim of the partnership, and is facilitated by the NIHR Cambridge BRC, the Clinical Research Networks and the CLAHRC. The CLAHRC for Cambridgeshire and Peterborough is hosted by CPFT and the University component includes the Department of Psychiatry, the Institute of Public Health, the Judge Business School and the Engineering Design Centre. The CLAHRC focuses on “Gap 2”, ie the application of research to every day practice in mental health and disability care. There are many examples of translation from discoveries in Cambridge including the widespread clinical use of monoclonal antibodies. It should be noted that translation to widespread patient benefit takes many years and often involves a range of different contributions. The following are five specific examples of recent translational science successes in Cambridge.

**Alemtuzumab for multiple sclerosis.** Alemtuzumab, (Campath-1H), was invented in Cambridge and eventually licensed for treatment of chronic lymphocytic leukemia in 2001. Professor Alastair Compston has investigated the idea that Alemtuzumab may be effective as a treatment for multiple sclerosis. Studies led by him have demonstrated a marked and durable reduction in disease activity with cumulative sustained recovery of function, no conversion (to date) to secondary progression, and responses that are predictable for the individual patient. These data have had a profound effect on concepts and therapeutic strategies in multiple sclerosis. On 27 June 2013, in the light of successful completion of two Phase III studies and on-going Phase IV studies, the Committee for Medicinal Products for Human Use, which is part of the European Medicines Agency, recommended that alemtuzumab should be granted a license for the treatment of adults with active relapsing remitting MS, defined by clinical or MRI features.

**Ichorcumab – a novel approach to anticoagulation.** Ichorcumab is a synthetic antibody based on a naturally-occurring antibody found in a patient at CUHFT in 2008. The patient arrived in A&E with a head injury, and was rapidly discovered to have a degree of anticoagulation consistent with severe haemophilia, but surprisingly the bleeding stopped quite normally. The observation led Dr Baglin (CUHFT) and Professor Huntington (UoC) to design a synthetic version of the antibody. A new spin-out company from the University of Cambridge and CUH, XO1 Ltd, raised \$11 million in 2013 from leading life science investor Index Ventures to develop ichorcumab, which targets thrombin.

**Inherited forms of early onset obesity.** Professor Sir Stephen O’Rahilly and colleagues co-ordinated the first proof-of-concept clinical trial of recombinant human leptin in patients with severe, life-threatening obesity due to congenital leptin deficiency, and now offer this treatment to patients worldwide on a named-patient basis. Further studies in patients with severe early-onset obesity have led to comprehensive descriptions of several monogenic obesity syndromes, which have altered approaches and attitudes to childhood obesity, reducing the associated stigma among medical and social service professionals. In several cases, identification of pathogenic mutations by the Cambridge group has prevented severely obese children from being removed from their families and placed into the care of social services, under the assumption that a dysfunctional family environment caused the child’s obesity. These advances have led to the development of international policy in relation to the assessment of severe, early onset obesity, with CUHP researchers having a leading role in many of these initiatives.

**<sup>13</sup>C hyperpolarised MRI** was developed in Cambridge and provides a 10,000 fold increase in sensitivity over conventional MRI, and through the use of <sup>13</sup>C labelled metabolic intermediates such as fumarate, provides metabolic information about tumours in real time (Gallagher et al., Nature 2008; Rodrigues et al, Nature Medicine 2013). Professor Kevin Brindle is now taking <sup>13</sup>C hyperpolarised MRI imaging into the clinic in partnership with GE Healthcare, and has been funded by a £5.3m grant from the Wellcome Trust to define its utility in treatment response in different cancers.

**Next generation sequencing.** Cambridge chemists Balasubramanian and Klenerman developed the use of clonal arrays and massively parallel sequencing of short reads using solid phase sequencing by reversible terminators as the basis of a new DNA sequencing approach, which they spun out of the University as Solexa in 1998 (subsequently acquired by Illumina, 2007). Their invention underpins the most widely adopted next-generation sequencing platform (56% market share in 2012). Over the last five years next generation sequencing has transformed genetics and genomics by massively increasing throughput and drastically reducing costs. This has led to a rapid acceleration in understanding the genetic basis of human diseases. There are numerous recent examples of the application of next generation sequencing in Cambridge, including “liquid biopsy” of metastatic breast cancer by studying circulating tumor DNA (Dawson et al, N Engl J Med 2013), the demonstration that mosaic overgrowth in humans can be caused by somatic activating mutations in *PIK3CA* (Lindhurst et al, Nature Genetics 2012), and investigation of hospital acquired infections (Koser et al, N Engl J Med 2012).

