

Community Innovation Survey 1996

Service Sector

* NEW VARIABLE NAMES

25 July 1997

Do we hat	re your correct	
name and	address?	
Yes		
🗂		
No L	Please correct	



A Government Executive Agency

Office for National Statistics

Newport

Gwent

NP9 IXG

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Restricted - Commercial

This voluntary inquiry is being conducted by the Office for National Statistics on behalf of the Department of Trade and Industry

What we want you to do

The aim of this survey is to gather up-to-date information on the levels and characteristics of innovation activity in UK firms. This will benefit businesses by allowing DTI to more effectively target its science and technology policies. The information collected will also form part of the European Community Innovation Survey (CIS). The survey aims to cover all your firm's products/services.

Please complete and return this form by post or fax by 8 September 1997.

A prompt return will ensure we don't need to trouble you further with reminder letters or telephone calls.

Use informed estimates if exact figures are not readily available.

Need more information or help? If the enclosed notes cannot help please contact

Kathryn Davies

telephone 01633 812257/812585

E-mail kathryn.davies@ons.gov.uk

What we do with the information you give

We promise to keep the information you supply confidential

The growing awareness of the important role innovation plays in the economy has been increasingly recognised by government, business and other users. Efforts are being made to ensure that the CIS provides comparable data between participating countries so that the survey will also provide international benchmarking information. It is expected that DTI will have results available by mid-1998. Further information can be obtained by telephoning Anthony Craggs on 0171-215 1911 (Textphone 0171-215 6740).

Thank you for your co-operation

M Bale

JOHN BARBER

Department of Trade and Industry

Notes

- All questions relate to the period 1994 to 1996, unless otherwise stated.
- All questions relate to your enterprise's activity in the UK.
- Definitions of various terms are provided in the questions. Further information and selected examples
 of technological innovation can be found on pages 12-14.

General Information abou	it the enter	prise
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Name of respondent	88 0 m8 5 c44 A C48 A A C4A A C4A C4A C4A C4A C4A C4A C4A C	V + CH TC » F E E F TO E E E C C C C C C C C C C C C C C C C	540 *6 6*66**
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TelephoneFax		ないかながかであり かがも 日本 ももあまれのも はんかくぶんか	#21日前曹俊徽张会长办 o
Was the turnover of your enterprise affected by at lea by any of the following?	st 10% between Ja	nuary 1994 and D	ecember 1996
Your enterprise was established	Yes	No	ESTABLIS
Turnover increased due to a merger with another enterprise or part of it	Yes	No	HERGER
Turnover decreased due to sale or closure of part of your enterprise	Yes	No	Crosuse
Please give the following basic information on your	enterprise.		
If possible, please answer this question for the calend available for this period, please provide figures for b 1996 to 5 April 1997 inclusive for 1996, from 6 April use the same reporting period for both years.	usiness years endi	ng on any date fro	m 6 April
	1996	1994	CHANGE 94/96
Number of employees (at end of reporting period)	EMP_96	EM-94	EMPC %
Turnover ¹ (£'000s)	Tuens_96	Tuen-94	Turne %
Exports (£'000s)	Export 96	EXPORT 94	EXICPT(.%
¹ For banks - interests and commissions received; for	insurance compan	nies - gross prem	ium written.
		day month	~
Period covered by return (for 1996)	from:		DHEFROM
	to:	/	DATE_TO

Scope and impact of innovation activity of the enterprise

3	~ -	a
-	**************************************	Innovation
A		AREADON VARCATIONS

A new or improved service is considered to be a technological innovation when its characteristics and ways of use are either completely new or significantly improved or when it is performed in a significantly improved way or by using new technology. The adoption of a production or delivery method which is characterised by significantly improved performance is also a technological innovation. Such adoption may involve change in equipment and/or organisation of production and may be intended to produce or deliver new or significantly improved services which cannot be produced or delivered using existing production methods or to improve the production or delivery efficiency of existing service. For further information, see definitions on page 12.

	994-1996, has your enterprise he market any new or	Yes	O POPULATION OF THE PROPERTY O	No		SERV_INN
significantly improduce or deliver	oved services or methods to r services?					
 If yes, please ar 	iswer the following questions, other	erwise contin	ue to <u>ques</u>	tion 3 on t	he next pag	ge.
	of the following categories do your r services fall (see notes on page	-			nethods to	
Services	Methods to produce or deliver services		SERV	YYT		
•	of your enterprise's technologics services been developed in any		-			0
Mainly by other en	erprises or institutes	F	lease tick	SERVE	page Tampina	
	together with other enterprises or education institutions)	To occupant the second		SERVE		
Mainly by your ent	erprise			SERVE	_3	
		portyran earl man and an and an and	A victima of the contract of t	y		1
enterprise introdu	194 and 1996, did your te technologically new or	Yes		No		NowInd
improved services new to your enterp	new to your enterprise and prises's market?					
If yes, please estima	ite the share of turnover due to the	se services i	n 1996		Turn	Na
					IURN	_100

DTI 3TX				
<i>৽ৢঽ৽৴৽ৼৼৼৼড়ড়ৼঢ়</i> ঢ়ঢ়ৼঀঀৼ৻৴ৼ৽৽ঀ৽৶৽ৼৼড়৽ৼৼৼঀৼৼড়ঢ়ৼ৾ঀৼ৾ৼঀৼৼড়ড়ড়ৼৼৼড়ড়ৼৼৼড়ৼৼৼৼড়ৼৼড়ড়ৼড়ড়ড়ৼড়ড়ড়ৼৼড়ৼৼঢ়ড়ৼঢ়ড়	5% \$7 \$2 \$2 \$2 \$4 \$4 \$4 \$4 \$4 \$4 \$4 \$4 \$4 \$4 \$4 \$4 \$4	· රිසිරිස් සිවමට වනේ ඉංගු	¢γφ⊅∲√βΩσ⊌⊄Φ⊕±±⊕±≡	(FEEEE DAS A A A A A A A A A A A A A A A A A A
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3. Between 1994-1996, did your enterprise have	Yes		No	
unsuccessful or not yet completed projects to develop				Inun
or introduce new or significantly improved services or	*			
methods to produce or deliver services?				
For further information, see definitions on page 12.				
4. Between 1994 and 1996, did your enterprise in		iy of the	e followin	g organisational
changes or new management techniques? (tick all that	appiy)		•	
Electronic Data Interchange	The second secon			Tradocol
ust In Time or similar planning system	Oranic Admirat			Transit
K = + + + + + + + + + + + + + + + + + +		ě		11 (21117) 11
		200		
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Use of Electronic Mail Use of the Internet Investors in People (IiP) Quality Management System or Standard (e.g. ISO9000) Idenchmarking your performance against other firms Other (please specify)				E-MAIL INSTERNET INSTERNET INSTRUCTION BENCHMAR INSTRUCTION INSTRUCTION INSTRUCTION
Jse of Electronic Mail Jse of the Internet Investors in People (IiP) Quality Management System or Standard (e.g. ISO9000) Jenchmarking your performance against other firms Other (please specify) Jone In the last 10 years, did your enterprise have	Yes		No	E-MAIL INSTERNET INSTERNET INSTRUCTIF INSTRUCTIF BENCHMAR INSTRUCTIF INSTRUCTIF
Jse of Electronic Mail Jse of the Internet Investors in People (IiP) Quality Management System or Standard (e.g. ISO9000) Denchmarking your performance against other firms Other (please specify)	Yes		No	E-MAIL INSTERNET INSTRUCTIP INSTRUCTIP SEVENMAR

continue to question 5b.

5b. In the next 5 years do you expect your enterprise to have any projects to introduce new or improved services or methods to produce or	Yes	No	
 If you have answered no to question 5b, please please continue to <u>question 6</u>. 	now go to g	uestion 13 on	page 10, otherwise
6. Please estimate how your turnover in 1996 i definitions on page 12.	s distributed l	petween the foll	owing services. See
Technologically new services introduced between 1994	and 1996		%Tuensen
Technologically improved services introduced between	1994 and 1996	5	% THOWIMP

Unchanged or only marginally modified services between 1994 and 1996,

other turnover

Total turnover in 1996

100 %

please estima	te expend	prise engage in liture involved. lither in £'000s o						* .
If your enterprise has not been involved in technological innovation between 1994 and 1996, your enterprise may have been involved in residual work from previous technological innovative activity (e.g. training) or preparations for future technologically innovative work (e.g. acquisition of technology, machinery etc.), so please still answer this question.								
The expenditure items should cover current (labour costs, acquisition of service, materials etc.) and capital expenditure (instruments and equipment, computer software, land and buildings). If it is not possible to estimate all expenditure items involved, please at least indicate if your enterprise has been engaged in a particular innovation activity or not. For further information, see definitions of technological innovation activities on page 12.								
					(Plea.	se tick)	If yes, pleas	
					No	Yes	(£ 000s), or	% of turnover
Research and e	•	tal Development	within the	enterprise	Troto	A_RD	EXPINSTRA	
Acquisition of R&D services (extramural R&D)			EXTER	(_QD_	EXPEXTRA			
Acquisition of machinery and equipment linked to technological innovations			MACH	LEQU	EXP_MATQ			
Acquisition of technological in		ind other externa	l technolo	gy linked to	Ext-	TECH	EXPETECH	
Preparations fo methods to pro-		ignificantly impoliver them	roved serv	ices or	THED	SERV	Exp_SERV	
Training directl	y linked t	o technological ii	nnovations	5	TOAIN	PCNK	EXPTRAIN	
Market introdu	ction of te	chnological inno	vations		MARY	T	EXPHARE	
TOTAL						The second state of the	EXPTOTAL	
Number of R& equivalents):	D person	inel in 1996 (in I	terms of fi	ill time		RI	PER	
Did your enter	prise eng	age in R&D bet	ween 199	4 and 1996? ((tick as a	i <i>ppropri</i>	iate)	
Continuously		Occasionally		Not at all	or o	A UTILLAND A STATE OF THE STATE	DCON	
scientists and e at least first deg	ngineers, ree level i	ow many of you irrespective of n a science or en tage of total emp	current fu gineering	unction? (qual subject.) Ansv	lified to wer eithe	bc i	(Number)—QSE QSE	7
How many patents did your enterprise apply for between 1994 AND								

Factors influencing innovative activity

Innovative activities are development of technologically new or improved services and methods to produce or deliver services and related research, acquisition of external technology, acquisition of machinery and equipment linked to technological innovation, industrial design or other production preparations, training linked to technologically innovative activities, market introduction of technological innovations.

If your enterprise has been engaged in any technologically innovative activities between 1994 and 1996, please answer the questions in this section (i.e. questions 10-13) in relation to these activities, If your enterprise has not been engaged in any technologically innovative activities between 1994 and 1996, we would still be interested to hear your views as to what may influence any future innovative activity of your enterprise, so please still answer questions 10-13

10. What are the main objectives of your enterprise in developing and introducing technological innovations?

Please indicate the degree of importance attached to the various alternatives by ticking 0 = not relevant, 1 = slightly important, 2 = moderately important, 3 = very important.

Objective		Impo	rtance	
	0	E-Crimate	2	3
Replace services being phased out OREP				
Improve service quality OTMP		You wante		
Extend service range				
Open up new markets or increase market share COPN	or confirmacy.			
Fulfilling regulations, standards OSTD		į		
Retain or protect existing markets ORFT				
Improve internal business process flexibility OPCS				
Reduce unit labour costs OLBR				
Reduce materials consumption OMAT			į	
Reduce energy consumption ONK				
Reduce environmental damage OFNV				

11. How important to your enterprise are the following as sources of information for new technological innovation projects or for the completion of existing services?

Please indicate the degree of importance by ticking 0 = not used, 1 = slightly important, 2 = moderately

important, 3 = very important.

Information Source			Importance				
		0	1	2	3		
Sources within the enterprise	SQUIT						
Other enterprises within the enterprise group	Sarb	***************************************	-				
Competitors	30H. I	do					
Clients or Customers	201I		though the				
Consultancy enterprises	2001		4				
Suppliers of equipment, materials, components or	software						
Universities or other higher education institutes	SUIVE						
Government institutes	SGOV	Ì					
Private non-profit research institutes	SOND	ali phone in the contract of t					
Patent disclosures	SPAT	İ					
Professional conferences, meetings, journals	2000						
Computer based information networks	SOFT	(APPAIRMAN)					
Fairs, exhibitions	SEXB		A separate and a sepa	No.			
Environmental regulations	SEM						
Health and Safety regulations	SHSB						
Service Standards	7222						
Research Associations or other independent Resear	ch and			M. Williams			
Technology Organisations	SOLO	***************************************	and the control of th	<u>i</u>			
Training and Enterprise Councils	STEC		-drhee-adm				
Business Links	SRS	anti-Log-					
Trade Associations	2AT?						

