ÖZET TASLAK

Thematic Priority
1.3 Nanotechnology and nanosciences, knowledge-based multifunctional materials, new production processes and devices

WORK PROGRAMME
2002-2006

3.4.1 Nanotechnologies and Nanosciences

3.4.1.1 Long-term interdisciplinary research into understanding phenomena, mastering processes and developing research tools

Expanding the generic underlying knowledge base of application-oriented nanosciences and nanotechnology, and developing leading edge research tools and techniques is vital for the future of industry.

Selected topics for 2003:

- ***Expanding knowledge in size-dependent phenomena - NE; STREP; CA***

  The objective will be to increase the basic understanding of phenomena and properties at the nano-scale with attention to possible applications. Long-term, ambitious interdisciplinary research will address, theoretically (incl. modelling) and experimentally, size-dependent phenomena, including quantum and/or mesoscopic scale phenomena.

- ***Self-organisation and self-assembling - IP; NE; STREP***

  The objective will be to achieve materials and systems with predictable composition and structure, and control of their final properties, e.g. through external fields. Interdisciplinary research may include growth, characterisation and/or functionalisation

of nano-entities; promotion and control of growth of cells on substrates; positional assembly; self-replication (automatic copying); molecular replication.

- ***Molecular and bio-molecular mechanisms and engines - IP; NE; STREP***

  The objective will be to develop new concepts and technologies for further developments with substantial breakthrough potential applications. Research may address a vast variety of areas, such as molecular electronics, artificial photosynthesis and molecular motors.

3.4.1.2 Nano-biotechnologies

Europe needs to support research into the integration of biological and non-biological systems, opening new horizons in many applications, such as for processing and for medical and environmental analysis systems (see also section 3.4.4).

Selected topics for 2003:

- ***Interfaces between biological and non biological systems - IP; NE; STREP***

  The objective is to realise novel forms of integration of biological and non-biological systems at the nano-level. Research may include bio-molecular, chemical and physical modifications at the substrate surface, including patterning, enabling specific bioactivity/biomimetic performance and integration in devices with new potential applications.

3.4.1.3 Nano-metre-scale engineering techniques to create materials and components

There is an increasing need of developing novel functional and structural materials of superior performance for industry by controlling their nanostructure. This will include technologies for their production and processing.

Selected topics for 2003:

- ***Engineering techniques for nanotubes – IP; NE; STREP***

  The objective is to develop production technologies for high purity and high performance nanotubes, such as carbon nanotubes, at a commercially viable cost. RTD may integrate the applications of the nanotubes to related systems (composites, components, surface structures, wires, etc.).

3.4.1.4 Development of handling and control devices and instruments

It is important for Europe to develop efficient instrumentation for measurement, analysis and manufacture at the nano-scale. A guiding target for handling and controlling nanostructures will be a feature size or resolution of the order of 10 nm.

Selected topics for 2003:

- ***Handling and control instrumentation at the level of single atoms or molecules and/or < 10 nm - IP; NE; STREP; CA***

The objective is to develop instrumentation and methods, for analysis, control, manipulation and manufacture at the nano-scale. Research may include the study of a variety of advanced techniques for nano-scale manufacture; the development of breakthrough technologies and methodologies exploiting the self-assembling properties of matter; the development and benchmarking of efficient and cost effective instrumentation; nano-metrology.

3.4.1.5 Applications in areas such as health and medical systems, chemistry, energy, optics, food and the environment[1]

Nanosciences and nanotechnologies are fast developing domains with great potential, both in terms of improving the quality of life of all people and of creating wealth though novel knowledge-based and sustainable processes. The goal is to foster the potential nano-technologies in breakthrough applications through the integration of research developments in materials and technological devices in an industrial context. The development of new, more high performance "nano-based" services, products, components, devices, systems and processes still requires long term research efforts. The availability of up-to-date information and the development of realistic scenarios are key elements for elaborating possible forms and scope for the intervention of public funds. This area is clearly linked with section 3.4.4.

Selected topics in 2003:

- ***Roadmaps for nanotechnology - SSA***

  The objective is to elaborate technological roadmaps (or to co-ordinate existing work on such roadmaps at national level) in nanosciences and nanotechnologies. The outputs will have to illustrate in due detail the realistically expected developments in industrial fields such as materials, health and medical systems, or energy, and in particular for SMEs. The scale-down industrial trends in micro-systems have to be considered with particular attention. The state of the art both at international level and in Europe, applications, implications for the industrial take-up, anticipated market reactions, and potential benefits for the general public and the society as a whole should be dealt with. Both conservative and optimistic scenarios should be considered. The role of public and private funds, including venture capital, should be considered as well as the scope for possible international co-operation. An analysis of available and required infrastructures should also be included.

