

NEF: achieving a visible difference in Further Education



Prof Sa'ad Medhat
PhD MPhil CEng FIET FCIM FCMI
FRSA MIoD
Chief Executive



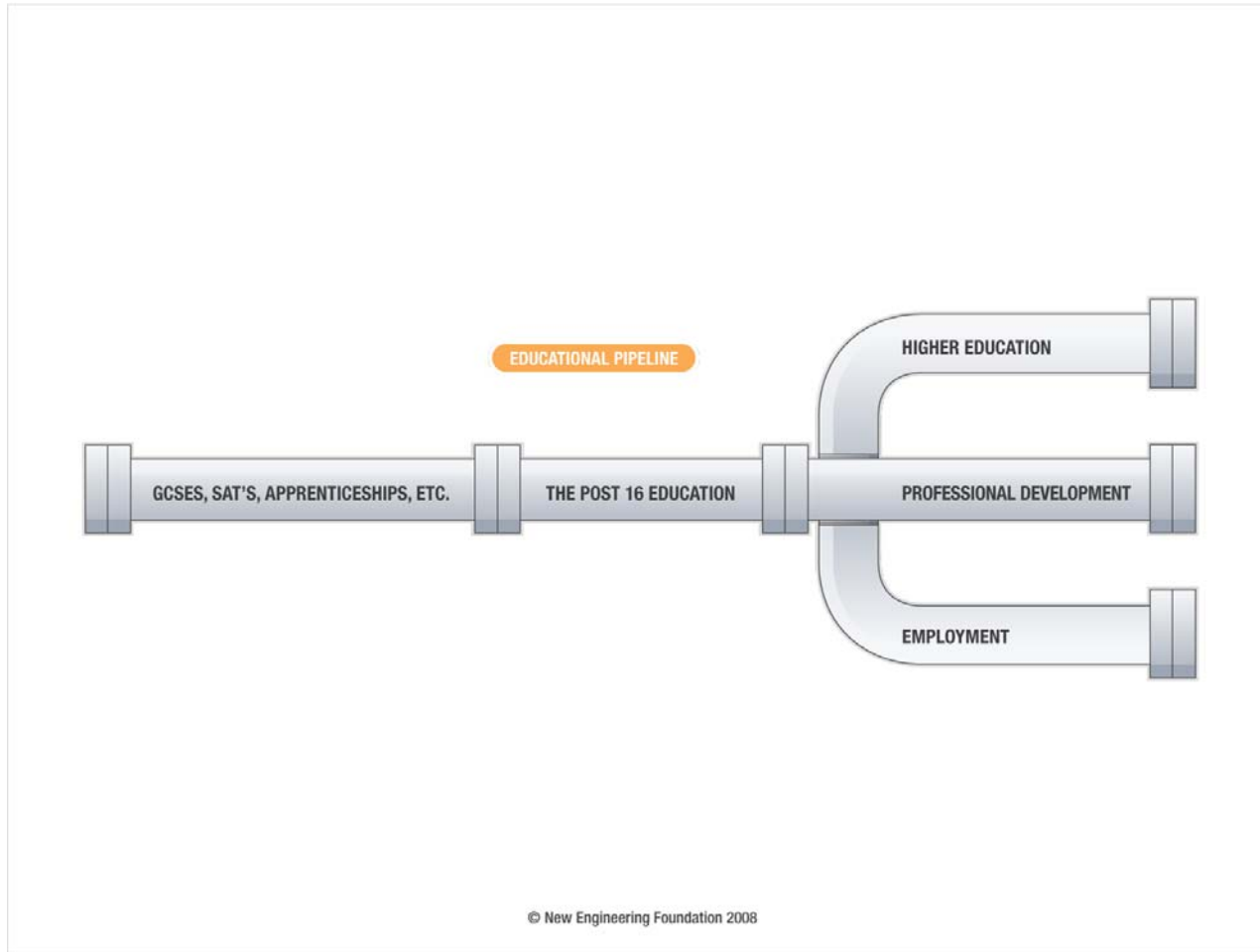
2009: our fifth anniversary

- **NEF was established in 2004 as a grant awarding charity and a think-tank that supports the development of Vocational Education in science, engineering and technology through providing:**
 - policy advice and advocacy
 - undertaking and commissioning research studies and impact analyses, and
 - developing and delivering educational programmes and resources.

Supported by an Advisory Panel: *AoC, Barnet College, BASF, BBC, BIA, Bournemouth University, CBI, Cogent Sector Skills Council, Continuing Education in Electronic System Education, EEDA, EEF, FDF, Gatsby Charitable Foundation, HE Academy (Engineering Subject Centre and Physical Science Subject Centre), IoD, LSIS, LDA, NPL, National Skills Academy for the Process Industries, Newcastle College, NWRDA, OFSTED, PWC, Procter & Gamble, RAEng, Royal Society, RSC, SEMTA, Skills for Justice, SWRDA*



The Pipe Line – our Focus...