In the context of these and other successes, we are not complacent and are determined that we will drive more translation to clinical benefit in the future. CUHP’s initial five years has seen major investment in clinical

research infrastructure and training on the Cambridge Biomedical Campus and this has filled gaps in our capacity and capability for bidirectional translation between the clinic and the laboratory. An important example is the Cambridge Bioresource that includes over 12,000 healthy members of the public who can be approached on the basis of genotype and phenotype to participate in functional and mechanistic studies (for further details see Section 6 above). The importance of the Bioresource in increased understanding of disease by 'pull-through' of basic science into the clinic has been recognised internationally and has formed the basis for the national NIHR Bioresource, led from Cambridge. The Bioresource is a particularly important resource for stratified medicine approaches, as it enables selection by genotype. Illustrating the potential for this approach, a post hoc analysis in a recent proof-of-mechanism study of the mu-opioid receptor antagonist GSK1521498 on eating behavior in binge-eating obese subjects was more effective in individuals carrying the 118G SNP of the *OPRM1* gene that encodes the mu opioid receptor. The GSK unit in Cambridge is now using the BioResource to perform a prospective pharmacogenetically stratified study to confirm and extend this finding.

New initiatives which will help drive translation are the planned creation of an ideaSpace on the campus as a hub for early stage innovation, the creation of an Office for Translational Research to provide a more effective portal for industry and to assist applications for translational awards, and the University's investment in the Stevenage Bioscience Catalyst.

**How the partnership will achieve further integration of research, health education and patient care over the next 5 years as an AHSC. How increased integration will lead to improvement in research, health education and patient care.**

There are two possible interpretations of this question. One would relate to integration in each domain across our partnership; for example of health education across the University, PH, CUHFT and CPFT. An alternative interpretation would relate to integration across domains – for example of research and patient care. Over the five year period we will drive progressive integration in both respects, and this forms an important part of our plan to achieve our ambitious aims and objectives. Our underpinning philosophy – “local integration for global impact” – reflects our commitment to integration. This is balanced by sensitivity to the possibility that merger of organisations can run across strong institutional loyalties. For example, premature merging of activities to form a larger organisation may (1) be perceived as threatening by partners and stakeholders such as other NHS organisations in our sub-national health economy (2) raise concerns from other academic communities within the University, which is committed to maintaining breadth and balance across disciplines and operates under a very different financial and governance framework from the NHS (3) could diminish our ability to drive forward specific areas; for example mental health is of great importance and currently gains some benefits from being organised as a separate NHS Trust. In practice, CUHP has proved highly effective in driving strategic alignment between the partners, drawing on the complementary perspectives of our partner organisations, and achieving benefits from pooling human and financial resources across organisations. As laid out in each of our six themes, our approach is to bring together the expertise, capability and capacity across the organisations to address tough challenges. Our experience is that achieving buy in to our vision of what CUHP can achieve is very strongly reinforced by showing that our partnership does deliver tangible outcomes that matter. Over the next five year period our track record of achievement through integrating our efforts will prove a very strong driver for closer alignment and further integration. The development of the campus will be a particularly powerful driver of integration; for example the planned move of PHFT on the shared site with CUHFT and the Clinical School will lead to a step change bringing together many aspects of patient care, administrative functions and education, and transform the environment for research related to heart and lung disease.

In terms of integration across the tripartite mission, our separate themes should not imply that we view research, health education and patient care as isolated from each other. Our approach is rooted in the premise that excellence in research and education are key drivers for outstanding patient care, and vice-versa; by increasing integration across the components of the tripartite mission we will make these drivers more effective and drive a virtuous cycle of increasing excellence.

**The partnership's vision and strategy for maximising the impact of multi-disciplinary and multi-professional working across the AHSC.**

CUHP considers that multidisciplinary team working is an integral part of safe and effective care for patients, and that multidisciplinary approaches are the most powerful way to address important research and organisational challenges. The AHSC strongly promotes the development of high-performing teams that bring together their combined skills, expertise and resources to manage complex patient problems.

