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Unit C3 Innovation Networks and Services

# STRATEGIC ANALYSIS OF THE INNOVATION RELAY CENTRE (IRC) NETWORK

## *Executive summary*

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## RESUMÉ

### ***Descriptive summary***

The strategic analysis examines the objectives, context, achievements and possible futures of the Innovation Relay Centre (IRC) network. It identifies 3 distinct objectives within the overall mission of the IRC network and highlights some notable achievements that relate to these objectives. It examines the strategic gaps that have emerged when the IRC programme is viewed in its context and suggests some strategic, operational and financial options for consideration by policy makers and programme managers. Finally, it develops 3 possible scenarios for the future, based on what are referred to as entrepreneurial, professional and structural approaches. It suggests a preferred option for the network that includes elements of all 3, draws some final conclusions, presents a series of recommendations for Framework Programme 6 (FP6) and the remaining period of FP5, shows how these address the objectives set for the study and undertakes a sensitivity analysis.

### ***Evaluative summary***

The analysis **finds** that there is still a market failure to be addressed, that a quality transnational technology transfer (TTT) network has the potential to fill the gap, that performing IRCs in strong hosts are needed to underpin this quality and that the few IRCs that can demonstrate these features (and could survive without EC funding) are needed in the network. A key challenge is to bring quality to the full network, which needs proposals from strong hosts and IRC teams with commercial acumen. The analysis **concludes** that the IRC network is mature and professional and is appreciated by its clientele. At the same time, the economic impact is yet to be felt, a substantial number of TTT contracts have yet to deliver convincing results and the performance of individual IRCs varies significantly. Some are still weak and the majority need Community funding to survive, IRCs in the Central and Eastern European Countries (CEEC) and some of the lagging EU regions being the most disadvantaged. IRC performance comparisons show that high targeting IRCs in strong hosts both deliver and promise better TTT results than others, are more active in networking and have a greater transnational focus. However, the average cost of delivering a TTT agreement across the network is too high and network development strategies that will lead to the reduction of this cost ratio are needed.

### ***Prescriptive summary***

The analysis **recommends** a service capability-led definition of objectives and a series of actions to reorient strategy in FP 6 that differentiates the IRCs (the “TTT disadvantaged” and others), extends the scope and reach of the network, develops results-related financial instruments, positions and consolidates the network as a “niche” and proactive player at EU level and seeks the collaboration of other European and national partners in this endeavour. It proposes the inclusion of private sector players in IRC network operations at local level, “call for proposals” revisions to attract stronger hosts and invitations to cross-border consortia to take on network development challenges. Pilot experiments in IRC financing are proposed to assess performance related funding and to underpin better value for money. Monitoring suggestions are made and proposed preparatory actions during FP5 spelt out.

Summary tables show the way in which the recommendations support the **objectives** set for the strategic analysis: enhancing the IRCs’ ability to provide cost effective value-added transnational services which are pertinent to the real regional needs.

## SUMMARY OF RECOMMENDATIONS

*“Enhancing the IRCs’ ability to provide **cost effective value-added transnational services** which are pertinent to the real regional needs.”*

- **Optimising the modalities: increase cost-effectiveness in FP6**

Through setting more specific “call for proposal” qualifications and asking for business plans from potential hosts. Through Central Unit training in marketing, entrepreneurship and quality assurance systems. Through retaining a proportion of the contract value for special packages, pilot projects and “TTT performance related” rewards. Reduced unit costs per signed TTT through a combination of reward based financing, more targeted clientele development, a better conversion of matched TTT into TTT agreements and more creative use of local IRC websites. Use of a “quality of service” grid to measure how IRCs are shaping up against the proposed objectives for the programme and regular surveys of IRC clientele and peer institutions to feed into quality of service. Permitting IRCs to fail and lose their funding is also envisaged.

- **Preparing for FP6**

Through further analysis of the feasibility of the “professional” approach in each IRC region and the design of a new “call for proposals” project package. Revisiting the Central Unit contract with a view to its greater emphasis on training and quality assurance. Drawing up and testing a fixed/variable funding model to assess its capacity to reduce overall costs per signed TTT agreement. Debating and refining the proposed objectives for the network in FP6 with stakeholders, including what it means to be a quality IRC.

- **Ideas for further development**

The development of a quality assurance system for IRCs to establish the degree of maturity as a centre against certain agreed criteria. Comparing future IRC “quality of service” performance targets with external indicators through extension of the existing benchmarking study initiative of the Commission.

*“Enhancing the IRCs’ ability to provide **cost effective value-added transnational services** which are pertinent to the real regional needs.”*

- **Optimising the modalities: greater value-added in FP6**

Through seeking a flow of potential TTT opportunities from a wider set of players in EU level programmes, positioning the IRC network as a “niche” player in Community level network structures and establishing a clear product-market segmentation. Negotiating “service level agreements” with local players to protect promotional support activities and client relationship management. Through permitting cross-border consortia to bid for IRC contracts. Capturing learning gains being accumulated by SMEs and IRCs across the network and seeking to measure longer term economic impact through something like net present value (NPV). Using benchmarking to monitor the cost of delivering successful TTT and comparing this with other actors delivering international TT services.