Achievements 2008

neweng.org.uk

The Industrial Fellowship Scheme (IFS)

www.neweng.org.uk/IFS



103 colleges in the IFS to date

285 lecturers participated (855 associated)

Benefitting an estimate 114,000 students

In 2008:

25 colleges, 60 lecturers

17% female / 83% male

46% hosted by large companies

42% by SMEs

11% by universities

Over 100 teacher-generated e-learning content

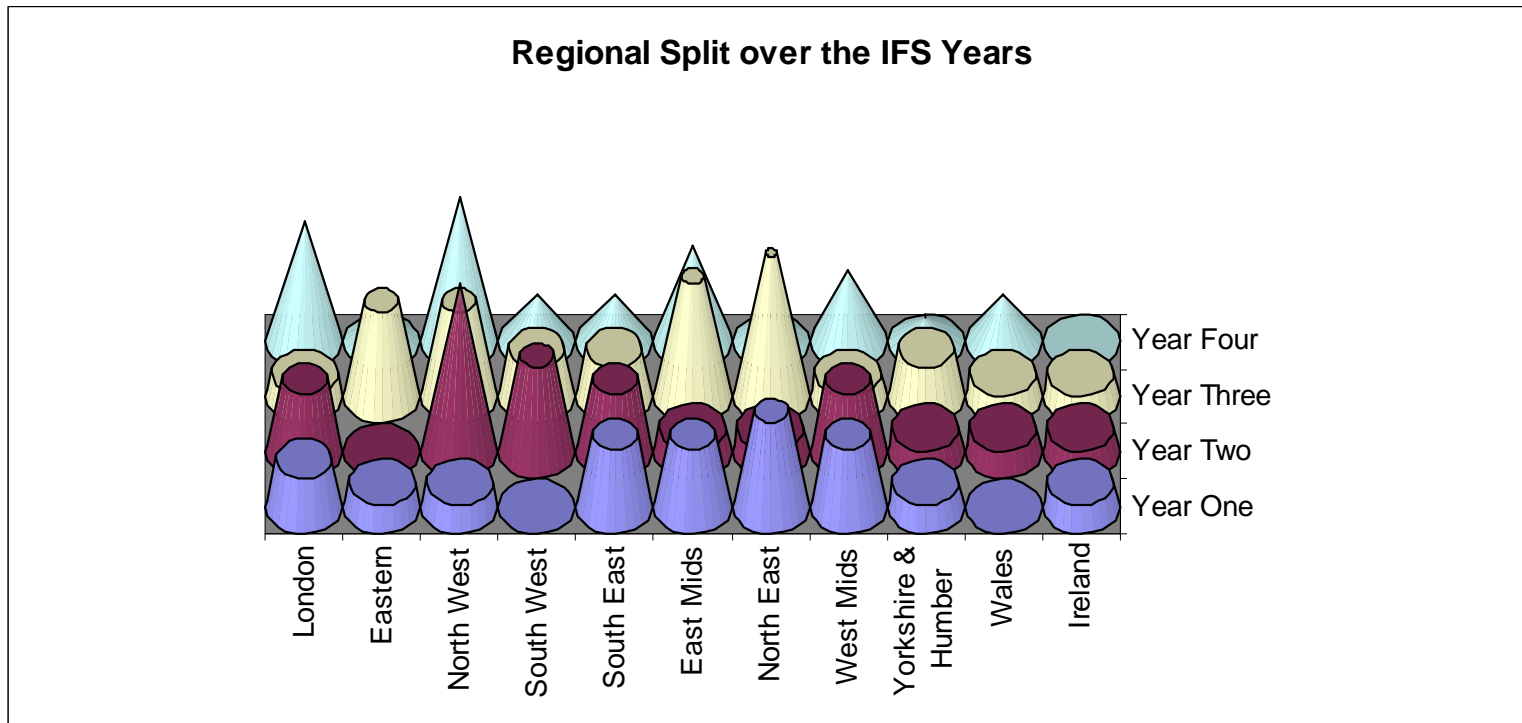
<http://www.neweng.org.uk/resources.asp>

