

# D1.5: Template for Regional R&D&I Policies Report (Draft)

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# Introduction

## Institutional structures for innovation in England

The degree of centralisation in the English state and its impact on innovation policy at the regional level can be divided into three periods.

- Pre 1999 – centralised state, lack of a regional innovation system.
- 1999 – 2010 – some degree of devolvement and power from the centre, establishment of Regional Development Agencies and promotion of regional innovation systems.
- 2010 to 2012 – the return of centralisation, proposed abolition of the regional innovation system.

In 1999 Regional Development Agencies (RDAs) were established in England, and within the West Midlands this organisation was called Advantage West Midlands (AWM). AWM was supported in its role by a parallel organisation that was set up at the same time called Government Office West Midlands (GOWM) which represented Government departments in the regions staffed by civil servants. The West Midlands Regional Observatory (WMRO) was also set up to assist and inform AWM through the production of research. Of course, compared to many other OECD countries the UK was late in adding a spatial dimension to innovation policy at the regional level (OECD 2008).

AWM like all RDAs was as an appointed interim body which was supposed to be a precursor to a fully elected regional authority. However, elections were never held and they remain appointed bodies.

Despite the establishment of the RDA, central government in London still exerted the major influence over innovation policies at the national level through the allocation of resources, national programmes and national organisations (such as the Technology Strategy Board and Research Councils). In fact the OECD estimated that “An RDA may have direct control over as little as 3.5% of the core public resources for economic development... spent in the region.” (OECD, 2008, p.23).

The election of a new government in 2010 has seen the proposed dismantlement not only of regional institutions (such as AWM, GOWM, WMRO) but also the centralisation of services previously provided at the regional level. For example, Business Link a business advisory service which previously operated from Birmingham has been replaced by a call line service from London. The one new sub – regional entity created by the new government is the Local Economic Partnership. These are public-private consortia (private sector led), but have no resources for day to day running costs or other resources attached to them. They are supposed to support their sub-region by bidding into a much reduced fund of money known as the Regional Growth Fund (estimated at have less than 1/3 of the money compared to the budget of the previous RDAs). Most of the R&D&I support programmes we report on in section 3 will end sometime in 2011/2012.

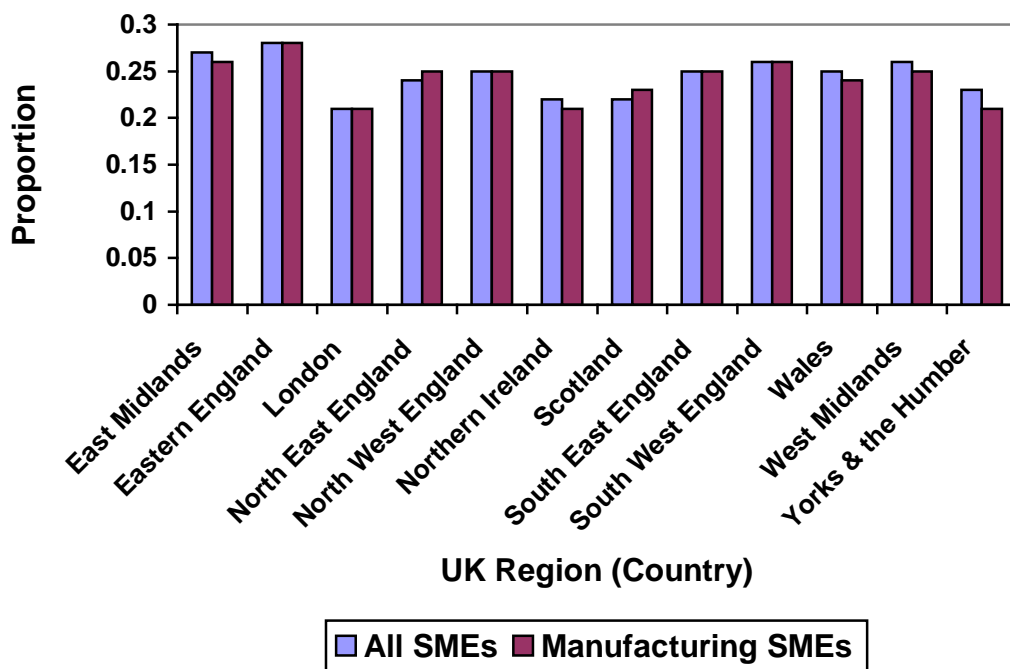
For all intents and purposes once the RDAs and associated organisations are closed down (early 2012) *there will be no regional innovation system in the West Midlands* thus putting the region at a significant disadvantage compared to other European regions.

The next section suggests that the innovation needs of SMEs in the West Midlands, and of manufacturing SMEs in particular, are not completely homogenous with those of SME and of manufacturing SMEs in the rest of the UK.

## SME and manufacturing SME innovation: in the West Midlands and in other UK regions

In this Section, we use data from the 2008 Community Innovation Survey to compare product, process, and broad innovation both by SMEs in general and by manufacturing SMEs (SIC in particular across the 12 UK regions and countries. These comparisons are then used to highlight strengths and weaknesses of SME innovation in the West Midlands.

**Figure 1. Product innovation by region: proportions of SMEs and Manufacturing SMEs undertaking product innovation**



Source: authors' calculations from the Community Innovation Survey, 2008 (by permission of the Office of National Statistics)

By region, the proportions of all SMEs and manufacturing SMEs (SIC 2) undertaking product innovations do vary: in both cases, between 0.21 (London) and 0.28 (Eastern England). It should be noted that the SME sample is dominated by manufacturing firms.

**Table 1. Sample sizes for Figure 1**

	Eastern England	East Midlands	West Midlands	South West England	Wales	South East England	North West England	North East England	Yorks & the Humber	Scotland	Northern Ireland	London
All SMEs	1033	1002	974	1083	1017	889	924	951	955	964	990	754
Manufacturing SMEs	758	770	543	742	678	858	683	640	813	671	690	680

There is minimal difference between SME performance in the West Midlands and in Eastern England, the regional leader:

1. there is no significant difference between the proportion of SMEs undertaking product innovation in the West Midlands and in Eastern England ( $p=0.16$ ); however,
2. the difference between the proportion of manufacturing SMEs undertaking product innovation in the West Midlands and in Eastern England is somewhat larger (0.03) and but statistically significant only at the 10 percent level ( $p=0.07$ ).

**Figure 2. Process innovation by region: proportions of SMEs and Manufacturing SMEs undertaking process innovation**



Source: authors' calculations from the Community Innovation Survey, 2008 (by permission of the Office of National Statistics)

For SMEs in general and for manufacturing SMEs in particular, the proportions undertaking process innovation vary between 0.11 and 0.10 respectively (London) and 0.15 in both cases (West Midlands).

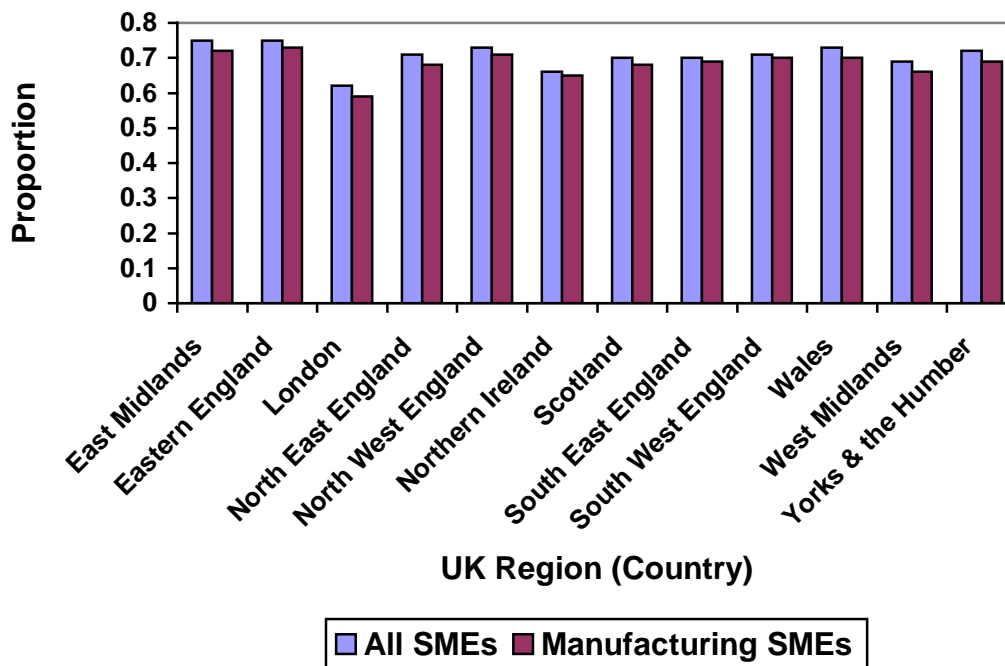
There is no significant difference between either of the West Midlands proportions and those of the regions with the second highest proportion of process innovators (North Eastern England in the case of all SMEs and Eastern England in the case of manufacturing SMEs).

It should be noted that the SME sample is dominated by manufacturing firms.

**Table 2. Sample sizes for Figure 2**

	Eastern England	East Midlands	West Midlands	South West England	Wales	South East England	North West England	North East England	Yorks & the Humber	Scotland	Northern Ireland	London
All SMEs	1002	1033	754	951	924	990	964	889	1083	1017	974	955
Manufacturing SMEs	758	770	543	742	678	858	683	640	813	671	690	680

**Figure 3. "Broad" innovation by region: proportions of SMEs and Manufacturing SMEs undertaking broad innovation**



Source: authors' calculations from the Community Innovation Survey, 2008 (by permission of the Office of National Statistics)

Within each region, the proportions of all SMEs and manufacturing SMEs (SIC 2) undertaking some kind of innovation do not differ much, although in each case they are a little lower for manufacturing SMEs. However, it should be noted that the SME sample is dominated by manufacturing firms.

**Table 3. Sample sizes for Figure 3**

	Eastern England	East Midlands	West Midlands	South West England	Wales	South East England	North West England	North East England	Yorks & the Humber	Scotland	Northern Ireland	London
All SMEs	1002	1033	754	951	924	990	964	889	1083	1017	974	955
Manufacturing SMEs	758	770	543	742	678	858	683	640	813	671	690	680

In the case of the proportions of firms undertaking activities defined under the heading “broad innovation”, the West Midlands region is behind Eastern England, the UK’s regional leader, by substantial and statistically significant margins:

1. by 0.06 for all SMEs ( $p=0.00$ ); and
2. by 0.07 for manufacturing SMEs ( $p=0.00$ ).

## Conclusion

We may summarise the findings as follows:

- In spite of substantial regional variation in the proportions of SMEs undertaking *product* innovation, there is no evidence that the West Midlands lags the regional leader, Eastern England. Moreover, the evidence for a small lag for manufacturing SMEs is statistically weak.
- The West Midlands is the regional leader with respect to the proportions of firms undertaking *process* innovation, both for SMEs in general and for manufacturing SMEs in particular.
- The most striking contrast both between SMEs in general and between manufacturing SMEs in different regions is in relation to *broad* innovation: SMEs in the West Midlands lag the UK’s regional leader by substantial and statistically significant margins.

These findings suggest a small lag with respect to product innovation at worst and a leading position with respect to process innovation. Insofar as SMEs in the West Midlands are lagging with respect to innovation it is with respect to other aspects of innovation measured by the Community Innovation Survey; namely, organisational and marketing innovation. In turn, this may indicate deficient business capabilities and corresponding needs for knowledge transfer and training.

# Overview of the innovation context in the region

## Innovation status

Innovation systems refer to the place-based dimension of innovation. To what extent is there a regional system of innovation in the West Midlands? As a unit, the West Midlands it could be argued is at too high a level of aggregation. Not so much a single regional innovation system as opposed to series of, particular clusters (see Table 4) which can be seen as hot spots and areas with low levels of economic activity seen as cold spots. However in terms of policy and institutions there has been an attempt to consider the region as a whole when it comes to innovation policy.

**Table 4. Clusters in the West Midlands identified by the DTI (2001)**

Cluster	Stage	Depth	Employment	Significance
Agriculture/food (processing/beer)	Established	Shallow	Stable	National
Antique dealing	Established	Shallow	Stable	International
Automotive	Established	Deep	Growing	National
Ceramics	Established	Deep	Declining	International
Environmental industries	Embryonic	Shallow	Growing	National
Industrial equipment	Mature	Deep	Stable	Regional
Metals (iron processing, metal products)	Mature	Deep	Stable	Regional
Plastics (products)	Mature	Unknown	Stable	Regional
Rubber products/tyres	Mature	Deep	Stable	Regional
<b>Less Significant Clusters</b>				
Domestic appliance manufacture	Established	Deep	Stable	National
Furniture manufacture	Mature	Unknown	Declining	Regional

Source: DTI (2001). For more nuanced and up to date information and analysis on automotive, ceramics and metals see the sector reports in deliverable D1.2.



In 2004 AWM identified the following barriers to innovation in the region:

1. Low levels of basic, intermediate and management skills.
2. A workforce with below the national average of higher level qualifications.
3. The problem of graduate retention.
4. Lack of access to higher education in rural areas.
5. Below average levels of self employment.
6. Skill shortages in the public sector and construction industries.

Furthermore within the region the knowledge economy was weak as there were few knowledge-intensive business sectors. High skills were concentrated in the public sector.

WMRO (2006a, 2006b) produced a major report for the region on innovation, which included an analysis of the following sectors: manufacturing as a whole; automotive; medica; and healthcare technologies; construction and the built environment; and information and communication technologies. With regards to innovation it noted that “manufacturing is severely hampered by skill inadequacies in workforces and the labour pool” (WMRO 2006a, p.20) and that “Failure to train and develop their staff is an important factor” (WMRO, 2006a, p.20). Companies were urged to use the talents of the creative community to help them to innovate and two business support programmes were established to aid this process. Firstly, the Manufacturing Advisory Service for the smaller companies; and, secondly, for the medium companies the Design for Business programme.

Interviewing for the GPrix project to investigate absorptive capacity in SMEs in traditional manufacturing sectors has often led to comments on the general education, training and academic background of SME owners and enterprise-level leadership within groups. Where these owners and managers have spent their working lives in an industry and come up through the once traditional apprenticeship route, there can be barriers to innovation arising from lack of theoretical understanding as well as obstacles to overcoming this deficiency by seeking and absorbing the necessary knowledge:

1. their tacit knowledge gained from experience is consistent with continuous and incremental improvement but can be too narrow to lead larger, more radical innovation (for example, one senior informant in metal engineering – himself a PhD metallurgist - explained that his MDs typically lack the scientific understanding of the behaviour of metals under extreme conditions needed to be comfortable with radical process innovations); and
2. a corresponding lack of confidence in dealing with academics can lead to a corresponding cultural resistance to seeking support from HEIs to overcome obstacles to more radical innovations.

In such cases, demonstration can overcome reluctance; formal presentations to non-graduates are less useful. However, the same respondent mentioned above also recorded the success of several KTP projects in bringing about important innovations. Of course, this problem intersects with the broader regional innovation system; in particular, in the medium term, with the issues of graduate retention in the West Midlands and of how to attract graduates into SMEs in traditional

manufacturing sectors; in the long term, the issue is science and technical education not only in higher education but also in schools and colleges.

Cluster policy was further refined and updated in the region by AWM in 2008 (see Table 5).

**Table 5. AWM Cluster Policy 2008-2011**

Aerospace Cluster
Automotive Cluster
Building Technologies Cluster
Business & Professional Services Cluster
Environmental Technologies Cluster
Food & Drink Cluster
Information & Communication Technology Cluster
Interiors & Lifestyle Cluster
Medical Technologies Cluster
Rail Cluster
Screen Image & Sound Cluster
Tourism and Leisure Cluster

At the same time, a business support simplification policy was being implemented to reduce the bewilderingly large range of programmes.

## Current policy: innovation support as “solutions provision”

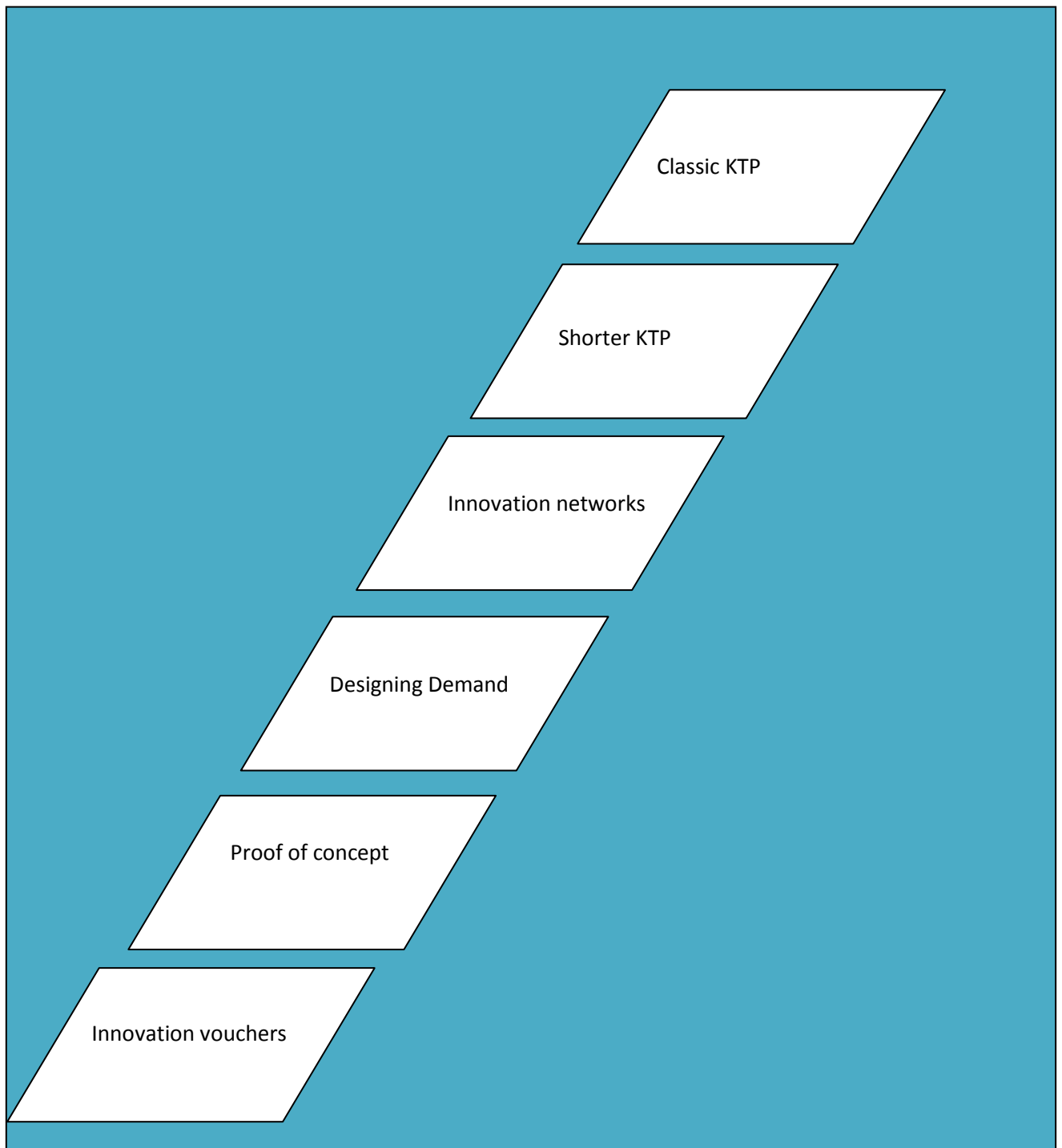
Between 2008 and 2010, there have been “drastic changes” in business support, moving from a more supply-led to a more demand-led approach and with a greater emphasis on evaluation.

