# Worldwide Intercluster Initiative for New Materials and Processes focused on Clean Technologies

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DELIVERABLE REPORT

## <D1.4B – International Common Strategy >

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## Approvals

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# A. Introduction

As a result of the **globalisation of markets**, business alliances and collaboration schemes are becoming increasingly international. Clusters and networks are forced to look for and acquire complementary competences wherever they are available. In addition, access to foreign markets is an important component of the competitive advantage of a cluster and a driving factor for critical mass, especially when compared to local-focused clusters. Many clusters in the EU have now reached a certain level of maturity, and international cooperation is logically the next step towards strengthening their competitive edge.

Although there is a clear case for international cluster cooperation, in practice **only relatively few clusters have strong international links** with partners outside the EU. The results of a 2007 survey among 91 cluster initiatives across EU countries conducted by the German Competence Networks ("Kompetenznetze") showed that only 10% of cluster initiatives or networks actually have an internationalisation strategy.

Although the general focus for cluster cooperation lies without doubt within Europe, a stronger international orientation of European clusters is becoming an increasing issue and plays more and more a strategic role. The main countries outside Europe that are of particular interest for such cooperation are USA, Canada, Japan, South Korea, India, China, Malaysia, Brazil and Russia. Besides that, neighboring countries such as the Mediterranean countries are also of great political interest.

The DGCIS, the branch of the French Ministry of Economy, Finance and Industry responsible for the implementation of the French competitiveness policy is in charge of supporting clusters and their members in their international development. After positive evaluation of the first phase of the cluster policy (2006-2008), the French government decided to launch its second phase (2009-2012). While it continues to support R&D and innovation as the central part of cluster dynamics, it also comprises the development of other dimensions of cluster ecosystem of innovation and growth, such as their international activities. Up to now, the DGCIS has focused on supporting them in the identification of their international partners (agreement with the Ubifrance agency and call for proposals "International and European technology partnerships") and European partners to access European funding (call for proposals "European technology partnerships"). Moreover, certain French clusters **have an experience in interclustering activities with clusters from other member states**, as is the case with some of the material clusters. During these last years, the French cluster Plastipolis has participated in initiatives such as Clusterplast , Aplastics or NanoCom projects with several European clusters designed to encourage interclustering and transnational cooperation at the European scale.

It is therefore important to **establish an encouraging environment supporting these emerging synergies between European clusters in the perspective of a common definition of an international strategy** and a joint search for international partners.

In order to follow and valorize the first existing contacts between 8 European clusters in the materials field, the WIINTECH project was launched. WIINTECH is undertaken in the continuation and valorization of already achieved pre –existing projects or initiatives in order to build a common international strategy between a set of leading European clusters aiming to the following objectives:

(i) fostering the already accomplished intercluster and transnational partnerships,
(ii) extending them to international cooperation,
(iii) developing **a joint intercluster cooperation towards internationally leading** clusters (technology and industrial partnerships, training, tech transfer, mobility, mentoring…) for example: Japan, USA, Korea, Brazil, China, India, Russia, Mediterranean region and **focusing on material and production technologies for fast growing lead markets such as clean tech markets.**

This document presents the common international strategy defined by the 8 cluster partners, details the strategy roadmap process and defines the goals to achieve. A methodology has been implemented based on a consensus of the partners on the keys sectors, the targeted countries and with the support of economic analysis per country and surveys carried out by Ubifrance.

## B. The Strategy Roadmap Steps

The steps which the consortium considered make up the roadmap were agreed and defined as listed below, having examined various models for this process. These were then addressed in 2 workshops by the consortium facilitated by the Fondation Sophia Antipolis and experts from Ubifrance. This document sets out the results of this work.

1. Mission and Objectives

    - to agree the opportunity for internationalisation of clusters and the confirmation of project objectives.

2. Market Vision

    - selecting likely technologies for driving lower carbon economies and market areas based on existing knowledge

3. Economic Analysis of Targets

    - To carry out a formal PEST analysis of clusters in the selected countries by the partners. These countries are Brazil, India, USA and Japan.

4. Identifying International Cluster Targets

    - using structured semi quantitative analysis of key criteria against each location
    - finding clusters within technology areas to provide the basis for selecting partners
    - structured semi quantitative analysis to produce short list of clusters
    - using existing networks and cluster knowledge to confirm opportunities

5. Developing Projects and Business Approaches

    - use of dynamic workshops and existing contact networks
    - developing interaction with clusters and companies who are members
    - clarifying markets, opportunities for network development and lead partners
    - confirming through country specialists where available
    - setting out detailed company and cluster targets

6. Initial network visit

    - targeting a suitable follow up opportunity for an intercluster exchange in the EU and identifying actions to sustain the opportunities.