- **Preparing for FP6**

Through making approaches to those responsible for the 7 thematic areas of FP6, Eureka, the European Space Agency (ESA), the Joint Research Centre (JRC) and relevant programmes in other Directorates General (DGs) to strengthen the flow of potential TTT opportunities. Beginning the work product-market segmentation and “service level agreement” definitions with DG Enterprise. Defining the components of a more broadly based programme monitoring system to give good value for money from this additional network surveillance.

- **Ideas for further development**

The launch of a study as to how to capture the “spin-offs” from IRC network activity.

## SUMMARY OF RECOMMENDATIONS

*“Enhancing the IRCs’ ability to provide cost effective value-added **transnational** services which are pertinent to the real regional needs.”*

- **Optimising the modalities: a more transnational network in FP6**

Through encouraging linkages with other global network players, working with national governments to create the best environment for TT and international network and making reciprocal arrangements to deliver a global service and encouraging a horizontal representation of individual IRCs as part of the overall IRC network governance structure.

- **Preparing for FP6**

Through making approaches to national governments and global network players to explore the possibilities for practical TTT networking in FP6.

- **Ideas for further development**

Investigating the potential for **peer to peer (P2P) computing** for the direct linking of IRCs across the network.

*“Enhancing the IRCs’ ability to provide cost effective value-added **transnational** services which are pertinent to the **real regional** needs.”*

- **Optimising the modalities: more pertinent to regional needs in FP6**

Through encouraged well-positioned local organisations to submit proposals as hosts and negotiating “service level agreements” with local players to protect promotional support activities and client relationship management. To encourage IRCs to be more proactive in extending their scope of service to include universities, research centres and large firms, as well as SMEs. Identifying “TTT disadvantaged” IRCs and permitting them to buy into a range of “pre-conditioning services” that address local innovation dissemination deficits and encourage the development of strong host organisations at the same time. Bringing these priorities to the attention of those responsible for Regional Policies with a view to their promoting the strengthening local innovation and TTT capacity. Encouraging the inclusion of private sector consultants with entrepreneurial experience in technology as partners in local governance structures with a view to raising the quality of TTT management and engaging others with specific TTT tasks as sub-contractors. Developing TTT results-related financing scheme(s) for IRC clients that can be used across the network.

- **Preparing for FP6**

Agreeing the definition of what constitutes a “TTT disadvantaged” IRC. Discussions with DG Regional Policy with a view to fine-tuning the special packages proposed for “disadvantaged” IRCs.

- **Ideas for further development**

Transfer some of the overall IRC funding to seed TTT projects of particular promise.

## Content

<b>Table of contents</b> .....	<b>5</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>6</b>
<b>1. OBJECTIVES</b> .....	<b>6</b>
1.1. The aim of the study.....	6
1.2. The objectives of the IRC programme.....	6
<b>2. THE IRC NETWORK LANDSCAPE</b> .....	<b>6</b>
<b>3. THE CONTEXT FOR THE IRC NETWORK AND TTT</b> .....	<b>7</b>
3.1. Technology transfer in the USA, CEEC and EU .....	7
3.2. The current position of the IRC network.....	8
3.3. SMEs in Europe: the main clientele of the IRC network.....	8
<b>4. STAKEHOLDER VIEWS</b> .....	<b>8</b>
4.1. Viewpoint of SME clientele.....	9
4.2. Viewpoint of the IRCs.....	9
4.3. Viewpoint of the country representatives .....	9
<b>5. SUMMARY OF MAIN FINDINGS AND CONCLUSIONS</b> .....	<b>10</b>
5.1. The main findings.....	10
5.2. The main conclusions.....	11
<b>6. FUTURE OPTIONS</b> .....	<b>12</b>
6.1. Narrowing the options .....	12
6.2. Exploring 3 different scenarios .....	12
<b>7. RECOMMENDATIONS</b> .....	<b>13</b>
7.1. Recommendations for a TTT network in FP6.....	13
7.2. Recommendations for the remainder of FP5 .....	16
7.3. A sensitivity analysis .....	18

# EXECUTIVE SUMMARY

## 1. OBJECTIVES

The study aims, IRC programme objectives and shape of the network are described.

