



FINAL REPORT

Design and Methodology of the
“e-Business Survey 2007”
- Project III (RFID) and Project IV (Intellectual Property) -
for
empirica Gesellschaft für Kommunikations- und Technologieforschung, Bonn
by
Ipsos GmbH, Mölln

Subject

The '**e-Business Survey 2007**' was a service provided by **Ipsos GmbH (Germany)** to the **empirica GmbH**.

This survey is part of the "e-Business W@tch" (www.ebusiness-watch.org), a service launched in 2007 and provided by empirica GmbH to the European Commission, Enterprise and Industry Directorate General, in co-operation with renowned international partners.

The key objective of the e-Business W@tch is to gather information about the usage of ICT and their application for electronic business in companies, in order to derive indicators on industrial sector level. The e-Business survey is the main tool for gathering the relevant empirical data.

The 'e-Business Survey 2007' is splitted by 4 separate projects; i.e.

- **2 CATI Sector surveys**
- **2 CATI Flash surveys**

and covered in total **10 countries** and **13 industry sectors**.

Eight of these countries (AT, FR, DE, IRE, IT, ES, SE, UK) are 'old' EU Member States (i.e. before 2004), one (PL) is a New Member State (i.e. have joined the EU after May 2004) plus the USA.

This final report is referred to the **CATI Flash Surveys of Project III** (RFID) and **Project IV** (Intellectual Property).

The following topics were included in the survey:

Project III (RFID (Radio Frequency Identification) - use and implications):

- A: Filter questions
- B: Questions for firms using / planning to use RFID
- C: Questions for firms not using / planning to use RFID

Project IV (Intellectual Property protection for ICT SMEs):

- A: Intellectual property protection and innovation practice: yes or no
- B: Intellectual property protection objectives and management
- C: Awareness and opinions about intellectual property protection
- D: No use of intellectual property protection
- E: Intellectual property protection in co-operative research
- G: Background information about the company



Survey Design

The multi-country survey was coordinated by the German branch Ipsos GmbH, Mölln and was conducted in cooperation with local partner institutes (sub-contractors) by the market research institutes below (see Table 1). Ipsos is a globally operating independent market research company, conducting research and consultancy in more than 50 countries. Being established in Paris in 1975 with more than 6,000 employees worldwide Ipsos is currently ranked third on revenue. Since 1999 it is listed on the Paris Stock Exchange. Ipsos is member of the ESOMAR.

Table 1: Countries and market research institutes conducting the fieldwork

Country	Market research institutes (fieldwork organisations)
Austria	IPSOS GmbH, 23879 Mölln
France	IPSOS Insight Marketing, 75628 Paris
Germany	IPSOS GmbH, 23879 Mölln
Ireland	CONTINENTAL Research, London EC1V 7DY
Italy	Demoskopea S.p.A., 20123 Milano
Poland	IQS and Quant Group Sp.z.o.o, 00-610 Warszawa
Spain	IPSOS Spain, 28036 Madrid
UK	CONTINENTAL Research, London EC1V 7DY

Methodology

The survey was carried out in form of Computer-Aided Telephone Interviewing (**C.A.T.I.**).

Universe/ Target Person

The universe consisted of all companies in the respective countries, belonging to the relevant country sectors and company sizes, which were for **project III medium to large sized compnyies** (50+ employees) and for **project IV mirco to medium sized compnyies** (3 to 249 employees).

The country sectors were defined on the basis of the **NACE Rev. 1.1** classification. The final selection of sectors to be covered by the e-Business Survey 2007 (see Table 2) was agreed with empirica (hereafter referred as „the client“). A detailed description of the sectors and sub-sectors is outlined at the **APPENDIX I** (see below) which shows both, the relevant codes of the Rev. 1.1 used as well as the corresponding new classification codes of Rev 2.

Target Person - Project III:

As for projext I & II, the target respondent within the company was a person responsible for or taking part in decisions concerning the use of information and communication technologies and of e-business. This person could have been in different positions, depending on the size and kind of company or organisation – usually the IT manager or a senior professional in the IT department. Particularly in the case of larger companies, there are dedicated positions for e-business management while smaller companies, the respondent rather are someone at the level of managing director or owner.

Target Person - Project VI:

The target respondent within the company was a person responsible for or taking part in decisions concerning the protection of intellectual property in companies that produce products or services related to information and communication technologies. This person could have been in different positions, depending on the size and kind of company or organisation – usually the intellectual property manager or the head or senior manager of the research and development department.

Particularly in the case of larger companies, there are dedicated positions for intellectual property management while in micro and small enterprises, the respondent rather are someone at the level of managing director or owner.