## C. C Mission & Objectives

The project has the core objective of promoting international cluster activities in CIP participating countries and has brought together clusters linked by their interest in a developing market for clean technologies in specific CIP countries. This market area has been selected because of its current and future potential growth opportunities. In terms of the project, clean technology includes the manufacture of products and materials as well as the development of manufacturing processes and equipment. It is technology aimed at resource efficient supply chain development in the materials space including specifically polymer manufacture and processing.

The area is also conceived as facilitating business development in such areas as renewable energy systems, high efficiency low carbon building and construction, recycling/reused materials, green transportation systems and components, water and air treatment systems, waste management and recycling, new renewable materials including chemicals and polymers/plastics manufactured from bio-feedstock's and waste products via depolymerisation or other processes.

The Wiintech project brings together 8 cluster organizations from across the EU and provides the support to them in identifying trade and technological opportunities and developing partnership agreements with selected clusters. The breakdown of the EU cluster organizations is given in Table 1.

Table1: EU Clusters

| **Cluster** | **Region/Area** | **Business/Technological Focus** |
|---|---|---|
| Plastipolis | Lyon, France | Plastics |
| Proplast | Italy | Plastics |
| ChemieCluster Bayern | Munich,Germany | Chemicals |
| NEPIC | Wilton, UK | Process Industry |
| Clusterland | Austria | Multi sector |
| Plastival | Spain | Plastics |
| Veneto Nanotech | Italy | Nanotech |
| Poolnet | Portugal | Engineering and Tooling Industry |

The project will establish an encouraging environment supporting the development of linkages, business partnerships and export opportunities between technology linked clusters. This will lead to

a shared international strategy and a joint search for international partners. The project will seek to use, where appropriate specialist intercluster expertise developed through the partners via national trade and investment activities, including those developed by DGCIS France and UK Trade & Investment.

The concept of the project is to consider together two complementary activities:

- To develop joint interclustering partnerships toward following leading clusters in the field of material and production technologies applied to clean techs,
- To coordinate cluster initiatives for the internationalization of SMEs focusing on clean tech markets and using the capabilities of an international intercluster framework in the following fields : Renewable energy systems, High efficiency building and construction, Recycling / Reused Materials, Green transportation systems & components, Water and air treatment system, Waste management & recycling, New and renewable materials (polymers/ materials made from bio-feedstock's or waste products via depolymerisation or other processes)

According to their previous experiences and review of priorities with their members, the different clusters are considering **developing co-operations with three main geographical areas:**

- **North America**
- **South America**
- **Asia**

Complementary targets in Europe's closer regions such as North Africa or Russia were originally considered based on ongoing experiences but with limited allocation of efforts in comparison to the 3 main areas listed above.

In the selected regions of North America, Asia & South America, a **series of targeted clusters have been defined:**

- North America:
  - USA: Ohio Polymer (www.polymerohio.org), California nanotechnology (http://www.cnsi.ucla.edu/ ), Chemical Alliance Zone West Virginia (www.cazwv.com), Clean technology and sustainable industry organization (http://www.ct-si.org/)
  - Mexico: CIATEC (http://www.ciatec.mx/), ANIPAC (www.anipac.com.mx)

- Asia:
  - India: Indian Chemical Council (ICC) represents the majority of Indian process industry with significant investments in more sustainable processing clusters across India targeted. Additionally PlastIndia is a major cluster target in the polymer sector.
  - China (clean-tech clusters and chemical clusters) : Shandong province (dyetdz: http://www.dongying.gov.cn/eng/tz_lm2.html , zibo: http://english.shandongbusiness.gov.cn/public/area/zibo/, Shanghai: à right partners need to be chosen within the project and according to the project's objectives
  - Japan: Nagano techno foundation (http://www.tech.or.jp/eng/). Also the Japan Plastics Industry Federation (JPIF) and the Kyushu Recycle & Environmental Industry Plaza.
  - Korea: partners still to be defined within the project

