



This presentation was made at the 3rd OPAALS public conference in Brazil in March 2010

Using knowledge gained from two international ICT projects – DBE and OPAALS, I'd like to put forward the notion that regional participation should ALWAYS be an element in international R&D projects. My argument is that regions can best perform that vital role of knowledge transfer, in order that the technologies being developed are fully exploited. But first...I'd like to teach the world to sing...



Play video clip [New Seekers/Coca Cola 'I'd like to teach the world to sing...']

'I'd like to teach the world to sing...'

- Products and brands are global
- Our media are global
- It is modern to think global

But....



The increasing globalisation of economic and cultural activity could lead one to believe that regions are no longer necessary at all.

However, the picture is a little more complicated than global brands would have us believe.

...but we each want a different song



Tribal behavior is not just some sad historical carry-over into our modern global world. It represents something fundamental in the human psyche – a need for identity, a need to be part of something.

In his book 'Jihad v McWorld', Benjamin Barber argues that the two extremes of globalisation and tribalisation are in reality a counterpoint to each other and will probably always co-exist. Indeed, if you imagine a harmonious, but homogenous world, where we all look the same, behave the same, consume the same things, and sing the same songs, that world would be a very sterile and boring place.

On a purely practical basis, UN Food and Agriculture Organisation have underlined the importance of regional self-sustainability by calling for food to be produced closer to those who consume it as there are increasing global concerns, both for our carbon footprint in transporting food, and the security of supply if global climate change causes sudden failures in producer countries.

Value in diversity

- Monoculture v biodiversity
- Creativity from different ways of thinking
- The right 'plant' in the right 'soil'
- Environment adaptation bringing multiple uses



I would like to draw an agricultural comparison at several points in my presentation, and this is one of them. We accept the need for biodiversity in agriculture as a kind of storehouse of nature's resources, and we can see the damage done to the environment and to security of food supplies by engaging in monoculture farming. I believe that we need to show the same celebration of diversity in the human population.

I think it was Einstein who said that every person should learn a second language, just to understand that there is more than one way of thinking. We will see in some of the technical social science presentations how language in the broadest sense is fundamental to the way that we all operate, and can be a barrier to communication between disciplines.

For many technologies it is important to have the right environment for them to flourish and as we cannot anticipate technologies of the future, we cannot foresee what environments we will need. This is a theme I will touch on again later when we try to transplant initiatives from one region to another.

Across the world, regions are so different in their size, structure, authority, power, resources, culture, history, and behaviours that one region might hardly recognize another as its counterpart. However, this lack of uniformity is what underpins the value of the region.

Comparing two EU regions



Let us take a moment to contrast two regions that have participated in the Digital Ecosystems projects. Both of these regions are from well-established EU Member States, so you might think that they would be similar. You would be wrong.

UK - West Midlands



The first is the UK West Midlands. The UK's ancient history is one of feuding regional kingdoms and successive invasions to produce a densely-packed mongrel nation locked within a small island. Much of its subsequent history has been about the four 'nations' of England, Scotland, Wales, and Ireland.

Within England, regional divisions are purely administrative, and this can be seen from the names, like West Midlands and East Midlands, which owe more to a cartographic convenience than any ancient sense of identity.

UK - West Midlands

- English regions are administrative divisions of national government
- Many quasi-autonomous NGOs
- Competition brings fitness and change
- Multiple agencies brings confusion
- Freedom to operate outside region



In the Digital Business Ecosystem project the participation was initiated and led by one of the region's universities, who in turn had to get partial funding for their participation from the Regional Development Agency and other sources. These funding sources each had their own agendas, and so participation was a matter of appealing to those agencies and accommodating their various individual interests. Interestingly, there was no restriction on working outside their region, and so they also covered the neighbouring East Midlands region and were even able to bid (though unsuccessfully) to set up and operate a national Open Source centre.

The university did not have day to day contact with SMEs and so had to engage other agencies, specifically a kind of industry IT club, to help to attract SMEs to events and identify target adopters. Thus the core role of the university was to bring together the various funders and SME agencies in a complex landscape, and it took on two new temporary staff specifically contracted for the project.

