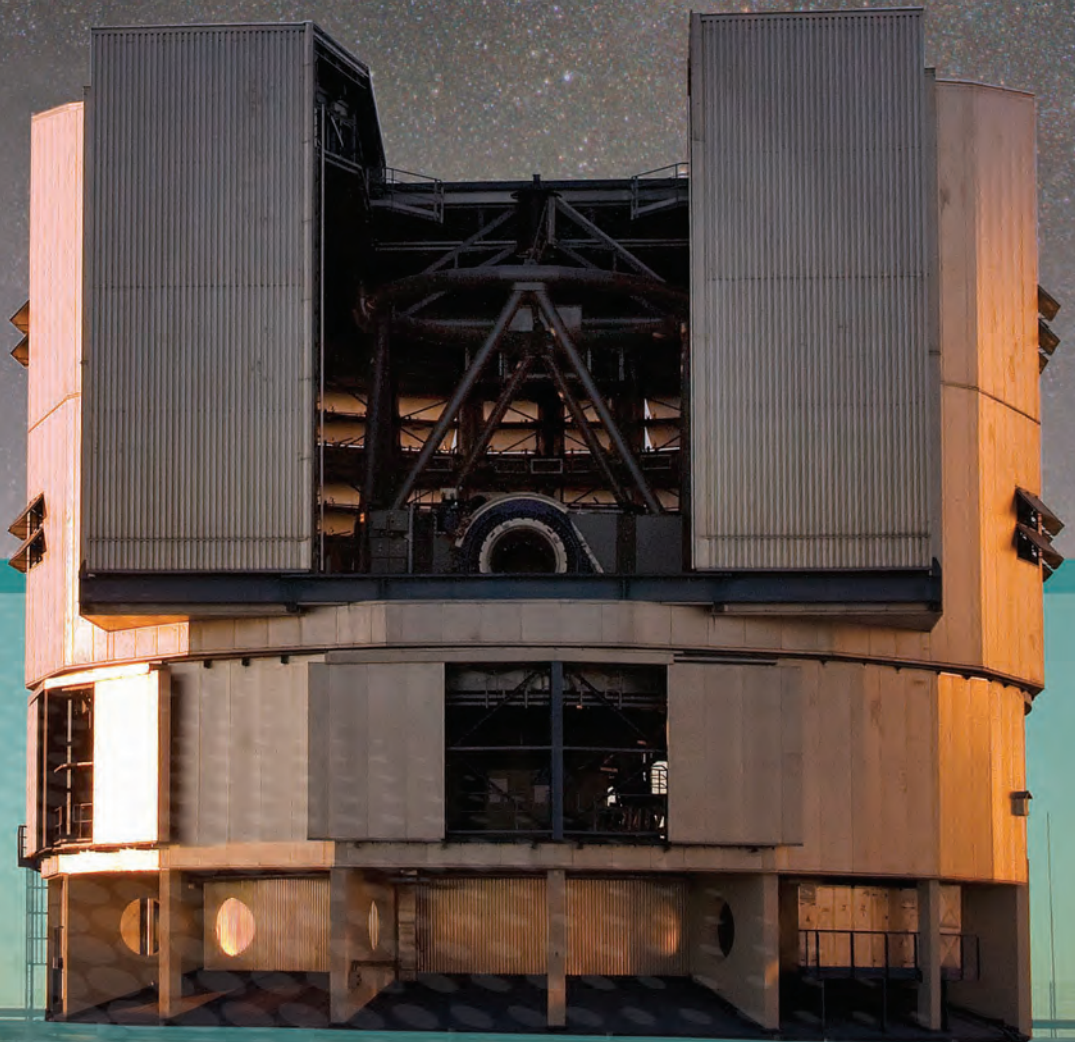


Corporate Strategy 2010-2020

Our Vision

“To maximise the impact of our knowledge, skills, facilities and resources for the benefit of the United Kingdom and its people.”



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The Science and Technology Facilities Council (STFC) is one of seven UK research councils. STFC was created in 2007 as an inherently cross-disciplinary organisation with a uniquely broad remit. We engage with research, business and innovation and our mission is delivered through three distinct but interrelated functions:

- We support research, innovation and skills in particle physics, astronomy, nuclear physics and space science through UK universities and participation in major international collaborations
- We design, build, operate and exploit world-leading, large scale facilities in the UK for the physical and life sciences, we enable access to international facilities and we support innovation in these areas
- We are developing the UK's Science and Innovation Campuses to promote academic and industry collaboration

We are tasked not only with the core goal of delivering world leading scientific research, and the technology to achieve it, but also to mine the boundaries between these sectors and other research fields to generate new applications and greater impact for the UK.

This Strategy provides a clear framework for the next 10 years toward achievement of our Vision – 'to maximise the impact of our science and technology for the benefit of the UK and its people'.

This is a vitally important mission at any time, but especially so now, given the challenges the UK faces

to rebuild our economy and the important role that scientific and technological innovation must play in this task. STFC is uniquely placed within the research community in its ability to contribute. We are firmly convinced that the future for the UK, and for STFC, is one of great promise and enormous potential.

Our skills, technologies and facilities already deliver world-beating science, and significant economic and societal benefits. This Strategy commits us to do more – by providing improved skills, innovation, knowledge, inspiration and commercial development. We will deliver new and better ways to apply our existing science and technology resources, without losing sight of the crucial role we play in encouraging and enabling the unexpected and the unimaginable discoveries arising from basic research, but which form the pipeline of future scientific and economic success.

It is this scientific and technological innovation, underpinned by our world-leading science and research base, which will help find the solutions our country, society and world needs for the future – such as new sources of energy, addressing novel security threats, dealing with climate change and an ageing population, while at the same time building an effective knowledge based economy.

Addressing these major challenges also requires a scientifically literate and technically skilled workforce. The inspirational nature of STFC science plays a major role in attracting the young people who will form this workforce, and influencing their career choices. UK's researchers require access to world

Introduction

class facilities and support – our role is to fund and operate these facilities and provide this support. We also need new and innovative ways of bringing researchers together with industry; our development of the National Science and Innovation Campuses will deliver just that.

We are pleased that the Government shares our view of the importance of science, technology and innovation, and has chosen to protect research funding relative to other areas in the 2010 Comprehensive Spending Review. We welcome our settlement as an extremely strong vote of confidence in our activities, given the overall pressure on public spending at present. This Strategy explains the priorities that we will use to guide our investment decisions to increase, as far as possible, the UK's scientific standing and productivity.

This Strategy was developed after extensive consultation with, and input from, our staff, research communities, academic and international collaborators and commercial partners. STFC's first few years have not been easy ones, and there have been

significant reductions in funding support for our research areas, coupled with a series of lengthy and unsettling external reviews. We are proud of the dedication and commitment of our staff, our research communities, collaborators and partners, who have continued to deliver first rate science and technology through this period. The coming years will not necessarily be any less challenging, but we are confident that by working together with a clear, shared vision we can address the major challenges of the 21st Century while keeping the UK the best place in the world to do science.



Our Vision was developed in consultation with stakeholders and was published in July 2009. It sets out the key role that STFC plays in rebuilding the economy and the UK's future competitiveness through the research we support in universities, the research carried out using STFC-provided facilities and the collaborative research and innovation on our Campuses. The Vision recognises the contribution of fundamental research to society and the benefits that can be garnered from that research. These benefits flow on a range of timescales and are often intertwined and hard to predict. Our task is to ensure that we are prepared for and receptive to such benefits and can recognise and seize them when they appear.