### 1.1. The aim of the study

The aim of the study is succinctly described in the terms of reference:

***“The purpose of the contract is the provision of concrete recommendations for optimising the operational modalities (including financing) of the IRC Network for the second half of FP5 (the Community’s 5<sup>th</sup> Research and Development Framework Programme) and, more tentatively, beyond. In particular, the analysis will investigate optimal solutions for enhancing the IRCs’ ability to provide cost effective value-added transnational services which are pertinent to the real regional needs.”***

The implications for the study were that it needs to be clear about the objectives of the IRC initiative, develop a suitable typology, understand the strengths and weaknesses of the present IRC network, assess the opportunities and threats facing the IRC network for the future, become fully cognisant of the needs of the regions and the views of the Member States and make recommendations about the strategy, operations and financing of the IRC network which are appropriate for the short and longer term.

### 1.2. The objectives of the IRC programme

Although no quantitative objectives have been formally agreed for IRC network results and impacts, 3 key objectives can be identified:

**1. Signed TTT contracts:**

To deliver successful transnational technology transfer (TTT) proposals, negotiations and contracts across the IRC network.

**2. Level of TTT service capability:**

The installation and maintenance of a network of centres with a level of service capacity that can deliver successful TTT.

**3. Geographic coverage:**

To deliver the service to all EU countries, CEEC partners, notably candidates to an enlarged EU, and other stakeholders in FP5.

IRC projects, thematic group activities, Central Unit (IRC-CU) facilitation and performance monitoring and improvement all contribute to these objectives and bring benefits to participating SMEs and the regions in which they reside.

## 2. THE IRC NETWORK LANDSCAPE

The current IRC network (2000-2002) consists of 67 IRCs<sup>1</sup> and spans 30 countries, including EU15, 10 Central and Eastern European countries (CEEC), Iceland, Norway, Israel, Cyprus and Switzerland. It involves 210 organisations as partner organisations (an

<sup>1</sup> There are in total 68 IRCs, the other being West Switzerland, based in Lausanne, which covers the French and Italian speaking regions. It is not included in the analysis because it does not have a formal contract and receives no Community funding.

average of just over 3 per cent), and these include public bodies, such as Chambers of Commerce, technology transfer centres from universities, regional development agencies, semi or quasi-public organisations, private non-profit making organisations and other types of organisations.

The network of IRCs is spread geographically as follows:

IRC comparisons between areas	Centre	East	North	South	Total
Number of countries in the IRC network	8	10	6	6	30
EU Member States in the IRC network	6	0	5	4	15
Number of IRCs	20	12	15	20	67
Average number of IRC partners (including the lead partner)	3.10	2.83	2.60	3.75	3.13

The degree to which the IRC network has been effective in attaining the 3 objectives identified is difficult to measure, but the evidence that is available is presented as part of the study findings.

### 3. THE CONTEXT FOR THE IRC NETWORK AND TTT

The context for the IRC network is set by examining TTT across some major global regions, assessing its current position and reporting on the views of small and medium-sized enterprises (SMEs), IRCs and Country Representatives on the Programme Management Committee (CR-PMCs).

#### 3.1. Technology transfer in the USA, CEEC and EU

The environment for technology transfer is examined in the USA, the CEEC and the EU. The challenges for TTT, emerging from the study, are summarised as follows:

##### EU

TTT mechanisms not turning results into competitive advantage  
Improvements, but obstacles to innovation and TT persist  
A lack of finance is still the obstacle most often quoted by SMEs  
The supply of “results based” TTT finance for small firms is low

##### CEEC

SME are more likely to buy, than develop, innovation and technology  
The import of ready-made solutions hinders innovation  
TTT is not yet fully integrated in national innovation policies  
R&D mechanisms and financial instruments not fully developed

##### USA

Fewer cultural, language and mobility barriers than EU/CEEC  
A spirit of entrepreneurship is prevalent in innovation  
Success based funds to finance TT are available, and are used

The main observation is that the lack of “results based finance” is a big obstacle in the EU and CEEC for SMEs when thinking of engaging with TTT.

### 3.2. The current position of the IRC network

The IRC programme exists alongside other EU instruments in offering services to its different clientele:

Services	Clientele			
	SMEs	Large firms	Innovative Start-ups	Universities & R&D Org.
Access to Finance	BIC, EIC, IRC (LIFT, FIT), EBIC, BC-NET, COOPECO	BIC, EIC, IRC, EBIC	BIC, IRC	IRC
<b>Technology transfer</b>	<b>IRC, OPET</b>	<b>IRC, OPET</b>	<b>IRC</b>	<b>IRC, OPET</b>
Business partner search	BIC, EIC, IRC, OPET, BC-NET, COOPECO	BIC, EIC, IRC, OPET,	BIC, IRC	IRC, OPET
Information and advice assistance	BIC, EIC, IRC, OPET, EBIC, BC-NET, COOPECO	BIC, EIC, IRC, OPET, EBIC,	BIC, IRC	IRC
Business start up and development support	BIC	BIC	BIC	

**Note:** the core services of the IRC network are shown in **bold**, but all current areas of activity are included

All abbreviations and acronyms are explained in Annex 13 to the report.

