

Final Report

of the Pilot Phase

G8 **Pilot Project**
"A Global Marketplace for SMEs"

Foreword

The G8 Global Marketplace for SMEs project, which started in February 1995, has successfully completed its pilot phase. When the project started very few people recognised the importance that the Internet would have on electronic commerce – but this project did! We aimed to help SMEs’ participation in global trade by using the new open networks. We also stressed the importance of close co-operation between industry and the public sector in achieving this goal.

The G8 project was the first important public initiative in international electronic commerce. It was catalytic in stimulating world-wide policy dialogue and providing practical help for SMEs in this area. It is still unique in looking at the specific issues of electronic commerce for small companies and in providing a global forum for discussion “where policy meets practice”. This report summarises the many achievements of the G8 Global Marketplace for SMEs pilot project. There is still much more to do, especially in bringing best practice to the SMEs and policy makers of the developing world.

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Part A

G8 Global Marketplace for SMEs Pilot (G8 theme #10)

Final Report of the Pilot Phase

Purpose and Objectives

The overall objective of the G8 Pilot “Global Marketplace for SMEs” is to facilitate increased competitiveness and participation in global electronic commerce for SMEs. This is addressed by:

- | | |
|---------|--|
| Theme 1 | Global Information Network for SMEs. Theme leader is Japan . |
| Theme 2 | SME Requirements - Legal, Institutional and Technical. Theme leader is the European Commission . |
| Theme 3 | International Testbeds for Electronic Commerce. Theme leader is the USA . |

The European Commission (also providing the secretariat), Japan and the USA jointly lead the project. The meeting of the representatives is called the ‘Policy Group’. Eight different members hosted regular meetings of participating countries.

While initially involving the G7 countries and the European Commission only, participation expanded rapidly. Currently the pilot has over twenty countries and several international organisations. Although participation stabilised after about two years, in the last year of the project interest was rising again, notably from developing and Central and East European countries.

Assessment and achievements

Theme 1: A large network of business information on the Web has been established, the Global Information Network for SMEs, with contributions from 15 economies and five international organisations (including the European Commission). Each participating economy or international organisation created its own home page. These provide information on products, technologies and so forth offered by SMEs of the country, on SME representative organisations and other contact points, on government policies towards SMEs and on policies benefiting SMEs trading in the country. Japan has created the general entry point (homepage) for the Network.

The theme was successful by giving an example of a Website dedicated to SMEs and electronic commerce. This has clearly motivated others to create focal points for SME information. On the other hand, the Global Information Network faced some challenges. Some of the information that was provided at the early stage by the public sector is now also available from the private sector. The borderline between public and private needs constant re-evaluation, where the outcome may be different for each country. The Network would be even more useful if a multi-lingual search could be supported, and first contacts with private sector search engines have been established to achieve that. There is also a need for a higher level of uniformity of presentation, which may be achieved through continuing co-ordination on the Network. Finally it is costly to maintain the information base and to enrich its contents.

Theme 2: International and national working groups have been studying the policy issues in electronic commerce for SMEs (legal, technical, institutional). This has contributed to policy definition in many countries. In fact, this theme has been very successful in catalysing electronic commerce policy making, for example, the formulation of the European Initiative in Electronic Commerce in April 1997, which is the framework policy paper of the EU. Recently, representatives from several countries have acknowledged the important role of this Pilot for shaping national electronic commerce policy, and obtaining practical ideas for the implementation of such policies. Work in theme 2 in Japan has led, among other things, to guidelines for certification authorities and an overview of legal issues, formulated within the private sector initiative.

A best practice book was issued in April 1997 with updates in April 1998. This provides examples how SMEs deal practically with the theme 2 issues and is a tool for awareness creation. A major conference of the project was held in Bonn/Germany in April 1997 and this was followed by another conference in Manchester in September 1998, and a final event in Texas, April 1999.

Theme 3: Thirty-three international testbeds or pilots have received the G8 label. Testbeds have been grouped into categories: background for e-commerce for SMEs, implementation of trading forums, electronic payments, infrastructure, and information resources. The USA set up a website containing the testbed descriptions in a common format and providing links to the pilot projects' websites, as well as online registration for new ones. Analyses of these projects have been performed by the USA and by the European Commission.

This theme has been hampered by a lack of resources to provide more visibility and by conceptual problems about what appropriate international testbeds for SMEs could be. The latter indicates a concrete challenge for the future: co-operation of international testbeds that show how the global marketplace for SMEs can become a reality. However, by bringing together the experiences of people involved over several years in testbeds it was possible to define a set of priorities and concrete ideas for future SMEs testbeds.

Conclusion and perspectives

The pilot contributed substantially to electronic commerce policy and actions in most of the participating countries. It has also decidedly contributed to sparking off the international dialogue.

In addition, the experience has clearly shown that for such international co-operation to be effective, at least a minimal budget should be available. Actions require the presence of at least some kick-start public funding, which can then attract private funding. The Pilot was fortunate that such funding was available from individual countries, from the European Commission (which supported the secretariat, reports for theme two, the conferences, and most of the pilots), and from some others. For example the OECD supported an SME study.

Finally, the G8 label itself has been very useful. It has been a vehicle to attract new membership. It has also been a support for a number of the testbeds in their marketing. The G8 label is believed to have served its purpose.

As far as the future is concerned, there is no doubt about interest in continued work on the global marketplace for SMEs. There is no other private/public sector forum where "policy meets practice", that is where the practical implementation of electronic commerce tools and policy affecting SMEs is its focus. At the same time it is recognised that possibly the G8 project has now served its purpose as a catalyst for electronic commerce activities. However, the 'Global Marketplace for SMEs' is even more of a challenge than ever before. Therefore future work should aim to realise this vision rather than aim to carry forward the G8 label.

A continued dialogue is needed on best practice for SMEs, preferably with fully international participation and with strong involvement of SMEs and their representative organisations should be pursued in global co-operation with the public sector.

Future work should aim at:

Providing information and improving awareness in training about electronic commerce aimed at SMEs, including continuation of the Global Information Network and the Global Marketplace Website.

Promoting international pilots for SMEs as participants in global trade and enabling SMEs to make the transition from the paper-based economy to the digital economy.

Strengthening international collaboration between emerging, developing and industrialised economies in electronic commerce for SMEs.

Along these lines the participants at the final meeting of the G8 Pilot in Dallas, 15-16 April 1999, recognised the benefits of focused action for SMEs in the global marketplace as a valuable and unique contribution to the international dialogue on electronic commerce. The European Commission will co-ordinate international efforts by interested parties to define a detailed action plan for future work in this area by Fall 1999.

Part B

Project Framework

Purpose of the work

Small and medium-size enterprises (SMEs) are the foundation of economic activity and the key to innovation and job creation. However, business opportunities for SMEs in the global marketplace are limited by a variety of factors, including difficulties in accessing appropriate information and integrating themselves in global trade.

Objectives of Pilot Project

The overall objective of this Pilot #10 is **to facilitate increased competitiveness and participation in global trade for SMEs** by exploiting the opportunities offered by the development of the Global Information Society. This is addressed by:

Theme 1 “Global Information Network for SMEs”: the development of an open non-discriminatory environment for enabling SMEs to access the information they need and disseminate information on their products, technologies, legislation, partner search, trade conditions, market situation, and so forth, using international information networks. Theme leader is Japan.

Theme 2 “SME Requirements - Legal, Institutional and Technical”: to ensure that the systemic issues associated with an open global marketplace for SMEs are addressed, such as globalisation, financial aspects, ownership, privacy and security, interconnectivity & interoperability, multi-linguality, multi-culturality, and deployment. Theme leader is the European Commission.

Theme 3 “International Testbeds for Electronic Commerce”: to promote awareness of the issues that must be addressed to realise a "Global Marketplace for SMEs", encourage testbeds, pilot projects, etc. that evaluate/demonstrate the issues, and publicise successful demonstrations of global electronic commerce involving SMEs. Theme leader is the USA.

The project is jointly led by the European Commission (also providing the secretariat), Japan and the USA. The meeting of representatives is called the ‘Policy Group’.

Deliverables

While initially involving the G-7 countries and the European Commission only, participation expanded rapidly. Currently included are other European countries (Denmark, Ireland, Lithuania, the Netherlands, Norway, Spain, Switzerland) as well as representation from the CEECs (Central and Eastern European Countries), CIS, Egypt, Korea, Mexico, Argentina, and Singapore, as well as the OECD, ICC, GIIC, and the European Commission (over 20 countries and international organisations). Although participation stabilised after about two years, currently interest is rising again, notably from developing and CEEC countries (e.g. Egypt, Lithuania, CIS).

The representatives have met eight times since 1995, to exchange progress in policy and action plans development and implementation. Two major international conferences have been held, in April 1997 in Bonn with 650 participants and in September 1997 in Manchester with 350 participants, and a significant contribution was provided to the Business on the Web WWW5 conference in Paris in May 96. Meetings of representatives have also involved industry and SME organisations. For example, in the EU, meetings have been held with several hundreds of companies. Working groups have been created around various themes, either internationally or nationally (e.g. Japan in the frame of the ECOM initiative).

Theme 1:

A large network of business information on the Web has been established, with contributions from 16 economies (including the European Commission) and International organisations (ISBC, IBCC, APEC, UN/ECE). Information ranges from business-oriented yellow pages, market research reports, trade conditions, business opportunities e.g. in technology transfer, information about national and international legislation and electronic commerce action plans, projects, and contact points. The specific approach of each Website is a choice of the country or organisation responsible. In addition Japan has created the general entry point (homepage) for this collection of Websites, which is called the G7 Global Information Network. Although actual usage is not known of the individual country Websites, an indication is given by the Japanese theme 1 Website which attracts about 32,000 hits (1998) and the EU’s Electronic Commerce Website about 250,000 hits/month (end 1998)

Theme 2:

International (e.g., European) and national working groups have been studying many of the policy issues in electronic commerce for SMEs (legal, technical, institutional). This has catalysed and contributed to policy definition in many countries (including CAN, CH, D, F, I, J, NL, UK) and concrete proposals for solutions are being defined. A major conference of the project was held in Bonn/Germany in April 1997 with a range of policy and practice papers. This was followed by another conference in Manchester in September 1998, and a final event in Texas, April 1999. A best practice book was issued in April 1997 with updates in April 1998. This provides examples how SMEs deal practically with the theme 2 issues and is a tool for awareness creation. In Europe, Memoranda of Understanding ("Information Networks for SMEs Support Organisations" and "Open Access to Electronic Commerce") have been developed or advanced. Work in theme 2 in Japan has led, among other things, to guidelines for certification authorities and an overview of legal issues, formulated within the private sector initiative.

Theme 3:

About 30 international testbeds or pilots have received a G8 label. These aim to raise the awareness about electronic commerce for SMEs, contribute to business information and try out solutions. The USA has set up a website providing access to all these pilots as well as online registration for new ones. Analyses of these projects have been performed by the USA and by the European Commission. Testbeds and have presented their results at various occasions.

Evaluation

The process of evaluating the *overall* achievements and usefulness of the Pilot began at the Policy Group meeting of April 1998, continued in September 1998 in Manchester, and will be completed in Texas, April 1999, when results and future work will be brought into a discussion with an extended group of experts in this area.

A specific evaluation of a number of SME information Websites (theme 1) was presented in April 1997 by the OECD SME Working Party. The USA conducted an assessment of the testbeds during 1997. The European Commission performed an independent assessment of European testbeds during 1998.

Reporting

- *National and international progress was reported in details at the meetings of the representatives, of which 8 have been held in the USA, Japan, France, Italy, Germany, Canada, the Netherlands, UK.*
- *Two of these meetings have been extended to include additional external experts from industry and SME organisations (Rome, Ottawa).*
- *Major international conferences in Bonn, April 1997 and Manchester, Sept 1998, and still to happen at a final meeting in Texas, April 1999.*
- *Presence at exhibitions, including the G8 ISAD Conference in Johannesburg, SA, May 1996, EITC Nov 1997, Bled June 1998, OECD Ottawa Oct 1998, and many others.*
- *A range of reports and publications have been produced (see annex).*
- *Website information, along the three themes has been provided*
- *Final report book will be published at the Pilot's closing event in Texas, April 1999.*

PROJECT'S WORK AND ACHIEVEMENTS

Assessment

The overall assessment is that this Pilot has **substantially contributed to electronic commerce policy and actions** in most of the participating countries. It has also decidedly contributed to sparking off the international dialogue. The Policy Group members at the Manchester, September 1998 conference, explicitly confirmed this conclusion.

Despite this positive assessment, the Pilot also has gone through a phase of somewhat reduced interest and re-orientation, once electronic commerce policy-making moved to the international scene in forums such as the OECD and bilateral negotiations (2nd half of 1997). However, during 1998 interest revived with new members joining and the discussion starting about further work for SMEs in the global marketplace.

In addition, the experience has clearly shown that for such international co-operation to be effective **at least a minimal budget should be available**. Actions require the presence of at least some kick-start public funding, that on its turn can attract private funding. The Pilot was fortunate that such funding was available, including individual countries (e.g. Japan invested considerable in theme 1, and all countries supported the Policy Group meetings), from the European Commission (which supported the secretariat, reports for theme 2, the conferences, and most of the pilots), and some others (e.g. the OECD supported an SME study).

Finally, the G8 label has been very useful. It has been the perfect vehicle to attract new membership. It has also been a support for a number of the testbeds in their marketing. The G8 label is believed to have served its purpose.

As far as the future is concerned, there is no doubt about the lively interest in continued work about the global marketplace for SMEs. Despite the plethora of international forums (OECD, WTO, UNCITRAL, WIPO, ...) there is currently **no other international forum where the issues in electronic commerce for SMEs are the centre of attention**. There is also no other forum where 'practice meets policy', that is where the practical implementation of electronic commerce policy for SMEs can be discussed. At the same time it is recognised that possibly the G8 umbrella has had its longest time. However, the 'Global Marketplace for SMEs' is even more a challenge than ever before. Therefore future work should rather aim to realise this vision rather than aim to carry forward the G8 label.

The views on future action, building on the achievements of this G8 Pilot, can be summarised as follows:

- *Future work at international level in electronic commerce and SMEs is seen as highly desirable;*
- *This need not necessarily happen under the G8 umbrella; however, the 'Global Marketplace for SMEs' label is worthwhile to continue;*
- *A practical implementation approach in relation to policy development is to be followed (no other forum goes beyond policy); a continued dialogue is needed on best practice for SMEs;*
- *Preferably this should be with fully international participation (clear interest exists from the European/CEEC/MED countries);*
- *Stronger involvement of SMEs and their representative organisations is to be pursued;*
- *Global pilots with SMEs are to be promoted;*
- *Possibly more emphasis is to be given to business-to-business e-commerce for SMEs.*

Future work could then be structured around four lines of action:

- *Providing a platform for 'hands-on' policy makers and action plans implementation*
- *Supporting and defining international pilots for SMEs, 'policy meets practice'*
- *Extending international collaboration*
- *Information sharing and awareness, including continuation of the Global Information Network and the Global Marketplace Website.*

The assessment for each of the three themes is as follows.

Theme 1 (SME information)

The theme was successful in the sense that the early example of some of the G8 countries with a Website dedicated to SMEs and electronic commerce (e.g. Japan, France, Canada, and USA) has clearly motivated others to create strong focal points for SME information. For example, the UK and Korean websites were realised only later during the project but are generally perceived as offering a high quality and rich information content. The discussion about SME information requirements in European working groups has led to specifications for such content which have been put to practice by commercial information providers.

On the other hand it has to be mentioned that the Global Information Network faced positioning, technical and resource challenges. Some of the information that was provided at the early stage by the public sector is now also available from the private sector. The borderline between public and private needs constant re-evaluation, where the outcome may be different for each country. The GIN would be especially more useful if a multi-lingual search could be supported, and first contacts with private sector search engine providers have been established to that extent. There is also a need for a somewhat higher level of uniformity of presentation, which may be achieved through continuing co-ordination on the GIN. Finally it is costly to maintain the information base and to enrich its contents. Some countries have already taken this into account in their next years' budget planning (e.g. Japan).

Theme 2 (SME requirements)

This theme has been very successful, as mentioned before, in catalysing electronic commerce policy making across the world. Even recently, representatives from several countries (such as Italy, Switzerland, UK, and others) have acknowledged the important role of this Pilot for shape thinking in electronic commerce policy, and to obtain practical ideas for the implementation of such policies.

In the case of the European Union the investigation of SME requirements has directly catalysed:

The formulation of the European Initiative in Electronic Commerce, April 1997, the framework policy paper of the EU (see also the success stories chapter below).

The inclusion of electronic commerce pilots in the ESPRIT R&D programme, as early as 1996, extending during 1997 into a thematic call in electronic commerce R&D and pilots, that received a very high response, notably of SMEs (>45% of participants), and culminating in the creation of a special €550 million Key Action of the Information Society Technologies Programme for R&D/pilots called 'New Methods of Work and Electronic Commerce'.

The launch of a pilot awareness actions and an ongoing discussion about awareness for SMEs in the European Commission, resulting in a active involvement in awareness from several parts of the Commission (SME-policy, industrial policy, R&D).

The provision of a large amount of information for the focal point for information about electronic commerce in the European Union <http://www.ispo.cec.be/ecommerce>.

Theme 3 (testbeds)

This theme has been successful to the extent that about 30 international pilot experiments in electronic commerce for SMEs have received increased public visibility by providing them with the G8 label ("it is an excellent promotional tool" – AMIDE testbed). It also lent them credibility ("the G7 accreditation to persuade companies to co-operate is relevant" – DMONLINE) and enabled them to extend their market reach ("contact from a much wider geographic area, including a potential customer from Australia who would otherwise not have heard from us" – INFOMAR). The exchange of ideas amongst testbeds is also mentioned as a key benefit. On the other hand, this theme has been hampered by a lack of resources to provide more visibility, by an unclear definition of what constitutes a testbed and what the quality standards should be, and by conceptual problems about what appropriate international testbeds for SMEs could be. The latter especially indicates a concrete challenge for the future, but co-operation on international testbeds that show how the global marketplace for SMEs can become a reality.

In summary, the Pilot contributed to the overall objectives of all Pilot Projects (as defined by the Information Society Ministers at their 1995 Brussels meeting) as follows:

Overall Objectives	Contributions of G8 Global Marketplace for SMEs Pilot
Development of international consensus	Electronic commerce policy development has been catalysed by this Pilot. The first meetings between high-level US and EU and Japanese negotiators took place by inviting them to the Pilot Project's Bonn Conference in April 97.
Establish the groundwork for productive forms of co-operation among G-8 partners in order to create critical mass to address the global issues	<p>This G8 Pilot is being referred to as a co-operation platform in several national and international electronic commerce plans.</p> <p>Theme 1 established the global information network of Websites; Although data are not known of the country Websites, indicative might be the Japanese theme 1 Website which attracts about 32,000 hits (in 1998) and the EU's Electronic Commerce Website about 250,000 hits/month (end 1998)</p> <p>Theme 2 established working groups about e-commerce and SME issues, set up electronic discussion lists, delivered policy papers, and provided other tools like a best practice book for contributions from several countries. It also organised two major conferences which proved to be a fertile meeting ground and have spun-off international negotiations about the global framework for electronic commerce.</p> <p>Theme 3 established an inventory of international testbeds and set up a G8 label scheme to distinguish them.</p>
Create an opportunity for information exchange	The Policy Group meetings have proven to be a fertile ground for exchange about policy development, to the extent that national action plans have concretely benefited from the experience of others (e.g. most recently Italy and Switzerland).
Identify and select projects of exemplary nature	Theme 3 selected about 30 projects of this nature.
Identify the obstacles	The working groups have provided concrete input to policy development on the various issues for SMEs, such as awareness, business information, training, trust and confidence, etc.
Help create new markets for new products and services	G8 Pilot best practice and general e-commerce info have led to new business and services. Information material from the project has been used for training, e.g. in 2000 communities in Canada. Testbeds have provided the concrete feedback that the G8 label has been helpful in their international marketing (e.g. Citius, Infomar). Some examples are known of companies that have been expanded their work based upon this Pilot (e.g. work in Europe Online, D3 Group).

Conclusions

The G8 Global Marketplace for SMEs has realised virtually all its objectives. It has been leading the way to the development of insight into electronic commerce for SMEs. It has been able to catalyse policy making in many countries.

The success is evident, but the challenge that remains is even more clear. The global marketplace for SMEs is by far not realised. While policies are developing there is a clear need to push much further in meeting SME needs in the practical realisations of electronic commerce. The involvement of developing countries in the emerging digital economy is of particular concern.

There is a clear need to continue the dialogue and action, globally, and oriented towards the evolving practice of the global marketplace for SMEs.

Outlook

The G8 Global Market Place for SMEs Pilot had beneficial results in catalysing national and international policy, providing a practice-oriented meeting point for policy makers and creating awareness. There is no doubt about the lively interest in continued work about the global marketplace for SMEs. Despite the plethora of international forums (OECD, WTO, UNCITRAL, WIPO,) there is currently no other international forum where the issues in electronic commerce for SMEs are the centres of attention. There is also no other forum where ‘practice meets policy’, that is where the practical implementation of electronic commerce policy for SMEs can be discussed although the ‘Global Marketplace for SMEs’ is even more a challenge than ever before.

At the same time it is recognised that possibly the G8 umbrella has had its longest time. The G8 label has been the perfect vehicle to attract new membership. It has also been a support for a number of the testbeds in their marketing. The G8 label is believed to have served its purpose. Therefore future work should rather aim to realise this vision than aim to carry forward the G8 label, however, the ‘Global Marketplace for SMEs’ label is worthwhile to continue.

Experience has clearly shown that for such international co-operation to be effective at least a minimal budget should be available. The G8 Pilot was fortunate that such funding was available, supported by individual countries (e.g. Japan invested considerably in theme 1, and all countries supported the Policy Group meetings). Support also came from the European Commission (which supported the secretariat, reports for theme 2, the conferences, and most of the pilots), and some other organisations (e.g. the OECD supported an SME study). Future activities will need some financial commitment of public authorities to ensure at least basic organisational functions. In addition private funding from industry needs to be attracted. Therefore the focus of future work and its benefits to the contributors need to be made clear.

Building on the achievements of this G8 Pilot future work at international level in electronic commerce and SMEs is seen as highly desirable. Ideally participation should be truly international (clear interest exists from the European/CEEC/MED countries). The work plan could then be structured around four lines of action:

- *Providing a platform for ‘hands-on’ policy makers and action plans implementation: A practical implementation approach in relation to policy development is to be followed (no other forum goes beyond policy). A continued dialogue is needed on best practice for SMEs.*
- *Supporting and defining international pilots for SMEs, ‘policy meets practice’: Global pilots with SMEs are to be promoted. More emphasis is to be given to business-to-business e-commerce for SMEs.*
- *Extending international collaboration: in particular SMEs and their representative organisations should be involved more strongly.*
- *Information sharing and awareness, including continuation of the Global Information Network and the Global Marketplace Web site.*

STATUS OF ELECTRONIC COMMERCE FOR SMES

Most significant outcomes in theme 1, 2 and 3

Theme 1: Overview of the Global Information Network for Small and Medium Enterprises

Objectives

Theme 1, GIN-SME will contribute to the development of an open and non-discriminatory environment for enabling SMEs to access the information they need and disseminate information on their products, technologies, and so forth, using international information networks.

Overview

Each participating country or international organisation creates its own "home page", known as its "SME Information Home Page". Links to each such "home page" are established from the home page of the Global Information Network for SMEs that Japan has created and now maintains.

Each "home page" provides the information listed below:

- *Information on products, technologies and so forth offered by SMEs of the Country*
- *Information on SME representative organizations and other relevant contact points*
- *Information on government policy towards SMEs in the country*
- *Information on policies benefiting SMEs trading in the country*

Participation

Year	Month	Countries of Origin
1996.	2	Japan
1996.	3	European Commission
1996.	5	France, Germany, Italy, U.S.A., International Bureau of Chambers of Commerce (IBCC-Net)
1996.	7	United Nations Economic Commission for Europe (UNECE)
1996.	8	Korea
1996.	10	Canada
1997.	1	Singapore
1997.	3	Australia, U.K.
1997.	9	Hong Kong Special Administrative Region of the People's Republic of China, APEC Network for SMEs (APEC Center for Technology Exchange and Training for SMEs (ACTETSME))
1997.	10	International Small Business Congress (ISBC))
1997.	12	Brunei, Spain
1999.	3	Thailand, Switzerland

Achievements

A large body of business information has been established on the Web by linking the GIN-SME home page with national home pages. 16 economies (including the European Commission) and four international organisations have contributed to this effort. Participating countries are in the process of making databases available on policies and contact points on their home pages.

- *We provide support for this initiative which allows various SMEs to obtain useful information about SMEs listed in each country's home page through the home page of the Global Information Network for SMEs which provides an entry point (31,747 accesses to the International GIN homepage in 1998).*
- *Last July, we initiated the implementation of a user feedback survey. The questionnaire is available on the GIN home page.*
- *We have deployed and are still deploying extensive efforts to publicize the GIN activities and to encourage participation to this network, such as for example, at the APEC SME Ministerial Meeting which was held at Kuala Lumpur in Malaysia last September.*

INGECEP/CyberNet”

(Integrated Next Generation Electronic Commerce Environment Project)

(1) Objectives

INGECEP has started as one of the registered projects of G8 Global Marketplace for SMEs as well as APEC Working Group on Telecommunications (TEL-WG), and aims to clarify the issues and solutions for realizing the global “user-friendly” e-commerce.

(2) Progress

INGECEP made a step-by-step progress, and after great efforts, TELESAs (Telecom Service Association of Japan), the promoting institution of this project in Japan, concluded agreements with a private company called Mediaworks, their counterpart in Singapore, to conduct international interconnection of e-commerce testbeds.

In the third APEC Ministers’ Meeting for Telecommunications and Information Industry in Singapore in June 1998, the TELESAs and the MPT made a demonstration of this project, which was very successful, and started the interconnection field trial with Singapore in July 1998.