Our Strategy's starting point is that the research that STFC supports must be of the highest innate quality. We also recognise that excellent research by itself is not enough: we must also ensure that innovative ideas, technology and techniques can be translated into application – both to deliver economic prosperity for the country and to make a real difference to people's lives.

The Strategy also recognises that the first class skills and training we provide in advanced engineering and problem solving are absolutely vital for a successful knowledge economy. We realise that the contribution of highly skilled people to the UK extends beyond their technical and scientific abilities. Scientific research inspires people to think about seemingly intractable problems in new ways – to innovate.

The inspiration and innovation fostered in others by skilled researchers is a tangible benefit that is fundamentally important to the future of our nation and the prosperity of its people.

We will achieve our Vision by delivering a combination of world class research, innovation and skills – the three goals which form the core of our Strategy. We will increasingly focus our programme on activities that deliver these long-term strategic goals as we realign our operations and redirect resources to deliver our Vision.

We will seek to provide leadership to the research community in maintaining the focus on excellence, making a significant impact on the key challenges of our age, and transforming the public's perception of science. We will achieve this by working in close collaboration with the other research councils, Government, the Technology Strategy Board, academia and commercial partners; promoting the exchange of knowledge, expertise and creativity and; building our international standing to exert influence over future investment decisions. These ambitions are reflected in the six strategic themes that focus our approach in delivering the strategic goals.

Three strategic enablers are critical to our ability to deliver this Strategy: developing our people, financial sustainability, and delivering an efficient and effective organisation. We set out here what we must do differently to ensure future success.

Delivering OUR vision

This Strategy has been developed to deliver our Vision – 'to maximise the impact of our knowledge, skills, facilities and resources for the benefit of the United Kingdom and its people'.

Our Strategy sets out an ambitious future for STFC over a ten year horizon that reflects the long-term nature of our business and investments. The durability of our strategic goals will ensure we maintain a focus on the long-term. Our strategic themes influence the particular focus of delivery and may change over time

to reflect our progress and shifts in the external environment. Implementation will require that we continuously improve the effectiveness of the organisation and that we develop new ways of working in order to maximise opportunities and deliver excellence.

Our vision

Maximising impact for the UK

World class
research

World class
innovation

World class
skills

Strategic goals

Solutions for
global challenges

Inspiring and involving

Sustaining research
excellence and leadership

Effective
knowledge exchange

Strategic themes

Strengthening
strategic partnerships

Building
international influence

Developing our people

Financial sustainability

Efficient and effective organisation

Strategic enablers

Strategic goals

We will realise our Vision through our three strategic goals of world class research, innovation and skills; these enduring goals define our core business.



Strategic goal

World class research

This strategic goal covers the quality and extent of the research we sponsor, support and deliver directly. Related strategic themes include Sustaining Research Excellence, Solutions for Global Challenges and Building International Influence.

Current position

Independent surveys have repeatedly shown that the UK is second only to the United States in scientific standing and best in terms of return on investment, with UK institutions regularly appearing in the top 10 global science universities. STFC makes a distinctive contribution to this UK research excellence by providing grant support to researchers in universities, by providing access to facilities across a wide range of scientific disciplines both within our own laboratories and overseas, and by developing the science and innovation campuses as focal points for industry and academia to work together.

STFC operates three world-leading, multi-million pound multi-disciplinary national facilities in the UK to allow researchers to understand the structure of materials from the atomic to cellular scale, and provides access to two complementary overseas facilities. Each year UK academic and industrial researchers carry out hundreds of experiments in disciplines including medical, biological, materials, and engineering research at these facilities, generating around 1,000 world class papers in peer reviewed journals and delivering significant impact for UK society. For example, recent experiments have mapped the H1N1 virus and resulted in the development of Tamiflu; advanced our understanding of cloud formation, essential for accurate global climate models, and; modelled the behaviour of crude

oil which will lead to more efficient oil field extraction in future.

STFC works with and through its university partners to provide grant support to the UK's world class particle physics, astronomy, space science and nuclear physics research communities. We also devote significant funding to international subscriptions to guarantee long-term access to world-leading research facilities at the European particle physics laboratory CERN, and the European Southern Observatory, and we support UK scientists using facilities provided by the European Space Agency. UK researchers have taken leadership positions and steadily increased the quality and volume of research publications – exceeding 2,000 in 2008/9 – establishing themselves as among the very best globally in these disciplines. These research areas have an immediate impact on skills and training in STEM subjects. Societal benefits that flow from these research areas are often longer-term and include the development of the World Wide Web which underpins the £100bn UK digital economy, and particle accelerators which are used for tumour treatment.

The technology and engineering capabilities developed in our own laboratories and in universities underpin and tie together these diverse research fields and we are working to build and sustain UK critical mass in these areas. The recently- opened



European Space Agency centre at our Harwell Campus will strengthen UK expertise in climate change and satellite instrumentation, bringing inward investment and opportunities for the UK as will our plans for the development of our Science and Innovation Campuses.

- Ensure that national and international research facilities meet the needs of the UK's research community and funders, and that these facilities deliver excellent science with maximum impact
- Develop the Science and Innovation Campuses as recognised international focal points for research collaboration, bringing universities and industry together

AMBITION

Sustain the UK's position as one of the world's leading research nations and support the growth of a high technology UK economy.

Objectives

In delivering world class research over the next ten years we will:

- Working with our partners, develop and support an exciting and relevant programme of World Class Research to sustain the UK's global research ranking
- Maintain a balance between curiosity-driven and application-led research and ensure we deliver and capture a broad range of impact, including technological innovation, training and skills, from our programmes

Decision Criteria

We will give priority to new and existing research projects, programmes and facilities that:

- Deliver research excellence
- Support areas of UK scientific leadership
- Contribute to the delivery of high impact particularly in the Global Challenge areas, and to the building of critical mass at our Science and Innovation Campuses
- Reflect the needs of our stakeholders including the other research councils

Measure of success

Sustain the UK's global research ranking, as measured by an annual assessment of UK research performance.

Strategic goal

World class innovation

This strategic goal describes how we will promote the successful exploitation of new ideas to produce useful innovation and deliver economic and wider societal benefits for the UK. The related strategic theme of Effective Knowledge Exchange sets out our contribution to broadening the knowledge base in support of this strategic goal, whilst Solutions for Global Challenges describes what we will do to focus innovation on the pressing issues facing society.

Current position

As a funder and direct producer of leading research, STFC has an important role in mobilising the UK's huge inventive capacity.

STFC has a distinguished tradition of developing innovative facilities, techniques and technologies that transform scientific research. We pioneered novel protein crystallography techniques which are now used across the globe to develop new drugs for HIV, cancer and Alzheimer's. ISIS, our world leading pulsed neutron source, has revolutionised our knowledge about the structure of materials. Its new target station has expanded its research capability into bioscience and soft matter; early results include novel materials to treat babies born with severe cleft palates.

STFC also has a good track record in developing key technology from which new markets emerge. For example, the MRI industry that contributes £260m Gross Value Added to the UK economy and supports 4,000 jobs developed from early STFC technological expertise, as did the £20bn UK computer animation industry.