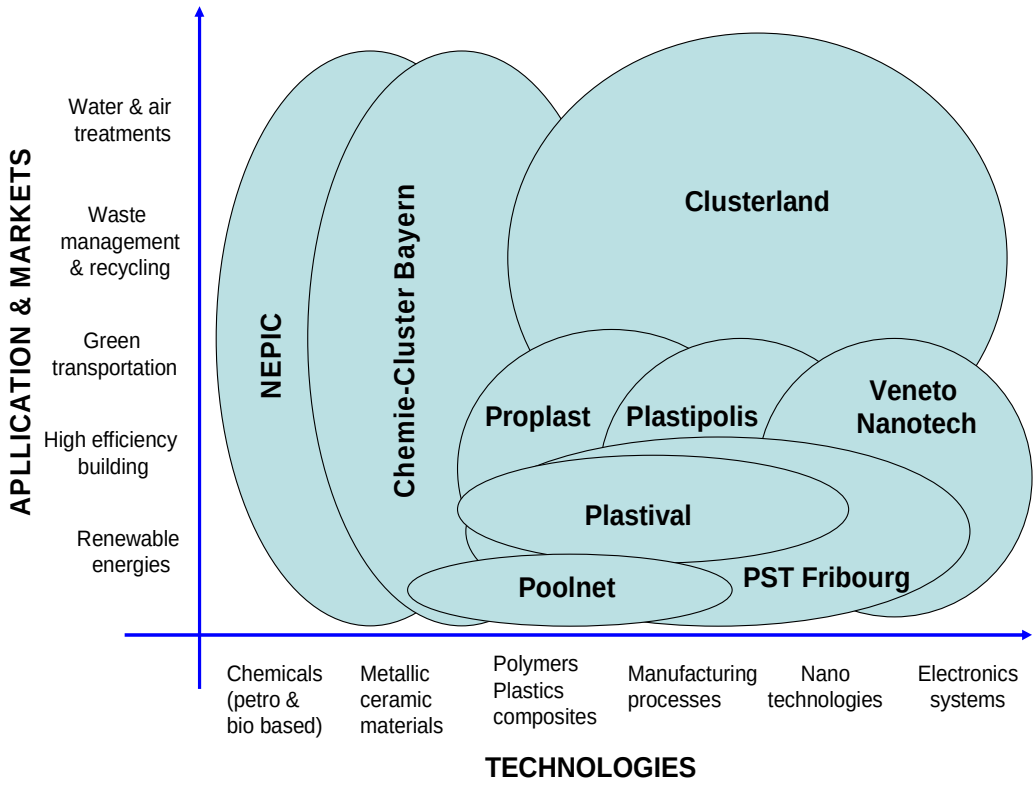
- South America:
  - Brazil: Bio based manufacture and bio feedstock group CTC and Unica / Florianopolis University / Campinas -S. Paulo area / S. Carlos area / CENI Training Centers network / Region of Pernambuco, Region/Cluster Rio Grande do Sol/Porto Alegre
- Complementary regions:
  - Russia: clusters of companies and universities in Krasnodar, Tatarstan, Uljanovsk
  - Morocco: Innanotech (materials for photovoltaic / http://www.university-directory.eu/Morocco/Institute-of-Nanomaterials-and-Nanotechnology-INANOTECH.html )

## D. Market Vision

The project starts by requiring the clusters in the consortium to build an understanding of their own technology and business strengths in the clean technology space. This information will allow the members to understand which target markets are of common interest in which international clusters. This in turn will allow the definition of products and services which can be presented to the proposed target clusters. This is a wide area where the broad range of skills and knowledge existing within the European cluster partners, is a real benefit to achieve the programme objectives by being able to address a wide range of industrial activity in conjunction with being able to identify the most appropriate target cluster organisations in the selected countries.

The project has mapped the European clusters technical strengths against the potential applications and markets which make up the technology space. This has made it initially possible to set out how the clusters fill the available space and how they will collaborate to make a better approach to the opportunities for export led growth.

Figure2: European Clusters – Applications/Markets and Technologies




The Wiintech project will build upon the existing links and activities established by the partners which include:

- **Chemie Cluster Bayern** which have implemented several ongoing co-operations in China including a local office for supporting SMEs. In addition, this cluster is developing links in the USA
- **NEPIC** with a number of initiatives involving clusters and major players in both Brazil and India
- **Plastipolis** which have a joint agreement with Ohio Polymer in the USA (2011)
- **Poolnet** which have several years of co-operations with Brazil
- **Veneto Nanotech** which have long term partnerships with Nagano Techno foundation in Japan
- **Plastival** which have a number of initiatives toward export markets through bilateral visits or the participation to business fairs.

One of the first steps for the partners was to identify the targeted countries where all of them have a common interest to develop partnerships. This was the focus of the initial workshop held at Sophia Antipolis in April 2012. Then, the second step was to define the targeted technologies and markets in each selected country.