Which of these information sources has provided your enterprise with technological knowledge used to carry out innovation?

(tick all th	nat apply) (tick all that apply)
Sources within the enterprise	Professional conferences, meetings,
I-ENTEDP	journals I — COVICE
Other enterprises within the enterprise	Computer based information networks
group I-OTHNET	T-COMPUT
Competitors T_ CMPET	Fairs, exhibitions T = EXHIB
Clients or Customers I — CUSON	Environmental regulations I_ COVR G
Consultancy enterprises I _ CONSUL	Health and Safety regulationsHSQG
Suppliers of equipment, materials,	Service Standards
components or software T - SUPPLY	II - SERSTO
Universities or other higher education	Research Associations or other
institutes	independent Research and Technology
I_HEIS	Organisations 1 – 270
Government institutes $T = QOVT$	Training and Enterprise Councils I - TECH
Private non-profit research institutes I_PNP	Business Links T — BLS
Patent disclosures T - DATENT	Trade Associations I — TAS

12. Did your enterprise have any co-operation arrangements on technological innovation activities with other enterprises or institutions between 1994 and 1996?

Yes	No	The state of the s
The state of the s	6-	

Innovation co-operation means active participation in joint R&D and other technological innovation projects with other organisations. It does not necessarily imply that both partners derive immediate commercial benefit from the venture. Pure contracting out work, where there is no active participation is not regarded as co-operation.

If yes, please indicate the type of organisation and location of your co-operation partner .(tick all that apply)

	Location of partner							
Type of partner		Local	National	EU	USA	Japan	Other	
Other enterprises within the group	0	HE WILL	OTHENT-N	OTHERNE	DIMENT_0	OTHENT-	CLHEVAL.	10
			COMPET-N					
			W-MOTOW_N					
			CNAIT-M					
Suppliers of equipment, materials, components or		***************************************						1
software	ŁE	MATA-F	SUPPLY-10	37667-E	SUPPLY-U	STABLY-2	KIAATE	ļc
Universities or other higher education institutes		HEI-L	HEI-N	HEI-E	HEI -U	HEI -J	HEI -(
Government institutes ? (07) -	ŀ	40V-L	GOV-11	GOV-E	GOV-4)	GOV-71	gov c	ļ
Private non-profit research institutes 10015			M-WA				POP-O	political property and
Research Associations or other independent							_	
Research and Technology Organisations	Ì	<u> 1-079</u>	<u> </u>	E10-E	C-013	210-2	DNO-C	-

¹ Local applies to partners situated within 50 miles of your enterprise.

13. Have any of your innovation projects in 1994-1996 been (tick all that apply)

PACIF	uslv	data	470.08
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DELAYE	D
J	-
	DELAYE

terminated after being started?

not even

VOTSTACT

If yes to any of the above, what contributed to this? (tick all that apply)

Factor	Seriously	terminated after	not even
	delayed	being started	started
Excessive perceived economic risk	D-EON	T-ECO10	NS-FON
Lack of availability of finance \(\tag{H31}	D-AVFIN	T_AVFIN	NS-AVFIN
Cost of finance H33	D-(0F1N)	T_OFIN	NS-COFIN
Organisational rigidities	MADO- a	CIADSO_T	1430-CXAV
Lack of qualified technical personnel (HSI-	D-0216	T_0TP	MS-QTP
Lack of qualified managerial personnel \ H5\	D-OMP	T-OMP	MS-OMP
Lack of information on technology	D-100FOT	T_INFOT	NS-INFOT
Lack of information on markets	D-10201	T_110F01	NS-INFOT
Direct cost of innovation?	15007	7200-T	NS-COST
Regulation, standards	D 552	T_24	NS-REG
Lack of customer responsiveness to new services	D-CUST	T-CUST	NS-CUST
Lack of opportunities for co-operation with other			
firms or technical organisations	D- (20)	T-000P	1000-00A
Lack of availability of external technical services	D_ETS	T-ETS	NS-ETS
Other (Please specify)			Province of the second of the
			of the control of the
DTI14TX	D-anes	T_OTHER	NS-OTHER

Cost of finance refers to the costs incurred in obtaining any finance that may be available for innovation activities. This may be a hampering factor if, for example, interest rates are too high, or repayment conditions unfavourable.

Direct cost of innovation refers to the costs incurred in carrying out technological innovation. This may hamper innovation if, for example, machinery or materials necessary for innovation is too expensive.

Government Schemes

14. Did your enterprise receive any central Government financial support for innovative activitie	yes yes	No		
in 1996? (loans including a subsidy element, grants)			GOVSC	TPPT
15. Did your company participate in or obtain assistance from any of the following types of	Yes	No		
innovation related Government programmes since 19 (See explanatory notes on page 13 for descriptions of the types of programmes)			GOV PC	žQć
If yes, please indicate which, (tick all that apply)				
Technology Development, R&D e.g. SMART. SPUR. Advanced Manufacturing Technology	TECHDEVE			
Collaborative Research e g. LINK. General Industrial Collaborative Programmes	COTTSEZ			
UK Technology Access & Transfer e.g. Technology Transfer Centres, Demonstrator projects, Teaching Company Scheme	TECHACCE			
Overseas Technology Access & Transfer e.g. Overseas Technology promoters, EC Relay Centres, Overseas secondments and overseas information services	OVERTECH			
Management Advice e.g. Managing into the 90s. Benchmarking Services and Clubs	MOTADVIC	A		
Investment Support e.g. Regional Selective Assistance, Regional Investment Grants	INVISUPP			
European Programmes e.g. Framework, Esprit, Eureko Innovation related literature	EUROPROG			
In assessing innovation related Government programmes have you used a Business Link?	Yes	No		
		P	VON 1211	

Thank you for completing this survey

DEFINITIONS

Technology can be defined as a complex set of knowledge, capabilities, routines, competencies, equipment and technical solutions necessary to produce and deliver a service.

Technological Innovations comprise implemented new or significantly improved services and new or significantly improved ways of producing or delivering a service. A technological innovation has been implemented if it has been introduced onto the market (service innovation) or used within a production or delivery process (process innovation). The service or process should be new (or significantly improved) to the enterprise. It does not have to be new to the relevant market.

The introduction of a new or significantly improved service or production or delivery method can require the use of radically new technologies or a new combination of existing technologies or new knowledge. The technologies involved are often embroiled in new or improved machinery, equipment or software. The new knowledge involved could be the result of research, acquisition or utilisation of specific skills and competencies.

The following changes are *not* technological innovations if they are not directly related to the introduction of new or significantly improved services or ways of producing or delivering them:

- organisational and managerial changes such as the implementation of advanced management techniques, the introduction of significantly changed organisational structures and the implementation of new or substantially changed corporate strategic orientations
- · the implementation of a quality standard such as ISO9000.

See page 14 for examples of innovation.

INNOVATION ACTIVITIES

Innovation activities are all those scientific, technological, organisational, financial and commercial steps which actually, or are intended to, lead to the implementation of technologically new or improved services or processes.

Research and experimental Development (R&D) comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, and the use of this stock of knowledge to devise new applications. Design, construction and testing of a prototype is often the most important phase of development work. Software development is included as long as it involves making a scientific or technological advance. R&D can be carried out within the enterprise, or can be acquired from external R&D services.

Acquisition of machinery and equipment (including integrated software) linked to innovations implemented by the enterprise.

Acquisition of software and other external technology linked to technological innovation includes the acquisition of packaged software, patents, non-patented inventions, licenses, know-how, trademarks, drawing plans and consultancy services (excluding R&D) relating to the implementation of technological innovations, plus the acquisition of packaged software that is not classified elsewhere.

Preparations to introduce new or significantly improved services or methods to produce or deliver them comprise activities aimed at defining procedures, specifications and operational features (including final tests) necessary for the introduction of innovations.

Training directly linked to technological innovations is training for the implementation of new or substantially improved services or methods to produce or deliver them. Expenditure for training might include acquisition of external services and expenditure for in-house training.

Market introduction of innovations includes activities in connection with the launching of new services. These may include preliminary market research, market tests and launch advertising, but will exclude the building of distribution networks to market innovation.

Notes to question 15

Technology Development, R&D covers programmes of financial assistance to new developments within the company.

Collaborative Research covers financial or organisational assistance to collaboration between your company and other companies and/or Universities in the UK.

UK Technology Access & Transfer includes programmes to assist the acquisition of new technological knowledge through awareness, demonstration or people movement.

Overseas Technology Access & Transfer includes programmes to assist the acquisition of new technological knowledge through awareness, demonstration or people movement from companies. Universities or other institutions overseas.

Management Advice programmes assist the spread of Best Practice in business processes related to innovation.

Investment Support covers financial assistance with capital expenditure on new plant and equipment.

European Programmes covers mainly EC operated programmes.

Innovation related literature includes handbooks and guides to best practice, directories of technology sources etc.

Business:Links covers the use by the company of services provided by Business Links such as information, personal business advisors and innovation and technology counsellors.

Selected Examples of Innovation in Service Sectors

- Use of cellular phones to reroute drivers throughout the day
- · A new computer mapping system, used by drivers to work out the fastest delivery route
- Introduction of a new switching system that allows the digital transfer of information across the telecommunications net
- · The introduction of smart cards and multipurpose plastic cards
- · A new bank office without any personnel where clients conducted business through computer terminals
- Telephone banking
- Development of customer software packages with various degrees of support for customers
- The introduction of new multi-media software applications for educational purposes
- · The introduction of qualification procedures for medicine testing methods

Examples of innovations in Services and methods to produce or deliver Services

A delivery company may introduce a new routing system used by drivers to work out the fastest delivery route. The service (i.e. delivering packages, for example) has not changed, but the method to produce this service has changed (i.e. how the driver gets from A to B).

A telephone company may introduce digital exchanges. This, in itself, is not a new service, but is an innovation in the method to produce the service they already provide. This innovation in the methods of producing the service may enable the company to then introduce new services.

The service is what is seen by the customer (e.g. the delivery of an item or receipt of professional advice). The method to produce or deliver the service is often invisible to the customer, though may result in a more efficient service.



UK Innovation Survey

	PLEASE USE BLACK INK TO COMPLETE THIS FOR	ξM
	Write any changes to your name/address in this box only.	1
TO BE COMPLETED FOR:	FROM:	
	Office for National Statistics A Government Executive Agency NEWPORT NP10 8XG	
YOUR CONTACT FOR HELP AND QUERIES:		
PLEASE COMPLETE AND RETURN THIS FORM VIA POST Informed estimates are acceptable if exact figures are not availa Notes are enclosed to help you complete your return or you may	ble.	
IMPORTANT:		
· · · · · · · · · · · · · · · · · · ·	ness to unauthorised persons.	
FOR YOUR INFORMATION:		
 The numbers of businesses and questions are kept to the m This inquiry will benefit businesses by allowing governme Copies of our code "Maintaining the Confidentiality of Dat If you wish to use our Minicom service (for the Deaf), pleas 	ent to more effectively target its science and technology policies. ta" are available on request.	
THANK YOU FOR YOUR CO-OPERATION		

SELECTED EXAMPLES OF INNOVATIONS

The following are derived from real examples from previous surveys and include new-to-market introductions together with products and processes new to the business although already in the use in the market or industry.

PRODUCT INNOVATIONS

Goods

Fibre optic based display lighting range

Automation of electronic testing equipment

Lighter weighting of vehicle bodies

Multi-function printer/scanner

Carbon fibre based sports equipment

Services

IT based Credit Risk assessment service

On line estate agency

Geographical Information System software

A new computer mapping system, used by drivers to work out the faster delivery route

PROCESS INNOVATIONS

Linking of Computer Aided Design station to parts suppliers

Introduction of Electronic Point of Sale equipment in Garden Centre

Digitising of pre-press in printing house

Robotised welding

EXAMPLES WHICH ARE NOT TECHNOLOGICAL INNOVATION

The renaming and repackaging of an existing soft drink popular with older people, to establish a link with a football team in order to reach the youth market, is not a technology based innovation as defined in this survey, but could register as a marketing change in question 17.