### 3.3. SMEs in Europe: the main clientele of the IRC network

SMEs represent 70% of the workforce and turnover of EU enterprises. They are the backbone of the European economy in the member states of the EU. In 1998, the number of enterprises in the non-primary private sector in Europe-19 grew up to almost 20 million, with a positive effect on employment. These enterprises were providing a job for 117 million persons. The vast majority of these enterprises are SMEs, enterprises with less than 250 employees. SMEs are responsible for two thirds of total employment

Various ways of segmenting the SME population are examined and the implications for the study drawn out. The size of the IRC network client base in the last round<sup>2</sup> (which excluded the CEE countries, Switzerland and Cyprus) was almost 1.1 million and the analysis suggests that there may be around 10 potential TTT recipients to every potential TTT donor.

## 4. STAKEHOLDER VIEWS

The views of the 3 main stakeholders in the IRC network were canvassed through questionnaires, interviews and visits and are summarised below.

<sup>2</sup> The phrase "last round" refers to the 2½ year period 1997 - 2000 (the data actually captured from Autumn 1997 to March 2000); a period for which IRC performance statistics are available from the IRC-CU.

#### 4.1. Viewpoint of SME clientele

SMEs think that IRCs contribute more to their inward than their outward TTT support needs, but whilst both are relevant, the commercial and business benefits so far are unproven<sup>3</sup>. SMEs are prepared to pay for services, but only if “successful”:

- IRC services in general are relevant and SMEs will pay for some of them. SMEs are only willing to pay for TTT if based on success fees. SMEs are prepared to pay for certain other customised services. Economic benefits from TTT are generally not yet experienced by SMEs. IRCs are not seen to be in competition by other TTT service providers. The visibility of IRCs to local SMEs is generally low, TTT is not seen to be essential for survival by many SMEs and co-ordination by regional organisations is seen to be needed. Having said this, technology awareness increases when SMEs face global markets. In summary, marketing is still needed to convince SMEs of the potential benefits of TTT.

#### 4.2. Viewpoint of the IRCs

IRCAs expect to be able to offer both TT and TTT and to extend their services more to the universities and research community in the future. In broad terms, IRCAs expect an expanding and wider role under FP 6, including:

- Stronger existing operations, including a strong central unit
- More training across a wide variety of themes
- Increased use of IT
- Quality improvement (selection, standards, tools, screening follow-up)
- Increased network co-operation

At the same time they would like to see reduced bureaucracy and the reversal of some earlier decisions, in particular the return of the partner search tool (which was terminated when NCPs assumed responsibility for “upstream” work) and upstream work in general.

IRCAs do not believe SMEs will be willing to pay for TTT services, even though they showed their readiness to do so in the study (as long as an appropriate range of services and charging structure can be offered). IRCAs prefer funding continuity, although they are open to ideas:

- They are open to the “commercialisation” of their products and services.
- Special funds are suggested for specific accompanying measures.
- Other income is seen to be possible if the IRC remit is extended within FP6. IRCAs offer a variety of ideas and it is clear there is room for more innovation in developing suitable financial offerings for clients.

#### 4.3. Viewpoint of the country representatives

The viewpoint of the countries can be summarised as follows:

- All want to see a strong and reinforced IRC network

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<sup>3</sup> It is recognised that the economic benefits flowing from pre-competitive TTT are likely to take a long time, but the analysis does not assess the degree to which the TTT activity of the IRCAs is based on pre-competitive technology.

- The desire for a return to “upstream”, particularly in the South and East areas.
- Common themes are deeper co-operation and expansion of the scope of IRC services.

But differences can also be found between countries: infrastructure support gaps may be having a negative effect within the present programme area and some want to see expansion of the IRC network outside the present 30 countries. There could therefore be support for a differentiated approach.

## 5. SUMMARY OF MAIN FINDINGS AND CONCLUSIONS

### 5.1. The main findings

The **strategic gaps** emerging from the analysis are summarised as follows and suggest that there need to be some changes to the current IRC model:

- The product-client service range is too limited for IRC viability. The right financial incentive does not yet exist to stimulate TTT.
- The network does not meet SMEs’ needs in global markets. More marketing is needed to stimulate SME TTT engagement.
- Not all IRCs are being hosted by appropriate organisations.

The **model** used to deliver the IRC project needs to meet certain criteria for it to be effective in operational terms:

- It has to be clear about what it is offering by way of TTT services.
- It has to define its targeted clientele and be visible to them.
- It has to package its offerings to clientele so that they want to use them.
- It has to deliver on its promise for those who engage with its services.
- It has to follow through these services to ensure the final impact desired.

In seeking to live up to these parameters, the following **strengths of the IRC network** have been identified:

- It has added to TTT learning in the programme area. Important instrument as a business support network. The network is a niche player, focussing on TTT. Strong network support mechanisms have emerged. It has spawned 13 thematic groups. IRCs enjoy good relationships with existing clients.