(3) Pilot System

A consumer in Japan who wish to participate in this field trial have to make registration first to the Clearinghouse, i.e. Certification Authority, the TELESAs. The TELESAs examines the applicant, and issues a certificate to the applicant if there is no problem. In the next step, the consumer will look for goods which he/she wants in the Cybermalls in Singapore through the Internet. (Of course, non-registered consumers also can look for goods just for looking into the malls, but they cannot purchase goods.) If the consumer finds goods he/she wants, he/she can send an order to the mall also through the Internet. After that, the mall sends an authorization request to the TELESAs to make the order authenticated. The TELESAs informs the mall of confirmation of the request, then the mall sends the goods to the consumer. The actual payment will not be settled until the ordered goods arrive at the consumer.

The goods are sent via EMS, the Express Mail Service of the MPT, so the related parties can search the route in case of accident. Also, this enables them to confirm the time of arrival of the ordered goods. After the arrival is confirmed, the mall sends a payment request to the TELESAs, and then settles with the consumers’ account. This will be helpful to solve the delivery problem.

Finally, the payment is made between the bank accounts of the TELESAs in Japan and the Mediaworks in Singapore.

(4) User trust & confidence

In order to contribute to consumer protection, we have developed comprehensive terms and conditions to be applied to the shops.

Also, to ensure security on telecommunications network, we adopt a SET protocol based on public key cryptography.

Protection of consumers' privacy is also an important issue. All malls must be in accordance with "Guidelines for Protecting Personal Information in Cyber Business" which are voluntary guidelines established by the Cyber Business Association (CBA), a private organisation for promoting e-commerce under the auspices of the MPT.

For us Japanese, the language may be a great obstacle for e-commerce. In this sense, we provide navigators both in English and Japanese.

(5) Open Issues

We recognize some problems to be solved. For example, under the current system, the jurisdiction for lawsuits is uncertain. In the field of security, trust on CAs has not yet been established. High costs for delivery is another great obstacle. In some cases, it is higher than the price of the purchased goods. We recognize the necessity to make sure of what kind of goods are suitable for this type of e-commerce.

(6) Provisional Conclusion

Of all these issues we put the highest priority to be solved on the issues of protection of privacy and consumer protection. Therefore, we will make our best efforts to find out possible solutions to those two issues.

(7) Future Plan

This field trial with Singapore will be continued until June. We are now also planning international interconnection with other countries.

Theme 2 SME Requirements

Objectives

A *Global Marketplace for SMEs* highlights relevant issues (such as globalisation, financial issues, ownership, deployment, interoperability, privacy and security), whose overarching reach, making them relevant in different technical and economic contexts, let name them *the systemic issues*. Theme 2 takes the systemic issues as the reference nodes of the emerging Global Information Network, and plans activities targeting the setting of a general framework where to understand and process the systemic issues, in order to make the electronic access of the SMEs to the global marketplace feasible and profitable.

To achieve that, a bottom-up approach (dialogue with the SMEs) and a concerted action was adopted with participation by the business and institutional players.

Overview

So, in the frame of the Theme 2 Action Plan, on April 1996 over 100 experts participated in a Workshop on Electronic Commerce in Brussels, which gave birth to five Working Groups, on the following issues:

- WG1
 - 1. Information Networks
 - 2. Globalisation
 - 3. Deployment
- WG2 Legal, Regulatory, Security
- WG3 Interoperability
- WG4 Financial Issues
- WG5 Testbeds & Pilots

Each of the Work Groups was lead by experts, in charge with the co-ordination of the single forum and with the delivering of reports about the single-issue discussion progresses.

The activity of the Working Groups was performed in two phases, during 1996 and in the first half of 1997. In 1996 the WG activities were organised according to different scheduling, depending on the activism of the single WG, or of the single rapporteur. After the Workshop on April 1996, the further common occasion for letting all the WGs (except WG – Interoperability) communicate their objectives and methodology of work was the Workshop organised within the Policy Group meeting in Rome, in October 1996.

The Policy Group meeting in Manchester (UK) during September 1998 was held in conjunction with Electronic Commerce Week, a week long event focussing on information, technologies and services for SMEs investigating Electronic Commerce. This reinforced the overall theme of increasing awareness for SMEs.

Results

Much of the activity in 1996 was at the heart of future activity for theme 2, with a substantial level of activity in the working groups.

- WG1 (Deployment)
Link to the Memorandum of Understanding of the ICT Round Table 10 *Information Networks for SMEs Support Organisations*
- WG3 (Interoperability)
Co-operation with the DGXIII group promoting the Memorandum of Understanding on Interoperability¹ (Brussels, November '96)
- WG 1 (Multilingualism)
Sevilla Symposium, 20-22 November '96
Web Internationalisation & Multilingualism
- WG 4 (Financial Issues)
Brussels Workshop, 5-6 December '96

Therefore, at the end of 1996 a claim for some more finalised actions to be engaged by the WGs was raised by the European Commission and by the WGs themselves. A second phase was therefore stimulated, based on the drawing of Master plans including a structured work-plan and scheduling and their results were presented in a Workshop of all the WGs, held in Brussels on March 1997².

WG1 (Global Information Networks; Identification; Multilingualism; Deployment and Simplification) and WG 4 (Financial Issues) reports were mainly based on the pattern of identifying the key issues and sub-issues, with some difference in the degree of detail. In most cases the results were picked up by a subsequent research project.

WG2 Legal Issues through a well co-ordinated network of experts provided a legal model for each of the four sub-issues (electronic transactions; data protection; intellectual property rights and security). The model set-up a methodological framework within which the relevant issues should be approached.

Many problems were identified as needing to be solved at policy level, through the definition (and negotiation) of principles as protection of citizen, consumer, producer rights; participation; fair competition; etc.

Working Group on Global Master on Electronic Commerce

Within the G7 PP 10 partnership, particularly between a number of education institutions of EU countries and of the US, an effort has been paid to jointly design an initiative called *Global Master in Electronic Commerce*.

A number of Business Schools, University, and Research Institutes have gathered around the idea of designing and engineering a model of education integrating business & technology & policy competencies throughout a network of existing institutions, to be implemented through the exploitation of IT solutions, providing a formal CV and certificates to post-degree students and to executives.

By analysing the SMEs requirements it appears quite clearly that there is a demand of expertise and skill to rely upon when the company wishes to enter innovation in the business processes organisation through the application of IT tools in the Internet environment. The wish to experiment Electronic Commerce practices seems stronger, in the innovative SMEs, than the current debate about the barriers to Electronic Commerce would let expect.

A Global Master in Electronic Commerce is intended to address education requirements and to fill strategic gaps in the availability of professionals able to dealing with Electronic Commerce issues management & solutions, which typically have a complex and interdisciplinary nature.

¹ Open Access to Electronic Commerce for European SMEs, Memorandum of Understanding. Updates are published on the Web: www.ispo.cec.be/Ecommerce/MoU/geninfo.htm

² Master-plans 1997-1998 and Final Report of Electronic Commerce Workshop, Brussels, 13-14 March 1997 in www.ispo.cec.be/infosoc/elecocom/mstrplan.html

Theme 3

TESTBEDS: TO EXPAND GLOBAL ELECTRONIC COMMERCE

(Draft March 9, 1999)

The major objectives of Theme 3 are as follows:

- To promote awareness of the issues that must be addressed to realise a "Global Marketplace for SMEs" through global electronic commerce.
- To encourage the development of testbeds, pilot projects, and other co-operative ventures that evaluate or demonstrate approaches to addressing the issues.
- To publicise successful demonstrations of global electronic commerce involving SMEs.

Theme 3 identified testbeds and pilot projects evaluating and demonstrating technological approaches, and also those concerned with evaluating/demonstrating structures and processes addressing the legal and institutional issues. Specifically, the goal was to ensure that the systemic issues associated with an open global marketplace for SMEs were addressed. In this context, the systemic issues span a broad range including: "globalization" (e.g. identification, information services, multi-lingual and multi-cultural systems, etc.); "financial aspects" (e.g. contracts, billing, payment, taxation, accounting, etc.); "ownership" (e.g., intellectual property rights, copyright, etc.); privacy and security (including confidentiality, authentication, certification, etc.); interconnectivity & interoperability (including standards, etc.); and "deployment" (including awareness, promotion, best practice, education and training, etc.).

The testbed activity has made a real contribution to the general understanding of how the issues could be addressed and advanced best practices. Participants submitted commercial products as well as research projects addressing issues identified in Themes 1 and 2. The issues are of international interest and involve at least three countries (G-7 or non-G-7) or international organisations. Further, all the activities involved SMEs (and any other of the key actors necessary, e.g., information and communications systems and service providers, the financial sector, the legal sector, and public authorities). Testbeds that offered solutions or highlight best practices, with respect to the Theme 2 issues, were promoted by the Theme 1 and Theme 2 Co-ordinators as appropriate.

In addition to the requirements concerning the focus of the testbed and the need for participation of SMEs from three countries/ international organizations, the participating entities were asked for a commitment to funding, from either or both of the private or public sectors and a willingness for self-publicity and information dissemination in appropriate for a (e.g., independent journals, conferences, workshops, newsgroups, e-mail, etc.).

Participants submitted a copy of the 'Objectives and Framework for Action' document found on the Web signed by a duly authorized person attesting that the activity would adhere to the objectives and principles and the following details about the project:

- *testbed name and participants;*
- *contact person(s);*
- *description of the testbed activity, including Theme 2 issues addressed and approach;*
- *expected results;*
- *list of published materials and URL; and*
- *contact information for participating entities.*

The USA, as the Theme 3 Co-ordinator, maintained a public list of testbeds, which includes details about the project and a link to the project Web site where one is available. This list is dynamic with testbeds being added (according to the criteria) or deleted (at the request of the testbeds themselves) on an ongoing basis.

The tables summarising the registered projects can be found in Annexe 2: Testbeds.

ELECTRONIC COMMERCE POLICY TRENDS

Summary by KITE project

Introduction

There are many things that countries might reasonably want to regulate on the Internet. They include not just child pornography, but consumer protection, the defence of intellectual property rights, data protection and taxation. These are all issues on which countries or the Community legislates already. There is no obvious reason why a libel should be treated differently because it appears on a web site, rather than in a newspaper. Therefore the problem is not whether the Internet *should* be regulated but *how*. Ultimately the Internet could breed a new approach to regulation, less paternalistic and more trusting in market forces and the responsibility of the individual. Many markets have an incentive to regulate themselves, competing to offer consumers protection from unpleasant surprises. There is no total protection in the off-line world, so why should it be set up for the on-line world?

In order to evaluate Ecommerce policy trends within the states participating in the G8 group a questionnaire has been developed and distributed. The intention was to identify if solutions for Ecommerce issues are approached in a regulatory manner by governments or a self-regulatory way by industry or consumers/markets. Issues inquired included different aspects of trust, trusted third parties, taxation, privacy and intellectual property rights. As the feed back was limited the following relies upon the answers received as well as other sources.

Trust

This heading comprised confidentiality assurance, authentication and non-repudiation, i.e. parties to the transaction cannot subsequently deny their participation. The EU and its Member States are in the process of regulating issues of authentication and non-repudiation. Mexico is in the process of putting guidelines on the issues of confidentiality, authentication and non-repudiation in place. For all three issues industry guidelines are already in place in Mexico.

Trusted third parties

Trusted third party includes electronic contract recognition, consumer protection, service provider liability and electronic signature certificate, recognition and cryptography. In the EU all mentioned issues, excluding electronic signature cryptography are in the process of being regulated. A proposal for a directive (95/586/EC) to establish a coherent legal framework for the development of Ecommerce within the single market included definition where operators are established, electronic contracts, commercial communication, liability of intermediaries, dispute settlement and role of national authorities.

In German legislation on consumer protection, service provider liability and electronic signature certification and recognition are already in place. Germany was the first European country that deals with the liability issue in a specific act.

In a number of Member States, Internet access providers and host service providers have already set up systems of self-regulation. In the UK at the initiative of the industry, a code of conduct has been agreed and an independent body, the Safety Net Foundation, has been set up to provide rating services and a hot-line. Similar steps have been taken in Germany and the Netherlands.³ An industry report requests absolute liability for those initiating an infringing act and liability of an intermediary (e.g. service provider) only when and if he has effective knowledge of and control over the infringer, and no liability should exist for pure carrier services. The report also requests the implementation of a practical notice and takedown procedure.⁴

³ Nils Bortloff, Recent court decisions about ISPs Liability in Europe, 23 June 1997, <http://www.collegehill.com/ilp-news/bortloff.html>.

⁴ Memorandum of Understanding, open access to electronic commerce for European SMEs, Guidelines, January 1998, p.27.

The European Commission has also proposed a directive on a common framework for electronic signatures. In Italy digital signatures have already legal validity since 1997. On the contrary, Digital signatures are not yet recognised in Switzerland.

Also Mexico is the process of adopting legislation on electronic contract recognition, service provider liability and electronic signature certificate, recognition and cryptography. Legislation on consumer protection is planned. At the same time industry guidelines on electronic signature are in place. Industry guidelines on service providers' liability are planned and an initiative for consumer protection is in process.

Taxation

Electronic commerce has implications for the operation of the tax systems. As physical location of an activity becomes less important, it becomes more difficult to determine where the activity is carried out. Also, requirements for proof of identity on the Internet are very weak. In addition, the frequent elimination of reporting and withholding institutions poses a problem for tax administration: obtaining acceptable documentation of proof will become more difficult. Electronic money, which can be fully anonymous, can facilitate the use of off-shore banking centres.⁵

However, regulation on Taxation is still at an early stage. No government to-date has issued new laws or regulations or instructions on how to apply existing concepts to activities carried out on the Internet. The OECD, therefore, proposed that a moratorium should be imposed on any new tax initiatives for the Internet. In 1997 the Commission set up a working group with VAT experts from member states to examine the problem in the widest sense. Up to now VAT was an abstract concept applicable to any sector and business, in electronic commerce VAT rules have to take sector specifics account. The Commission continues to be committed to the introduction of a common VAT system based on taxation on origin and providing for a single country of registration. The idea of extra taxes such as a bit tax has been abandoned.

Switzerland, has however already determined its rules: If a person in Switzerland makes use of a foreign paid service or buys any electronically delivered goods through the Internet from a foreign supplier, the customer has to declare this himself with his VAT forms. For supplies up to CHF 10.000 per annum no declaration is required. If a person of Switzerland delivers to a customer based outside of Switzerland goods or services electronically, no VAT is paid.

Privacy

This item includes the freedom of companies to engage into Ecommerce as well as privacy protection of consumers. The established four freedoms of the internal market guarantee are also applicable on EC thus allowing companies and individuals to provide services and goods throughout the European Union. In Mexico nor government regulation exists or is planned, an industry and consumer guideline is however in place.

An EU directive on the protection of individual with regard to the processing of personal data and the free movement of such data was adopted in 1995. In Switzerland similar data protection rules as in the EU apply. Personal data may only be processed for certain reasons and under certain conditions. However, it is generally allowed to collect personal data. Normally the persons involved have to be informed.

In France, for example, the collector has first to declare to the National Commission for Computer Science and Freedom (CNIL) its intention to build such a database and the purpose and use of this database. Then he has to inform and respect the right of the user he gets the information from: right to oppose to the use of this information, the right to access them and the right to correct them.

⁵ OECD, Electronic Commerce: The challenges to Tax authorities and tax payers, November 1997.

Intellectual property rights

International intellectual property right agreements and treaties including dispute settlement procedures are already in place. The key for the functioning of the system is its world-wide enforcement through co-operation between all players to implement effective rules which take new technologies into account and deal with all sides and concerns in a practical, technically feasible and economically reasonable way.

Within the EU there is a fundamental difference of copyright concepts between the UK (copyright as transferable right) and other EU countries (copyright itself not transferable; only a transfer of the right of utilisation). The European Commission has proposed a directive (97/629/EC) on the harmonisation of certain aspects of copyright and related rights in the Information Society.

In Switzerland any content is protected through existing intellectual property laws and international treaties. The Swiss copyright law is applicable to the Internet. Of course it does not regulate any type of technical protection or marking such as digital watermarking. Also Mexico has legislation on intellectual property rights and copyright protection in place.

Another issue in the area of copyright is Internet Domain Names and Trademarks. No harmonised European approach exists. In France, for instance, the domain name .fr is well protected. According to jurisprudence, when there is a conflict between a trademark and a firm whose social denomination is the same as is the trademark, the second firm will obtain the first level domain name .fr and the first one - with the trademark - will have the second level domain name .tm.fr (where tm stands for trademark). Swiss domain names are handled at <http://www.nic.ch>. It is not protected by a special law, as in the rest of the world.

Although there are industry and consumer/market initiatives for most issues of Ecommerce in place or in process, governments are in the process of creating a regulatory framework in all the above areas. In awareness and confidence creation activities all actors, governments, industry and consumer organisations are involved in most countries.

Overview of National Developments

CANADA

National Statistics:			
Population:	30.3 million	Working Population:	15.6 million (labour force)
Number of SMEs	2.5 million		
Average Number of Employees in SMEs	1 employee firms–1.6 m	1-5 employee firms–0.5 m	
Estimated Volume of E-Commerce	C\$5.3 billion⁶		
Number of nationally registered Internet Sites	1,119,1727 (.ca TLD)	Estimated Annual E-com Growth (98-03)	73% (CAGR)⁸

Overview of current state of electronic commerce take-up at national level

Electronic commerce in Canada is strong and growing very rapidly. It is estimated that Canadian Internet based business transactions amounted to \$C 5.3 billion (US \$ 3.5 billion) in 1998. By 2003 Canadian Internet commerce is expected to be C\$ \$80.4 billion (US \$ 53 billion)⁹

Increasing rates of household and business Internet access is one of the principle forces driving the development of Canadian E-Com. By the end of 1998, 37% of Canadians were regularly using the Internet.¹⁰ A survey conducted in the first quarter of 1998 showed that 43.1% of Canadian SMEs were connected to the Internet—first quarter figures for 1996 and 1997 were 15.2% and 30.9% respectively. An IDC survey conducted in the spring of 1998 showed that firms with less than 100 employees were more than twice as likely to be using an E-com application than firms with more than 100 employees.¹¹

In terms of international comparison of Internet commerce readiness, Forrester Research rates Canada as being second to the United States. Forrester expects Canadian Internet commerce to enter a period of *hypergrowth* by the end of 2001 with the United Kingdom and Germany following close behind.¹² The Canadian government is attempting to enhance and promote the growth of E-Com with the *Canadian Electronic Commerce Strategy*¹³, released in September of 1998. SMEs are a central focus of the strategy and are envisioned to be one of the driving forces by which Canada achieves its objective of being a world leader in the development and use of electronic commerce by the year 2000.

Key initiatives/activities regarding E-Com and SMEs

Canada benefits from having a vibrant and technologically savvy SME community. This is particularly true in terms of the smallest firms, those run from home offices. Forrester Research estimates that nearly 15% of Canadian households have home-based businesses, a rate which is 2.5% higher than in the United States. Forrester found that these firms were 9% more likely to own a PC and 12 % more likely to be on-line than their US counterparts¹⁴. The Canadian government is confident that Canada's SME community will continue to seize the opportunities made available by electronic commerce, and thereby help to drive the development of E-Com in Canada. The government sees its role as providing a supportive and responsive domestic policy environment for electronic commerce, one that encourages market growth and competition, as well as consistent treatment of digital and paper-based commerce.

6 IDC, March 1999.

7 Network Wizards, January 1999

8 IDC, March 1999

9 Ibid.

10 ACNielsen, The 1998 Canadian Internet Survey, p. 10.

11 IDC, E-Commerce Status of Canadian Businesses: Opportunity Assessment, Canadian Internet Commerce Bulletin, January 1999, Table 1, p. 2. The figures for E-com application deployment for firms with under 100 employees was 30% while comparable statistics for all categories of larger firms was less than 15%.

12 Forrester Research Inc., The Commerce Threshold, The Forrester Report, (October 1998), p. 9-10.

13 <http://e-com.ic.gc.ca/english/60hi.htm>

14 Forrester Research Inc., *People and Technology Strategies*, *Forrester Report* (December 1998), p. 14.

Along with an overall policy framework that seeks to support the development of E-Com within all segments of Canada's private sector, the Canadian government has several initiatives that are geared specifically for SMEs. One of the most successful is the Student Connection Program, launched in March 1996. This program hires and trains college and university students who then provide customised, hands-on Internet training for SMEs across Canada. Since its inception the program has employed 2800 post secondary students who have imparted Internet training to over 42,000 SMEs. The program has been so successful that it has become a model to address other IT concerns of SMEs. Year 2000 First Step, a co-operative initiative between Industry Canada and the Canadian Imperial Bank of Commerce, is building on the success of the Student Connection Program to assist SMEs in dealing with the 'millennium bug.'

To reach SMEs that have not yet made the decision to get on-line, Industry Canada has launched a paper-based newsletter entitled Electronic Commerce. The first edition of the newsletter was distributed in April 1998. Over 250,000 copies are circulated on each printing. The material presented in the newsletter is oriented toward familiarising business people with business applications of the Internet, the Canadian E-Com strategy and specific E-Com promotion projects.

Community Storefronts is another program launched by Industry Canada to improve the level of confidence and skills of SMEs in conducting on-line business transactions. Community Storefronts is a one year pilot project, ending in the spring of 1999, which provides SMEs an opportunity to learn by doing and then share their experience. The project is organised as collaboration between five well-recognised electronic commerce service providers and 300 small businesses and 60 non-profit organisations (NGOs). The project enables the SMEs and NGOs to deploy and manage secure Internet commerce sites. Community Storefronts is the only national E-Com project of its kind in the OECD.

The Internet itself provides an important means by which the Canadian government is able to support and encourage the entry of SMEs into various realms of electronic commerce. For example, the Business Development Bank of Canada provides Internet access to a full range of business financing options. One of the options is specifically for SMEs who wish set up an Internet commerce facility.

Finally, a description of the programs supporting SME take-up of E-Com is not complete without mention of the Department of Industry's award winning website, Strategis. This site contains a wealth of resources for SMEs. Net Gain, one of the sites hosted on Strategis, was developed to deal with concerns of SMEs regarding doing business on the Internet. Net Gain was posted in the fall of 1998 and is regularly updated. It is a free service by which SMEs can get answers to questions such as how to select an ISP, how to have a commerce-enabled website designed, and how to network with other companies via extranets. By directly dealing with such practical issues it is hoped that the Internet's usefulness as a business tool will become clear and that there will be broader and more robust development of Canada's small business community within the new digital economy.

Conclusion

The Canadian Electronic Commerce Strategy includes four principle action priorities: building trust in the digital economy, clarifying marketplace rules, strengthening the information infrastructure, and realising the opportunities. The first three priorities form a broad framework necessary for the Canadian economy's adjustment to the tide of technological change that is sweeping the global marketplace. 'Realising the opportunities' refers to E-Com's potential to act as a powerful means of increasing productivity and stimulating economic growth and job creation. However, for Canada to fully realise the opportunities of E-Com, SMEs will have to continue in their role as an integral and driving force behind the transformation that it brings about.

EGYPT

National Statistics

Contributing Organisation:

The Cabinet Information and Decision Support Center (IDSC) <http://www.idsc.gov.eg/>

Contact Person:

Dr. Hisham El-Sherif,
Chairman of the Advisory Board of IDSC
Chairman of the National Electronic Commerce Committee.
email: hsherif@idsc.gov.eg,
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National Statistics (1998)	
Population:	60.7 million ¹⁵
Working Population:	55.7 million ¹⁶
Number of SMEs:	1.57 million ¹⁷
Average No. of Employees in SMEs:	22 ¹⁸
Estimated volume of E-Commerce carried out:	(cannot be determined)
Estimated annual growth:	5.7% p.a. ¹⁹
No. of national registered Internet sites:	2013

Overview of the current state of Electronic Commerce take-up at national level:

State of Awareness: There is a general state of awareness in the country on the importance of e-commerce as a new tool for trade that would lead to furthering national economic prosperity. However, the country is in the initial phase of understanding the financial, legal and organizational implications that result from the utilization of e-commerce.

Activity Business to Business (b-to-b/a): There have been several e-commerce projects on the b-to-b level which are still in the preliminary phase of operation:

Egyptian Maritime Organization (EMO): Demonstrates the use of EDI over the Internet through Egyptian ports. The EMO has secured business with the largest five shipping lines worldwide.

Egyptian Aluminium Co.: One of the largest public enterprise sector companies in Egypt, which produces 1% of the world's aluminium which processes its requests for proposals over the Internet.

Capital Exchange: An unprecedented²⁰, stock-trading system over the Internet, which links all the trading community of brokers with any potential investor in the world; therefore, providing a better mechanism for trade in the Egyptian stock market.

Banking: Several banks have recently taken initiatives to incorporate remote banking, Intranet banking and home banking on different levels.

¹⁵ The Central Agency for Public Mobilization and Statistics (CAPMAS), June 1998 (estimated), Cairo, Egypt

¹⁶ Ministry of Planning, 97/98, Cairo, Egypt

¹⁷ Ministry of Economy: Draft National Policy on SME Development in Egypt, June, 1998, Cairo, Egypt. (This figure for SME's excludes the agricultural sector).

¹⁸ Definition of SME's in Egypt: Small: 5 – 14 persons, Medium: 15 – 49 persons.

¹⁹ Monthly Economic Bulletin. The Cabinet Information and Decision Support Center, 97/98, Cairo, Egypt.

²⁰ Houssam Megahed, Managig Director – Middle East Networking Solutions.

There are also several projects with the customs authority and health care sector that are currently in the negotiation phase.

Activity Business to Consumer (b-to-c): Most commercial sites in Egypt provide presence/cataloging level e-commerce. However, there are a few representative examples of b-to-c commerce that vary from selling flowers, grocery shopping, Egyptian artefacts and Arabic software, to educational courses.

Chronological list of key initiatives/activities regarding e-commerce and SMEs

Date	Title	Organization Responsible	Budget
10/97	“Getting Egypt E-Commerce Ready”²¹ Initiative	Electronic Commerce Committee, The Internet Society of Egypt – ISE/E2C	Voluntary work
1/99	Egypt’s Electronic Commerce Initiative	National Electronic Commerce Committee, Ministry of Trade	tbd
In progress	Electronic Commerce for Developing Countries Center (EC-DC Center)	International Telecommunications Union & ISE/E2C	tbd
3/99	1. Electronic Commerce and Information Technology Community Center (ECOITEC) 2. Information Technology Community Center (INFTEC)	UNDP, UNV, Governorate of Sharkeya, Investors Association of the 10th of Ramadan City, IDSC, Chamber of Commerce of Sharkeya Governorate, RITSEC	500,000 USD
Regional Initiative	ETrade Initiative for Arab States	UNCTAD	tbd

²¹ This is the motto of the E-Commerce Committee of The Internet Society of Egypt.