Table 2: Sector coverage (definition by NACE Rev. 1.1) of the e-Business Survey (2007)

No	Sector name	NACE Rev. 1.1	Sector description (acc. to NACE rev. 1.1)
Project III			
11	Discrete / Process Manufacturing	15, 18, 19, 24.4, 30, 31, 32, 33, 34	Discrete and Process Manufacturing
12	Retail distribution	52	Retail trade, except of motor vehicles and motorcycles
13	Transportation	60.1, 60.2, 62.1, 62.2	Transportation
14	Hospital activities	85.11	Hospital activities
Project IV			
15	Manufacturing activities	30.02, 32.1, 32.2, 32.3, 33.2,	Manufacturing activities
16	Software companies	72.2	Software companies
17	Telecommunication and IT services	64.2, 72.1, 72.3	Information technology services

Sample and Sampling Source

From the universe a random sample of companies, stratified by sector and, where possible, size (number of employees in the company), was selected per country for each of the pre-defined quota cells, i.e. 'country-sector-cells' (in total: three to four size groups X seven sectors).

In total, **1,100 interviews** (Project III: 420 / Project IV: 680) were to be achieved.

Quotas on country-sector size groups were set under consideration of the countries universe individually for each country, but for the 'Flash Surveys' quotas are **non-interlocking** in term of sector and size.

Initially the following **strata by company sizes** was intended across all countries per project:

Size groups – share of ...	Project III	Project IV
large companies (1000+ employees)	10-20%	
large companies (500-999 employees)	20-25%	
large companies (250-499 employees)	30%	
medium sized companies (50-249 employees)	30%	33%
small companies (10-49 employees)		33%
micro enterprises (3-9 employees)		33%

Furthermore, to qualify for an interview for **project IV**, the companies needed to protect or plan to protect intellectual property. If this was not the case, the company needed at least to have developed products, services or processes that are new to the market within the past three years.

Operational and organisational procedure of country-sector-cells selection and sampling:

The institutes were provided with the final sector list to be covered by the e-Business Survey 2007 (see Appendix I). Based on the countries universe and availability of addresses the partner institutes were asked to provide us with their recommendations and restrictions on the maximum number of interviews they regarded as feasible to conduct in each of the relevant sectors (independently of any size quotas).

Based on the countries' recommendations and under consideration of the comments and „country-sector-request“ made by the client, the sampling plan (country-sector-cells) was finalized in collaboration with the client.

However, this time in addition the ‚initial intended‘ size quotas outlined above were adjusted individually for each country under consideration of the universe availability in each country sector. This was done in order to avoid major problems in achieving the targeted size quotas right from the start other than in previous e-Business surveys. Furthermore for the ‚Flash surveys‘ quotas on sector and company size were set on non-interlocking basis.

A detailed overview of the envisaged targets per country-sector-cell and size classes is outlined at the attached **Appendix IV ‚Final Field Report [Quota Achievement]‘**.

The final approved **country-sector-cell** matrix is as follows (see Table 3):

Table 3: Consolidated country-sector-cell matrix – targeted sampling plan (Project III and IV)

Sector/ Country	DE	ES	FR	IT	PL	UK	IE	AT	Total
Total project III + IV	195	150	160	140	130	165	90	70	1.100
Total per sector									
11: Discrete / Process Manufacturing	38	17	25	17	14	24	13	0	148
12: Retail Distribution	26	16	19	12	11	20	8	0	112
13: Transportation	17	13	12	10	9	17	2	0	80
14: Hospital Activities	24	14	14	11	6	9	2	0	80
Project III	105	60	70	50	40	70	25	0	420
15: Manufacturing Activities	36	36	36	36	37	41	16	23	261
16: Software Companies	36	36	36	36	30	36	26	34	270
17: Telecommunication and IT Services	18	18	18	18	23	18	23	13	149
Project IV	90	90	90	90	90	95	65	70	680

The sampling was done decentrally by each of the partner institutes.

The quality of the survey frame was of very high importance. In order to ensure the best possible quality of results in terms of raising the survey data, we explicitly instructed the institutes that the **sampling/ address purchase and the universe figures** (sample frame) should be based to the largest possible extent on "official" business registers and company statistics, which are usually run by the National Statistical Office in the country.

Wherever possible for the drawing of the sample the same source was chosen as for building-up the universe. However, in some countries the statistical offices that were used for the universe figures were not able (resp. were not allowed) to provide the institutes with full and up-to-date addresses or telephone numbers of companies at all. In case where the sampling/ address purchasing could not be obtained directly from the respective national statistical offices, the countries used renowned address supplier of the highest possible quality in terms of coverage and up-to-dateness. This is common practise in business to business surveys.



The following sample sources were used (see Table 4):

Table 4: Sample sources (directories) from which the samples were drawn

Country	Sampling Source
Austria	Dun & Bradstreet (sampling by Heins and Partner Business Pool)
France	WEGENER DM, previously IDATA (based on INSEE SIRENE file of the National Institute of Statistics)
Germany	Heins and Partner Business Pool (SABIS-Germany)
Ireland	Dun & Bradstreet
Italy	Dun & Bradstreet
Poland	Hoppenstedt Bonnier Information Poland (HBI)
Spain	Dun & Bradstreet
Sweden	Statistics Sweden's Business Register
United Kingdom	Dun & Bradstreet

Sampling sources in detail were as follows:

Austria:

The sample was drawn from Heins und Partner (same address provider used for Germany). It is a high-quality sampling which is based on the database of Dun & Bradstreet.