Estimated contribution from B&I in kind: £2.13 million



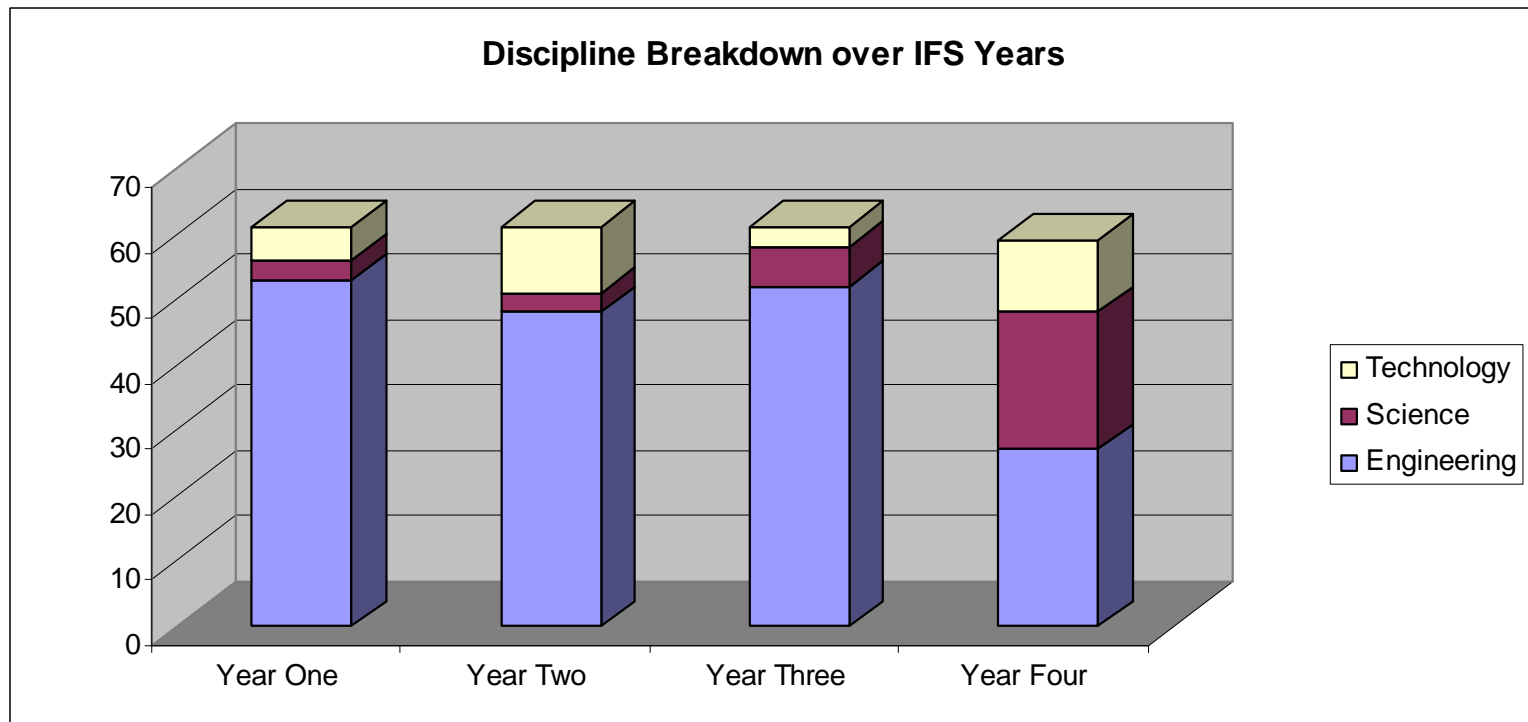


Regional Split over 4 years IFS





IFS - Discipline Breakdown over 4 years



Accrington & Rossendale College		Highbury College	
Barnet College	City of Sunderland College	Hull College	Redcar & Cleveland College
Bedford College	City of Wolverhampton College	Isle of Wight College	Salford College
Blackburn College	Coleg Glan Hafren	Keighley College	Solihull College
Boston College	College of North West London	Leicester College	Somerset College of Arts and Technology
Bradford College	Cornwall College	Lincoln College	
Bridgwater College	Darlington College	Macclesfield College	Stafford College
Bromley College of F & HE	Deeside College	Merton College	St Helens College
Brooksby Melton College	Derwentside College	Mid-Cheshire College	Stanmore College
Broxtowe College	Doncaster College	Nelson & Colne College	Stourbridge College
Burnley College	Dudley College	Newcastle College	Sussex Downs College
Burton College	Ealing, Hammersmith & West London College	Newham College of Further Education	Tameside College
Calderdale College	East Riding College	North Nottinghamshire College	The Oldham College
Carshalton College	Eastleigh College	North West Institute	Tresham Institute
Central Sussex College	Exeter College	Northampton College	Uxbridge College
City College Brighton and Hove	Fermanagh College	Norton Radstock College	Walsall College
City College Plymouth	Goreseinon College	Oxford & Cherwell Valley College	Warwickshire College
City of Bristol College	Gateshead College	Park Lane College Keighley	West Cheshire College
	Grantham College	Preston College	West Nottingham College
	Hartlepool College	Reaseheath College	Writtle College
	Havering College	Redbridge College	Yeovil College
	Herefordshire College		
	Hertford Regional College		

The Enterprise and Knowledge Transfer Scheme (London)

www.neweng.org.uk/London



16 Colleges / 40 lecturers

Across Greater London

Mix of disciplines, including: healthcare, medical, hair & beauty, environmental, dance, accountancy, IT, manufacturing, product development, voluntary service management