[1] It is reminded that nanoelectronics is covered under Priority 2.

3.4.2. Knowledge-based Multifunctional Materials

New, high knowledge-content materials, providing new functionalities and improved performance, will be critical drivers of innovation in technologies, devices and systems, benefiting sustainable development and competitiveness in sectors such as transport, energy, medicine, electronics, photonics and construction. Since these applications have a strong impact on individuals and on society as a whole, a new research culture will be required, where ethical and ecological considerations might play an important role. RTD activities are expected to be high risk, inter and multidisciplinary, long term and generic, with potential benefits in material and energy savings as well as on health, safety and the environment. Breakthroughs will come not only from the new materials developed but also from new processing and from the new approaches taken. To assure Europe's strong position in emerging technology markets the various actors need to be mobilised through leading edge RTD partnerships and high-risk research.

3.4.2.1. Development of fundamental knowledge

There is a pressing industrial need to better understand complex physico-chemical and biological phenomena relevant to the mastering and processing of multifunctional materials providing the basis for developing novel materials with predefined physical, chemical or biological characteristics.

Selected topics for 2003:

- ***Understanding materials phenomena – NE; STREP; CA***
  Research will focus on materials phenomena offering new options for the long-term. Research projects should support high risk activities to design and develop new structures with defined characteristics, which can lead to new industrial applications. The activities should address the understanding of properties, behavior and synthesis of materials in order to exploitthe potential use of these novel highly complex materials. Computational strategies, experimental, theoretical, simulation and modelling are key tools to be considered.

3.4.2.2. Technologies associated with the production, transformation and processing of knowledge-based multifunctional materials, and biomaterials

Industry needs the development and sustainable production of new “smart” materials with special functionalities and for building up macro-structures. These novel materials, serving multisectoral applications, should possess characteristics to be exploited under predetermined circumstances as well as enhanced bulk properties or barrier and surface characteristics for higher performance. To produce these novel materials new crosscutting technologies and processes have to be developed.

Selected topics for 2003:

- ***Mastering chemistry and creating new processing pathways for multifunctional materials - IP; NE; STREP; CA***

The overall objective is to maintain and extend Europe's lead in chemical technologies, building on skills and respecting the environment, and also to provide benefits in other intermediary and end-user sectors. RTD objectives should include, among others, new strategies and optimisation of chemical reactivity and catalysis, development of supra-molecular and macromolecular engineering, improved separation technologies, product formulation, new solvent routes, , chemistry for eco-materials and new synthesis routes.

- ***Surface and interface science and engineering - IP; NE;STREP; CA***
  The aim is to foster the strong position of European industry in areas such as smart coatings, adhesion, tribology and thin films. RTD should range from the generation of fundamental knowledge, e.g. on interfaces in hybrid materials to the development of generic technologies with a broad range of applications in many industrial sectors such as packaging, automotive, aerospace, energy, building, textiles, machine tools, and instrumentation.

3.4.2.3. Engineering support for materials development:

The challenge is to bridge the gap from "knowledge production" to "knowledge use", thus overcoming EU industry's weaknesses in the integration of materials and manufacturing or processing. This will be supported by the development of new tools enabling the production of new materials in a context of sustainable competitiveness.

Selected topics for 2003:

- ***New materials by design - IP; NE; STREP; CA***
  The main objective is to develop novel multi-functional materials for multisectoral applications by providing new materials processing solutions and encouraging new approaches, such as "learning from nature" or materials "made to measure" and using the potential of nanotechnology. Emphasis should be put on developing novel materials by means of "design approaches", including prediction and modelling, on exploring new complex multi-functional properties of materials and on tailoring the materials in order to obtain a desired set of properties suitable for given applications. In using the potential of nanotechnology, a particular attention should be given to self-repairing materials.

- ***New knowledge-based higher performance materials for macro-applications - IP; NE, STREP, CA***

  The objective is to understand, design and develop new complex multifunctional materials in order to extend their limits in a context of sustainability. RTD will consider among others metallic- and ceramic-based materials, soft, cellular and organic materials and polymers, composites and materials tailored for extreme conditions. Engineering support may include as well materials characterisation and testing, up-scaling, eco-design tools and life-cycle approaches.