France:

The sample was drawn from **WEGENER DM**. The previous years we used the iDATA database which is based on the INSEE SIRENE file of the National Institute of Statistics. But from 1st January 2006, iDATA and other companies is merged into the WEGENER Group

Now, WEGENER DM offers integrated and complete solutions of data sources and processes. It is a leading supplier of data and data related services on the French Marketing Activities.

WEGENER DM is a specialist in validation of companies' addresses. It offers three millions of French companies categorized according their activity and is updated regularly.

Germany:

Sampling source was the **Heins und Partner Business Pool SABIS-Germany (Stategic Analysis Business Information System)**. Based on almost all address databases available in Germany Heins und Partner has created a high-quality Business Pool, which comprises approx. 3.6 million files and is subject to permanent validation and updating.

Ireland:

The sampling source chosen **was Dun & Bradstreet's Business Database**.

This sampling source was used because it is one of the most respected and reputable list providers in Ireland. It provides a wide coverage of all companies in Ireland and is regularly updated, on a quarterly basis at least. The partner institute regularly uses Dun & Bradstreet as a sampling source on business-to-business surveys.

Italy:

The sampling source chosen was **Dun & Bradstreet**. It was used because it covers all industry sectors and provides a detailed indication of NACE codes, covers the whole country and is the most up-to-date, reliable and complete sampling sources in Italy (it results in a fairly high percentage of accurate names and telephone numbers).

**Poland:**

The sampling source chosen was **Hoppenstedt Bonnier Information Poland (HBI)**.

It covers a wide range of precise and up-to-date information of companies and is updated at least 4 times a year. The database includes information on number of employees and NACE codes.

Spain:

The sampling source chosen was Dun & Bradstreet. D&B has a very accurate database of companies and is experienced to be a reliable database for Spain. The database is updated daily and includes around 700 000 files. Moreover, D&B has many information of each company and it is possible to get a database with an exhausted segmentation criteria.

As far as quality is concerned the foundation of DUNSRight™ is Quality Assurance which includes over 2,000 separate automated checks, plus many manual ones, to ensure the data meets their high quality standards. In addition, five quality drivers work sequentially to collect and enhance the data.

UK:

The sampling source chosen was **Dun & Bradstreet's Business Database**. It was used because it provides the most comprehensive coverage of companies (as opposed to establishments) in the UK. The primary basis for the list is data filed with Companies House – all companies must register, by law, certain details on a yearly basis, so by definition the sample source is all inclusive. The database is updated on a regular basis (at least monthly) so it is up-to-date and „newer“ companies are properly included. Our company regularly uses Dun & Bradstreet as a sampling source on business-to-business surveys and has used it successfully on previous surveys conducted as part of the e-BusinessW@tch.

Comments on quotas on company sizes and the procedure for dealing with problems on this aspect

The institutes were provided with a detailed country specific quota plan with the objective to fulfil the country specific targeted strata with respect to company size classes and country-sector-cell.

The progress of fieldwork was, therefore, monitored very closely. In agreement with the client, the institutes were briefed to proceed in case of problems (with fulfilling the quota in specific sector-cells) as follows:

Firstly, on the contrary to project I + II priority was given to the size quotas than to the sector targets.

In case of any problems in achieving the aimed at number of interviews in a specific quota cell (biggest size cells), there would be some flexibility which needed to be monitored during fieldwork. That meant firstly trying to achieve as much interviews as possible in the biggest size cell (P3: 1.000+; P4: 50-249), the remaining interviews needed to be done in the next lower size cell (P3: 500-999; P4: 10-49), i.e. **the procedure was: "Quota/ Quota/ Remainder/ Max"**.

The same procedure in case the next lower size cells were also limited.



Questionnaire

The "draft" version of the English questionnaire was developed in the context of the *e-Business W@tch* and delivered to Ipsos by the client.

The „draft“ questionnaire version was firstly checked by Ipsos for its feasibility in terms of technical aspects (filter, completeness) and, in cooperation with the client, modifications were made prior to the pre-test.

Pilot interviews prior to the regular fieldwork were conducted in Germany for Project III on August 6, 2007 and for Project IV on August 2, 2007. Objective of the pretest was the verification and, if necessary, the modification of the questionnaire (special care was taken to the structure, comprehensibility of the questions/ of the scales and items, to the filters as well as to the interview length).

At the pre-test, at least 10 interviews per project with companies from different sectors (in Germany) were conducted to pilot the questionnaire. The questionnaire worked well in terms of its overall logic, terminology and structure and interviewers experienced no technical difficulties. Thus, the pre-test gave us sufficient information for any modifications possible. However, the length was somewhat beyond the originally assumed length by 8 minutes and had to be shortened for the main survey.

Based on the proposed amendments at the pretest report final modifications were done to the agreed **Final English Master Questionnaire** (already provided, **see Appendix II**).

