The South East Strategy for Technology – S4T
August 2009

Purpose

The purpose of this South East Strategy for Technology (S4T) is to help make the South East a leading global region in innovation by providing a framework for investing in regional innovation priorities, in the context of national strategies, and providing a common understanding of SEEDA's technology focus.

Developed by the South East Science Engineering and Technology Advisory Council (SESETAC), the region's science and industry council, the Strategy:

- identifies interventions which will increase the global competitiveness of the South East, with clear criteria and evidence-based guidance upon which to base investment decisions;
- is consistent with the region's sectoral focus and technology priorities;
- responds to and informs alignment with national priorities;
- encourages opportunities for cross-regional collaboration.

Context

S4T supports the region's vision *"to be a world class region achieving sustainable prosperity"*[1], and will enable the South East to play its part in achieving the national vision for the UK to be *"a global leader in innovation and a magnet for innovative businesses, where technology is applied rapidly, effectively and sustainably to create wealth and enhance quality of life"*[2].

Technology Priorities

Based on analysis of regional strengths and market opportunities[3], SEEDA will proactively encourage activity in four key pillars of technology activity, each with potential to bring economic benefit to the region:

Pillar for Technology Activity
Advanced Materials
Communications Technologies
Healthcare Technologies
Sustainability Technologies

The region is unique within the UK, in having outstanding business and knowledge-base strengths across a comprehensive technology base, and is particularly well-placed to promote open and interdisciplinary innovation. A summary of the South East Technology Priorities & Key Themes is shown in Table 1.

Alignment with Government Priorities and National Technology Strategy

TSB

S4T aims to influence future TSB activities for maximum benefit of the UK and the region. SEEDA has aligned nearly £30 million of funding with the National Technology Strategy over 2008-11, targeting TSB activities that are of particular importance to the South East, to leverage funding into

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[1] The South East Regional Economic Strategy 2006-2016
[2] Connect and Catalyse: A Strategy for Business Innovation 2008-2011, Technology Strategy Board
[3] Informed by the Global Opportunities research undertaken by K-Matrix

the region and maximise the added value of any SEEDA investment. This is presented in the TSB Regional Prospectus for the South East and an assessment of the degree of alignment between SEEDA technology priorities and TSB priorities is shown in Table 2.

New Industry, New Jobs

The Government launched the key policy framework "New Industry, New Jobs"[4] in April 2009, setting out a strategic vision for Britain's recovery and future growth, describing a new industrial activism shaping the government's approach to working with business, markets and industrial sectors, looking to maximise the opportunities in the post-recession global economy. It focuses, particularly, on strengthening the UK's capability in export-orientated sectors to complement and reduce the country's dependence on financial and business services. The "New Industry, New Jobs" priority sectors and their alignment with the South East Technology Priorities are shown in Table 3.

SEEDA will use S4T to influence the delivery of "New Industry, New Jobs", relating appropriately to the national Strategies driving activity, such as the Low Carbon Industrial Strategy, Office for Lifescience – Lifescience Blueprint and Digital Britain.

Whilst there is strong alignment between S4T Technology Priorities and TSB and "New Industry, New Jobs" priorities, further consideration will be given to prioritising business support in Professional and Financial Services, a priority area in "New Industries, New Jobs" and in the TSB Key Application Area of High Value Services, which focuses on Financial Services, Professional Services, Retail and Leisure & Tourism.

S4T embraces the strong case for focusing interventions on key priority technologies and sectors, but also acknowledges the strengths of a diverse and flexible economy and will therefore take a responsive and flexible approach to changing economic circumstances, supporting technology projects from any sector that potentially has a significant positive impact on competitiveness, sustainable economic growth and quality of life, on the South East of England.

Criteria for Investment

Support for projects will be assessed against the following five criteria:

1. There is an existing capability (business and/or knowledge base) in the technology in the South East.

2. There are significant global market opportunities for the technology and/or challenges/societal needs that will drive significant future markets.