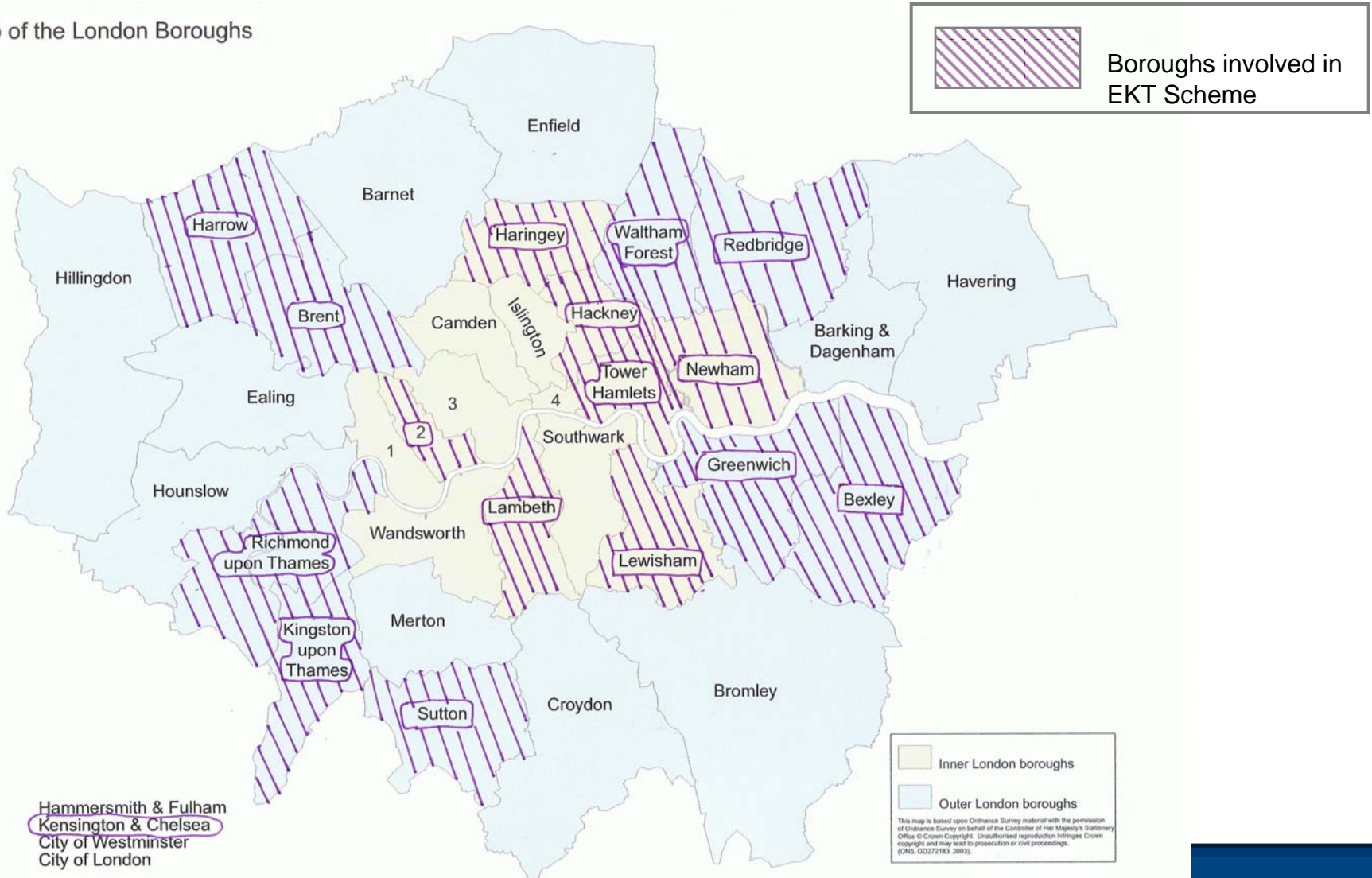
More colleges, showing greater interest in KT – but need help in innovation and enterprise skills





London Regional Breakdown

Map of the London Boroughs



Masterclasses in new technologies
Developing the “*Dual Professionalism*”

www.neweng.org.uk/masterclass.asp



The Masterclasses Programme

The **Gatsby** Charitable Foundation



- Commenced in June 2008
- Covering such themes as:
 - Advanced Manufacturing
 - Advanced Materials
 - Aerospace
 - Biosciences
 - Digital Broadcasting
 - Microelectronics & Telecoms
 - Nano-scale Systems
 - Renewable Energy
 - Sustainable Construction

- Delivered on-company sites and cutting-edge scientific centres
- Real context case studies and hands-on supported by innovative pedagogies



The Masterclasses Programme

The  Charitable Foundation



600 lecturers (over first 3 years)

**60,000 students (est.) in FE colleges
over first 3 years**

**1800 other lecturers by association
(waterfall effect)**

Check-out dates for your diary...