New models of complex products, such as cars or television sets, are not product innovation, if the changes are minor compared with the previous models, for example offering a radio in a car.

DEFINITION OF AN ENTERPRISE

An *enterprise* is defined as the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain autonomy in decision making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit.

Introduction

This questionnaire asks about innovation in your enterprise during the three year period 1 January 1998 to 31 December 2000.

We begin by looking at innovation based on the results of new technological developments, new combinations of existing technology or utilisation of other knowledge held or acquired by your enterprise. We then consider other aspects of the innovation process including the sources of technical and market knowledge, the extent to which your enterprise co-operates and the type of impact that successful innovation has on your enterprise's performance. The final part of the questionnaire broadens the focus to consider organisational and management changes.

We would like you to consider innovation activity at the enterprise level - that is well defined reporting units, which may be subsidiaries or parts of larger units (enterprise group) or independent companies. See inside cover for a fuller definition of an enterprise.

1.	Please briefly describe your enterpri	sa's main product (goods or sorvice	ne).
••	riease briefly describe your enterpris	MNPROOTX	s).
2. perio	Did any of the following significant cood 1998-2000? (please tick one)	hanges occur to your enterprise dur	ing the three year
	enterprise was established	SIGCHANG	2
	over increased by at least 10% due to merger over decreased by at least 10% due to sale or	• •	3
	e of the above	violate of part of the chicipine	4
3.	Basic economic information about th	e enterprise	
3.1 servi	Total turnover market sales of goods and ces including export and taxes except VAT	£ 1998 £ 000 £ TURN98	2000 TURN00
3.2 (enter	Exports of goods and services r nil if appropriate)	£ 1998 £ 000 £ EXPORT98	2000 EXPORT00
	Capital expenditure r nil if appropriate)	1998 £	2000 CAPEX00 2000
3.4 (full 1	Number of employees time equivalents)	EMPLOY98	EMPLOY00
Of w	which: Approximate proportion educated to degree level or above	Science and engineering subject Other subjects	PROPSCI % %

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PROPOTH

¹For credit institutions: interests receivable and similar income; for Insurance services: gross premiums written.

3.5	ls your enterprise's largest marke	et? (please tick one)	
Locaf	MARKET	1	
Region	al ^s	2	
Nation	al	3	
Interna	tional	4	
4.	Product innovation (goods an	d services)	
signification new terfirm. I	cantly improved with respect to fundmental chnological developments, new combiners of product innovations set interested in products new to your e	th goods and services introduced to the ental characteristics. The innovation shorted the ental characteristics in the innovation shorted the ental characteristics. The innovation shorted the inside front cover. **Enterprise* - even if already on the marketime in the interprise in	ould be based on the results of on of other knowledge by your
new to	your market.		
		98-2000, did your enterprise introd ts (goods or services) which were	
No	0 → Go to question 5.	PRODINOV	·
Yes	1		
4.2	How were these products devel	oped? (please tick one)	PRODWHO
Mainly	by your enterprise or enterprise group)	1
Mainly	by your enterprise in co-operation wit	h other enterprises or institutions	2
Mainly	by other enterprises or institutions		3
	Please estimate how your turno ntroduced during the period 19	ver in 2000 was distributed betwe 98-2000 which were:	een products (goods or serv-
New to	your firm	PRODNEW	%
Signific	cantly improved	PRODIMP	%
Uncha	nged or only marginally modified	PRODUNC	%
Total	turnover in 2000		1 0 0 %
	· · · · · · · · · · · · · · · · · · ·	98-2000, did your enterprise intro s) which were also new to your e	
No	0 PRODNOV		SHARENOV
Yes	Please estimate the share	e of turnover of these products in 2000	%

²Situated within approximately 50 miles of your enterprise

³Situated within approximately 100 miles of your enterprise

PROI	DTXT	
5. Process innovation		
for this survey process innovation is the use of new or f goods and services. Purely organisational or managenovations see inside front cover.		
We are interested in processes new to your enterpri nat are new to your industry.	se - even if already in use in	your industry - as well as thos
.1 During the three year period 1998-2000, mproved processes for producing or supply our firm?	•	
Go to question 6 .	PROCINOV	
res 1		
.2 How were these processes developed?	(please tick one)	PROCWHO
Tainly by your enterprise or enterprise group		1
Tainly by your enterprise in co-operation with other en	nterprises or institutions	2
Tainly by other enterprises or institutions		3
.3 During the three year period 1998-2000, nproved processes for producing or supplyi our industry?		
Jo 0 PROCNOV		
Yes 1		
5.4 Please give a short description of your n	nost important process i	nnovation:
	CTXT	

6.	Innovation a	activities not completed or aba	ndoned				
6.1 During the period 1998-2000, did your enterprise have any projects to develop or introduce new or significantly improved products (goods or services) or processes that were: (please tick all that apply)							
Aban	doned		ABAND				
Not y	vet completed but	t on time	NYETTIME				
Not y	vet completed bu	t seriously delayed	NYETLATE				
Not e	even started		NOTEVEN				
7.	Longer term	n innovation activities					
	elop or implen	eriod 1998-2000, did your enterp nent technological change not dir sic R&D, technology watch?					
No	0	LONGTERM					
Yes	1						
8.	Factors han	npering innovation					
	8.1 A range of factors may inhibit your ability to innovate. Please grade the importance of the						
8.1	_			_	-		uie
8.1	_	nstraints during the period 1998-2		_	-		uie
8.1	_		2000: (please tick	_	-	ow)	High
Econ	following co		2000: (please tick	one box	in each ro	ow) Importance	
	following co	nstraints during the period 1998-2	2000: (please tick	effect	in each ro	Importance Medium	High
Econ	following co	nstraints during the period 1998-2 Excessive perceived economic risks	2000: (please tick No HPECRISK	effect	in each ro	Importance Medium	High
Econ	following co	Excessive perceived economic risks Direct innovation costs too high	No HPECRISK HPINCOST	effect	in each ro	Importance Medium	High
Econ factor	following contact formic rs	Excessive perceived economic risks Direct innovation costs too high Cost of finance	No HPECRISK HPINCOST HPCSTFNC HPAVFNC	effect O	in each ro	Importance Medium	High
Econ	following contact formic rs	Excessive perceived economic risks Direct innovation costs too high Cost of finance Availability of finance	No HPECRISK HPINCOST HPCSTFNC HPAVFNC	effect O	in each ro	Importance Medium	High
Econ factor	following contact formic rs	Excessive perceived economic risks Direct innovation costs too high Cost of finance Availability of finance Organisational rigidities within the enterprise	No HPECRISK HPINCOST HPCSTFNC HPAVFNC erprise HPORGRIC	effect O	in each ro	Importance Medium	High
Econ factor	following contact formic rs	Excessive perceived economic risks Direct innovation costs too high Cost of finance Availability of finance Organisational rigidities within the entertail	No HPECRISK HPINCOST HPCSTFNC HPAVFNC HPAVFNC HPLKPERS	effect O	in each ro	Importance Medium	High
Econ factor	following contains	Excessive perceived economic risks Direct innovation costs too high Cost of finance Availability of finance Organisational rigidities within the entertack of qualified personnel Lack of information on technology	No HPECRISK HPINCOST HPCSTFNC HPAVFNC HPAVFNC HPLKPERS HPLKTECH	effect O	in each ro	Importance Medium	High

9. Innovation-related expenditure in 2000

9.1 Did your enterprise engage in the following innovation activities in 2000?

(please tick all that apply and estimate expenditures where appropriate)

	Please tick if expenditure in the category	Please estimate innovative expenditure in 2000, incl. personnel and related investment expenditures (no depreciation)
Intramural research & experimental development (R&I	XINTER	£ ,000
Acquisition of external R&D	XEXTRA	£ ,000 ,000 XEXTRAM
Acquisition of machinery and equipment (including computer hardware) in connection with product or process innovation.	XMACH	£ ,000 ,000 XMACHM
Acquisition of other external knowledge such as licences to use intellectual property (eg. patents, know-how) or specialised services (eg. consultants, Universities).	XKNOW	£ ,000 ,000 XKNOWM
All design functions, including industrial, product, process an service design and specifications for production or delivery.	xDESIGN	£ ,000 ,000 XDESIGNM
Internal or external training for your personnel directly related to innovation activity.	d XTRAIN	£ ,000 ,000 XTRAINM
Internal or external marketing activities aimed at the introduction of your enterprise's innovations. Include market research and advertising of new innovations but exclude routine marketing activity.	XMARKET	£ ,000 ,000 XMARKETM
Tota	al expenditure	£ ,000

10. Internal r	esearch and development (R&D)				
If you have interna	al R&D-activities:				
10.1 How many	persons were involved in R&D activities with	thin you	r enterpi	rise in 200	00?
(in full time o	equivalents)	RDPERS			
10.2 How did y	our enterprise engage in R&D during the thr	ee year _l	period 1	998-2000	?
Continuously	RDCONT				
Occasionally	RDOCCAS				
11. Effects of	f innovation				
	licate the impact that your innovation activition. (please tick one box in each row)	ies have	had on	your ente	erprise in the
			Deg	gree of imp	act
		None	Low	Medium	High
Product	Increased range of goods or services				FRANGE
oriented effects	Opened new market or increased market share				FMKTSHR
	Improved quality of goods or services				FQUALITY
Process oriented effects	Improved production flexibility				FFLEXIB
	Reduced unit labour costs				FLABOUF
	Increased capacity				FCAPAC
	Reduced materials and/or energy per produced unit				FMATERI
Other effects	Improved environmental impact or health and safety aspects				FENVIRO
	Met regulations or standards				FREGS

12. Sources of information for innovation activities

12.1 Please indicate the sources of knowledge or information used in your technological innovation activities, and their importance during the period 1998-2000. (please tick one box in each row)

			Degi	ee or impor	tance
		Not used	Low	Medium	High
Internal	Within the enterprise	IFWITHIN 0	1	2	3
	Other enterprises within the enterprise group	IFOTHENT	$\overline{\sqcap}$		
Market	Suppliers of equipment, materials, components or	IFSUPPL software			
	Clients or customers	IFCLIENT			
	Competitors	IFCOMPET			
	Consultants	IFCONSLT			
	Commercial laboratories/ R&D enterprises	IFRDLABS			
Institutional	Universities or other higher education institutes	IFUNIV			
	Government research organisations	IFGOVT			
	Other public sector eg. business links, Governmen Offices	t IFOTHPUB			
	Private research institutes	IFPRI			
Other	Professional conferences, meetings	IFCONF			
	Trade associations	IFTRADE			
	Technical/trade press, computer databases	IFTECH			
	Fairs, exhibitions	IFFAIRS			
Specialised	Technical standards	IFSTAND			
	Health and safety standards and regulations	IFHEALTH			
	Environmental standards and regulations	IFENVIRO			

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13.	Innovation	on co-operation							
orga	nisations. It	eration means active participation is does not necessarily imply that eit out of work, where there is no acti-	her partner derives	immedia	te comm	ercial bene	fit from t		ıture.
		enterprise have any co-oper institutions in 1998-2000?	ation arrangem	ents on i	innova	tion activ	ities wit	h oth	er
No	0	Go to question 14. PCOOP							
Yes	1								
	Please inc	dicate the type of organisation $t \; apply)$	on and location		-	JK National		versed US	as Other
		Type of partner					Larope		
Inte	rnal	Other enterprises within your e	enterprise group	POTHENT	L	N	Е	U	O
Mar	·ket	Suppliers of equipment, materi	als, components o	PSUPPL r software					
		Clients or customers		PCLIENT					
		Competitors		PCOMPET					
		Consultants		PCONSLT					
		Commercial laboratories/R&D	enterprises	PRDENT					
Inst	itutional	Universities or other higher edu	acation institutes	PUNIV					
		Government research organisa	tions	PGOVT					
Spe	cialised	Private research institutes		PPRI					
14.	Public su	apport for innovation							
14.1	Did your	enterprise receive any public related activities in the perio		ncial or o	ther as	ssistance	and adv	/ice)	
No	0	Go to question 14.3	UPPORT						
Yes	1								
		e the sources of this public	support for inn	ovation-	related	activities	in the p	perio	d
1998	3-2000? (pl	ease tick all that apply)				ncial port	Otl partici		n
Loca	l or regional	government		SPLO	CAL F	F	O]	

government)