Our approach to major trauma exemplifies how multiprofessional working ensures the seamless management from roadside to rehabilitation and complements our multidisciplinary approach to research in brain injury. In April 2012 CUHFT became the Major Trauma Centre for the eastern region, serving a population of 4.8 million, supported by 17 acute hospitals, the East of England Ambulance Service and the air ambulance and emergency care charities. This was the product of a five year project led by CUHP. The work exemplified CUHP's approach of being multi-professional, clinically led, evidence based and focused on improving outcomes for patients. A multi-professional group implemented this project, widely regarded as one of the

leading trauma projects nationally. This work was the subject of a BBC documentary in 2013 and has been shortlisted for a national innovation award. Trauma care requires that all involved are knowledgeable about each step of the patient pathway and how their own role integrates with and supports the previous and following steps. To address this, CUHP is establishing an innovative multiprofessional and multidisciplinary Trauma Education portfolio for training, which will increase awareness of the multidisciplinary expertise available across the entire pathway, enabling timely and appropriate referrals for patients, and smooth transition of care between services. Complementing the educational and clinical programmes we have a major multidisciplinary Acute Brain Injury (ABI) research program based in the Neurosciences Critical Care Unit and the adjacent Wolfson Brain Imaging Centre which houses two 3T research MR systems and a PET scanner. The research addresses acute and chronic TBI, coma, and the vegetative state. It uses structural and functional imaging approaches to explore regional heterogeneity, and examine the impact in terms of tissue fate and clinical outcome. Conventional physiological measures are combined with microdialysis and brain tissue oxygen monitoring to provide comprehensive clinical bedside monitoring using our innovative software platform (ICM+) which is now being used globally to personalise therapy in patients with intracranial hypertension. Research in the post-acute phase is closely coordinated with a program of inpatient and community neurorehabilitation, and includes an internationally competitive program of research focused on the vegetative state. The framework of clinical care, training, and research infrastructure have resulted in Cambridge being selected as the hub for the NIHR Health Technology Cooperative in Brain Injury, and enabled us to lead large international studies, including a trial of decompressive craniectomy in TBI (<http://www.rescueicp.com/>). Our established program of research in neurotrauma is complemented by a study of regional trauma epidemiology, the Cambridgeshire Trauma Audit Research Project, and a growing research portfolio in musculoskeletal trauma.

**Details of the partnership's close working with Health Education East of England (HEEoE) and how this will further the aims of the AHSC.**

CUHP is represented on the Board of HEEoE by Professor Maxwell (Regius Professor of Physic and Executive Director of CUHP) to ensure effective partnership. The Director of Education of CUHP (Dr Gupta) has been extensively involved in the strategic planning and authorisation of HEEoE, with particular input into the skills strategy and leadership strategy. CUHP's member Trusts and the University of Cambridge are represented within the Cambridgeshire & Peterborough Workforce Partnership Group board (one of the four local partnership boards reporting to HEEoE).

CUHP and HEEoE are collaborating extensively on education improvements and delivery through the newly authorised Eastern Academic Health Science Network. The collaboration of HEEoE and CUHP is strengthened by the Postgraduate Dean and Head of Quality of HEEoE (Dr Simon Gregory) being a member of the CUHP Multiprofessional Education Board. Strategic aims of HEEoE include development of values based recruitment and expanding training capacity to meet regional needs, which align closely with CUHP. Working together, we are expanding the Clinical School from 160 per annum to offer places to all the 2014 intake of ~270 pre-clinical students to Cambridge. The Eastern Deanery (the forerunner of HEEoE) formed an extremely effective partnership with Cambridge to develop clinical academic training programmes, one example being the integrated seven year neurology training programme which involves an intercalated PhD for all trainees. Raising the overall quality of postgraduate medical training in the East of England in general, and CUHP hospitals, is a very high shared priority, which we intend to address in part by further expansion of our academic training programmes. HEEoE has recently awarded specific funding to CUHP organisations to develop a regional trauma care education programme and to lead a regional leadership development programme.

## 11. FINANCIAL PERFORMANCE (1 page)

**Foundation Trust Partners:** The three-year plan, submitted by each Trust in May 2013 and accepted by Monitor has the following key financial forecasts:

Year end 31 <sup>st</sup> March	2012/13 (£m)			2013/14 (£m)			2014/15 (£m)			2015/16 (£m)		
	PHFT	CUH	CPFT	PHFT	CUH	CPFT	PHFT	CUH	CPFT	PHFT	CUH	CPFT
<b>EBITDA</b>	12.0	32.9	7.2	12	22.5	7.6	12.0	24.6	8.1	13.0	37.0	8.5
<b>Surplus</b>	6.0	4.1	0.9	7.0	(10.2)	0.0	7.0	(9.1)	0.0	8.0	2.7	0.0
<b>Cash balance</b>	37.0	43.2	9.7	43.0	40.5	8.7	76.0*	29.9	8.7	56.0	19.9	8.5
<b>Financial Risk Rating</b>	4/5	3	3	5	2	3	4	2	3	5	3	3

\*Increase in cash balances occurs as the Trust draws down a loan which is subsequently used to pay for the New Papworth build.