It is clear that the IRC networks delivers more than just TTT agreements and this needs to be recognised when deciding future strategy. In terms of **weaknesses of the IRC network** at the present time:

- Network not yet strong enough to stand on its own.
- Commercial results and spin-offs are not proven.
- Economic impacts have yet to be demonstrated.
- IRCs need more services and/or a wider clientele.
- Variable performance across the IRC network.
- Indicators of wider IRC benefits are not measured.
- Mechanisms to underpin quality not yet in place.

Service flexibility and demonstrable impacts are needed to address these weaknesses.

The present position can be **summarised** as follows:

- There is a market failure to be addressed. Few private firms offering the same service to SMEs and there is no network operating which offers a similar service. A quality TTT network has the potential to fill the gap. This requires a sustained effort in delivering successful TTT. Performing IRCs in strong hosts are needed for quality. The few that can demonstrate these features, and could survive without EC funding, are needed in the network. A key challenge is to bring quality to the full network. This will need stimulation for proposals to be delivered by strong hosts and for IRC teams to show commercial acumen.

It is concluded that a quality network is needed to address market failure.

The following **pre-conditions** are proposed in addressing this challenge:

- FP 6 needs to take a significant step in the direction of alternative funding structures. The present model needs to take a significant step in delivering greater commercial acumen, management capacity and organisational strength. The option chosen needs to offer a high potential for “inclusiveness” in terms of the potential opportunities and benefits it offers for stakeholders in the future, including the disadvantaged regions of the programme area. The costs and benefits of introducing any “variable geometry” solution for FP 6 needs to be carefully examined, particularly if this implies an increase in work load at Commission levels. Where risks have to be taken, there needs to be a calculation of their likelihood of success before a final decision is made.

The determination of more detailed criteria will be needed to support the selection of a preferred option for the future of the network.

## 5.2. The main conclusions

The main conclusions of the study are as follows:

- The IRC network has developed into a **mature and professional network** that is appreciated by its clientele.
- At the same time, the **economic impact is yet to be felt** and a substantial number of TTT contracts have yet to deliver convincing results.
- The **performance of individual IRCs varies significantly** across the programme region. Whilst some are strong and established, others are still weak and the majority need Community funding to survive. IRCs in the CEEC and some of the EU regions are the most disadvantaged and many are still a long way from maturity.
- IRC performance comparisons, when differentiated so that they can be **examined against the 3 types of IRC objective**, are summarised as follows:
  1. **Signed TTT contracts:** When IRCs are segmented by the level of their **TTT targeting** in the current round (2000-2002), high targeting IRCs are found both to deliver and promise better TTT results than others and are clearly more active in terms of networking activity.
  2. **Level of TTT service capability.** When IRCs are segmented by the **strength of their host organisations**, IRCs in strong hosts have been found to both to deliver and promise better TTT results than others and have a greater focus on transnational activity.
  3. **Geographical coverage.** When IRCs are examined in terms of their **regional economic context**, the differences are not very substantial. The evidence suggests that IRC performance is not related to general economic factors, but rather to

particular contextual features, such as the quality of the team and the hosting of IRCs by strong organisations.

- The average **cost of delivering a TTT agreement across the network is still too high** and programme managers need to focus on network development strategies that will lead to the reduction of this cost ratio. However, the results of other IRC services need to be captured at the same time, so that the full benefits are understood.

## 6. FUTURE OPTIONS

The study examines different options for strategy (mission, scope, positioning), operations (organisational) and financing.

### 6.1. Narrowing the options

It first seeks to **narrow the options** in each of the categories examined:

- It is proposed that the three options for the primary **mission** of the IRC network are considered as potential scenarios to illustrate what each could be in practice, if chosen as the primary aim.
- It is proposed that, whatever the choice of mission option, the IRC network should have an inclusive approach to the **scope** options, which are not mutually exclusive, and seek to apply them all within FP6. However, it is suggested that the option of extending the product range to “disadvantaged” IRC clientele is based on permitting additional financing for specific products and services rather than allowing “upstream” work back into the Project.
- It is proposed that the IRC programme chooses to improve programme **positioning** in those areas where it has the highest chance of influencing the result, including dialogue with DG Research to strengthen the link with Innovation Cells, with DG Enterprise to segment the market for overall business support services, define the IRC product and service range and strengthen its position as a “niche” network. Discussion with DG Regional Policy about strengthening host organisations could be beneficial.
- In terms of choosing an **organisational** structure that underpins the future, the option to appoint cross-border brokers promises the highest TTT impact but may lead to a distorted network by focusing on the strong only. The direct management option has its attractions, but is unlikely to lead to an eventual exit route for the Commission. A “hybrid” approach is needed.
- It is proposed that some kind of broad public-private partnership (PPP) model for **financing**, which makes possible the direct financial participation of the private sector in the network in some way, offers the most attractive route long term. This could be based on several large contracts (i.e. with cross-border brokers or country-specific agents) or many smaller contracts built into existing individual IRCs structures.