Spain - Aragon



Spain also had a turbulent past, finding itself, since pre-historic times, at a crossroads between Northern Europe, the Middle East, and North Africa. General Franco governed Spain as a Fascist dictatorship for almost 40 years until 1978, when the transition to democracy brought a sharp reversion to former regional kingdoms, with substantial devolution of power and autonomy.

Thus the region of Aragon is autonomous and has a strong historical and cultural identity. It even has a heraldic coat of arms.

Spain - Aragon

- Autonomous region
- Single government ICT agency
- The agency plans strategy and implements
- Agency distributes funds
- Social capital very high
- No competition



For economic development, such autonomous regional governments tend to operate through their own tied agencies, although these may be constituted as independent not-for-profit companies. The region of Aragon has an ICT agency, ITA, which decided to become involved in the Digital Business Ecosystems project. Although constituted as an independent not-for-profit company, ITA is in effect owned by the regional government and enjoys a monopoly status on ICT development. IT formulates the government's regional ICT plan, delivers government funding to SMEs, as well as providing advice and involving SMEs in projects. As such they enjoy massive long term 'social capital' with SMEs and an established working relationship with many of them.

ITA was able to directly contact suitable SMEs and to command their attention and respect, based on its past relationships. The other side of this position is that they have been anxious to preserve this 'social capital', especially when research has failed to meet its time scales or objectives and the SMEs were in danger of becoming disillusioned. ITA has also been able to mobilise complementary government funding for implementation, and so, largely as a result of its stable, central position in regional ICT, has been able to take a long-term and holistic approach.

Matching initiatives to environments



Both West Midlands and Aragon achieved success in bringing SMEs into the research and exploitation. The main point is that they did it in entirely different ways, adapting the project to their local environment. To continue my analogy, the plant that thrives in the soils of one region may quickly wither and die in those of another.

This interplay of action and environment has an important lesson for us. Throughout Europe, I have seen many knowledge transfer initiatives that have been demonstrated to be effective. However, when transplanted the same initiatives have failed. This leads me to the conclusion that both the initiative AND the environment are important.

So, in any international project, it is important to have partners that take into account the local environment and can say what will work and what will; not, and to some extent adapt initiatives to work with the local environment, just as a farmer might tend and treat and irrigate their soil.

Important generic concepts



During the DBE project some important generic concepts were developed and employed project-wide.

During the OPAALS projects, social science research was done to produce analyses of the regional partner's environments, focusing in particular on human and organisational networks. This knowledge is available and should inform regions that are developing ICT strategies, or for that matter any knowledge transfer strategy.

Let's look at some of that knowledge now.

Regional Catalysts

- Single point of contact
- Networked into the region's actors
- Contact with target audience
- Social capital
- Translation research to business
- Translation business to research



By far the most important common concept common concept was that each region had a single organisation that was able to act as a 'catalyst'. This concept has provided an enduring model of regional engagement that can be readily transferred to any size or type of region or project.

Here are some of the key qualities that a regional catalyst brings to an international project.

Social capital is the most crucial as SMEs are best persuaded to participate when their participation is requested by an organisation that they respect and trust

Driver SMEs

- Progressive
- Role models
- Social capital with customers
- Provide
 - feedback
 - case studies
 - end user applications



It is notoriously difficult to involve SMEs in research. Research requires investment and contains many risks.

Drivers are those few successful and respected SMEs in a region that are already innovative on the basis of personal interest. They have both the mindset and the capability to adopt the technology. They make excellent early adopters, and provide information, case studies, and leadership, in support of more widespread adoption by the mass of 'follower SMEs'. The Drivers in our case were software developers who could develop end-user applications. Often they were already active in Free/Open Source Software, so were receptive to this aspect of Digital Ecosystems and enthusiastic about the possibilities.

It was found to be worth supporting such Driver SMEs intensively. We did this in terms of training and practical support, plus financially, with small-scale standardised funding packages delivered via the Regional Catalysts.

Preparing the region

- Self analysis
- Education
- People and infrastructure
- Adaptation of initiatives
- Lead organisation (Regional Catalyst)



Self-analysis to a process to ensure that the initiative is of a type that the region's environment and characteristics can support. Stretching my farming analogy still further, this would be like scientifically assessing your soil and climate before deciding which crops – or which variety of a crop – to grow.