FRANCE

Electronic Commerce in France (1998) KEY STATISTICS

Below is a synthesis of the results of the “Statistics, trends and future prospects” working group of the “Electronic Commerce Task Force”. Quantitative assessment of the development of the Internet and electronic commerce raises numerous problems of definition and method, particularly for the comparison of data from different periods. The figures given below must for this reason be taken as approximate orders of magnitude and treated with circumspection.

1. Progress in the installation of computer equipment

Percentage of households possessing a personal computer (source: GfK)

1997	1998	1999 (forecast)
18.5%	22.5%	26.0%

Percentage of French SMEs (workforce 6 - 200) with Internet connections (source: UFB-Locabail)

1994	1995	1996	1997	1998
2%	7%	14%	24%	48%

2. Internet access in France is expanding rapidly ...

Percentage of households possessing a personal computer (source: GfK)

mid-1996	mid-1997	mid-1998	Early 1999 (estimate)
400,000 to 500,000	1,100,000 to 1,200,000	2,500,000 to 2,900,000	3,500,000 to 4,000,000

... but not fast enough to make up the ground lost.

France's positioning in cyberspace (estimates collected by NUA)

DATE	NUMBER	% ADULT POP.	SOURCE
End 1998	3.5 - 4 million	7.6	Synthesis of estimates

3. Electronic commerce around the world – a powerful growth dynamic

Growth in sales generated by electronic commerce (EDI excepted) over the Internet
(Synthesis of various estimates)

FRF billions	1997	1998	1999 (forecast)	2000 (forecast)
B-to-C	15	40	120	300
B-to-B	80	140	400	800

4. France: insufficient development of commerce over the Internet...

Estimate of number of websites, third quarter 1998 (source: AFTEL)

FRANCE
34,000

Estimates of sales generated by purchasing (EDI excepted) over the Internet
(Synthesis of various estimates)

FRF billions	FRANCE
B-to-C	0.5
B-to-B	2

... but intensive use of EDI systems ... and the Minitel

Indicators of use of EDI systems in 1998

FRANCE (EDIFRANCE)

transactions worth

FRF 700 billion to FRF 800 billion

Indicators of use of EDI systems in 1998

**COMMISSION PAID TO MINITEL
CONTENT PUBLISHERS**

FRF 3.2 billion (source: France Télécom)

**ONLINE PURCHASES OF GOODS
AND SERVICES**

FRF 6 to 8 billion (source: AFTEL)

The French Government is very concerned by the issue of electronic commerce. SMEs and SMIs have an important role in this field. Their dynamism and their flexibility are assets on a market in such a perpetual evolution. They have the spirit of innovation necessary to the growth and the development of this activity. In addition, the success of SMEs and SMIs in this sector leads to the creation of many jobs and has a part to play in the local and regional development effort.

The French Government has therefore launched a set of initiatives to support electronic commerce's development. This document will refer to four of the main and more representative actions taken to this purpose:

the set up of a major " Electronic Commerce Task Force" by the Ministry of Economy, Finance and Industry, with a special interest on the contest it organises to reward French SMEs especially efficient in electronic commerce;

- the funding program called " Collective Use of Internet by SMIs ", by the State Secretary of Industry;
- the funding program called " Exporter on the Web", by the State Secretary of Foreign Trade;
- the funding program to help the development of new services based on new technologies, by the National Agency for Research Valorisation.

The Electronic Commerce Task Force

An " Electronic Commerce Task Force " was launched in 1997 by Dominique Strauss-Kahn - the Minister of Economy, Finance and Industry. Its purpose was to lead a pragmatic analysis on the conditions of the development of electronic commerce in France. The Task Force, whose president was Francis Lorentz, returned its conclusions in a report released in January 1998²². This work was prolonged, in February 1998 by the presentation to the European Union of a Memorandum defining the French positions on the development of an international framework for electronic commerce. Eventually the Minister of Economy, Finance the Industry announced in May 1998 a set of 10 actions to develop electronic commerce in France. Those actions were grouped within 4 themes: Building trust; Developing the role of the State as a model; Helping SMEs to take part in Internet and electronic commerce; Develop the dialog between the State and the private sector on electronic commerce issues.

²² A public forum was immediately open on the Web to collect questions and commentaries on the Task Force's report. An Addendum to the report was released in march 1998. It has been based, among other things, on the contributions to this electronic forum. Both the summary of the report and its addendum are available in English on : <http://www.finances.gouv.fr/comelec/rapports/index-d.htm>

In June 1998 Mr Dominique Strauss-Kahn asked Francis Lorentz to lead an evaluation of the actions taken after the publication of this first report by the Task Force, as well as new priorities of action for the immediate future. The new "Electronic Commerce Task Force " made up for this purpose was organised around twenty smaller working groups. Composed of members of the administration and actors of the private sector, the work of each one of them concerned a broad topic of the development of electronic commerce. The subjects were for instance: security and confidentiality; Business to Business electronic commerce; intermediation functions; consumer and privacy protection; public procurement; etc. One of the working groups was in particular dedicated to "SMEs and electronic commerce". On each subject, these working groups attempted to make an account of the actions of public and private sectors, to identify the possible blocking issues, and to define new directions for thinking and action²³.

This Electronic Commerce Task Force organises two demonstrations in 1999:

- the presentation of its work, on February the 4th, in presence of more than 300 main actors of electronic commerce in France, and chaired by the Minister. At this occasion were also presented the achievements of the Ministry in the field of tele procedures;
- the distribution on March the 19th - during the festival of the Internet – of the "*eLectrophées*".

A contest for SMEs innovating on electronic commerce: the eLectrophées

The *eLectrophées* were designed to reward and bring to light French SMEs which manage to show their dynamism and their know-how in the various fields of electronic commerce: technologies, on-line sales and intermediation services. It does not reward projects, but actual products or realisations. On March the 19th, a price of 100 000 FF (around 15000 Euro) was awarded to the winner in each category, and all the national candidates have been given the opportunity to meet consultants and various expert in venture capital, technology, etc. according to their need in order to go further in their activity. The winner of the *eLectrophées* 1999 are:

Technologies :

Netgem (<http://www.netgem.com>)

Netgem made the first European TV device for Internet access, called "NetBox". It is now the European leader on this market, with 80% of the market shares.

Intermediation services :

Isagri-Terre-Net (<http://www.terre-net.fr>)

Terre-Net is a Portal for the agricultural world. It proposes directories, information, forum, and help to create Web sites.

On-line sales and services :

Informusique (<http://www.partitor.com>)

Informusique is a real on-line music scores retailer. It has developed and patented a technology that allows a score to be printed directly on the printer of the buyer, once and only once.

On one hand, such a contest is a way to help these SMEs, in a financial way of course, but also to be known. On the other hand, it is one of the best ways for the Government to check if the electronic commerce activity is actually developing in the country. A first look at the number of participant SMEs to the contest (more than 400 candidates) should prove that 1998 definitely was the year of the launching of electronic commerce activities in France. Mr Dominique Strauss-Kahn announced on February the 4th that these *eLectrophées* would be organised each year.

"Collective Use of Internet by SMIs"

The State Secretary of Industry set up a found to support collective and innovating initiatives, that help SMEs or SMIs to adapt themselves to the Internet technology and to exploit its potentiality, in order to consolidate a competitive position or to conquer some new markets, in France or abroad.

²³ This work can be found on the Task Force on Electronic Commerce's Web site at <http://www.finances.gouv.fr/comelec/travaux/>, including an English translation of the synthesis written by Francis Lorentz.

A call for projects, named “Collective Use of Internet by SMIs” was therefore launched in 1998. The priority has been given to projects that lead companies to:

- reinforce their ability in technological and commercial survey;
- create virtual communities;
- enter the world of electronic commerce;
- implement remote exchange with the administration.

The regional projects were taken of by the concerned regional services of the State Secretary of Industry; the ones at the national level, by the Direction for Industry, Information Technologies and Postal Services.

In 1998, more than 330 projects were received, half of them being in regions. For the other half, at the national level, a budget of 50 MF (7 600 000 Euro) was distributed for financial support among the 67 retained projects.

A new budget of 50 MF is forecasted for 1999, and a new edition of the call for projects should therefore be launched during the second quarter of 1999.

“Exporter on the Web”

In 1998, the State Secretary of Foreign Trade set up a program, named “Exporter on the Web”, to promote and highlight the export side of electronic commerce. It had a found of 10 MF (around 150 000 Euro) this year, to reward SMEs whose Web site was especially efficient on the export market. There were around 100 winners; most of them were also given a label that helps them to communicate on their activity²⁴.

Helping the development of new services based on new technologies

The National Agency for Research Valorisation, created by the Ministry of Industry and the Ministry of Research, launched in June 1998 a call for projects in order to help SMEs in the development of new services based on new information and communication technologies. This call for projects was addressed to SMEs, whatever their branch of industry was, as well as to all the public and private laboratories, provided that they had presented a project in partnership with an industrialist. This project had to be related to one of these 5 topics: logistics and transport, teaching, health, tourism and culture.

There were 31 projects related to logistics and transport, 62 to teaching, 31 to health, 19 to tourism, and 10 to culture. Many of them were close to the electronic commerce field. The total amount of the help given for these adopted projects exceeds 500 MF (around 76,2 Millions of Euro).

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²⁴ Information on this program and a list of the labeled and funded SME's Web sites can be found at : <http://www.commerce-exterieur.gouv.fr/expertoile/descriptif.htm> (french only).

GERMANY

Contributing organisation: Federal Ministry of Economics and Technology

National Statistics (1998)			
Population	81,9 million DM	Working population	35,8 million DM
Number of SMEs	3,3 million	Average No. of Employees in SMEs	6,25
(note: in Germany all firms < 100 Mio. DM turnover and < 500 employees are defined as SMEs)			
Estimated volume of Electronic Commerce carried out	rough estimates 1 - 2,7 billion DM	No of national registered Internet sites in 1999	1,37 million
Estimated annual growth	N.A.		

Overview of current state of Electronic Commerce take-up at national level.

Among German firms there is growing awareness of the business potentials of the new digital networks. A host of initiatives by private firms, industrial associations, Chambers, state governments and by the Federal government have contributed to an increase of interest in applying electronic business. Falling telecommunication costs in the wake of liberalization in 1998 and a growth of trust and confidence in electronic communication as a consequence of the new legal framework of the Information and Communication Services Act in 1997 - which also includes a Digital Signature Law - represent a strong impetus to the spread of electronic commerce in the German economy.

But there are also indications that there still exists a gap of SMEs in terms of their share of concrete applications of E-Business and in terms of sophistication of these business forms and their integration into the whole of business processes.

Electronic Commerce in Germany by now predominantly is business to business in spite of a growth of web purchases of consumers and a considerable increase of internet users which indicates a high potential for consumer applications.

Further potential can be seen in the relation business to public administration. Its realization requires notably appropriate measures of the public sector on all levels (federal, regional, local).

Chronological list of key initiatives /activities regarding e-commerce and SMEs

Initiatives concerning electronic commerce and SME have so far been part of a wider framework for Information Society. At the same time such initiatives have been taken in parallel on local, state and national levels. Here we can only look at measures on the federal level.

Date	Title	Organisation	Budget
July 1996	Report „Info 2000 - Germany's Way into Information Society“	Federal Government	---
July 1996	Launching of „Forum Info 2000“, a platform for a dialogue between interested partners	Federal Ministry of Economics, Federal Ministry of Economics and Research	N.A.
October 1997	Progress Report „Info 2000 - Germany's Way into Information Society“	Federal Government	---
October 1997	Initiative „Electronic Commerce“	Federal Ministry of Economics	N.A.
June 1998	Launching of the initiative „Competence Centers for Electronic Commerce in Support of SMEs“	Federal Ministry of Economics and Technology	15 Mio. DM (3 years)

The Federal Government is preparing an action program to be submitted by fall 1999 which will describe the future action lines of government's policy in the area of Information Society and its applications.

Description of the highest impact initiative

Centers of Competence for Electronic Commerce in 24 regions in Germany.

Objectives:

- to give an additional impetus to broad and rapid use of electronic commerce by SMEs
- to make SMEs aware of the new business potentials, to demonstrate the commercial use of electronic communication, to provide initial and further training measures,
- to make SMEs familiar with concrete uses
- to remove existing reservations with regard to these technologies

Activities of the Centers:

- comprehensive information and advice about the possibilities and modalities of the use of the Internet and other networks for commercial purposes
- presentation of model solutions and successful applications (best-practice examples) to demonstrate the economic use of various types of electronic business
- seminars and training courses
- establishment of electronic platforms and marketplaces
- advertising and information campaigns for electronic commerce in SMEs

Based on the activities of the Centers in their regions, a national network for competence in electronic commerce has been established.

Networking actions:

cooperation and coordination of activities of the competence centers

creation of an electronic platform with information on electronic commerce (www.ec-net.de)

regular exchange of information and experience of competence centers, other institutions and firms

regular workshops on generic issues of electronic commerce (electronic payment, security and confidence, digital signatures, EDI/Internet, training)

Achievements:

Too early to judge as to the total project. During the first six months of their activities the Centers have reached about 10.000 SMEs with advice, training and demonstrations.

ITALY

Contributing organisation. Ministry of Industry

(WWW.MININDUSTRIA.IT)

National Statistics (1998)			
Population	57.563.000	Working population	20.000.000
Number of SMEs	ca 3.000.000	N° of national registered Internet sites.	40.000 as of end 1998
Estimated volume of E-Commerce carried out. 1998	€530.000.000	Estimated annual growth.	100% p.a.

Overview of current state of Electronic Commerce take-up at national level.

The government position

The Ministry of Industry undertook a general reflection on Electronic Commerce within the Government's initiatives starting from the publication in April 1997 of the "Information System and Telecommunication Policy²⁵" paper. In this paper Electronic Commerce is indicated, in the course of broader considerations on the Information System and Telecommunications sector, as one of the applications that are bound to become quickly successful in the telecommunications environment and to contribute to facilitate the increasing competitiveness of SMEs and their participation to the global market.

The Prime Minister Office (Presidenza del Consiglio) has also expressed its thoughts about Electronic Commerce with the "Promotion of the development of the Information System Society in Italy: a reference scheme²⁶" June 1997 paper, produced as a basis for the work for the development of the Government's active policies of the government body responsible for the coordination and the confrontation between the Parties involved in the implementation of the information society: the "Forum per la Società dell'Informazione".

However the clearest expression of the government trend concerning Electronic Commerce can be found in article 21 of the legislative decree dated March 31st 1998, No. 114 the "new rules for commerce." Act.

The provisions of the statute assign the Ministry of Industry the task of promoting the introduction and the use of the Electronic Commerce. This is to enhance the global competitiveness of enterprises, particularly the small and medium size ones, but keeping in mind the protection of the consumers and ensuring the participation of Italy in the European and international cooperation and negotiation process.

The Government Method

The Government intends to cope with the problems of the production system using a new approach based on the confrontation of ideas presented by all the interested Parties. The "method" we intend to follow is based on the activation of the consultation process between the Parties both on horizontal and sectorial policies and on keeping them active. The horizontal policies cope with the general issues of the overall production system, to adapt it to the times by which economy and social life change.

²⁵ Available on the Ministry of industry Web: <http://www.minindustria.it>.

²⁶ Available on the Presidency of the Council Web: <http://die.pcm.it/socinf>.

Such issues include:

- Organizational and technological development
- Promotion of innovations
- Training and information
- New professional roles and new employment openings
- Internationalization
- Infrastructures and services to enterprises
- Reorganization of taxation of enterprises
- Simplification of administrative procedures
- Relationship with the territory and the environment
- Tools to access the market and to finance promotions

To keep up confrontation with the Parties involved, in order to accomplish the general guidelines outlined in the present document and in general to develop the various national activities on the theme of the Information Society (Società dell'Informazione), with particular reference to the Electronic Commerce, a permanent Advisory Board will be established within the Ministry of Industry.

State of awareness

The first success stories and an intense conferencing activity slowly begin spread out the notion that e-commerce could be a competitive advantage. Awareness in SMEs is still very limited but a sustained awareness campaign activity is well under course, with conferences and workshops organized by various bodies occurring nearly every other week.

A feeble activity business-to-business is to be reported, with the most popular usage of Internet by firms still being that of a permanent virtual showcase. The digital signature law enacted in 1998 and the regulatory framework for certification authorities enacted on February 1999, enabling the practical usage as of today, is expected to ease take-up by business.

The business-to-consumer activity is mostly represented by purchases of foreign goods not readily available on domestic shops. A limited but qualified activity is reported in sales.

Chronological list of key initiatives/activities regarding e-commerce and SMEs

1996 – Privacy: personal data protection act
1997 – Internet: new connection tariff scheme introduced
1997 – Digital signature: legal validity of electronic document act
1998 – Commerce: liberalization act
1998 – Electronic commerce: ministry of Industry policy paper
1999 – Public administration: on-line tax declaration and payments accepted
1999 – Privacy: personal data on the net regulation
1999 – Electronic commerce: permanent advisory board established
1999 – Digital signature: certification authorities regulation, dig. sig. operational.

Description of the highest impact initiative(s)

The permanent Advisory Board for the Electronic Commerce.

The Advisory Board has the task of treating and organically analyzing in depth the policies and the themes concerning the Information Society and the Electronic Commerce. It also monitors the development of the various actions undertaken and identifies the occasions/opportunities for the transfer to other contexts of the skills as they are acquired in the course of time.

The Advisory Board supported by an expert committee and with the technical and organizational support of ENEA will be capable of interfacing the subjects that operate in the sector (e.g. Confindustria, Confcommercio, Confesercenti, Confartigianato, CNA, category Associations, Consumer Associations, Forum per la Tecnologia dell'Informazione etc.) and the other institutions at the national (e.g. Office of the Prime Minister, Ministry of Foreign Commerce, M. of Communications, M. of Civil Service, M. of Scientific Research, M. of Finance, ANCI, Authority for IT in public administration, Antitrust Authority, Telecommunications and Broadcasting Authority, Privacy and personal data protection Authority, Trade Unions, Unioncamere, Infocamere etc.) and international level (e.g. European Commission, OECD, G8, WTO, etc.).

The Advisory Board reports its work to the Minister of Industry submitting an Annual Report, containing suggestions and proposals on how to update the policies and to define the strategies and the actions to be implemented.

Methods:

Consultative rounds with all institutional and private actors involved promotion of legislation and initiatives.

Achievements:

Start-up in January 1999. Four consultation tables establishes:

- Monitoring, reporting and communication
- Public Administration procedures
- Market guarantees: legal issues, standards and regulatory framework
- Market promotion: business, infrastructures and technology stimulation and incentives

Joined by all administrations and the major private and academic operators. All activity can be traced at the web site: www.minindustria.it/Osservatorio/osservat.htm

JAPAN

Contributing organisations:

Small and Medium Enterprise Agency
Ministry of International Trade and Industry
Ministry of Post and Telecommunication

National Statistics (1998)			
Population:	126.2 million	Working population:	67.9 million
Number of SMEs	6.4 million	Average Number of Employees in SMEs:	6.9
Estimated volume of E-Commerce carried out in 1998:	52 billion yen	Estimated annual growth rate (GNP):	-2.2%
Number of national registered Internet sites (99.1.1 connected domains in Japan)	54,492		

Overview of current state of Electronic Commerce take-up an national level

State of awareness:

Number of Internet Users in Japan is estimated at over 10 million.

According to a survey by the Small and Medium Enterprise Agency, 90 % of large-sized manufacturing companies and 50% of SMEs that responded knew about electronic commerce. 70 % of large-sized manufacturing companies and 50 % of SMEs that responded considered that Electronic Commerce would have an important role in future business transaction.

On the other hand, 30 % of SMEs that responded had not introduced PCs into the workplace yet.

Business to Business Activity

While procurement is still the main driver for EDI, Enterprises which use EDI for various purposes in business to business transactions are increasing rapidly. Particularly, the automobile and electronics sectors are advanced in the introduction of EDI. Moreover, feasibility experiments in various types of industries were conducted using CALS, and these are progressing towards practical use.

Business to Consumer Activity

There are over 10,000 virtual malls in Japan.

Various types of electronic commerce, such as using electronic money in a shopping district and the introduction of Internet banking have appeared.

Chronological list of key initiatives/activities regarding e-commerce and SMEs

Support for informatization

Year	Budget	Activity
1997	158 million yen	"SME information exchange network " project
	8610 million yen	"Development of business application software targeted at SMEs" project
1997	1067 million yen	"Retail SME goods database" project
1997	485 million yen	"Network development for Manufacturing, Sales and Distribution SMEs" project

Electronic commerce

Year	Activity
1995	APEC/Internet EDI Project
1996	Establishment of the Electronic Commerce Promotion Council of Japan
1996	The Report of the Study Group on Cryptography Policy and Electronic Money
1996	A five-year R&D plan of Next Generation Internet Technologies
1997	Electronic Commerce Pilot Project (First Phase)
	The Report of the Study Group on Electronic Authentication
	Guidelines for Certification Authorities
1998	Electronic Commerce Pilot Project (Second Phase)
	The Advanced Information and Telecommunication Society Promotion Headquarter
	The Report of the Working Group on Electronic Commerce "A Japanese Initiative in Promoting Electronic Commerce"
	Revision of the Basic Guidelines on the Promotion of an Advanced Information and Telecommunication Society

Description of the highest impact initiative

Title: "SME information exchange network " project

Objective:

Supporting SME's management through the promotion of the domestic SME information exchange network. This network provides SMEs with useful information such as business, technology, and human resources news over the Internet.

Method:

The SME home page was established to announce business, technology and policy news on the Internet. This homepage can provide to SMEs information about other SMEs' profiles, products and technology by region, information about government policy and planning for SMEs by sector type, and information about government associations and public corporations supporting or assisting SMEs.

Moreover, the SME reference system (SME's Index) has been introduced. It currently allows keyword references on domestic companies (profile and contact point), on business information held by SMEs (technology, outline of products and services, procurement needs, alliance needs, and joint research needs), and on specialist information (including technology and management expertise).

Achievement:

SME home page contains information on 3,000 domestic companies (the number of registered SMEs doubled from 1500 companies at the end of 1997)

Number of Accesses to SME home page: 233,646 (April 1998 - February 1999)

Overview of National Developments

(1) The Advanced Information and Telecommunication Society Promotion Headquarters decided in September 1997 to form the Working Group on Electronic Commerce with the goal of developing basic concepts and clarifying major issues regarding the promotion of electronic commerce.

In June 1998, the WG published a report under the title of "Japanese Initiative in Promoting Electronic Commerce" which outlined three principles for promoting electronic commerce: leadership by the private sector, the creation by the Government of an environment conducive to advances in this area, and international harmonisation.

In consideration of changes in conditions since the formulation of the previous basic guidelines such as the rapid development of networks and the practical progress of electronic commerce, the Government revised "the Basic Guidelines on the Promotion of an Advanced Information and Telecommunications Society" in November 1998.

(See <http://www.kantei.go.jp/index-e.html>)

(2) In comparison with large enterprises which are introducing leading-edge information technologies for improving management, the informatization of SMEs is being delayed by lack of management resources (for example, human or financial resources), and by difficulties in getting useful and relevant information on products.

For the purpose of promoting innovation in SMEs' management, MITI is developing policies for supporting SMEs. These policies comprise support for informatization of enterprises, practical use of information technologies, and the development of human resources.

In concrete terms the steps outlined below have been taken. Firstly, business support has been provided through informatization initiatives (contribution to improvements in productivity through informatization by such means as the support of business application development via the "development of business application software targeted at SMEs" project, support for the upkeep of a database system for each type of industry's common goods via the "Retail SME goods database" project, and support, through the manufacturing, wholesale, service and other industries, of a project for the development of the Open Information Network through the "Network development for Manufacturing, Sales, and Distribution SMEs" project). Next, support has been provided for the public works project for the "Wide-area cooperative information network" of the SME Support Organization. And finally, an initiative for informatization research at Universities, schools and the like targeted at SMEs has been implemented.

Moreover, along with the promotion of the domestic SME information exchange network which provides SMEs with useful information such as business news, technology news, human resources news, etc. promotion of the project aimed at expanding the scale of the network to make it an international information exchange network has been undertaken. In addition, the SME home page which was established in 1996 to announce business, technology, and policy news has now been expanded, and an SME reference system (SME's Index) has been introduced which currently allows keyword references for 3000 domestic companies, on technological information (including technological information held by public testing and research organisations) and specialist information (including technology and management expertise), by area and by type of industry. Through this, the matching of enterprises can better be accomplished.

MEXICO

Contributing organisation. **Infosel**

National Statistics (1998)			
Population	96,527,710	Working population	39,049,995
Number of SMEs	82,249	Average n° of Employees in SMEs	4,067,681
Estimated volume of ECommerce carried out. Euro/Local currency	N.A. 1998		
Estimated annual growth.	1.93% p.a.	N° of national registered Internet site	s 120,000

Overview of current state of Electronic Commerce take-up at national level.

State of awareness: Numerous seminars by the public and private sectors to promote the EC; Public Notaries have been incorporated to valid digital signature to assure seamless service in the local PKI.

Business to Business Activity: 1,500 of the 3,000 firms that carry out EDI will be up to date on EDIFACT by the end of the third quarter '99; at present there are six suppliers of EDI which are also working with the IMSS (Instituto Mexicano Seguro Social) to facilitate the electronic filing of income tax withholding (addition, deletions, change of status) of the SMEs. The name of the project is IDSE.

Business to Consumer Activity: Regulations have been published, NOM (Norma Oficial Mexicana), for oversight of sales/purchases done electronically, including via the Internet: several businesses will develop the service of SET certification for banks they have log on operations.

Chronological list of key initiatives /activities regarding e-commerce and SMEs

Date	Responsible organisation	Title
03/98	Electronic Taxes	Ministry of Treasury
06/98	Extended Infrastructure of Security (IES)	Banco de México (Central Bank) and Private Sector (Banks and Commercial)
01/99	Digital Certification Network(RCD)	Public Notaries, Infosel and Ministry of Commerce
04/99	Government Acquisitions	Secretaría de Contraloría and

(COMPRANET)

Private Sector

N° of SMEs reached by initiatives 82,249

Title : Government Acquisitions (COMPRANET).