To achieve these 2 goals, a survey has been carried out by the Fondation Sophia Antipolis. A questionnaire was sent to the partners in order to identify their needs and priorities. After the collection of data, an analysis in 2 steps was conducted (ranking and to confirm the first results, the creation of a synthetic index):

- **Step 1**: At the beginning of this initiative, 9 countries were identified by the clusters. In order to define the common international strategy, 3 countries were to be selected among these 9 countries. Different criteria were taken into account to allow a first ranking: Do the partners select the country, if yes how many partners have identified it, how many partners have identify the country as their first priority, accessibility to the market, number of SME's that could be involved.

| Countries | Priority Number (N) | Number of answer (Na) | N°1 | Accessibility to market for SMEs | Number of potential SMEs |
|---|---|---|---|---|---|
| USA | 10 | 7 | 5 | 17 | 315 |
| BRAZIL | 9 | 7 | 4 | 15 | 160 |
| MEXICO | 9 | 3 | 0 | 7 | 45 |
| INDIA | 7 | 5 | 1 | 10 | 125 |
| CHINA | 6 | 6 | 0 | 13 | 270 |
| KOREA | 5 | 5 | 1 | 12 | 80 |
| JAPAN | 4 | 6 | 3 | 10 | 100 |
| RUSSIA | 2 | 5 | 1 | 7 | 83 |
| MOROCCO | 2 | 5 | 0 | 12 | 111 |

**As a result, two countries were unanimously agreed as selected: Brazil and the USA. India, China, and Japan were put forward for further analysis and discussion.**

- **Step 2:** To validate the first results, a synthetic index was built to support selection. The index was made up from [N+Na+N°1]+ [Number of SMEs*0.Market accessibility

| Countries | Synthetic Index |
|---|---|
| USA | 75,55 |
| BRAZIL | 44 |
| MEXICO | 15,15 |
| INDIA | 25,5 |
| CHINA | 47,1 |
| KOREA | 20,6 |
| JAPAN | 23 |
| RUSSIA | 13,81 |
| MOROCCO | 20,32 |

According to the study results, China emerged as the third candidate country. However, the partners considered that working with Chinese cluster partners would be both resource intensive and difficult to execute within the project time frame. It was therefore decided not to select China

The cluster partners divided into 2 groups:

- The 1st group were more technological oriented and preferred Japan as a targeted country.
- The 2nd group were more business oriented and preferred India.

The consortium reached agreement at the first workshop to select clusters in Brazil, USA and both India and Japan to accommodate the range of interests.

## E. Economic Analysis of Targets

This important step ensures that all consortium partners develop a common understanding of the selected countries and cluster environment. For this strategy roadmap, it has been compiled with input from UbiFrance experts who are present in the selected countries and who provided an analysis at the second workshop in Sophia Antipolis in July 2012.The analysis covers the political, economic, social and technological developments together with elements of culture. In each selected countries case, high level strengths, weaknesses, opportunities and threats are also identified.

The economic analysis commences with Brazil in Table 2.

### Brazil

Table 2: Brazil PEST Analysis

| Parameter | Issue | Notes |
|---|---|---|
| **Political** | Government.<br>Country size and scale. | <br>191M people. 85% urban. Twice size of EU 27<br>Significant reserves of fossil fuels. 75% land cultivated. |
| **Economic** | GDP<br>Growth<br>Inflation<br>Trade with EU. | <br>6% growth pa<br>6% inflation/pa is high.<br>EU is main partner – mostly raw material exports to EU |
| **Social** | Population<br>Income/head<br>Public investments<br><br><br>Regulatory environment | Large middle class at 110M.<br>76th in world at 13000$/head.<br>Significant infrastructure spend (transport/telecoms) as limited capacity in roads and power.<br>Significant barriers to entry via regulation. |
| **Technology** | Innovation<br><br><br><br>Industry scale<br><br><br>Climate for enterprise.<br><br>R&D capacity | Sao Paulo is a major centre and spends a bigger proportion of Budget on R&D than whole country which is just below majority of European countries.<br>Dominated by larger players such as Petrobras, Braskem, Vale, Embraer but still none in world top 100.<br>Seen as positive – 72% enterprises are positive |

Table 3: Brazil SWOT Analysis

| **Strengths** | **Weaknesses** |
|---|---|
| Innovative capability and competitive centres for specific sectors<br>Large agricultural sector | High prices |
| **Opportunities** | **Threats** |
| Clean technologies including green/biopolymers<br>Developing R&D strengths<br>Cost reduction – improved productivity | Environmental concerns<br>Protectionist in some areas of trade |