The Final English Master Questionnaire (see APPENDIX III) was delivered by Ipsos to all participating countries for translation into the major local language(s) spoken.

As a next step for quality assurance, Ipsos arranged that the translated questionnaire versions were back-checked by an external translation agency, i.e. back-translator. Suggestions and amendments to the translations were made (if any) and the corrected translated version(s) were finally approved by us. The final translated questionnaire versions are already provided (**see APPENDIX III 'Final Translated Questionnaire'**).

Based on the final approved translated version(s), programming of the CATI scripts were done by the partner institutes. The programmed scripts (and, if available, a TOPLINE based on dummy „Autopilot“-Interviews) were double-checked by us for its correspondence to the agreed translated questionnaire version(s). In case of any comments made, amendments were done by the institutes and finally approved by us prior to start of fieldwork.

Fieldwork

Fieldwork was carried out during August 23 and October 22, 2007 the country specific fieldwork periods are shown in Table 6 below.

During fieldwork the client was provided with a weekly progress field report (Quota Achievement per "country-sector-cell") and comments of problems that occurred on specific country-sector-cells.

As this time especially the size quotas were adjusted and set under consideration of the universe availability in each country-sector and size group (especially in the bigger size classes), we were not faced with many problems in achieving the targeted quotas.

However, in some countries it was not possible to realize the total targeted sample sizes in certain specific sectors as well as size classes due to a very **limited and already exhausted universe** as well as the **very small sample size per quota cell** (which is more difficult for quota steering).

Furthermore as quotas were set non-interlocking, fieldwork shows that fulfilling the sector quotas became more and more difficult to the end of fieldwork as the missing sectors were rather limited within some of the remaining size groups.

Thus, the countries concerned tried to compensate these sector “shortfalls” in other sectors. More specifically, interviews were compensated for Germany (sector 12 and 15), Spain (sector 17), France (sector 12 and 13) and UK (sector 12) by additional interviews in other sectors. For Ireland a shortfall of 11 interviews (at sector 15 and 17) were compensated by the UK instead.

In detail assigned size quotas mostly with medium sized and big companies (50+ employees) were not achievable in France (P3: 1000+ size, P4: size 3-9), Spain (P4: size 50-249) and the UK (P3: size 250-499), i.e. the remaining interviews were compensated in the lowest size cells. Whereas in Poland some more interviews were possible to realise with biggest companies (sized 500+ employees).

In total, 1.117 interviews (instead of the foreseen 1.100) were conducted across all 8 countries covered by this both projects.

The final achieved **country-sector-cell** matrix is as follows (see Table 5):

Table 5: Final country-sector-cell matrix –achieved interviews (Project III and IV):

Sector/ Country	DE	ES	FR	IT	PL	UK	IE	AT	Total
<i>Total project III + IV 'planned'</i>	195	150	160	140	130	165	90	70	1.100
Total project III + IV 'achieved'	200	150	162	148	130	176	81	70	1.117
Total per sector									
11: Discrete / Process Manufacturing	44	19	30	17	14	25	14	0	163
12: Retail Distribution	22	16	9	11	11	16	9	0	94
13: Transportation	16	13	9	17	9	16	2	0	82
14: Hospital Activities	28	12	22	12	6	13	2	0	95
<i>Project III 'planned'</i>	105	60	70	50	40	70	25	0	420
Project III 'achieved'	110	60	70	57	40	70	27	0	434
15: Manufacturing Activities	33	37	37	37	37	45	12	23	261
16: Software Companies	38	41	36	36	30	36	31	34	282
17: Telecommunication and IT Services	19	12	19	18	23	25	11	13	140
<i>Project IV 'planned'</i>	90	90	90	90	90	95	65	70	680
Project IV 'achieved'	90	90	92	91	90	106	54	70	683

Colours of changes to country-sectors (due to 'shortfalls'):

yellow = decreased country-sector samples

green = increased country-sector samples, in order to compensate missing (decreased) interviews

A detailed overview of the final **quota achievement** per country-sector-cell by size classes (including detailed targets) is attached (**see Appendix IV 'Final Field Report [Quota Achievement]'**).

Table 6: Further fieldwork details per country:

Project III					
Country	Duration of Fieldwork	# of Inter-viewers	Average duration (in min)	Min # of contact attempts	Controls
France	14-09 to 26-09-07	10	7:54	5	10%
Germany	23-08 to 02-10-07	11	7:75	5	10%
Ireland	29-08 to 10-09-07	2	5:53	5	15%
Italy	20-09 to 08-10-07	7	8:14	7	20%
Poland	07-09 to 12-09-07	6	7:56	5	10%
Spain	25-09 to 09-10-07	8	6:05	5	20%
UK	29-08 to 12-09-07	6	6:04	5	10%

Project IV					
Country	Duration of Fieldwork	# of Inter-viewers	Average duration (in min)	Min # of contact attempts	Controls
Austria	29-08 to 05-09-07	12	12:32	5	10%
France	21-09 to 26-09-07	7	13:00	5	10%
Germany	29-08 to 26-09-07	15	13:09	5	10%
Ireland	03-09 to 26-09-07	3	12:32	5	15%
Italy	18-09 to 08-09-07	7	11:17	7	23%
Poland	11-09 to 17-09-07	10	13:37	5	11%
Spain	02-10 to 22-10-07	10	10:53	5	20%
UK	04-09 to 26-09-07	4	11:57	5	11%

General comment on different average interview lengths in the countries:

The main reason for different average interview lengths of different countries in market research surveys is usually the different language. Some languages are generally more "flowery", i.e. more words are needed to express one and the same thing than in another language. English, which was the basic language for the assumed interview length quoted for (8 minutes), is a rather "leaner" language than others, e.g. French, Polish or German.