Previously, support programmes began with the question “what do businesses need”, whereupon consultation took place, national government would interpret the feedback and then develop “bespoke schemes” for particular industries/sectors. Typically, only a few firms were consulted and these had a disproportionate influence on the programmes. Now, the emphasis is more on firms deciding “the type of support” they need and addressing these with individual solutions rather than standard products.

The new “solutions” approach to innovation support in the West Midlands is enacted through

1. the Innovation Advisory Service, a new institution to provide a “single gateway” to “simpler to understand” innovation support (see below), which uses
2. the “escalator model” to provide “different levels” and a “choice of support” rather than the old “one programme fits all” approach (see figure 1). The lower levels of support are provided at the bottom of the escalator, but firms are able to “jump in” to whatever stage of support they see as suitable.

**Figure 4. The Innovation Escalator for SMEs in traditional sectors in the West Midlands**



Source: Business Link - West Midlands (modified for SMEs in traditional sectors according to interview evidence).

The issue of why many SMEs do not grow is of huge concern to the EU and other policy makers. The new approach is more able to address this concern by approaching different types of firm in different, more appropriate ways:<sup>1</sup>

1. “Lifestyle” businesses – Business Incubators are “full of them”, offering “workspace” rather than “true incubation”;
2. businesses that “make a living”, often in “old broken down premises”, but without wider ambitions; and
3. “real entrepreneurs” who “want to go somewhere”.

Each of these requires a “different type of business support”. Typically, firms need “someone to go in and ask the right questions” along with getting to understand the business and, in particular, its “capacity” and “capabilities”.<sup>2</sup> Thereafter, firms can be encouraged to “jump on and off” the “escalator ... as the company grows and needs to change”.

### **Getting firms onto the “escalator”: the Innovation Advisory Service**

The Innovation Advisory Service (IAS) was inaugurated in October 2009. The IAS addresses two lessons from the experience of innovation support in the West Midlands during the life of Advantage West Midlands (inaugurated in 1998; now abolished):

1. the need for a single point of access for firms (a “one stop shop”); and
2. the need to address SMEs in language that they understand.

In 2006, national government recognised the complexity of business support in the UK, and the corresponding bewilderment and low take up by firms, and responded with the Business Support Simplification Programme (BSSP). The aim of the BSSP is to make it easier for companies and entrepreneurs to understand and access government funded grants, subsidies and advice with which to start and grow their businesses. According to the Department for Business, Innovation and Skills:

Supporting businesses and encouraging economic growth is a priority at all levels of Government. Currently over 3,000 publicly funded business support schemes exist. Businesses have said they are confused by the number of schemes and discouraged from applying. The Government could also get greater value for money from a leaner system.

<http://webarchive.nationalarchives.gov.uk/http://www.berr.gov.uk/bbf/simplifying-business-support/page44805.html>

Accordingly, the [Budget 2006](#) announced that the 3,000 schemes would be reduced to 100 or less by 2010, while the [Pre-Budget Report 2007](#) announced that [Business Link](#) would become the primary access route for individuals and businesses seeking support. [Budget 2008](#) announced a timeline for the transfer of brokerage services to Business Link. The intention is that these measures will deliver a better support service to business, as well as making substantial savings for Government by removing complexity, cost and confusion from the system.

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<sup>1</sup> This insight and following taxonomy is similar to that advanced by Edith Penrose in her 1959 classic *Theory of the Growth of the Firm* (Blackwell: Oxford). She makes clear that her theory concerns only those firms willing and able to grow.

<sup>2</sup> This also has an affinity with Penrose’s (1959) “resource based” view of the firm.

In the same spirit, Business Link West Midlands has set up the Innovation Advisory Service. This will be a focal point across the West Midlands to “streamline access” for firms to innovation. This will address the problem previously identified, namely that firms “did not know who to approach” for support (Business Link, the Manufacturing Advisory Service; etc.). The IAS will be delivered by the Manufacturing Advisory Service in the West Midlands (MAS-WM) and will offer firms

1. free consulting advice and
2. match-funding grants to help companies take project forward.

A budget of £3.1 million for three years will support a team of three specialist advisors to provide free innovation mentoring; while complex projects will be taken through the MAS New product Development (NPD) gateway.

According to a press release of 15/02/2010, although UK manufacturing displays a high level of creativity and an understanding of market needs that is “only half the story”.

The process for new product development, the manufacturing readiness and commercialisation into the market is where support is required. The IAS will provide guidance and support through that process, introduce specialist help in areas such as market analysis, design of product and the manufacturing solution, prototyping, IPR, product compliance and testing.”

The service is funded by the European Regional Development Fund (ERDF). It is worth noting that the RDA’s were one of the main sources of match funding for ERDF programmes. One of the first actions of the new government in 2010 was to put a block on RDAs match funding ERDF bids. It has been suggested that ERDF funds may be dispersed from London which may well change the sector and composition of any innovation support programmes.

At least as important is the ethos of addressing SMEs in language that they understand. From a scientific or policy perspective, firms in the West Midland that are “higher up” the innovation escalator/ladder are comfortable with the terminology used by researchers and policy makers. However, “lower down” this is not the case; people in such firms typically do not refer to “innovation” to describe what they are doing to commercialise their ideas. However, many do not have such clear understanding even though they do innovate. From 60 SMEs interviewed by the Programme Manager shortly after the inception of the IAS, around 20 responded that that they “don’t do innovation” and, upon being asked about the role of the IAS, that they “don’t see how it could benefit them”. Further discussion revealed that these firms indeed do engage on activities regarded as “innovation” by MAS. The problem was that the SMEs themselves tend to think of innovation in terms of Microsoft, Apple or Intel rather than in terms of their own activities, which they see as just what all businesses “have to do”. Consequently, by emphasising “innovation”, business support organisations have been off-putting to those firms - the majority - undertaking “incremental” innovation (by, for example, improving existing products, creating a brand and finding new routes to market).

Accordingly, the IAS continues to focus on innovation but without using the term. Instead, publicity material, workshop title and so forth highlight concerns such as “developing a new product or service, “how to improve profitability” and “profiting from your ideas”. As “means to these ends”, it

mentions activities such as “feasibility assessment”, “research and development” and “routes to market”. Indeed, the only reference to “innovation” is in the name of this new institution. In this way, the IAS believes that it will be more successful in engaging firms. Indeed, the early indications suggest that “language matters”! The new publicity approach has been coincident with an improvement of business attendance at events organised by MAS.

The IAS is designed to be responsive to firms’ needs; hence, demand-led. In around 80 percent of cases, a firm will be referred by Business Link’s Business Advisors to the IAS Programme Manager. If eligible according to ERDF requirements (SME, not retail etc), the firms will then be referred to an Innovation Consultant for diagnostic advice. Most are eligible and “more than 90 percent go on to receive support”. Once the firm’s needs have been identified, the Consultant will help to “guide firms towards the right step on the escalator” discussed above – i.e., “a multi-output funnel based on the outcome of one-to-one diagnostics – which may be some existing programme or assistance from a third-party consultant. In this way, firms can benefit from “an integrated support package”, ranging from a new (2010) “High Growth Programme” (to support potential high-growth firms”) to “short-term collaboration with a knowledge base” (MAS can broker an introduction with a local University) and existing programmes such as Designing Demand. On average, the one-to-one diagnostic help and attendance at associated workshops amounts to a subsidy of £1,600 to the assisted firm.

There are no sectoral priorities other than exclusions dictated by the ERDF.

At the time of interview (October 2010), the IAS had been operating for less than 12 months. Accordingly, there no formal evaluation has been undertaken.

## Summary

The regional innovation system will have operated in the West Midlands for little over a decade (and this includes set-up time and wind down time). The short termism of programmes, policies and institutions at the regional level in England diminishes programme effectiveness, reduces business engagement, and leads to loss of institutional memory and tacit knowledge in the region.

Compared to the institutional stability of, for example, the Fraunhoffers which have operated in Germany since 1950 England suffers from a politically conditioned institutional instability. This increases uncertainty and unwillingness of business and other stakeholders to invest in relationships. A regional innovation system is at heart a relationship system between national and regional institutions, regional institutions, sector organisations and firms as well as universities and others. As a form of social capital such relationships are accumulated over time; this process is undermined by institutional instability.

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# Innovation strategies in the region: Introduction and overview

## Introduction: emergent findings and research still to do

Interviews were conducted with senior staff at Advantage West Midlands (the Regional Development Association) who, in turn, brokered interviews with Programme Managers. Together with review of published and some unpublished document (particularly programme evaluations) these interviews inform analyses -draft reports - from the perspective of SMEs in traditional manufacturing sectors on:

- 1) the regional innovation system (analysed above); and
- 2) innovation support programmes (consisting mainly of completed programme templates, see below) for
  - a) Innovation Vouchers
  - b) Proof of Concept (this remain to be completed)
  - c) Designing demand
  - d) Innovation networks
  - e) Knowledge Transfer Programmes (KTP)

In addition, we have yet to complete our investigation of the role of the Manufacturing Advisory Service (MAS).

Among the emergent findings concerning innovation support programmes in the West Midlands are the following.

- 1) Some innovation support programmes are national but regionally delivered. It remains to be seen what will survive the abolition of the Regional Development Associations after March 31<sup>st</sup> 2012 and current budget cuts set out under the Comprehensive Spending Review (October 2010).
- 2) Even when the RDA were at the centre of regional development strategy, innovation support for SMEs in traditional manufacturing sectors seems to have been marginal:
  - a) The innovation support programmes most relevant to SMEs in traditional manufacturing sectors typically have small budgets (at most, in the low £ millions).
  - b) A corollary of small budgets is that only a small number of SMEs participate in support programmes (as a proportion, perhaps slightly over one percent at best).
  - c) Participation in innovation support programmes by SMEs in traditional sectors is even lower (although more data is needed to test this hypothesis).
- 3) Together, these emergent findings suggest that there is relatively little public support for innovation by SMEs in traditional sectors. In the short to medium run, there might be even less as a result of
  - a) budget cuts, the adverse effect of which may be multiplied by loss of capacity to “match” ERDF funding, and



- b) changes in the composition of funding as “nationalisation” is likely to see continued emphasis on technically motivated modes of support - e.g., R&D tax credits - which disproportionately benefit large firms in London and the South East but reduced emphasis on non-technologically motivated modes of support - e.g., design and networking - which disproportionately benefit SMEs, including SMEs in traditional manufacturing sectors that continue to be important in regions such as the West Midlands.
- 4) Small-scale, demand-led programmes (e.g., Innovation Vouchers) are heavily over-subscribed) whereas firms have to be recruited for larger, more supply-led programmes.
  - 5) Innovation Vouchers have at least three appealing features: voucher schemes are
    - a) transferable across regions and countries;
    - b) self-regulating, in the sense that SMEs and providers both have an interest in completion, and thus pose minimal bureaucratic demands; and, above all, are
    - c) demand led.

The demand-led nature of the programme may be particularly important in its success. Over time, definitions of innovation developed by researchers and adopted by policy makers have tended to become more heterogeneous: process and product augmented by organisation and marketing; technical by non-technical; and so on. Yet, in spite of broader and more flexible definitions, interview evidence suggests that at the firm level it is not easy for respondents to distinguish innovation from all the other aspects of business improvement. This suggests that supply-led programmes can at best be an imperfect match to firms’ needs, in which case firms will not respond to programmes or they have to adapt their activities to make them fit programme requirements. Conversely, demand-led programmes are better able to respond to the heterogeneity of firms’ needs. As we note in Appendix 2 of the report on Innovation Vouchers in the West Midlands: “The projects supported by the Innovation Voucher scheme are heterogeneous in the extreme; it is hard to generalise about them.”

- 6) Programmes are not properly evaluated. Practitioners at regional level insist that programmes are extensively evaluated. However, while the consultancy reports that support this contention are useful for assessing, for example, user satisfaction, they generally *do not meet best practice standards with respect to evaluation methodology*. They either do not address additionality at all or do so with a lack of rigor. In turn, this puts a question mark over the validity of estimated economic benefits attributed to any programme interventions we have investigated. For this reason, each programme template below has been extended to “evaluate the evaluations”!

These are emergent findings and some require more research (e.g., the speculation regarding the effect of budget cuts and consequent changes in the composition of innovation support).

Accordingly, these findings will be extended and modified in the light of

- 1) additional research on support programmes and
- 2) the findings of GPrix.

Additional research on programme support is need on the following areas.

- 1) By value, tax credits/subsidies for R&D are the UK's major support programme. The national cost of c.£600m dwarfs all other innovation support measure (for example, divided equally between the UK's 12 regions – including Wales and Scotland – annual regional costs of £50 million compare to, say, no more than £5 million for the five programmes mentioned above. However, R&D tax credits/subsidies benefit only 6,000 firms, most of which are large. It is likely that this scheme is largely irrelevant for SMEs in traditional sectors. However, this hypothesis remains to be tested.
- 2) Export promotion is not traditionally considered to be part of “innovation support”. However, in the West Midlands, we already have good case study evidence that SME diversification into new export markets is an important way to exploit new knowledge for firm survival and growth. For example, this is how to exploit the “paradox of China”; namely, that while emerging economies create import threats to commodity production in traditional manufacturing industries they also create opportunities for the export of high value added consumer goods and niche producer goods. Moreover, at the theoretical level, including diversification into new markets on the spectrum of activities that can be characterised as innovation accords is in the spirit of Schumpeter, whose seminal work lies at the origin of the modern understanding of innovation; for example, Schumpeter (1942), Ch.VII - “The Process of Creative Destruction” - anticipates all four of the current dimensions of innovation: product; process; organisational; and marketing.

The fundamental impulse that sets and keeps the capitalist engine in motion comes from the *new consumers' goods*, the *new methods of production* or transportation, the *new markets*, the *new forms of industrial organisation* that capitalist enterprise creates ... that incessantly revolutionises the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism ... the competition from *the new commodity*, the *new source of supply*, the new type of organisation (the largest-scale unit of control for instance) ... which strikes not at the margin of the profits and the outputs of the existing firms but at their foundations and their very lives.

Accordingly, we are inclined to investigate further the role of UK Trade and Industry (UKTI) support such as “Passport to Export” as part of public support for innovation by SMEs in traditional manufacturing sectors.

- 3) At present, we are not clear about the role of sector-specific institutions and initiatives in promoting SME innovation. In our sector analysis reported in D1.2, we identify industry/sector institutions such as the Ceramic Industry Forum together with initiatives that promote innovation. The extent of sector-level activity and its articulation with regional institutions and initiatives requires more investigation. In this respect, we expect the automotive sector to be particularly instructive, given that it has benefitted from a variety of national and regional support over many decades.

## Description of R&D&I support programmes

The following pages present detailed description and analysis of four of the support programmes so far identified as of substantial importance to SMEs in traditional manufacturing sectors in the West Midlands (see Figure 1 above: “The Innovation Escalator”):

1. Innovation Vouchers;
2. Designing demand;
3. Innovation networks; and
4. Knowledge Transfer Programmes (KTP).

Proof of Concept (this remain to be completed).

These templates are very detailed. To provide initial orientation, Table 6 below gives an overview of the main quantitative data and qualitative assessments for each of the support programmes reviewed below.

Each programme template also includes an assessment of the extent and quality of the existing evaluation (the relevant sub-sections can be identified from the Table of Contents).