### 6.2. Exploring 3 different scenarios

Three main scenarios emerge from the analysis, based on taking each of the “mission options” as the primary and driving objective of the future IRC network. These are described as entrepreneurial, professional and structural approaches and are presented in turn in the tables below. The other variables are included to create a more realistic picture of what that scenario could look like in practice.

<b>Approach</b>	<b>Entrepreneurial</b>
<b>Mission</b>	<b>To maximise economic impact of delivered TTT through the network</b>
<b>Scope</b>	Reach: international, through network to network linkages Clientele: include U2S, R2S, S2S, L2S and S2L, TTT links. Products: special instruments for disadvantaged IRCs
<b>Programme</b>	Part of FP6; ongoing debate with DG Regional Policy; define IRC positioning in the context of enhanced co-operation with other Community networks.
<b>Organisation</b>	<b>PPP: Multi-country brokers, regional players, European Commission.</b>
<b>Financing</b>	<b>Costs: Contracts with brokers, including performance bonuses.</b> <b>Revenues: Reimbursements, share of royalties via the PPP.</b>

<b>Approach.</b>	<b>Professional</b>
<b>Mission</b>	<b>To maintain a high quality of service in TTT delivery to clientele</b>
<b>Scope</b>	Reach: international, through network to network linkages Clientele: include U2S, R2S, S2S, L2S and S2L, TTT links. Products: special instruments for disadvantaged IRCs
<b>Programme</b>	Part of FP6; ongoing debate with DG Regional Policy; define IRC positioning in the context of enhanced co-operation with other Community networks.
<b>Organisation</b>	<b>PPP: Country-specific agency consortia, European Commission.</b>
<b>Financing</b>	<b>Costs: Contracts with agent(s) and for central support unit.</b> <b>Revenues: Charges to clients for products and services</b>

<b>Approach.</b>	<b>Structural</b>
<b>Mission</b>	<b>To maintain a TTT delivery infrastructure across FP member countries</b>
<b>Scope</b>	Reach: international, through network to network linkages Clientele: include U2S, R2S, S2S, L2S and S2L, TTT links. Products: special instruments for disadvantaged IRCs
<b>Programme</b>	Part of FP6; ongoing debate with DG Regional Policy; define IRC positioning in the context of enhanced co-operation with other Community networks.
<b>Organisation</b>	<b>Direct management by the European Commission; Central Unit</b>
<b>Financing</b>	<b>Continued EC funding; some retained for conditionality and reward</b> <b>Costs: Contracts with individual IRCs and for the central unit</b> <b>Revenues: Charges to clients for products and services</b>

**Abbreviations used:** PPP = public-private partnership. U2S = University to SMEs; R2S = Research to SMEs; S2S = SMEs to SMEs; L2S = Large firms to SMEs; S2L = SMEs to large firms. TTT = transnational technology transfer. Wording in **bold** changes from scenario to scenario.

The report concludes that a hybrid approach is needed, drawing on all three scenarios.

## 7. RECOMMENDATIONS

Having considered the different scenarios, the most appropriate network model to address the market failure is considered to be one based on a “**professional**” approach where the objective is to attain and maintain a high quality of service in TTT delivery to clientele linked to funding that is, in part, performance related. This model is therefore recommended as a basis for the future of the IRC Network, but with ingredients added from the two other models.

### 7.1. Recommendations for a TTT network in FP6

The recommendations are presented under the headings of network strategy, network operations, network financing and project monitoring in the main report and summarised in terms of their contribution to the different emphases embodied in the study objective in the accompanying tables.

### NETWORK STRATEGY FOR FP6

- In support of the “professional approach”, the following set of objectives are proposed for the IRC network in FP6:

Hierarchy of objectives	Detailed wording
Main objective	<ul style="list-style-type: none"> <li>• <i>“To develop and maintain a high level of service capability in delivering successful TTT to local clientele across the programme area”.</i></li> </ul>
Subsidiary objectives	<ul style="list-style-type: none"> <li>• <i>“To address TTT capability deficits in disadvantaged regions across the programme area”.</i></li> <li>• <i>“To encourage the attainment of tangible economic benefits for clientele through successful TTT”.</i></li> </ul>