Furthermore due to cultural differences interviewers in different countries use to talk more -or less- with respondents. Although interviewers are trained to go through the questionnaire straight forward, in practice they use to talk to the respondents about aside things, if it is only to persuade them to go on with the interview. But in some countries they talk more about aside-things, in other less. Additionally respondents might need to interrupt the interview just for a moment due to their business. A variation of up to 3 minutes for an interview length of approx. 10 minutes is not unusual in this context.

Last but not least, the variation of the interview length can also be influenced by the different sectors included in different countries and/or by the respondents ICT knowledge: sectors with less ICT-usage or respondents with less knowledge of specific ICT-related technical terms might have a higher need for explanations.



Interviewers and controls:

All interviewers were personally briefed on the survey and fieldwork was continuously controlled by trained supervisors. Due to the computer-aided interviewing, systematic errors during data collection can be excluded. Controls (telephone listening) were made to check the correct administration of the interview and the questionnaire (the proportion of controls varied between 10-25%, depending on institutes' standards).

Detailed **comments of the participating institutes** on fieldwork, questionnaire etc. are attached in **Appendix V** (see below). The most frequently mentioned comments are outlined at the next chapter 'data delivery'.

Data Delivery

All incoming country data files were thoroughly checked on compliance and completeness with the pre-defined data map. The results of the project are provided to the client in the form of a **labelled SPSS data file** (already provided as **Appendix VI**)

Furthermore, deliveries comprise '**Universe Figures**' (company and employees based) as **Appendix VII** (i.e. country-sector cell by size classes per country – where available) and '**Contact Protocols**' as **Appendix VIII** including completion rates and non-response reasons per country-sector-cell.

Comments on data processing and results:

As usual for consumer as well as for B2B-market research survey during data processing for some questions we observed slight inconsistencies (respectively contradictory figures) within interviews. Since we want to support your future analyses of the data we would like to draw your attention to the following:

- The inconsistencies mainly concern numerical figures at project IV (absolute figures or percentages on numerical questions e.g. on market share, number of employees conducting R&D etc.) which are usually difficult to specify by respondents for various reasons over a telephone interview. Unless checks are built into the script there is no way of preventing occurrences of seemingly 'implausible' responses. On the other hand, too many built-in checks do not only interrupt the flow of the interview but also give respondents the (probably negative) impression of being scrutinised. Therefore, it has to be accepted that not every respondent answers all of the questions in what would seem to be a perfectly logical way.
- High share of DK ("don't know") is usually coming from respondents who simply do not know the answer or are not willing to share information which they consider as internal, confidential or indiscreet (e.g. market share, budgets, education of employees etc.).



- For the following questions the aspects mentioned below need to be taken into consideration:

[Project IV only] Question G6 [U12 eBiz 2006] (Company's market share in its 'most significant market' [regional/country/international market acc. to question G4]):

High shares of DK:

Senior IT personnel quite reasonably may not know their company's market share. This is rather the case for Marketing or Accounting personnel. And even if respondents are the owner or managing director of the company they obviously often do not have any mechanism to provide them on the spot with accurate figures on market share.

For future surveys we would therefore strongly suggest to provide respondents with ranges (up to 5%, 6-10% market share, etc.) for this type of questions rather than ask for exact figures. Respondents could possibly consider this as more risk free and this would result in less DK.

As example, high values for market share although company is rather small and most significant market is mentioned to be the country's market or the international market:

Several countries like UK, Italy mentioned it was assumed that some respondents might not have understood the questions correctly due to several reasons.

In the UK some respondents misinterpreted this question, i.e. that this meant the share of their sales represented by main market, as opposed to market share in that market compared to other companies. Same in Italy, so it is possible that question G6 was understood as percentage of their turnover (see Italy) on their main market rather than about the market share.

This can also apply to other countries.

[Project IV only] Question G12 (U6 eBiz 2006) (Absolute number of employees primarily conducting R&D in the company):

High shares of 0 or DK:

The explanation for companies replying that no one does R&D, might be that this function is completely outsourced (certainly the case in many hospitals, for instance, with the development of software). It might also be because respondents are thinking about dedicated R&D employees and/or departments and they do not have any of those, just people who do 'a bit' of development.