Our experience of translating research into successful commercial products or new companies builds on decades of experience gained at UK universities. Our innovation programme is providing researchers with £5m funding in 2010/11, plus the support and skills

to develop their inventions into marketable products and services. A spin-out established by astronomers at Edinburgh University uses distant star imaging techniques to stabilise MRI images of moving patients, allowing young children to be scanned without anaesthetic. Another spin-out set up by Leicester University space scientists is developing a portable medical scanner, invaluable in treating immobile or vulnerable patients.

We established STFC Innovations, our wholly owned technology transfer company, to increase commercialisation of STFC's intellectual property. Since 2002 it has launched 15 spin-out companies, with more in the pipeline. One of our earliest, Nominet, operates at the heart of e-commerce, running one of the world's largest Internet registries and managing over eight million UK business domain names.

STFC supports innovation in other ways. We are developing clusters of public and private sector science and technology enterprise at our two Science and Innovation Campuses. By creating a critical mass of facilities, skills and businesses, in synergy with the universities and research base, the Campuses are becoming centres of collaboration, cross-disciplinary working, and inward investment. From early beginnings, the two sites already host 230 enterprises and 5,500 jobs.

AMBITION

Realise the innovative capacity of STFC's science and research facilities to support the growth of a high technology UK economy.

Objectives

In delivering world class innovation over the next ten years we will:

- Increase innovation output from our funded activities, including our funded university programmes and the STFC laboratories
- Demonstrate the impact of our innovation output
- Develop the Science and Innovation Campuses as national focal points for innovation

Decision criteria

We will give priority to activities that:

- Develop ideas with commercial potential
- Increase STFC's contribution to economic impact
- Build the economic impact of the Science and Innovation Campuses

Measure of success

Increase innovation from STFC's funded activities, measured by an innovation index.

Strategic goal

World class skills

This strategic goal sets out how STFC will increase the impact of its role in delivering STEM skills to rebalance and rebuild the UK economy. The strategic theme Inspiring and Involving describes how we will build our contribution to attracting young people to STEM based careers. The contribution of our staff to the success of STFC is covered in the strategic enabler Developing our People.

Current position

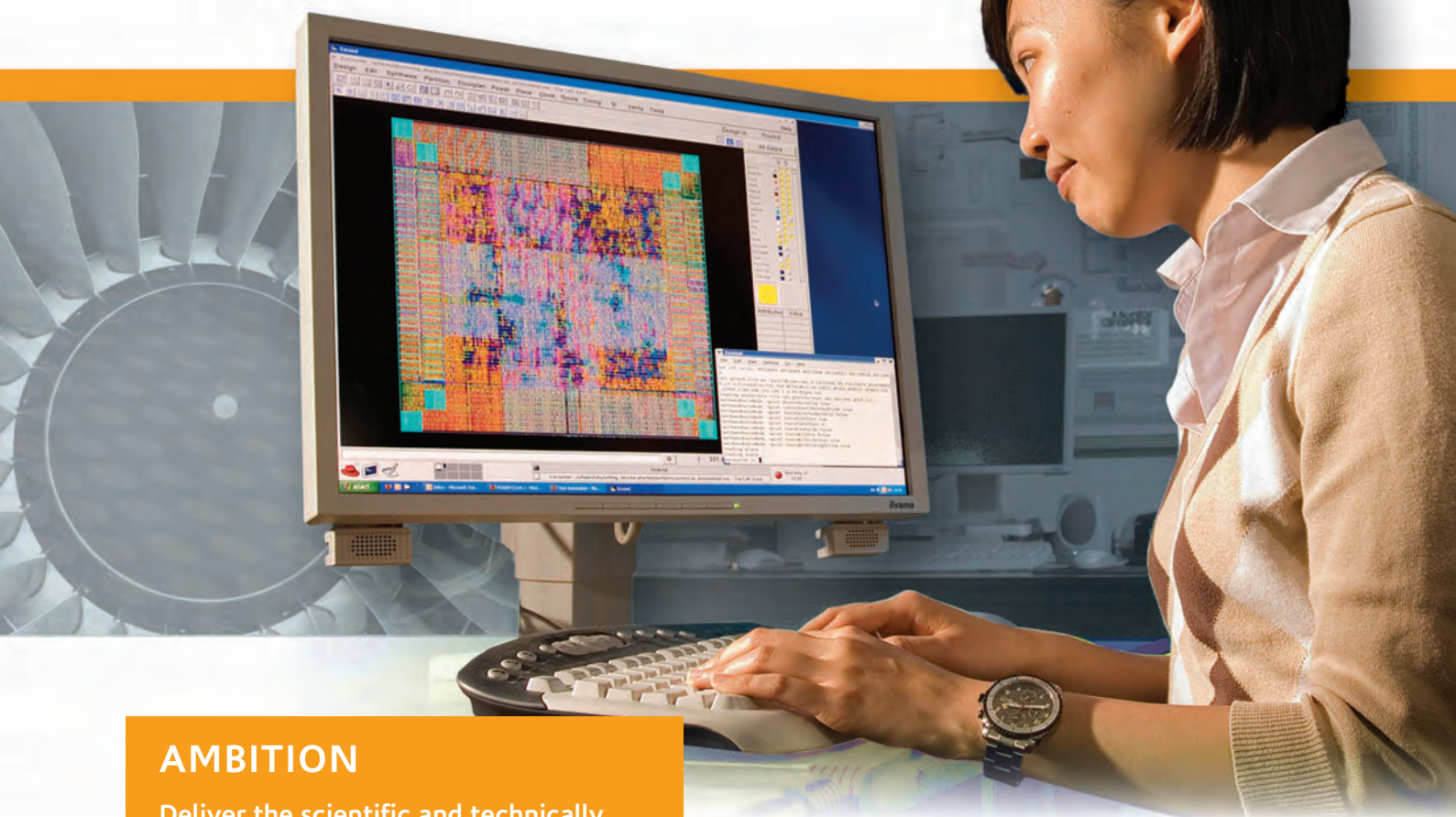
The UK has aspirations to be one of the foremost knowledge economies in the world, attracting inward investment, international companies, and jobs at the top of global value chains by supporting a thriving high technology culture.

World class skills are one of the most important ways that we deliver impact. World class research and innovation depends on the outstanding performance and contribution of UK researchers, technologists and engineers to create knowledge, exploit ideas, and build and operate large scale facilities. It requires a distinct combination of skills to deliver world class science and technology on this scale; building this skills base is one of STFC's unique contributions to the UK.

STFC provides skills at the highest level through grant support to universities, subscriptions to international facilities and training at its own facilities. We encourage collaboration by: promoting cross-institutional projects at our own facilities; encouraging joint appointments, and; establishing hubs of national expertise, such as the Cockcroft Institute at Daresbury.

The research we support is hugely important in inspiring and attracting young people into science, while our grants help create the environment for the best teaching departments. We fund the training of the next generation of researchers and skilled workers, supporting over 200 new PhDs every year in particle physics, astronomy, space science and nuclear physics, with our rolling cohort currently standing at 900. Our PhD students enjoy almost full employment when they complete their courses, with half continuing in research. We offer development through 800 postdoctoral positions and around 60 advanced fellowships. The remainder are much valued for their numerical, problem solving and project management skills and choose equally important commercial or government careers. In addition to directly-funded activities, we also exploit our laboratories and facilities as unique training centres with more than 700 students, funded by other research councils, receiving more than 9,000 PhD training days every year.