- That linkages be encouraged between the IRC network and other global network players, such as North America, Australasia and the Pacific Rim, making reciprocal arrangements to deliver a **global service** to local clientele.
- That well positioned local organisations, which offer related services (e.g. national TT, upstream information, general business advice) be encouraged to submit proposals as **hosts** for IRC contracts to encourage good client relationship management at local level.
- That IRCs be encouraged to be more proactive in **extending their scope of service** to include technology offers from universities, research centres and large firms, as well as SMEs, and to include technology requests from large firms as well as SMEs.
- That “TTT disadvantaged” IRCs be able to buy into a range of “**pre-conditioning services**” at local level that address innovation dissemination deficits and have the potential to encourage the development of strong host organisations at the same time.
- That “**TTT disadvantaged**” IRCs be defined as those in the newly associated countries (NACs) and Objective 1 regions where the following conditions also apply:
  - A need to address innovation dissemination deficits;
  - A lack of strong organisations for IRC hosting;
  - A low level of demand for TTT services in the local economic fabric
  - A track record in achieving a reasonable number of “matched TTTs”.
- That the programme seeks to strengthen the flow of potential TTT opportunities from a **wider set of players** involved in EU level programmes (such as the 7 thematic areas of FP6, Eureka, the ESA, the JRC and relevant programmes in other DGs, such as the Environment Programme), working with the BBS system to ensure more visibility to a wider range of IRCs and their clients.
- That the IRC network establishes itself as a “**niche**” **player** in the context of enhanced co-operation with other Community networks which support enterprises. It should focus on TTT services, working with DG Enterprise towards a clear product-market segmentation and negotiating related “service level agreements” with other players to protect promotional support activities and client relationship management.

- That the need for stronger host organisations and the new product packages proposed, both relating to IRCs in “TTT disadvantaged regions”, be brought to the attention of those responsible for **Regional Policies** with a view to their promoting the strengthening local capacity to support innovation and TTT.
- That a **financial scheme** (or combination of schemes) is developed, in collaboration with other units in DG Enterprise, with a view to this being offered to clients by IRCs within the network, to address the lack of results related financing to support TTT.
- That **countries** represented in the IRC network be encouraged to create the **best possible environment** through fostering TT schemes at national, regional and local levels, through linking local IRCs into bi-lateral international networks outside Europe and through encouraging those agents which deliver these TT schemes and international contacts to consider submitting proposals for IRC contracts as potential hosts in FP6.

#### NETWORK OPERATIONS IN FP6

- That IRCs be encouraged to include **private sector** brokers and consultants with entrepreneurial experience in technology as equal partners in their local governance structures with a view to raising the quality of TTT management.
- That IRCs also be encouraged to include the best-qualified brokers and consultants to be engaged with specific TTT tasks as **sub-contractors**.
- That the “**call for proposal**” **qualifications** set for organisations who wish to be IRC hosts are made more specific through insisting that they demonstrate their capacity against the range of characteristics already described.
- That IRC proposers be requested to submit their offers in a **business plan** oriented format so that the segmentation of their targeted clientele, the range of services being delivered, pricing strategies, costing policies, client relationship management and quality assurance procedures are clear.
- That IRC proposers be allowed to offer **cross-border combinations** as consortia in FP6. This should be based on the objective of reducing the innovation deficit across the network and on the condition that at least one “TTT disadvantaged” IRC is included in each consortium bid<sup>4</sup>.
- That recent efforts to deliver a **broader ownership** of the network continue through encouraging a horizontal representation of individual IRCs as part of the overall IRC network governance structure.
- That a Central Unit be appointed, as now, to support the network, but that greater emphasis be placed on **training in marketing, entrepreneurship and quality assurance** systems than has been the practice to date.

#### NETWORK FINANCING IN FP6

- That the IRC network continues to be funded in a similar way to now (i.e. through the same mechanisms and structures and on a shared cost basis for basic IRC operations), but that a **small proportion (say about 20%) of the EC component of the contract value is held back** from the initial outlay and earmarked for special packages, pilot projects and “TTT performance related” rewards:

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<sup>4</sup> This is a stronger recommendation than the former twinning arrangements (set up for the earlier FEMIRCs) in that the co-ordinator of the consortium would be expected to exercise a managerial role.

- The special packages would be those for the disadvantaged IRCs and would permit additional funding for the targeted purposes described.
- The pilot projects would be related to developing new models that promised future self-sustainability with a view to implementation after FP6.
- The rewards for TTT performance would be based on the level of TTT agreements achieved during a fixed period of one year (involving both offer and request partners within the IRC network) and paid immediately following this period.
- That the Project aims to **reduce further the current average unit cost per signed TTT** for those IRCs which are not “TTT disadvantaged” through a combination of reward based financing, more targeted clientele development, a better conversion of matched TTT into TTT agreements and more creative use of local IRC websites.