In smaller companies DK can be an appropriate response if respondents are confused about the use of the term 'primarily'. It is possible that they do not know how to deal with someone who does R&D from time to time, when required etc. but then for quite a concentrated period of time (i.e. temporary R&D on special projects in companies where fulltime researcher simply do not exist). Perhaps they are reluctant to say 'no one' but equally do not think a full person is the appropriate answer.

For all those types of numerical questions in future surveys, we would therefore strongly suggest providing respondents with ranges (e.g. 3-5 size groups) rather than ask for exact figures. Respondents could possibly consider this as more risk free and this would result in less DK.



Selected comments from different countries

Furthermore, some other **main points from the different countries' comments** on fieldwork, questionnaire, data and any problems occurred etc., as indicated in the Appendix V below:

In general (project IV only):

Trading companies answered not being concerned by intellectual property, R&D and innovation, particularly in manufacturing activities sector.

Technical terms – ICT knowledge:

A few questions were quite technical. Especially respondents of smaller companies had often difficulties to answer questions related to specific technical terms and application as they didn't understand/didn't know specific technical terms, e.g. RFID (project III) or DRM at question A1 (project IV). Especially when using only one or few computers, respondents were simply unaware of such technical terms. These were rather respondents who are not IT specialists but still taking decisions regarding ICT (mostly owners or share holders of small companies).

G6 – market share (project IV only):

As in projects I and II, many countries mentioned misunderstandings of respondents in this question, for example UK:

As in the previous year, and despite careful briefing of the interviewers, there was some confusion over question G6 (U12 in eBiz 2006). Some respondents seemed to think, until clarified, that this meant how much of their sales are in their most significant market, e.g. if their main sales area was the UK, and they only operated in the UK, a few respondents were initially claiming 100% until we explained (i.e. that we wanted to know the market share of their company in comparison to all other companies operating in that market). In sectors with many small companies the answer is often under 1%, and I think this is what confused some respondents. It is also worth pointing out that the term 'regional market' is open to considerable misinterpretation on the part of respondents – i.e. some respondents took this to mean their immediate locale, others their county, while others took a broader view (e.g. the South East of England).



Weighting

Weighting information:

Due to stratified sampling, the sample size in each size-band is not proportional to the universe numbers (per country). If proportional allocation had been used, the sample sizes in the 250+ size-band would have been extremely small, not allowing any reasonable presentation of results. Thus, weighting is required so that results adequately reflect the structure and distribution of companies as well as number of employees in the universe of the respective sector or geographic area.

The necessary information needed for weighting are the attached '**Universe Figures**' per country (see Appendix VII) which were provided by the various countries' partner institutes, based on the highest possible quality and reliable source available (mostly from the respective national statistical offices). In addition weighting was required based on the universe for the number of employees working at the company. As most of the institutes could not provide us with the relevant universe, the source used for the 'employees universe' was 'Heins and Partner Business Pool', except of Italy and Spain.

The universe figures show the distribution of companies per country-sector-cell (and sub-sectors) broken down by size classes (four size bands, where available).

All the relevant information used for weighting (company and employee universe, weights etc.) is attached in the **Appendix IX 'Universe Companies Employees Weighting Bases'** (already provided).

Weighting was done by Ipsos in close cooperation with the client, in order to reflect the needs of the entire project analysis of e-Business W@tch.

The weighting procedure was as follows:

As mentioned, due to the structure of the companies in the universe – i.e. many small companies, few big ones - but the need of being able to analyse companies with many employees as well as the others the sample has been set up disproportional per country-sector-group.

To resolve this disproportionality and show structures

- by company sizes, i.e. number of companies (splitted by employee size bands)
- by employee weight, i.e. number of employees in a company (again splitted by employee size bands)

a weighting procedure has been established.

According to agreement with empirica the weighting has been applied by sector, but across all countries within each sector. The sum of weights reflects the total number of interviews in the sector (across all countries).

Weighting cells are constituted by sector (11-17), country and employee class.

- Countries: France/ Germany/ Italy/ Ireland/ Poland/ Spain/ UK/ Austria (project IV only)
- Project III - Company size bands:
 - 50 – 250 employees
 - 250 - 499 employees
 - 500 - 999 employees
 - 1.000+ employees
- Project IV - Company size bands:
 - 1 – 9 employees (Project II only)
 - 10 – 49 employees
 - 50 – 250 employees
 - 250+ employees



As in Project IV only companies who fulfilled eligibility criteria (see description “sample and sampling source”) entered the sample, the universe figures had to be adjusted to reflect the proportion of the companies protecting intellectual property. These proportions were estimated by checking how many interviews had to be screened out due to eligibility criteria (Question A1/A2).

NB: for Poland this information was not available therefore we did not adjust the Polish universe.

Special cases/comments:

- For Poland universe information was available in less detail than requested. For Project III we just had information about the number of companies with 250+ employees, not specified for 250 – 499 / 500 – 999 / 1000+ employees. For Project IV we didn’t have the breaks of 1 – 2 and 3 – 9 employees but only for 1 – 9 employees. Figures for the detailed classes were estimated by using information from other sources (Heins + Partner) and from comparison of sector structures of countries being similarly structured as the referring Polish sectors.