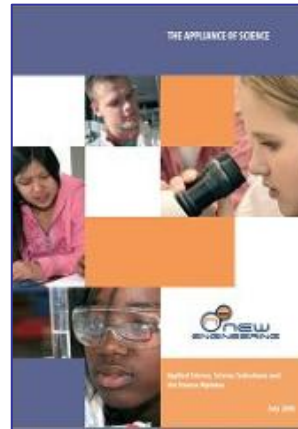
Research Studies – Supporting Policy Reforms



FE for the 21st Century: making the argument



Knowledge & Technology Transfer in Further Education



The Appliance of Science



Preparing for the Future



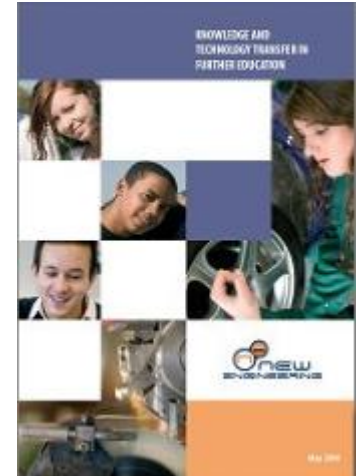
The Path to Productivity

All available on-line: www.neweng.org.uk/policy.asp



Knowledge and Technology Transfer in FE

- **Developing a framework that could be implemented by the FE sector to expand the potential of Knowledge and Technology Transfer in Further Education College.**





Appliance of Science

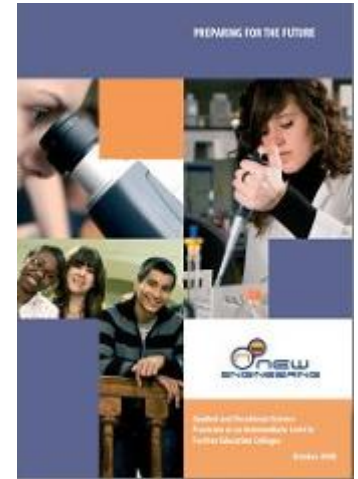
- **Focusing on the shortfall of Technicians in the workplace, the lack of understanding of Technician as a career and explored ways in which vocational science could be improved.**
- **The main body of the study focused on the issues and recommendations that emerged from a major NEF think-tank which sought 'clarity of purpose' for the new Science Diploma.**





Preparing for the Future - applied and vocational science provision

- **Establishing a baseline position on the extent of, and the current strengths in, the provision of Applied / Vocational Science at levels 3 and 4 in FE Colleges in England.**





The Path to Productivity

- **Develop better work based learning strategies and recognition for science and engineering provision in Higher and Further Education.**





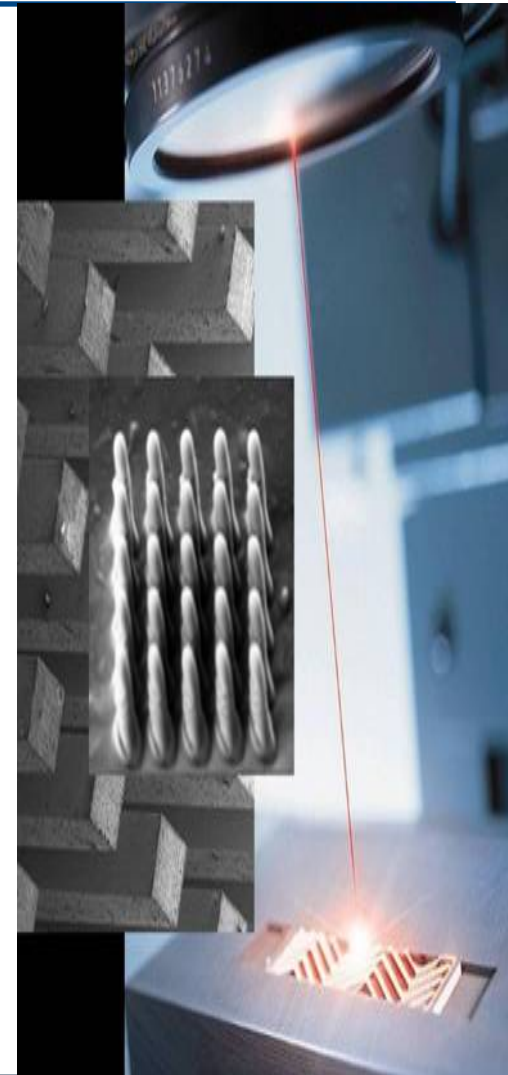
Emerging Technologies Project

Identify current/future readiness of colleges to deliver 'emerging technology' programmes at levels 3/4 and progression to level 5.

Sector capability: staffing, resources, employer engagement.

Market dynamics.

Funding systems and strategies (regional/national) for strategically important subjects.