3. The technology has the potential to build competitive advantage, which will lead to wealth creation and sustainable economic growth for the South East Region, and is at a stage where an impact can be made in the near and medium term (ie and intermediate Technology Readiness Level).

4. SEEDA investment in the technology can make a difference and there is the potential for the leverage of business funding into the activity.

5. Show close alignment with
   - The SEEDA Regional Economic Strategy and Sector priorities.
   - New Industry New Jobs priority areas.
   - Technology Strategy Board Priorities,

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[4] New Industry, New Jobs http://www.berr.gov.uk/files/file51023.pdf

- Opportunities for cross-regional collaboration with other Regional Development Agencies

It is acknowledged that the timeframe for exploitation of technologies will vary significantly from technology to technology and sector to sector. For example, there is a rapid pace of change and uptake of new digital technologies in the creative industries but application of advanced materials in next generation aircraft will take much longer.

Engagement with the wider SEEDA-supported Innovation Portfolio

The SEEDA-supported innovation and knowledge transfer portfolio, including the Sector Consortia, Knowledge Networks and Science and Innovation Campuses, is delivered in close partnership with Universities and the knowledge base. Alignment with the four Technology Pillars is shown at Table 4.

In addition to direct support for technology development, SEEDA further supports the wider innovation culture through:
- Innovation and Growth Teams – 8 place-based teams run by partnerships for innovation, coordinating support from the knowledge base, business, local authorities and intermediary organisations. The Innovation and Growth Teams provide intensive advice, guidance and support for behavioural change to encourage uptake of technology for 2000 high growth businesses.
- Access to Finance through Finance South East
- Manufacturing Advisory Service and Designing Demand, supporting innovation in business processes.
- Investor Development Managers providing client management to global companies in the region
- Inward Investment/UKTI team encouraging innovative companies to develop global markets, and overseas R&D intensive businesses to locate activities in the region.
- European Enterprise Network providing greater knowledge base to business engagement, through London Technology Network targeted networking events, University Business Fellows; raised awareness of European opportunities through the European Information Centre, and increased numbers of European technology transfer deals.

Delivery

Products and services that help companies and individuals start, grow and succeed in business, drawn from the national Solutions for Business (SfB) portfolio, provide the framework for delivery. A simplified route of accessing the products and services through Business Link, as the primary access channel, is in place. The SfB products and services of relevance to delivery of this Strategy are:

- Networking for Innovation
- Innovation Advice and Guidance
- Innovation Vouchers
- Knowledge Transfer Partnerships
- Collaborative R&D (including Science and Innovation Campuses and Innovation Platforms)
- Demonstrators (support with costs)

Review

S4T is a living document and is monitored by SESETAC, and formally reviewed on an annual basis.

Table 1 – Summary of SEEDA Technology Priorities & Key Themes

Technology Priority Area and Themes	Key Challenges and Opportunities
Advanced Materials	
• Demanding Environments	Air, marine, space
• High Value Manufacturing	Nano-materials
	Composite materials
Communications Technologies	
• Digital economy, Pervasive and Complex Systems	Satellite Communications
	Photonics
	Pervasive, ubiquitous and complex systems
	Intelligent Infrastructure
• Creative industry technologies	Virtual Worlds
	Advanced Game Play & Artificial Intelligence
	Computer Animation & Digital Imaging
• Security Technologies	Homeland security
	Network/Cyber security
	Identity management
	Crowded spaces
Healthcare Technologies	
• Ageing population	Integrated Health Solutions
	Intelligent Information and Behavioural Change
	Regenerative Medicine & Gene Therapy
• Technologies for rapid and targeted treatment	Rapid Diagnostics
	Stratified Medicines
	Therapeutics
Sustainable Technologies	
• Transport and Logistics	Integrated Transport Solutions.
	Intelligent Information and Behavioural Change
	Autonomous Systems (land, marine, air & space)
	Decision support tools for environmental & security hazards
• Low Carbon technologies and systems	Energy Security – renewables & sustainable fuels
	Integrated Energy, Water & Waste Technologies
	Environmental technologies
	Sustainable building technologies (retrofit & new build)
• Resource management	Zero waste technologies
	Rural-Urban Interface