**Table 6. Innovation support programmes for West Midlands SMEs in traditional sectors: summary**

	<b>Innovation Vouchers</b>	<b>Innovation Networks</b>	<b>Designing Demand</b>	<b>Proof of Concept (to be completed)</b>	<b>Knowledge Transfer Partnerships (KTP)</b>
<b>Character: supply or demand led?</b>	Demand-led	Demand-led	Supply-led		Supply-led
<b>Range of activities supported</b>	Very broad	Very broad	Design-focussed		Technology-based KTPs recently prioritised
<b>Main objective of programme</b>	SME-HEI collaboration	SME to SME collaboration	Promoting design as a business development tool		HEI-Industry knowledge transfer
<b>Participation: % of SMEs in West Midlands *</b>	c.0.1%	Less than 0.1%	0.04% (all firms) 0.26% (SMEs – excluding micros)		0.23% (all firms) 1.16% (SMEs – excluding micros)
<b>Total annual budget for the West Midlands (2010) †</b>	< €1 million	Circa €1.3million	< €1 million		c. €9.5 million
<b>SME share of budget</b>	100%	100%	100%		86%
<b>Average subsidy (% of total cost)</b>	75%	50%	c.33.3%		33.3% (large firm) 66% (SME)
<b>Matched funding required</b>	VAT only	50%	Yes (c.66.6%)		Yes (33.3% for an SME)

<b>Value of support to SME</b> †	€3574	Up to €15,000	Average: €11,915 Typical range: €5957-€16681		c.€100,000
<b>Funding source:</b> Regional; national; EU	Mixed (all three)	Regional and European	National; delivered regionally		National (regional supplement)
<b>Sector(s)</b>	All	All	All		All
<b>Company targeted for participation?</b>	No (?)	No	Yes		Yes
<b>Substantial excess demand?</b>	Yes	Yes	No		No
<b>Independent Evaluation?</b>	Yes	Yes	Yes (for internal use only)		Yes
<b>Evaluation meets best practice standards?</b>	No	No	No		No
• <b>Additionality rigorously assessed?</b>	No	No	No		No (at best partially)
• <b>Use of comparison group?</b>	No	No	No		No

\* These estimates are indicative of orders of magnitude. KTP estimates derived from the number of firms in the West Midlands in 2007 and: for KTP, the number of completed and current projects in the period 2004 to Oct.2010; and for Designing Demand, the number of completed projects up to March 2011.

† At a euro-sterling exchange rate of 0.8393 (the rate on 01-12-2010). Designing Demand estimated from the approximate number of current projects and average support of £10,000.

Source: GPrix programme templates completed by document research and interviews; plus additional assessments of evaluation studies (where available) appended to templates.

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**TEMPLATE FOR PROGRAMMES DESCRIPTION:**

**INNOVATION VOUCHERS SCHEME: DELIVERED BY ASTON  
UNIVERSITY ON BEHALF OF BUSINESS LINK WEST MIDLANDS**

<b>A. Programme Summary</b>	
<i>(data to be inserted in uniform format to allow comparability – follow guidelines)</i>	
1. Programme's name	Innovation Vouchers Scheme (formerly known as the INDEX Voucher scheme)
2. Keywords	Innovation; Knowledge transfer; Cooperation between SMEs and HEIs
3. Structure and objectives	<i>Please provide information about the main aims and various modules/subprogrammes and specific activities of the programme</i>
<p>Innovation Vouchers is a demand-led voucher scheme that invites SMEs to apply for a £3,000 voucher to purchase academic support from one of the 13 universities in the West Midlands. Innovation is defined as not just about technology but also about information more broadly and the management of the information process. It is about “doing things” differently to improve effectiveness and/or efficiency.</p> <p>The Innovation Voucher scheme is relatively small scale: according to ECOTEC (2009, p.20), in Phases 2 and 3 (see below) fewer than one in a thousand (0.09%) “of the total West Midlands SME base were voucher winners”.</p>	
4. Relevant policy priorities	Innovation; productivity; firm growth and employment
<p>One of the key national policy frameworks emphasising the importance of collaboration between businesses and universities is the <i>Lambert Review of Business–University Collaboration</i> from 2003. The review expressed concern about the sub-optimal utilisation of knowledge, and lack of employer engagement with Higher Education. The key problem was insufficient demand from businesses for support from HEI, as opposed to an insufficient supply of support services from the universities.</p> <p>The INDEX Innovation Voucher scheme is closely aligned to the objectives of two key national policy documents, both of which cite Vouchers as an example of good practice.</p> <ul style="list-style-type: none"> <li>• <i>Innovation Nation White Paper</i></li> <li>• <i>National Enterprise White Paper</i></li> </ul> <p>For further details, see the Appendix 1 below.</p>	

5. Country	<p><i>use codification found at:</i></p> <p><a href="http://publications.europa.eu/code/en/en-370100.htm">http://publications.europa.eu/code/en/en-370100.htm</a></p> <p>UK</p>
6. Region	<p>According to <i>NUTS2</i> :</p> <p>West Midlands, Shropshire, Herefordshire, Worcestershire, Staffordshire, Warwickshire</p>
<p>7. Programme budget</p> <p>Two approaches suggest an annual budget of less than £1m (€1.2 at an exchange rate of 0.8393)</p>	<p>1. In the three years or so of the scheme (mid-2007 to mid-2010) more than 600 SMEs in the West Midlands benefitted from vouchers. At a unit cost of £4,060 (see below), this suggests</p> <ul style="list-style-type: none"> <li>• total expenditure of around £2.5 million; or</li> <li>• an average annual budget of somewhat less than £1m; hence,</li> <li>• around £250,000 per year devoted to firms in traditional manufacturing sectors (given that around 25 percent of vouchers have been awarded to firms in these sectors).</li> </ul> <p>2. According to ECOTEC's Final Evaluation of the INDEX Innovation Voucher Scheme Pilot (July 2009) (p.11):</p> <p style="padding-left: 40px;">The scheme was awarded a total of £400,000 of funding for Phase Two and £331,000 for Phase Three.</p> <p>The total of £731,000 for 2008 is consistent with an annual budget of somewhat less than £1m; or around €1 million.</p>
8. Approximate share of overall programme budget going to SMEs	<p>Actual allocations: 75 percent (based on the value of the voucher, £3,000, and the unit cost, £4,060)</p> <p>(The implications of the VAT paid by SMEs on the Voucher still have to be checked.)</p>
9. Sources of programme funding + respective %	<p>Previous rounds were funded by regional, national and European institutions.</p> <p>Regional level: (c.15%)</p> <ul style="list-style-type: none"> <li>• Advantage West Midlands (AWM - the Regional Development Association);</li> <li>• the Environmental Cluster at AWM;</li> <li>• the West Midlands Centre for Construction Excellence (WMCCE).</li> </ul>



	<p>National level: (c.35%)</p> <ul style="list-style-type: none"> <li>• the Economic and Social Research Council (ESRC);</li> <li>• the Engineering and Physical Sciences Research Council; and</li> <li>• the Higher Education Funding Council for England (HEFCE).</li> </ul> <p>EU: ERDF (up to 50%)</p>
10. Start date	<p>So far (to November 2010) there have been five calls:</p> <ol style="list-style-type: none"> <li>1. Phase 1: Awarded June 2007 - no expiry date</li> <li>2. Phase 2: Awarded Jan.2008 – October 2008 expiry</li> <li>3. Phase 3: Awarded April 2008 – November 2008 expiry</li> <li>4. Phase 4: Oct.2009 – March 2010</li> <li>5. Phase 5: May 2009 – May 2010</li> </ol> <p>The overlap is deliberate to enable new calls to be made before the completion of the current round.</p>
11. End date	March 31 <sup>st</sup> 2011
12. Programme owner	<p>Aston University (acting for AWM)</p> <p><i>(name of person(s) responsible for programme):</i></p> <p>Andrew Wilson: 0121 204 3271</p> <p><a href="mailto:a.r.wilson@aston.ac.uk">a.r.wilson@aston.ac.uk</a></p>

<b>B. Main programme characteristics</b>	
1. Sector	<p>All sectors.</p> <p>However, particular sectors may be prioritised according to the funding bodies, which have varied over the different rounds (phases); see A.9 above. AWM, ESRC and ERDF all have sector priority themes For example, AWM has prioritised firms across its priority sectors.</p> <p>Favoured sectors have included:</p> <ul style="list-style-type: none"> <li>• Health Technology/Healthcare;</li> <li>• Automotive/Transport/Transport Systems;</li> <li>• Creative Industries/Digital Media/Software, Media and Communications;</li> <li>• Construction, Water and Environment;</li> <li>• Process Industries;</li> <li>• Aerospace and Defence;</li> <li>• Manufacturing;</li> <li>• Electronics</li> </ul> <p>Evidence from both interviews and ECOTEC's 2009 evaluation suggest that that 25-30 percent of vouchers have been awarded to firms in manufacturing sectors, which have been neither favoured nor excluded as a priority.</p>
2. Type of beneficiaries	<p>All small-to-medium enterprises (SMEs) in the West Midlands area are eligible to apply for an Innovation Voucher. By SME we refer to organisations that are registered companies, employ between 1- 250 employees and have an annual turnover of less than €50 million or an annual Balance Sheet total not exceeding €40 million.</p> <ul style="list-style-type: none"> <li>• <i>HES: Higher Education (i.e. organisations only or mainly established for higher education/training, e.g. universities, colleges);</i></li> <li>• <i>SMEs: entities with &lt; 250 employees and annual turnover ≤ € 50 million or annual balance sheet total ≤ € 43 million)</i></li> </ul>
1. role of SME (type of involvement)	<p><i>(chose from 'research user', 'research producer', 'both research user and producer', 'demonstrator', 'other-specify')</i></p> <p>Research user; both research user and producer</p>

2. Existence of programme requirements that a specific type of organisation is the project coordinator	<p><i>(if yes, chose between 'SME' or 'Scientific Partner' or 'other – specify')</i></p> <p>The project team (including the SME) has the overall lead.</p>			
3. Programme subscription and success indicators.				
	Latest available year or period of years	SMEs (a)	Others (b)	Total (c)=a+b
(1) Number of proposals submitted by... Phase 3: Vouchers award in April 2008, expiring Nov.2008	2007 – 2008 (3 rounds)	588	0	588
(2) Number of approved proposals (projects) by		220	0	220
(3) Number of applicants (of either approved or not approved proposals)		588	0	588
(4) Number of participants (in projects)...		220	0	220
5.1 % of submitted SME coordinated proposals vs. all submitted proposals	<i>(a1/c1): 100%</i>			
5.2 % of SMEs coordinators of approved proposals vs. all coordinators	<i>(a2/c2): 100%</i>			
5.3 % of SME participants vs. all programme participants	<i>(a4/c4): 100%</i>			
5.4 % of SMEs participants vs. SMEs applicants	<i>(a4/a3): 37%</i>			
5.5 Success rate of proposals coordinated by SMEs	<i>(a2/a1): 37%</i>			
5.6 Overall programme success rate	<i>(c2/c1): 37%</i>			
4. Average time to contract	<3 months			
5. Average size (budget) of funded projects	<p>£3,000 (&lt;100.000€&lt;)</p> <p>(a unit cost of around £4,060 per business supported)</p>			
6. Average duration of projects	6 months (>less than 1 year<)			

7. Funding rates to SMEs	100% (But SMEs have to pay VAT on the Voucher)
8. % of different size of SMEs targeted / attracted	The Innovation Voucher scheme is dedicated to SMEs. Between 60 and 70 percent of vouchers are taken by micro firms.
9. Types of collaboration of SMEs vis-à-vis RTD partners	Partner. (SMEs initiate these projects and are thus the lead partner.)
10. Ownership of research results for SMEs	'Full ownership' (SME, by default.)  (The participating SME has ownership of research results. However, the participating SME and supporting HEI may have an agreement to specify otherwise. If so, this is entirely a matter for the SME and HEI; the Programme manager does not get involved in this.)
11. Type of research supported	<p><i>(Choose from – multiple choices are possible:</i></p> <ul style="list-style-type: none"> <li>• <i>'basic', (Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in vie);</i></li> <li>• <i>'applied', (Applied research is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective);</i></li> <li>• <i>'experimental development, (experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. R&amp;D covers both formal R&amp;D in R&amp;D units and informal or occasional R&amp;D in other units).</i></li> </ul> <p><i>(Definitions adopted by the Frascati Manual, 2002).</i></p> <p>In principle, all of these types of research are eligible for Innovation Voucher support.</p> <p>The Innovation Voucher website specifies in detail those activities that are excluded.</p>
12. Programme's focus	<p>The focus of the Innovation Voucher scheme is broad, including the following from the list above.</p> <ul style="list-style-type: none"> <li>• Support for R&amp;D and innovation (R&amp;D&amp;I) activities;</li> </ul>

	<ul style="list-style-type: none"> <li>• Support for activities referring to science – industry cooperation;</li> <li>• Support for activities referring to technology/knowledge transfer;</li> <li>• Support for the creation of new and innovative products or services, processes;</li> </ul> <p>Training activities are specifically excluded from the Innovation Voucher scheme. Other exclusions: website development; IP protection; establishment not in the region.</p> <p>Firms are limited to a maximum of two vouchers.</p>
<p>13. Programme features affecting SME involvement before, during, after project</p>	<p><i>Before</i></p> <ul style="list-style-type: none"> <li>• Seminars were run with businesses to provide input into the design of the scheme</li> <li>• <i>Demand led by the SME; i.e. SMEs initiate.</i> The idea of the Innovation Voucher scheme is that SMEs approach HEIs (or, indeed, particular academics). In practice, this can work the other way around; in around 20 percent of cases, an academic will approach an SME and suggest an application for a voucher.</li> <li>• Simplicity of the application process is a key strength (ECOTEC 2009).</li> </ul> <p><i>During</i></p> <ul style="list-style-type: none"> <li>• An implicit aim of the programme is to lead onto other support and collaboration (30-40% according to interview have done so).</li> </ul>
<p>14. Sources of information and available reports:: (the database should provide ability to upload the reports used reports)</p>	<ul style="list-style-type: none"> <li>• ECOTEC, 2008. <i>An interim evaluation of the INDEX Innovation Voucher Scheme: Pilot Phase</i> (available on GPRIX server at Staffs University)</li> <li>• ECOTEC, 2009. <i>Final Evaluation of the INDEX Innovation Voucher Scheme Pilot.</i> (available on GPRIX server at Staffs University)</li> <li>• Pro Inno Europe, 2007. <i>Better innovation policy governance – a toolbox for innovation policy makers.</i> (Available on GPRIX server at Staffs University; useful, as it provides an international comparison.)</li> <li>• Andrew Wilson, Aston University: 0121 204 3271</li> </ul>
<p>See D.5 below and the references to the Appendix.</p>	

### C. Programme performance

*(Information to be inserted as text but be concise, succinct and to the point as possible – refrain from repeating general text from policy / programme documentation – insert not more than 8-10 lines per question – use bullet points whenever possible to facilitate easy reading)*

1. Impact assessment and evaluation results, where available, that address in particular the programmes' scientific and technological, economic, social and environmental impacts

The Innovation Voucher scheme in the West Midlands has been subject to an unusually thorough level of formal evaluation, although the methodology falls short of best-practice standards. Because this judgement needs to be supported, and because the analysis of the evaluation reports on the Innovation Voucher scheme raises general questions about the evaluation of business support programmes, these evaluation reports are discussed in Appendices 2 and 3 below. Nevertheless, the two ECOTEC reports (2008 and 2009) do contain useful descriptive results. The following draws upon these.

- Successfully engaged business who had never previously worked with Universities before (approx 50% of cohort).
- Phases Two and Three estimated to have generated 5 net additional on-going full time equivalent jobs (£1.1m of GVA) and 5 full-time equivalent temporary jobs (£121,000 of GVA) (ECOTEC 2009).
- The scheme was the first of its type to be delivered in England and the national roll-out of the innovation vouchers concept is a testament to the scheme's success (ECOTEC 2009).
- Phases two and three have assisted 180 SME's at a unit cost of around £4,060 per business
- 25% of beneficiaries have implemented the innovation since receiving support.
- Product innovation was the highest area of demand (2 out of 3 applications)
- Random selection process for allocating vouchers reduces costs and speeds up the process.
- Creative and manufacturing businesses dominate those receiving vouchers.

2. Key elements in the programmes' design that determine the success or failure in achieving targets and objectives

- Business input into the design of the scheme
- Demand led from the SME
- Match funding is small (only VAT)
- Simple application process
- Programme team is well regarded
- Large buy-in from key stakeholders.

The demand-led nature of the programme may be particularly important in its success. Over time, definitions of innovation developed by researchers and adopted by policy makers have

tended to become more heterogeneous: process and product augmented by organisation and marketing; technical by non-technical; and so on. Yet, in spite of broader and more flexible definitions, interview evidence suggests that at the firm level it is not easy for respondents to distinguish innovation from all the other aspects of business improvement. This suggests that *supply-led* programmes can at best be an imperfect match to firms' needs, in which case firms will not respond to programmes or have to adapt their activities to make them fit programme requirements. Conversely, *demand-led* programmes are better able to respond to the heterogeneity of firms' needs. Accordingly, as we note in Appendix 2:

The projects supported by the Innovation Voucher scheme are heterogeneous in the extreme; it is hard to generalise about them (examples may be found on the Innovation Voucher scheme website; see below).

For more detail, see Appendix 2 below.

### 3. Key drivers and opportunities for the development of such programmes and initiatives

#### **Lambert Review of Business-University Collaboration 2003**

The review recommended that future government support for business R&D should essentially be targeted at SMEs, and that Regional Development Agencies (RDAs) should also identify non-collaborating SMEs that could potentially benefit significantly from collaboration. The review also states that RDAs should impose targets relating to business–university collaboration, and that the issue should form a key element of any sector/cluster policies. The INDEX scheme has therefore been designed as an inducement to increase levels of demand amongst West Midlands SMEs in terms of engaging with universities.

**Innovation Nation White Paper 2008** - this led to a national roll out of the voucher scheme.

**National Enterprise White Paper 2008** One of the five strategic aims of this strategy is to stimulate innovation amongst businesses. As part of this, it encourages businesses to look externally to find ideas at each stage of development. The INDEX Innovation Voucher scheme is highlighted in the strategy as an example of a project helping to address these issues.

#### **Regional Strategic Context**

The INDEX Innovation Voucher scheme is aligned with the "Business" theme of the West Midlands Economic Strategy, and is directly related to the objective to stimulate innovation, creativity and knowledge generation. The strategy emphasises the need to increase levels of innovation is a key means of addressing the region's low productivity and increasing the region's competitiveness.