**India**

Table 4: India PEST Analysis

| Parameter | Issue | Notes |
|---|---|---|
| **Political** | Government<br>Country size and scale | Democracy, states are autonomous<br>1.2 billion people (2nd largest population – adding 22m/yr). It is 6 times the size of France. |
| **Economic** | GDP<br>Growth<br>Inflation<br>Trade with EU | 11th largest economy in world<br>8.2% in 2010/11 |
| **Social** | Population<br>Education<br>Income/head<br>Public investments<br>Regulatory environment | Very young, average age 25. Mostly rural.<br>300,000 engineers trained annually |
| **Technology** | Innovation<br><br><br><br><br><br>Industry Scale<br>R&D Capacity<br>Climate for enterprise | Focus on green energy /clean technologies, limited biopolymer interest<br>Large demand for energy based on renewable sources, looking to green technologies for construction and to do more recycling of wastes which are growing fast. Also air and water quality focus.<br>Significant polymer and petrochemicals production as well as growing automotive sector.<br>2010-20 is the Indian Government decade of innovation. Framework programmes with EU. |

Table 5: India SWOT Analysis

| **Strengths** | **Weaknesses** |
|---|---|
| Educated population | High prices<br>Limited mineral and energy resources |
| **Opportunities** | **Threats** |
| Developing R&D strengths<br>Waste recycling | Environmental Concerns |

**United States of America**

Table 6: USA PEST Analysis

| Parameter | Issue | Notes |
|---|---|---|
| **Political** | Government | $70bn spending on recovery and reinvestment |
| | | Trade deficit is $ 620bn and rising |
| | Country size and scale | |
| **Economy** | GDP, Growth | GDP rose 2% in 2011, signs of growth in investment, housing and retail. |
| | | 2% and rising. |
| | Inflation | |
| | Trade with EU | |
| **Social** | Population | |
| | Education | |
| | Income/head | |
| | Public Investments | Support for green energy is significant. |
| | | EPA regulates air and water. |
| | Regulatory environment | |
| **Technology** | Innovation | Target to be leader in clean energy economy (but also support fossil fuels). Also developing green buildings. |
| | | Leading global players such as GE. USA is largest waste producer in the world. |
| | Industry Scale | Patents in clean energy are rising. |
| | R&D Capacity | |
| | Climate for enterprise | |

Table 7: USA SWOT Analysis

| **Strengths** | **Weaknesses** |
|---|---|
| Educated population | Debt |
| Technological Prowess | |
| Large corporations | |
| **Opportunities** | **Threats** |
| Green economy | |
| Low Carbon energy | |
| Waste recycling and usage | |

**Japan**

Table 8: Japan PEST Analysis

| Parameter | Issue | Notes |
|---|---|---|
| **Political** | Government<br>Country size and scale | |
| **Economy** | GDP<br>Growth<br>Trade with EU<br>Inflation | World's 3rd largest<br>2.2% pa. Country recovery from 2011 Tsunami.<br>Good links with EU and low tariffs. Also linked to Asia and S America. |
| **Social** | Population<br>Education<br>Public Investments<br>Regulatory environment<br>Income/head | Low unemployment (<5%)<br>Highly trained and educated workforce.<br>Looking to support green innovation and low carbon in new Government programmes.<br>Government closely linked to industry |
| **Technology** | Innovation<br>Industry Scale | World leader in automotive, electronics, robotics, very large number of patents. Looking at biopolymers and nano technology.<br>Very large, many large companies |
| | R&D Capacity | R&D Spend at 3.8% GDP is very high |
| | Climate for enterprise | Look for long term relationships and quality of product |

Table 9: Japan SWOT Analysis

| **Strengths** | **Weaknesses** |
|---|---|
| Educated population<br>Technological prowess | High prices<br>Limited mineral and energy resources |
| **Opportunities** | **Threats** |
| Green economy<br>Novel materials<br>Low Carbon energy and waste recycling | Energy issue |

## F. Identifying International Cluster Targets

The next stage was the development of a detailed analysis for the market opportunity for each selected cluster in the 4 selected countries. In this case the analysis was supplemented by further examination of the target clusters themselves and the clean technology value and supply chain interests of the EU clusters. The analysis focussed on complementary technologies. Information and feedback from all European cluster partners has been used to help identify a number of international clusters, and after detailed discussion and analysis of the data by all European partners, a final selection was made based on the core criteria and scored as shown in the following tables.