Knowledge and Technology Transfer in FE

www.neweng.org.uk/programmes.asp

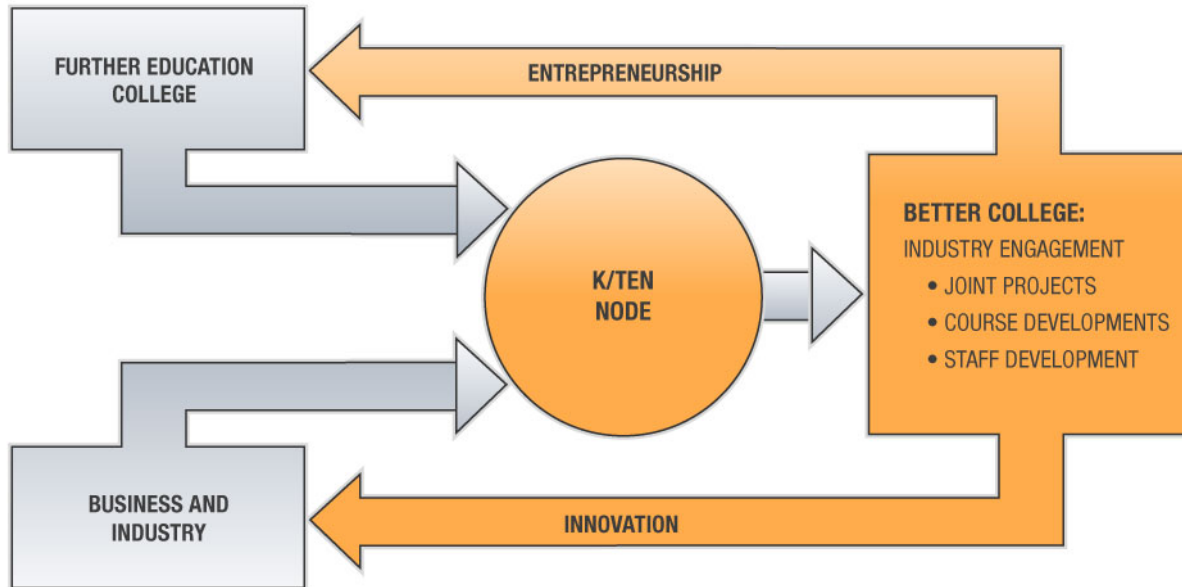


KTT in FE: progress so far...

- **Sept 2005:** Knowledge and Technology Exchange in FE Colleges – a national study of 59 colleges and 100 businesses participated
- **December 2007:** DIUS Innovation Strategy consultation
- **Jan – April 08:** NEF-led focus groups and think-tanks, including Windsor Castle (March 2008)
- **March 2008:** Innovation Nation White Paper: plans to support expansion of KT in FE
- **May 2008:** Knowledge and Technology Transfer in Further Education
- **December 2008:** FE Specialisation & Innovation Fund (FESIF) Pathfinder Projects
- **2009:** NEF A range of business innovation and knowledge transfer support programmes