### 4. Programmes' characteristics responding to SMEs' needs

- Demand led
- Businesses involved with design of the scheme
- Aiding collaboration with Universities

## 5. Benefits for the participating SMEs

- Developed new relationships with Universities even for those companies who had already worked with a University.
- Two in three voucher winners that had previously encountered barriers to working with Universities indicated that these barriers had been overcome because of the scheme.
- 66% of had produced an innovation that was novel and new to the market
- Of those businesses that had implemented their innovation:
  - 64% had already experienced an increase in sales
  - 50% had improved their productivity
  - 43% expected their number of employees to increase over the next three year

On its own, a voucher project can make a difference; for example, in traditional manufacturing sectors there are examples of vouchers being instrumental in product development and taking products to market. However, the Innovation Voucher scheme is designed to be a “knowledge taster”, supporting SME contact with and access to HEIs in the hope that they will want more and thus extend contacts and networks. In this stimulus role, feedback from participating SMEs suggests that 30 to 40 percent of vouchers lead onto some other form of collaboration with the university. Accordingly, a significant proportion of vouchers are undertaken as part of larger projects, feeding into – for example – KTP and CASE projects. Help and advice are routinely given to help voucher firms to step up to larger programmes. For example, AWM require that all applicant firms are referred to Business Link for follow up.

A particular feature of the Innovation Voucher scheme is the effort devoted by the Programme Manager to match SME needs with academic providers. In fewer than one percent of cases – five or six from over 600 during the various phases on the scheme – was a match unable to be made. In other cases, the Programme Manager went outside the region to secure a suitable academic provider.

For further detail, see Appendix 2.

## D. Programme results dissemination and communication activities

- Is detailed planning of results’ dissemination activities required by programme for each project? (Y/N); No
- If Yes, what kind of dissemination actions are required

Although there is no formal requirement for dissemination, voucher projects can be publicised through the scheme’s website and through the media. Firms’ attitudes are heterogeneous: they range from being pleased by the prospect of publicity; to being not bothered one way or the other; to wanting the project kept confidential (for example, until an associated product is launched).



- Area marketing campaigns associated to the programme? (Y/N); Yes
- If Yes please detail: printed media, emailing,

• Sources of information and available reports:  
*(the database should provide ability to upload the reports used reports)*

- Project website <http://www.innovationvouchers-wm.co.uk/>
- Case studies <http://www.esrc.ac.uk/ESRCInfoCentre/KnowledgeExch/SMEVoucher.aspx>
- More case studies: <http://www.wlv.ac.uk/Default.aspx?page=19452>
- published reports (incl. programme documentation)  
See the references to the Appendix
- names of interviewees and their organisations (in case they have no problem of disclosing their name:  
Andrew Wilson:  
[a.r.wilson@aston.ac.uk](mailto:a.r.wilson@aston.ac.uk)  
0121 204 3271

**Name of person and organization and date of filling in the template**

Jon Fairburn and Geoff Pugh, Staffordshire University Business School  
Interviewee Andrew Wilson: Aston University.

**Comment box:**

*(you can use this space in case you wish to make any clarifications about the data provided in the table or sources of information or reasons why some data was not able to gather or other points you think necessary for the better understanding of the specific programme).*

Points from the interview

1. 30-40% of vouchers have led onto some other type of support, typically innovation networks or KTPs.
2. All applicants are referred to Business Link to follow up.
3. NW RDA issued 1000 vouchers and Yorkshire 600
4. Round 5 is currently being appraised and will be publically available.

Data issues

1. There is a list of firms who applied but were not selected. This is not publically available.
2. They can provide a breakdown by sector of the firms.
3. Firms were selected by lottery (once they had passed basic eligibility tests).
4. Out of 600 vouchers 5 or 6 did not manage to find an academic in the region so they went outside.
5. Can assist with firms to interview.
6. Can assist with distributing questionnaire.

Other programmes suggested

1. Innovation Networks – Gill Roberts, Coventry University
2. Proof of Concept.

## Appendix 1. Origin and influence of the INDEX Voucher scheme

The INDEX Voucher scheme in the West Midlands originated as an exercise in international policy transfer. It was based on “a programme that was piloted in the Netherlands ... launched in September 2004 ... provided vouchers of €7,500 to purchase support from knowledge institutions, such as universities” (ECOTEC, 2009, p.1).

The INDEX Voucher scheme is mentioned in the *Innovation Nation White Paper* (DIUS, 2008) and is highlighted as a means of encouraging networks and knowledge transfer between SMEs and HEIs in the *National Enterprise White Paper* (BERR, 2008) (see ECOTEC, 2009, pp.14-15).

In March 2009, the government finalised its *Solutions for Business Portfolio*, which outlined 30 common themes that address a specific business issue. One of the themes is Business Vouchers, which specifically “aims to increase knowledge exchange through collaborative activity – thereby encouraging a cultural change where businesses share the risks and costs associated with innovation collaborations”.

In addition, the INDEX Voucher scheme is “aligned with the “Business” theme of the *West Midlands Economic Strategy* (AWM, 2007), which “emphasises the need to increase levels of innovation as a key means of addressing the region’s low productivity and increasing the region’s competitiveness” (ECOTEC, 2009, p.15). To this end, the INDEX Voucher scheme has links with:

1. Business Link West Midlands (BLWM) (to provide additional support for successful and unsuccessful applicants);
2. Manufacturing Advisory Service West Midlands (MAS-WM) (likewise to provide additional support for successful and unsuccessful applicants);
3. the Grants for Research and Development (GRD) Programme (grants for SMEs to carry out R&D that leads to “technologically innovative products and processes”);
4. Advantage Proof of Concept Fund (“grants of up to £30,000) for market assessments, IPO, on-line business planning, basic prototyping, and some management support); and
5. Knowledge Transfer Partnerships (KTPs).

Given the origins, reputation and influence of the INDEX Voucher scheme in the West Midlands, we might expect a commensurate level of rigor in programme evaluation. Unfortunately, we have some reservations concerning the rigor and, hence, the validity of the available evaluation studies.

ECOTEC (2009, pp.13-14) provides a useful summary of the national policy context.

The INDEX Innovation Voucher scheme is closely aligned to the objectives of three key national policy documents that have been developed since 2003.

- **Lambert Review of Business-University Collaboration** - This review, carried out in 2003, expressed concern about the sub-optimal utilisation of knowledge, and lack of employer engagement with higher education institutions (HEI). The key problem was insufficient demand from businesses for support from HEIs, as opposed to an insufficient supply of support services from the universities,

and therefore recommended that policy interventions were required to stimulate demand from the SME sector. The INDEX scheme has therefore been designed as an inducement to increase levels of demand amongst West Midlands SMEs in terms of engaging with universities.

HM Treasury (2003), "The Lambert Review of Business-University Collaboration", HM Treasury, London, July 2003.

□ **Innovation Nation White Paper** - This paper, developed in March 2008, emphasises the importance of innovation, in terms of fostering the competitiveness of UK businesses, and meeting the challenges of globalisation. The paper recognises the need for the government to support businesses to innovate where the market fails ...The paper therefore makes reference to the existing pilot programme in the West Midlands. The government is expecting to invest a phased £3 million on the voucher schemes, and by 2011, it is intended that at least 1,000 vouchers will be distributed to UK businesses annually.

DIUS (2008), "Innovation Nation", March 2008

□ **National Enterprise White Paper** - One of the five strategic aims of this strategy is to stimulate innovation amongst businesses. As part of this, it encourages businesses to look externally to find ideas at each stage of development ...The strategy emphasises the need to bring businesses closer to world class research and design in the UK, and to foster the development of productive clusters and networks across businesses, universities, and their students. The INDEX Innovation Voucher scheme is highlighted in the strategy as an example of a project helping to address these issues.

BERR (2008), "Enterprise: Unlocking the UK's Talent", HM Treasury/BERR, March 2008

## Appendix 2. Summary of existing Evaluation studies

### Impact

In spite of our criticisms of the two evaluation studies conducted by ECOTEC (these are fully referenced in the Appendix referred to above), they do contain useful descriptive results. The following draws upon these.

The projects supported by the Innovation Voucher scheme are heterogeneous in the extreme; it is hard to generalise about them (examples may be found on the Innovation Voucher scheme website; see below).

ECOTEC's *Final Evaluation of the INDEX Innovation Voucher Scheme Pilot (July 2009)* focuses on 180 vouchers completed under Phases Two and Three between January and November 2008. The main findings, which are detailed in the *Executive Summary*, are as follows.

1. The Innovation Voucher scheme has successfully engaged a substantial body of businesses who have never previously worked with universities, although SMEs who have worked with universities in the past still comprise more than half the beneficiaries.
2. Successful ongoing collaborations. Examples of continued collaboration consequent upon a voucher include:
  - ... one medical technology SME to develop a three-year collaborative PhD research project worth £57,000 ...
  - ... one SME continued to work with their selected university on two bids for further research on their innovation
  - ... one SME within the Advanced Materials sector has invested their own finance to use some of the university's equipment to further develop their innovation
  - ... one SME worked with their university on submitting a bid to the AWM Proof of Concept Fund to help develop their innovation further.
3. However, levels of private sector leverage during Phases Two and Three have been relatively limited during the actual time period in which the vouchers were being implemented. However, the findings from the survey of voucher winners indicated that some of the voucher winners are likely to allocate some of their own financial resources towards continuing their innovation in the longer-term (after the voucher expiry date).
4. Our research findings have indicated that the INDEX Innovation Voucher scheme is currently closely aligned to the strategic objectives of the region's universities. Moreover, there is evidence to suggest that it complements other innovation support schemes being delivered in the West Midlands, and that voucher winners could be referred to other innovation support schemes on completing their vouchers. Significant steps have also been taken by the INDEX Innovation Voucher scheme delivery team to ensure that the scheme becomes more closely related to the services being delivered by BLWM, with all voucher winners being allocated a free consultation with this organisation.
5. The high levels of satisfaction amongst the voucher winners, academics and HEIs servicing the vouchers would suggest that the scheme is operating effectively. The fact that the scheme is currently achieving the majority of its over-riding objectives is further testament to this.

6. There is some evidence of additionality, albeit derived only from the self-assessment of participants rather than from rigorous comparison of participants and non-participants. ECOTEC's *Final Evaluation* (p.30) includes the following summary:

**Table 4.3 Ability to Undertake the Innovation in the Absence of a Voucher (of those companies already delivering innovations – Base: 14 responses)**

Response	%
Would definitely not have been able to implement the innovation	21.4%
Would have been able to implement the innovation, but not as effectively	14.3%
Would have been able to implement the innovation, but at a later date	35.7%
Would probably have been able to implement the innovation	14.3%
Would definitely have been able to implement the innovation	14.3%
<b>Total</b>	<b>100.0%</b>

Source: ECOTEC Survey (2009)

Of those businesses that had yet to implement their innovation, around three in four (71%) indicated that they were very likely to implement their innovation in the future. In more than half of these cases, the business was almost ready to implement the innovation but small improvements were required to the design. The INDEX Innovation Vouchers appear to have played a key role in influencing the planned implementation of these innovations (more than three in five of these respondents have claimed that the vouchers have played a very important role in this respect).

7. The scheme is helping to develop the innovation potential of SMEs across the West Midlands region, given that it is supporting businesses to develop product innovations (as well as process and service innovations), many of which are novel to the business and novel to the markets.
8. Participating academics are interested in developing longer-term working relationships with the voucher winners (although, at the time of evaluation, in many cases it was “too early to measure whether these relationships are being forged).

Evidence on the economic impact is suggestive (“less certain”, according to ECOTEC's *Final Evaluation*, 2009, p.40) and entirely absent on social and environmental impacts. Of course, this may reflect the small size of the scheme.

Our analysis indicates that the overall economic impacts generated through the INDEX Innovation Voucher scheme to date have been relatively modest, given that relatively few beneficiaries have fully brought an innovation to market. However, given that beneficiaries are optimistic about implementing innovations in the future, it can be anticipated that further economic impacts will be accrued from beneficiaries from Phases Two and Three of the scheme.

To date, we estimate that Phases Two and Three of the INDEX Innovation Voucher scheme has generated 5 net additional on-going full time equivalent jobs (£1.1m of GVA) and 5 full-time equivalent temporary jobs (£121,000 of GVA). However, beneficiaries were optimistic about future prospects, indicating the potential to generate a further 80 jobs and over £3.7m in GVA. Although it is too early to fully understand all economic impacts that have been generated through the vouchers from Phases One and Two, our economic impact analysis suggests that the GVA return as a ratio of investment for the INDEX Innovation

Voucher scheme is broadly similar to the national average for science, R&D and innovation projects, as detailed in BERR's Impact of RDA Spending Report (March 2009).

BERR (2009), "Impact of RDA Spending – National Report – Volume 1 – Main Report", March 2009

## Design features

These feature in ECOTEC's *Final Evaluation of the INDEX Innovation Voucher Scheme Pilot* (July 2009).

1. Aston University has successfully managed and administered the INDEX Innovation Voucher scheme. The thorough and pro-active approach adopted by its delivery team has been a key success factor for the scheme.
2. The Governance Group continues to act as one of the scheme's notable strengths, and the group is strongly represented by individuals from some of the region's key players in delivering innovation support. An ongoing challenge for the Governance Group is to ensure that the scheme continues to complement other innovation support initiatives being delivered in the West Midlands region.
3. The INDEX Innovation Voucher scheme's delivery team has demonstrated considerable ability to deal promptly with enquiries, and also their pro-active approach for monitoring the progress made with the innovation vouchers. The Governance Group also appears to be operating successfully, with the speed of its decision making highly commended.
4. The HEI representatives are considered to be crucial to the successful delivery of the scheme. They provide an important link between the various parties involved in the delivery of the vouchers and do much to ensure that the Scheme runs smoothly within their respective institutions.
5. The simplicity of the application process is a key strength of the INDEX Innovation Voucher scheme; however ensuring businesses provide sufficient information on their application forms remains a challenge. This issue could prove difficult to address, without tampering the demand-led ethos of the scheme (which is considered as one of its key strengths).
6. There is some support for the possible introduction of the pooling of vouchers between different companies in the future. The consensus amongst the HEI representatives and SMEs interviewed was that other more appropriate delivery mechanisms exist where there is more than one business with common innovation needs.

The ethos of the Innovation Voucher scheme's is "demand driven" and SME focussed; i.e., SMEs decide what they want and then are supported to find the help they need from regional universities. In comparison, previous innovation support programmes were more "supply driven" – i.e., determined by what universities offered – and typically more suited to large firms (such as R&D support).

ECOTEC's *Final Evaluation* (p.30) includes evidence of high satisfaction levels with some of the main components of the scheme – the initial expression of interest from academics and the actual academic input - as well as with the overall scheme.

Interview evidence suggests that among the features of the Innovation Voucher scheme appreciated by SMEs are

1. its “light touch” approach to bureaucracy (especially as, in practice, academics often “pre-fill” the paperwork for their SME clients),
2. help in finding academic partners.

Criticisms tend to be minor, but include:

1. a desire on the part of some SMEs to be able to work with private-sector consultants; and
2. a desire for the process from application to project commencement to be quicker.

In addition, it was noted that ERDF involvement can be seen as “nuisance” (bureaucratic demands – e.g., for original documents - tend to be onerous).

ECOTEC's *Final Evaluation* (p.34) summarises SME responses on the main strengths of the scheme.

The voucher winners identified three key strengths of the scheme, which are factors dictating the high levels of satisfaction. These are:

- The scheme's simplicity
- The provision of access to academics with high levels of technical expertise
- The scheme provides businesses with financial support to help develop an innovation.

**Table 4.6 Perceived Usefulness of Individual Elements**

	Index Website	Index Advice Centre	Posted/e-mailed Documentation	Index Breakfast Events	Index Brokerage Service
Very useful (5)	32.1%	37.5%	51.8%	25.0%	10.7%
Useful (4)	16.1%	16.1%	19.6%	10.7%	10.7%
Average (3)	21.4%	32.1%	14.3%	21.4%	30.4%
Of Little Use (2)	3.6%	3.6%	7.1%	3.6%	3.6%
Not useful (1)	3.6%	0.0%	1.8%	0.0%	3.6%
No reply	12.5%	3.6%	1.8%	25.0%	17.9%
Don't know	10.7%	7.1%	3.6%	14.3%	23.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: ECOTEC Survey (2009)

According to ECOTEC's *Final Evaluation of the INDEX Innovation Voucher Scheme Pilot* (July 2009) (p.3):

The scheme wholly or largely met the objectives of the majority of voucher winners and there was a high degree of satisfaction with all elements of scheme. Over half of the businesses used the voucher as a pre-cursor to, or as a follow on to other support and although the vast majority of winners claimed that they would have completed the work without the INDEX Innovation Voucher, it would have happened more slowly. There is



evidence to suggest that the scheme has increased the knowledge and innovative strengths of the SME and there is real prospect of them working with universities again.

Business Link is selective in its support, generally expecting to see potential for growth. Hence, it is to be expected that benefitting from further support are not typical firms but those most likely to be, in any case, innovative high-growth firms. This “selection bias” has important implications for the evaluation of the impact of the Innovation Voucher scheme.

The findings of ECOTEC’s *Final Evaluation* (p.30) with respect to additionality are reported above.

## Appendix 3: Evaluation of existing Evaluation studies

One of the “three overriding objectives” of the INDEX Innovation Voucher scheme (ECOTEC, 2009, p.9) is: “To evaluate, in conjunction with external evaluators ... the value of the vouchers in stimulating innovation in the short to medium term ...” Unfortunately, the external evaluation (ECOTEC 2008 and 2009) falls short with respect to both national (HMT, 2006) and international (OECD, 2007) best practice guidelines. Since these evaluations have gained currency among policy makers, this criticism will be substantiated in detail.

ECOTEC (2009, p.ii) claims best practice for its final evaluation of the pilot of the INDEX Innovation Voucher scheme, which focussed on the impacts of Phases Two and Three:

Importantly, the work needs to be compliant with HM Treasury's *Impact Evaluation Framework* (IEF) for Regional Development Agencies.

Yet internal evidence suggests that the ECOTEC (2009) evaluation is *not* compliant with the evaluation standards set out in HMT (2006).