Objectives:

To facilitate access for businesses that desire to be providers of goods and services to the Mexican government by way of electronic means. In its initial phase, a minimum of 35,000 small and medium businesses dispersed throughout Mexico will be involved; eliminating the obligatory travel to Mexico City to participate in being a provider.

Method:

Development of an application for the Web that permit the sending and receiving of economic and technical proposals, the signature of proposals (contracts) and the transfer of funds for the payment of the goods and services provided. It will incorporate a digital signatures, authenticated by the Notary Publics, for which legal authority have been proposed that will give value to such an acceptance mechanism.

Achievements:

Two initiatives underway, first the greatest participation of the small and medium businesses in the State and Federal governments sales/purchases, and second the transparency allowed in the management of the public resources.

SINGAPORE

Contributing organization: National Computer Board.

(The NCB is the national IT authority responsible for IT development in Singapore. The NCB drives the implementation of Singapore's IT2000 Masterplan which aims to develop the country into an Intelligent Island, where IT is interwoven into every fabric of the economy and society.)

National Statistics (1998)			
Population	3.87m	Working population	1.93m
Number of SMEs	92,000	Average Number of Employees in SMEs	81% of SMEs < 10 staff
Estimated Volume of E-Commerce carried out 1998	Figures unavailable	Estimated annual growth	Figures unavailable
Number of national registered Internet sites.	8,000+		

Overview of current state of Electronic Commerce take-up at national level

State of awareness:

Singapore is committed to exploit the huge potential of e-commerce and is determined to prepare itself to plug into the digital economy and become a global e-commerce player. The National Computer Board (NCB) is the lead agency for electronic commerce (e-commerce) in Singapore. NCB spearheaded the Electronic Commerce Program in August 1996 to jump-start the pervasive use of e-commerce and position Singapore as an international e-commerce hub. Much progress has since been made in Singapore's e-commerce landscape. Concrete steps have been taken to put in place legislation and laws to support e-commerce activities. The government, in partnership with the industry, has also deployed useful e-commerce infrastructural services such as online payment services, trust and security systems. International linkages are also being actively pursued. In September 1998, an e-commerce masterplan was launched to mark the start of a campaign to bring e-commerce to mainstream businesses and the public, and to attract international e-commerce activities to Singapore. The target is to make Singapore an international center for e-commerce activities where significant volume of products and services are transacted electronically through Singapore; cultivate a sizeable e-commerce services sector and for 50% of its business to use some form of e-commerce by the year 2003. The plan centers on the following six-point strategy:

1. build an internationally linked infrastructure to support businesses with global reach,
2. jumpstart Singapore as an e-commerce hub by attracting a critical number of businesses to base their e-commerce ventures in Singapore,
3. harmonize cross-border laws and policies, allowing parties to trade securely and confidently
4. expedite industry's adoption of e-commerce,
5. promote public usage, and
6. establish thought leadership in e-commerce policies and business strategy

Laws and Regulations

Pro-business and relevant laws and regulations are needed for the growth of e-commerce. The government is committed to create an environment of trust, predictability and certainty in the Singapore system so that companies can feel safe and secure in conducting their online business.

A new law, the Electronic Transactions Act (ETA), came into force in July 1998. The ETA provides a legal foundation for electronic transactions, and gives predictability and certainty to the electronic formation of contracts.

The Computer Misuse Act has also been amended to give greater protection to critical computer systems. Copyright laws are being updated to protect multimedia works, and a Privacy Code to safeguard consumer data is being drafted for industry self-regulation. Other relevant law and policy areas including data protection issues are currently being studied.

Infrastructure

A comprehensive e-commerce infrastructure, together with the necessary e-commerce services and applications, are in place today to enable companies to get their e-businesses up and running quickly. Examples include online payment systems, trust and security systems, directory services, as well as other intermediary e-commerce services. In addition, several third-party e-commerce solution providers offer complete end-to-end solutions to support both business-to-business and business-to-consumer transactions. These include online malls, which provide hosting, payment clearance and delivery so that vendors can plug in easily and start selling their goods without having to build systems from scratch. Trading platforms, which transmit purchase orders, specifications, and invoices, and offer integration to companies' internal back-end systems, are also available.

Singapore's nation-wide broadband network, *Singapore ONE*, was launched in June 1998. The broadband network allows the public and businesses the opportunity to experience advanced interactive and multimedia applications based on broadband technology. Today, the network can be accessed by 98% of homes and businesses in Singapore. Offices can also get direct ATM access to the broadband network at speeds of up to 622 Mbps. *Singapore ONE* offers over 150 applications to more than 60,000 users. More than 100,000 users are projected to be on-line by the end of 1999. This is expected to increase to 400,000 users, or up to 50 percent of Singapore homes, by the year 2001.

Internationalisation

Singapore has been actively participating in international discussions (for example, ASEAN, APEC, WTO, WIPO, and UNCITRAL and OECD) on e-commerce-related issues and policies. Singapore was the co-chair of the APEC EC Task Force in 1998.

Singapore is also looking into establishing bilateral agreements with other e-commerce-ready countries. To-date, Singapore has signed bilateral agreements on IT and e-commerce collaboration with Canada, Thailand and Australia.

E-Commerce Adoption

To encourage the mass adoption of e-commerce, a support fund was set up by the government in 1998 to encourage local enterprises to be early adopters.

One of the key approaches in the deployment of e-commerce is through industry-wide projects in which a single implementation could create a multiplier effect across a particular industry. Examples are EDIMAN in the manufacturing sector, ShopNet and BookNet in the retail sector (please see details in the next section).

Business to Business Activity

After the successful implementation of TradeNet in 1989, there is a need to unify EDI standard based on UN/EDIFACT for the manufacturing sector in Singapore. This has led to the creation of *EDIMAN* (Electronic Data Interchange for Manufacturing) messaging guidelines. To-date, about 54 multi-national Corporations (MNCs) are using EDIMAN to trade with their local and overseas suppliers.

As of January 1999, there are about 700 VAN-based and 300 Web-based EDIMAN users in Singapore chalking up a monthly average of 160,000 transactions worth about S\$400m in purchase order value. It is estimated that the number of SME users will increase as more SMEs are expected to use EDI over the Internet to meet the demands of their customers.

The success of EDIMAN also saw the development of EDICHEM (EDI for Chemical industry) and EDITRANS (EDI for Transportation)

ShopNet is a business-to-business procurement system over the Internet (with back-end retailer system) between grocery retailers and suppliers in Singapore. The project was launched in May 1996 and is anchored on the standardization of grocery items through the use of EAN bar-coding. A retailer would be able to integrate its backend system to the point-of-sales, inventory control and accounting system. Hence, when his inventory runs low, the retail owner would be able to send purchase orders electronically through EDI messages to their preferred suppliers. To-date, more than 200 retailers and suppliers have joined the project.

BookNet is a similar business-to-business procurement system using the Internet platform for book and stationery retailers and suppliers. This was launched in September 1997. To-date, more than 20 retailers and suppliers have participated in the project.

Singapore Connect is Singapore's link to the global information network of small and medium-sized enterprises that is being set up by the G-8 countries. Launched in December 1997, *Singapore Connect* is a comprehensive Internet-based business directory of Singapore businesses and companies. In addition, it has a Bulletin Board that assists local and foreign companies to seek business partners. Currently, Singapore Connect receives an average of 400,000 hits a month, with 32,000 searches done to locate potential business partners. At least two local companies have reported closing more than US\$1m worth of contracts through *Singapore Connect* (<http://www.sgconnect.com.sg>).

A similar initiative called **ASEM Connect** was launched in April 1998 during the Asia Europe Meeting (ASEM) ministerial meeting in London. *ASEM Connect* is the official web site linking all 25 member countries. This initiative is an extension of *Singapore Connect* and aims to promote business partnerships within the ASEM framework (<http://www.asemconnect.com.sg>).

A **market survey on Internet-based business-to-business e-commerce** was commissioned by the National Computer Board in January 1999 to assess the state of Internet-based business-to-business e-commerce (B2B EC) in selected industry sectors covering manufacturing and services. The survey shows that about 9% of all companies in the selected industries are currently engaged in buying and selling activities with their trading partners via the Internet. Among the industries covered, the top four sectors with the highest level of B2B EC are: manufacturers of electronic products; freight forwarding firms; publishing firms; and storage and warehousing firms.

Business to Consumer Activity

There are many on-line malls operating in Singapore, ranging from shopping and Internet banking to booking of tickets, airline reservation, etc. A good place to locate all these services is the Singapore Shopping Village web site (<http://www.shoppingvillage.com.sg>).

The government itself is also setting the pace to proliferate the use of e-commerce in Singapore through its Electronic Public Services initiatives. Today, all government agencies have their own web sites. Key public services will be delivered electronically by the year 2001. An eCitizen Centre (<http://www.ecitizen.gov.sg>) was launched in April 1999 to integrate information and services across different government agencies into a one-stop centre, providing ease of access and greater convenience to the public.

Government Shopfront, a one-stop electronic store front, was also launched in September 1998 to enable government agencies to conduct Internet commerce using cash card. A total of 11 government agencies and 12 stores are currently offering services on the *Government Shopfront* (<http://shop.gov.sg>). More agencies are expected to come on-line by the end of the year.

Chronological list of key initiatives and activities regarding e-commerce and SMEs

Aug 96	NCB initiates Electronic Commerce Hotbed (ECH) Programme.
Sep 96	NCB and Visa pilots secure electronic commerce in Singapore The SET pilot was a key ECH project to provide secure credit card payments on the Internet. Participants include major commercial organisations and banks.
Dec 96	Launch of Singapore Connect web site as part of Singapore's participation in the G8 Global Information Network for SMEs.
April 97	Citibank Singapore launched the world's first secure Visa card payment over the Internet.
Jul 97	Launch of South East Asia's first certification authority, Netrust, to boost secure electronic commerce.
Nov 97	Canada and Singapore signed bilateral agreement on IT and e-commerce co-operation.
Feb 98	National Electronic Commerce Coordination Committee established to coordinate and plan national e-commerce initiatives in Singapore.
Feb 98	Internet cash card payment (C-ONE) launched by NETS.
Jun 98	Canada and Singapore announce first cross-certification of public key infrastructures.
Jul 98	Enactment of Electronic Transactions Act 1998.
Sep 98	Launch of National Electronic Commerce Masterplan.
Nov 98	S\$9 million Local Enterprise Electronic Commerce Programme launched.
Jan 99	Launch of Windows and Internet-based TradeNet.
Feb 99	Thailand and Singapore signed bilateral agreement on IT and e-commerce cooperation.
Feb 99	Australia and Singapore signed bilateral agreement on IT and e-commerce cooperation.
Mar 99	Casetrust was launched to certify retailers that have a code of good business practice, including transaction integrity over the Internet by having information security standards and procedures tied in with their web pages.
Apr 99	Citibank launched <i>Citibank Commerce</i> in Singapore, making companies in Singapore the first to enjoy its business-to-business e-commerce platform that combines transaction banking services with a secure, web-based buying and selling system.
May 99	Commerce Exchange was launched by Visa International and NCB Holdings to provide companies, their suppliers and financial institutions with customised on-line trading hubs in an Internet-based environment.

THE NETHERLANDS

Contributing organisation:

Ministry of Economic Affairs, ECP-NL (The Dutch Electronic Commerce Platform, non-profit association of business users and providers of e-commerce, government, intermediary organisations and universities).

National Statistics (1998)			
Population	15,8 million	Working population	6,4 million
Number of SMEs	0,44 million	Average n° of Employees in SMEs:	5
(note: in the Netherlands all firms < 100 employees are counted as SME's)			
Estimated volume of Electronic Commerce carried out.	€329 million 25 million Dutch guilders (1998)		
Estimated annual growth.	About 100 % p.a.	N° of national registered Internet sites.	About 70.000 (1998)

Overview of current state of Electronic Commerce take-up at national level.

April 1998 the Dutch Government have published his Electronic Commerce Action Plan. If electronic commerce is to expand rapidly, a critical mass of users (companies, consumers and authorities) is needed. This requires an increase in knowledge about and confidence in the subject. The actions are addressed to this goal. (favourable business environment, clear legal framework, use of governments own position in markets by fostering public procurement etc). SME's forms a special focus group. Implies a policy directed to creating awareness, thrust, knowledge and support.

Much publicity, congresses. National and regional campaigns. Great deal of SME's have heard of e-commerce. Knowledge yet to limited for application of e-commerce in business processes. For that reason continuation of awareness efforts. This year regional awareness campaign framing the program Sp.OED-Advies (individual support of SME's). A program of education and training forms topic of study.

Chronological list of key initiatives/activities regarding e-commerce and SMEs

Date	Title	Organisations	Budget
May 1996	Start national campaign "Sp.OED"	Ministry of Economic Affairs (EZ), Dutch umbrella organisations for enterprises as VNO-NCW and MKB-NL (special for SMEs)	2 million guilders €910.000
March 1997	launching of ECP-NL action	group of business organisations dedicated to national/sectoral awareness actions addressed to SMEs)	1 million guilders €405.000
May 1997	opening Mediaplaza	Ministry of Economic Affairs and business sponsoring (high tech demonstration centre	8,5 million guilders (yearly) €3. 860.000
	for the subject e-commerce; general and sector specific awareness and hands on training for firms with more than 50 employees and support to sector organisations)		
Dec 1997	Start regional campaign "Oprit-MKB"	IMK-Advies, Syntens (regional advisory institutions special dedicated to SMEs)	1 million guilders €405.000
July 1998	Start program "Sp.OED-Advies" (support for individual SME's)	Syntens	12 million guilders (5. €545.000
April 1999	new regional awareness campaign framing "Sp.OED-Advies"	Syntens	2 million guilders €910.000

N° of SMEs reached by initiatives: general awareness programs (for instance Sp.OED, Mediaplaza) about 15000, support/advisory programs (for instance Sp.OED-Advies) about 1500 (exact figures are not available).

Description of the highest impact initiative(s)

ECP-NL is the national competence centre on Electronic Commerce

It has 6 focus areas: awareness, trust, interoperability, national projects, international projects and research and education.

Currently includes 130 participants from both public and private sector.

Method: various committees, seminars and conferences, newsletter, website www.ecp.nl, participation in national and international projects, representative in European and global groups on ec.

Sp.OED-Advies

Objectives: in a period of 3 years support of 3000 individual entrepreneurs with their first application of e-commerce.

Method: Individual guidance by advisers of the organisation Syntens, together with use of (hired in) advise of private expertise. Each firm will be advised a maximum of 5 days. Dedicated advise is based on strategic analyses of firm's position in his market.

Achievements: too early to judge now. Much interest from firms.

UNITED KINGDOM

Contributing organisation.

Department of Trade & Industry

(Completed by SWC)

National Statistics (1998)			
Population	59 million	Working population	29 million
Number of SMEs	2.9 million	Average n° of Employees in SMEs	7
(includes 1.7 m out of the total of 2.5m sole-traders)			
Estimated volume of Electronic Commerce carried out in 1998	€500-800M £300-500 million rough estimates	N° of national registered Internet sites in 1998	200,000
Estimated annual growth.	100% p.a.		

Overview of current state of Electronic Commerce take-up at national level.

Recent industry research shows that over one million people in the UK became Internet users for the first time during the third quarter of 1998 and during December 1998 and January 1999 alone 1 million people subscribed to just one new "free" service provided by electronics company Dixons. According to NOP 10.6 million UK residents (23% of the adult population) accessed the Internet at least once during 1998 – a 48% increase over 1997.

Some 350,000 UK businesses currently make regular use of external networking technologies such as the Internet. The UK Government plans to achieve a target of one million businesses wired up to the digital market place by 2002. Business use of the Internet and web-sites grew by 37 per cent and 40 per cent respectively in the UK last year, compared with 5 per cent and 11 per cent in the US.

One million UK customers purchased £400m of goods over the Internet in 1998 – this was double the 1997 figure and it is expected to double again in the first half of 1999. Internet based E-commerce is growing rapidly – particularly business-to-consumer sales in the book, travel, electronics and financial services sectors. However, the business-to-business sector is expected to be the fastest growing area in the future.

According to Durlacher Research (www.durlacher.co.uk) 33% of UK SMEs had were already "online" (i.e. had a website or used email) and 35% expected to be involved in ecommerce in the next 6 months (www.durlacher.co.uk). However, whilst 83% of companies surveyed believe that internet technologies will underpin business-to-business e-commerce within the next 5 years only 21% have developed an ecommerce strategy.

Chronological list of key initiatives /activities regarding e-commerce and SMEs

Ecommerce & SME initiatives have so far been part of wider Information Society, IT For All, Business Link and government on-line programmes or have been established by the private sector or public private sector partnerships (e.g. EU funded projects, Electronic Commerce Association initiatives, CBI undertakings, serives provided by the Federation of Small Businesses, activities by the Alliance for Electronic Business, etc.) rather than as separately funded initiatives. (Also see Annex 1 : The UK Competitiveness White Paper And The Global Marketplace)

Description of the highest impact initiative(s)

The UK Government's [Information Society Initiative \(ISI\)](#) Programme for Business has worked with Business Links and their equivalents in Scotland, Wales and Northern Ireland to develop a network of 80 Local Support Centres, giving smaller businesses access to independent advice on the use of digital technologies The initiative brings together a whole range of programmes including TradeUK at www.tradeuk.com (which offers every small business in the UK which exports or is thinking of doing so an electronic shop window on the World Wide Web free of charge) and the [University For Industry](#) (which targets skills in business as a key priority) in support of UK companies, particularly SMEs who may be inexperienced in the use of new technologies. The intention is to provide them with the right information to make informed decisions about adopting information and communication technologies in their business. The national coverage of ISI Local Support Centres will be completed by Autumn 1999, accompanied by an enhanced promotional campaign. The ISI initiative is complemented by the activities of the IT For All programme. (See Annex 2: The ISI Programme & IT For ALL)

Part of the Government's new plans over the next three years will include backing a private-sector initiative to ensure that all advisors to small business, in the public and private sectors, can deliver consistent and integrated advice on IT and business best practice. The Advisor Skills Initiative, being piloted by Microsoft, Intel, Compaq and BT in partnership with DTI, will create a network of quality-accredited SME advisors. The Government will also launch a new fund for partnership action to increase use of ICTs at local level and through supply chains and it will develop, in partnership with the private sector, an "E-Commerce Resource Centre" on the Internet, available through the [Enterprise Zone](#). This will provide businesses with the information, tools and advice needed to exploit the opportunities of electronic commerce. The national award to recognise excellence in digital business will also be launched.

In March 1999 the Government announced a range of measures to ensure that the UK "mastered the newest and most decisive economic challenge of the 21st Century". This will include a £1.7 billion plan to provide a national network of 1,000 computer learning centres across the country.

Case reports on national and international developments in e-commerce for SMEs

THE G8 GLOBAL MARKETPLACE FOR SMEs

Involvement of the European Commission²⁷

The G8 Pilot Project "A Global Marketplace for SMEs" started in February 1995 with strong involvement of the European Commission, which has provided the Secretariat for the Policy Group and co-leadership together with Japan and the USA. The purpose of the pilot was to facilitate increased competitiveness and participation in global trade for SMEs by exploiting the opportunities offered by the development of the Global Information Society. For the European Commission, the pilot acted as a catalyst, which started a long string of activities in the area of electronic commerce. The pilot has also encouraged close co-operation between the industry and European Commission in electronic commerce issues.

Introduction

The European businesses, big and small, are confronted with a great challenge – will they say ‘yes’ to the challenge of electronic commerce? By now every business will have heard of Internet and electronic commerce. It is time for businesses to get serious about the phenomenon in Europe, especially at top management and marketing level, and not just in the IT department. The year 1999 could be the crucial year. There is a need to convert ambitions and ideas into action in electronic commerce.

The same holds true European governments: will they be able to take the right measures and enable the work of the businesses? Words have to become deeds when it concerns behaviour codes for electronic commerce, adaptation of the national laws, and especially: the government itself as user of electronic commerce. The European Commission has done preparatory work in a number of difficult topics for electronic commerce in Europe. For the political decision making at European level it's now the turn of the European Council of Ministers and the European Parliament. The work concerns amongst others a Directive on electronic signatures, and a Directive concerning legal aspects of electronic commerce.

Market researcher Forrester believes that large countries like Germany and Great Britain have no more than a few years left to take the necessary measures (by government *and* by businesses). If they do it right, and this we can know only afterwards, they can count on a period of 5 to 10 years of ‘hyper’ growth in electronic commerce. The United States are already nearly in this super fast growth (the increase of the Internet stocks seems to indicate that).

Can we be optimistic about the activities of businesses and governments in Europe?

European Commission and the G8 Global Marketplace for SMEs project

There is enough ground for optimism, but at the same time there are also some reservations about the speed of going from intentions to actions.

Every government of Member State of the European Union has now become active in the strategic development of electronic commerce. That happened fast. In 1995, during the Global Information Society conference, the G7 government leaders initiated 11 international projects, including the project on electronic commerce for small- and medium sized enterprises (Global Marketplace for SMEs). This project made an inventory of the electronic commerce challenge during 1996 and in doing so catalysed the discussion about electronic commerce on European level. In April 1997 this resulted in the ‘European Initiative in Electronic Commerce’. This Initiative provides a framework for action to create a favourable legislative framework, to enable access to infrastructure and technology, and to improve the business and consumer environment. The approach is sensitive to the interplay between these issues. Figure 1 suggests this approach and indicates the areas of electronic commerce policy and programme development.

²⁷ Opinions expressed do not necessarily represent the opinions of the European Commission. The text is based on an article originally published by Paul Timmers, European Commission, Directorate General XIII and Joep van der Veer, Directorate General XV and adapted by Hannele Ihonen, DG XIII.

European Initiative in Electronic Commerce

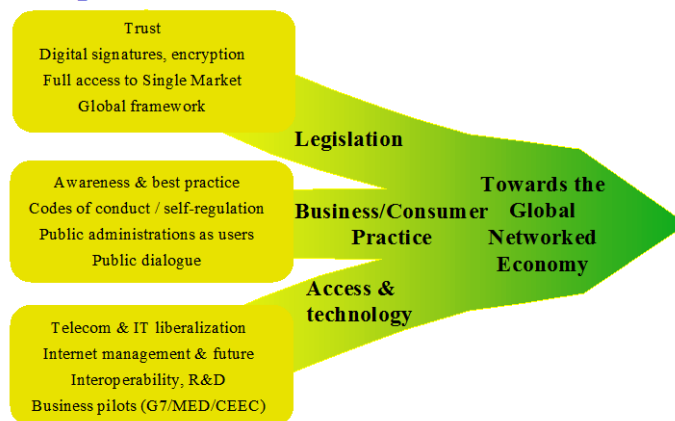


Figure 1 European Initiative in Electronic Commerce

In addition to acting as a catalyst in electronic commerce for the European Commission, the G8 pilot has contributed in many ways to Commission's activities in electronic commerce. The project has provided a forum for discussions between the industry and the policy makers. This has happened through several seminars and workshops and in the working groups that were established in connection with the pilot project. For example, the working groups have discussed in detail the requirements of SMEs in electronic commerce. The theme three of the project "International Testbeds for Electronic Commerce" has given insight into international piloting of electronic commerce by SMEs and has given international visibility to the testbeds.

The member states of the European Union have also developed national action plans. These plans are concrete and aim at fast action, although the emphasis differs from country to country. Member states have been able to put to good use the experience of front runners. The 'Global Marketplace for SMEs' project has contributed by providing policy makers a forum, where they have met each other regularly.

In the international context, the approach of the European Commission supports the world-wide consensus that solutions to questions of electronic commerce have to be found by the marketplace, taking the global and unique character of Internet into account. In addition, it is now generally accepted that there should only be a minimal amount of laws. They should stimulate rather than suffocate electronic commerce. A particular challenge at this stage is to ensure that the discussion truly involves all parties and all countries, including the developing countries. The G8 pilot project has provided a good forum for international co-operation and there has been a growing interest for the project also from developing countries.

Achievements of the European Commission

The European Commission seeks to promote electronic commerce. The European Union has an attractive starting position, with its internal market of 370 million people, one single currency and the plans future expansion of the Union.

The European Commission formulates policy proposals and implements specific programmes. In the process of European decision-making the Council of Ministers and the European Parliament in most cases take the actual decision, on the basis of the proposal from the European Commission. European Directives still require implementation into national legislation after the decision of the Council of Ministers.

Global electronic commerce requires a legal framework that is clear and predictable. It has to take care that public interests are respected and it should have the confidence of consumers and business. As the Commission currently sees it, not many new rules are needed. Instead it is necessary to clarify existing rules and remove obstacles in legislation. All-encompassing pan-European harmonisation of all of civil legislation is not what the European Commission has in mind.

Such a restraint in government's approach has to go hand in hand with a carefully operating industry, which can contribute by means of self-regulation to create a climate of confidence in electronic commerce.

The European Union has taken the following actions (for reference information, please see <http://www.ispo.cec.be/ecommerce/legal.htm>):

- 5 August 1999 the "Transparency Directive" will come into force. This Directive obliges Member States to inform the Commission of draft measures concerning "Information Society services". In this way these can be assessed on beforehand for their compatibility with the Internal Market. The importance of this Directive to prevent new obstacles emerging cannot be overemphasised.