Knowledge and Technology Exchange Nodes – K/TENs

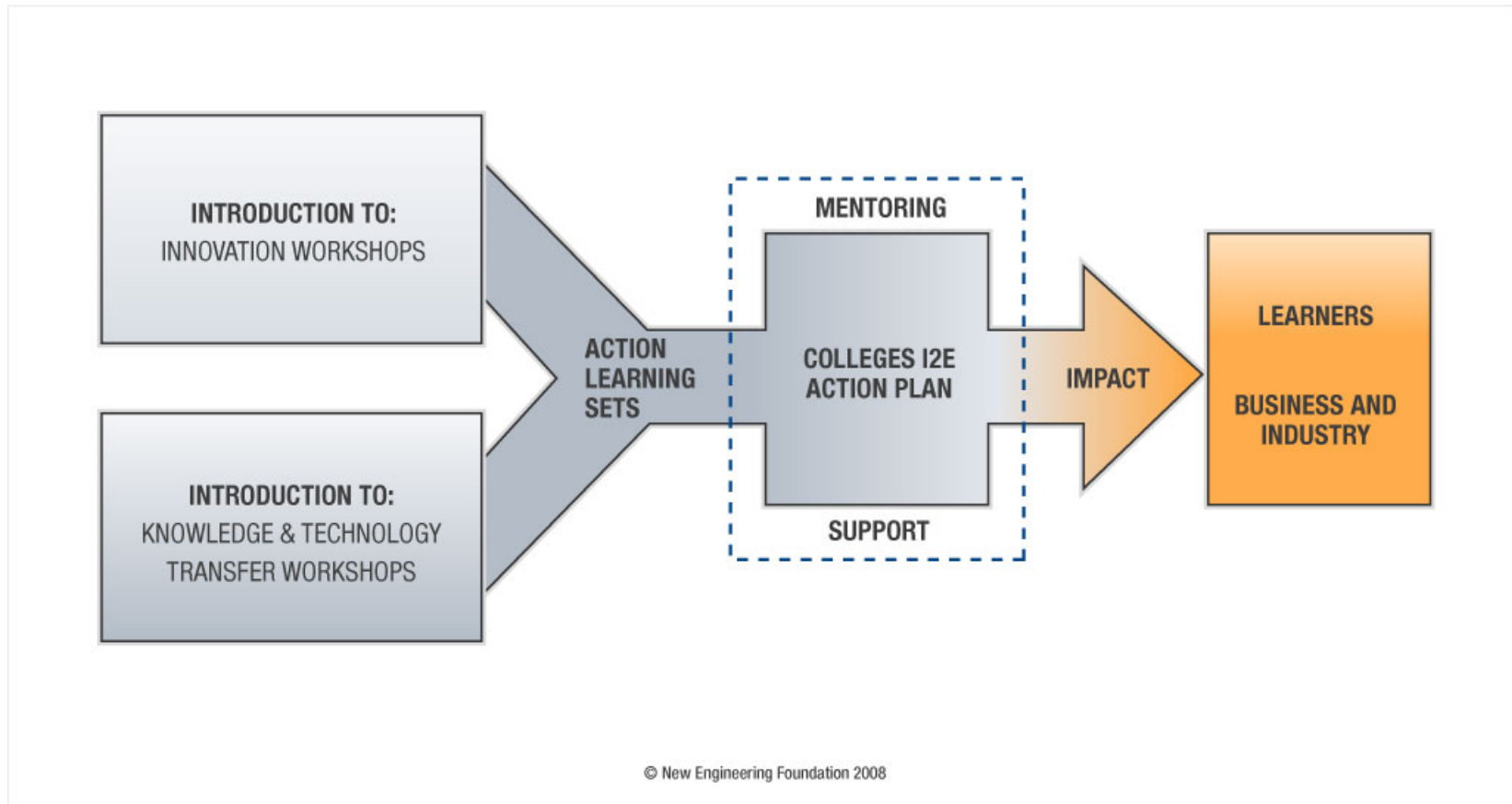


- Develop an innovation activities' Action Plan
- Create / embrace specialist networks
- Improve impact of FE business innovation & engagement

- Facilitate the dissemination of good practice - FE Colleges ↔ industry
- Enable development of new teaching and learning in SET inquiry-based-learning



Innovate-2-Educate (I2E)

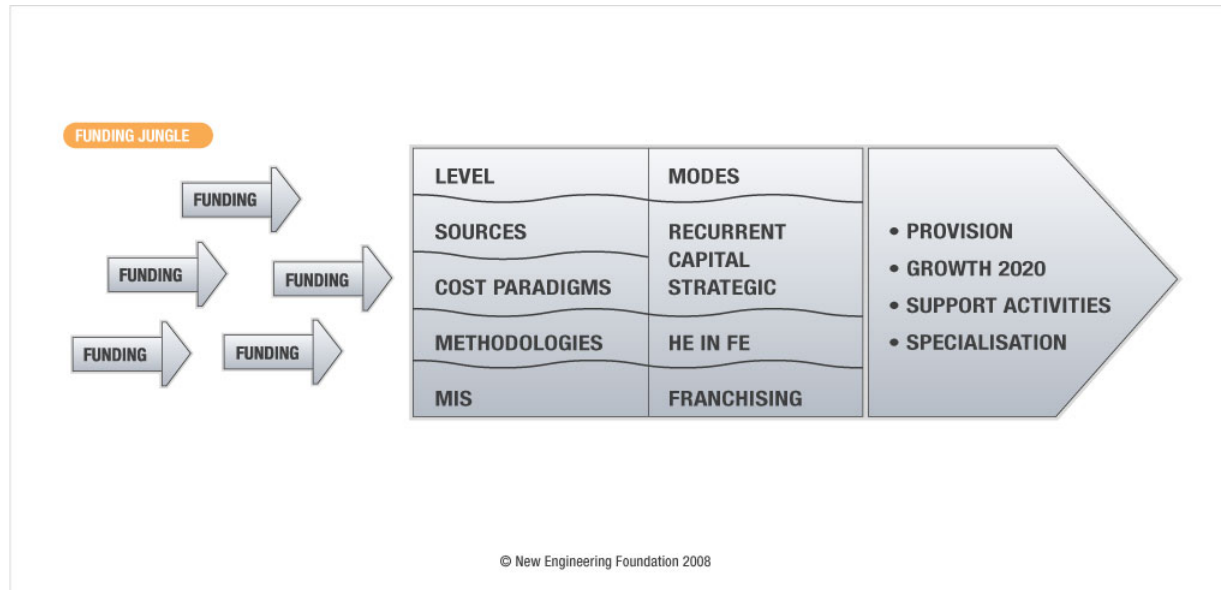


18- 20 workshops around the country on Innovation and KTT

Simplifying Planning in FE



The Planning Cycle in FE – from 2009



Department for
**Innovation,
Universities &
Skills**

- Working with Principals and Senior Executives;
- Reviewing how to extend the current short planning cycle for colleges to...
- ✓ take a longer term view of infrastructure and resource needs.
- ✓ align planning with learner and business community needs.
- ✓ stabilise and develop their educational 'offer' & value-added services such as KTT.