The European Union

Central government (including institutions working on behalf of central

SPCENT

SPEURO

 $^{^4\}mathrm{Situated}$ within approximately 50 miles of your enterprise.

		rticipated in or received as ogrammes in the period 19		•		_	ypes of
Tech	nology Development (eg. LII	NK, SMART)				SPDEVELP	
Tech	nology Acquisition (eg. Teac	hing Company Scheme, Demon	stration Project	s)		SPACQUIS	
Man	agement Information Program	mmes (eg. Industry CLUBs)				SPMNGT	
Euro	pean programmes (eg. Framo	ework, Eureka)				SPEUROP	
15.	Patents and other pro	otection methods					
whic	-	of protecting innovations developed previously.		-			
(if no	one, please enter NIL) During the period 1998	ny, did your enterprise app -2000, please indicate the i vations? (please tick one bo	PATA	APPLY o your			
					Degr	ee of impor	tance
			No	t used	Low	Medium	High
Forn	nal	Registration of design	PRREG	0	1	2	3
		Trademarks	PRTRADE				
		Patents	PRPATENT				
		Confidentiality agreements	PRCONF				
		Copyright	PRCOPY				
Stra	tegic	Secrecy	PRSECRCY				
		Complexity of design	PRCOMPLX				

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PRLEADTM

16.	Enterprises with no innovative activity					
plea	If your enterprise had no technological innova use indicate why it has not been necessary or po use tick all that apply)				0,	
No n	eed due to prior innovations	NO	PRIOR			
No n	eed due to market conditions	NO	OMKT			
Facto	ors impeding innovation	NOI	MPEDE			
17.	Wider innovation					
	is section we seek to broaden the survey to cover changes ntage, but not necessarily involving technology.	s in the enterprise ain	ned at gainin	g comp	etitive	
pra	Did your enterprise make major changes in the ctices during the period 1998-2000 and how far assetick one box in each row)					ılt?
(pied	ise lick one box in each row)			Impac	ct on perform	mance
			Not used	Low	Medium	High
-	ementation of new or significantly changed corate strategies eg. mission statement, market share.	ORGSTRAT	0	1	2	3
	ementation of advanced management techniques in your firm eg. knowledge management, quality circles.	ORGMNGT				
orga	ementation of new or significantly changed inisational structures eg. Investors in People, rification.	ORGORGAN				
	nging significantly your firms marketing concepts/egies eg. marketing methods.	ORGMKT				
	Can you indicate the extent of your enterprise 3-2000. (please tick all that apply)	's use of e-busine	ess activiti	es ove	er the perio	od
Basic	c internet presence		EBBA	SIC		
Inter	net used for information		EBIN	FO		
Custo	omers can place orders through the internet site		EBOR	DER		
	merce with other businesses ugh the internet site		EBCON	/IRCE		

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Please give details of the person we should contact with any questions about this return.

PLEASE USE BLOCK CA	API	TA	LS					 	 	 		 _						 	
Name of person to be cont	acte	ed i	if n	ece	ssaı	ry													
Telephone no.]	Ext	•		
Fax no.																			
E-mail address																			
Signature										D	ate								

THANK YOU FOR YOUR CO-OPERATION

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SELECTED EXAMPLES OF INNOVATIONS

The following are derived from real examples from previous surveys and include new-to-market introductions together with products and processes new to the business although already in the use in the market or industry.

PRODUCT INNOVATIONS

Goods

Fibre optic based display lighting range

Automation of electronic testing equipment

Lighter weighting of vehicle bodies

Multi-function printer/scanner

Carbon fibre based sports equipment

Services

IT based Credit Risk assessment service

On line estate agency

Geographical Information System software

A new computer mapping system, used by drivers to work out the faster delivery route

PROCESS INNOVATIONS

Linking of Computer Aided Design station to parts suppliers

Introduction of Electronic Point of Sale equipment in Garden Centre

Digitising of pre-press in printing house

Robotised welding

EXAMPLES WHICH ARE NOT TECHNOLOGICAL INNOVATION

The renaming and repackaging of an existing soft drink popular with older people, to establish a link with a football team in order to reach the youth market, is not a technology based innovation as defined in this survey, but could register as a marketing change in question 17.

New models of complex products, such as cars or television sets, are not product innovation, if the changes are minor compared with the previous models, for example offering a radio in a car.

DEFINITION OF AN ENTERPRISE

An enterprise is defined as the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain autonomy in decision making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit.

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We would like you to consider innovation activity at the enterprise level - that is well defined reporting units, which may be subsidiaries or parts of larger units (enterprise group) or independent companies. See inside cover for a fuller definition of an enterprise.

uem	intorror an enterprise.		
1.	Please briefly describe your enterpri	se's main product (goods or services):	:
2. peri	Did any of the following significant cod 1998-2000? (please tick one)	changes occur to your enterprise during	g the three year
	enterprise was established over increased by at least 10% due to merger	with another enterprise or part of it	
Turn	over mereased by at least 10% due to merger over decreased by at least 10% due to sale or e of the above	·	
3.	Basic economic information about the	ne enterprise	
3.1 servi	Total turnover¹ market sales of goods and ces including export and taxes except VAT	1998 £ ,000 £	2000 ,000
3.2 (ente	Exports of goods and services r nil if appropriate)	1998 £ ,000 £	2000,,000
3.3 (ente	Capital expenditure r nil if appropriate)	1998 £ ,000 £	2000 ,000
3.4 (full	Number of employees time equivalents)	1998	2000
Of v	which: Approximate proportion educated to degree level or above	Science and engineering subject Other subjects	% %

¹For credit institutions: interests receivable and similar income; for Insurance services: gross premiums written.

3.5 Is your enterprise's largest market? (p	lease tick one)
Local ²	
Regional ³	
National	
International	
4. Product innovation (goods and ser	rvices)
significantly improved with respect to fundmental c new technological developments, new combinations firm. For examples of product innovations see insic	ds and services introduced to the market which are either new or characteristics. The innovation should be based on the results of sof existing technology or utilisation of other knowledge by your de front cover. rise - even if already on the market - as well as those that are
· ·	00, did your enterprise introduce any technologically ods or services) which were new to your firm?
No Go to question 5.	
Yes	
4.2 How were these products developed	? (please tick one)
Mainly by your enterprise or enterprise group	
Mainly by your enterprise in co-operation with other	r enterprises or institutions
Mainly by your enterprise in co-operation with other Mainly by other enterprises or institutions	r enterprises or institutions
Mainly by other enterprises or institutions	2000 was distributed between products (goods or serv-
Mainly by other enterprises or institutions 4.3 Please estimate how your turnover in	2000 was distributed between products (goods or serv-
Mainly by other enterprises or institutions 4.3 Please estimate how your turnover in ices) introduced during the period 1998-200	2000 was distributed between products (goods or serv- 00 which were:
Mainly by other enterprises or institutions 4.3 Please estimate how your turnover in ices) introduced during the period 1998-200 New to your firm	2000 was distributed between products (goods or serv- 00 which were:
Mainly by other enterprises or institutions 4.3 Please estimate how your turnover in ices) introduced during the period 1998-200 New to your firm Significantly improved	2000 was distributed between products (goods or serv- 00 which were:
Mainly by other enterprises or institutions 4.3 Please estimate how your turnover in ices) introduced during the period 1998-200 New to your firm Significantly improved Unchanged or only marginally modified Total turnover in 2000 4.4 During the three year period 1998-200	2000 was distributed between products (goods or serv- 00 which were:
Mainly by other enterprises or institutions 4.3 Please estimate how your turnover in ices) introduced during the period 1998-200 New to your firm Significantly improved Unchanged or only marginally modified Total turnover in 2000 4.4 During the three year period 1998-200	2000 was distributed between products (goods or serv- 00 which were:

²Situated within approximately 50 miles of your enterprise

³Situated within approximately 100 miles of your enterprise

4.5	Please give a short description of your most important product innovation:
5.	Process innovation
of go	his survey process innovation is the use of new or significantly improved technology for production or the supply ods and services. Purely organisational or managerial changes should not be included. For example of process vations see inside front cover.
	re interested in processes new to your enterprise - even if already in use in your industry - as well as those are new to your industry.
	During the three year period 1998-2000, did your enterprise introduce any new or significantly roved processes for producing or supplying products (goods or services) which were new to firm?
No	Go to question 6.
Yes	
5.2	How were these processes developed?(please tick one)
Main	Ily by your enterprise or enterprise group
Main	lly by your enterprise in co-operation with other enterprises or institutions
Main	lly by other enterprises or institutions
	During the three year period 1998-2000, did your enterprise introduce any new or significantly roved processes for producing or supplying products (goods or services) which were new to industry?
No	
Yes	
5.4	Please give a short description of your most important process innovation:

6.	Innovation activities not completed or abandoned								
		eriod 1998-2000, did your enterprise have ar ly improved products (goods or services) or ply)				duce			
Aband	doned								
Not ye	et completed but	t on time							
Not yet completed but seriously delayed									
Not e	ven started								
7.	Longer term	innovation activities							
	lop or implem	eriod 1998-2000, did your enterprise have an nent technological change not directly aimed ic R&D, technology watch?				0			
No Yes									
8.	Factors ham	npering innovation							
8.1		ctors may inhibit your ability to innovate. Planstraints during the period 1998-2000: (please				the			
					Importance				
			No effect	Low	Medium	High			
Econo		Excessive perceived economic risks							
Tactor	3	Direct innovation costs too high							
		Cost of finance							
		Availability of finance							
Interr		Organisational rigidities within the enterprise							
factor	rs .	Lack of qualified personnel	П						
		Lack of information on technology							
		Lack of information on markets							
Other		Impact of regulations or standards							
factor	rs	Lack of customer responsiveness to new goods or services							

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- 9. Innovation-related expenditure in 2000
- 9.1 Did your enterprise engage in the following innovation activities in 2000? (please tick all that apply and estimate expenditures where appropriate)

	Please tick if expenditure in the category	Please estimate innovative expenditure in 2000, incl. personnel and related investment expenditures (no depreciation)
Intramural research & experimental development (R&D)	£ ,000
Acquisition of external R&D		£
Acquisition of machinery and equipment (including computer hardware) in connection with product or proces innovation.	s	£ ,000,
Acquisition of other external knowledge such as lice to use intellectual property (eg. patents, know-how) or specialised services (eg. consultants, Universities).	nces	£
All design functions, including industrial, product, proceservice design and specifications for production or deliver		£
Internal or external training for your personnel directly reto innovation activity.	elated	£
Internal or external marketing activities aimed at the introduction of your enterprise's innovations. Include market research and advertising of new innovations but exclude routine marketing activity.		£
	Total expenditure	£ ,000

10.	Internal rese	nternal research and development (R&D)								
If you	have internal Ra	&D-activities:								
10.1	How many persons were involved in R&D activities within your enterprise in 2000? (in full time equivalents)									
10.2 How did your enterprise engage in R&D during the three year period 1998-2000?										
	ionally									
11.	Effects of in	novation								
		ite the impact that your innovation activit (please tick one box in each row)	ies have		your ente					
			None	Low	Medium	High				
Produ	uct	Increased range of goods or services				Ц				
orien	ted effects	Opened new market or increased market share								
		Improved quality of goods or services								
Proce	ess ited effects	Improved production flexibility								
		Reduced unit labour costs								
		Increased capacity								
		Reduced materials and/or energy per produced unit								
Other	effects	Improved environmental impact or health and safety aspects								
		Met regulations or standards								

12. Sources of information for innovation activities

12.1 Please indicate the sources of knowledge or information used in your technological innovation activities, and their importance during the period 1998-2000. (please tick one box in each row)

		Not used	Degr Low	ree of impor Medium	tance High
Internal	Within the enterprise Other enterprises within the enterprise group				
Market	Suppliers of equipment, materials, components or software				
	Clients or customers				
	Competitors				
	Consultants				
	Commercial laboratories/ R&D enterprises				
Institutional	Universities or other higher education institutes				
	Government research organisations				
	Other public sector eg. business links, Government Offices				
	Private research institutes				
Other	Professional conferences, meetings Trade associations Technical/trade press, computer databases Fairs, exhibitions				
Specialised	Technical standards Health and safety standards and regulations Environmental standards and regulations				
	Ŭ				

13. Innovation co-operation Innovation co-operation means active participation in joint innovation projects (including R&D) with other organisations. It does not necessarily imply that either partner derives immediate commercial benefit from the venture. Pure contracting out of work, where there is no active collaboration, is not defined as co-operation in this survey. 13.1 Did your enterprise have any co-operation arrangements on innovation activities with other enterprises or institutions in 1998-2000?