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- The Electronic Signatures Directive guarantees free availability of products and services for electronic signatures. It creates a flexible and market oriented system, which allows a variety of approaches. For example, countries like the Netherlands can introduce new private sector based TTP certification schemes like the ‘TTP Kamer’, while others, like Germany and Italy can keep with small adaptations, their existing legislation. The Directive provides for legal recognition of electronic signatures. The current negotiations are about the technical requirements.
 - Money makes the world go round: this holds for the normal world as well as for the information highway. The Commission has proposed to adapt the existing financial legislation such that also other enterprises than banks can issue electronic money (under surveillance of national and European monetary authorities and with certain quality requirements).
 - The European Data Protection Directive has come into force in October 1998. It is still the subject of negotiations between the EU and the US.
 - A proposal has been submitted to protect copyrights in the online world. Currently a discussion is held about the difficult balance between the interests of authors and those of distributors of digital information
 - The Commission adopted end 1998 a draft Directive, which sets out to systematically eliminate the current uncertainty about all kind of aspects of electronic commerce. This important proposal aims to create free circulation of online services, in the spirit of the Internal Market. At first sight this looks like a hotchpotch of measures, from the establishment of online service providers and the relevant jurisdiction, online commercial communications, electronic contracts, up to and including liability of intermediaries and the co-operation between government services. The extraordinary architecture of the Directive ensures a coherent package. Because of this sophisticated approach, based on the tried and tested Internal Market approach, it seems that there is the persistent misunderstanding that the Directive would put the consumer at a disadvantage. Close consideration shows that the contrary is true. For example, the Directive clarifies which legislation has to be applied to the online service provider and which administration has to monitor. The Directive does not alter the applicability of any of the existing rules. In order to protect the online consumer it even adds information and transparency conditions. Therefore, the level of consumer protection is never less than that it was before, but instead is raised because of the collection of fine-tuned additional measures.
 - Furthermore policy papers have been adopted about taxation (especially VAT, although these consider principles only until now). In addition agreement exists that there should be no customs on services provided via the Internet (although the international discussion has not yet been concluded about the exact definition of a service – does this also include the online delivery of a book in digital form?).
 - What can be expected in the area of policy/legislation is further work on consumer protection, VAT for online services, interoperability and competitiveness of industry.
 - In the European R&D programme for the Information Society a special action has been included about new methods of work and electronic commerce, with a budget of 550 million Euro. Previously pilot project and awareness actions were launched amongst others in the ESPRIT programme. Industry participated with enthusiasm to these, including many small companies: over 45% of all participants were SMEs. Such projects address:
 - Basic technologies (digital money, encryption, intelligent agents, etc); an example is the E2S project that developed a secure electronic commerce architecture, with components such as smart cards, public keys and electronic payments. Its results are now commercially exploited by the TradeZone company.
 - Systems (digital markets, transaction management, etc) and experimental applications in many sectors. An example is INFOMAR, an electronic auction in fisheries, allowing to trade fish right from the ship. The time to sell a full catch has been reduced from eight to one hour. The city of Oostende recently decided to introduce the system.

A lot of attention is also given to discussion about future development and standards, and to cooperation with non-EU countries. A complete overview of projects can be found in the book ‘Accelerating Electronic Commerce in Europe’ (see <http://www.ispo.ccc.be/ecommerce/ecbook.html>). Figure 2 gives an overview of the areas of work addressed by current projects.

EU Electronic Business Projects

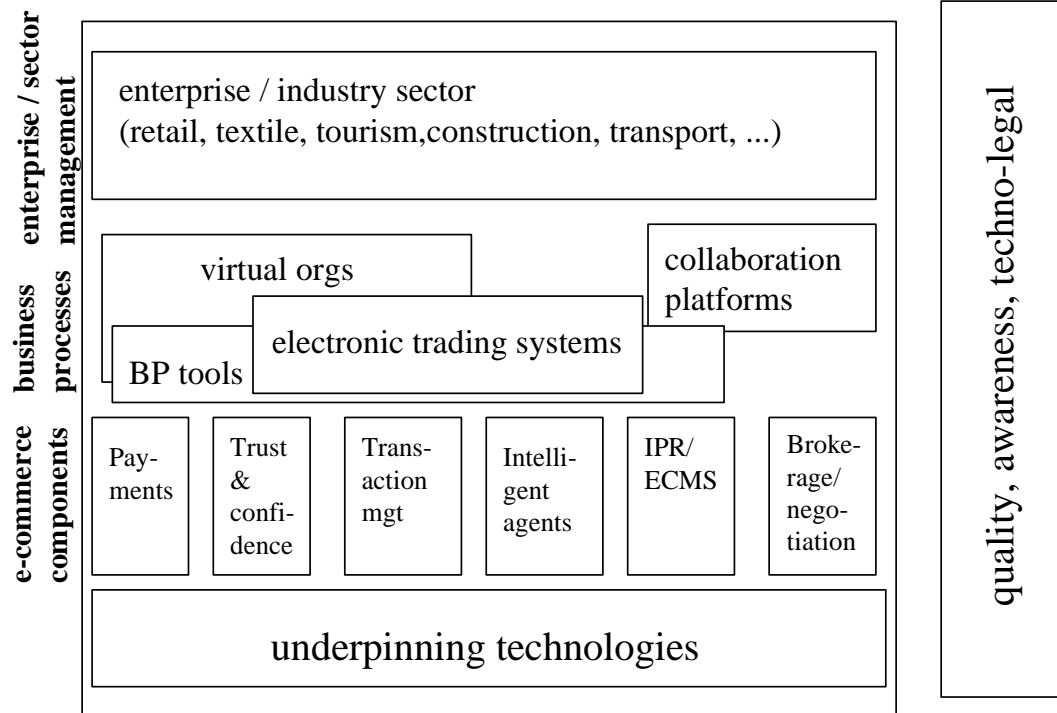


Figure 2 Electronic commerce and business processes projects in the EU ESPRIT programme

For more information on the research and development programme for the Information Society, please see <http://www.ispo.cec.be/ecommerce/fifthtrtd.htm>

Action from the businesses

The underlining idea of the G8 project has been that small and medium-sized enterprises are the foundation of economic activity and the key to innovation and job creation. Business opportunities for SMEs in the global marketplace are limited by a variety of factors, including difficulties in accessing appropriate information and integrating themselves in global trade. The project has been a unique forum where international electronic commerce issues have been discussed from a SME viewpoint. The ambition was that through the different actions in the project the SMEs received new possibilities to participate in electronic commerce policy discussions and obtained concrete ideas and contacts for their day-to-day work.

Big businesses have also been interested in the pilot and have been active in the G8 project since its beginning. In addition, they have joined forces in a variety of forums, including initiatives originating from Europe. The most recent of these is the Global Business Dialogue. Increasingly companies and their organisations take the lead in proposals for self-regulation. A Memorandum of Understanding about electronic commerce provided during 1997-1998 an important platform to build consensus in Europe²⁸.

²⁸ Please see <http://www.ispo.cec.be/ecommerce/MoU/S1700.htm>

Table 1 summarises a number of industry initiatives in which European companies are involved.

Table 1 Some industry initiatives involving European companies

Memorandum of Understanding on Open Access to Electronic Commerce
Global Business Dialogue
EU-US Trans-Atlantic Business Dialogue, OECD Business Advisory Committee
Business Action Plan Ottawa (ICC, BIAC, GIIC, ECE, ...)
Self-regulation, codes of conduct by industry sectors like direct marketing
Awareness actions (WE-CAN, DEMARCHE, ...)
Hundreds of pilot and R&D projects

The interest for electronic commerce roadshows and other awareness actions from the side of business and sector organisations is increasing. The G8 pilot project's testbed theme has stressed the need for innovative piloting of business ideas. Now industrial experimental projects are being launched everywhere. 'E-shops', 'e-auctions', '3rd party marketplaces' and a plethora of other business models are being piloted.

However, there are still barriers to be overcome in electronic commerce. Andersen Consulting polled during 1998 some 350 European and 30 US companies for their views on electronic commerce in Europe. The researchers state that this showed that a major barrier to electronic commerce was formed by the risk-avoiding and hesitating attitude of European companies. A significant part of business in Europe seems to wait for clear legislation before they move into electronic commerce. Other obstacles for a fast growth of electronic commerce in Europe are lack of understanding about what electronic commerce really is about (there is still a lot to be explained). A great need exists to provide recognisable examples. Sector organisations can play an important role in this respect. Finally there is a severe lack of skills. The equivalent of 510,000 fulltime jobs remained open in the sector in Europe, because of the skills gap, according to nine large European ICT companies. Others calculated that this would grow to no less than 1.6 million jobs in 2001.

The question is whether Europe can afford to leave the 'first-comer advantages' and network effects to others, despite all these obstacles. Europe risks with this attitude to miss out. Playing the second violin will then be all that is left (or perhaps the third, after Asia). The European Commission hopes that the G8 project will keep looking into the future of international electronic commerce and can keep contributing to making the "right" decisions together with the companies.

Fast enough?

The development of the digital economy, and correspondingly of international competition, are proceeding at the pace of a high-speed train, while new legislation as well as industry-wide acceptance of codes of conducts takes time. Probably we will have to wait long for a world-wide legislative framework. Internet entrepreneurs move fast ahead and build on the basis of their 'first-comer advantage' their new imperiums, while the legislative and self-regulatory framework evolves only gradually. Success stories are well known from the online book world and from the travel world.

Less visible for the public at large, but with a high impact, are the developments in business-to-business electronic commerce. For example, in electronic trading systems for products that are not directly going into the production (MRO – maintenance, reparations, operations), a market of 150 billion Euro in 2002, that is 50% of all electronic commerce. The companies that support this form of electronic commerce provide, in fact, the infrastructure for a large part of the future way of doing business. Their future role might be comparable to that of the telecom operators today. They built up the knowledge about large scale national and international electronic trading and will be able to provide valuable additional services on the basis of the enormous amount of transaction information in their systems. Customers will accept the standards of these providers because of the positive network externalities, and will thereby enable these providers to grow even more. Currently it is only lack of IT professionals that slows down this trend.

Future role of the public sector

Despite all expectations from the side of business towards governments, it is of course first of all up to business itself and its organisations to take action and to overcome hesitations. And the expectations from governments towards business concerning fast development of self-regulation are equally high.

The governments themselves certainly also have an important role they can play. Their task is to produce a favourable legal framework and to get rid of old rules that no longer function. Governments in the European Union should aim at adjusting the national legal system as soon as possible to the European regulations and/or anticipate to them. Governments can also take the initiative to adapt education to the digital economy. Investing and enterprising in electronic commerce can also be stimulated by the government. The vision on the long term has to be that electronic commerce will structurally increase the dynamics in the European economy. The best way for governments to realise their ambition of stimulating electronic commerce is certainly by setting the example of using it. Indeed, in many European countries the government is the largest buyer. Besides that, each business has to deal with the local or national governments in connection with taxes, customs, permits, and so on. These are all areas where electronic commerce can be of great importance. Thus it has a two-sided effect: efficiency and quality of government services will improve *and* electronic commerce will be catalysed in businesses.

In Europe in a very short time unmistakably much has happened in electronic commerce. Businesses and consumers have reacted with a bout of enthusiasm and political backup is increasing steadily. However, despite these good signs the clock is ticking away.

Further information and references

European Institutions: <http://europe.eu.int>

Electronic Commerce and the European Union: <http://www.ispo.cec.be/ecommerce>

G8 Global Marketplace for SMEs: <http://www.ispo.cec.be/ecommerce/g7init.htm>

'Business Models for Electronic Markets', P.Timmers in the International Journal of Electronic Markets, Vol 98/2: <http://www.electronicmarkets.org>.

Information Society Technologies Programme: <http://www.ispo.cec.be/ecommerce/fifthtrtd.htm>.

JAPAN

Promotion of Electronic Commerce

MITI is promoting projects for establishing the type of technical and institutional infrastructure needed to realize electronic commerce in Japan. In the first phase, which concluded last March, MITI undertook 45 Electronic Commerce pilot projects. These projects were implemented with participation by 500,000 consumers and a broad range of industries in over 20 sectors. The purpose was the development of substantial technologies aimed at resolving structural issues in each area.

In the second phase which started in 1998, 17 projects have been already implemented for the purpose of establishing a common base for the development of electronic commerce.

The Electronic Commerce Promotion Council of Japan (ECOM). See <http://www.ecom.or.jp> was established in August 1996, and comprises of 250 enterprises in various sectors such as manufacturing, finance, retail, research, and industrial associations.

ECOM, which has 7 working groups for studying technical and institutional issues in electronic commerce, has publicized various guidelines, including for certification authorities, for model contracts for credit card settlement, and guidelines for the protection of personal data, and many others.

MPT compiled the Report of the “Study Group on Cryptography Policy and Electronic Money” (published in April 1996) and the Report of the “Study Group on Electronic Authentication” (published in May 1997). The former SG intended to make recommendations for cryptography policy in the context of electronic commerce and to contribute to creating an environment that is favorable for promoting electronic payments. The latter SG aimed at providing policy principles and guidance for establishing an appropriate institutional framework for promoting the development and use of electronic authentication over telecommunications networks such as the Internet. The SG also published “Guidelines for Certification Authorities” for business entities providing, or planning to provide, electronic authentication services.

INGECEP

INGECEP/CyberNet (Integrated Next Generation Electronic Commerce Environment Project) is one of “International Testbeds for Electronic Commerce” promoted as Theme 3 of G8 Global Marketplace for SMEs Pilot and promoted by Telecom Services Association of Japan (TELESA)..

1. INGECEP Overview and Background

INGECEP is a pilot project for Next Generation Electronic Commerce System with the goal set to build user trust and confidence in electronic commerce.

INGECEP was proposed at G7 Global Marketplace for SMEs Policy Group meeting in Pictou, June 1995 by Japan with the objectives to contribute to the development of electronic commerce society by:

- identifying various obstacles in realizing the cross-border EC,
- sharing the outcomes among G7 member economies and
- presenting input for harmonized policy-making.

At the Policy Group meeting December 1995, Tokyo, this project was registered in Theme 3 of G7 Global Marketplace for SMEs.

The field trial of the pilot system started in July 1998 with the participation of Japan and Singapore.

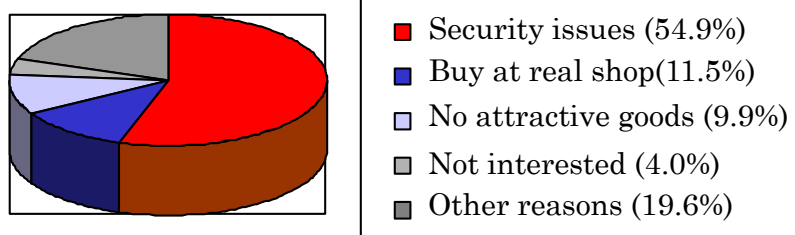
2. Issues in Cross Border Electronic Commerce

2.1 User Awareness of Internet Shopping

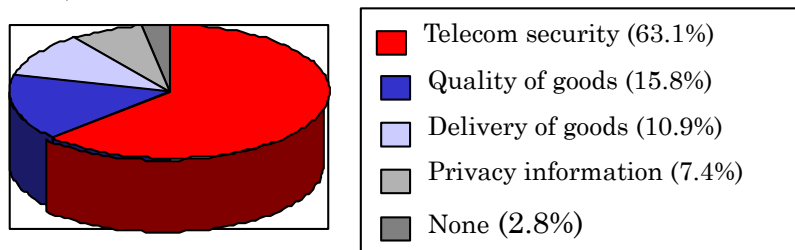
For the first stage of INGECEP, we conducted a consumer awareness survey on Internet shopping to identify legal, technical, and business issues relating to electronic commerce, and found out that 55 % of Internet users who do not have experiences in the Internet shopping (i.e., 58 % of Internet users) do not intend to do shopping on the Internet because of security issues, and that 97 % of Internet users have concerns over the Internet shopping, and the greatest issue confronting electronic commerce was the insecurity that consumers felt toward electronic commerce (see Table 1).

Table 1 Consumer Awareness for Internet Shopping

Q1. Why have you not had experiences with Internet shopping ?



Q2. Do you have concerns over internet shopping?
If so, what issue?



Source: Nikkei Multimedia (2/1999)

2.2 Issues To be Resolved

Based on the results of the research, we set a goal at INGECEP to pursue “build consumer trust and confidence in electronic commerce,” and decided to address the following issues to achieve the goal;

Eavesdropping and Forgery:	It is necessary to protect confidentiality and integrity of transaction and payment information
Impersonation and repudiation:	It is necessary to authenticate communicating parties and ensure non-repudiation of the information exchange
Disclosure of privacy information:	It is necessary to protect personal information gathered in the malls from uses for other purposes or disclosure to third parties
Terms and conditions:	It is necessary to make information on terms and conditions concerning the sales available to consumers
Payment and delivery:	It is necessary to ensure delivery of goods in exchange for the payment
Uses of languages:	It is necessary to provide information on how to uses malls and description of goods in a manner which is understandable to consumers

3. Solutions Adopted by INGECEP

3.1 Pursuit of Consumer Protection

We adopted the following solutions in pursuit of consumer protection (See Figure 1);

Adoption of SET

adopted SET for protection of order and payment information adopted PGP for protection of shipment information, etc

Adoption of digital signature

adopted electronic authentication based on public key cryptography

Self-regulation on privacy protection

developed rules for privacy protection prohibiting its use for other purposes or disclosure to third parties, etc

Definition of standards sales agreement

defined standards sales agreement and made available terms and condition for cancellation and so on to consumers

Payment after Delivery

transferred payments to merchants after confirmation of delivery of goods, provided alternate dispute resolution service to arbitrate conflicts between consumers and merchants

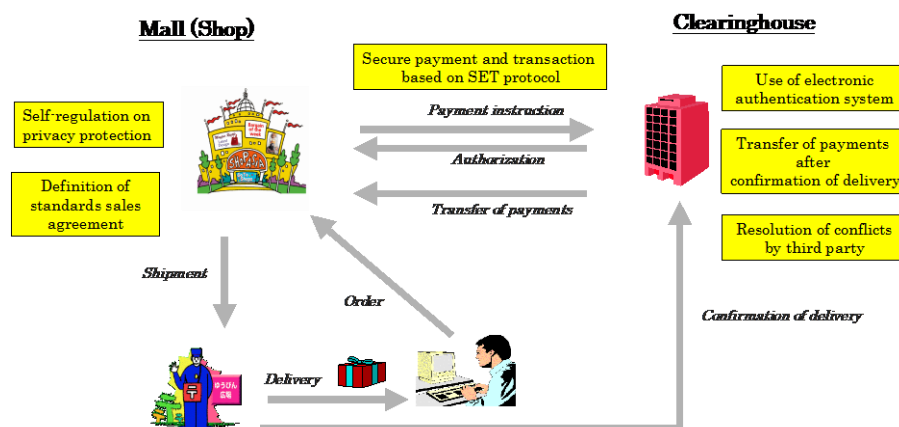


Figure 1 Pursuit of Consumer Protection

3.2 Pursuit of Use Convenience

We adopted the following solutions in pursuit of user convenience (See Figure 2);

Payment after delivery

provided delivery status information to consumers by using tracking services offered by post office,
provided conversion from foreign currency to local currency (Japanese Yen), and
provided information on duty and tax to be paid by consumers to customs

Support of Japanese Language

provided Japanese translation of information on how to use malls, etc.

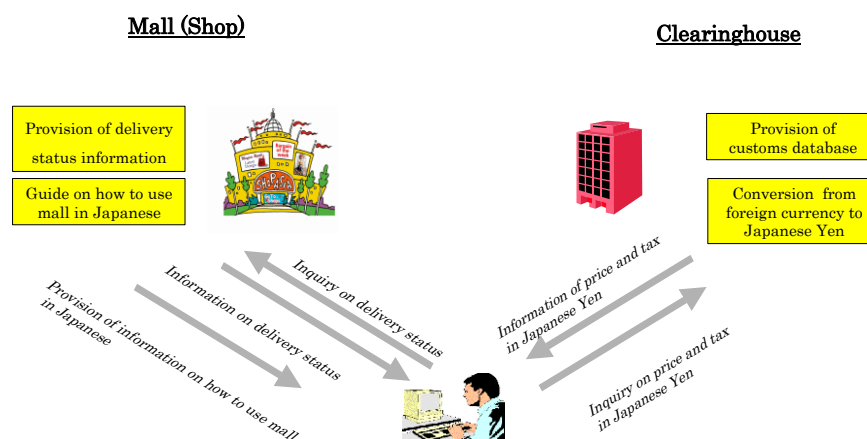


Figure 2 Pursuit of User Convenience

4. Outcomes and Analysis of INGECEP

4.1 Outcomes and Analysis from Consumer Point of View

The outcomes of the field trial and the analysis are as follows;

found out that the pursuit of consumer protection and convenience in all phases of electronic commerce, i.e., order placement, delivery of goods and payment for goods, is a key element in fostering cross border electronic commerce,

found out that the INGECEP pilot system is effective to building of consumers trust and confidence in electronic commerce

Public Concerns	A	B
Concern over telecommunication security:	35%	0%
Concern over quality of goods:	9%	5%
Concern over delivery of goods:	6%	5%
Concern over privacy protection:	4%	0%

[A: Survey by Nikkei Multimedia](#)

[B: Questionnaire Survey from the INGECEP pilot users](#)

found out that trust on Certificate Authority and Clearinghouse depend on social recognition and achievements of the operators

4.2 Outcomes and Analysis from Viewpoint of Collaboration among Private and Public Sectors

clarified actions to be taken by private and public sectors through the performance of respective roles (i.e., leadership by private sector, fostering of an attractive policy environment by public sector)

carried out the work on key issues such as consumer protection and privacy protection in line with the approach being taken by international organizations such as OECD

4.3 Outcomes and Analysis from Business Facilitation Point of View

found out that it is important for merchants to provide not only attractive goods but also information relevant to goods.

5. Observations

It is recommended that the following observations are taken into consideration in fostering the attractive policy environment for cross border electronic commerce;

While electronic authentication based on public key cryptography is one of the most effective ways to achieve telecommunication security, it is necessary to attain international harmonization of the legal and regulatory framework

While publication of standards sales agreement by merchants is an effective way to remove concerns over consumer protection system, it is necessary to attain international harmonization of the guidelines for description

While publication of privacy protection policy by merchants is an effective way to remove concerns over privacy protection system, it is necessary to attain international harmonization of the guidelines for description

While arbitration by a third party is considered an effective way to resolve conflict between consumers and merchants, it is necessary to develop the framework for international cooperation

The payment and delivery of goods are fundamental to conducts of electronic commerce, and it is necessary to develop these infrastructures along with to the needs of electronic commerce in a seamless manner

Because consumers have to make decisions based on the information transferred on the network, it is necessary to develop Next Generation Internet which is capable of handling of highly reliable and broadband information transfer concerning goods in response to the consumers' needs.

6. Action Plan

It is of our plan to continue the field trial of the pilot system until the end of March 2000 with the view to enriching the substance and to addressing the issues further as follows;

Continue to study and assess the importance of building user trust and confidence by taking measures such as to insure the transaction security and to establish self regulations on sales agreement and privacy protection policy in fostering cross-border electronic commerce,

Continue to study and assess the importance of improving user convenience by taking measures such as to provide shop contents in Japanese, to provide information on delivery status, to present information on payment including tax in Japanese Yen, in fostering cross-border electronic commerce,

Continue to study and assess the importance of enriching the service by providing attractive goods and information relevant to goods, in fostering cross-border electronic commerce,

Continue to study and assess on how the technical and institutional framework of electronic authentication infrastructure should be developed to meet with the increasing demands.

APEC /Internet EDI project

Outline of the Project

The APEC/Internet EDI Project is an Internet EDI pilot project that is easy to install even for SMEs. It aims to promote the liberalization of commercial transactions within APEC. The project was proposed by MITI and conducted with the cooperation of APEC members.

The fundamental concepts of this project were first proposed by MITI at the 12th APEC-TEL meeting in September 1995. In order to realize EDI on an open network like the Internet, it is imperative to solve the security issues of wiretapping, data falsification, and false identification. In this project, by incorporating encryption mechanisms for standard EDI messages and for mutual recognition functions into the system, we realized a system with high reliability in an open network.

In the project, testing and evaluation were conducted with an emphasis on practical use and we aimed for an Internet EDI that was easy for SMEs to set up. On the question of environment and systems development and activities, development was done using internationally available hardware and software as a basis in order to foster Internet EDI within the APEC region.

The final report of the project and the guidelines for Implementing EDI over the Internet were submitted to the 17th APEC TEL meeting in March 1998.

Result of the Project

We demonstrated that it is possible to construct an Internet EDI environment for SMEs even with current technology. The guidelines for Implementing EDI over the Internet are a compilation based on the results of this pilot project and we believe them to be a good resource for SMEs in the APEC region for Internet EDI implementation.

(Reference)

The structure of the guidelines for Implementing EDI over the Internet:

-System Design Guidelines

-Network Construction Guidelines

-Operations Guidelines

R&D of Next Generation Internet

In order to improve the quality of the Internet, which is the key infrastructure for electronic commerce by SMEs, the MPT is promoting a five-year R&D plan of Next Generation Internet Technologies, e.g. technologies for ultra high-speed data transmission and improved security and reliability, and has appropriated significant amount of funds to the plan every year.

ITALY

The role of Electronic Commerce

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A Global Market-place for SME

The role of Electronic Commerce

Abstract

This paper aims at giving some inputs to the debate on the role that Electronic Commerce could play in favouring the positioning of SMEs in the global market-place, that is in a changing and increasingly open environment, where competitiveness is getting harder, Information and Communication Technologies (ICTs) are making shorter the distances between markets, people and places, are suggesting new organisational patterns, are giving impulse to new ways of working, producing and trading.

The speed at which those phenomena are taking place is still faster than the speed their implications are understood: thus, when transition is perceived the immediate reaction is often to statically overlap the new scenario to the old one, rather than focusing on the dynamics created, or accelerated, within the single components of the current scenarios. So, some over-emphasis is put on the economic possibilities ICTs are giving to small business to operate in the global market-place, simply because the recent and pervasive technical progress is making that possible.

We argue that in the Global Information Society scenario the small businesses are challenged by increasing complexity and competition, although ICTs are technically (and formidably) simplifying the transactions between entities, and the chances for the SMEs to turn the challenge into advantages are directly proportional to the ability to cope simultaneously with traditional weaknesses and new requirements. The strategic effort demanded today in the market is more intense and urgent than yesterday for all the business players: be they transnational, large, medium or small enterprises. But that is not implying that market selection is going to be reduced, or the balance of power in the market to be modified or even reversed.

For sure, new tools, as the so-called electronic commerce ones, are providing new instruments to all the players in the competition game. Their economic value will depend upon the ability to exploit them strategically, that is functionally to the need to stay, and possibly win, in the game.

The paper tackles the concepts included in the theme: Global Market-place, SMEs, and Electronic Commerce, trying to sketch a realistic picture. Today, as at the beginning of the G7 Pilot Project *A Global Market-place for SMEs*²⁹, the basic policy purpose has to be that of favouring global (that is, extended to all players wherever they are located and whatever their size and power) access to - and experiencing of - the ICT and electronic commerce tools, to let all the players be equally equipped in the competition game.