Table 10: Brazilian Clusters

| **Cluster Target** | **Scoring** | | | |
|---|---|---|---|---|
| | **Fit for Programme** | **Size** | **Interaction** | **Total** |
| | HML- 1/5/10 | HML- 1/5/10 | HML- 1/5/10 | Overall (out of 1000) |
| Suape/Pernambuco | 10 | 10 | 7 | 700 |
| Rio Grande do Sol/Porto Alegre | 7 | 7 | 7 | 343 |

Table11: India Clusters

| **Cluster Target** | **Scoring** | | | |
|---|---|---|---|---|
| | **Fit for Programme** | **Size** | **Interaction** | **Total** |
| | HML- 1/5/10 | HML- 1/5/10 | HML- 1/5/10 | Overall (out of 1000) |
| PlastIndia | 7 | 10 | 7 | 490 |
| Indian Chemical Council | 7 | 10 | 10 | 700 |

Table 12: USA Clusters

| **Cluster Target** | **Scoring** | | | |
|---|---|---|---|---|
| | **Fit for Programme** | **Size** | **Interaction** | **Total** |
| | HML- 1/5/10 | HML- 1/5/10 | HML- 1/5/10 | Overall (out of 1000) |
| SPI: The Plastics Industry Trade Association Inc | 3 | 10 | 5 | 150 |
| San Diego | 10 | 10 | 1 | 100 |
| Mississippi Polymer Institute | Put forward at meeting - consensus was that this was less attractive than other options | | | |
| Ohio Polymer Institute | Put forward at meeting – consensus was to make contact with this group | | | |

Table 13: Japan Clusters

| Cluster Target | Scoring | | | |
|---|---|---|---|---|
| | **Fit for Programme** | **Size** | **Interaction** | **Total** |
| | HML- 1/5/10 | HML- 1/5/10 | HML- 1/5/10 | Overall (out of 1000) |
| Nagano techno Foundation | 3 | 3 | 7 | 63 |
| Japan Plastics Industry Federation (JPIF) | 3 | 7 | 1 | 21 |
| Kyushu Recycle & Environmental Industry Plaza | 10 | 7 | 1 | 70 |

## G. Developing projects and approaches to clusters_

Core to effective interclustering is the identification of the common specific, measurable, achievable, realistic and time phased objectives for the partners. In each case here, the specific opportunities for the initial visit were identified for confirmation but in doing so these set the targets and timing for the initial activity.

In this area, feedback and analysis is required from the international clusters themselves in order to provide market and technology interests and developments requirements and also, potential business opportunities. The lead European cluster for each international visit will approach each of the individual international clusters using the assistance of national trade promotion bodies where appropriate. In addition the views of any regional EU delegation need to be sought.

Lead partners are:

- Brazil – NEPIC
- India - Chemie Cluster Bayern
- USA – Plastipolis
- Japan – Veneto Nanotech

Table: 14 Brazil

| What | Who | How | When | Where |
|---|---|---|---|---|
| Contact with Brazilian clusters to confirm participation and interest. | Lead EU cluster - (NEPIC) | Direct contact | By end September 2012 | From UK |
| Ongoing contact with Brazilian clusters | Wiintech partners and trade and investment agencies, e.g. UbiFrance and UKTI. | Direct contact | Ongoing | Within EU and Brazil |
| Identify key centres | All clusters share data | Scoring system | Ongoing | Porto Alegre, Sao Paulo and Recife. |
| Timing of Visit and specific event where appropriate – Brazilplast.<br><br>Brazilplast takes place 20-24 May 2013. | Lead EU Cluster | Through local contacts and EU consortia | May 2013 | Sao Paulo will be a stopover between cluster visits in Porto Alegre and Recife. |
| Gathering EU cluster feedback and technology/market interests | All clusters to provide to Proplast | Through Proplast leading Wiintech communication strategy. | Through Q3 2012. | |

| What | Who | How | When | Where |
|---|---|---|---|---|
| Dialogue with major Brazilian market players through European events. | All partners | Through workshops, seminars, conferences etc. | November 2012 | NEPIC International Bioresources Conference, Newcastle upon Tyne. |