Mölln, November 28, 2007

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APPENDIX I – Sector Definition

FINAL REPORT (e-Business Survey 2007)

Definition of the sectors to be covered by the e-Business Survey 2007

11. Discrete / Process manufacturing

NACE Rev. 2	NACE Rev. 1.1	Discrete / Process manufacturing
10	15	Manufacture of food and beverages
14	18	Manufacture of wearing apparel
15	19	Manufacture of leather and leather products (e. g. footwear)
21.1, 21.2	24.4	Manufacture of pharmaceuticals
26, 27	30, 31, 32, 33	Manufacture of computer, electronic and optical products
29	34	Manufacture of motor vehicles, trailers and semi-trailers
Not to be included 31.61 (Rev. 1.1)		

12. Retail distribution

NACE Rev. 2	NACE Rev. 1.1	Retail distribution
47	52	Retail trade, except of motor vehicles and motorcycles
Not to be included 50.5 (Rev. 1.1)		

13. Transportation

NACE Rev. 2	NACE Rev. 1.1	Transportation
49.10, 49.20	60.1	Passenger and Freight Rail transport
49.3, 49.4	60.2	Other land transport
51.10, 51.21	62.1, 62.2	Air transport

14. Hospital activities

NACE Rev. 2	NACE Rev. 1.1	Hospital activities
86.1	85.11	Hospital activities

15. Manufacturing Activities

NACE Rev. 2	NACE Rev. 1.1	Manufacturing Activities
26.2	30.02	Manufacture of computers and peripheral equipment
26.1	32.1.	Manufacture of electronic components
26.3	32.2	Manufacture of communication equipment
26.4	32.3	Manufacture of consumer electronics
26.51, 26.7	33.2	Manufacturing of instruments and appliances for measuring, checking, testing ...
Not to be included 30.01, 33.3 (Rev. 1.1)		

16. Software companies

NACE Rev. 2	NACE Rev. 1.1	Software companies
58.21+29	72.2	Software publishing

17. Telecommunication and IT services

NACE Rev. 2	NACE Rev. 1.1	Telecommunication and IT services
61	64.2	Telecommunications
62	72.1	Information Technology Service activities
63	72.3	Information service activities



APPENDIX V

Comments of Institutes concerning Fieldwork

FINAL REPORT

The following comments concerning fieldwork were provided by the institutes:

General Comments:

Due to the small number of companies available, in some of the countries the fulfilment of the targeted quotas was in specific sectors difficult (respectively not possible) – see also chapter “Fieldwork” above. During fieldwork it was therefore essential to adapt quotas in individual sectors and size classes which was done in close co-operation with the client and the partner institutes involved.

France:

Project III:

- In general, the fieldwork went without any problems and the questionnaire was understood by the respondents.
- Many respondents did not know the term ‘RFID’, especially in hospital activities sector

Project IV:

- Like in project I and II, the question about evolution of the market share (G6) could be misunderstood. Respondent answered: “*Comparing what?*”.
Actually, there are 2 ways to understand the question: interviewees can understand the market share of the company in the regional market/ French market/ international market. Or they can understand the share of the regional market/ French market/ international market for the activity of the company.
- Finally, trading companies answered not being concerned by intellectual property, R&D and innovation, particularly in manufacturing activities sector.

Germany and Austria:

- As with previous e-Business surveys carried out, in total fieldwork ran relatively smooth and the questionnaire was easy to understand and interesting for most of the respondents.
- As in the previous e-Business surveys, positive response came from the respondents concerning the survey was done on behalf of the European Commission. The reference to the website at the end of the interview was welcomed and therefore was very helpful.

Project III:

- However, given that the survey targeted medium and large companies only (50+ employees), one might have expected progress to have been even more difficult. Two factors ensured that this wasn’t the case.
 - First, the quotas imposed were not interlocking on sector and company size and this made things slightly more straightforward than on either Project I: Manufacturing or Project II: Retail, Transport and Logistics where the quotas were all interlocking.
 - Second, the relatively short average questionnaire length proved beneficial. This demonstrates that in an environment where it is becoming increasingly difficult to secure interviews with IT/DP professionals, a shorter interview does appear to help in reaching interview targets when the universe of companies is relatively small.
- However in some of the sectors it was not possible to realize the targeted sector quotas due to the rather small universe basis available. For Germany, in detail assigned quotas were not



achievable in sector 12 (Project III: Retail...) and sector 15 (Project IV: Manufacturing Activities). The remaining interviews were compensated by other sectors. In Austria all quota were achievable.

Ireland:

General:

- Many interviewers said that a short letter explaining the purpose of the survey, on European Commission letterhead, would have been beneficial. This could have been faxed or emailed to potential respondents to allay any potential concerns they had about taking part. We believe this would have helped increase levels of participation.