Specific tools

- ROAME analysis
(Requirement Objective Action Monitoring Evaluation)
- Social network analysis
- Balanced scorecard
- Impact index
- Delphi surveys



There are many management tools out there that can be applied to this problem. These are ones we have used, but you should never get hung up on specific tools. It is more important to understand what a tool is for and how it works, and then Adapt and adopt it to your needs.

This is perhaps where I part company with some of my academic colleagues who are concerned with correctness of process and provable validity of outcomes. My personal approach, which is probably a product of my industrial background, is 'anything so long as it works'.

Connect initiatives together

- ICT is not an activity in isolation
- Regional initiatives can sit on ICT initiatives
 - Culture bridge
 - Tourism
 - Purchasing and supply chains
 - SME clustering



A Digital Ecosystem is only a platform: an environment. To achieve something there need to be one or more applications created and mounted on that platform and one or more communities that use it.

The dream scenario is to use a complementary economic development initiatives as the application to be mounted. One can then achieve more than the sum of the parts as the application is used to good effect and at the same time the benefits of the platform become better understood.

Conclusions

1. Regions will have an increasingly important role in global RTD
2. All EU international RTD projects should involve Regional Catalysts
3. Regions should use formal techniques to improve their ability to link to international projects and harness global technologies

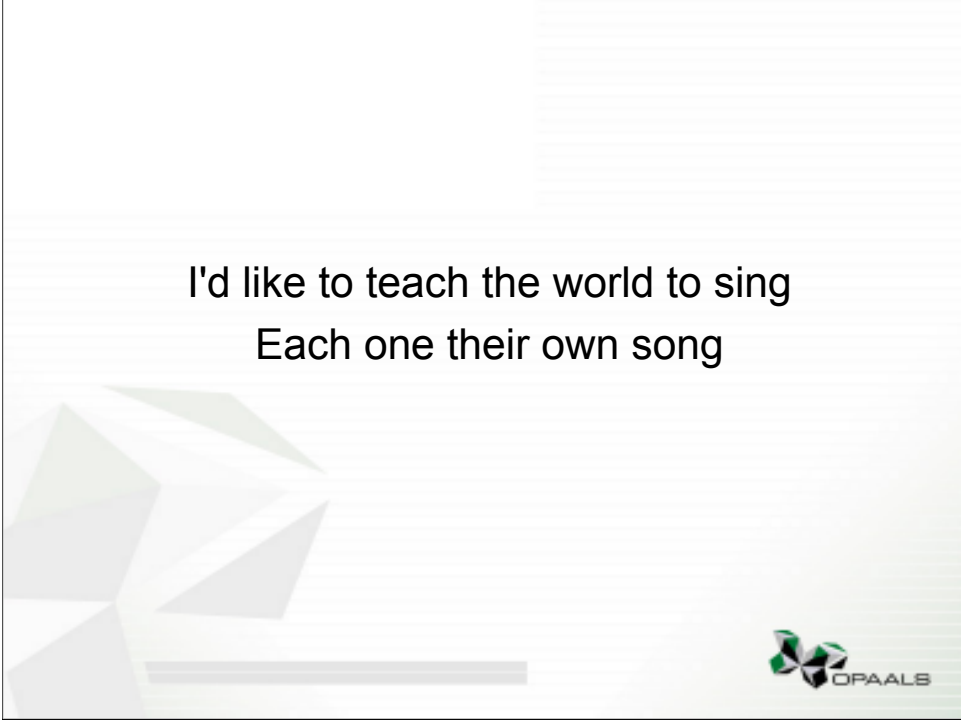


Finally, I present you with three conclusions:

The first is that regions have a very special role in knowledge transfer for economic development, whether in ICT or any other technology. They are able to overcome the barriers to exploitation and adoption in ways that are not possible when thinking on a global scale.

The second is that all EU projects should involve Regional Catalysts as they have the social capital that is essential to bring target groups into participation, whether that is SMEs, micro-enterprises, or private individuals. They can also act as 'sounding boards' to input end user considerations into projects.

And finally, regions can do a lot to improve the effectiveness and efficiency with which they act as knowledge transfer agents, connecting their region to the global development of RTD – whether that be ICT technologies or any other science.



I'd like to teach the world to sing
Each one their own song



We should not abandon the idea of a world singing in peace and harmony, but we must appreciate that individuals will sing their own songs, and we need them to do that.