Table 15: India

| *What* | Who | How | When | Where |
|---|---|---|---|---|
| Contact with Indian clusters to confirm participation and interest. | Lead EU cluster - (Chemie Cluster Bayern) | Direct contact | By end October2012 | From Germany/UK using existing NEPIC contacts. |
| Ongoing contact with Indian clusters | Wiintech partners, trade agencies. | Direct contact | Ongoing | Within EU and India |
| Identify key centres | All Clusters share data | Scoring system | Ongoing | To be confirmed. ICC and PlastIndia both based in Mumbai but travel may be necessary internally to help maximise benefit. |
| Timing of Visit and specific event where appropriate e.g. PlastAsia or ICC Conference.<br>PlastAsia 15 – 18 Feb 2013. Awaiting details on how appropriate/beneficial PlastAsia is to partners. The event is based in Bangalore. | Lead EU Cluster | Through local contacts and EU consortia | February 2013 | India. |
| Gathering EU cluster feedback and technology/market interests | All clusters to provide to Proplast | Through Proplast leading Wiintech communication strategy. | Through Q3 2012. | |
| Dialogue with major Indian market players through European events. | All partners | Through workshops, seminars, conferences etc. | November 2012 | NEPIC International Bioresources Conference, Newcastle upon Tyne. |

Table16. USA

| What | Who | How | When | Where |
|---|---|---|---|---|
| Contact with USA clusters to confirm participation and interest. | Lead EU cluster - (Plastipolis) | Direct contact | By end September 2012 | From France. |
| Ongoing contact with USA clusters | Wiintech partners, trade agencies | JEC Conference in Boston (Plastipolis attending) and CCB discussions with West Virginia. | Ongoing | Within EU and USA. |
| Identify key centres | All clusters share data | Scoring system | Ongoing | San Diego Cleantech, Ohio Polymer Institute. |
| Timing of Visit and specific event where appropriate.<br><br>To be considered and defined. | Lead EU Cluster | Via local knowledge/links and existing contacts via consortia members. | June 2013 | USA |
| Gathering EU cluster feedback and technology/market interests | All clusters to provide to Proplast | Through Proplast leading Wiintech communication strategy. | Through Q3 2012. | |
| Dialogue with major USA market players through European events. | All partners | Through workshops, seminars, conferences etc. | October 2012 | ReTECH Conference, Washington DC. |

Table 17: Japan

| What | Who | How | When | Where |
|---|---|---|---|---|
| Contact with Japan clusters to confirm participation and interest. | Lead EU cluster - (Veneto Nanotech) | Direct contact | By end September 2012 | From Italy. |
| Smart building sector partner required.<br><br>Ongoing contact with Japan clusters | Lead cluster to try to determine.<br><br>Wiintech partners, trade agencies. | Through matchmaking event in November attended by lead partner. | November 2012 | EU Japan Centre, Japan |
| Identify key centres | All clusters share data | Scoring system | Ongoing | Nagano techno Foundation, Japan Plastics Industry Federation (JPIF) and Kyushu Recycle & Environmental Industry Plaza Institute. |
| Timing of Visit and specific event where appropriate. | Lead EU Cluster | A scoping visit to include attendance at matchmaking event run by EU Japan Centre.<br><br>Further visit in 2013 to be explored. | November 2012 | Japan |
| Gathering EU cluster feedback and technology/market interests | All clusters to provide to Proplast | Through Proplast leading Wiintech communication strategy. | Through Q3 2012. | |
| Dialogue with major Japanese market players through European events. | All partners | Through workshops, seminars, conferences etc. | | To be identified. |

The project partners agreed that it would be necessary to work with, and through national and EU agencies who are already involved with the selected country in order to help establish the necessary and required business and logistics support.

## H. Intercluster Activity

*Cluster Offerings and Template*

As part of the approach a common presentation of the features and benefits of working with the individual EU clusters as well as with a European partner more generally will be prepared. The clusters will collaborate to produce an agreed view of the benefits to the target clusters of establishing and sustaining interclustering activities with the partners. The early establishment of a Wiintech brand will assist in maintaining the wide linkage in the cleantech area.

A common template for all is an essential element of this and this document will need to be developed and translated into the national language of the clusters within the selected countries. It will contain key statistics about the EU clusters, their key business and technology interests, as well as business information and career background of the key individuals representing the EU cluster in order to encourage further contact.

*Inward Mission(s) and Sustaining the Links*

In each selected country visit, the EU cluster consortia will identify the best possible return event in the EU. From the workshops undertaken to date, in October 2013 in Dusseldorf was identified as providing the best opportunity. This is due to its scale and coverage and the partners believe it provides an attractive focus for further Intercluster activity across the range of technologies available in the partner clusters.