Table 2: Alignment between SEEDA and Technology Strategy Board Priorities

Key: * = Strong Alignment; − = Little or N**

	Advanced Materials	Communications & Systems Technologies	Healthcare Technologies	Sustainable Technologies
TSB Key Technology Areas				
Advanced Materials	***	*	*	***
Bioscience	−	−	**	**
Electronics, Photonics & Electrical Systems	***	***	*	**
Nanotechnology	***	*	***	*
High Value Manufacturing	***	*	*	−
Software Applications Systems & Services	−	***	***	***
TSB Key Application Areas				
Medicines & Healthcare	***	−	***	−
Energy Generation & Supply	***	−	−	***
Transport	***	***	−	***
Environmental Sustainability	***	***	−	***
Built Environment	***	***	−	***
Creative Industries	−	***	*	*
High Value Services	−	−	−	***
TSB Innovation Platforms				
Intelligent Transport Systems & Services	***	***	−	***
Network Security	−	***	***	*
Assisted Living	***	**	***	***
Low Carbon Vehicles	***	−	−	***
Low Impact Buildings	***	**	−	***
Diagnosis of Infection & Identification of Disease	**	−	***	−

Table 3 – Alignment of SEEDA Technology Priorities with National Priorities (New Industries, New Jobs)

SEEDA Technology Priorities	New Industries, New Jobs priority areas
Advanced Materials	• Engineering Construction • Advanced manufacturing • Low Carbon Industrial Strategy • Ultra Low Carbon Vehicles
Communications	• Digital Britain • Industrial opportunities in an Ageing Society
Healthcare Technologies	• Life Sciences and pharmaceuticals • Industrial opportunities in an Ageing Society
Sustainable Technologies	• Low Carbon Industrial Strategy • Ultra Low Carbon Vehicles • Engineering Construction • Advanced manufacturing
N/A	• Professional and Financial Services

Table 4 – Alignment of SEEDA Technology Priorities with SEEDA Innovation Programmes

SEEDA Technology Priorities	Alignment with SEEDA Innovation Initiatives			Project Examples
	Knowledge Network	Sector Consortia*	Science & Innovation Campus	
Advanced Materials	[Advanced Materials - Scoping]	FAC MSE SECBE	**Harwell (with Hub at Harwell and Spokes, across the region)**	• Next Generation Composite Wing • Professorial Fellow (Nanotechnology) • Centre for Defence Enterprise • European Space Agency • Diamond
Communications	• Air Traffic Management • MARVIN (Autonomous Systems) • Satellite Communications, Earth Observation, Navigation & Science (Space) • Security-KIN • Digital Content	SEMN SIT-C FAC MSE	**Communications**	• ASTRAEA • HealthMaP • ALPHASAT • Multilateration Aircraft Positioning • Professorial Fellow (Photonics)
Healthcare Technologies	ICE-T (Elective Telecare)	SEHTA	**Communications**	• NHS Innovation Hubs
Sustainable Technologies	Environmental Decision Support [Food Technology – scoping]	Envirobusiness SECBE MSE FAC	**Thames Gateway Institute for Sustainability**	• Thames Gateway Economic Development Implementation Plan • Rural Research Strategy

__The seven Sector Consortia are:__ Envirobusiness South East; Farnborough Aerospace Consortium (FAC); Marine South East (MSE); Security Innovation & Technologies Consortium (SIT-C); South East Centre for the Built Environment (SECBE); South East Healthcare Technologies Alliance (SEHTA); and South East Media Network (SEMN).