3.4.3. New Production Processes and Devices

In line with advances in nanotechnology and new materials, new production concepts need to be designed, based on breakthrough organisational, quality and technological developments, supporting new products, processes and services. The goal is to accompany the transformation of the European industry towards improved competitiveness and sustainability. In this perspective it is vital to provide the industrial systems of the future with the necessary tools for efficient life-cycle design, production, use and recovery, decreasing at the same time internal and external costs. Appropriate organisational models and improved knowledge management should support technological developments and innovation routes. Flagship research projects need to be carried out, highlighting the importance of collaboration between research and industry, the major outcome of which would be a framework for "manufacturing in 2010" based on improved co-ordination and integration of research efforts at European level.

3.4.3.1. Development of new processes and flexible, intelligent manufacturing systems

The challenge for Europe is to encourage industry's transition towards more knowledge-based and customised production and systems organisation and to consider production from a more holistic perspective, encompassing not only hardware and software, but also people and the way in which they learn and share knowledge. In this domain of activity, an international dimension is evident. A wide innovation range is expected in a number of industrial sectors, and particularly the traditional ones, with the final goal of increased competitiveness and increased private investment in research, in line with the objectives of the Lisbon and Barcelona Summits.

Selected Topics for 2003:

- ***"Hybrid" technologies, as well as "bottom-up" production techniques, based on nanotechnology and new materials - STREP***

  To produce the materials of the future, Europe also needs also new production technologies. The objective of this area is the development of radical breakthrough production techniques, through research at the frontiers of knowledge, paving the way towards the production systems of the future, e.g. based on mass production of nano-components of very high quality, or self-controlled manufacturing operations. A significant collaboration is expected between research and industry. There are obviously strong links with section 3.4.1.3.

- ***New and user-friendly production equipment and technologies, and their incorporation into the factory of the future - IP; NE; STREP; CA***

  The objective is to support future low cost, high quality, fault-tolerant, eco-friendly and more flexible manufacturing systems, including control systems and innovative robotics. Modularization and customisation as well as new design and engineering concepts (integrating new materials, sensors, mechatronics, automation, communicating machines) are urgently required. Quality, reliability and accuracy are increasingly needed for effective development of such systems and, in this context, metrology and pre-normative

aspects could be critical issues. The objective is also the elaboration of a clear roadmap for the emergence of new manufacturing concepts, their validation and the identification of best practices. Addressing the challenge of creating knowledge-based industries, particular attention should be given to education and skill development. Emphasis should also be given to creating maximum of synergies with "EUREKA Factory".

- ***The creation of "knowledge communities" in production technologies - IP; NE; CA; SSA***

  The objective is to support dynamic organisations, inter-enterprise operability, and necessary standardisation. Incorporation of advances in virtual production, supply chain and life-cycle management, interactive decision-aid systems, development and rapid manufacturing should be addressed. The objective is also to profit from different approaches to common manufacturing problems and to promote successful technology transfer. Particular attention should be given to the world market. Emphasis should be given to creating maximum of synergies with IST, national programmes and the IMS scheme at international level.

  NB: A specific call will be launched together with Priority 2, to promote "manufacturing, products and services engineering in 2010".

- ***Support to the development of new knowledge based added value products and services in traditional less RTD intensive industries - IP dedicated to SMEs[2].***

  The objective is to promote the shift of the traditionally less RTD intensive industrial sectors to high-added-value sectors. This goal should be achieved through incorporation of emerging technologies such as biotechnologies, nanotechnology, new materials and hybrid technologies in all phases of the complete/extended value-chain (design, production, distribution, recycling) to allow development of new knowledge-based, added value and quality products and services in traditional sectors. Addressing the challenge of creating knowledge-based industries at the 2010 horizon, particular attention should be given in the different projects to education and skill development.

3.4.3.2. Systems research and hazard control

It is important for Europe to contribute to an improved sustainability of industrial systems and a substantial and measurable reduction in environmental and health impacts, through new industrial approaches, as well as an enhancement of resource efficiency and a reduction in consumption of primary resources. Aiming at sustainable development (often implying 90% of reduction in the use of new resources) demands new paradigms not only of production but also of use and consumption. This should be based on an increased move towards more knowledge-based and life-cycle approaches. Projects should help explore new concepts, expected to support the technological and reference basis for the EU Environmental Technologies Action Plan[3].