### MONITORING THE PROGRAMME IN FP6

- That individual IRCs be monitored against a **“quality of service” grid** that is constructed to measure how they are shaping up against the proposed objectives for the programme.
- That **regular surveys** of IRC clientele and peer institutions are introduced to feed into the quality of service indicator.
- That surveys of IRC managers are included in regular evaluation processes to **capture the learning gains** that are being accumulated across the network.
- That a pilot project is set up to measure the longer term economic impact of the IRC network based on a **net present value (NPV)** or similar model.
- That a **benchmarking** exercise be undertaken that monitors the cost of delivering successful TTT and compares it with other actors delivering international TT services.
- That the **logframe** be used to communicate the intervention logic of the revised programme to stakeholders and other interested parties.
- That the **funding of non-performing IRCs in FP6 be withdrawn** and the opportunity given to other hosts to bid for these contracts, with a first option being given to performing cross-border IRC consortia.

## **7.2. Recommendations for the remainder of FP5**

### NETWORK OBJECTIVES

- That preparatory work be undertaken to analyse the feasibility of the “professional” approach in FP6 in each IRC region in terms of:
  - Coherence with local and regional innovation policies;
  - The availability of strong organisations to host IRCs;
  - The ability to segment clients in terms of technology potential;
  - The factors affecting the conversion of “matched” into “signed” TTT;
  - The advantages and practicality of cross-border consortia.
- That the definition of what constitutes a “TTT disadvantaged” IRC be studied in greater detail, including:
  - Definition of what constitutes an “innovation dissemination deficit”;
  - Determination of the level of demand for local TTT services;
  - Detailing what might be a reasonable number of “matched TTTs”

- That the proposed objective for the IRC network in FP6 be refined and the **definition** of what it means to be a quality IRC be debated and agreed with stakeholders.

#### NETWORK SCOPE

- That approaches be made to other **global network players** to explore the possibilities for practical TTT networking in FP6.
- That the **mid-term evaluation** of the current IRCs be extended to include questions about:
  - The capabilities of their host organisations against the criteria suggested.
  - The extent to which current IRCs address different market segments.
  - The pre-conditioning services needed by “TTT disadvantaged” IRCs.

#### NETWORK POSITIONING

- That approaches be made to those responsible for the 7 thematic areas of **FP6, Eureka, the ESA, the JRC and** relevant programmes in other DGs, such as **the Environment Programme** with a view to strengthen the flow of potential TTT opportunities.
- That work begins on **defining the IRC “niche”** in terms of products, markets and “service level agreement” definitions with others in DG Enterprise.
- That discussions take place with **DG Regional Policy** with a view to fine-tuning the special packages proposed for “disadvantaged” IRCs in Accession countries.
- That discussions take place with **countries** to establish positions on TT support schemes and integrating the IRC network with bi-lateral international networking.

#### NETWORK OPERATIONS

- That a **new programme package** be drawn up which includes:
  - Stricter selection criteria for proposing host organisations;
  - A more business oriented plan format for IRC proposals and ongoing monitoring;
  - Means of encouraging private sector expertise in IRC governance;
  - Procedures to include private consultants and brokers in IRC sub-contracts;
  - Definitions of what might constitute “pre-conditioning services”;
  - Better coordination with the relevant policies of member countries.
- That the **Central Unit** contract be revisited with a view to its greater emphasis on training and quality assurance in FP6.

#### NETWORK FINANCING

- That a **fixed/variable funding model** be drawn up and tested for acceptability and viability across the network, ensuring the capacity to reduce overall costs per signed TTT agreement is embedded in the system.
- That the components of the more broadly based programme monitoring system be defined in more detail to give **good value for money** from this additional network surveillance.

### NETWORK ENHANCEMENT IDEAS

That a deeper assessment is made of the following **additional ideas**, which have emerged during the study: IRC funding to seed TTT projects, quality assurance system for IRCs, how to capture the “spin-offs” benchmarking quality of service and an assessment of the potential of peer-to-peer (P2P) computing for the IRC network.

### **7.3. A sensitivity analysis**

The sensitivity analysis regarding actions recommended and inherent assumptions being made is summarised as follows:

- Getting the shape of future contracts right, encouraging strong host organisations and ensuring good value for money are seen to be the most important **actions**, but decisions regarding the level of funding and IRC differentiations harder to implement. Those actions relating to supporting processes, such as planning, formatting, evaluating and monitoring, are seen to be less importance, because these are developments of what is already in place.
- Securing the positioning of the IRC network as a niche player and seeking to get government support in TT and international linkages are seen as the most significant **assumptions**, but those involving countries the most difficult to influence. The wider flow of EU level programme opportunities is seen to be a more proactive approach to what already exists. Influencing DG Regional Policy is expected to be difficult due to the partnership approach of the Structural Funds.

With regard to the sensitivity of the recommendations in the context of the purposes of the study, those relating to **cost-effectiveness** are seen to be the most important and easiest to deliver, followed by the **value-added** benefits, where the chances of influencing policy are seen to be high. More difficult are the “**real regional needs**” recommendations, where definition and agreement could be difficult and the **transnational** recommendations, which rely in particular on national government support.