**Papworth Hospital NHS FT (current financial risk rating: 4).** PHFT has delivered robust financial performance. It plans to relocate to a new hospital to the Cambridge Biomedical Campus and continues to generate revenue surpluses in order to create financial headroom to fund the new hospital. The Trust has taken into account anticipated tariff reductions; however the actual changes in tariff are currently part of an annual process which leads to a degree of uncertainty. Achievement of the CIP programme and commissioners' ability to pay also constitute significant risks. The Trust mitigates these risks by holding back contingency reserves, maintaining good relationships with commissioners and through increasing the support to its Service Improvement Programme which drives the delivery of cost improvements.

**Cambridge and Peterborough NHS FT (Current financial risk rating: 3).** CPFT is developing a business case to move all services from its Ida Darwin Hospital to the Fulbourn site allowing residential redevelopment and delivering additional capital. It continues to work in partnership with commissioners and aims to realise annual savings of 5%. The introduction of Payment by Results in the coming years creates a potential opportunity. Achievement of the CIP programme and commissioners' ability to manage risks in the overall healthcare economy represents risk to the Trust. It mitigates these risks by holding back contingency reserves, maintaining good relationships with commissioners and increasing the support to its various transformation programs.

**Cambridge University Hospitals NHS FT (Current financial risk rating: 3).** CUHFT has robust plans to achieve a sustainable financial future. The Trust aims to resolve the underlying deficit so that the Trust is in a position to achieve an annual financial surplus without reliance on non-recurrent sources. The cost of the Trust's eHospital project, which will facilitate significant financial and operational efficiencies, means that the Trust will likely not achieve this goal for the next three years. The Trust plans to maintain a Financial Risk Rating of 3 throughout the 10 year timeframe.

**University of Cambridge** The University's financial forecasts submitted to HEFCE were:

Year ended 31 July:	Actual 2012 (£m)	Forecast 2013 (£m)	Forecast 2014 (£m)	Forecast 2015 (£m)	Forecast 2016 (£m)
Total income	1,322.1	1,429.0	1,492.6	1,555.4	1,666.5
Total expenditure	<b>1317.5</b>	<b>1434.4</b>	<b>1522.3</b>	<b>1578.2</b>	<b>1643.1</b>
Surplus / (deficit) before transfers from endowments	3.9	0.7	(29.6)	(22.8)	23.4
Surplus on reserves	47.9	50.4	24.1	29.3	76.2
Net assets at 31 July	2,640.9	2,969.9	3,116.5	3,242.0	3,403.3
Net current assets at 31 July	111.1	491.1	384.8	258.9	270.4
<b>Total Funds</b>	<b>2640.9</b>	<b>2969.9</b>	<b>3116.5</b>	<b>3242</b>	<b>3403.3</b>

The University plans to diversify its income streams and replace reducing government sources. In 2012 it issued £350m of bonds for redemption in October 2052, listed on the London Stock Exchange. In preparation for the issue the University sought a rating from Moody's, which assigned an Aaa (stable) rating. The principal risks to the University are its long-term ability to maintain and develop its research funding, to attract the best staff and students, and to maintain and renew its physical facilities and a number of measures are in place to address these risks, as follows. A tight planning envelope was set in the 2010 planning round: -2% cash for 11/12 and +1% for 12/13 and subsequent years. Schools and Institutions have cut back budgets, built substantial reserves and contingency funds are being retained to assist with unexpected additional costs. Finally, changes to the Universities Superannuation Scheme have been implemented, and the University is in the final stages of implementing changes to the Cambridge University Assistants Contributory Pension Scheme.