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2 See section 3.6.5

3 The Commission is ensuring an important interservice co-ordination on this matter.

Selected Topics for 2003:

- ***Radical changes in the "basic materials" industry (excluding steel) for cleaner, safer and more eco-efficient production - IP; STREPS***

  In support of the "production of tomorrow", the objective is to provide for the basic materials industries through the development of sustainable solutions that do not harm 'people and planet'. Industrial breakthroughs should be fostered, integrating various innovative technological approaches, in particular biotechnology-based processes, new eco- and renewable materials, eco-design, zero-waste and related control technologies. With regard to the challenge of creating knowledge-based industries at the horizon 2010, attention should be given in the different projects to education and skill development.

- ***Sustainable waste management and hazard reduction in production and manufacturing - NE; CA; SSA***

  The objective is to support life-cycle safety, and minimisation of waste and pollution through improved integrated approaches, including bio-processes as well as environmental technologies (e.g. linked with recycling or recovery of products). Sound and human-friendly working conditions and safety aspects for prevention of accidents should also be ensured. A specific target is to create a maximum of synergy with other European, national or regional programmes. Drivers of co-ordination and support activities should obviously correspond to the IPPC (integrated pollution prevention and control) policy.

3.4.3.3. Optimising the life-cycle of industrial systems, products and services

Products and production should become increasingly life-cycle, quality and service oriented, in addition to the requirements of intelligence, cost-effectiveness, safety and cleanliness. The key challenge is therefore to promote new industrial and consumption approaches based on eco-efficiency, which must allow the development of new concepts for products and organisational innovation.

Selected Topics for 2003:

- ***Optimisation of "production-use-consumption" interactions - NE; CA***

  A particular focus should be given on the co-ordination and integration of "design-production-use-service-end-of-life" approaches, and of new concepts of product-services based in particular on advances in new materials and industrial technologies. A topic to be examined in such networking activities is also whether the EU and national legislation helps or hinders the development of sustainable solutions. Co-ordinated research activities could also help to establish third party validation and/or certification of the sustainability performance of new products, processes and / or services. Research efforts should finally target the transformation of information into useable knowledge along the complete value chain as well as the analysis of socio-economic implications. Expected benefits are increased life-cycle quality, efficiency and upgradability of services provided to customers, citizens and society in general. Co-ordination and integration efforts will be supported to join forces and create maximum of synergies with other European, national or regional programmes.

- ***Increasing the "user awareness" - SSA***

  There will not be any sustainable development without the demand from users for sustainable solutions. In addition a growing challenge is the 'rebound effect' of increasing consumption of more eco-efficient products. Elaboration of scenarios for the future should help to identify the implications for the various systems at stake. The role of public and private initiatives should be considered as well as the international dimension. It is timely to provide information and tools to help users understanding and evaluate the sustainability impacts of proposed solutions and increased their 'responsibility'. Specific Support Actions should also help efficient benchmarking of emerging decision support systems.

3.4.4. *Integration of nanotechnologies, new materials, and new production technologies for improved security and quality of life*

This area has been added to the three first areas, as defined in the specific programme, due to the "integrating" challenge of the expected output and due also to the number of EoIs received on the subject. A specific target should indeed be to put materials science and advanced industrial technologies at the service of health. In this context, integration of technological developments, and in particular of the new generation of smart and hybrid materials interacting with their surrounding and related manufacturing equipment, is bringing huge potential for the development of sensors, actuators and devices, allowing a greater security and safety of people and the environment.

Selected Topics for 2003:

- ***3.4.4.1 – Systems, instruments and equipment for better diagnosis and/or surgery, including for remote operations - IP; NE; CA***

  The long-term objective is the development of remote surgically precise systems, new medical instruments and/or intelligent diagnosis equipment and systems, supporting challenges such as the development of health care for the future. A specific technical goal should be the miniaturisation of systems and instruments, including sterilisation aspects. The advances in biosensors should also be considered here.

- ***3.4.4.2 - Tissue engineering, new biomimetic and bio-hybrid systems - IP; NE; STREP; CA***

  The new developments in new materials and industrial processes for health will strongly boost treatment and healing, in fields such as artificial organs. Research should encompass the understanding, modelling and development of biomaterials through new bioreactor developments including adult stem cell research. The final goal should be the development of advanced intelligent bio-hybrid systems and their production lines. Ethical, legal and regulatory issues need to be looked at in parallel with RTD issues.