²⁹ Fariselli P. (1998)

1. A Global Market-place

1.1 Globalisation

“Globalisation” is a lucky word, enjoying great popularity nowadays. Being a large hat covering many phenomena, one can hardly be wrong when using it. But as soon as definitions, measurement and implications are needed, arguments and disagreements take over the general consensus about its existence, and often a number of dichotomies take place, claiming for pros and cons, rather than analyses of what is more or less relevant in terms of change. Thus, a complex set of phenomena is reduced to polarisation of alternatives, such as global vs. local; international integration vs. national disintegration; free-trade vs. protectionism; free-market vs. regulation. Often ‘globalisation’ offers both motivation and goal (as globalisation occurs, one must be global) asking for adaptation; sometimes it is seen as the reason of instability, stimulating regressive behaviours.

Actually, ‘globalisation’ is the right word for collecting a wide set of processes having simultaneously horizontal (geographic) and vertical (institutional) dimensions. The lasting achievement of those two dimensions on the global level made great the ‘great empires’ in ancient and in modern history. A universal power extended up to the borders of the known world gave instance to globalisation before the rise of the nation state.

The advantages of belonging to the same empire in the Roman age or in the XVI century was enjoyed by a few dynastic families and by very small policy and business communities, while the opportunity to move around the global territory was mostly enjoyed (or suffered) by soldiers, merchants, and missionaries. To go around the globe had to be motivated by a mission and be legitimated by the central power.

The same happens today too, but what makes formidable the difference is that the transportation and communication facilities (and their relatively low costs), together with the reduction of barriers to trade, allow also individuals and groups to pursue their missions all over the globe. In doing that, crossing local, national and trans-national polities. That means that the economic power is the truly universal power in an increasingly open, accessible and global environment.

The power of the economic players depends on the ability to compete in the markets. This includes markets for capitals, goods, services, technologies, and information, at local, regional, national, and international levels. To designate the increasing horizontal and vertical exchanges between markets and market-places today the term ‘internationalisation’ seems to be limited, and is progressively supplanted by the term ‘globalisation’. The different terminology is mostly due to the development of the transnational players, which are able to move around capitals, goods, services, technologies and information, selecting the countries where to locate investment and operations, and to the increasing openness of the national markets.

The financial (long-term and speculative capital) markets have developed internationalisation in the global market-place much faster and deeper than the products and services markets. The high and global mobility, enhanced by the ICTs developments, of the financial markets, allows them a dominant influence over the products markets, and substantiate the globalisation, although it is the world trade its most popular dimension.

The development of world trade is higher than that of world GDP in the post second world war period, (see Tab.1) and is usually taken as an evidence of the increasing globalisation.

TAB 1 GROWTH OF WORLD OUTPUT AND WORLD TRADE 1870-1990

(ANNUAL % GROWTH RATES, CALCULATED PEAK TO PEAK)

		Output	Trade	
Pre WW1:	1870-1913	2.7	3.5	
	1913-1937	1.8	1.3	
Interwar	1913-1929	2.3	2.2	
	1929-1937	0.8	-0.4	Great Depression
Postwar:	1950-1990	3.9	5.8	
	1950-1973	4.7	7.2	Bretton Woods
	1973-1990	2.8	3.9	

Source: Kitson M. and Michie J. (1996)

Some analysts point out how the study of the world growth and trade from a limited historical perspective can tend to exaggerate the globalisation phenomenon. The above data show that, compared to the pre-WW1, globalisation has increased but not radically.

Also, many authors see some developments usually taken as evidences of growing globalisation (as the increase in international trade) rather as evidences of an increasing regionalisation. Regional Trade Agreements (such as the European Community, NAFTA) and the development of geographical blocs “has led to an increase of regionalism as both a defensive and aggressive response to intensified international competition³⁰”.

“A customs union, and in general every regional integration agreement, can be a regressive coalition, sustained by those who believe that they are incapable of maintaining a small closed market, but are not able to withstand the social costs of opening..... The risk of generating resistance to opening is very high”³¹

The “regional trade areas”, by moving the external borders outside the individual member countries’ borders can be interpreted as a response to globalisation, although the language of globalisation is not dismissed, since the globalisation philosophy is claimed to be implemented within the regional area itself. In a way, a regional economic or trade area, by addressing the global economic players’ need of a common platform, encapsulates globalisation, or, better, the advantages of globalisation, in sub-areas of the globe.

“The only response to this tendency [to regressive coalition] is further integration, passing to a form of integration that foresees a reorganisation of production to fit the extension of the single market – as an economic union. This passage occurred between the Treaties of Rome and Maastricht”³², but where and when it does not occur, the risks are of regressive protectionism, from one side, and of subordination to the global players’ interests, on the other side.

TAB 2 EXPORTS OF THE MAJOR DEVELOPED COUNTRIES TO THE MAJOR DEVELOPED AREAS

(% of total exports of the country/area)

Exporters	1980-85	1986-89	1990-96	
USA	58.5	63.4	59.0	
Japan	51.0	61.2	52.1	Industrial countries
EU	74.7	81.2	78.7	
USA	27.3	26.9	24.6	
Japan	15.2	19.7	18.8	Western Europe
EU	64.2	69.3	68.1	
USA	18.6	22.0	21.1	
Japan	32.2	38.5	30.8	North America
EU	8.5	9.4	7.8	
USA	10.2	11.9	11.1	
Japan	--	--	--	Japan
EU	1.1	1.7	2.1	

Source: Banca d’Italia (1998), Data sources: IMF

Table 2 shows that, in the period 1990-96, a percentage between 52 and 78 of exports of the major developed country/areas flows within the area of the developed countries itself. About 70% of the EU exports is towards the Western Europe.

The long debate between multilateralism and regionalism within the WTO has formally acknowledged the primacy of the globalisation, by pursuing and imposing the esprit of trade liberalisation. But regional areas are influent on WTO, and the degree of influence is measured by their economic power. Eventually, even if the WTO membership is on country base, to belong to a wealthy or poor (economic or trade) regional area makes a lot of difference in negotiating the economic implications of globalisation.

1.2 The key players

Even more interesting than the figures on the world trade, are those concerning the *international production*.

³⁰ Kitson M. and Michie J. (1996)

³¹ Bianchi P. (1994)

³² ibidem

“In 1997 the value of international production, attributed to some 53,000 transnational corporation (TNCs) and their 450,000 foreign affiliates was \$ 3.5 trillion as measured by the accumulated stock of FDI, and \$ 9.5 trillion as measured by the estimated global sales of foreign affiliates.... The ratio of inward plus outward FDI stocks to global GDP is now 21%; foreign affiliates exports are one-third of world exports; and GDP attributed to foreign affiliates accounts for 7% of global GDP... Sales of foreign affiliates have grown faster than world exports of goods and services, and the ratio of the volume of world inward plus outward FDI stocks to world GDP has grown twice as fast as the ratio of world imports and exports to world GDP, suggesting that the expansion of international production has deepened the interdependence of the world economy beyond that achieved by international trade alone³³”

The weight of TNCs (parents plus foreign affiliates) on the world trade comes out much clearly from the following data, referring to a 1995 UN report. “the world’s 37,000 parent transnational corporations and their corporation’ 200,000 affiliates control over 75% of world trade” and “one third of this trade is intra-firm³⁴”

It is reasonable to expect that the increased number of parents and affiliates all over the (developed) world is not changing the trend of the intra-firm trade.

The following Tables 3 and 4, show the (high) percentage of the multinationals exports on the country exports of goods and services, for USA, Japan, France and Sweden, and the (high) percentage of intra-firm trade of the multinationals on the multinationals trade in the same countries.

TAB.3 PARENTS’ TRADE ON THE COUNTRY TRADE

Country	Exports		Imports	
	1982	1992	1982	1992
France ³		44 ⁹		22 ⁹
Japan	76 ^ø	78	19 ^ø	23
USA	71	58	43	41
Sweden ³	61 [⊗]	52 [⊕]	--	--

TAB.4 INTRA-FIRM TRADE ON THE MULTINATIONALS’ TRADE

Country	Exports		Imports	
	1982	1992	1982	1992
France ³		48 ⁹		32 ⁹
Japan	30 ^ø	33	21 ^ø	35
USA	31	40	37	43
Sweden ³	40 [⊗]	50 [⊕]	--	--

Source, Banca d’Italia (1988) Data from OECD (1996)

³ Manufacturing; ⁹ in 1993; ^ø in 1983; [⊗] in 1978; [⊕] in 1990

33 UNCTAD (1998), , pg. xvii. Data on share of world exports of foreign affiliates refer to 1995.

34 UNRISD (1995), as quoted in Streeten P. (1996)

TAB.5 NUMBER OF PARENT CORPORATIONS AND FOREIGN AFFILIATES

Area/Economy	year	Parent Corporations based in economy	Foreign Affiliates located in economy
DEVELOPED COUNTRIES		43,442	96,620
Western Europe		33,302	63,789
European Union		27,846	54,875
Austria	1996	897	2,362
Belgium	1996	1,110	2,000
Denmark	1997	5,000 ①	2,012
Finland	1996	1,200	1,200
France	1996	2,078	9,351
Germany	1996	7,569 ②	11,445 ③
Greece	1991		798
Ireland	1994	39	1,040
Italy	1995	966	1,630
Netherlands	1993	1,608	2,259
Portugal	1997	1,350	5,809
Spain	1997	822	6,809
Sweden	1997	4,148	5,551
United Kingdom④	1996	1,059	2,609
Other Western Europe		5,456	8,914
Iceland	1995	50	40
Norway	1996	900	3,100
Switzerland	1995	4,506	5,774
Japan	1996	4,231 ⑤	3,014 ⑥
United States	1995	3,379 ⑦	18,901 ⑦
Other developed countries		2,530	10,916
Australia	1997	485	2,371
Canada	1996	1,695	4,541
New Zealand	1997	232	1,949
South Africa	1996	118	2,055
DEVELOPING ECONOMIES		9,323	230,696
Africa		32	330
Ethiopia	1998		21
Swaziland	1996	30	134
Zambia	1997	2	175
Latin America and Caribbean		1,109	21,174
Bolivia	1996		257
Brazil	1995	797	6,322
Chile	1955		2,028
Colombia	1995	302	2,220
El Salvador	1990		225
Guatemala	1985		287
Mexico	1993		8,420
Paraguay	1995		109
Peru	1997	10	1,183
Uruguay	1997		123

① includes both Danish and foreign parents corporations in Denmark

② does not include holding companies abroad that are dependent on German-owned capital, with participation of more than 20% abroad

③ does not include foreign-owned holding companies in Germany, with participating interests in Germany

④ the number is probably understated, because of lags in identifying investment in greenfield sites, and because some companies with a small presence in UK and abroad have not been identified

⑤ does not include the parent companies in finance, insurance and real estate industries in March 1996 (3,959) and in December 1992 (272)

⑥ do not include the foreign affiliates in finance, insurance and real estate industries in March 1996 (2,730) and in December 1992 (284)

⑦ Only parents with affiliates (and only affiliates) whose assets, sales or net income exceed \$3 million are included in US survey data

Area/Economy	year	Parent Corporations based in economy	Foreign Affiliates located in economy
DEVELOPING EUROPE		1,482	6,045
Croatia	1997	70	353
Slovenia	1996	1,300	1,792
Former Yugoslavia	1991	112	3,900
SOUTH, EAST AND SOUTH-EAST ASIA		6,242	199,469
China	1997	379	145,000
Hong Kong China	1997	500	5,067
India	1995	187	1,416
Indonesia	1995	313	3,472
Korea, Republic	1996	4,806	3,878
Pakistan	1993	57	758
Philippines	1995		14,802 ^⑧
--			
Singapore	1995		18,154
Sri Lanka	1995		139
Taiwan Prov.of China	1990	--	5,733
Thailand	1992		1,050
West Asia		449	2,486
Bahrain	1995		538
Oman	1995	92	351
Saudi Arabia	1989		1,461
Turkey	1995	357	136
Central Asia		9	1,041
Kyrgyzstan		9 (3)	1,041 (387)
The Pacific		151	
Fiji	1997	151	
Central and Eastern Europe		842	121,601
Albania	1997		1,280
Belarus	1994		393
Bulgaria	1994	26	918
Czech Republic	1997	660	44,062 ^⑨
Estonia	1998		3,170
Hungary	1994	66	15,205
Lithuania	1997	12	1,624
Poland	1997		32,889 ^⑩
		58	
Romania	1998	20	6,193
Russian Federation	1994		7,793
Slovakia	1997		5,560 ^⑨
Ukraine	1994		2,514
WORLD		53,607	448,917

^⑧ includes all firms with foreign equity

^⑨ includes joint-ventures

^⑩ firms with foreign capital

Source: UNCTAD (1998)

The areas/countries where the parent corporations are based are relevant to understand where the gains of the globalisation are going to (see Tab 5).

Globalisation appears thus to be a more circumscribed, although intense, phenomenon, concerning mostly the more advanced countries and areas and the TNCs (parents and foreign affiliates).

“The bulk of the international flow of goods, services, FDI³⁵, finance occurs among America, Europe and Japan....[while] developing countries participating in the benefits from growing trade have in fact been few... more than a dozen, although their number is rising... the group of least developed countries accounted for only 0.1% of the total global investment inflows, and for 0.7% of inflows to all developing countries... Africa ... has been almost bypassed”³⁶

TAB.6 REGIONAL DISTRIBUTION OF INWARD AND OUTWARD FDI

STOCK (percentage)								
Region/Country	Inward FDI stock				Outward FDI stock			
	1985	1990	1995	1997	1985	1990	1995	1997
Developed	72.3	79.3	70.6	68.0	95.7	95.6	91.5	90.2
Western Europe	33.6	44.1	39.1	36.9	44.4	50.8	51.1	50.4
USA	24.4	22.7	20.5	20.9	36.4	25.5	25.6	25.6
Developing	27.7	20.6	28.1	30.2	4.3	4.4	8.4	9.7
Africa	3.1	2.2	2.1	1.9	0.9	0.7	0.5	0.5
Latin America &	10.1	7.1	10.2	10.9	1.1	0.7	0.9	1.0
Developing	0.1	0.1	0.1	0.1		--	--	--
Asia	14.3	11.1	15.6	17.2	2.3	2.9	6.9	8.2
Central-Eastern	0.1	1.3	1.8	0.1	0.2			
WORLD	100	100	100	100	100	100	100	100

Source, UNCTAD 1998

Therefore, on one (emotional) side, the term ‘globalisation’ raises friendly feelings of openness, interdependence, free-exchange of resources all over the globe, but on the other (analytical) side it is represented by a set of processes having different (positive and adverse) impact on the world’s countries/areas. Using a typical competition language, there are ‘*winners and losers*’ in term of economic growth.

Some authors question the transnational nature itself of the TNCs, because, it is argued that the great majority of them are nationally based and home oriented³⁷. Looking, for example, at the technology transfer of the cross-border activities of TNCs, “the value of receipts and payments of royalties and license fees is increasing at double-digit rates, and intra-firm transactions are predominant, accounting for 52% for Japan, 79% for US, and 95% for Germany”³⁸. The big players of the globalisation are based in the most developed countries/areas, and contribute to a very large extent to the wealth of these countries/areas. Globalisation has its leaders (players and areas).

The key characteristics of TNCs, that is international production and capital accumulation on a global scale, requiring co-ordination across national boundaries, is not sufficiently motivated by the need to save transaction costs.

³⁵ FDI: Foreign Direct Investment

³⁶ Paul Streeten (1996)

³⁷ Hirst and Thompson (1996)

³⁸ UNCTAD, 1998

What should be emphasised is “the importance of control, and in particular strategic decision making rather than market exchange.... Transnationalism, particularly for the giant firms, gives additional leverage...with its great potential to shift operations... Although states can have considerable regulatory powers, transnationals possess real economic power with the threat of withdrawal, redundancy, or the promise of investment as a counter to government desires to some control... They encourage nations and communities to compete....As control over such strategic decisions as investment, output, employment and other issues becomes more firmly in the hands of a few elite decision makers, the risk of ‘strategic’ failure become more significant, where the objectives of elite conflict with wider interests in society...The end result is social inefficiency...”³⁹

The increasing economic globalisation in the markets is derived by a significant reduction of trade barriers to the flow of capitals, goods and services. The increasing openness of the markets has taken place in a relatively deregulated monetary environment, where, after the collapse of the Bretton Woods system, fluctuations of exchange rates has enhanced the speculative movements of capitals all over the world. In an increasingly open market, the coexistence of national economic systems with different resources/costs and economic-fiscal policy regulations stimulate the flow of FDI (mostly from/to the developed countries), and processes of de-localisation of operations all over the world.

The economic players able to take advantage from the globalisation have mainly been and are the TNCs, because of the formidable mass and influence of their economic power (in terms of investment, employment, technological innovation), which stimulates competition among the local and national governments throughout policies for attracting FDI.

Transnational is not necessarily synonymous of giant companies⁴⁰: anyway, Table 5 tells that over 80% of the parent corporations are based in the developed economies, and the figure is underestimated because, for example, US survey register only parents with affiliates (and only affiliates) whose assets, sales or net income exceed \$3 million.

As a matter of fact, to be winner in the global market-place requires an economic and political power whose weight is not likely to be reduced by the fact that the global market-place is more approachable because of the ICTs. In the global market-place competition is even stronger. Being the mobility of capitals and corporations accelerated by the trend toward dismantling trade barriers, in the open field the competitive game is more favourable to the strongest players rather than to the weaker ones.

A lot of emphasis is often put on the consequences of the globalisation in terms of *economic integration*, due to the increasing exchanges of goods, services and capitals, which would enhance the interdependence between different areas/countries. That correlation is not necessarily positive, if the engines of interdependence and integration are the global players, from one side, and the nation states, on the other side. Being the typical players in the global market-place private entities whose decision-making is typically profit-oriented, the possible integration of objectives between them and local/national polities is not said to be stable or, far less, coincident with the objectives of an area larger than the individual country. The economic integration of a regional area requires more than an intense trade exchange within its borders, especially if the major trading shares are managed by players “foreign” to the area. If there is an intense air traffic over our heads, it does not mean we are a very mobile population.

There is a recurrent dichotomy, between global and local, which is often imposed when debating about globalisation, as an alternative between (free trade - modern) globalisation and (protectionist - regressive) localism. The point, yet, is different. Globalisation is underway, and any regression to a previous stage of history is to refuse.

The balance between globalisation and localism, that is, from the economic viewpoint, between the global and the local market-places, lays in the balance between global business and local development.

If global players enter the local markets and contribute to the generation of (local) wealth the impact of globalisation would be positive both for global and local players.

On the contrary, if the global players enter the local market and generate/enhance asymmetries and exclusion, the impact would not be but negative, from the economic and social viewpoint, and the feedback on the global player would be negative too, forcing, for example, modifications in the strategy of localisation or investment.

³⁹ Cowling K. and Sugden R. (1994, 1998); Bailey D., Harte G. and Sugden R. (1998)

⁴⁰ “Transnational corporations are incorporated or unincorporated enterprises comprising parent enterprises and their foreign affiliates. A *parent enterprise* is defined as an enterprise that control assets of other entities in countries other than its home country, usually by owing a certain equity capital stake. An equity capital stake of 10% or more of the ordinary shares or voting power for an incorporated enterprise, or its equivalent for an unincorporated enterprise is normally considered as a threshold for the control of assets.(in Germany and in UK the stake of 20% or more is a threshold). ... Subsidiary enterprises, associate enterprises and branches are all referred as *foreign affiliates*. (UNCTAD 1998, pg. 350)

If the local player is prevented to enter the global market-place because of informal barriers or discriminating rules of the game, solutions has to be found, and such a kind of solutions eventually do not belong to the market, but to the policy domain.

In a keenly competitive scenario, as the global one, the risk to diminish diversity is very high. To protect the pluralism of the players, rather than local vs. global, is the safeguard of the system itself. "The more a system loses its variety, the more it will lose its capacity to renew itself"⁴¹

It is correct to say that globalisation is a private and market driven phenomenon: it implies that the search for profit is displayed all over the globe. However, since "market is a social construction that does not emerge by itself from a natural human impulse to trade....Rather, the assumption [is] that in a society based on the existence of individual rights to trade, the market, as the place where trade relations among individuals (legally equal and equally able to trade) are created, is an institution that should be created through the definition of collective rules that foster positive dynamics among these individual actors"⁴²

2. *Electronic Commerce in the Global Market-place*

There is a lot of concern about the implication of globalisation on the business models of the companies/corporations operating in the global market-place.

It is said that globalisation changes the nature (national identity) of the traded goods, as well as the business processes organisation of the companies operating in the global market-place. The mobility of factors of production drives companies to search for economic optimisation and strategic positioning around the globe. The trend is towards fragmentation and specialisation of the supply chain.

Globalisation is hard to be coped with monolithic and multidivisional structures: decentralisation of the organisation model is going along with the decentralisation of the operations and functions all over the globe. Some emphasis has been also paid to the influence of the (lean and mean) pattern, typical of the SMEs, on the large companies facing the decline of the fordist-tayloristic model and the increasing opportunities of trans-nationalisation.

All that is true and confirmed by many case studies. In the 1990s, multinational companies are getting concerned with need of rationalising not the single plant, as it occurred in the 1980s, but the whole system spread all over the globe. Size and proximity to the outlet markets are not anymore sufficient to exploit the advantages of the large scale production. To become globally integrated, organisational changes are required, new economies of scale to be achieved, based on a networks of decentralised and only relatively independent entities (multi or single functions); connected with a central and strong pole of co-ordination and control⁴³.

Roughly summarised, that is the common motivation and objective of most of the re-organisation efforts paid by the large multinational companies, which have generally led to the application of models of business processes (re)engineering. The result is downsizing to enhance specialisation and flexibility, under the influence of the culture of product customerisation and customer care.

The synchronisation of a new organisational awareness and the rapid and pervasive technical progress of the ICTs have given a formidable boost to the implementation of new models of business processes organisation. Electronic Commerce takes up here and now, first with the EDI formats, as an electronic mean to ensure standardisation, fast and impersonal control and tracking, in infra-companies communications.

The fast developments of personal and mobile computing and communications, and the sudden breakthrough of Internet out of the military and academic networks have provided extremely favourable circumstances to the implementation of models of business organisation based upon a network structure. By providing the tools and the infrastructures to an incipient demand, hardware & software houses and TLC companies have given birth to a new market. The parallel push toward liberalisation of the telecommunication services has done the rest.

The need of modelling and managing complex organisations as the large multinational companies in an increasingly global scenario, and the application of new and effective technological solution to address it, have produced very positive expectations and economic results, both to the users and to the producers. The consequence is that now the reasoning has been reversed: electronic commerce makes you global.

The market has been created, the market has to be enlarged.

⁴¹ Emmerij L. (1996)

⁴² Bianchi P. (1994)

⁴³ Harrison B. (1994)

First of all the target audience of the new market has been the consumers. Global electronic commerce initially meant buying and selling consumer goods, particularly software, entertainment, books, music, culture, hobbies, and – obviously – advertising. Electronic shopping requires electronic catalogues, electronic malls, and therefore the production of web sites, to introduce the company in the electronic market. The possibility to sell cookies on the other side of the globe, or to book a hotel room without moving from home, have got (and deserved) a very excited media response. In this phase, the massive attack is against the small retailers or distributors, who are already experiencing a significant decline.

At the beginning, SMEs have often been approached using the attraction of selling their traditional products outside and far beyond their local or domestic market. But that is probably not sufficient to enter the global market-place. Rather, many SMEs have experienced the urgency of adapting their business processes and information systems to quality certification requirements, and/or to the demand of the contractor or the parent company to introduce EDI or other electronic commerce tools. These are for enabling and ensuring sub-contacting relationships, or delivery within a supply chain, dispersed geographically but with hierarchical integration and sometimes-significant vertical integration.

The SMEs which have been and are – first – involved in electronic commerce have been those connected or incorporated in the supply chains of the large industry in electronics, computing, aerospace and defense, motor vehicles, engineering, which, by the way, are very often led by large multinational or transnational companies.

Other SMEs are those included (dealers) in the distribution chains of goods (cars, components, appareil, etc.) or services (tourism, HW-SW, etc.) or involved with the remote assistance to consumers-producers.

In short, in this preliminary phase the electronic commerce tools are primarily used in connection with the re-organisation of the large multinationals, motivated by the need to be competitive in the global market-place, and the applications are flowing down along the network and, in some cases, along the supply chain, where they are usually concentrated the SMEs.

For similar rationalisation and price-competition reasons, networks of (small) dealers distributing consumer and durable goods are approaching the system of electronic transactions with the (medium – large) parent company (business-to-business) and with the customers (business-to-consumers).

For typically price competitions reasons, specific new business managed by small, and sometimes very small young companies, are launched, particularly in the entertainment, books, music, and hobby industries. Sometimes these business are really global, that is they supply goods all over the world, supported by a global service courier (Amazon, to mention the most famous). Sometimes they prefer to operate in local/national markets using a decentralised network of operators, to address more directly the demand (and the language) of local people. The business record of these companies are highly variable.

Last, a new business is born: the “e-forecasting”, that is the foresights about the business expectations connected to the Internet and to electronic commerce: leaded by Gartner, IDC, Meta, Yankee, Forrester, using methodologies and parameters whose effects are not always directly proportionate to their acceptability. The emphasis upon electronic commerce and the Internet is still using the advertising language, at least in Europe. It often uses data on the “explosion” of the Internet-related businesses, and the disparity of opportunities between the Internet haves and have-nots in the competition game in the global market-place as a warning message. It assumes that the market is global for anyone, because of the technology applications that make it closer to anyone.

Along this way it is not much reasonable to expect but a very superficial usage by the SMEs. But it is sensible to expect that the SMEs, or some of them, will grasp the potential of the electronic commerce tools because of deeper reasons than those advertised in the current promotional campaign.

3. SME and Electronic Commerce in the Global Market-place

The definition of SME adopted by the European Commission, foreseeing three categories (micro, small and medium-size enterprises) focuses on the measurable parameters of size (number of employees, turnover, balance-sheet total) and control (less than 25% of equity should be owned by one, or a joint enterprise). Such a quantitative way of defining is the only possible way to ensure identification, which is the priority issue when one has to do with statistical analysis and with policy measures providing to SME financial support, services facilities and fiscal benefits.