## 12. ADDITIONAL COMMENTS (1 page)

### Feedback on adverse Monitor ratings.

**Cambridge University Hospitals NHS Foundation Trust:** CUHFT was awarded 'NHS Trust of the Year, 2012' by Dr Foster Intelligence (DFI) on the basis of their independent assessment of NHS hospitals using a broad array of clinical outcome measures. These included Hospital Standardised Mortality Ratio (HMSR) and Summary Hospital Mortality Index (SHMI), death following low risk procedure and death following surgery. The independent analysis shows that more patients are surviving than would be expected, and that they are less likely to be readmitted to hospital. The metrics used include 13 parameters relating to operating efficiency including senior staffing at weekends, use of day surgery and cancelled operations. DFI particularly noted that CUHFT had scored well on its efficiency index, had lower than expected rates on both mortality indicators used and had no concerns in relation to the clinical outcomes assessed. This accolade demonstrates that against a range of nationally benchmarked outcome measures CUHFT's care of our patients is exemplary. However, in November 2012, at the same time as the prestigious DFI award, Monitor found CUHFT to be in significant breach of its terms of authorisation due to failure to meet targets including waiting times for cancer treatment and A&E performance. These concerns, combined with concern over financial stability and the occurrence of eight patient safety incidents ('never' events) between September 2011 and August 2012 gave rise to concern that the Board had not dealt adequately with the range of issues that the Trust faced. CUHFT's response to these concerns was rapid, thorough and multi-faceted, demonstrating our strong commitment to improving our organisation's delivery of healthcare.

The Board immediately commissioned a Board governance and effectiveness review, and has already implemented its recommendations. Since November 2012 a new CEO, Dr Keith McNeil, has been appointed, and the executive membership of the board streamlined, including a new standalone Chief Operating Officer role and a single designated lead at board level for clinical quality in the Medical Director. These changes ensure that providing high quality, safe and compassionate care is a key focus of all staff, and that the governance and leadership within the organisation is effective in ensuring that this is the case. An independent report into the cluster of Never Events at CUHFT in November 2012 found that the organisation has a very proactive safety culture involving excellent reporting of patient safety events. It concluded that "It is our belief, from both qualitative and quantitative information, that CUHFT is a safe hospital with a very good safety culture". There have been no further Never Events in the 12 months since August 2012. Since Monitor raised concerns, CUHFT performance against waiting times targets has improved substantially. CUHFT achieved monthly compliance with the cancer 62 day target in January 2013, ahead of our planned recovery, and have consistently maintained this since. Monthly compliance with the 18 weeks referral to treatment target was achieved in February 2013 as planned, and has been sustained since. In the context of widely-reported national difficulties for the majority of Trusts in meeting the A&E 4hrs waiting targets, CUHFT maintained monthly compliance from August 2012 to February 2013, and from May 2013 onwards. In quarter 1 of 2013-14 we achieved quarterly compliance with all three Monitor healthcare performance targets. In light of this significant progress and assurance that the changes instigated are bringing about demonstrable improvements in patient care as measured by the absence of Never Events and achievement of access targets, Monitor decided in June 2013 to reduce the frequency progress review meetings from monthly to quarterly.

**Cambridgeshire and Peterborough NHS Foundation Trust (CPFT):** In March 2012, Monitor informed CPFT that it was in significant breach of the terms of its authorisation based on concern over effective leadership and governance. The decision was triggered by the failure of CPFT to address Care Quality Commission concerns with sufficient alacrity. Following a programme of radical change within the Trust, it was announced in March 2013 that CPFT was out of significant breach (with both Monitor and CQC) in record time. Since the announcement the Trust has had very good CQC reports following recent visits and very good national patient survey results.

### 13. DECLARATIONS AND SIGNATURES

*By signing the declarations the named individual is agreeing that they are authorised to do so on behalf of their organisation.*

**Please print this page, have it authorised and return it by post by 7 October 2013 to the address stated at the bottom of this form.\***

The applying English NHS Provider/University Partnership fully endorses the application for an Academic Health Science Centre award and assert that appropriate support will be provided to the AHSC should the application for designation be successful.

English NHS Provider/University Partnership: Cambridge University Health Partners

Name, job title, address, email and telephone number of the lead contact for the proposed AHSC:



Signature

Date: ...30/09/2013.....

(Lead contact for the proposed AHSC)

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If you have questions about the completion of this form please e-mail Sonja Tesanovic at [sonja.tesanovic@nihr-ccf.org.uk](mailto:sonja.tesanovic@nihr-ccf.org.uk).

This form must be submitted by **1:00pm on 30 September 2013**. The 'wet-ink' Declaration and Signatures section of the application form should be received by NIHR CCF on **7 October 2013**, and sent to:

Dr Sonja Tesanovic  
NIHR Central Commissioning Facility  
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15 Church Street  
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TW1 3NL