HMT (2006, pp.40, 42, 43, 47 and 50-52) emphasises the need to survey both programme beneficiaries and a control (randomly assigned) or comparison (non-randomly assigned) group of non-beneficiaries. Indeed, a specific recommendation (p.51) is that “RDAs should adopt increasingly robust evaluation methods ... specifically ... surveys of non-beneficiaries”. HMT (2006, pp.42 and 43) explains that this approach is “the most sophisticated in terms of identifying the counterfactual (what would have happened without the intervention)”:

Non-beneficiaries within the target group of the intervention may be informative about deadweight or additionality – i.e. they can provide insights into the counterfactual (what would have happened without the intervention. So, it may be worthwhile to explore the experience of this group and their views of the intervention although care will need to be taken to avoid selection bias in establishing the sample.

Hence, investigating programme beneficiaries together with a comparison group of non-beneficiaries is necessary to identify *additionality* – i.e., the outcome(s) attributable to the intervention - which is the purpose of evaluation.<sup>3</sup>

ECOTEC (2009, p.5) provides a conventional definition of additionality in the context of the INDEX Voucher scheme:

The extent to which beneficiaries would have accessed and financed the same or similar alternative support if they had not secured a voucher and

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<sup>3</sup> Deadweight is defined as (HMT, 2006, p.17): “The proportion of total outputs/outcomes that would have been secured anyway (sometimes referred to as non-additionality).”

the extent to which the implementation of new products or processes was due to the support received from the HEI. In addition, it considers how far the vouchers brought forward innovations that would have happened anyway.

Yet ECOTEC (2009, p.7) does not investigate both beneficiaries and non-beneficiaries, which is the methodologically robust approach to identify additionality:

Capturing the views of the unsuccessful INDEX Voucher scheme applicants was not within the remit of this evaluation.

ECOTEC (2009) acknowledges (p.7) that “in the future, it would be useful to collate information on the performance of their business”. Correspondingly, an acknowledged “limitation” of the evaluation is that interviews were carried out only with voucher winners (p.5). However, ECOTEC (2009) does not acknowledge or attempt to assess the extent to which this methodological shortcoming invalidates its claim to investigate and measure additionality.

This shortcoming is especially to be regretted, because under Phases Two and Three of the West Midlands INDEX Voucher scheme, vouchers were awarded at random from eligible applicants (ECOTEC, 2009, p.9) with a roughly equal division between successful and unsuccessful applicants (51% successful in Phase 2 and 42% in Phase 3). This could have been an excellent opportunity to meet the methodologically exacting requirement for “experimental survey design with random assignment” (i.e. with every firm having an equal chance of being selected for either group) (HMT, 2006, p.42), which is the gold standard for identifying programme effects (notably additionality). The usual situation facing evaluators is one in which possibilities are limited to “quasi-experimental design with non-random assignment”, which imposes the requirement on researchers to control for “selection bias” (i.e., the likelihood that “those who do not benefit from an intervention have particular characteristics that prompt them not to engage”).<sup>4</sup>

We are not the first to criticise prevailing standards of programme evaluation. The *OECD* (2007) has this to say about the state of evaluation studies on innovation programmes:

... whilst there are examples of high quality evaluations, this is not the norm ... there remain too few examples of top quality evaluations ... about ... the impact which policy changes have upon SMEs and the economy more widely (OECD, 2007, pp.11-12).

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<sup>4</sup> Of course, even random assignment does not eliminate the likelihood of selection bias between both successful/non-successful applicants and non-applicants. Without taking this into account, it is not valid to draw inferences from the evaluation results for SMEs in general.

The approach of the OECD (2007) to defining best practice (2007; see Appendix B, pp.106-108) is consistent with HMT (2006).

## References

AWM (2007: Advantage West Midlands (2007). *Connecting to Success: West Midlands Economic Strategy*. See: <http://www.advantagewm.co.uk/what-we-do/connecting-to-success/default.aspx>

BERR (2008). *Enterprise: Unlocking the UK's Talent*, HM Treasury/BERR, March 2008.

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HMT (2006): HM Treasury (2006). *Evaluating the Impact of England's Regional Development Agencies: Developing a Methodology and Evaluation Framework*, DTI Occasional paper Number Two, February 2006. Available on-line.

OECD (2007). *OECD Framework for the Evaluation of SME and Entrepreneurship Policies and Programmes* (3<sup>rd</sup> Edition, 2007). Paris. Available on-line.

## TEMPLATE FOR PROGRAMMES DESCRIPTION: DESIGNING DEMAND (DESIGN COUNCIL, DELIVERED BY BUSINESS LINK WEST MIDLANDS)

To introduce the template, we first introduce Designing demand, then consider the relationship between design and innovation and, finally, comment on the state of evaluation of Designing Demand.

### Overview and background

Designing Demand helps established small and medium enterprises (SMEs), as well as fast growing new start up technology businesses, to harness the power of design and transform their business performance.

<http://www.eeda.org.uk/3941.asp>

This does seem to be a genuine example of evidence based policy. The UK Government has responded to growing evidence from home and abroad:

1. that alongside technical and business skills, design is a particularly important contributor to innovation and the competitiveness of UK firms; indeed, design is increasingly being used “as a strategic tool which enhances performance and unlocks innovation” (Design Council: *The impact of design on business*; [www.designcouncil.org.uk/](http://www.designcouncil.org.uk/));
2. that the contribution of design to innovation and competitiveness is “not picked up by traditional metrics ... traditional innovation measures do not capture ‘hidden’ innovations around the workplace, which often include the use of design processes”;
3. that “there is a shift in investment priorities among UK manufacturers towards the exploitation of intangible assets such as design and development, marketing and R&D”; and
4. that SMEs are lagging large companies in the integration of design.

Accordingly, the Design Council’s national business support programme, Designing Demand, was launched in 2006 to make SMEs more competitive through the strategic use of design.

Indeed, it seems that continued funding from national government, the Department for Business, Innovation and Skills (BIS), reflects this understanding, as revealed by the following FAQ:

#### **Doesn’t everyone use design these days? Why does government need to promote its use?**

Multinationals, consumer and high-street brands have embraced the use of design to add value and drive innovation, but there are still parts of the economy that are critical to future economic and social success where design awareness is low – notably small businesses, scientists seeking to commercialise new ideas and the public sector.

It is important that government leads by example in order to provide the best conditions for innovation to thrive ... The creativity of the UK design sector is a strong asset that needs to be used more widely and there is a clear role for government in helping encourage that through the Design Council, as concluded by Martin Temple's review. <http://www.designcouncil.org.uk/about-us/design-council-review/>

(The Temple Review found that there was a compelling case for the Design Council to continue and recommended the continuation of government support for the Design Council at a reduced level.)

Designing Demand is an intensive support service which helps companies grow by using design as a business development tool. It gives companies the chance to work with leading designers to investigate how using design can tackle core strategic issues and make a lasting impact on performance.

There are two key parts to Designing Demand.

1. **Workshops.**

- a. These introduce the value of design, in particular through case studies of how firms have used design to develop.
- b. Design Council tools are introduced to enable firms to map firms' strategic goals onto design opportunities. In turn, use of these tools does the groundwork for potential design projects.

2. **Business Growth Services.** These help put design projects into practice by one-to-one support from Design Associates selected from a Design Council roster and experienced both in design management and business. These are of three types: Generate; Innovate; and Immerse (<http://www.designcouncil.org.uk/our-work/Support/Designing-Demand/FAQs/>):

- a. **Generate.** Design support for high-growth start-ups and established businesses to help get a design project moving;
- b. **Innovate.** Design support for technology ventures; and
- c. **Immerse.** Design support for mature businesses with appetite for strategic change and a willingness to invest.

The typical level of assistance to a participating SME is indicated by the following answer to an FAQ (<http://www.designcouncil.org.uk/our-work/Support/Designing-Demand/FAQs/>):

Workshops, services and Design Associate support are provided at no charge. The only direct cost to business would be investment in the resulting design project, and senior management time spent on projects lasting from 6 to 18 months. Each design project is different, but as a general guide businesses have seen substantial returns on design investments between £5,000 and £14,000.

According to the Programme Manager in the West Midlands, Designing Demand is not so much about telling companies how to design a product (or change their website and so forth) but about strategic thinking and rebranding companies.

According to the Design Council's *Annual Report for 2009-10*, Designing Demand, the Design Council's business support service, "has been delivered in partnership with eight Regional Development Agencies to over 1,800 small and medium sized firms".

[http://www.designcouncil.org.uk/Documents/Documents/About%20us/Annual%20Reports/DCAnnualReport\\_2009-10.pdf](http://www.designcouncil.org.uk/Documents/Documents/About%20us/Annual%20Reports/DCAnnualReport_2009-10.pdf)

## Design, R&D and innovation

Livesey and Moultrie (2010), a major academic study on UK company spending on design, does rather qualify the rather uncritical opposition of R&D and design propounded by the Design Council in some of its public pronouncements. For example, on its website, the Design Council highlights the following:

The report estimates that UK firms spend around £50bn on design annually. Around £40bn is spent on technical design, which compares with private sector R&D spend at around £21bn. These early results are based on a small sample of 358 companies that are representative of UK firms.

<http://www.designcouncil.org.uk/publications/Company-spending-on-design/>

Yet the study itself is very much more tentative (p.22).

This type of spend is the closest to R&D and most commentators believe there is an overlap. As noted above, spending on technical design dominates the total spend on design for the companies surveyed, with 81% of the total design spend categorised by respondents as technical. However, it appears that the companies surveyed do not consider there to be a significant overlap between R&D and technical design, as only 8.6% of companies in the sample indicated that they claim R&D tax credits whereas 33.4% report internal technical design spend on developing products and services. This may indicate that companies who could claim R&D tax credits do not do so, or that technical design is reliably distinct from R&D spending. Given that four times as many companies indicate a technical design spend than claim R&D tax credits, this remains an important open question.

According to the current state of knowledge, the degree of overlap between design – especially technical design – and R&D is contested.

## Evaluation of existing evaluation studies

Evaluation studies on the impact of Designing Demand have been commissioned. However, these are for internal use by the Design Council; they are not publicly available.

Both interview evidence and document analysis reveal that evaluation has not been conducted according to best practice standards.

Interview evidence revealed that the Steering Group responsible for commissioning evaluation did consider methodological issues, in particular the need for a comparison group. Unfortunately, while the need for a comparison group was acknowledged, this would have added appreciably to the costs of evaluation and none of the stakeholders represented were prepared to contribute to the additional expenditure. Consequently, evaluation was conducted without a comparison group, by surveying participants only. In addition, most of the evaluation studies do not explicitly address additionality; and where additionality is addressed it is not by a standard methodology, so that "approaches to calculating additionality differ" (Vanilla Research, 2010, p.17).

Not only lack of adherence to best practice standards but also lack of standardisation of such evaluations as have been commissioned reduce the validity of findings because, as acknowledge by the Summary Report: "This makes any aggregation of results across programmes difficult or in some cases impossible" (Vanilla Research, 2010, p.22). (For more on the evaluation of Designing demand, see Section c of the template below.)

### References

LIVESEY, F. and MOULTRY, J (2010). *COMPANY SPENDING ON DESIGN: EXPLORATORY SURVEY OF UK FIRMS 2008*. Design Council and Cambridge University.

Vanilla Research (July 2010). *Summary Report: Evaluation of Designing Demand*. Design Council (not on-line; available by request).



<b>A. Programme Summary</b>	
13. Programme's name	<b>Designing Demand</b>
14. Keywords	Design; product innovation; organisational innovation; marketing innovation.
15. Structure and objectives	<p>An intensive support service which helps companies grow by using design as a business development tool. It gives companies the chance to work with leading designers to investigate how using design can tackle core strategic issues and make a lasting impact on performance.</p> <p>There are two key parts to Designing Demand.</p> <ol style="list-style-type: none"> <li>1. Workshops.</li> <li>2. Business Growth Services.</li> </ol>
16. Relevant policy priorities	<p>The Design Council's national business support programme, Designing Demand, was launched in 2006 to make SMEs more competitive through the strategic use of design.</p> <p>For more on the policy background, see C.4 below and:</p> <p><a href="http://www.designcouncil.org.uk/our-work/Support/Designing-Demand/FAQs/">http://www.designcouncil.org.uk/our-work/Support/Designing-Demand/FAQs/</a></p>
17. Country	<p><i>use codification found at:</i></p> <p><a href="http://publications.europa.eu/code/en/en-370100.htm">http://publications.europa.eu/code/en/en-370100.htm</a></p> <p>UK</p>
18. Region	<p>The West Midlands region, which includes:</p> <p style="text-align: center;">West Midlands, Shropshire, Herefordshire, Worcestershire, Staffordshire, Warwickshire</p> <p>(confusingly, West Midlands is a county within the West Midlands region)Note:</p> <p>Designing Demand is a national programme delivered regionally by Advantage West Midlands (the former RDA).</p>
19. Programme budget	<p>National (2010): ?</p> <p>West Midlands (2010): The budget for the five years 2008-12 was £1.8 million (€2.14 million at the exchange rate of 01-12-2010), although this has been cut, reflecting a cessation of recruitment in June 2010.</p>

	If we also estimated from the approximate number of current projects and average support of £10,000, then we still arrive at an estimate of the annual budget of (considerably) <€1 million.
20. Approximate share of overall programme budget going to SMEs	100% (targeted at SMEs only)
21. Sources of programme funding + respective %	National (100%)
22. Start date	In the West Midlands, started in 2007 (after national piloting by the Design Council from 2002).
23. End date	Ongoing.
24. Programme owner	National: Design Council - Louise Connolly-Smith West Midlands: AWM - Paul Travers Contact details: see B.16 below.
<b>C. Main programme characteristics</b>	
2. Sector	All sectors.  Sector is not a selection criterion; it is “down to companies”. Some sectors may be more strongly represented than others, but there are no sectoral restrictions on applications.  With respect to the six GPrix traditional manufacturing sectors/industries, the Programme Manager reported that firms from all of these sectors would have participated in Designing Demand, but not necessarily firms located in the West Midlands (bearing in mind that this is a national programme).
4. Type of beneficiaries	<ul style="list-style-type: none"> <li>• <b>SMEs:</b> entities with &lt; 250 employees and annual turnover ≤ € 50 million or annual balance sheet total ≤ € 43 million</li> </ul>
15. role of SME (type of involvement)	Client and partner
16. Existence of programme requirements that a specific type of organisation is the project coordinator	SME

17. Programme subscription and success indicators. (If figures are available please fill in the following table and estimate the specific shares that follow 5.1 - 5.6). The figures provided should refer to the total duration of the programme if possible. Otherwise please indicate year(s) of reference of inserted figures. If figures are not available but there are some success rates or other shares mentioned in programme documentation, relevant reports or interviews please fill them in at the respective cell.)

	Latest available year or period of years	SMEs (a)	Others (b)	Total (c)=a+b
Note: Completed by interpreting proposals as equivalent to enquiries.				
(1) Number of proposals submitted by...  Note: Programme Manager's estimates of enquiries: no formal records of enquiries; see C.2 below.	No data	c.100	0	c.100
(2) Number of approved proposals (projects) by	No data	c.50	0	c.50
(3) Number of applicants (of either approved or not approved proposals)  Note: According to the Programme Manager, there are "not many unsuccessful applications"	To be completed by March 2011	c.50	0	c.50
(4) Number of participants (in projects)...	To be completed by March 2011	c.45	0	c.45
5.1 % of submitted SME coordinated proposals vs. all submitted proposals		$(a1/c1)$ : 100%		
5.2 % of SMEs coordinators of approved proposals vs. all coordinators		$(a2/c2)$ : 100%		
5.3 % of SME participants vs. all programme participants		$(a4/c4)$ : 100%		
5.4 % of SMEs participants vs. SMEs applicants		$(a4/a3)$ : c.90%		
5.5 Success rate of proposals coordinated by SMEs		$(a2/a1)$ : c.50%		
5.6 Overall programme success rate		$(c2/c1)$ : c.50%.		
18. Average time to contract	This depends on the complexity of the support package: <ul style="list-style-type: none"> <li>• Generate: &lt;3 months</li> <li>• Immerse: Can be 3 to 6 months</li> </ul>			

19. Average size (budget) of funded projects	<p><i>(chose from '&lt;100.000€', '100.000€ - 500.000€', '&gt;500.000€')</i></p> <p><b>&lt;100.000€</b> (although, in a few cases, the projects could exceed this)</p> <ul style="list-style-type: none"> <li>• National average (mean): c.£10,000</li> <li>• National range: £5,000-£100,000 (or more) (but most are in the range of £5,000 to £14,000)</li> <li>• Approximate average ratio between support and SME financial commitment: c.1:3.</li> </ul>
20. Average duration of projects	<p>Less than 1 year; or Between 1 - 3 years, depending on the type of project and, hence, on the type of SME.</p> <ol style="list-style-type: none"> <li>1. <b>Generate:</b> from 6 to 12 months, for either start-ups or established businesses (turnover &gt;£250,000).</li> <li>2. <b>Innovate:</b> up to 12 months, for firms developing technology with applications in high-tech sectors.</li> <li>3. <b>Immerse:</b> up to 18 months, for mature businesses (turnover &gt;£3 million).</li> </ol>
21. Funding rates to SMEs	<p>c.33.3% of total eligible project cost; however, note that</p> <ol style="list-style-type: none"> <li>1. the SME spend is variable and</li> <li>2. includes not only financial commitment but also a major commitment of management time.</li> </ol>
22. % of different size of SMEs targeted / attracted	<p><i>(multiple choices are possible – chose from 'micro: 0-9 empl'; 'small:10-49 employees'; 'medium': 50-249 employees' – indicate % of each SME type targeted, e.g. 5% micro, 30% small, 65% medium)</i></p> <p>Apart from high-growth start-ups participating in “Innovate” projects, generally participating firms have between 10 and 250 employees.</p>
23. Types of collaboration of SMEs vis-à-vis RTD partners	<p><i>(Choose from 'partner' or 'sub-contractor' or 'other – specify' to specify the role of SME vis-à-vis the RTD partners in the project)</i></p> <p><b>Not applicable.</b></p>
24. Ownership of research results for SMEs	<p>Full ownership (where applicable – Designing Demand is not a research programme)</p>

<p>25. Type of research supported</p>	<p><i>(Choose from – multiple choices are possible:</i></p> <ul style="list-style-type: none"> <li>• <i>‘basic’, (Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in vie);</i></li> <li>• <i>‘applied’, (Applied research is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective);</i></li> <li>• <i>‘experimental development, (experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. R&amp;D covers both formal R&amp;D in R&amp;D units and informal or occasional R&amp;D in other units).</i></li> </ul> <p><i>(Definitions adopted by the Frascati Manual, 2002).</i></p> <p><b>Not applicable.</b> Designing Demand is based on an understanding of innovation that goes beyond a simple linear progression from R&amp;D. Of these categories, “experimental development” appears to be the most relevant.</p> <p>Note that the degree of overlap between design – especially technical design – and R&amp;D is contested.</p>
<p>26. Programme’s focus</p>	<ul style="list-style-type: none"> <li>• <i>Support for R&amp;D and innovation (R&amp;D&amp;I) activities;</i></li> <li>• <i>Support for activities referring to creation of networks &amp; clusters,</i></li> <li>• <i>Support for activities referring to technology/knowledge transfer;</i></li> <li>• <i>Support for the creation of new and innovative products or services, processes;</i></li> </ul>
<p>27. Programme features affecting SME involvement before, during, after project</p>	
<p>Favourable:</p> <ul style="list-style-type: none"> <li>• Designing Demand is fully funded, hence providing access to free consultancy support (valued at c.£600 per day) that many SMEs otherwise could not afford.</li> <li>• The Design Associates are of high quality, having been vetted by the Design Council and typically having extensive industrial experience.</li> <li>• There is some paperwork (SME declarations etc). However, because Designing demand is full funded, the bureaucratic obstacles are relatively small.</li> </ul>	

Unfavourable

- Some SME owners are resistant to putting in the time and effort to ensure the success of the project. It can be “a bit of a wrench to get them away from the tools” to focus on strategic issues.
- Because they are not used to dealing with consultant, some SME owners and managers see the Design Associates as expensive (“a gravy train”).
- Sometimes Design Associates find it only worthwhile to work with a critical mass of firms in an area; they can be reluctant to commit travelling time to a single client in an area.
- Some SME owners and managers want a Design Associate with experience in their area, but this is not always possible. Nor it is necessarily desirable; the saving of reduced start-up costs may be less – although less immediately visible – than the benefit of a fresh perspective and knowledge transfer from other types of business and activity.