In 1996 in Europe 98% of the industrial firms (19 million) was made by SMEs (18,590 million), out of them 93% were micro-enterprises (17,690 million). Large companies accounted for 40,000⁴⁴, and, according to the UN figures (see Tab.5), over 33,000 are parent corporations with foreign affiliate abroad.

⁴⁴ Eurostat/DGXXIII (1998)

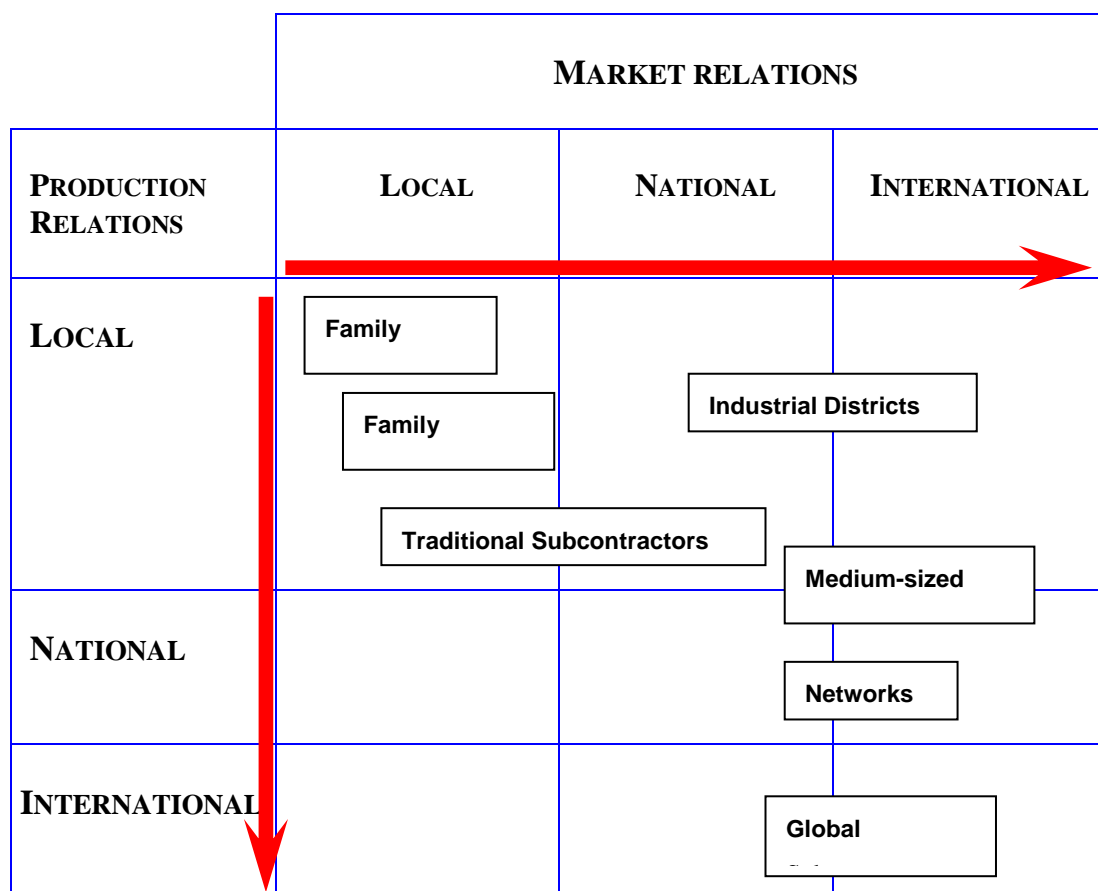
To know how many there are does not help so much in understanding what they are, but for sure the above data make the question a very relevant one. A vast amount of European and International literature is devoted in to the SME, and to SME policies, since their numbers raise profound economic and political interest and concern.

Before dealing with the issues relevant to this paper (nature, organisational patterns, competitive advantages/disadvantages of the SMEs in the global market-place and the impact of electronic commerce), it would be helpful to add some more elements to identify such a widely differentiated SME world.

“Scale may be a necessary condition, but it is not alone sufficient to classify firms. Also needed are specifications of dimension such as the economic and social contexts in which SMEs operate, and particularly their production and market relations...As regards production and market relations, SMEs may exploit local, national and international networks of relations... and may serve very local markets, larger national markets or even operate at the international level... The most local SMEs mostly operate at the margins of the formal market and are local in their production and market relations...However, SMEs which have their roots in local production networks are not necessarily limited to local markets... because they have managed to create market links at the international level or because the uniqueness of their products allow them to directly access national and international markets”⁴⁵ The authors draw the following taxonomy for SME:

- Family rural firms operating on a survival basis for the very local market
- Urban firms straddling the formal and informal sectors, often found in the outlying districts of metropolitan areas
- Subcontractors operating under the indirect command of a larger firm
- Specialised firms interacting with others within clusters, industrial districts and networks
- Medium sized firms offering niche products directly on international markets

FIG.1 TYPOLOGIES OF SMEs



Source: Bianchi P. and Di Tommaso M.R (1998)

⁴⁵ Bianchi P. and Di Tommaso M.R (1998)

According to some schools of thought it is doubtful if a business can be considered an industrial enterprise with less than 10 employees. But ignoring this and other (open) questions about the nature of the enterprise, it is well understood and documented that an intense mobility occurs within that extremely wide share of the European business. This is represented by short life cycles (high mortality) of the small businesses, mergers and acquisitions, grouping, joint ventures, agreements.

The intense activism which is revealed by the stable high volume of small business is socially highly productive (in 1996, 65% of the total employment was in SME, and 33% in the very small enterprises), contributing extensively to the production of welfare, and signalling aptitudes to creativity and risk.

However, the model of accumulation of economic wealth is still not very clear, and the competitive results are variable. Independently on the analytical approach (small business centred, or evolutionary), as a matter of fact, the small business are mostly something resulting from - and in process to become - something else.

To cope with the most typical path in the SME life story: from a (small) pool of resources around a business idea, throughout the setting of a formal company entrepreneur-centred, to the management of the growth of the market and of the company, flexibility to react to changes and rapid decision-making are simply essential.

The glorified flexibility, flat organisation, specialisation, informal but efficient information and knowledge flow, networking are (or, at least, have been so far) a 'must' for the small businesses, while they have turned to be a strategic choice for the large enterprises over the last decade. The flexibility is a response to a lack of scale. The question is: what happens to the SMEs when the large scale competitors make more flexible and global their organisation?

In a closed or relatively open market with relatively slow technical progress, the opportunity to turn the typical behavioural characteristics into economic advantages is enjoyed by many SMEs in different industries, often at the margins of the large enterprises. But also in circumstances of increasing technical innovation and product differentiation, and openness of the market, the SME plays an active, profitable and therefore competitive role, mostly contributing to incremental innovation, to product's quality, customerisation, and post-sales assistance.

The concurrence of globalisation of the markets, organisational restructuring of the large companies, and fast technical progress in the information and communications infrastructure and tools are challenging the competitive positioning of the SMEs in the local, domestic and global market-places. All this increases the complexity of their normal operational environment by reducing the scale rigidities of the larger counterparts of SMEs, which were often the basis of their prosperity. Also, increasing the number of "flexible large scale" competitors in the typical markets for SMEs tends to raise the technological and infrastructural barriers for access to the markets.

According to the view of the small firms *as agents of change*⁴⁶ the small firms is not able to maintain a sustained response to the complexity of the environment external to them, but are able to grasp and exploit, specific timely opportunities generated in their complex external environment. As soon as the circumstances that have generated that opportunity cease, the small firm disappears. Only in some cases it, accidentally, survives and/or enters a growth path.

According to the view which focuses the systems of small enterprises, rather the individual ones, the fast life cycle of the SMEs "provides that circulation of human resources, skills, ideas, ensuring flexibility, reactivity and stability to the whole system"⁴⁷.

A similar approach refers to the networks of small firms as a stable industry structure, alternative to that based on large corporations, compensating the size disadvantage of the small firms⁴⁸.

The key point of stability of the small enterprise is the key point of all the different approaches of the literature, which are all supported by case analyses. Stability of the player is the pre-requisite of any dissertation about the competitive positioning of the player in the highly competitive, global market-place. It seems to be out of question that the stability chances of a small business player rooted in a local system of production are higher than those of an individual player out of any network. However the proximity between territory and business is not always the only, prescriptive way of deploying a network. It depends on the way the network is organised, i.e. on the hierarchy model implemented by the network's leaders, and on the skill and specialisation of the players.

⁴⁶ Audretsch D.B (1995)

⁴⁷ Raffa M. (1998)

⁴⁸ Pyke et al. (1990)

But stability is a particularly relevant issue when the company is at the cross-road of survival with growth. That is when the change it is facing concerns its organisational structure as the sine-qua-non condicio of moving away from a limited market strategy, to a more complex one. That is when the main issue is the 'size' of the company, not necessarily its statistical size, but its 'strategic' size. Many authors argue that firm growth is independent on size, but the point is which is the minimum size allowing delegation of tasks from the entrepreneur to a management structure, that is for moving from a 'personal' to an 'impersonal' management of the company.

Electronic commerce is highly applicable in such a context. In fact, while 'buying and selling' electronically does not necessarily require structural organisational changes, to implement and manage a (growing) company's business processes does.

To implement effectively electronic commerce practices requires:

- a) available infrastructure and equipment
- b) technical ability and control to/of usage
- c) control of the information and knowledge to be shared (decision-making)
- d) procedures of information management (mining, selection, editing, filing)
- e) vision of the company business/knowledge (information/knowledge strategy)

The most relevant impact on the company of the electronic commerce, in a business-to-business perspective, is threefold:

- 1) on the information/knowledge base (market and technical information knowledge)
- 2) on the performance of the transactions (fast, clear, lower cost)
- 3) on the business processes organisation (formalisation; organisation model)

A successful application of electronic commerce, both intra and infra-companies, therefore, implies control and formalisation of the business processes organisation, and a strategy-oriented behaviour, which is the ground of a pro-active information and knowledge strategy⁴⁹.

In a way, the electronic commerce requisites and pre-requisites perfectly address the typical criticalities of a typical small company facing the transition to growth. The degree to which the exploitation of the electronic commerce tools can be brought depends on the current and potential position of the company in the markets, which is highly dependent on the degree of skill, specialisation, and innovation of the company.

Innovation is a key asset in increasingly competitive markets, particularly when markets are more and more open. Market selection does not work primarily against the 'small size', but against the lack of specialisation, quality, and strategy. A defensive or passive behaviour, relying upon low quality / low costs policies are going to be penalised in the global market-place, as well in the local ones, because of the increasing competitiveness and openness of the markets. Innovation does not necessarily mean high tech goods and services, but implies quality, skill and creativity, and therefore market knowledge, knowledge management, formal organisational models, active market and growth strategy. Today, to be effective, all that is connected with higher degrees of efficiency and is requested to be performed at a high speed.

The SME variety, the challenges of stability/growth, the increasingly competitive value of innovation, and the impact of the electronic commerce tools and practice on the SME business processes organisation, do not yet complete the complex picture of the SME world.

The industrial model where the SMEs operate also influences the companies behaviours in the markets, and in the global market-place as well. There are two alternative models as far as the impact of globalisation on the organisation of the industrial activities, and therefore on the SMEs.

- 1. "as suggested by Reich⁵⁰, more fragmented industrial systems are a natural consequence of globalisation and the formation of large currency unions. Accordingly, national industries and the national enterprises within them are about to lose their function as instruments through which a country attains and/or maintains a competitive advantage. This implies that a smaller number of products will have in the next few years clear national features and that they will be produced in different regions and countries according to a pure efficiency principle;

⁴⁹ Nomisma (1998 a)

⁵⁰ Reich R. (1991)

2. as suggested by Porter⁵¹, in global competition the future prosperity of a country depends on its ability to improve productivity levels in those industries in which it already has a competitive advantage, and this in *all* the phases relevant to the overall production process of such industries. This would determine a deepening in the international division of labour and, eventually, the exit of each country from those industries in which they *do not* have a competitive advantage. This reinforcement of the competitive advantage in a given industry is also likely to set in motion a process of division of labour between large firms and SMEs, with the latter specialised in those phase of the overall production process which do not require the employment of highly qualified workers.

From each of the above interpretations, it is possible to set out a distinct address for industrial policies: 1) by following Reich, a country should take as its main goal the creation of a highly qualified labour force, one able to carry out the most crucial functions (financial management, R&D, marketing, etc.) within globalised “filieres” devoid of any clear national attribute. Highly qualified workers will be able to find high-paid employment in the global webs⁵² of enterprise that are currently being spun around the world as a consequence of the globalisation process; 2) by following Porter, the same country should instead specialise even more in those production activities in which it holds a competitive advantage, therefore avoiding to de-localise even those function for which labour costs represent the most critical variable. By following this perspective, the key to the future prosperity of a country is the improvement of productive capabilities by building industry clusters⁵³ within its borders”⁵⁴.

In the first model the market selection, based on the response of specialisation to the global competition, only the most dynamic SMEs are likely to survive and even grow. In the second model, relying on the international division of labour and on the division of labour between the large corporations and the SMEs supplying low qualified goods and services, also the low productivity SMEs are likely to survive, but less likely to grow.

The electronic commerce practices would probably take different patterns, according to the positioning of the company, in terms of specialisation and innovation in the first and/or in the second model.

In the first case, company included in “global webs” should develop control over the electronic commerce tools, proactively to growth strategy requirements in line with the competition in the global market-place. Electronic commerce is adapted to the company requirements.

In the second case it is likely that the electronic commerce practices implemented by the SME rooted in “industry clusters” dominated by large and global companies are top-down application of procedures, requiring very limited control. The company has to adapt itself to the electronic commerce tools and procedures, and that would represent an extra factor of selection.

Last, but not least, a special attention has to be devoted to horizontal dynamics occurring in the SME world, in order both to swap away some rhetoric fog spread over the SME subject which often obscures a realistic view, but also to develop some suggestions about the role of electronic commerce could play in upgrading the positioning of the SMEs in the global market-place.

Recent research works⁵⁵, carried out in Italy have provided very interesting evidences, which show the dynamics underway in the country of the Italian districts. About 50% of the Italian industrial companies with at least 50 employees (75% of the employment) belong to groups. Other industrial or financial companies control an unexpected number of Italian companies, so that it is reasonable to deduce that their real average size of is higher than usually perceived.

Tab.7 Italian Industrial Companies Organised in Groups

Size/Employees	% of companies
10-19	8
20-49	18.2
50-99	35.1
100-199	63.1
200-499	78.4
500-999	85.4
1000 and upwards	97.7
Total 50 and upwards	50.8

⁵¹ Porter M. (1990)

⁵² Lazonick (1993)

⁵³ ibidem

⁵⁴ Santarelli E. (1998)

⁵⁵ Barca et al.(1994), Nomisma (1998 b), IDSE (1999)

Nomisma⁵⁶ has carried out in 1998 a research work on a sample of 444 Italian small and medium groups⁵⁷, with a turnover up to ITL 200 billion (1,000,000 Euro), including at least two companies, one (the controlling company) holding no less than 50% of the equity of the other one. All together 1352 companies are included in the sample. 80% of these groups have mono-product specialisation, about 75% is made by 2-3 companies; 60% are leaded by a holding, owned by the members of the family; 28% is controlled by an operational company.

The research has analysed the organisational models of 200 of these groups. Here is a rough summary of the conclusion, relevant to this paper.

On average the groups have a low organisational profile, being relatively more centrally developed only the commercial functions (contracts, sales). Procurement, finance, and R&D are rarely integrated. The intra-group communication is mostly informal. Those groups with a better competitive positioning (usually exploiting cost/price competitive advantage) are less integrated, the individual companies holding their strategic and decision power. The more the internationalisation, the more structured is the group architecture. The more dynamic groups are the more structured.

What comes out is that the major reason of grouping is to improve the market relations, which are delegated to a central service, for companies operating in the same industry segment (product). On average, the group does not perform any significant organisational upgrading of the pre-existing model of the individual companies.

However, be these phenomenon to be taken as an opportunistic way to maintain the benefits of the small size, or as a step along an evolutionary path, the signal that the 'market size' of the SME could be enlarged throughout the networking/sharing of some functions is clear, and tells there is some activism in experiencing an intermediate stage between the individual SME and the global market-place.

The research work points out that the way to achieve 'structure' is still a long way, but what we would stress is that the small and medium groups of SMEs could take formidable advantages from electronic commerce tools, because of the impulse they would give to the achievement of more structured and formal organisation models.

On the other side, similar dynamics are occurring in the traditional Italian districts, where a trend toward concentration, or at least toward leadership, is underway since many years. As a matter of fact, these trends are probably the rational response to increasing competition in the global market-place, which makes more difficult the 'natural' composition of the naturally conflicting dimension of the coexistence.

Conclusions

To be winner in the global market-place requires an economic and political power whose weight is not likely to be reduced by the fact that the global market-place is more approachable because of the ICTs. Being the mobility of capitals and corporations accelerated by the trend toward dismantling trade barriers, in the open field the competitive game is more favourable to the strongest players rather than to the weaker ones.

Globalisation has increased competition, and the flexible response of the individual SMEs is going to be not as much effective any longer. The 'size' issue is going to get worse in the global market-place.

As the large corporations have undertaken changes, even radical changes, in the organisation, looking for new economies of scale, the same change is even more urgent for the small businesses. As a matter of fact, the small and medium companies participating in the supply chains of the large corporations are already experiencing, without choosing it, the feedback of such a re-organisation. Quality and reliability of the supply are requirements that can be remotely controlled through electronic commerce tools, and in the global market-place the number of players or potential players is always higher than in a less open market.

Size is not exclusively a quantitative parameter, although the acceptable minimum is probably increasing today, but a qualitative one. It can be improved throughout innovation, specialisation, and – mostly – organisation. For sure, electronic commerce could provide the right tools to that.

But one cannot expect that all the SMEs can take advantage from it. In fact, in the global market-place selection is harder, and the possibility to enter and stay in the global market-place is highly dependent upon the ability of the SME to cope with the typical issues of stability and growth. In any case, the access to the global market-place, and to the infrastructure and tools (such as the electronic commerce ones) have to be allowed to any player, and not represent a discriminatory barrier⁵⁸. The more diffused the access to the tools, the higher are the possibility of controlling and exploiting them to the purpose of surviving, and eventually grow, in the global market-place.

⁵⁶ Nomisma, 1998

⁵⁷ A Group of companies is defined by the existence of at least two companies linked by equity participation where one holds the control of the othe one.

⁵⁸ Fariselli P. et al. (1997-1998)

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GERMANY

Final Project Report on

G8-Global Marketplace for SMEs

to the

Bundesministerium für Wirtschaft und Technologie



Responsible Partner: IHK Gesellschaft für Informationsverarbeitung mbH

Introduction

The overall objective of the G8 Pilot Project "A Global Marketplace for SMEs" is to facilitate increased competitiveness and participation in global trade for SMEs. It provides a coherent operational framework and a plan of implementation for global co-ordination and co-operation in electronic commerce, focusing on SMEs.

The main lines of action of the Pilot Project are organised around three themes:

Theme 1: A Global Information Network for SMEs, Theme 2: The business requirements of SMEs, Theme 3: The international testbeds and pilot projects.

As it was expected to create a "Global Marketplace for SMEs" in Germany, IHK Gesellschaft für Informationsgesellschaft GmbH, as IT-software and systemhouse of the German Chamber organization, together with its partner formally Siemens-Nixdorf – took over the responsibility integrating all necessary actors to create a global marketplace in Germany. As the financing was not solved and therefore taken by the German Economy itself, the task was integrated in the European Project AGENTISME.

Without concrete examples it was nearly impossible to enable small and medium sized enterprises to take part in a project under the label G8-Global Marketplace. The label itself was only interesting as a marketing platform in connection with concrete best practice scenarios.

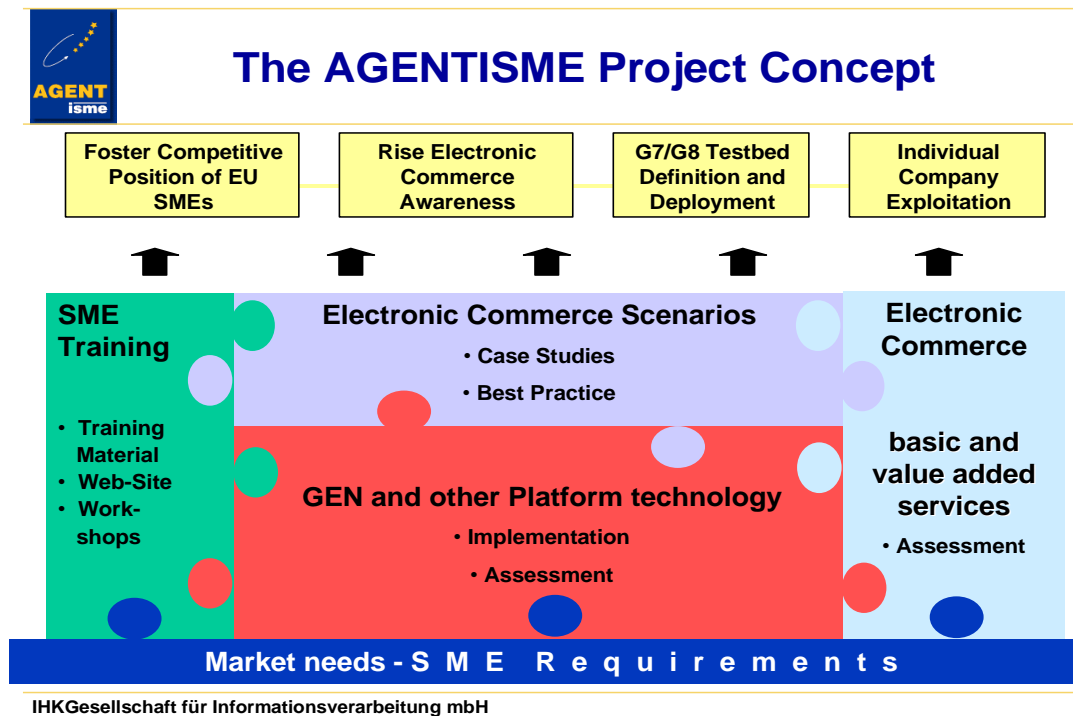
The objective of AGENT-ISME is to assess, integrate and demonstrate technology for Electronic Commerce related to GEN, involving all necessary actors - end users, suppliers, service providers. The scope of these pilot activities covered business-to-business transactions and topics such as marketing and directories, but also interactive co-operative work.

To run AGENT-ISME in the context of the G8 Pilot Project: „Global Marketplace for SMEs“ without the participation of selected SMEs was seen as a contradiction to the theme "SME-requirements". THEREFORE, AGENT-ISME focused on an initial group of SMEs for the assessment.

The Project Framework

Manufacturing enterprises are currently in a process of far-reaching changes. Globalisation puts small and medium-sized enterprises in Europe under enormous competitive and price-pressure. Companies are forced to reduce time-to-market under increasing quality requirements and shorter product life cycles. As a result, companies have to concentrate on their core-business. On the one hand, they have to optimise the value-chain within the company. On the other hand, companies are forced to co-operate with other enterprises in order to reduce cost and to increase their product offer.

AGENTISME assesses solutions for SMEs in a best practice approach, involving all necessary actors, end-users, suppliers and service providers (see above mentioned concept).



Objectives for the Pilot Project

The objective of the Global Marketplace for SMEs was assessment, analysis of the usability of such a platform for small and medium sized enterprises and to integrate them by demonstrating best practice solutions.

AGENTISME is a best practice pilot project for electronic commerce related to GEN - The Global Engineering Network concept. The concept is to create a real market place within the mechanical and engineering sector in several areas based on requirements of SMEs in France, Germany, Switzerland and Greece.

Starting point for the SME user driven project was both the analysis of user requirements from project internal SMEs (Klotz and Cadtron) and the SME requirements analysis of 81 external engineering companies. These analyses, conducted during the project, set the basis for the definition of services to be assessed and integrated within AGENTISME.

Then, the project seeks to develop and demonstrate best practice business scenarios to promote a global business to business market place for SMEs in the machine tool industry. The scenarios are based on assessment of current and emerging e-commerce technology, e-commerce business models, and a survey of SME and user requirements. The results are disseminated in awareness and training workshops, as web based presentations and distributed as training manuals.

Project status and Achievements

This project is complete and has fulfilled its contractual requirements with a maximum of value. This is indicated in detail in the success story at the end of the document.

Awareness and SME-requirements towards a global marketplace

Respecting the multicultural and multi-lingual aspect of a global business community, AGENTISME project flyers and other dissemination tools and materials are available in four languages. Continuous awareness activities have also been conducted in several European countries. Therefore, The.

The homepage of German G7-Marketplace for SMEs is strongly related to the AGENTISME-homepage <http://www.agentisme.com>. Both are enriched by Agentisme results such as the online-training material, guided tour and SME statements concerning their needs and interests. Rising interest in the AGENTISME homepage is noted during the last months of period 3 with approximately 8000 hits per months. This positive result is seen as outcome of the awareness activities and the success of the AGENTISME-project as major input to the global marketplace for SMEs.

Within the project several presentations were given on international conferences and more than 50 presentations on a regional/national and European level. It has been shown that especially presentations with real life scenarios are of great impact to SME audiences. The contents of presentation is adapted to this requirement.

Co-operation with other G8-related projects and European Projects

National Projects/Programs

On a national scale IHK-GfI use various contacts to promote the Global-Marketplace with other projects and programs, for instance the MediaMit initiative of the German CCIs, and federal initiative of Electronic Commerce Competence-Centers, supported by the National Ministry of Economy

European and G7-Projects/Programs

Furthermore IHK-GfI has established a co-operation with other related networks such as **MIDAS-Net** (CCI Aachen and the CCI Berlin are part of the German MIDAS-Net), **Euro Info Centres**, **PROSOMA-Network** (published on PROSOMA CD-ROM showcase version 3, on-line <http://www.prosoma.lu>).