We contribute to the skills agenda in many valuable and distinctive ways but recognise that senior level coordination would marshal our unique resources more effectively and increase the impact of our activity on the UK's knowledge economy.



AMBITION

Deliver the scientific and technically skilled workforce that will sustain the UK as one of the world's leading research nations and support the growth of a high technology economy.

Objectives

In delivering world class skills over the next ten years we will:

- Strategically manage skills training across our funded activities as one of our highest priorities
- Ensure that our education and training programmes address the national demand for scientists, technologists and engineers
- Develop the Science and Innovation Campuses so that they become recognised as national focal points for scientific and high-tech skills training

Decision criteria

We will give priority to skills activities that:

- Maximise the contribution of the scientific areas and facilities that we support as a distinctive and inspiring training ground
- Exploit our unique strengths and capabilities, complementing rather than duplicating what others provide
- Match the specific strengths and needs of the UK's science, technology and knowledge based sectors

Measure of success

Increase STFC's contribution to providing relevant high-tech skills for the UK economy, measured by student career choices and how our training meets industrial and academic needs.

Strategic themes

We will transform the way we achieve our strategic goals by focusing our approach on six strategic themes.



Current position

STFC currently undertakes many activities that address the global research challenges in energy, environment, security and healthcare. Initiatives include the transfer of technology and know-how from fundamental particle physics and astronomy research into the areas of threat detection and bio-imaging. For example, we are developing innovative solutions based on STFC technology in baggage scanning, detection of radioactive sources and surveillance with scanning equipment, already in operation at Heathrow Airport. Our facilities support world class research in energy storage materials, which are essential if we are to reduce our dependence on fossil fuels.

STFC scientists and engineers develop satellite instrumentation and interpret data on atmospheric composition and sea surface temperature – critical for long-term climate monitoring. They generate technology spinouts from space science into medical and security applications. More recently, we have developed a challenge-led approach to addressing these problems and through our Futures Programme we are matching STFC's capabilities to the challenges; developing projects and programmes to take forward technology and knowledge-based solutions.

As part of this approach, we are also working to improve collaboration between the academic and commercial sectors; for example we have established MedTec, a medical technology exchange centre based at the Daresbury Science and Innovation Campus that provides a focus for researchers and companies to more rapidly translate ideas into real improvements in healthcare.

We are continuing to build on this work, sharing our strengths in technology and skills and leading a co-ordinated and sustained effort. Initiatives that address the global challenge areas will be given a high funding priority. We will engage our funding partners, in particular the other research councils, in the process of prioritisation and decision-making.

Strategic theme

Solutions for global challenges

This strategic theme sets out how STFC will harness its key strengths and capabilities to respond to the worldwide 'call to arms' to address the challenges arising from increasing pressure on natural resources, the effects of climate change, an ageing population, and the uncertainty generated by international terrorism and conflict.

AMBITION

Ensure that our science, skills and facilities are at the heart of the research effort to develop innovative solutions to the global challenges.

Objectives

In developing solutions to the global challenges over the next ten years we will:

- Continue to define the problems for which STFC is equipped to provide solutions and, focus and co-ordinate our existing capabilities in these areas
- Contribute effectively as a partner in the RCUK global challenge programmes, taking the lead in areas where STFC has particular strengths and capabilities
- Increase STFC's investment in the global challenges
- Widen the funding sources accessed by STFC to support its global challenge work

Decision criteria

Within the global challenges portfolio, we will give priority to activities that:

- Deliver a high impact in the global challenge areas
- Build on STFC's existing strengths and capabilities
- Address the agreed priorities of the RCUK programmes in Energy, Global Uncertainties, Lifelong Health and Wellbeing and Living with Environmental Change
- Attract matched funding from external strategic partners

Measure of success

Increase STFC's contribution to providing solutions to global challenges, assessed through an annual impact report, which will include both qualitative and quantitative measures of progress.



Current position

STFC has a long tradition of stimulating the public discovery of science and the benefits it brings. We promote the science and technology that we support in universities and our own laboratories through a vigorous programme of media activities, educational programmes, exhibitions, workshops, outreach activities and training schemes.

We are greatly assisted by the wonder and awe inspired by our disciplines, such as astronomy, and by the public astonishment at the scale and engineering of our facilities, let alone by the fascinating work and discoveries done with them. For example when the Large Hadron Collider was switched on at CERN, we led the UK within the highly successful international communications campaign that inspired a billion people worldwide to follow the project's start-up.

We are committed to reaching out to the public, especially the young, to enthuse and inspire them about science, technology, engineering and mathematics, the STEM subjects, and to encourage them to pursue careers in these disciplines. We invest in local and national schools projects to reach around 100,000 pupils and 6,000 teachers each year, increasing the take up of STEM study choices. In fact, the majority of UK physics undergraduates report being drawn to science by STFC's research and the 'big questions' we are seeking to address.

All audiences value personal engagement with working scientists, so a key strand of our programme is to support and encourage enthusiastic researchers, who are increasingly reaching the public in innovative ways, including creative scientific cultural events. We have also capitalised on our unique, world-leading facilities as excellent sites for outreach; last year our two Science and Innovation Campuses engaged with over 10,000 members of the general public.

As well as our own activities to promote our unique and exciting programme, we also use our sponsorship of the collective research council's public engagement programme to deliver broader engagement and national impact with scientific discovery and impact. We will continue to work with our research council partners to build on this programme and increase our impact.

Strategic theme

Inspiring and involving

This strategic theme describes how we will foster public engagement with the excitement, relevance and benefits of STFC science and technology, to inspire, promote scientific literacy and support the national STEM agenda. Related sections include World Class Skills and Strengthening Strategic Partnerships.



AMBITION

Stimulate and sustain public discovery of science in support of the UK's growing high technology society and economy.

Objectives

In inspiring and involving the public over the next ten years we will:

- Celebrate and raise the profile of our science to excite and awaken public interest and promote scientific literacy and culture
- Inspire young people to pursue STEM-related studies and careers
- Increase public awareness of the outcomes of STFC science and technology, and the benefits that flow from it
- Work more productively with new media, creative and artistic industries

Decision criteria

We will give priority to running or investing in activities that:

- Link audiences with contemporary research, especially through active scientists and engineers
- Deliver to our key audience of young people
- Exploit our distinctive offer, complementing rather than duplicating what others provide, and delivering more through stronger strategic partnerships

Measure of success

Increase public awareness of STFC science and technology, measured through a survey of public attitudes to science and young people's study choices.



Current position

Research excellence is the bedrock of STFC – it underpins the economic and societal impact we make and drives the technological challenges, whose solutions facilitate further excellent research. Our challenge is to continue to deliver this level of excellence within a constrained financial environment, while increasing impact and efficiency.

The provision of increasingly large scale infrastructure and facilities is the prerequisite for many modern advances across the entire research base. We enable the work of many thousands of scientists by providing access to world-leading facilities and providing grants for researchers to exploit them – from giant telescopes for studying the far reaches of the Universe to laser tweezers for manipulating living cells, from the Large Hadron Collider (LHC) at CERN searching for the Higgs Boson to medical research at the Diamond Light Source searching for treatments for cancer.