28. Sources of information and available reports::  
*(the database should provide ability to upload the reports used reports)*

Design Council:

<http://www.designcouncil.org.uk/>

Designing Demand

<http://www.designcouncil.org.uk/our-work/Support/Designing-Demand/>

- *names of interviewees and their organisations,*

Programme Manager – Designing Demand: Paul Travers

Head of Business Solutions: Richard Lowe

Business Link West Midlands,

Advantage House,

19 Ridgeway,

Quinton Business Park,

Quinton,

Birmingham, B32 1AL.

[PaulTravers@BusinessLinkwm.co.uk](mailto:PaulTravers@BusinessLinkwm.co.uk)

0121 569 0786

Richard Lowe: 0121 569 0688

Design Council, Senior Partnership Manager for Designing Demand: Louise Conolly-Smith

0207 420 5200

0793 043 3196

[Louise.Conolly-Smith@designcouncil.org.uk](mailto:Louise.Conolly-Smith@designcouncil.org.uk)

## D. Programme performance

6. Impact assessment and evaluation results, where available, that address in particular the programmes' scientific and technological, economic, social and environmental impacts

Evaluation studies on the impact of Designing Demand have been commissioned. However, these are for internal use by the Design Council; they are not publicly available.

Interview evidence revealed that the Steering Group responsible for commissioning evaluation did consider methodological issues, in particular the need for a comparison group.

Unfortunately, while the need for a comparison group was acknowledged, this would have added appreciably to the costs of evaluation and none of the stakeholders represented were prepared to contribute to the additional expenditure. Consequently, evaluation was conducted without a comparison group, by surveying participants only. In addition, most of the evaluation studies do not explicitly address additionality; and where additionality is addressed it is not by a standard methodology so that "approaches to calculating additionality differ" (Vanilla Research, 2010, p.17). In turn, this puts a question mark over any estimates of regional impact; for example, claims such as the following (Vanilla Research, 2010, p.19):

In Yorkshire, the evaluation of Yorkshire Forward's Immerse and Generate programmes estimated project costs of £1.95m had leveraged gross sales of £15.561m and gross profits of £5.025m, with resulting **return on investment ratios of 1:8 for sales and 1:2.6 for profits.**

The Generate element of this programme was also highlighted for cost efficiency by a report by PricewaterhouseCoopers, which estimated the cost per net job created/safeguarded was £5,650 versus a national figure for comparative Regional Development Agency programmes of £8,301.

The concluding figures suggest the programme consistently offers significant value to regional economies.

On the positive side, a very high response rate was achieved and firms do report substantial benefits from participation (see C.5 below).

7. Key elements in the programmes' design that determine the success or failure in achieving targets and objectives

Programme documentation and evidence from interviewing the Programme Manager suggest several features of Designing Demand that help to ensure the success of projects.

Participating firms are not representative but carefully selected. The main route to SMEs is via established business support organisations. Typically, firms are recruited to participate in Designing Demand. An enquiry will arise from a business advisor – e.g., from the Manufacturing Advisory Service (MAS), a Chamber of Commerce, or an industry body such as the Ceramic Industry Forum – on the firm's behalf or after the firm has attended a one-day Workshop event. In order not to waste firms' time, as many as 50-60 percent of firms are filtered out at this stage. Often, if firms have more pressing issues, then other support measures – e.g. for technical assistance - will be recommended before undertaking a Designing Demand project. Hence, at the application stage, firms are invited to apply after a more or less prolonged "conversation", the corollary of which is that a very high proportion of applications (90% or more) are successful.

Designing Demand is part of [Solutions for Business](#), a package of publicly funded business support products and services designed to help businesses start and grow. Accordingly, Designing Demand can – and often is - self-standing, but need not be; instead, it can be complemented by other support programmes. For example, there will typically be prior support from business support agencies such as MAS (see above), while a Designing Demand project may be continued, for example, by a later Knowledge Transfer Partnership (KTP). Hence, to exploit synergy between programmes, a package of support can be created for a company so that it has the optimum support at different stages.

For SMEs eligible on grounds of size, the main selection criteria are how long they have been established and financial stability together with the ability and willingness to invest both the necessary financial and management resources to the Designing Demand project. Owners or key decision makers are expected to commit themselves to the level of involvement recommended by the Design Associate. According to the Programme Manager, "senior management "buy-in" is essential. If the participating firm is to rebrand itself, then this has to be led by senior management. For this reason, application forms are expected to be completed by managing directors.

Design Associates are typically qualified designers who have worked as design managers and led creative Design Associates teams, often with formal business management training and experience of delivering business advice or consultancy. Design Associates are selected using a rigorous recruitment and interview process and Designing Demand supports them with a programme of continuous professional development.

Companies also benefit from peer networks developed during the service.



## 8. Key drivers and opportunities for the development of such programmes and initiatives

*(e.g. what was the rationale for developing such a programme? what were the needs and challenges that drove its development? what opportunities does this programme try to exploit? Insert relevant extracts from the WP2 National Report and from WP2 interviews)*

According to a FAQ on the Designing Demand website

[\(HTTP://WWW.DESIGNCOUNCIL.ORG.UK/OUR-WORK/SUPPORT/DESIGNING-DEMAND/FAQS/\)](http://www.designcouncil.org.uk/our-work/support/designing-demand/faqs/):

Why was the programme created?

The accelerated roll-out of the programme follows a review of creativity in business commissioned by the Chancellor of the Exchequer and the then Design Council Chairman Sir George Cox. The Cox Review, published in 2005, identified the need for urgent action if UK businesses are to compete with rivals in fast-emerging global economies. The review, endorsed by the Chancellor, recommended support for the Design Council's programme and called for it to be made available across the UK to help SMEs use design as a business tool.

See also A.2 above.

## 9. Programmes' characteristics responding to SMEs' needs

See B.15 above.

## 10. Benefits for the participating SMEs

SME impact is generally very positive. In part, this reflects a rigorous recruitment process focussed on "high-growth, aspirational, entrepreneurial companies" that are prepared to invest both financial resources and the time of their senior management. Accordingly, the programme deliberately "steps away from a large part of the economy". A corollary is that returns on investment are very high.

A number of evaluations of Designing Demand projects have been carried out at regional level: According to Vanilla Research (July 2010, p.2) - see D.5 for the full reference:

Although not every business covered by the programme has benefited - given the evaluations cover over 300 businesses it would be unusual if they had – a clear majority have. The evaluations cover the recent economic downturn and so the effects have sometimes been in terms of businesses not slipping back rather than actually moving forward ... Designing Demand programme is usually seen to have the following impacts on a business:

- Improve the competitiveness of a business, either in the short term or expectations of it doing so in the future;
- Improve sales and profit levels;

- Increase the importance placed on design – a key aim given Design Council research shows the greater importance a business places on design, the more likely they are to experience rapid growth;
  - Improve a business’s confidence around buying external design services;
  - For Innovate, improve a business’s routes to market, the ability to raise finance, or reduce the risk of developing technologies.
- Lastly, where robust measures of the programme’s return on investment have been made, the returns to a region’s economy are seen to be impressive.

**D. Programme results dissemination and communication activities**

- Is detailed planning of results’ dissemination activities required by programme for each project? (Y/N);
- If Yes, what kind of dissemination actions are required  
*(multiple choices are possible – chose from web page creation, open forums, events, press releases, meetings, training, other – specify)*

- Area marketing campaigns associated to the programme? (Y/N);
- If Yes please detail  
*(multiple choices are possible – chose from TV, Radio, printed media, emailing, events, other- . specify)*

• Sources of information and available reports:  
*(the database should provide ability to upload the reports used reports)*

- See B.16 above  
  
Vanilla Research (July 2010). *Summary Report: Evaluation of Designing Demand*. Design Council (not on-line; available by request).

**Name of person and organization and date of filling in the template**

Professor Geoff Pugh, Staffordshire University Business School

**Comment box:**

Please refer to the “Overview and Background” provided on p..1-2 above.

## TEMPLATE FOR PROGRAMMES DESCRIPTION: INNOVATION NETWORKS

<b>A. Programme Summary</b>	
1. Programme's name	<i>Innovation Networks (West Midlands, UK)</i>
2. Keywords	<i>commercialisation; innovation;</i>
3. Structure and objectives	<i>Please provide information about the main aims and various modules/subprogrammes and specific activities of the programme</i>
<p><i>The overall aim of the project is to:</i></p> <ol style="list-style-type: none"> <li><i>1. To pool skills between small companies.</i></li> <li><i>2. To help overcome financial barriers for business to business activity.</i></li> </ol> <p><i>At least three SMEs collaborate to produce a new innovative product, process or service.</i></p> <p><i>Revenue and capital grants are available at £10,000.</i></p> <ul style="list-style-type: none"> <li><i>• Revenue grants cover product development costs including prototyping, consultancy and patenting.</i></li> <li><i>• Capital grants cover the purchase of tooling and machinery.</i></li> </ul> <p><i>Total project costs should be a minimum of twice that of that grant chosen (i.e. for a £10,000 grant the project budget should be a minimum of £20,000).</i></p> <p><i>All applicants are referred to Business Link (a business support agency).</i></p> <p><i>Successful applicants can apply for an additional £3,000 of grant funding for consultancy assistance to bring the product, services or process to market. As an alternative a grant of £1,000 is available to cover exhibition costs.</i></p>	
4. Relevant policy priorities	
<p><i>2002 RDA report identified two key barriers to innovation</i></p> <ol style="list-style-type: none"> <li><i>a. lack of finance</i></li> <li><i>b. lack of in-house skills (and so a need for collaboration).</i></li> </ol>	
5. Country	<i>UK</i>

6. Region	West Midlands region, comprising West Midlands, Shropshire, Herefordshire, Worcestershire, Staffordshire, Warwickshire (confusingly, West Midlands is a county within the wider West Midlands region)
7. Programme budget	<i>(figure in K€ + reference year(s))</i> 2002-2006 £4.4 million i.e. about £1.1 million per annum 1.3€ million (At a euro-sterling exchange rate of 0.8393 the rate on 01-12-2010).
8. Approximate share of overall programme budget going to SMEs	<i>Administration costs low (less than 10% of budget) discounting SME match funding means ca 90% of programme budget went to SMEs</i>
9. Sources of programme funding + respective %	<i>Regional - Advantage West Midlands (17%) European - ERDF Objective 2 (32%) Regional - Match funding from SMES (51%)</i>
10. Start date	2002
11. End date	Sept 2011
12. Programme owner	<i>Coventry University Enterprises Ltd on behalf of AWM Gill Roberts</i>
<b>B. Main programme characteristics</b>	
1. Sector	<i>ALL</i>
2. Type of beneficiaries	<ul style="list-style-type: none"> <li><i>SMEs: entities with &lt; 250 employees and annual turnover ≤ € 50 million or annual balance sheet total ≤ € 43 million</i></li> </ul>
3. role of SME (type of involvement)	<i>Other – collaborator</i>
4. Existence of programme requirements that a specific type of organisation is the project coordinator	<i>SME</i>

5. Programme subscription and success indicators.				
	Latest available year or period of years	SMEs (a)	Others (b)	Total (c)=a+b
(1) Number of proposals submitted by...	2004-2006	143	n/a	
(2) Number of approved proposals (projects) by		102	n/a	
(3) Number of applicants (of either approved or not approved proposals)				
(4) Number of participants (in projects)...				
5.1 % of submitted SME coordinated proposals vs. all submitted proposals		100		
5.2 % of SMEs coordinators of approved proposals vs. all coordinators		100		
5.3 % of SME participants vs. all programme participants		100		
5.4 % of SMEs participants vs. SMEs applicants		100		
5.5 Success rate of proposals coordinated by SMEs		71		
5.6 Overall programme success rate		71		
6. Average time to contract	<i>&lt;3 months (2-3 weeks usually)</i>			
7. Average size (budget) of funded projects	<i>&lt;100.000€, (£20K top figure)</i>			
8. Average duration of projects	<i>'less than 1 year',</i>			
9. Funding rates to SMEs	<i>50 % cash match (previously a time match was allowed)</i>			
10. % of different size of SMEs targeted / attracted	<i>Majority 20 employees or less (from interview)</i>			

11. Types of collaboration of SMEs vis-à-vis RTD partners	N/A – SME two SME
12. Ownership of research results for SMEs	'co-ownership with other participating SMEs'
13. Type of research supported	<ul style="list-style-type: none"> <li>• <i>'experimental development, (experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. R&amp;D covers both formal R&amp;D in R&amp;D units and informal or occasional R&amp;D in other units).</i></li> </ul> <p><i>(Definitions adopted by the Frascati Manual, 2002).</i></p>
14. Programme's focus	<ul style="list-style-type: none"> <li>• <i>Support for R&amp;D and innovation (R&amp;D&amp;I) activities;</i></li> <li>• <i>Support for activities referring to creation of networks &amp; clusters,</i></li> <li>• <i>Support for activities referring to science – industry cooperation;</i></li> <li>• <i>Support for activities referring to technology/knowledge transfer;</i></li> <li>• <i>Support for the creation of new and innovative products or services, processes;</i></li> <li>• <i>Support for the creation of start-ups and spin-offs;</i></li> </ul>
15. Programme features affecting SME involvement before, during, after project	
<p><i>Before the project – requires collaboration between SME's to complete application.</i></p> <p><i>Before the project – simple application procedure and assistance proved.</i></p> <p><i>Before the project – assistance is demand led from the business SME'S Before the project – very quick turnaround from application to decision (2-3 weeks)</i></p> <p><i>During the key project partners are both SMEs.</i></p>	

29. Sources of information and available reports::  
(the database should provide ability to upload the reports used reports)

- *Regeneris Consulting Ltd (Feb 2007) Evaluation of the Innovation Networks Service (available on GPRIX server at Staffs Uni)*
- *SQW (2003) Interim Evaluation of the Innovation Networks Programme: Executive Summary (available on GPRIX server at Staffs Uni)*
- *Roberts G (2007) Which factors are the most significant in affecting the success of innovations in small to medium sized enterprises? MBA Dissertation, Coventry University (available on GPRIX server at Staffs Uni)*
- *Interviewee – Gill Roberts groberts@cad.coventry.ac.uk 02476 236391*
- *Project website <http://www.2wm.co.uk/innovation-networks/>*

### C. Programme performance

11. Impact assessment and evaluation results, where available, that address in particular the programmes' scientific and technological, economic, social and environmental impacts

*Funds have commonly been used for development activities, prototyping and research activities. Some key ERDF indicators(source Regeneris 2007) up until Dec 2006*

	Core ERDF		Transitional ERDF	
	Completed	Target	Completed	Target
<i>Businesses Assisted</i>	67	55	17	17
<i>Businesses assisted with env management</i>	18	14	4	4
<i>Number of business start-ups led by female managers</i>	9	6	8	4
<i>New jobs</i>	135	125	39	34
<i>Safeguarded jobs</i>	139	139	46	44
<i>New sales</i>	5215	4215	1520	1510
<i>Safeguarded sales</i>	434	164	80	71
<i>Number of businesses improving environmental performance</i>	17	11	28	28

12. Key elements in the programmes' design that determine the success or failure in achieving targets and objectives

*General levels of satisfaction with the scheme are very high.(Regeneris 2007).*

*Low bureaucracy levels and flexible criteria for awarding grant.*

*Rapid decision making from submission to decision (2-3 weeks commonly)*

*Strong core staff team who play an important role in driving forward innovation and networking*

*Less than 10% of budget spent on salaries and operating costs (including marketing). Use of Business Link in particular to generate referrals.*