No	Go to question 14.				
Yes					
13.2 Please ind (please tick all that	dicate the type of organisation and location tapply)		UK National	Oversea Europe US	as Other
	Type of partner				
Internal	Other enterprises within your enterprise group				
Market	Suppliers of equipment, materials, components or software	; <u> </u>			
	Clients or customers				
	Competitors				
	Consultants		П		
	Commercial laboratories/R&D enterprises				
Institutional	Universities or other higher education institutes				
	Government research organisations				
Specialised	Private research institutes				
14. Public su	upport for innovation				
	enterprise receive any public support (financial or or related activities in the period 1998-2000?	other a	ssistance	and advice)	
No	Go to question 14.3				
Yes					
	e the sources of this public support for innovation-	relatec	l activities	s in the perio	d
1998-2000? (pi	ease tick all that apply)		ancial port	Other participation	า
Local or regional (government				
Central governme government)	nt (including institutions working on behalf of central				
The European Un	ion				

⁴Situated within approximately 50 miles of your enterprise.

3	orise participated in or received assistar ublic programmes in the period 1998-20	,		0	ypes of
Technology Developmen	nt (eg. LINK, SMART)				
Technology Acquisition	(eg. Teaching Company Scheme, Demonstration	n Projects)			
Management Informatio	n Programmes (eg. Industry CLUBs)				
European programmes (eg. Framework, Eureka)				
15. Patents and o	ther protection methods				
which methods you have	methods of protecting innovations developed by used in the period 1998-2000 - these may have use developed previously.	, ,			
15.1 How many pate (if none, please enter NI	nts, if any, did your enterprise apply for	during the pe	riod 19	98 to 2000)?
(ii none, piease cinei ivi	L)				
	od 1998-2000, please indicate the impor ect innovations? (please tick one box in e		enterp	orise of the	e follow-
			Degr	ee of impor	tance
Formal	Registration of design Trademarks	Not used	Low	Medium	High
	Patents				
	Confidentiality agreements				
	Copyright				
Strategic	Secrecy				
	Complexity of design				
	Lead-time advantage on competitor	s			

16.	Enterprises with no innovative activity						
plea	If your enterprise had no technological innova use indicate why it has not been necessary or p use tick all that apply)					0,	
Nor	need due to prior innovations						
No r	need due to market conditions						
Fact	ors impeding innovation						
17.	Wider innovation						
	is section we seek to broaden the survey to cover change ntage, but not necessarily involving technology.	s in the ente	rprise air	med at gainin	g compe	etitive	
pra	Did your enterprise make major changes in the ctices during the period 1998-2000 and how far ase tick one box in each row)						ılt?
					•	t on perforr	
	ementation of new or significantly changed porate strategies eg. mission statement, market share.			Not used	Low	Medium	High
•	ementation of advanced management techniques in your firm eg. knowledge management, quality circles.						
orga	ementation of new or significantly changed anisational structures eg. Investors in People, rsification.						
	nging significantly your firms marketing concepts/ egies eg. marketing methods.						
	Can you indicate the extent of your enterprise 8-2000. (please tick all that apply)	e's use of (e-busin	ess activition	es ove	r the perio	od
Basi	c internet presence						
Inter	net used for information						
Cust	omers can place orders through the internet site						
	nmerce with other businesses ugh the internet site						

6/01 1 4 4 0 0 1 0 2 1 1 4 4 T 1 2

PLEASE USE BLOCK CAPITALS
Name of person to be contacted if necessary

Telephone no.

Ext.

Fax no.

E-mail address

Date.

Please give details of the person we should contact with any questions about this return.

THANK YOU FOR YOUR CO-OPERATION

4/01 1 4 4 0 0 1 0 2 1 1 4 4 T 1 3

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UK Innovation Survey

Purpose of the Questionnaire:

The purpose of this questionnaire is to collect information about innovation in the UK between 2002 and 2004. To be able to compare enterprises with and without innovation activities, we request all enterprises to respond to **all** questions, unless otherwise instructed.

The results of this survey will published, free, on the Department of Trade and Industry website: www.statistics.gov.uk and the National Statistics website: www.statistics.gov.uk

If your enterprise is part of a larger corporate group, please answer all questions **only** for those units in the UK for which you are responsible.

An enterprise is defined as the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain autonomy in decision making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more location. An enterprise may be a sole legal unit.

Information Required and Definition of Innovation

This questionnaire asks for information relating to innovation activities. For the purpose of this survey,

Innovation is defined as major changes aimed at enhancing your competitive position, your performance, your know-how or your capabilities for future enhancements. These can be new or significantly improved goods, services or processes for making or providing them. It includes spending on innovation activities, for example on machinery and equipment, R&D, training, goods and service design or marketing.

Where possible, answers should be provided relating to activity during the three **calendar years** 2002 to 2004. Where precise figures cannot be provided for the calendar years, **your best estimates are acceptable**.

Completing your return

•	Complete in black ink
•	Ensure letters and numbers are printed and centred within each box
•	Do not use commas , or dashes -
•	Do not cross sevens 7 or zeros 0

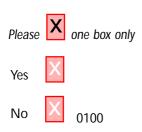
Please give details of the person we should contact with any queries about this return

Please use block capitals																			
Name of person to be cor	ntacte	d if	nec	essa	ary		Τ			Τ							$oxed{\Box}$	$oxed{\Box}$]
Telephone no.														Ex	ct.]
Fax no.																			

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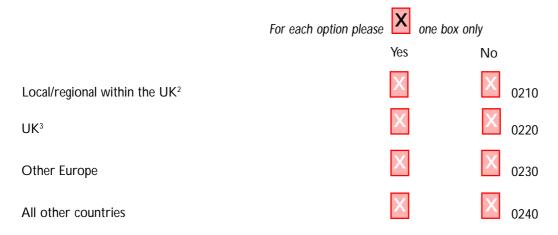
General information about your enterprise

1. Is your enterprise¹ part of an enterprise group? (A group consists of two or more legally defined enterprises under common ownership. Each enterprise in the group may serve different markets, as with national or regional subsidiaries, or serve different product markets. The head office is also part of an enterprise group.)



If your enterprise is part of an enterprise group, please answer all further questions <u>only</u> for your enterprise in the UK. Do not include results for subsidiaries or parent enterprises outside of the UK.

2. In which geographic markets did your enterprise sell goods and/or services during the three year period 2002-2004?



3. Which of the following best defines the main customers for your enterprise's goods and/or services during the three-year period 2002-2004?



4. Was your enterprise established after 1 January 2000?



¹See definition of an enterprise on page 2

144102

²Within approximately 100 miles of your enterprise

³ Within the UK but more than 100 miles away from your enterprise

Product (good or service) innovation

A product innovation is the market introduction of a **new** good or service or a **significantly** improved good or service with respect to its capabilities, such as quality, user friendliness, software or subsystems. The innovation must be new to your enterprise, but it does not need to be new to your market. It does not matter if the innovation was originally developed by your enterprise or by other enterprises.

_	Dumin n the a th					
5.	During the t	hree-year period 2002-2004, did your enterprise introduce	:: Yes		No	
		antly improved goods. (Exclude the simple resale of new goods other enterprises and changes of a purely cosmetic nature)	X		X	0510
	New or significa	antly improved services	X		X	0520
	If no to both	options above, please go to question 9, otherwise:				
6.	How were th	nese products (goods or services) developed?				
		Please X one box onl	y for th	e most ap	propria	ate option
	Mainly by your	enterprise or enterprise group	X	0610		
	Mainly by your	enterprise together with other enterprises or institutions	X	0620		
	Mainly by other	enterprises or institutions	X	0630		
7.	Were any of	your product innovations during the three-year period 20	02-20	04:		
		Vous enterprise introduced a new good or service entervous	Yes		No	
	New to your market?	Your enterprise introduced a new good or service onto your market before your competitors	X		X	0710
	Only new to your enterprise?	Your enterprise introduced a new good or service that was essentially the same as a product already available from your competitors in your market	X		X	0720
8.		ate how your total turnover 4 in 2004 was distributed between estimates are acceptable here)	ween	the cate	egori	es
	Products introd	uced during 2002-2004 that were new to your market		%	ı	0810
		uced during 2002-2004 that were new to your enterprise o your market		%	ı	0820
	Products introd	uced during 2002-2004 that were significantly improved		%		0830
		rere unchanged or only marginally modified during 2002-2004 ale of new goods or services purchased from other enterprises)		%		0840
		Total turnover in 2004	1	0 0 %		

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⁴ For Credit institutions: Interests receivable and similar income, for insurance services: Gross premiums written

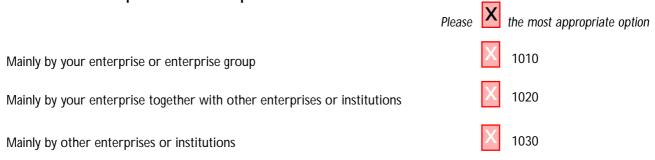
Process innovation

Process innovation is the use of new or significantly improved methods for the production or supply of goods and services. The innovation must be new to your enterprise, but it does not need to be new to your industry. It does not matter if the innovation was originally developed by your enterprise or by other enterprises. Purely organisational or managerial changes should not be included - these are covered at question 23.

9. During the three-year period 2002-2004, did your enterprise introduce any new or significantly improved processes for producing or supplying products (goods or services) which were new to your enterprise?



10. How were these processes developed?



11. During the three-year period 2002-2004, did your enterprise introduce any new or significantly improved processes for producing or supplying products (goods or services) which were new to your industry?



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Effects of innovation

Reduced costs per unit produced or provided

Met regulatory requirements

Increased value added

Reduced environmental impacts or improved health and safety

12. How important were each of the following effects of your product (good or service) and/or process innovations introduced during the three-year period 2002-2004?

Degree of importance

one box for each category

1260

1270

1280

1290

Please

Not relevant

Increased range of goods or services

Entered new markets or increased market share

Improved quality of goods or services

Improved flexibility of production or service provision

Not Low Medium High

1210

1210

1220

1230

1230

1240

1250

144105

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Innovation activities and expenditures

13. During the three-year period 2002-2004, did your enterprise engage in the following innovation activities?

	Please ^	one box fo	or each category
		Yes	No
Intramural (in-house) R&D	Creative work undertaken within your enterprise on an occasional or regular basis to increase the stock of knowledge and its use to devise new and improved goods, services and processes	X	1310
Acquisition of R&D (extramural R&D)	Same activities as above, but purchased by your enterprise and performed by other companies (including other enterprises within your group) or by public or private research organisations	X	1320
Acquisition of machinery, equipment and software	Acquisition of advanced machinery, equipment and computer hardware or software to produce new or significantly improved goods, services, production processes, or delivery methods	X	1330
Acquisition of external knowledge	Purchase or licensing of patents and non-patented inventions, know-how, and other types of knowledge from other enterprises or organisations	X	1340
Training	Internal or external training for your personnel specifically for the development and/or introduction of innovations	X	1350
All forms of Design	Expenditure on design functions for the development or implementation of new or improved goods, services and processes. Expenditure on design in the R&D phase of product development should be excluded.	X	1360
Market introduction of innovations	Activities for the market preparation and introduction of new or significantly improved goods and services, including market research and launch advertising.	X	1370

1 4 4 1 0 6 144T1G

14. Please estimate the amount of expenditure in each innovation activity in 2004, either from management accounting information or using informed estimates:

Intramural (in-house) R&D	0 0 0 1410
Acquisition of R&D (extramural R&D)	0 0 0 1420
Acquisition of machinery, equipment and software	0 0 0 1430
Acquisition of external knowledge	0 0 0 1440
Training	0 0 0 1450
All forms of Design	0 0 0 1460
Marketing expenditures	0 0 0 1470

Ongoing or abandoned innovation activities

15. During the three-year period 2002-2004, did your enterprise have any innovation activities to develop product or process innovations that you had to abandon or which were ongoing at the end of 2004?

No D

1500

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Sources of information and co-operation for innovation

16. How important to your enterprise's innovation activities during the three-year period 2002-2004 were each of the following information sources?