The technical and technological infrastructure needed to deliver and keep these facilities at the global cutting edge is beyond the capabilities of any single research group, or sometimes any single nation. This is something STFC is very good at; demonstrated by recent achievements including the Diamond Light Source, ISIS Target Station 2 and the UK contributions to the LHC. This key strategic area is one in which we can maintain UK scientific and technological

competitiveness in the face of the growing challenge from emerging scientific nations, who will require many years of investment to match our existing skills and capabilities.

World class research facilities are large undertakings, not only in physical size and complexity but in their longevity, level of organisational requirements and scale of financial investment. Our success in building, operating and exploiting our facilities comes from adopting a long-term planning approach to the deployment of skills and resources. A key requirement for maintaining this leading edge is the STFC and wider UK team of leading scientists, engineers and technicians – many with rare and highly specialised skills. Individually they are often highly competitive, and we need to encourage greater collaboration if we to deliver our common goals and equip our leaders to inspire and maintain motivation, whilst increasing efficiency and productivity. This represents a significant investment which must be nurtured in these difficult times.

Research does not stand still and our role is to open up new possibilities for the UK's future. To succeed in this challenging task, STFC has to maintain a combination of scientific and technological expertise and breadth of activity that is unique in the UK, and matched by few other organisations in the world.

Strategic theme

Sustaining research excellence and leadership

This strategic theme builds on World Class Research and sets out how STFC will maintain UK research excellence across our core disciplines in the face of a mounting challenge by China and other BRIC nations, within a constrained financial environment. Related sections include Solutions for Global Challenges, Building International Influence, Developing our People and Financial Sustainability.



AMBITION

Be recognised as a world class research organisation in terms of the leadership we provide across the full breadth of our activities and the uniform excellence of the science and technology we plan, develop and support.

Objectives

In sustaining research excellence and leadership over the next ten years we will:

- Ensure all that all facilities we support – including those where STFC does not have the primary responsibility – are developed and operated to world leading standards
- Fully exploit the synergy between the different branches of our science and technology programmes, to provide new opportunities and capabilities while increasing value for money
- Build and sustain UK leadership of our funded research programmes
- Work in partnership with the Research Council family to effectively exploit the current capabilities and develop future capabilities to deliver the UK's science requirements

Decision criteria

In sustaining research excellence we will give priority to activities that:

- Are financially viable and sustainable over the necessary timescale to achieve the research objectives
- Focus investment in research programmes and disciplines where we can maintain UK critical mass and influence
- Maintain core UK scientific, technical and engineering skills and capabilities to support STFC science and facilities, including the ability to design, build and operate future world class large research facilities

Measure of success

Increase the recognition of our research excellence, measured through UK leadership of projects, programmes and facilities.



Current position

Scientific and technological creativity thrives on openness and collaboration. Building the successor to the Hubble space telescope, developing alternative energy solutions, or training our brightest minds is best achieved by open-handed sharing of knowledge, data and skills.

As facilities increase in scale and expense, world class research is increasingly carried out in partnership, best exemplified by CERN. With 10,000 global researchers, it is the world's largest research collaboration. Twenty years ago they developed the World Wide Web to solve their communication needs. Now we are funding the next leap in computing interconnectivity, the Grid. This pools our new data centre with the power of 8,000 computers in UK Universities and similar networks abroad, sharing data around the globe. Like the Web before it, the Grid's impact will spread far wider than CERN. STFC will continue to open up opportunities for other disciplines to benefit from this exciting new way of working, such as biologists identifying promising anti-malarial drugs.

STFC has an excellent track record of disseminating technical knowledge. Our scientists and engineers work closely with their international peers, whether on designing the next generation research facility or publishing user papers. We also have considerable success reaching out to HEIs and commercial

researchers. Our technology showcases, workshops and conferences, such as the Appleton Space Conference, bring together thousands of public and commercial researchers to stimulate innovation enterprise. Our collaborative activity with HEIs and industry currently stands at £30m.

We are using these strengths, as explained elsewhere in this Strategy, to promote an open innovation approach in developing our Campuses. We are setting up formal structures to assist. For example, our Knowledge Centre for Materials Chemistry provides a focus for UK chemical companies to access public research skills and facilities, while the RCUK Research Complex at Harwell provides a unique environment for researchers in the life and physical sciences to work alongside STFC and Diamond scientists and to access the capabilities of the national research facilities located at Harwell.

Our plans for the Campuses will be strengthened by our technology themed Centres of Expertise. These will be explicitly outward focused and will enable multidisciplinary interactions with HEIs, public, private and third sector organisations that would benefit from access to our skills, expertise and resources. Our first, the International Space Innovation Centre (ISIC), opened in 2010, attracting £12m investment from the Government's Strategic Investment Fund and bringing more than £30m of further investment.

Strategic theme

Effective knowledge exchange

This strategic theme explores how we will facilitate the diffusion of knowledge to stimulate creativity, increase learning and build capability, thereby supporting the delivery of our three strategic goals. It sets out how we are embracing new ways of working and setting up new opportunities to ensure knowledge is transferred into the economy and society to support economic development, growth and prosperity.

We have less experience bringing non-technical knowledge into the organisation. If we are to succeed in the coming decade we need to build a greater understanding of the policy challenges facing particular sectors. We have started this important work in our Futures Programme by employing skilled technology translators. Our recently established business development team will continue to build STFC-industry relationships to create greater value in our collaborations. Recent work between Pfizer and our Central Laser Facility now allows accurate chemical analysis of materials inside sealed capsules. This will significantly improve prescription drug production with further applications in detection of counterfeit medicines and explosives.

AMBITION

Maximise the opportunities for sharing the knowledge, skills, ideas and expertise arising from STFC funded activities.

Objectives

In delivering effective knowledge exchange over the next ten years we will:

- Make knowledge exchange an integral part of all STFC's funded activities and programmes

- Strengthen links between STFC funded research and commercial innovation through collaborative partnerships, including universities and STFC laboratories
- Build a climate of creativity and learning within STFC, fostering innovative ways of working enabling us to take maximum advantage of new opportunities

Decision criteria

We will give priority to knowledge exchange activities that:

- Strengthen the UK's research, innovation or skills base
- Build on STFC funded research and technology
- Promote multidisciplinary working and collaborative working

Measure of success

Increase the impact of STFC's knowledge exchange performance, measured through an assessment of its collaboration activities.



Current position

STFC works extensively with Strategic Partners to deliver key elements of our programme. Whether these are international research collaborations, or partners on our Science and Innovation Campuses, or universities conducting research, all are vital to our success.

Across our programme we have a clear track record of building and maintaining partnerships of mutual benefit. For example, we work with the Wellcome Trust to provide and enhance the Diamond Light Source, the UK's national synchrotron facility that supports ground-breaking research in the life, physical and environmental sciences. We also work closely with the Japanese institute RIKEN in the construction of the world's highest energy pulsed muon beam at our ISIS facility. This underpins leading edge research on superconductivity, magnetism and material structures.

Core to the delivery of our science programme is a healthy relationship with the university sector and our overseas scientific partners such as CERN and ESO. We have developed a close working relationship with the community through our advisory structures and the learned societies. We will continue with this approach by developing more structured relationships with key universities that are core to the achievement of world class standards in our research programme. Our membership of international scientific

partnerships is similarly underpinned by enduring relationships for mutual scientific and strategic benefit.