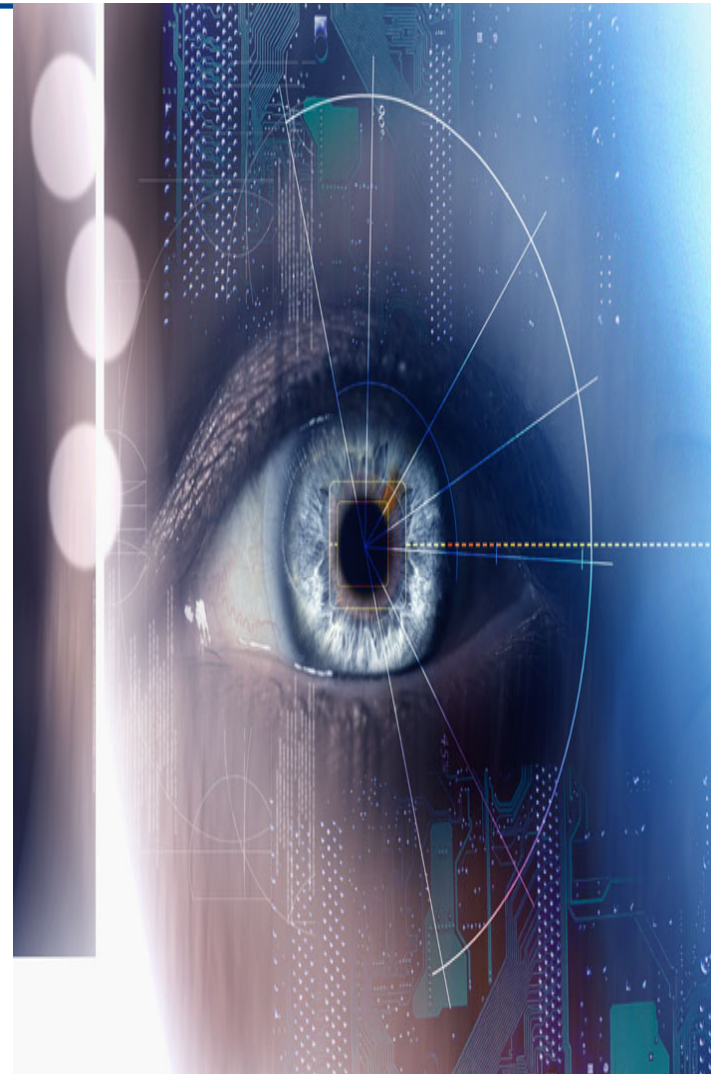


Horizon Scanning and Market Intelligence for FE

Over the next 18 months...

- **3-Dimensional Reference Map illustrating skills priorities: national, regional, sectoral.**
- **Gap analysis of business and industrial needs for technician-level skills.**
- **Step-by-step business engagement and specialisation guide.**

>lsc





From vision to reality...

- Aimed at policymakers, regulators and FE management
- Brings together all NEF research, funding opportunities & policy recommendations
- Endorsements from politics, academia & the media



THE NEW ENGINEERING FOUNDATION
MANIFESTO



POWERING EDUCATION : ENRICHING LIVES

The NEF Manifesto

Available on-line: <http://www.neweng.org.uk/Manifesto.pdf>



Communicating with you...



Via our website:
www.neweng.org.uk

Our Twitter site – sign up now!
twitter.com/NewEngineering



This Edition:
Welcome to issue one of the NEF newsletter

NEF Newsletter – sign up by emailing
liz.ogilvie@neweng.org.uk

Welcome to the first edition of the new NEF E-newsletter.

The aim of this newsletter is to keep you in touch with the Foundation's activity. NEF is here to support you and your organisation's Vocational Education and Training work, especially SET. We hope the articles in this newsletter will show you the many ways we do that. To learn more about any of the stories in this newsletter simply click through to our website.

We believe that skills gaps and shortages in science, engineering and technology (SET) present serious barriers to the fulfilment of potential. This affects individuals, society, and the economy. On a personal level, individuals gain greatly from the study and application of SET, on a societal level, scientific progress benefits everyone and on an economic level technological innovation forms the foundation for our competitiveness in a global marketplace.

This is your newsletter and we want to make it as informative and useful as possible. Your feedback is very welcome. We look forward working with you to meet the skills challenges faced by employers.

Masterclasses

Register now for immersive hands on instruction in the latest industrial technologies. Taught by experts from industry at no cost to you and soon available on-line as well.

[Read More](#)

Industrial Fellowship Scheme

The Industrial Fellowship scheme helps colleges send up to three selected lectures on secondment. The secondments can be taken in local businesses or university research centres and count towards your CPD requirement. They are backed by generous support from the Gatsby Charitable Foundation

[Read More](#)

Resources

Take a look at our range of compelling e-learning resources and other presentations.

Coming in 2009: NEF social networking sites (watch this space!)

But what do you want to hear from us?

It is about “collective responsibility” requiring action by
Government, business, and the education sector.

Thank You

e: saad.medhat@neweng.org.uk

t: + 44 (0)20 8786 3667

neweng.org.uk

Registered Charity No: 1112354