Project III:

- The questionnaire was quite similar in tone and feel to those used for previous e-Business W@tch surveys. Although some of the questions do appear to be quite technical, this did not prove a particular problem for respondents.
- There was a low universe of companies in certain quota cells. However, the quotas had been set quite low with this in mind. As a result all sector and employee size band targets were met.

Project IV:

- The target respondent on this survey was slightly different to the other e-Business W@tch surveys conducted this year. This did not prove a particular obstacle, however, and the questionnaire itself ran smoothly and was straightforward for respondents to understand.
- There was a very low universe of companies in some of the quota cells imposed on this survey. As a result interview targets were not met in either Sector 15 – Manufacturing Activities or Sector 17 – IT Services. In terms of employee size category, the 3-9 band fell some way short of its target. Some of these interviews were made up in other bands but ultimately a decision was taken to make up the overall shortfall of 11 interviews in the UK instead.

Italy:

Project III:

- It was not easy to get the availability of the respondents, many refusals both from the contact person and from target persons.
- The most important issue in this Project was the lack of knowledge about RFID technology, in particular in the small medium companies, or when the respondent was the owner instead of the IT manager. To get some answer to C1, our interviewers gave more details on this technology. Sometimes after the explanation of interviewers respondents misunderstand the potentiality of RFID confusing it with a new technology for badge validation/control.
- It would be better in the future to give more details/describing more any new technology.

Project IV:

- No major problem arose during fieldwork, except the more and more high number of refusals
- As already encountered when interviewing in Project I and II, the respondents met some difficulties in appropriately understanding question G6 (Market Share). *Question G6: As in the past many respondents misunderstood this question. They did not answer giving the market share in their main market, but giving the share of their "turnover" in their main market (Company's turnover in all markets = 100%)! Anyhow the most of respondents are not aware about the market share and they answered: DK. A more detailed explanation about the market share (%) required would be advisable.*

Poland:

- In general, the fieldwork ran relatively smoothly and the questionnaire was straightforward for respondents to understand.

Project IV:



- Sometimes respondents weren't able to answer all questions, e.g. they knew everything about issues concerning technology but had problems to answer those numerical concerning employees (G12) and market share (G6). At G6 for example some figures are quite strange, and we think it is possible that respondents just don't know the answer.

Spain:

Project III:

- As in previous e-business surveys, there were some difficulties in reaching the target persons which results in a long time for fieldwork. Especially the participation of target persons in big companies is becoming more and more difficult as those IT professionals are much approached.
- Difficulty to complete the required quotas, especially the Pharmaceutical sector, i.e. which results in a very low response rate.

Project IV:

- Quite complicated to reach all the quotas regards the sectors (16 and 17), company size (50-249 employees) as well as the questions A1/A2. Low response rate.
- Problems with most of the numerical questions (absolute/percentage), e.g. G6 and G12. Often the respondents indicated just an estimation or they answered DK.

UK:

General:

- Many interviewers said that a short letter explaining the purpose of the survey, on European Commission letterhead, would have been beneficial. This could have been faxed or emailed to potential respondents to allay any potential concerns they had about taking part. We believe this would have helped increase levels of participation.

Project III:

- The questionnaire was again quite similar in tone and feel to those used for previous e-Business W@tch surveys. Although some of the questions do appear to be quite technical, this did not prove a particular problem for respondents.
- There was a low universe of companies in certain quota cells – as a result it proved impossible to meet the quotas precisely for Sector 12 – Retail distribution and Sector 13 – Transportation. In addition the target for companies with 250 to 499 employees was not achieved.
- A positive effect on the response rate was that the quotas imposed were not interlocking on sector and company size which made things slightly more straightforward than on Project I and II.
- As on all the other e-Business projects undertaken this year, we believe that given the limited sample available in some sectors, and the need to target a relatively high proportion of large companies, a longer field period would have helped to maximise the number of complete interviews in the target quota groups. It is generally more productive on projects with limited sample to run fieldwork with smaller shifts of interviewers over a longer field period. Having excessively large interviewing shifts, because of a need to finish fieldwork in a relatively short timeframe, means that sample can become exhausted quite quickly.

Project IV:

- The target respondent on this survey was slightly different to the other e-Business W@tch surveys conducted this year. This did not prove a particular obstacle, however, and the questionnaire itself ran smoothly and was straightforward for respondents to understand.
- Despite there being a low universe of companies in some of the quota cells, all initial sector and employee size targets were met relatively comfortably in the UK. This was helped by the fact that the quotas imposed were not interlocking, and this certainly made things easier than on Project I and II where the quotas were all interlocking.



- In addition, the fact that we were concentrating on small to medium companies (1 – 249 employees) in this survey made the targets more attainable.
- Once the initial target of 95 interviews was achieved, a further 11 interviews were conducted in the UK: 4 of these were in Sector 15 – Manufacturing Activities and 7 were in Sector 17 – IT Services. The additional interviews were spread between the 3-9 employee category (6 interviews) and the 10-49 employee category (5 interviews). These interviews were conducted to make up a shortfall in Project 4 in Ireland.