The Science and Innovation Campuses, themselves initiated through creative public private partnerships, are already proving to be fertile opportunities for building new partnerships. ESA, industry, academia and UK agencies are all taking up the opportunities created by the Campuses. We have also provided working environments and facilities for the other research councils, in particular through hosting research centres and programmes. We are developing these through the RCUK partnership, to maximise the delivery of research, innovation and skills activities from the Science Budget.

Our objectives for innovation and partnership with industry map closely to those of TSB. We have identified a wide range of activities that demonstrate our commitment to joint activity with the TSB. These will be enhanced to ensure that the opportunities created by STFC's technological strengths and Campus capability are fully exploited by the TSB and the industries it supports. Building on this theme, we will develop specific partnerships with key industries for which the STFC Campuses and knowledge base offer particular advantage.

As the research agenda moves increasingly to address key global challenges, we have shown our ability to respond through forming strategic alliances; for

Strategic theme

Strengthening strategic partnerships

This theme sets out our approach for delivering our three strategic goals through the strengthening of strategic partnerships and collaborations to align resources and jointly deliver shared aspirations.



example collaboration with the Defence Science and Technology Laboratory and with the NHS has led to a pooling of budgets and staff to deliver solutions to particular themes. These approaches demonstrate our ability to work across organisational boundaries and provide models for future working.

AMBITION

Enhance the impact of the UK science base by delivering our strategic goals through strong, effective and mutually supportive strategic partnerships with key organisations.

Decision criteria

We will give priority to partnerships that:

- Produce significant long term mutual benefit and enhance joint capacity to deliver shared goals
- Offer a good cultural fit with STFC
- Have a clearly articulated partnership plan

Measure of success

Increase the strength of STFC's strategic partnerships to improve the delivery of both our own and our partners' organisational goals, measured through a periodic partnerships assessment.

Objectives

In delivering strategic partnerships over the next ten years we will:

- Build mature, long-term partnerships to deliver our strategic goals and thereby strengthen UK science
- Increase our understanding of the value of our unique expertise and resources to potential partners
- Be an effective and strong strategic partner to increase the impact of all our operations, developing and utilising excellent partnership management skills for the benefit of partners



Current position

STFC and the communities it supports have a world leading reputation in science, engineering and project management which provides us with significant influence over the international partnerships and projects in which we engage. Our strengths have made us a partner of choice for many countries, although difficult, resource-constrained decisions not to participate in a number of international projects will require extra effort to maintain these relationships. We will continue to build our influence over national and international planning to ensure that we maximise the opportunities and benefits to UK communities from projects, facilities and new funding programmes.

STFC represents the UK at the highest level on key intergovernmental research partnerships. These fora provide an opportunity to build a coherent relationship with the European research community that is broader than the confines of each partnership. The UK's influence over international science also benefits from the personal input of highly regarded individuals, many of whom hold leadership positions in international projects and are funded by, or work directly for, STFC. The central future challenge is to coordinate the efforts of these representatives and leaders and thus strengthen the delivery of our integrated vision for the future of UK programmes and facilities.

STFC uses its sponsorship of the RCUK overseas offices and membership of European associations to develop specific actions for its programmes. We will continue to use these routes to maintain project level influence. We will also continue to build a stronger national profile at European government level in order to influence the strategic development of global research as well as specific projects.

AMBITION

Enhance the position of the UK science base by extending powerful influence over international governments, partnerships and research institutes.

Objectives

In building international influence over the next ten years we will:

- Play an active role in shaping European and Global research strategy
- Seek to build the UK's status as a partner of choice for international projects and the development of new facilities
- Attract funding from international partners and programmes to support delivery of our strategic goals

Strategic theme

Building international influence

Research success is increasingly international. We recognise that this must be reflected in the way we deliver our strategic goals. Success will depend progressively on our ability to build substantial proactive influence over international research investment and programmes based on earlier success. Complementary themes are Sustaining Research Excellence and Leadership and Strengthening Strategic Partnerships.

Decision criteria

We will give priority to activities in this area that:

- Manage the international dependencies of STFC's science and business development programmes
- Integrate STFC's international activities, so that all projects are within a coordinated programme, recognising that decisions in one area may affect partnerships in another
- Coordinate STFC representation on key international committees
- Support and encourage STFC research leaders in their international activities
- Ensure our international diplomatic and representational activity supports the delivery of our strategic goals

Measure of success

Increase STFC's international standing, recognition and trust, measured by an evaluation of our ability to influence and deliver key international projects.



Strategic enablers

We will enable the successful delivery of our Strategy by developing our people, ensuring financial sustainability and building an efficient and effective organisation.



Strategic enabler

Developing our people

This section covers how we will engage with our people's talent, nurturing their ambition and developing their skills to their full potential to enable the delivery of our strategy. Our people's direct contribution to the delivery of world class research, innovation and skills is covered in our three strategic goals.

Current position

STFC currently employs around 1,700 people all of whom are strongly committed to delivering and supporting world class science, innovation and skills. Our staff have valuable skills with many educated to degree, if not higher degree, level. STFC's scientists and engineers are recognised the world over for their expertise and contribution to major projects. Many achieve prestigious science prizes, or senior appointments to international committees and professional institutions.

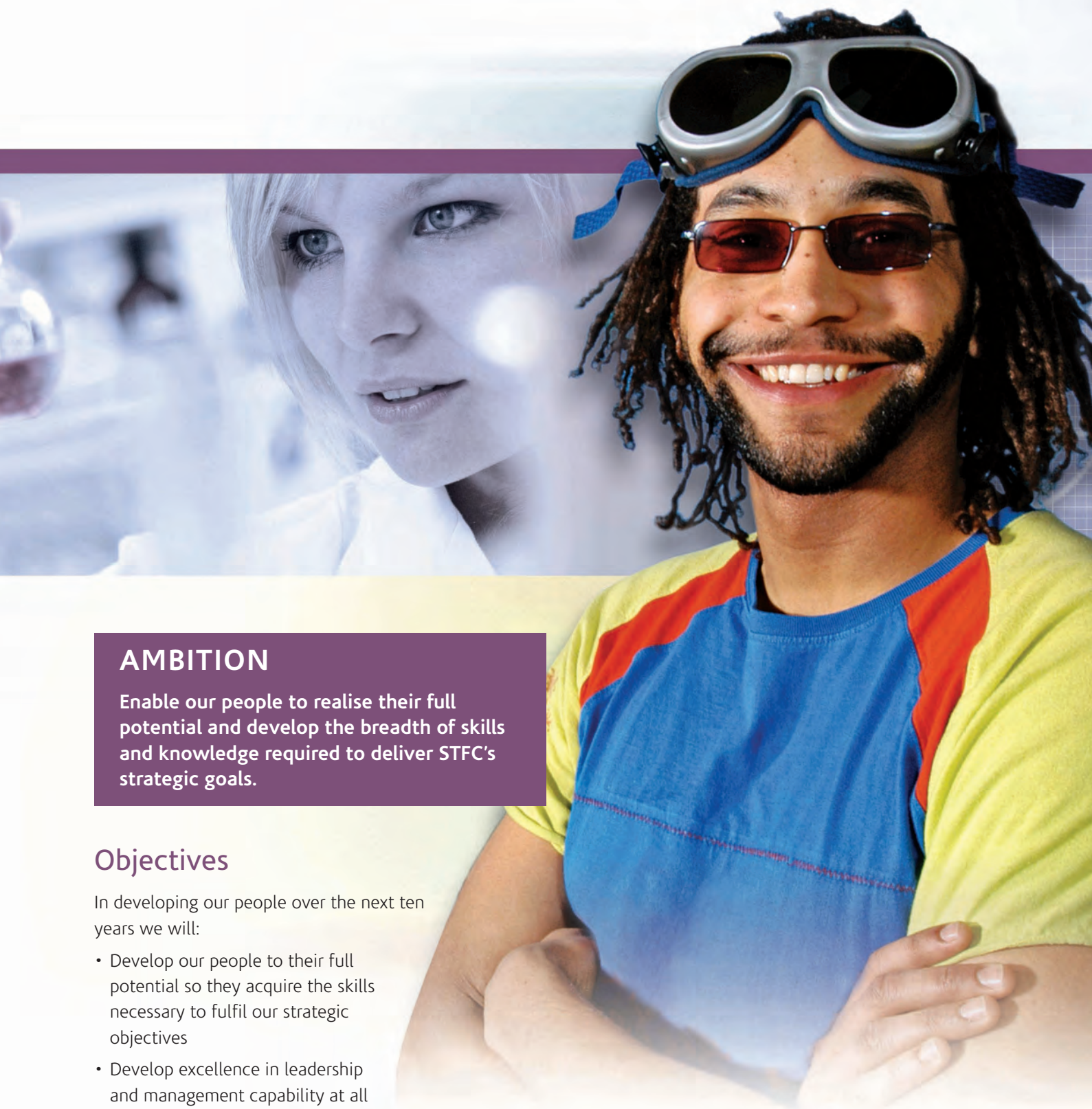
We are recognised as an Investor in People. This reflects our strong commitment to developing people to achieve their potential and contribute to the UK's success. External reviews have commended staff passion and commitment and identified areas for improvement. Our senior management acknowledge these improvement priorities, which are being addressed through our organisational change programme and our management development framework.