Degree of importance

Please X one box for each category

	Information source	Not used	Low	Medium	High
Internal	Within your enterprise or enterprise group	X	X	X	1601
Market	Suppliers of equipment, materials, services, or software	X	X	X	1620
sources	Clients or customers	X	X	X	1630
	Competitors or others enterprises in your industry	X	X	X	X 1640
	Consultants, commercial labs, or private R&D institutes	X	X	X	1650
Institutional sources	Universities or other higher education institutions	X	X	X	X 1660
30urces	Government or public research institutes	X	X	X	1670
Other	Conferences, trade fairs, exhibitions	X	X	X	1680
sources	Scientific journals and trade/technical publications	X	X	X	1690
	Professional and industry associations	X	X	X	X 1610
	Technical, industry or service standards	X	X	X	1611

17. Did your enterprise co-operate on any of your innovation activities with other enterprises or institutes during the three-year period 2002-2004? Innovation co-operation is active participation with other enterprises or non-commercial institutions on innovation activities. Both partners do not need to commercially benefit. Exclude pure contracting out of work with no active co-operation.

Yes

No

No

1700 → Please go to question 19

1 4 4 1 0 8 144T1J

18. Which types of co-operation partner did you use and where were they located?

Type of co-operation partner

Please X all that apply

		Local/ Regional within UK⁵	UK national ⁶	Other Europe	All other countries
A.	Other enterprises within your enterprise group	1811	1812	1813	1814
B.	Suppliers of equipment, materials, services, or software	1821	1822	X 1823	1824
C.	Clients or customers	1831	1832	1833	1834
D.	Competitors or other enterprises in your industry	1841	1842	1843	1844
E.	Consultants, commercial labs, or private R&D institutes	1851	1852	1853	1854
F.	Universities or other higher education institutions	1861	1862	1863	1864
G.	Government or public research institutes	1871	1872	1873	1874

Continued overleaf

⁵ Within approximately 100 miles of your enterprise

⁶ Within the UK but more than 100 miles away from your enterprise

Barriers to innovation

19. During the three-year period 2002-2004, how important were the following factors as constraints to your innovation activities or influencing a decision not to innovate?

Degree of importance

		Pleas	se X	one box for eac	ry	
		Factor not experienced	Low	Medium	High	
Cost	Excessive perceived economic risks	X	X	X	X	1901
factors	Direct innovation costs too high	X	X	X	X	1902
	Cost of finance	X	X	X	X	1903
Knowledge	Availability of finance	X	X	X	X	1904
	Lack of qualified personnel	X	X	X	X	1905
factors	Lack of information on technology	X	X	X	X	1906
	Lack of information on markets	X	X	X	X	1907
Market	Market dominated by established enterprises	X	X	X	X	1908
factors	Uncertain demand for innovative goods or service	ces X	X	X	X	1909
Other	Need to meet UK Government regulations	X	X	X	X	1910 l
factors	Need to meet EU regulations	X	X	X	X	1911

Enterprises with no innovation activity

20. <u>If your enterprise had no innovation activity</u> during the three-year period 2002-2004, please indicate why it has not been necessary or possible to innovate.

	Yes	No
No need due to prior innovations	X	2011
No need due to market conditions	X	2020
Factors constraining innovation	X	2030

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Protection methods for innovation

21. For the three-year period 2002-2004, please indicate the importance to your enterprise of each of the following methods to protect innovations?

Degree of importance

V

		Please None box for each ca			
		Not used	Low	Medium	High
Formal	Registration of design	X	X	X	2110
	Trademarks	X	X	X	X 2120
	Patents	X	X	X	X 2130
	Confidentiality agreements	X	X	X	2140
	Copyright	X	X	X	2150
Strategic	Secrecy	X	X	X	X 2160
	Complexity of design	X	X	X	2170
	Lead-time advantage on competitors	X	X	X	X 2180

Public support for innovation

22. During the three-year period 2002-2004, did your enterprise receive any public financial support for innovation activities from the following levels of government?

Include financial support via tax credits or deductions, grants, subsidised loans, and loan guarantees. Exclude research and other innovation activities conducted entirely for the public sector under contract.

	Yes	No
Local or regional authorities	X	2210
Central Government or devolved administrations (including their government agencies or ministries)	X	2220
If yes, did your enterprise claim a tax credit for R&D performed between	X	2230
2002 and 2004 The European Union (EU)	X	2240
If yes, did your enterprise participate in the EU's 5th (1998-2002) or 6th (2003-2006) Framework Programme for Research and Technical Development	X	X 2250

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Wider innovation

This section seeks to investigate new or significantly amended forms of organisation, business structures or practices, aimed at step changes in internal efficiency of effectiveness or in approaching markets and customers.

23. Did your enterprise make major changes in the following areas of business structure and practices during the three-year period 2002-2004?

Plea:	se X	one box for each category
	Yes	No
Implementation of a new or significantly changed corporate strategy	X	2310
Implementation of advanced management techniques within your enterprise e.g. knowledge management systems, Investors in People	X	2320
Implementation of major changes to your organisational structure e.g. introduction of cross-functional teams, outsourcing of major business functions.	X	2330
Implementation of changes in marketing concepts or strategies, e.g. packaging or presentational changes to a product to target new markets, new support services to open up new markets.	X	2340

Basic economic information on your enterprise

Informed estimates are acceptable if exact figures are not available

24. What was your enterprises total turnover for 2002 and 2004? Turnover is defined as the market sales of goods and services based on the amount earned; include exports and taxes, but exclude VAT.



25. What was your enterprise's total number of employees in 2002 and 2004?⁷



26. Approximately what proportion of your enterprise's employees in 2004 were educated to degree level or above in the following?



1 4 4 1 1 2 144T1N

⁷ Estimated annual average - part-time staff should be converted to 'full-time equivalents'

	If you would like to make any comments on your approach to innovation, or if you would to provide us with any feedback on this questionnaire, please feel free to do so in the box	iikc
	below:	2700
8.	How long has it taken you to complete this questionnaire?	
	Include: any time spent extracting information from your accounting systems and collating data over and	
	above normal accounting operations. Hrs Mins	2800
	Thank you for your co-operation	

1 4 4 1 1 3 144T1P

UK Innovation Survey

Purpose of this survey:

The purpose of this survey is to collect information about innovation in the UK between 2006 and 2008. To be able to compare businesses with and without innovation activities, we request all businesses to respond to **all** questions, unless otherwise instructed.

Information Required

Section A - General Business Information

Section B - Innovation Activity

Section C - Goods, Services and Process Innovation

Section D - Context for Innovation

Section E - General Economic Information

Definition of Innovation

Innovation, for the purpose of this survey, is defined as **new** or **significantly improved goods or services** and/or the **processes** used to produce or supply all goods or services, that the business has introduced, regardless of their origin. These may be new to the business or new to the market. Investments for future innovation and changes that the business has introduced at a **strategic** level (in organisation and practices) are also covered.

Basis for Completion

Where precise figures cannot be provided your best estimates are acceptable.

Please complete this questionnaire for the business named on the front page.

If this business is part of an enterprise group, please answer all further questions <u>only</u> for this business in the UK. Do not include results for subsidiaries or parent enterprises.

Instructions

This questionnaire will be scanned, therefore please:

- Complete in black ink
- Ensure letters and numbers are PRINTED and centred within each box
- **Do not** cross sevens 7 or zeros Ø

Section A - General Business Information

During the 3 year period 1 January 2006 - 31 December 2008:

1.	in which geographic markets did this business sell goods and/or services?		For each category	y please [yes or no No		
	a. UK regional within approximately 100 miles of this business			X	X	0210	MTU
	b. UK national			X	X	0220	MTU
	c. European countries			X	X	0230	MTU
	d. All other countries			X	X	0240	MTU
2.	did any of the following significant changes occur to the	nis busi	iness?	Please	X all that app	oly	
	a. The business was established				X	0410	M RY
	b. Turnover increased by at least 10% due to merger with and	other bu	siness or part of it		X	0420	M RY
	c. Turnover decreased by at least 10% due to sale or closure	of part	of the business		X	0430	M RY
	d. None of the above				X	0440	M RY
3.	how important were each of the following objectives to this business?		Please X one box	for each	category Not		
		High	Medium	Low	applicable		
	a. Profit margin on sales	X	X	X	X	0001	MRE
	b. Growth in sales/turnover	X	X	X	X	0002	MRE
	c. Growth in exports	X	X	X	X	0003	MRE
	d. Market share in UK	X	X	X	X	0004	MRE

Section B - Innovation Activity

		please X yes or no)
a.	Internal Research & Development Creative work undertaken within your business that increases knowledge for developing new and improved goods or services and processes	Yes No	1310
b.	Acquisition of external Research & Development Same activities as above, and performed by companies, including other businesses within your group, or by public or private research organisations and purchased by your business.	X	1320
c.	Acquisition of machinery, equipment and software for innovation		
	Advanced machinery	X	1331
	Computer hardware	X	1332
	Computer software	X	1333
d.	Acquisition of external knowledge Purchase or licensing of patents and non-patented inventions, know-how and other types of knowledge from other businesses or organisations	X	1340
e.	Training for innovative activities Internal or external training for your personnel specifically for the development and/or introduction of innovations	X	1350
f.	All forms of design Engagement in design activities for the development or implementation of new or improved goods, services and processes. Design activities in the R&D phase of product development should be excluded	X	1360
g.	Market introduction of innovations		
	Changes to product or service design	X	1371
	Market research	X	1372
	Changes to marketing methods	X	1373

5.	For each of the main innovation related activities in question 4, please ESTIMATE the amount of expenditure for the year 2008					
	a. Internal R&D		,	000	1410	NFR
	b. Acquisition of external R&D			000	1420	NFR
	c. Acquisition of machinery, equipment and software	<u> </u>	,	, 0 0 0	1430	NFR
	d. Acquisition of external knowledge		,	, 0 0 0	1440	NFR
	e. Training for innovative activities	<u> </u>	,	, 0 0 0	1450	NFR
	f. All forms of design		,	, 0 0 0	1460	NFR
	g. Market introduction of innovations	<u> </u>	,	0 0 0	1470	NFR
For t	ness Strategy and Practices he purpose of this section, include all new and significantly improved forms ices aimed at improving internal efficiency or effectiveness of approaching mark			structures or		
6.	During the 3 year period 1 January 2006 - 31 December 2008, did this business make major changes in the following areas:	each categor	y please X Yes	yes or no No		
	a. implementation of a new or significantly changed corporate strategy?		X	X	2310	MTU
	b. implementation of new management techniques within this business? e.g. Investors in People, Just in Time, 6 Sigma		X	X	2320	MTU
	c. implementation of major changes to your organisation structure? e.g. introduction of cross-site /teamworking		X	X	2330	MTU
	d. implementation of changes to marketing concepts or strategies?		X	X	2340	MTU
Sect	ion C - Goods, Services and Process Innovation					
In thi bene	ds or Services Innovation is section, include all new or significantly improved goods or services e.g. implies. The innovation, although new to this business, does not need to be new to ations, regardless of their origin.					
Dur	ing the 3 year period 1 January 2006 - 31 December 2008					
7.	did this business introduce:	each categor	y please X	yes or no		
	a. new or significantly improved goods? Evaluate the simple result of goods purchased from other businesses		Yes	No		
	Exclude the simple resale of goods purchased from other businesses and changes of a solely aesthetic nature		X	X	0510	MTU
_	b. new or significantly improved services?		X	X	0520	MTU
STO	If you answered no to both options above, please go to question 11					