- ***3.4.4.3 - New generation of sensors, actuators and systems for safety and security of people and environment - IP; NE; STREP***

  The target is to support technological platforms for the development of novel, low cost and highly reliable sensors and actuators, in particular those based on nano or micro-technologies, in combination with signal treatment. The resulting systems will enable the real-time detection of hazards and species from various origins, to monitor quality, reliability and safety of systems and to provide early feedback to protect people and the environment. The long-term objective is the development of stable, multifunctional, precise, small and low-cost systems for optimised use, as well as of an efficient related metrology infrastructure.

  NB: A specific call will be launched together with Priority 2, to promote projects using the new instruments for "micro and nanosystems"

3.5. Links to other research topics

Clear links exist between this Thematic Priority and Priority 2 “information society technologies”, especially in the field of “manufacturing, products and services engineering in 2010” and on “micro and nanosystems”. Joint call(s) are organised in 2003. Clear links exist also between this Priority and activities in the support of the EU Environmental Action Plan. Calls for co-ordinated actions are also organised during the first year to improve synergies with EUREKA (in the field of “the factory of the future” and “sustainable production”), and with ESF and COST in the field of new materials and nanotechnology.

3.6.5 Implementation and Budgetary Planning

- **First Calls for 2003**

  See fiches in section 3.7.

- A **first call** (call 3.a) will be launched in December 2002, for an indicative funding of **370 M€**, opened in the fields identified in section 3.4. A budget **260 M€** indicative will be devoted to the new instruments. A budget of **110 M€** indicative will be devoted to other projects (STREP, CA, SSA). Special attention will be given to INCO activities. There will be different closing dates: (1) for the new instruments the closing date for receipt of first stage proposals is on **February 26**, 2003, 17.00, Brussels time; for the second stage proposals on **June 24**, 2003, at 17.00, Brussels time. (2) for the other instruments, the closing date for receipt of full proposals is on **April 10**, 2003, 17.00, Brussels time. Co-ordination will be ensured with Priority 2 in the field of "micro and nanosystems".

- A **second call** (call 3.b) will be launched in December 2002, jointly with **Priority 2** in the field of "manufacturing, products and service engineering in 2010". The indicative funding from Priority 3 is of **35 M€**, of which **25 M€** for the new instruments. Special attention will be given to IMS. The closing date for receipt of full proposals (other instruments) and first stage proposals (new instruments) will be **April 24**, 2003, 17.00, Brussels time; for the second stage proposals on **September 16**, 2003, at 17.00, Brussels time.

- **A third call** (call 3.c) targeting SMEs Integrated Projects will be launched in December 2002, with an indicative funding of **40 M€**. The deadline for the first stage proposals will be on **April 10**, 2003, 17.00, Brussels time, and for the second stage proposals on **September 3**, 2003, at 17.00, Brussels time.

SME can of course participate in each and every call for proposals. However, ***Integrated Projects dedicated to SMEs*** are specifically designed to encourage SMEs efforts towards research and innovation. Such Integrated Projects should be led by ***SMEs with R&D capacities*** with, obviously, possible participation of universities, research centres. Other industries and industrial associations can participate in IP modules designed to ensure effective innovation, such as those dealing with technology transfer, education and skill development. Proposed activities should be centred on reinforcement of the SME S&T knowledge and validation of innovative solutions within broad international as well as regional contexts. Benefits of such IPs should be 100% for the SMEs.

Potential participants are reminded that ***mobilisation of resources from SMEs with research capacities should be substantial.*** Activities to be carried out should benefit to the shift of less intensive RTD sectors to RTD intensive and higher added value sectors. They should lead to a positive image of industrial research. A wide range of innovation is expected in a wide range of sectors, such as textiles, building, wood, pulp and paper, leather and footwear, bio-medical, control systems, etc.

- **Indicative Budgetary Road map**

Budget Year	Total Budget	Adm M€	New Instruments M€	Other instruments (STREP, CA, SSA)
2003	300	15	200	90
2004	320	To be decided later		
2005	335			
2006	345			
Total	1300 (1)	xxx	xxx (2)	xxx (2)(3)

(1) of which minimum 15% for SMEs
(2) funds for INCO participants to be included in the funding of research projects
(3) including call for tenders

Table for the first calls (2003)

Instrument	New Instruments M€	Other instruments (STREP, CA, SSA)
First Call	260	110
Joint call with Priority 2	25	10
Dedicated Call for SMEs	40	

3.7. Call information

Call fiches, see following pages

Call fiche –

- Call ID: …..