We are proactively working to attract more women to science, engineering and technology (SET) and to senior positions and our gender balance is slowly improving. We report annually on workforce diversity, although the profile has remained broadly constant for five years; 75% of all staff are men, rising to 90%

in SET roles. We have below average national and local levels of staff from ethnic minorities.

Our workforce has an average age of 42, a low turnover rate at 4%, and a high proportion of staff with service exceeding 20 years. Whilst this is evidence of a high level of job satisfaction and creates unique knowledge and experience, it restricts circulation across the UK SET pool, limits opportunities to recruit new blood and may inhibit innovation.

We have quality people. We will nurture their ambitions and develop them to their full potential. Our organisation is in transition and we need to continue to embed the changes recognised by earlier reviews. The new directions identified in our Strategy will also require new styles of working and these will be drawn together in a single change management programme. These actions will create a more diverse and responsive organisation with the breadth of skills and knowledge required to deliver our future commitments.



AMBITION

Enable our people to realise their full potential and develop the breadth of skills and knowledge required to deliver STFC's strategic goals.

Objectives

In developing our people over the next ten years we will:

- Develop our people to their full potential so they acquire the skills necessary to fulfil our strategic objectives
- Develop excellence in leadership and management capability at all levels – both in current and future leaders
- Align personal objectives with STFC's Corporate Strategy
- Attract and retain high quality people at all levels, developing a cohesive approach to succession planning and talent management

Measure of success

Develop our people and enhance our leadership measured by an annual survey to assess staff satisfaction and engagement with a range of developmental and leadership issues.

Strategic enabler

Financial sustainability

A sound financial base is fundamental to STFC's future success and the delivery of our strategic goals. This strategic enabler sets out how we will adopt an increasingly strategic approach to the effective management of our financial resources, enabling continued investment in excellent science in an increasingly challenging financial climate.

Current position

Since STFC was established in April 2007, its financial resources have been significantly stretched as a result of: the fall in the value of the UK pound; the need to balance finances between international subscriptions, large facilities and the core programme, and; reduced availability of funds and grants from external funding bodies. We have needed a series of short-term adjustments to balance available funding across all our areas of science and technology, requiring difficult and painful choices. Our ambition in delivering this Strategy is to develop an affordable, sustainable and strategic approach to the allocation and management of our financial resources. By closely aligning scientific, technological and financial goals, we are confident that we can continue to invest in the development of scientific excellence, whilst maintaining a sound financial position in an increasingly challenging financial climate.

STFC undertook a critical evaluation of its science programme in 2009 to ensure that resources were aligned to deliver the highest economic, scientific and international benefit for the UK. Our revised priorities announced at the end of 2009 now form the core of a sustainable and affordable programme for the foreseeable future. To support these priorities, we made a relatively small but significant shift of

resources towards facilities to allow fuller exploitation of the large investments made by the British taxpayer in ISIS and Diamond over the last decade. We also undertook a managed withdrawal from a significant number of facilities and projects to reduce the level of research grants to a more sustainable level. As a result of this exercise, STFC's programme is more focused on the highest strategic priorities.

One of our long term challenges is to provide as much access to our international facilities as the UK can afford, while also working to ensure that costs are well managed and constrained in these austere times. Our large research facilities require a significant level of capital investment to maintain operations, and significant work has been carried out with the other research councils to determine the demand required of STFC's large facilities and the appropriate investment needed to sustain them. We must now develop a longer term perspective and be able to clearly identify the necessary capital investment required to be fully effective. This is also true of STFC's ageing infrastructure, which has been squeezed to fund the capital components of the International subscriptions, and other scientific priorities. Earlier this year we undertook a major review of our structural arrangements with Government to address concerns that pressures from



International subscriptions and UK based large facility operations were being absorbed by our grants line. As a result we have agreement that with the beginning of CSR10 future budgets will be considered in separate partitions, which will introduce a more sustainable approach.

The medium and longer term forecasts of the effect of the financial crisis on UK public expenditure confirm shrinking sources of funding for many years to come. We need to grow and diversify sources of external income to reduce our dependency on Government funding. Alongside ambitious plans to grow external income, we will also focus on managing our cost-base, developing more consistent and transparent financial processes, and improving the quality of management information to underpin informed decisions. The identification and mitigation of financial risk will be further embedded in everything we do.

AMBITION

Strengthen our financial base to underpin and enable planned investment in our strategic goals.

Objectives

In strengthening our financial base over the next ten years we will:

- Reduce our dependency on Government funding by growing and diversifying our sources of income, through commercial partnerships and collaborations
- Strengthen and embed strategic, business and financial planning to ensure close alignment of our programmes and finances
- Reinforce our budgetary and financial control processes that ensure effective financial management and improve the understanding of our cost base
- Increase public understanding and awareness of how STFC invests its resources
- Reduce administrative costs and seek improved value for money in all our activities

Measure of success

Strengthen our financial sustainability measured by periodic reviews of the alignment between our scientific programme and available resource.

Strategic enabler

Efficient and effective organisation

This strategic enabler sets out how we will reform to improve our efficiency and effectiveness, whilst placing customers at the heart of the organisation. This section is strongly linked to Financial Sustainability and underpins the delivery of our three strategic goals.