Duri	ing the 3 year period 1 January 2006 - 31 December 2008	Please X	• • •	ly	
8.	were these goods or services developed mainly by:	Goods	Services		
	a. this business or enterprise group?	0610	X	0601	MRC
	b. this business with other businesses or organisations?	X 0620	X	0602	MRC
	c. other businesses or organisations?	0630	X	0603	MRC
9.	were any of your goods and services innovations: For each category	y please X	yes or no		
	a. new to your market?	Yes	No		
	This business introduced a new good or service to the market before your competitors	X	X	0710	MTL
	b. only new to this business?				
	This business introduced a new good or service that was essentially the same as a good or service already available from competitors	X	X	0720	MTL
10.	Of the categories below, please ESTIMATE the percentage split of this business's total turnover in 2008				
	a. Goods or Services introduced during 2006-2008 that were new to the market		%	0810	NCE
	b. Goods or Services introduced during 2006-2008 that were new to this business but not new to the market		%	0820	NCE
	c. Goods or Services introduced during 2006-2008 that were significantly improved,		 		
	but not new		%	0830	NCE
	d. Goods or Services that were unchanged or only marginally modified during 2006-2008 include the resale of goods or services purchased from other businesses		%	0840	NCE
Prod	Total turnover in 20	08 1 0	0 %		
The i	ess Innovations are all new or significantly improved methods for the production or supplenovation, although new to the business, does not need to be new to your industry. Include dless of their origin.				
Duri	ing the 3 year period 1 January 2006 - 31 December 2008				
11.	did this business introduce any new or significantly improved processes for producing or supplying goods or services?				
	Yes X				
	No X — Go to Question 14			0900	MRK
12.	were these processes developed mainly by:	Please X	one box on	ly	
	a. this business or enterprise group?		X	1010	M RY
	b. this business with other businesses or organisation?		X	1020	MRY
	c. other businesses or organisations?		X	1030	M RY

Duri	ng the 3 year period 1 January 2006 - 31 Decembe	r 2008	3				
13.	did this business introduce any new or significantly improved processes for producing or supplying goods or services which were new to your industry?						
	Yes X						
	No X					1100	MRK
14.	did this business have any innovation activities that we	ere:	For each category	please Yes	yes or no No		
	abandoned?			X	X	1510	MTL
	incomplete?			X	X	1520	MTL
15.	Did you answer yes to any of questions 6, 7, 11 or 14?						
	Yes X						
	No Go to Question 20					1501	MRK
Sect	ion D - Context for Innovation						
16.	During the 3 year period 1 January 2006 - 31 December how important were each of the following factors in year	ur	Please X one box	for eac			
	decision to innovate goods or services and/or process(es)? High	Medium	Low	Not applicable		
	a. Increasing range of goods or services		X	X	X	1210	MRE
	b. Entering new markets	X	X	X	X	1211	MRE
	c. Increasing market share	X	X	X	X	1220	MRE
	d. Improving quality of goods or services	X	X	X	X	1230	MRE
	e. Improving flexibility for producing goods or services	X	X	X	X	1240	MRE
	f. Increasing capacity for producing goods or services	X	X	X	X	1250	MRE
	g. Increasing value added	X	X	X	X	1290	MRE
	h. Reducing costs per unit produced or provided	X	X	X	X	1260	MRE
	i. Improving health and safety	X	X	X	X	1270	MRE
	j. Reducing environmental impacts	X	X	X	X	1212	MRE
	k. Replacing outdated products or processes	X	X	X	X	1213	MRE
	I Meeting regulatory requirements	X	X	X	X	1280	MRF

7.	how important to this business's innovation related		Pleas	se X one bo	ox for e	ach ca	tegory Not		
	activities was information from:	High		Medium	Low		applicabl	le	
	a. within your business or enterprise group?	X		X	X		X	1601	N
	b. suppliers of equipment, materials, services, or software?	X		X	X		X	1620	Ν
	c. clients or customers?	X		X	X		X	1630	N
	d. competitors or other businesses in your industry?	X		X	X		X	1640	N
	e. consultants, commercial labs, or private R&D institutes?	X		X	X		X	1650	N
	f. universities or other higher education institutions?	X		X	X		X	1660	N
	g. government or public research institutes	X		X	X		X	1670	N
	h. conferences, trade fairs, exhibitions	X		X	X		X	1680	N
	i. professional and industry associations?	X		X	X		X	1610	ľ
	j. technical, industry or service standards?	X		X	X		X	1611	ľ
	k. scientific journals and trade/technical publications?	X		X	X		X	1690	ľ
8.	Did your business co-operate on any innovation		Pleas	se X all tha	t apply				
	activities with any of the following?	UK region	al	UK national	Othe Europ		All other countries		
	a. Other businesses within your enterprise group	X	1811	X 1812	X	1813	X	1814	N
	b. Suppliers of equipment, materials, services, or software	X	1821	X ₁₈₂₂	X	1823	X	1824	ľ
	c. Clients or customers	X	1831	X ₁₈₃₂	X	1833	X	1834	ľ
	d. Competitors or other businesses in your industry	X	1841	X 1842	X	1843	X	1844	ľ
	e. Consultants, commercial labs, or private R&D institutes	X	1851	X 1852	X	1853	X	1854	ľ
	f. Universities or other higher education institutions	X	1861	X 1862	X	1863	X	1864	N
	g. Government or public research institutes	X	1871	X 1872	X	1873	X	1874	ľ
9.	Please go to Question 21.								

Dur	ing the 3 year period 1 January 2006 - 31 December	r 2008 :	:				
20.	please indicate why it has not been necessary or possible to innovate:		For each category	y pleaso Yes	e X yes or no		
	a. no need due to previous innovations			X	X	2011	MTU
	b. no need due to market conditions			X	X	2020	MTU
	c. other factors constraining innovation			X	X	2030	MTU
21.	how important were the following factors in constraining innovation activities?		Please X one box	for ead	ch category Not		
	oo.oo. a g oo.a	High	Medium	Low	applicable		
	a. Excessive perceived economic risks	X	X	X	X	1901	MRE
	b. Direct innovation costs too high	X	X	X	X	1902	MRE
	c. Cost of finance	X	X	X	X	1903	MRE
	d. Availability of finance	X	X	X	X	1904	MRE
	e. Lack of qualified personnel	X	X	X	X	1905	MRE
	f. Lack of information on technology	X	X	X	X	1906	MRE
	g. Lack of information on markets	X	X	X	X	1907	MRE
	h. Market dominated by established businesses	X	X	X	X	1908	MRE
	i. Uncertain demand for innovative goods or services	X	X	X	X	1909	MRE
	j. UK Government regulations	X	X	X	X	1910	MRE
	k. EU regulations	X	X	X	X	1911	MRE
	Protection of Innovation						
22.	did your enterprise:		For each category	y pleas	e X yes or no		
				Yes	No		
	a. apply for a patent?			X	X	2130	MTU
	b. register an industrial design?			X	X	2110	MTU
	c. register a trademark?			X	X	2120	MTU
	d. produce materials eligible for copyright?			X	X	2150	MTU

23.	During the 3 year period 1 January 2006 - 31 December 2008, did your business receive any public financial support for innovation activities from the following levels of government? Include financial support via tax credits or deductions, grants, subsidised loans and equity investments.	
	Exclude research and other innovation activities conducted entirely for each category please	
	a. UK Local or regional authorities	MTU
	b. UK Central government	MTU
	c. European Union institutions or programmes	MTU
Sect	ion E - General Economic Information	
24.	Please ESTIMATE this business's total turnover for the year: Exclude: VAT	
	a. 2006,,, 2410	NFR
	b. 2008, 0 0 0 0 2420	NFR
25.	Please ESTIMATE the business's average number of employees for the year:	
	a. 2006 2510	NGT
	b. 2008 2520	NGT
26.	Of the employees in question 25: Please ESTIMATE the proportion that hold a degree, e.g. BA/BSc, or higher degree, e.g. MA/Phd, PGCE, in:	
	a. Science or Engineering subjects	NCE
	b. Other subjects % 2620	NCE
27.	Would this business be willing to be approached by the Department of Innovation, Universities and Skills or its appointed agents, in connection with further enquiries on innovation?	
	Yes X	
	No X	MRK
		1

28. In the box below, please write any additional comments that you would like to make.												; 	2700																	
																														FHI
29. How long has it taken you to complete this questionnaire? Include any time spent extracting information from your accounting systems and collating data over and above normal accounting operations.																														
																								L T	T	_ 	Hr		2000	NCB
																											IVII	ns	2800	NCB
Please provide details of the person we should contact if we have any queries regarding the information returned on this questionnaire																														
		_	_				_		_				_				_			_									7	
Contact name	Ц	\perp	\perp						_								L													QVA
Position in business		\perp	\perp																											QVA
Telephone number																			E	Ext.]					QVE
				Th	ı a n	l v	211	fo	r c	on	anl	oti	ina	+h	vic .	au i	oct	ior	'n	air	^									
				111	Iall	k y	Ju	10	I C	OH	npi	eu	iiig	u	115	qu	esi	Ю	11 16	aII (е									

UK Innovation Survey

Purpose of the Questionnaire:

The purpose of this questionnaire is to collect information about innovation in the UK between 2004 and 2006. To be able to compare businesses with and without innovation activities, we request all businesses to respond to all questions, unless otherwise instructed.

The results of this survey will be freely available on the Department of Trade and Industry website: www.dti.gov.uk and the National Statistics website: www.statistics.gov.uk

Information Required

Section A - General Business Information

Section B - Product (Goods or Service) Innovation

Section C - Process Innovation

Section D - Innovation Related Activity

Section E - Strategic Innovation

Section F - General Economic Information

Definition of Innovation

Innovation, for the purpose of this survey, is defined as new or significantly improved products (goods or services) and/or the processes used to produce or supply them, that the business has introduced, regardless of their origin. These may be just new to the business or new to the market. Investments for future innovation and changes that the business has introduced at a strategic level (in organisation and practices) are also covered.

Where precise figures cannot be provided for the three year period 1 January 2004 - 31 December 2006 your best estimates are acceptable.

How to complete the Questionnaire									
This questionnaire will be scanned, therefore please:									
 Complete in black ink Ensure letters and numbers are PRINTED and centred within each box Do not cross sevens 7 or zeros Ø 									

Please provide details of the person we should contact if we have any queries regarding the information returned on this questionnaire.

Contact name	
Telephone number	Ext.
Fax number.	

Please keep a record of the time it takes to complete this questionnaire. You are asked to record this at the end of the questionnaire.

> 144201 144T1B

Please complete this questionnaire for the business named on the front page.

If this business is part of an enterprise group, please answer all further questions <u>only</u> for this business in the UK. Do not include results for subsidiaries or parent enterprises outside of the UK.

Section A - General Business Information

During the 3 year period 1 January 2004 - 31 December 2006

1.	in which geographic markets did this business sell goods and/or services?	
	For every category you must either 💢 yes or no)
	Yes No	
	UK regional Within approximately 100 miles of this business	0210
	UK national	0220
	Other Europe	0230
	All other countries	0240
2.	which of the following best define the <u>main</u> customer(s) for this business's goods and/or services? Please X all that apply	
	Other businesses	0310
	Public Sector For example, Government, Public Authorities	0320
	Consumers For example, Households	0330
3.	did any of the following significant changes occur to this business? Please X all that apply	•
	The business was established	0410
	Turnover increased by at least 10% due to merger with another business or part of it	0420
	Turnover decreased by at least 10% due to sale or closure of part of the business	0430
	None of the aboveX	0440

144202

Section B - Product (goods or service) Innovation

In this section, include all **new** goods or services or **significantly improved** goods or services e.g. in quality, user friendliness, timeliness. The innovation, although new to this business, does not need to be new to the market. Include all product innovations, regardless of their origin.

Duri	ng the 3 year period 1 January 2004 - 31 December 2006	For each option	on please X	one box	only
4.	did this business introduce: New or significantly improved goods? (Exclude the simple resale of goods purchased from other businesses and changes of a purely cosmetic nature) New or significantly improved services?		Yes X	No X	0510 0520
STOP	If you answered no to both options above, please go to question 8				
5.	were these products developed mainly by:	please	X one bo.	x only	
	This business or enterprise group		X		0610
	This business with other businesses or organisations		X		0620
	Other businesses or organisations		X		0630
6.	were any of your product innovations:	For each category	please X	either yes	or no
	New to your market?		Yes	No	
	This business introduced a new good or service onto your market before your competitors		X	X	0710
	Only new to this business?				
	This business introduced a new good or service that was essentially the same as a product already available from your competitors		X	X	0720

1 4 4 2 0 3 144T1D

7.	Of the categories below, please ESTIMATE the percentage split of this business's total turnover in 2	006
	Products introduced during 2004-2006 that were new to your market %	0810
	Products introduced during 2004-2006 that were new to this business but not new to your market %	0820
	Products introduced during 2004-2006 that were significantly improved %	0830
	Products that were unchanged or only marginally modified during 2004-2006 (include the resale of goods or services purchased from other businesses)	0840
	Total turnover in 2006	
Sect	cion C - Process Innovation	
servio	ess innovations are all new or significantly improved methods for the production or supply of products (goods ces). The innovation although new to the business, does not need to be new to your industry. Include all process rations, regardless of their origin.	and
Duri	ing the 3 year period 1 January 2004 - 31 December 2006	
8.	did this business introduce any new or significantly improved processes for producing or supplying products?	
	Yes	
	No Go to Q11	0900
9.	were these processes developed mainly by: Please one box only	
	This business or enterprise group	1010
	This business with other businesses or organisations	1020
	Other businesses or organisations	1030
10.	did this business introduce any new or significantly improved processes for producing or supplying products which were new to your industry?	g
	Yes X	
	No X	1100

1 4 4 2 0 4

144T1E 1/06 11. Did this business undertake any product (goods or services) or process innovations during the period 1 January 2004 - 31 December 2006?