13. Key drivers and opportunities for the development of such programmes and initiatives	
<p><i>2002 RDA report identified two key barriers to innovation</i></p> <p><i>a. lack of finance</i></p> <p><i>b. lack of in-house skills (and so a need for collaboration).</i></p> <p><i>Low levels of innovation in the region.</i></p>	
14. Programmes' characteristics responding to SMEs' needs	
<p><i>Relatively wide brief and flexibility when awarding grant.</i></p> <p><i>Responds to business demand</i></p> <p><i>Capital and revenue grants available (and demand for type of assistance has fluctuated during the project depending on business needs).</i></p>	
15. Benefits for the participating SMEs	
<p>Many documented in the Regeneris 2007 report examples include:</p> <ul style="list-style-type: none"> <li>• Improving the quality of goods and services (17% rating transformative, 53% significant or higher)</li> <li>• Allowing businesses to keep up with competitors (41% significant or higher)</li> <li>• Assisting firms to adapt flexibly to client demands (41% significant or higher, 7% transformative)</li> <li>• 41% of firms claiming they have either already implemented changes to management following the support they received or are likely to in the near future.</li> <li>• 84% of firms claiming they are now more likely to investigate and participate in collaboration with other firms.</li> </ul>	
<b>D. Programme results dissemination and communication activities</b>	
<ul style="list-style-type: none"> <li>• Is detailed planning of results' dissemination activities required by programme for each project? No (there is a final report on outputs) but nothing formal for communication.</li> </ul>	
<ul style="list-style-type: none"> <li>• Area marketing campaigns associated to the programme? (Y) In house marketing, leaflets, website, selection of seminars and events.</li> </ul>	
<ul style="list-style-type: none"> <li>• Sources of information and available reports: <i>(the database should provide ability to upload the reports used reports)</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Regeneris Consulting Ltd (Feb 2007) Evaluation of the Innovation Networks Service (available on GPRIX server at Staffs Uni)</i></li> <li>• <i>SQW (2003) Interim Evaluation of the Innovation Networks Programme: Executive Summary (available on GPRIX server at Staffs Uni)</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Roberts G (2007)</i> Which factors are the most significant in affecting the success of innovations in small to medium sized enterprises? MBA Dissertation, Coventry University (<i>available on GPRIX server at Staffs Uni</i>)</li> <li>• <i>Interviewee</i> – Gill Roberts <a href="mailto:groberts@cad.coventry.ac.uk">groberts@cad.coventry.ac.uk</a> 02476 236391</li> </ul> <p><i>Project website</i> <a href="http://www.2wm.co.uk/innovation-networks/">http://www.2wm.co.uk/innovation-networks/</a></p>
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**Name of person and organization and date of filling in the template**

*Jon Fairburn, Business School, Staffordshire University, UK*

**Comment box:**

Gill Roberts, Project manager was interviewed 19<sup>th</sup> October 2010. Key points are noted below:

1. The project was started in 2002 and Gill joined in 2003 (she previously worked for AWM and has an engineering and IT background).
2. Although Innovation Networks can be self standing there have been extensive link ups with other support programmes especially Business Link, Manufacturing Advisory Service and for bigger projects the Proof of Concept funding stream.
3. Innovation networks make a practical difference due to the money involved. Intangibles include improvement of management through pooling skills and change the way they work.
4. Businesses are sent to Business Link who check the state of the business to assess their capacity for the project prior to submission. There is also an attempt to hook businesses into the main support structures once grants have been given.
5. Capital/revenue grants have varied enormously 70/30, 30/70 depending on the state of the economy currently about 50/50.
6. Tend to back winners – safeguard or create new jobs

Appraisal and evaluations

1. Final report – outputs and outcomes reported.
2. Additionality is measured in the evaluation. (Note: weakly done - JF after having read the report.)
3. The evidence base for aggregate claims is the individual reports.
4. Claims could be subject to auditing by Names, job titles, there is a greater focus on the financial side.

Data requirements

1. They can provide a list of firm who applied for a grant but were not selected.
2. They are not sector specific but there are not many service applications at the moment.
3. Willing to send out questionnaire for us.
4. Can help us with firms to interview

Other programmes important to SME in traditional manufacturing?

Manufacturing Advisory Service – very useful

Other programme managers to talk to ? Tom Blount – AWM Proof of Concept.

**TEMPLATE FOR PROGRAMMES DESCRIPTION:**

**KNOWLEDGE TRANSFER PARTNERSHIPS (“CLASSIC” KTP)  
TECHNOLOGY STRATEGY BOARD: DELIVERED BY ADVANTAGE WEST  
MIDLANDS**

Note: In the aftermath of the UK Government’s Comprehensive Spending Review, there is currently some turmoil in the national and regional systems of business support. The latest developments in KTPs are set out in Appendix 2. The main change is that the scope of KTPs is being narrowed to favour “technology-based” KTPs. This appears to reverse a broadening in the scope of KTPs in recent years that corresponded to a broadening understanding of the innovation process.

Appendix 1 reviews the existing evaluation studies of KTPs.

## A. Programme Summary

1. Programme's name	Knowledge Transfer Partnerships ("Classic" KTP)
2. Keywords	Knowledge transfer; Innovation; productivity; competitiveness; Firm growth and employment, stimulating business research
3. Structure and objectives	

The KTP is a major and long-established public support programme: more than 5,000 have been completed since the late 1970s (Regeneris, 2010, p.15).

According to TSB (2009, pp.5 and 15):

Knowledge Transfer Partnerships (KTP) ... helping businesses to improve their competitiveness, productivity and performance through the better use of knowledge, technology and skills ... UK-wide and is headed by the Technology Strategy Board and supported by 19 other public sector funding organisations (including Advantage West Midlands, the Regional Development Association).

A KTP involves the formation of a Partnership between a business, an academic institution (or knowledge base) and a recently qualified person, known as the Associate, to facilitate the transfer of knowledge and embedding of new capability within the business organisation.

The Partnerships can provide skills and expertise to help businesses that want to develop innovative solutions to help them grow ... The proportional balance of business function across the different areas remained very similar to the previous year, with the main categories being product development and design (32%), research and development (24%) and information and communications technology (ICT) (9%).

TSB (2009) is concerned with the so-called "Classic" KTP of one to three years duration. An essential condition for KTP support is knowledge transfer from an HEI. Moreover, the KTP must initiate a process of knowledge "cascading down through the company" (see D.2 below).

<p>4. Relevant policy priorities</p>	<p>The market failure case for KTPs – and other similar programmes - rests on difficulties that businesses have in accessing or exploiting new knowledge and, hence, on the case for public programmes to overcome the obstacles to knowledge transfer (Regeneris, 2010, p.3; see also p.6).</p> <p>The 2008 White Paper <i>Innovation Nation</i> set the aim of making the UK “the best place in the world to run an innovative business or public service”. According to TSB (2009, p.27), “KTP is at the heart of fulfilling that ambition”.</p> <p>National priorities established the KTP scheme. Regional priorities were responsible for its regional extension.</p> <p>According to Regeneris (2010):</p> <p>KTP operates in a supportive policy landscape. Central government has emphasised the importance of knowledge transfer and high value business activities.</p>
<p>5. Country</p>	<p>UK</p>
<p>6. Region</p>	<p>The West Midlands region, which includes:</p> <p style="padding-left: 40px;">West Midlands, Shropshire, Herefordshire, Worcestershire, Staffordshire, Warwickshire</p> <p>(confusingly, West Midlands is a county within the West Midlands region)</p>

7. Programme budget

Exact numbers by region are difficult to come by. However, the orders of magnitude can be indicated. One complicating factor is that although this is a national scheme, regions can supplement national funding from other sources.

**National support for KTPs in the West Midlands**

(£; nominal):

	Total	Mean
<b>2004</b>	£1,373,480	£76,304
<b>2005</b>	£3,784,582	£74,207
<b>2006</b>	£2,350,041	£75,808
<b>2007</b>	£1,379,468	£72,604
<b>2008</b>	£2,374,340	£79,145
<b>2009</b>	£3,674,887	£85,462
<b>Jan.-Oct. 2010 *</b>	£4,446,044	£87,177

\* €5,297,323 at the Dec.1<sup>st</sup> 2010 sterling-euro exchange rate of 0.8393

Source: Unpublished raw data from the Technology Strategy Board; own calculations.

**Total budget for KTP in the West Midlands:**

Over the three years 2008/09, 2009/10 and 2010/11 broad approximations arising from interview with the Programme Manager suggests a budget for the West Midlands of £23 million with the purpose of trebling the number of KTPs. This has been achieved by leveraging funding from other sponsors to supplement national support from the Technology Strategy Board.

- Technology Strategy Board (national): £6.2m
- Higher Education Funding Council (national): £3m
- Advantage West Midlands: £2.3m
- ERDF (matching funds): £11.5m

This suggests an annual budget in the past three years of almost £8 million (€9.53 million).

<p>8. Approximate share of overall programme budget going to SMEs</p>	<p>SME share by number (%), 2004-Oct.2010: 83%</p> <p>SME share by value (%), 2004-Oct.2010: 86%</p> <p>Source: Unpublished raw data from the Technology Strategy Board</p> <p>(see B.10 below)</p>
<p>9. Sources of programme funding + respective %</p>	<p>These percentages are informed by interview with the Programme Manager. Hence, they are to be interpreted as indicative.</p> <p>European (ERDF): up to 50% (matched funding)</p> <p>National/regional:</p> <p style="padding-left: 40px;">National: (c.40%)</p> <p style="padding-left: 80px;">1. Technology Strategy Board (70-80%)</p> <p style="padding-left: 80px;">2. Higher education Funding Council for England</p> <p style="padding-left: 40px;">Regional:</p> <p style="padding-left: 80px;">1. Advantage West Midlands (c.10%)</p> <p>All KTPs in the West Midlands are run by AWM.</p> <p>These estimates are quite close to the national data presented by Regenris (2010, p.4).</p>
<p>10. Start date</p>	<p>Continuous from c.1975</p>
<p>11. End date</p>	<p><i>Ongoing (but with radically proposed change to criteria announced December 2010)</i></p>
<p>12. Programme owner</p>	<p>National: Technology Strategy Board (and others)</p> <p>Regional: Advantage West Midlands</p> <p><i>(name of person(s) responsible for programme):</i></p> <p>Regional: Marc Fleetham</p>



**B. Main programme characteristics**

1. Sector

Subject to B.2 below, all sectors are eligible. KTPs are awarded by merit, not by sector.

National data suggest that in 2008/09 that between 40 and 47 percent of classic KTPs were accounted for by manufacturing industry, including many in traditional sectors (e.g., 9% in metal manufacturing; 6% in metal goods, including vehicle manufacturing; and 1% in footwear and textile manufacturing) (TSB, 2009, p.13). According to Regeneris (2010, p.23) 4.7 from every 1,000 manufacturing firms have at some time participated in a KTP.

Once disaggregated to the sector level, in the West Midlands relatively few firms in traditional sectors have benefitted from a KTP. The following table shows the number of KTPs in the five traditional manufacturing sectors under study by GPrix (2004 to October 2010):

**Number and value of KTPs in the West Midlands, 2004-October 2010 (2003 SIC categories)**

<b>Textiles:</b>		<b>Metal</b>		
<b>DJ 17&amp;18</b>	<b>Leather: 19</b>	<b>Ceramics : 262</b>	<b>Manufacturing: DJ 27&amp;28</b>	<b>Automotive: 34</b>
3	0	3	22	8
£224,910	0	£218,721	£1,579,081	£903,814

Source: Unpublished raw data from the Technology Strategy Board; own calculations

Together, these five sectors account for 15% of the total value as well as 15% of the total number of KTP projects in the West Midlands over the period 2004-Oct.2010.

There is no particular type of KTP for traditional sectors vis-à-vis other sectors.

Out of the 12 UK nations/regions, the West Midlands has the third highest number of KTPs (*Quarterly Statistical Report on Current Knowledge Transfer Partnerships*, 30 September 2009, p.21).

<p>2. Type of beneficiaries</p>	<ul style="list-style-type: none"> <li>• <i>REC: Research (i.e. organisations only or mainly established for research purposes);</i></li> <li>• <i>HES: Higher Education (i.e. organisations only or mainly established for higher education/training, e.g. universities, colleges);</i></li> <li>• <i>LE: large enterprise i.e. larger than SME (i.e. industrial organisations private or public, both manufacturing and industrial services);</i></li> <li>• <i>SMEs: entities with &lt; 250 employees and annual turnover ≤ € 50 million or annual balance sheet total ≤ € 43 million)</i></li> <li>• <i>OTH: Others - specify)</i></li> </ul> <p>Both large enterprises and SMEs are eligible for KTP. According to TSB, (2009, pp.5 and 7):</p> <p style="padding-left: 40px;">Businesses or organisations of any size, sector or from any regions of the country including public and third sector organisations can apply.</p> <p>The term “business” includes private sector businesses as well as qualifying public sector organisations such as NHS trusts, and third sector organisations including charities. Higher Education Institutions (HEIs) along with research and technology organisations and public sector research institutions are involved as “knowledge base partners” but not as primary beneficiaries. In 2008-09, of 122 knowledge base institutions, 104 were HEIs of which 71 percent were represented by their engineering, management and computing departments.</p>
<p>3. role of SME (type of involvement)</p>	<p>Both research user and producer</p>
<p>4. Existence of programme requirements that a specific type of organisation is the project coordinator</p>	<p>University or college.</p>

5. Programme subscription and success indicators.				
	Latest available year or period of years	SMEs (a)	Others (b)	Total (c)=a+b
(1) Number of proposals submitted by...	2004-Oct.2010	c.249	c.51	c.300
(2) Number of approved proposals (projects) by		c.224	c.46	c.270
(3) Number of applicants (of either approved or not approved proposals)		c.224	c.46	c.270
(4) Number of participants (in projects)...		202	41	243
5.1 % of submitted SME coordinated proposals vs. all submitted proposals		<i>(a1/c1): c.83%</i>		
5.2 % of SMEs coordinators of approved proposals vs. all coordinators		<i>(a2/c2): c.83%</i>		
5.3 % of SME participants vs. all programme participants		<i>(a4/c4): 83%</i>		
5.4 % of SMEs participants vs. SMEs applicants		<i>(a4/a3): c.90%</i>		
5.5 Success rate of proposals coordinated by SMEs		<i>(a2/a1): c.90%</i>		
5.6 Overall programme success rate Note: best measure is the percentage progressing from proposal to application to selection and participation For the source of the approximations in B.5, see C.4 below.		<i>(c2/c1): c.90%</i>  <i>(c2/c1): c.81%</i>		
6. Average time to contract	'>6 months< Usually, 6-9 months (see C.4 below) Four months is possible; but nine months is typical.			

<p>7. Average size (budget) of funded projects</p>	<p>c. €100.000; however, this could do with refinement</p> <p>Over the whole period 2004 to October 2010, the mean size of project was about the same for micro and small firms but somewhat larger for medium-size firms. Large firms typically received less (reflecting their greater required contribution).</p> <table border="1" data-bbox="603 443 1279 555"> <thead> <tr> <th>Large</th> <th>Medium</th> <th>Small</th> <th>Micro</th> </tr> </thead> <tbody> <tr> <td>£66,160</td> <td>£86,422</td> <td>£80,369</td> <td>£80,101</td> </tr> </tbody> </table> <p>Source: Unpublished raw data from the Technology Strategy Board; own calculations</p> <p>For the period January to October 2010, large firms received the least and small firms the most on average:</p> <table border="1" data-bbox="603 788 1311 900"> <thead> <tr> <th>Large</th> <th>Medium</th> <th>Small</th> <th>Micro</th> </tr> </thead> <tbody> <tr> <td>£64,859</td> <td>£80,017</td> <td>£102,867</td> <td>£90,718</td> </tr> </tbody> </table> <p>Source: Unpublished raw data from the Technology Strategy Board; own calculations</p> <p>For medium, small and micro firms respectively, the mean euro value of projects in 2010 (at the Dec.1<sup>st</sup> exchange rate of 0.8393) were as follows:</p> <table border="1" data-bbox="699 1160 1225 1205"> <tbody> <tr> <td>€95,337.88</td> <td>€122,562.94</td> <td>€108,087.86</td> </tr> </tbody> </table>	Large	Medium	Small	Micro	£66,160	£86,422	£80,369	£80,101	Large	Medium	Small	Micro	£64,859	£80,017	£102,867	£90,718	€95,337.88	€122,562.94	€108,087.86
Large	Medium	Small	Micro																	
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€95,337.88	€122,562.94	€108,087.86																		
<p>8. Average duration of projects</p>	<p>From one to three years (TSB, 2009, p.7). 2 years is typical.</p>																			
<p>9. Funding rates to SMEs</p>	<p>66.6% for an SME (33.3% for a large firm)</p> <p>An SME company can expect to contribute a third of the project costs.</p> <p>Companies will need to cover the full overhead costs of their own participation in a Knowledge Transfer Partnership. These include management and supervisory effort, additional materials, capital equipment and accommodation. They are also expected to contribute to the cost of equipment purchased specifically for the use of a KTP Associate during their project work above the contribution provided for in the grant.</p> <p>Companies should also be prepared to enhance the salaries of Associates to reflect pay levels in their organisation, business sector and location. Companies are invoiced by their Knowledge Base Partners, normally quarterly.</p> <p><a href="http://www.ktponline.org.uk/faqs">http://www.ktponline.org.uk/faqs</a></p>																			