Current position

STFC has integrated many legacy systems and processes since the merger of our predecessor research councils in 2007. We have brought systems together through a comprehensive change programme, harmonising employee terms and conditions, and integrating risk management processes across STFC. We have migrated Human Resources, Finance, Swindon IT, and Procurement into the RCUK's Shared Service Centre (SSC). We are now working towards the migration of grants management to the SSC in 2011, maximising benefits to increase the efficiency of the organisation.

We have improved our business planning systems to strengthen the link between strategy and finance, enhancing the robustness and transparency of top-level decision making. We are now establishing plans for a performance management framework at both a corporate and individual level.

We also improved our scientific advisory structure, which allowed us to work closely with our communities on the 2009 prioritisation of our programme. Building on that success we have worked in partnership to streamline our grants management and develop our options for the recent comprehensive spending review. It is our ambition to develop this way of working and place service users,

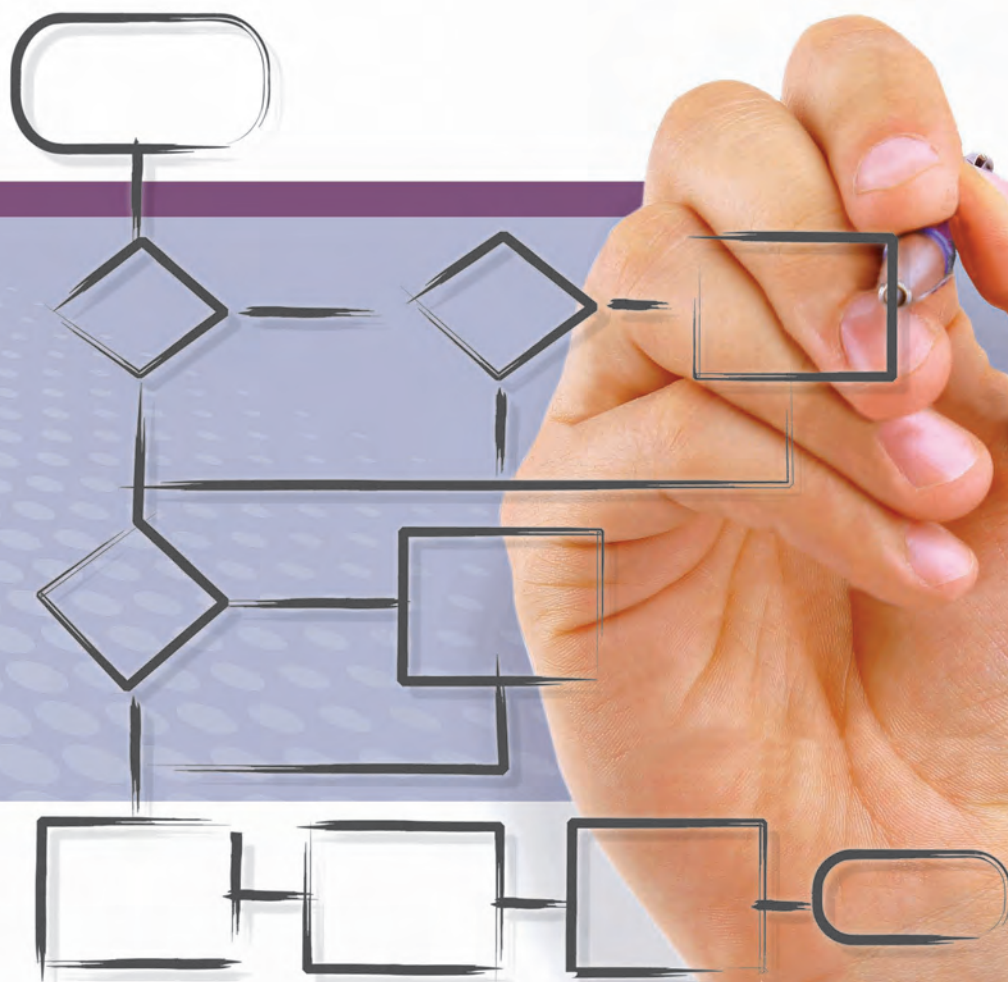
stakeholders and customers at the heart of our operations.

We have made progress in bringing forward policies and systems that have improved conditions and practices in the organisation, eg establishing an Environmental Policy and our very successful Safety, Health and Environment Management Systems. We are currently making plans to improve Environmental sustainability.

All these steps are assisting managers to improve the organisation and take collective ownership of cross-cutting and cross-boundary issues. We recognise the challenge of moving towards a more flexible organisation, as signalled in our Vision and detailed in this Strategy. We have plans to address structural reform, to streamline senior staff numbers and to improve prioritisation and efficiency.

We are piloting Lean and Six Sigma techniques, and will institute a programme of Continuous Improvement activities, to improve efficiency whilst maintaining focus on customer quality.

We are preparing for the significant change in the way we deliver operations, design systems and share information, including a coordinated communications programme to ensure stakeholders are well informed.



AMBITION

Become a continuous improvement organisation, developing and embedding customer driven, responsive systems and processes that deliver quality services.

Objectives

In improving STFC's efficiency and effectiveness over the next ten years we will:

- Provide the right organisational structures to deliver customer focussed leadership, valuable cross-organisational initiatives and effective operational management
- Continue to develop and embed organisational systems to improve our core activities and provide quality services, information and support
- Promote a safe, healthy and environmentally sustainable workplace, supporting organisational and customer wellbeing

- Develop a sustained and co-ordinated internal communications programme to ensure that all staff are well informed and can fully support customer communication

Measure of success

Increase customer satisfaction with STFC's services, measured by periodic surveys.

Monitoring our progress

Strategy will steer our corporate planning and investment decisions to increase the UK's standing and productivity. The measures set out in this Strategy are designed to evaluate our direction of travel towards fulfilling our Vision; our progress against these measures and will be assessed in our Annual Report each year.

World class research

Sustain the UK's global research ranking, measured by an annual assessment of UK research performance.

World class innovation

Increase innovation from STFC's funded activities, measured by an innovation index.

World class skills

Increase STFC's contribution to providing relevant high-tech skills for the UK economy, measured by student career choices and how our training meets industrial and academic needs.

Solutions to global challenges

Increase STFC's contribution to providing solutions to global challenges, assessed through an annual impact report, which will include both qualitative and quantitative measures of progress.

Inspiring and involving

Increase public awareness of STFC science and technology, measured through a survey of public attitudes to science and young people's study choices.

Sustaining research excellence and leadership

Increase the recognition of our research excellence, measured through UK leadership of projects, programmes and facilities.

Effective knowledge exchange

Increase the impact of STFC's knowledge exchange performance, measured through an assessment of its collaboration activities.

Strengthening strategic partnerships

Increase the strength of STFC's strategic partnerships to improve the delivery of both our own and our partner's organisational goals, measured through a periodic partnerships assessment.

Building international influence

Increase STFC's international standing, recognition and trust, measured by an evaluation of our ability to influence and deliver key international projects.



Developing our people

Develop our people and enhance our leadership measured by an annual survey to assess staff satisfaction and engagement with a range of developmental and leadership issues.

Financial sustainability

Strengthen our financial sustainability measured by periodic reviews of the alignment between our scientific programme and available resource.

Effective and efficient organisation

Increase customer satisfaction with STFC's services, measured by periodic survey.

This publication is available at
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