IHK-GfI also contributes AGENTISME to other European projects like **DEMARCHE** of Eurochambres where AGENTISME has been proposed as best-practice-model. As project co-ordinator, IHK-GfI is preparing the next steps of the Testbed-Workshop in the US together with **WeCAN** - Wide Electronic Commerce Awareness Network).

Training and Information Material in four languages

Starting from the SME requirements analysis a complete structure for SME training material has been developed. Training material is available in on-line and off-line versions in English, French, German and Greek. The off-line version is distributed during training and information seminars. The on-line version is accessible through the AGENTISME homepage.

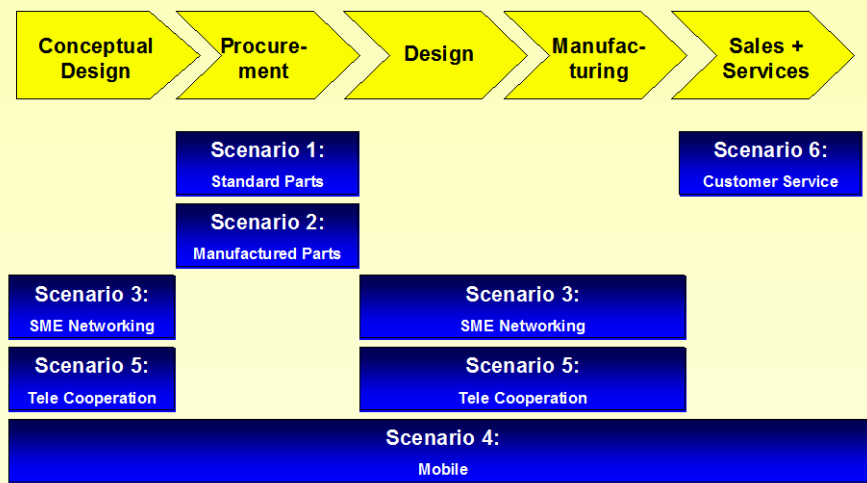
Best Practice Scenarios

Real life user scenarios (Klotz-Supplier-Center) as a result of the SME-requirements are core-elements of the Global Marketplace for SMEs. Besides the Klotz Supplier Centre, further scenarios have been developed offering process optimisation for SMEs. All scenarios support process optimisation at different steps and stages of the value chain as it was requested within the objectives of the Global Marketplace in its beginning in 1996.

The following schema gives an overview on the integration of the scenarios in the value chain. These scenarios are used as concrete illustrations of the impact of E-commerce technology on all aspects of the manufacturing value chain.



Scenario Framework



www.agentisme.com

The involvement of AGENTISME as official registered testbed in the G7/8 activities leads to additional awareness on a global level. The AGENTISME testbed definition is an active contribution from the consortium to the G8 setting and specification of the framework „A global market place for SMEs“.

The AGENT-ISME partners are convinced that by joining forces faster progress to the European and Global Information Society can be expected.

Conclusion

The business environment for European SMEs has been transformed by competitive and economic pressure of the last decade. Even the smallest SMEs had to downsize, outsource or adopt a fundamental shift in their business strategy in order to compete.

More and more SMEs are working together in “Micro-networks”, networks consisting sometimes of just a few core SMEs, as an adaptive survival strategy (The notion of survival here is real since many machine tool companies did not survive the last economic downturn).

Within this context, it is not surprising that many SMEs considers using e-commerce applications to optimise networking with local and regional partners as being both important and urgent.

Thus the Agentisme consortium identifies the need to support SME networking as a response to real and specific needs of European SMEs.

From a policy stand point, encouraging SME networking is also in accordance to the G8 testbed objective:

“To facilitate increased competitiveness and participation in global trade for SMEs.... The project should be driven by the explicit needs of the SMEs”⁵⁹

Working towards these objectives in a networking context can achieve a greater multiplier effect on technology uptake. Encouraging SME Networking at the local level also accelerate the build up of a critical mass for business to business E-commerce. In fact, the link between a strong local and regional network and the ability to compete on a global level has been well researched and documented⁶⁰.

The Agentisme project identifies two critical actions for supporting SME networking and the uptake of e-commerce technology

⁵⁹ see note 1 page 2

⁶⁰ Porter M.E., “Clusters and the New Economics of Competition”, Harvard Business Review, Vol. 76:6, 1998, 77-90

Awareness and training activities are extremely important to help accelerate the creation of a critical mass of SMEs for business to business E-commerce.

Supporting E-commerce intermediaries: Intermediaries are technology service providers such as web designers and Internet Service Providers that provide SME an “outsourcing” possibility for their e-commerce infrastructure. Often these intermediaries are themselves SMEs, and as a group, could become the economic engine of the new Information Society.

The AGENTISME experience also indicates a deployment model for future SME testbed activities. This model is based on “testbed-definition by practical scenarios”.. One of the most successful result in the project is the participation of SMEs in such a way that they become themselves role models for other SMEs. For this reason the SME participants of AGENT-ISME is key to extend the exploitation of the project regionally, nationally and globally.

To sum up: The AGENTISME deployment model promotes a „snow-balling“ effect often cited as a goal of G8-pilot projects within the **G8-Testbed** working group. Therefore the responsables within the Commission Rosalie Zobel and Paul Timmers supports using SMEs a role model. In this way, AGENTISME itself is seen as a testbed for this deployment model

For the Commission, deployment models are definitely an issue and they are interested in getting the results from the AGENTISME-deployment model, and seeing its potential implication for testbed definition in the future.

In Germany and in Europe, AGENTISME has very much supported the work of the national project responsible in the field of a global marketplace for SMEs. Therefore, AGENTISME results were integrated in the discussion of the G8-Conference in Dallas.

Success-Story AGENTISME

Quote from Final Report of Project Reviewers.

The Klotz lesson gives proof of how electronic commerce practices, when they are the result of a business strategy re-focusing, lead to a change in the ways of working and even in the business. Klotz is a good example of the effects of the decision of innovating as a strategy to cope with a negative economic scenario, and of the consequences of electronic commerce practices on the business core of the company. Klotz is actually changing its core business, from assembler of manufacturing, to service (providing knowledge and services to the engineering supply chain). This should be considered as a major research result, and should be emphasised in the final report, because it represents a real contribution to the project knowledge achievements about electronic commerce.

Helmut Klotz, managing director of Klotz GmbH, a medium sized engineering enterprise in Germany, describes the situation from his daily experiences as follows:

"There is no chance for SMEs to be active successfully on the world market using conventional information technology. There is an enormous need for new strategies like improved technology. For example Klotz was asked to participate in a planning project in Asia. This project would cover up to 200 sites where at each one Klotz machines would be used. Our machine would have to be integrated into the various layouts of the different production sites. Up to the present day we have not been able to meet these requirements.

This is due to the lack of support by conventional communication systems for simultaneous engineering and on the other hand the search for European partners to participate has appeared to be a nearly unsolvable problem. Only the costs for an offer based on conventional usable medias represent a problem not capable for Klotz. Therefore Klotz expects AGENT-ISME to find a solution for these information and communication problems and to open new markets."

THE UNITED KINGDOM

The UK Competitiveness White Paper and The Global Marketplace

The UK Government has set out an ambitious Electronic Marketplace goal that hopes to create in the UK *the best environment in the world for electronic trading by 2002*.

It has been realised that to achieve this goal the UK needed to start by benchmarking ourselves against the best - painting an honest and realistic picture of where we are, and of where we need to go.

The recent UK government *White Paper on Competitiveness* (December 1998) has started this process by:

setting out why the Government believes that success in the digital economy - and, in particular, winning a leading share of the world's rapidly growing e-commerce markets - will be critical to the competitiveness of UK business in the next century.

Establishing a baseline for the UK's current position in the digital economy, using both hard benchmarking data and the views of senior business executives.

Setting out how the Government, in partnership with business, proposes to address the challenges and opportunities identified through this analysis.

Benchmarking the UK

Recent industry research shows that over one million people in the UK became Internet users for the first time during the third quarter of 1998. Fifteen per cent of the adult population in this country have now visited the World Wide Web. This put the UK some two years behind the US but ahead of Germany and France – although more recent figures suggest that the US/EU gap is narrowing to around one year.

The UK is also behind the US in the use of the Internet for commercial transactions, although on a par with Germany and Japan.

Furthermore, UK Benchmarking studies on the uptake and use of ICTs in the UK, US, Japan, Germany and France, show that we are on a par with the US and Japan in business ownership of PCs with modems, but that we lag behind in the use of these for networking applications.

The benchmarking studies have also revealed that, although we are behind the US, we are catching up. Business use of the Internet and web-sites grew by 37 per cent and 40 per cent respectively in the UK last year, compared with 5 per cent and 11 per cent in the US. That said, growth rates in Germany and France were even faster, albeit from a much smaller base.

Targets For SMEs

[The Competitiveness White Paper](#) (December 1998) announced that the Government would work to achieve a target of one million UK businesses wired up to the digital market place by 2002 (i.e. making regular use of external networking technologies such as the Internet). SMEs will be a particular target as it is felt, whilst, UK large businesses are world-leaders in electronic business practices it is accepted that – like Germany and France - our SMEs lag behind those in the US and Japan.

UK Advantages

A recent EU benchmarking study found that the UK had the most advanced infrastructure of all G8 countries except the US – a position which the UK's early lead on digital television is likely to strengthen. It is also evident that although UK PC prices and Internet access charges are relatively high, we do have relatively low telecommunications prices – and a regulatory structure that facilitates one of the most intensely competitive market-places in the world.

Building on the Strengths of the UK

The UK Government believes that in order to build on our strengths to achieve leadership in the digital economy, the UK:

*needs consumers who provide strong and sophisticated demand for digital products and services
needs IT, electronics and communications supply sectors which are innovative, dynamic and growing
and needs a market framework which both empowers consumers and encourages competition and
innovation from the industries which serve them.*

The UK Prime Minister plans to appoint a Special Representative on the Digital Economy for the UK (**the e-Envoy**) to co-ordinate action in Government and internationally.

Legislation

It is further recognised that it is essential that the wider regulatory framework - from copyright to consumer protection, from contract law to taxation - is one which encourages UK businesses to exploit this world-class infrastructure to the full. The government has created the new Performance and Innovation Unit in the Cabinet Office to lead a cross-departmental review of the detailed changes which are needed to achieve this goal. The review, to be completed by Summer 1999, will inform the work plan of the new e-Envoy.

To build trust in electronic commerce, the Government also plans to introduce an Electronic Commerce Bill to establish a voluntary licensing scheme for organisations providing secure message services – consultations with industry have been continuing for some time and an Electronic Commerce Bill is being prepared for discussion in Parliament.

In addition the Government will work with consumers and businesses trading electronically to draw up a code of conduct by Summer 1999. This would enable traders committed to best practice to use an on-line digital hallmark, and give consumers help with effective complaint and redress procedures at the click of a mouse. The UK Government's strong preference is for self-regulation - but it will consider changes to the law if they do not provide the reassurance customers need.

Removing barriers to international e-commerce

The UK government does not intend to allow international trade on the Internet to be smothered by red tape. The Government is determined to ensure that on-line products are treated as services, attracting no customs charges, and that import and export procedures can be completed electronically.

Promoting UK demand:

in business...

As indicated above, the UK Government is setting a new goal, to triple the number of UK small businesses which are wired up to the digital marketplace, from about 350,000 at the end of 1997 to 1 million by 2002.

Significant action is already in hand.

The Government's [*Information Society Initiative \(ISI\)*](#) Programme for Business has worked with Business Links and their equivalents in Scotland, Wales and Northern Ireland to develop a network of 80 Local Support Centres, giving smaller businesses access to independent advice on the use of digital technologies.

TradeUK at www.tradeuk.com offers every small business in the UK which exports or is thinking of doing so an electronic shop window on the World Wide Web free of charge.

The Government has set up [*Action 2000*](#), with a budget of over £20 million, to advise businesses on the Millennium Bug, which will cause many IT and electronically-controlled systems to malfunction as the year 2000 approaches unless action is taken. It is also providing £26 million to train "bug-busters" able to help small businesses identify and fix their Millennium Bug problems.

The [*University For Industry*](#) will target ICT skills in business as a key priority.

In addition, the Government plans to invest some £20 million extra over three years.

It will complete national coverage of ISI Local Support Centres by Autumn 1999, accompanied by an enhanced promotional campaign.

It will back a private-sector initiative to ensure that all advisors to small business, in the public and private sectors, can deliver consistent and integrated advice on IT and business best practice. The Advisor Skills Initiative, being piloted by Microsoft, Intel, Compaq and BT in partnership with DTI, will create a network of quality-accredited SME advisors.

It will launch a new fund for partnership action to increase use of ICTs at local level and through supply chains.

It will develop, in partnership with the private sector, an "E-Commerce Resource Centre" on the Internet, available through the [Enterprise Zone](#). This will provide businesses with the information, tools and advice needed to exploit the opportunities of electronic commerce.

It will launch a national award to recognise excellence in digital business.

in the community...

It is also recognised that people need to feel confident using digital technology to make their living in the new economy. The Competitiveness White Paper sets out a comprehensive programme of action:

***Effective delivery of digital technologies within the National Curriculum** - by 2002, most school leavers will be able to use digital technologies.*

***Creating the National Grid for Learning** - all government maintained schools should be connected to a state-of-the-art computer network by 2002.*

***Preventing the creation of a class of "information-have-nots"** - the Government is working with Business in the Community to extend "IT for All" to the most socially disadvantaged.*

***Ensuring community access to digital technologies** - by investing in a major programme to wire up all public libraries as "information hubs" for their local communities by 2002.*

and in Government

Naturally, one of the major contributions Government can make to the development of e-commerce is through the way it organises its own work. The Government has therefore set itself stretching targets for digital government:

By March 2001, 90 per cent by volume of routine procurement of goods by central Government will be conducted electronically.

By 2002, 25 per cent of Government services will be accessible electronically.

The Government will publish details of Departments' performance against this target from Spring 1999, and review whether it is sufficiently challenging to ensure that the UK is at the forefront of international best practices.

Promoting competitive supply industries

Finally, the Competitiveness White Paper sets out a major programme of reform to modernise the supply side of the economy.

The Government will work with the UK's IT, electronics, communications and content sectors to ensure that they take full advantage of the initiatives announced in the Competitiveness White Paper, in particular those aimed at promoting high-growth SMEs, innovation and effective exploitation of knowledge generated by the science and engineering base.

The Government has asked the Information Age Partnership and the National Skills Taskforce for England to produce a national strategy to meet the skills needs of these sectors. The Government will publish proposals for action by Easter 1999.

.... And there's more

The programme of action announced in the UK Competitiveness White Paper represents only the first steps in the Government's drive to make the UK a world leader in the digital economy. The importance of the role of SMEs in this drive has been fully recognised and the UK government will work closely with its national and international partners to ensure that the needs and aspirations of SMEs are well provided for in the new digital economy.

*(Much of the text of this report is taken from the UK Government report **Benchmarking the Digital Economy** which (like the UK Competitiveness White Paper on which it in turn is based) is available at www.dti.gov.uk/comp/competitive)*

In March 1999 the Government also announced a major funding package to assist the "Digital Economy". This wide ranging series of initiatives and new funding programmes included a £1.7 billion plan to provide a national network of 1,000 computer learning centres across the country.

ANNEX 1: UK

Information Society Initiative Programme for Business & IT for All

The Information Society Initiative Programme for Business is a partnership between industry and Government to help UK business thrive in the emerging information-based economy.

Launched in February 1996, the Programme for Business aims to encourage both the development and the informed usage of information and communications technologies in the UK. Individual activities under the Programme range from support for research projects in the fundamental technologies, through to advice and guidance to help all firms, particularly smaller companies, get to grips with those business-related products, services and applications that are already available.

On 16th December 1998 the UK Government launched the White Paper "Our Competitive Future: Building the Knowledge Driven Economy" in which the Government sent out an ambitious goal: to create in the UK the best environment in the world for electronic trading and to triple the number of UK small businesses which are wired up to the digital marketplace to 1 million by 2002.

The White Paper states -

"Digital technologies are a key enabler of a modern, knowledge driven economy. Electronic business - and in particular electronic commerce - is radically changing the nature of individual businesses, of markets and of entire economies."

The ISI Programme for Business provides a range of support which can help your business see and realise its full potential. Find out more by accessing the sections from the [home page](#) which interest you. Or click direct to information about our [Local Support Centre network](#) to find the ISI centre nearest to you.

The ISI Programme for Business is focused on the needs of businesses themselves, but the emerging information society offers challenges and opportunities across all walks of life. In particular many individuals, whether working in a business or not, may find themselves wanting to know more and looking for a chance to get hands-on experience of the new technologies. Such individuals might want to take a look at the related Government-led programme [IT for All](#) which is designed with the needs of the individual in mind.

What is IT For All

'IT for All' is a four year initiative designed to help people in all walks of life understand and exploit the benefits of new Information and Communication Technologies in their everyday lives.

Launched on 3rd December 1996, 'IT for All' brings together local and national Government, businesses, voluntary groups and the public. By encouraging general public awareness, learning, access opportunities and business partnerships, 'IT for All' activities will work for everyone in the United Kingdom to build a confident, successful society making the most of information and communication technologies.

'IT for All' is not 'owned' or 'controlled' by any one individual or group - the campaign is driven by everyone who takes part. From a company sponsoring access events, to a shop or library displaying literature, to a child or student taking a moment to show a parent the Internet, 'IT for All' is about working together to ensure that everyone can find out about, understand and try the technology they need.

'IT for All' is designed to help to break down the barriers, dispel the myths and explain the jargon. The 'IT for All' initiative aims to raise awareness, provide access and develop skills of individuals, specifically adults, in the use of information and communications technologies (ICTs), and through that:

- ensure that the benefits of ICTs are available to all;
- break down the barriers, enhance skills and learning of members of the public, and encourage greater participation in the Information Age;
- demonstrate the Governments commitment of creating an inclusive information society;
- enhance the UKs competitiveness and improve the quality of life;
- expand the market for UK-based ICT companies; so that the UK is a leader in the development of the global information society.

'IT for All' is particularly aimed at those adults who are concerned that technology is leaving them behind or who are unconvinced of the benefits it offers.

ANNEXE 2: TESTBEDS

I. BACKGROUND for EC in SMEs

Products / Goals	Testbed(s)	Status
Reports or studies legal issues information needs: market processes and opportunities for EC	Content Blocking (complete 1/15/97) DM On-Line (complete 9/30/97)	Report available on the Web; http://www.ilpf.org/work/content/content.htm http://www.datacharter.demon.nl/dmonline/supply/supply.htm
Training and training materials IPR mgmt. telematics	CopySMART (complete 11/30/97) IMPRIMATUR (complete 11/30/98) TRANSMETE (complete 4/97)	Abstracts: http://www.ukc.ac.uk/library/ICCC/minard.htm ; http://www.cordis.lu/esprit/src/ep20517.htm Business model to implement IPR-managed server to be published Oct. 1997; licensing integrated into IMPRIMATUR electronic copyright system; text watermark achieved. External trials to commence Autumn 1997; http://www.imprimatur.alcs.co.uk/ 130 SMEs attended workshop; http://www.eurocom.gr/EurPrj/transmete/transmete/uk/news/Index.htm
Promotional materials - awareness	TRANSMETE (complete 4/97) AGORA (complete 12/31/99) WTE/Tradeline (ongoing) WeCAN (complete 6/30/99) PREMISE (complete 03/29/00)	Materials widely distributed; http://www.eurocom.gr/EurPrj/transmete/transmete/uk/news/Index.htm Materials sent to about 250 one-stop-shops; http://www.agora.org Exhibitor in Germany at "IBM Fair" and plan additional exhibits in Turkey and the US; http://www.wte.net/ ; http://www.tradeline.net/ Started 7/01/98; http://www.wecan-eu.org/ Started 01/11/99; http://www.premise-eu.org
A Virtual Centre of Competence	Kismet (complete 05/31/99)	Identifying and providing case studies of real applications in real businesses bringing real benefits; http://www.kismet.org.uk

II. IMPLEMENTATIONS of TRADING FORUMS

Trading Forum	Testbed(s)	Status
"Dynamic" catalog / industry-based	AGROWEB: mercantile exchange (complete 12/00/99) Infomar: trading network (complete 5/14/98)	Project awaiting approved funding as of 9/09/98.
Dynamic business directory service	Dynamic Yellow Pages (DYP) (complete 11/30/98)	Trans European Information and Business - produced leaflets and press releases; http://www.dyp.com/
Electronic catalogs	WTE/Tradeline (ongoing) EMB: "Agora" - mediation of electronic product catalogs (ongoing) GEN / AGENTISME: value-added services for product catalogs (complete 4/30/99) Shopping 2000 (complete 9/30/98) e-Deli (ongoing)	350 transaction ready e-catalogs; http://www.wte.net/ ; http://www.tradeline.net/ Fall 1997 launch planned; http://www.emb.net/ Internal trial since 9/95; public demos on WWW since 12/95; AGENTISME pilot project started 5/97; http://www.agentisme.com/ Virtual corporation linking small producers and developing electronic catalog and ordering system; http://www.innovation.es/projects/edeli/
Industry-based	WTE/Tradeline (ongoing)	Have "business towers" for AAMA and KTA; http://www.wte.net/ ; http://www.tradeline.net/

III. ELECTRONIC TRACKING re. PAYMENT

Electronic Payment	Testbed(s)	Status
SET-based	EMB (ongoing) AMIDE (complete 6/30/96)	Fall 1997 launch planned; http://www.emb.net/ 1998 field trials planned
e-"cash"	ecash: secure payment for PC to any workstation (Filed Chapter 11 on 4 Nov. 1998)	30,000 using trial cyberbucks; 7 banks issuing ecash in real currencies; http://www.digicash.com/
e-"letters of credit"	TradeCard: secure network with access to banks for credit and interbank payments (ongoing)	Product to be launched Fall 1997; http://www.tradecard.bm/ ; http://trade-card.com/
credit card transactions	WTE/Tradeline (ongoing)	Have credit card transaction as part of their Internet Business Site capabilities; http://www.wte.net/ ; http://www.tradeline.net/
e-procurement	WTE/Tradeline (ongoing)	Have government focused effort to link their service with national and regional governments; http://www.wte.net/ ; http://www.tradeline.net/
royalty distribution	AMIDE (complete 6/30/96)	1998 field trials planned
copyright mgmt-tracking	AMIDE (complete 6/30/96)	1998 field trials planned
XML/EDI	EXPERTS (complete 12/31/99)	Started 01/01/00 to demonstrate and evaluate the use of XML/EDI in the European Health Care Sector; http://www.ode.at/experts

IV. INFRASTRUCTURE

Component	Testbed(s) connecting customers and suppliers	Testbed(s) connecting members of group	Status
Network / Server (unspecified)	TradeCard (ongoing) WTE/Tradeline: built over 825 business sites (ongoing)	EBR: econ info among EU (complete 3/31/98) TradeNet: collaboration among project members (complete 12/31/98) IBCC-Net: information exchange among Chambers of Commerce and industry (ongoing)	Demo phase to start Nov 1997; http://www.ebr.org/ Product to be launched fall 1997; http://www.tradecard.bm/ ; http://trade-card.com/ Demonstrated potential for international collaboration over global networks; produced publications and gave presentations; http://www.crcg.edu/Trade Have sales activities in 16 of 27 countries in their distributor network; http://www.wte.net/ ; http://www.tradeline.net/ In 1997, 1250 Chamber of Commerce connected; 450,000 users; http://www.worldchambers.com/
Internet / Web	AGORA (complete 12/31/99) Shopping 2000 - Consumers to Business w/ C-SET (9/30/98)	Shopping 2000 - Business to Business w/ EDI (complete 9/30/98)	Experimented w/ 120 shops 3 experiments conducted in 1997
Internet/Direct Dial ISDN2	IMPRIMATUR - IPR-managed server (complete 11/30/98)		Business model to implement IPR-managed server to be published Oct. 1997; licensing integrated into IMPRIMATUR electronic copyright system; text watermark achieved. External trials to commence Autumn 1997. http://www.imprimatur.alcs.co.uk/
Euro-ISDN	Protonet (ongoing)		Pilot due to be launched September '97; No working URL
Database	AGORA (complete 12/31/99) IBCC-Net (ongoing)		Integrated service for 120 shops "Yellow pages" listing 2,500 international trade opportunities; http://www.worldchambers.com/
Interface	AGORA (complete 12/31/99) WTE/Tradeline (ongoing)		Experimented w/ 120 shops Multilingual; http://www.wte.net/ ; http://www.tradeline.net/
Video-conferencing	AGORA (complete 12/31/99)		Regional video-conferencing possible
Standard network security protocol	CYBERbusiness (complete 3/31/98)		Have network servers for multimedia applications; http://www.ijnet.or.jp/fmmc/ftp92e.html
Satellite for multimedia		ISIS - ACTS: interactive for Europe (complete 6/15/98) ISIS - HPCN: images server (complete 6/15/98)	http://www.uk.infowin.org/ACTS/RUS/PROJECTS/ac103.htm
Tool to provide EDI Cert.	DEDICA: for use of UN/EDIFACT (ongoing)		http://www.ac.upc.es/DEDICA/

V. INFORMATION RESOURCES

Listing of	Testbed(s)	Status
Businesses, corporate executives, and households (user supplied information)	Contacts Dir. (ongoing)	August 4, 1997, 866,211 registrations directly from users; http://www.dir.org/
Valid trademarks w/ domains	Trademark Dir. (ongoing)	630,000 trademarks registered - will be activated after greater market penetration is achieved; http://www.trademark.org/
Correlation of real world identifiers with those of the virtual world	INternet ONE (ongoing)	Direct association of trademarks, brand names, company names, and telephone numbers with Internet addresses, URLs, IP addresses, and domain names; http://www.io.io

VI. OTHER SERVICES

Services	Testbed(s)	Status
Design information, product design libraries, and information broker services for Engineering "know how" and knowledge	GEN / AGENTISME (complete 4/30/99)	Internal trial since 9/95; AGENTISME pilot started May 1997; http://www.agentisme.com/
Consulting services	TRANSMETE (complete 4/97)	Completed - consulting needed more than training; http://www.eurocom.gr/EurPrj/transmete/transmete/uk/news/Index.htm
Arbitration and Conciliation	E-Arbitration (ongoing)	Established 11/12/98; http://www.iseto.ch