Yes X
No X → Go to Q13

1110

Please X one box for each category

Determining factors for innovation

12. During the 3 year period 1 January 2004 - 31 December 2006, how important were each of the following factors in your decision to innovate (product(s) and/or process(es))?

		Trodoc At one be	<i></i> 101 00011	outogory	
	High	Medium	Low	Not applicable	
Increasing range of goods or services	X	X	X	X	1210
Entering new markets or increased market share	X	X	X	X	1220
Improving quality of goods or services	X	X	X	X	1230
Improving flexibility of production or service provision	X	X	X	X	1240
Increasing capacity for production or service provision	X	X	X	X	1250
Reducing costs per unit produced or provided	X	X	X	X	1260
Reducing environmental impacts or improved health and safety	X	X	X	X	1270
Meeting regulatory requirements	X	X	X	X	1280
Increasing value added	X	X	X	X	1290

144205

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Section D - Innovation Related Activity

Innovation related activities and expenditures

13. During the 3 year period 1 January 2004 - 31 December 2006, did this business engage in the following innovation related activities?

For each catego	ry please 🛚	either yes	or no
Internal R&D	Yes	No	
Creative work undertaken within this business on an occasional or regular basis to increase the stock of knowledge and its use to devise new and improved goods, services and processes	X	X	1310
Acquisition of external R&D			
Same activities as above, but purchased by this business and performed by other companies (including other businesses within your group) or by public or private research organisations	X	X	1320
Acquisition of machinery, equipment and software	_	_	
Advanced machinery	X	X	1331
Computer hardware	X	X	1332
Computer software	X	X	1333
Acquisition of external knowledge			
Purchase or licensing of patents and non-patented inventions, know-how, and other types of knowledge from other businesses or organisations	X	X	1340
Training Internal or external training for your personnel specifically for the development and/or introduction of innovations	X	X	1350
All forms of Design			
Expenditure on design functions for the development or implementation of new or improved goods, services and processes. Expenditure on design in the R&D phase of product development should be excluded	X	X	1360
Market introduction of innovations			
Changes to product or service design	X	X	1371
Market research	X	X	1372
Changes to marketing methods	X	X	1373
Launch advertising	X	X	1374

1 4 4 2 0 6 144T1G

14. For each of the main innovation related activities in question 13, please ESTIMATE the amount of expenditure for the year 2006

Please round to the nearest £ thousand							
Internal R&D						,000	1410
Acquisition of external R&D						,000	1420
Acquisition of machinery, equipment and software						,000	1430
Acquisition of external knowledge						,000	1440
Training	[,000	1450
All forms of design	[,000	1460
Marketing expenditures						,000	1470

Sources of information and co-operation for innovation

During the 3 year period 1 January 2004 - 31 December 2006

15. how important to this business's innovation related activities were each of the following information sources?

Please one box for each category

				0	
	High	Medium	Low	Not used	
Within your business or enterprise group	X	X	X	X 1601	
Suppliers of equipment, materials, services, or software	X	X	X	1620	
Clients or customers	X	X	X	1630	
Competitors or other businesses in your industry	X	X	X	1640	
Consultants, commercial labs, or private R&D institutes	X	X	X	1650	
Universities or other higher education institutions	X	X	X	1660	
Government or public research institutes	X	X	X	1670	
Conferences, trade fairs, exhibitions	X	X	X	1680	
Scientific journals and trade/technical publications	X	X	X	X 1690	
Professional and industry associations	X	X	X	1610	
Technical, industry or service standards	X	X	X	X 1611	

144207

Sources of information and co-operation for innovation

During the 3 year period 1 January 2004 - 31 December 2006

16. did this business co-operate on any innovation activities with other businesses or organisation? Both partners do not need to commercially benefit.

Exclude routine sub-contracting out of work with no active co-operation.

Yes

No

✓ Please Go to Q 18

1700

17. which types of co-operation partner did this business use and where were they located?

Please X all that apply UK Other All other UK regional national Europe countries 1811 1812 1813 1814 Other business within your enterprise group..... 1821 1824 Suppliers of equipment, materials, services, or software..... Clients or customers..... 1831 1832 1833 1834 Competitors or other businesses in your industry..... 1844 Consultants, commercial labs, or private R&D institutes..... 1851 1852 1853 1854 1861 1864 Universities or other higher education institutions..... Government or public research institutes..... 1871 1874

1 4 4 2 0 8 144T1J

Protection methods for innovation

During the 3 year period 1 January 2004 - 31 December 2006

18. please indicate the importance to this business of each of the following methods to protect innovation?

		Please X	one box for each category			
	High	Medium	Low	Not used		
Registration of design	X	X	X	2110		
Trademarks	X	X	X	X 2120		
Patents	X	X	X	X 2130		
Copyright	X	X	X	2150		
Confidentiality agreements	X	X	X	2140		
Secrecy	X	X	X	2160		
Complexity of design	X	X	X	X 2170		
Lead-time advantage on competitors	X	X	X	X 2180		

Abandoned and Incomplete Innovation Activities

During the 3 year period 1 January 2004 - 31 December 2006

19. did this business have any innovation activities to develop new product or process innovations that:

For each o	ption please X	either yes o	or no
	Yes	No	
were abandoned	X	X	1510
were incomplete	X	X	1520

144209

Constraints on Innovation

During the 3 year period 1 January 2004 - 31 December 2006

20. how important were the following factors as constraints on innovation activities in influencing a decision not to innovate?

		Please X one box for each category			
	High	Medium	Low	Not experience	ed
Excessive perceived economic risks	X	X	X	X	1901
Direct innovation costs too high	X	X	X	X	1902
Cost of finance	X	X	X	X	1903
Availability of finance	X	X	X	X	1904
Lack of qualified personnel	X	X	X	X	1905
Lack of information on technology	X	X	X	X	1906
Lack of information on markets	X	X	X	X	1907
Market dominated by established businesses	X	X	X	X	1908
Uncertain demand for innovative goods or services	X	X	X	X	1909
Need to meet UK Government regulations	X	X	X	X	1910
Need to meet EU regulations	X	X	X	X	1911

1 4 4 2 1 0 144T1L

Businesses with no innovation activity

During the 3 year period 1 January 2004 - 31 December 2006

21. <u>if this business had no innovation activity</u>, please indicate why it has not been necessary or possible to innovate

For each cate	gory please X	either yes	or no
	Yes	No	
No need due to prior innovations	X	X	2011
No need due to market conditions	X	X	2020
Factors constraining innovation	X	X	2030

Section E - Strategic Innovation

For the purpose of this section, include all **new** or **significantly improved** forms of organisation, business structures or practices aimed at improving internal efficiency or effectiveness or approaching markets and customers.

During the 3 year period 1 January 2004 - 31 December 2006

22. did this business make major changes in the following areas of business structure and practices?

For each category please X either yes or no

	Tor each category	piease 🔨 en	ilici yes u	1 110
		Yes	No	
Implementation of a new or significantly changed corporate strategy		X	X	2310
Implementation of new management techniques within this business e.g. Investors in People, Just in Time, 6 Sigma		X	X	2320
Implementation of major changes to your organisation structure e.g. introduction of cross-site /teamworking		X	X	2330
Implementation of changes to marketing concepts or strategies,		X	X	2340

Section F - General Economic Information

23. Please ESTIMATE this business's total turnover for the year 2006 *Please round to the nearest £ thousand.*

Include: • exports and taxes

Exclude: • VAT

1 4 4 2 1 1 144T1M

2420

24.	Please ESTIMATE this business's total value of exports for the year 2006 Please round to the nearest £ thousand.		
	000,	2440	
25.	Please ESTIMATE the business's total number of employees for the year 2006	2520	
26.	Of the total employees in question 25: Please ESTIMATE the proportion that were educated to degree level or above in		
	Science and engineering %	2610	
	Other subjects %	2620	
27.	Would this business be willing to be approached by DTI or its appointed agents, in connection with further enquiries on innovation?		
	Yes X		
	No X	2900	
28.	In the box below, please write any additional comments that you would like to make.	2700	
29.	How long has it taken you to complete this questionnaire? Include any time spent extracting information from your accounting systems and collating data over and above normal accounting operations. Hrs Mins	2800	

Thank you for your co-operation

1 4 4 2 1 2 144T1N 1/06

UK Innovation Survey 07 data documentation

Questionnaire coding:

Question type	Allowable values as held on the database
Separate 'Yes' and 'No' boxes	1 = yes
	0 = no
	Blank = not answered
A single 'X' box	1 = box has been marked
	0 = box has not been marked
Low / medium / high question	3 = high
	2 = medium
	1 = low
	0 = not relevant / not used / not experienced
	Blank = not answered
Expenditure, turnover, employment or	Any numeric value
percentage questions	

Data recodes:

- A. Quality issues:
- 1.1Q13 recoded to 1 if Q14 > 0.
- 1.2.1 Q6.1 recoded to 1 if Q7.1 > 0.
- 1.2.2 Q6.2 recoded to 1 if Q7.2 > 0.
- 1.3 Prodinov recoded to 1 if Q6s = 1 and sum of Q7 = 100%. Then, Q4.1 or Q4.2 recoded to 1 according to SIC number.
- 1.4 Q16 recoded to 1 if any Q17 ticked.
- 1.5 Q7.3 and Q7.4 recoded to 0 if Q4s = NO & Q6s = blank & rest of Q7 = blank.
- 1.6 Q5s recoded to blank if Q4s = NO
- 1.7 Q21s recoded from missing to 0 if any other Q21s answered.
- 1.8 Q6.2 recoded to 0 if 6.1 = 1 i.e. enterprises stating that the innovations were new to the market and only new to the firm.

- 1.9 Q3.4 recoded to 0 if any other Q3 = 1.
- 1.10 Procinoc recoded to 1 if any Q9 = 1.

B Missing data:

- 2.1 If Prodinov = 0, Q6s zeroed.
- 2.2 If Prodinov = 0 and Procinov = 0, Q12s zeroed.
- 2.3 Prodinov and Procinov zeroed.
- 2.4 Missing recoded to zero if blank entries appear to be used as a proxy for selecting 'No'. (E.g. if a respondent enter 'Yes' to a number of sections within a question and leaves all others blank, rather than entering 'No'. Q 1, 4, 6, 12, 13, 15, 18, 19, 20, 21, 22.

Derived variables

- 3.1 **Prodinov** (short for Product Innovator) = 1 if either Q4s = 1
- 3.2 Q9 rename as **Procinov** (short for Process Innovator)
- 3.3 **Activities** = 1 if any Q13s = 1
- 3.4 **Expenditure** = 1 if any Q14s > 0
- $3.5 \, \mathbf{Q17a} = 1$ if any Q18s in row A = 1 (and so on with rows B to G, and all columns)
- 3.6 No_Innovation_Activity = 1 if any Q21s = 1
- 3.7 Wider_Innovator = 1 if any Q22s = 1
- 3.8 SIZE = 1 for SMEs and = 2 for large businesses (sizeband: 2 = 10-49, 3 = 50-249, 4 = 250+)
- 3.9 **Innovation_Active** = 1 if either Prodinov = 1, Procinov = 1, Activities = 1, or Q19.1 or Q19.2 = 1
- 3.10 **Broader_Innovation_Active** = 1 if Innovation_Active = 1 or Wider_Innovator = 1
- 3.11 **Product or Process Innovator** = 1 if either Prodinov or Procinov = 1
- 3.12 **Product_and_Process_Innovator** = 1 if both Prodinov and Procinov = 1

IDBR Variabes:

The following variables within the dataset come from the IDBR (Interdepartmental Business Register), and not form the UK Innovation Survey:

INT_FOC/ULT_FOC (country of ownership) EMPLOYMENT TURNOVER