- Envisaged publication date: December 2002

- Envisaged closing date: For the new Instruments:
February 26, 2003 (1st stage); June 24, 03 (2nd stage)

For the other instruments
April 10, 2003 (single stage)

- Indicative budget available: 370 M€
(of which 260 M€) for new instruments

- Restriction to participation: see standard rules

- Evaluation criteria: see standard criteria (in annex B of this workprogramme)

- Description and content of the call: see sections 3.4.1 to 3.4.4

- ***3.4.1.1- Expanding the knowledge in nanosciences - NE; STREP; CA***
- ***3.4.1.1- Self-organisation and self-assembling - IP; NE; STREP***
- ***3.4.1.1- Molecular and bio-molecular mechanisms and engines - IP; NE; STREP***
- ***3.4.1.2- Interfaces between biological and non biological entities - IP; NE; STREP***
- ***3.4.1.3- Engineering techniques for nanotubes - IP***
- ***3.4.1.4- Handling and control instrumentation at the level of single atoms or molecules and/or < 10 nm - IP; NE; STREP; CA***
- ***3.4.1.5- Roadmaps for nanotechnology- SSA***
- ***3.4.2.1- Understanding materials phenomena - NE; STREP; CA***
- ***3.4.2.2- Mastering Chemistry; creating new processing pathways for multifunctional materials IP; NE; STREP; CA***
- ***3.4.2.2- Surface science and engineering - IP; NE; STREP; CA***
- ***3.4.2.3- New materials by design - IP; NE; STREP; CA***
- ***3.4.3.1- "Hybrid" technologies, as well as "bottom-up" production techniques, based on nanotechnology and new materials - STREP***
- ***3.4.3.1- New and simplified production equipment and technologies, and their incorporation into the factory of the future - IP; NE; STREP; CA***
- ***3.4.3.2- Radical changes in the "basic materials" industry (excluding steel) for cleaner, safer and more eco-efficient production - IP; STREPS***
- ***3.4.3.2- Sustainable waste management and hazard reduction - NE; CA; SSA***
- ***3.4.3.3- Optimisation of "production-use-consumption" interactions NE; CA***
- ***3.4.3.3- Increasing the "user awareness" - SSA***
- ***3.4.4.1- Systems, instruments and equipment for better diagnosis and surgery, including systems for remote operations - IP; NE; CA***
- ***3.4.4.2- Tissue engineering, biomimetic and bio-hybrid systems - IP; NE; STREP; CA***
- **** 3.4.4.3- New generation of sensors, actuators and systems for safety and security of people and environment - IP; NE; STREP***

** The call under this area is co-ordinated with Priority 2, area "micro and nanosystems", for which 70M€ are earmarked.*

Call fiche – First Joint call between Priorities 2 and 3 :

"manufacturing, products and services engineering in 2010"

- Call ID: …

- Envisaged publication date: December 2002

- Envisaged closing date: For the new Instruments:
April 24, 2003 (1st stage); September 16, 03 (2nd stage)

For the other instruments
April 24, 2003 (single stage)

- Indicative budget available: 35 M€
(of which 25 M€ for the new instruments)

This call is organised jointly with Priority 2, "product and service engineering", for which 30 M€ are earmarked indicatively.

- Restriction to participation: see standard rules

- Evaluation criteria: see standard criteria (in annex B of this workprogramme)

- Description and content of the call:

- Instruments targeted are IP; NE; CA; SSA.

Call fiche – Dedicated call for SMEs Integrated Projects

- Call ID: …..	
- Envisaged publication date:	December 2002
- Envisaged closing date:	April 10, 2003 (1st stage); September 3, 2003 (2nd stage)
- Indicative budget available:	40 M€
- Restriction to participation:	Proposals should be clearly led by SMEs.
- Evaluation criteria:	see standard criteria for IPs (in annex B of this workprogramme)
- Description and content of the call:	see sections 3.4.3.1 and 3.6.5

The following priority area is opened to IPs for SMEs:

- ***Support to the development of new knowledge based added value products and services in traditional less RTD intensive industries – IP dedicated to SMEs.***