<p>10. % of different size of SMEs targeted / attracted</p>	<p>TSB (2009, pp.7 and 13) reports that for the year 2008-09 the <i>national</i> position was as follows:</p> <p style="padding-left: 40px;">The portfolio remained well balanced across the spectrum of micro, small, medium and large businesses, with little change from the previous year – 9% of Partnerships involved micro businesses, 37% small, 29% medium and 25% large.</p> <p>The following table shows the number and value of KTPs financed by the Technology Strategy Board in the West Midlands by firm size (standard definitions) over the period 2004-Oct.2010.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Large</th> <th style="text-align: center;">Medium</th> <th style="text-align: center;">Small</th> <th style="text-align: center;">Micro</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">41</td> <td style="text-align: center;">73</td> <td style="text-align: center;">106</td> <td style="text-align: center;">23</td> </tr> <tr> <td style="text-align: center;">£2,712,578</td> <td style="text-align: center;">£6,308,823.48</td> <td style="text-align: center;">£8,519,118</td> <td style="text-align: center;">£1,842,321</td> </tr> </tbody> </table> <p style="padding-left: 40px;">Source: Unpublished raw data from the Technology Strategy Board; own calculations</p> <p>The SME share in the West Midlands is 83% by number and 86% by value.</p> <p>The Programme Manager commented that larger firms tended more readily to recognise “the benefits of collaboration with HEIs”, while micro firms tended to “lack the internal structure to look after a graduate” (i.e., an Associate).</p>	Large	Medium	Small	Micro	41	73	106	23	£2,712,578	£6,308,823.48	£8,519,118	£1,842,321
Large	Medium	Small	Micro										
41	73	106	23										
£2,712,578	£6,308,823.48	£8,519,118	£1,842,321										
<p>11. Types of collaboration of SMEs vis-à-vis RTD partners</p>	<p>Partner</p>												
<p>12. Ownership of research results for SMEs</p>	<p>By default, the participating firm owns the IP from a KTP. An agreement can be made with the HEI to specify otherwise, but IP costs - including the cost of contract negotiations – are not covered by the KTP budget.</p> <p>However, in practice this might not be much of an issue. Regeneris (2010, p.33) note:</p> <p style="padding-left: 40px;">Somewhat unexpectedly, the link between new IPR registrations and satisfaction levels appears to be weak.</p> <p>Indeed (p.35):</p> <p style="padding-left: 40px;">Only a small proportion (10%) of businesses indicated that there had been a significant impact on IPR registrations from KTP. Instead knowledge transfer has been informal – 34% of businesses identified an</p>												

	<p>important impact on either products or process.</p> <p>Nevertheless too few businesses are choosing to formally protect intellectual property generated through the KTP.</p> <p>The impact of R&amp;D expenditure is also much lower than anticipated.</p>
<p>13. Type of research supported</p>	<ul style="list-style-type: none"> <li>• <i>‘basic’, (Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in vie);</i></li> <li>• <i>‘applied’, (Applied research is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective);</i></li> <li>• <i>‘experimental development, (experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. R&amp;D covers both formal R&amp;D in R&amp;D units and informal or occasional R&amp;D in other units).</i></li> </ul> <p><i>(Definitions adopted by the Frascati Manual, 2002).</i></p> <p>These and similar categories are not used as a selection criteria for KTP. KTP can include one or all of these activities. Applicants have to demonstrate only that the firm’s knowledge base will benefit.</p>
<p>14. Programme’s focus</p>	<ul style="list-style-type: none"> <li>• <i>Support for R&amp;D and innovation (R&amp;D&amp;I) activities;</i></li> <li>• <i>Support for activities referring to science – industry cooperation;</i></li> <li>• <i>Support for activities referring to technology/knowledge transfer;</i></li> <li>• <i>Support for the creation of new and innovative products or services, processes;</i></li> <li>• <i>Support for research and innovation management including training activities and human resource development;</i></li> </ul> <p>Diversification strategies are definitely eligible for KTP support.</p>

<p>15. Programme features affecting SME involvement before, during, after project</p>	<p><i>(based on your understanding or the interviewees' views what are the features of the programme (if any) affecting the involvement of SMEs before, during or after the project. For example: before the project the SMEs may be asked to provide input/feedback for the programme design or it may be them who are usually the initiators of the project idea. During the project they may receive support to cover the IPR / patent application expenses, or they may be encouraged to undertake the research on their own. After the project, they may be encouraged to be involved in the dissemination of the results in various ways.</i></p>
<ul style="list-style-type: none"> <li>• Before – negative – length of time 6-9 months for associate to be in place</li> <li>• Before – negative – cost of the KTP to the firm</li> <li>• Before – positive - quality of associates</li> <li>• During – access to experts seen as unbiased</li> <li>• During – access to resources of HEI</li> <li>• At all stages – relative lack of bureaucracy</li> </ul> <p>See C.4 below.</p>	
<p>16. Sources of information and available reports:</p>	<p><i>See section D4</i></p>

### C. Programme performance

1. Impact assessment and evaluation results, where available, that address in particular the programmes' scientific and technological, economic, social and environmental impacts

There is no evaluation report for KTP in the West Midlands.

KTPs are graded by independent assessors on a scale of A ("outstanding") to E. Of the 374 completed Partnerships in 2004-05, 56% were assessed as A or B; by 2008-09 this had risen to 60% (TSB, 2009, p.8). However, this "assessment" is not equivalent to best-practice "evaluation" as defined by OECD (2007), the EU and UK Government (see for, example, HMT, 2006).

Only recently have procedures have been introduced to enable evaluation that meets rigorous best-practice standards.

- According to TSB (2009, p.7) "routine monitoring of projects one and three years after their completion, to validate the longer term benefits of participation in KTP" was introduced in 2008-09.

Earlier evaluations have not met best practice standards with respect to the use of comparison groups – e.g., unsuccessful applicants – to compare with KTP participants in order to identify additionality. An example is examined in detail in the Appendix (below).

2. Key elements in the programmes' design that determine the success or failure in achieving targets and objectives

Regeneris (2010, pp.33 and 34) notes:

KTPs which generate bigger impacts on product improvements, process improvements and staff skills tend to generate higher levels of customer satisfaction ... The most significant knowledge impacts have been realised in process and product improvements, although the average ratings of 3.2 and 3.0 are low ... Fewer than half of businesses rated the importance of impacts on products or process highly (4 or 5) and more than a fifth of businesses indicated that there had been no impact in these areas.

3. Key drivers and opportunities for the development of such programmes and initiatives

Long term desire to see greater engagement between higher education institutions and businesses. Greater knowledge transfer from universities to business.

4. Programmes' characteristics responding to SMEs' needs

An attractive feature for SMEs is the very high chance of success – around 75-80 percent - once an expression of interest is made. There are two stages towards inaugurating a KTP:

1. the Expression of Interest, at which stage a KTP Advisor assesses the application and provides support if it is acceptable, so that around 90 percent progress to the application stage; and
2. the Application, of which around 90 percent are successful (also firms can apply more than once).

These estimates are from interview with the Programme Manager; they inform the approximations



made in B.5 above.

Some firms drop out after a successful application. The main reasons for failure are:

1. an inability to recruit a suitable Associate; and
2. the firms and the HEI between them not taking responsibility for the Associate, which can be a consequence of personnel changes (these can cause partnerships “to falter”, according to the Programme Manager).

Responding to the latter reason for failure, a compulsory feature of KTPs are funded “away days” involving the firm, the HEI and the Associate.

Another attractive feature during the application process is that HEIs typically take the lead and “pre-fill” much of the paperwork for the SME.

The main business criticism of KTPs is the time frame. According to the Programme Manager, it is a “huge turn-off” that a firm cannot get an Associate in post for at least six to nine months. This finding is reiterated by Regeneris (2010, p.i), which further identifies the “inflexible” and often irrelevant training for Associates as a further source of criticism.

Acclaimed business-friendly features include:

- access to “unbiased experts”;
- access to other university resources;
- a “fully supported project manager” at the HEI; and
- relative lack of bureaucracy.

## 5. Benefits for the participating SMEs

According to the Programme Manager, typical feedback from participating firms is that their KTP enabled them to realise a project that had “been on the backburner”, often for many years, and for which they had previously had insufficient resources.

According to Regeneris (2010, p.3; also pp. 37-38), there is clear evidence of additionality:

The results of the business survey illustrate that KTP does effectively address the market failures identified; only 7% of business participants reported they would have achieved the same impacts without participating in KTP. The remainder reported that without KTP they either would not have achieved these at all (23%), or would have achieved them to a lesser extent (47%), or would have achieved them at a later date (23%).

Average benefits claimed for participating businesses include an average of 32 new jobs and a projected increase of annual PBIT of over £3.6 million (TSB, 2009, p.11). However, it is not clear how these figures are arrived at.

There might be some doubt as to the consistency of claimed levels of additionality with the levels of satisfaction noted in C.2 above.

#### D. Programme results dissemination and communication activities

- Is detailed planning of results' dissemination activities required by programme for each project?  
Yes

From the participating HEI, dissemination is expected via teaching materials, research (including scholarly publication) and, in particular, through the involvement of more academics in knowledge transfer.

From the participating SME, internal dissemination is expected via, for example internal bulletins and, in particular, training so that the firm retains new capabilities even if the Associate leaves. It is vital that KTP projects are not undertaken in isolation from other employees. External dissemination of the firm's KTP experience takes place through case studies (here the website is key – see below), opportunities to address business “breakfast meetings” and so forth (see A.1 above).

- Area marketing campaigns associated to the programme?

Yes ... but (see below)

- If Yes please detail

Marketing budgets have been cut (even before the October 2010 Comprehensive Spending Review). In principle, it is desired that SMEs should investigate the scope for collaboration with HEIs. In practice, the onus is on HEIs to recruit SMEs (indeed, to introduce them to the “UK's most closely guarded secret” – at least, in the world of business support programmes!). Increased funding in recent years provides HEIs with an incentive to take the initiative.

- Sources of information and available reports: (*the database should provide ability to upload the reports used reports*)

- National:

Regeneris (2010). *Knowledge Transfer Partnerships Strategic Review*. Technology Strategy Board, Feb.2010.

<http://www.innovateuk.org/assets/pdf/corporate-publications/ktp%20strategic%20review%20feb%202010.pdf>

As of November 2010, the latest Technology Strategy Board report available is:

TSP (2009): Technology Strategy Board (2009). *Knowledge Transfer Partnerships*, 2009/09.

<http://www.ktponline.org.uk/assets/Uploads/KTPAnnualReport0809.pdf>

The previous Review took place in 2002 (Regeneris, 2010, p.10). There are no available reports at regional level.

For the national KTP scheme:

<http://www.ktponline.org.uk/>

In particular, for detailed statistics:

<http://www.ktponline.org.uk/quarterly-statistics>

	<ul style="list-style-type: none"><li>• For the West Midlands: Marc Fleetham (<a href="mailto:m.j.fleetham@wlv.ac.uk">m.j.fleetham@wlv.ac.uk</a>) Wolverhampton University (on behalf of Advantage West Midlands).</li></ul>
<b>Name of person and organization and date of filling in the template</b>	
<i>Geoff Pugh and Jon Fairburn, Business School, Staffordshire University</i>	
<b>Comment box:</b>	
<i>(you can use this space in case you wish to make any clarifications about the data provided in the table or sources of information or reasons why some data was not able to gather or other points you think necessary for the better understanding of the specific programme).</i>	

## Appendix 1. Evaluation of existing evaluations: Does existing evaluation of the KTP scheme meet best practice standards?

Synovate (2004) is a book-length evaluation of a six business support programmes for the DTI. These programmes are the second wave to be investigated, the first wave having taken place in 2003. This study includes Knowledge Transfer Partnerships (KTP), which is one of the programmes of interest to GPrix.

A specific objective of this study is to “provide data to feed into in-depth assessment of the impact and effectiveness of each scheme, taking account of additionality, substitution and displacement”. Yet the methodology excludes a comparison group, for example, unsuccessful applicants, which is required for rigorous identification of additionality (Section 1.3 – eccentrically, the Report is not paginated):

Interviews were conducted amongst a sample of companies known to have participated in each of the schemes.

Even more eccentric than the lack of page numbers is the passing remark that (Section 1.3):

The ideal would have been to simply interview those that had completed a project (and perhaps for comparison those whose applications to the schemes had been unsuccessful).

What follows is a non-sequitur as far as justifying the study’s departure from this “ideal”.

More positive is that the study does include a range of questions designed to elicit respondents’ perceptions of additionality. However, the need – or even the possibility – of rigorous statistical analysis to identify additionality is not addressed or even acknowledged.

In the event, a few unsuccessful applicants were interviewed to enable comparison on particular questions. For example, towards the end of the study (p.208), the views of unsuccessful applicants were sought on the application process. Yet in such small numbers that:

It should be borne in mind when interpreting the unsuccessful applicant results that only a small number of unsuccessful applicants were interviewed and so the differences are unlikely to be statistically significant.

Specifically, for KTP four unsuccessful applicants were interviewed; for another programme one; and for two none at all.

In 2006, Momenta, the Managing Agents of the Knowledge Transfer Partnership programme, completed an evaluation for the KTPs funded by the Biotechnology & Biological Sciences Research Council (BBSRC). On the internal evidence, this does not meet best practice standards (Momenta, 2006, pp.9-10):

The review was limited to those partnerships that received BBSRC sponsorship support ... Further limitations on the review process were the accuracy of information held on the KTP database. Currently there are no requirements for the partners to take part in longer-term reviews of the outcomes to their partnership. They are not required to provide up-to-date contact information and have the opportunity to request that they are no longer contacted.

Regeneris (2010) falls into the familiar pattern of extensive evaluations that generate some interesting data but that do not meet best practice standards and thus carry only limited conviction regarding claims to additionality and seemingly precise calculations of turnover and GVA impact, number of jobs created and so forth.<sup>5</sup> In particular, their survey of businesses is restricted to KTP participants with no recognitions of the need for a control or, at least, comparison group. This is made clear in Appendix A, where Table A-1 gives details of the sample of firms surveyed:

All businesses in active or completed KTPs since 2004 ...

It seems that firms withdrawing from KTP projects were surveyed but were asked questions relating only to their reasons for withdrawing (see Regeneris, 2010, p.B-19). Hence, this opportunity for introducing a comparison group was neglected. Instead, additionality is measured only by responses to the standard question (p.B-17): Without taking part in the KTP, would these benefits: have been achieved in any case; have been achieved, but later; have been achieved, but to a lesser extent; Not have been achieved at all.

We conclude that the existing evaluations of the KTP scheme *do not meet best practice standards*.

## References

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- This is just one of around 40 evaluation reports included on the Department for Business, Innovation and Skills website: <http://www.berr.gov.uk/policies/economics-statistics/economics/evaluation/evaluation-reports>

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<sup>5</sup> The “gross jobs impact” is calculated using “additionality factors derived from survey responses (see Appendix C ...)” (Regeneris, 2010, p.39).

## Appendix 2: Criteria for Support of Knowledge Transfer Partnership Projects: December 2010

### **The Technology Strategy Board**

The Technology Strategy Board's objective is the acceleration of sustainable UK economic growth through the commercialisation of science, technology and new ideas. The Board has a broad remit across all business sectors, but has identified a number of priority challenge and technology areas on which to focus its investment and resources. The Technology Strategy Board works in partnership with the Research Councils, the Devolved Administrations and UK Government Departments, through aligned funding in key areas.

### **Knowledge Base Organisations**

The knowledge base partner in a KTP Project should be the most appropriate to meet the business need.

The HEFC research rating of an HEI's academic department will not be a factor in assessing whether the Technology Strategy Board will support a KTP project. The Board is therefore prepared to consider funding KTP proposals involving HEIs and FEIs (teaching to at least NVQ Level 4), as well as public and private sector research and technology organisations (RTOs) which satisfy the eligibility criteria.

### **Business Size and Characteristics**

The Technology Strategy Board wishes to focus its funding primarily on supporting SMEs and third sector organisations across the UK, and particularly those which show high growth potential. Participation in KTP by large companies (and organisations) will be conditional upon them demonstrating how they propose to draw in and facilitate the involvement of supply chain companies and SMEs.

### **Technologies, Disciplines and Subject Areas**

The Technology Strategy Board wishes to align the KTP projects it supports more closely with its priorities. These embrace:

- technology innovation (advanced materials, bioscience, electronics, photonics and electrical systems, information and communication technology, and nanotechnology),
- competency innovation (high value manufacturing, digital technologies, including design)
- challenge led innovation (energy generation and supply, sustainability (the built environment and food), healthcare, transport, creative industries, space, and high value services)
- Innovation platforms (low carbon vehicles, assisted living, low impact buildings, detection and identification of infectious agents, sustainable agri-food supply chain, stratified medicine)

The Technology Strategy Board's priority is to fund KTP projects which demonstrate the potential for a high level of innovation, economic and/or societal impact, as well as challenge for all the participants, in the areas listed below (more detail of the strategies for these can be found on the Technology Strategy Board website [www.innovateuk.org](http://www.innovateuk.org)). We therefore wish to prioritise technology-based KTPs involving the transfer of knowledge, technology and expertise within these areas. This includes projects with businesses and third sector organisations working within these areas, as well as projects which address issues which come under these headings but involve businesses in other market sectors

- Advanced materials
- Nanotechnology
- Biosciences
- Electronics, photonics and electrical systems
- Information and communication technologies
- High value manufacturing
- Digital technologies
- Emerging technologies
- Energy generation and supply
- Environmental sustainability
  - Sustainable agriculture and food
  - Low impact buildings
- Creative industries
- High value services
- Medicines and healthcare
  - Assisted living
  - Detection and identification of infectious agents
  - Stratified medicine
- Transport
  - Low carbon vehicles
- Space

The Technology Strategy Board intends that 75% of the KTP portfolio it funds should be technology-based projects within its priority areas (as described above) and should wherever possible be funded jointly with another KTP funding organisation. The other 25% should address underpinning or enabling capabilities (including projects addressing strategic challenges associated with marketing, business systems and processes). These projects must demonstrate the potential for high impact and fall within the priorities of at least one other KTP funding organisation and will, in all cases, be jointly funded. The Technology Strategy Board will no longer be the 'funder of last resort'.

It is intended that, in due course, half of the projects funded within the Technology Strategy Board's priority areas should be stimulated through targeted 'calls' for proposals in specific areas, and the remainder should continue to be responsive to unsolicited proposals. Such 'calls' will be publicised through the KTP, KTN and Technology Strategy Board websites, as well as directly to the KTP stakeholder community.

**Shared funding / sole funding**

The Board would prefer shared funding whenever possible, but will sole fund if necessary for projects focusing on the transfer of knowledge, technology and expertise within its priority areas.