# I. Conclusion and Next Steps

**Next Steps**

Following the recommendations of the European Cluster Alliance's Task Force on fostering international cluster cooperation and its draft Handbook on cluster internationalisation, the consortium will look to use the following cluster activities in the programme of contacts with the target overseas clusters:

1. Organisation of study trips, workshops for gathering information on foreign market opportunities and trends;

2. Facilitation of finding strategic partners abroad, including science-parks, techno-parks;

3. Organisation of training for developing an international strategy for cluster managers;

4. Promotion of clusters at international level and support of their linkages with similar organizations (such as act as international gateway for clusters, and provide information on international platforms/conferences);

5. Institutionalisation of cluster evaluation through international panels;

6. Support for setting up clusters international offices such as permanent business missions, commercial attachés and office representatives on foreign markets;

7. Support for establishing partnerships with similar organisations abroad (e.g. signing of agreements with peers where international cluster cooperation plays a central role).

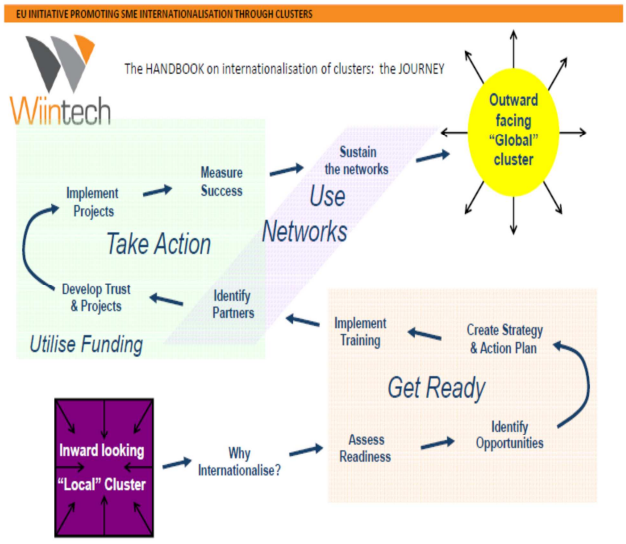
**Project Process**

The selection of target clusters across a wide range of interests was achieved by using a semi quantitative analysis and scoring systems and this was effective in focusing the partners on the best markets for their products and services. In particular the use of a facilitator assisted this process as did the face to face negotiations.

## The Overall Approach & the TACTICs model

The strategy roadmap process follows closely the TACTICs model which is currently in draft form. It is shown in Figure 1 below.

Figure 1: EU Initiative Promoting SME Internationalisation through Clusters




This sets out the best approach for turning EU clusters into more outward facing activities, looking for international opportunities to grow businesses especially SME's and to develop improved cluster policies. The Wiintech project will be a practical example of the application of the TACTICs model.

Particularly the Wiintech Project will be addressing many of the activities identified in the TACTICS analysis including:

- Access to knowledge
- Access to markets
- Access to new partners
- Promote cluster profile
- Attraction of foreign direct investment

So far the project has developed in a way which closely follows the structure proposed by Tactics although some steps need further attention – this is suggested in the Tube Map concept proposed by TACTICs group.

In summary the project is clearly taking forward conclusion 3 of the TACTICs report on intensified International networking and will be addressing conclusion 4 on Branding & Marketing. As the project develops the other insights of TACTICs will be considered by the partners.

In terms of the Steps proposed the project has moved through Steps 1 to 6 as follows

**Step 1 - Why?**

This stage has been addressed by the partners in coming together to promote the interests of their cluster members in the Cleantech sector.

**Step 2 - Assess Readiness**

The workshop process using the expertise of agencies such as UbiFrance and others has confirmed that all the partners are able to develop an internationalisation approach.

**Step 3 - Identify Opportunities**

The project through the workshops has identified the targets which all members can see the benefits of although this has required compromises due to the different interests involved.

**Step 4 - Create Strategy & Action Plan**

This has emerged from the workshop activity in detail

**Step 5 - Implement Training**

Because of the extensive experience of the support organisations such as UbiFrance and others this stage has required less attention, and by using the expertise of the consortium each member has been able to get direct experience of different approaches to internationalisation.

**Step 6 - Identify Partners**

The structured analysis of potential partners has allowed the consortium to identify the best opportunities for partnering with the international clusters.

The remaining steps are what the project will now take forward in 2013

**Step 7 - Develop Trust and Projects**

**Step 8 - Implement Projects**

**Step 9 - Measure Success**

**Step 10 - Sustain the Networks**

## J. References

1 Workshop 1 Minutes – Report Wiintech D1.2A

2 Workshop 2 Minutes – Report Wiintech D1.4A

3 NEPIC Strategy Presentation (Presentation at Workshop 2)

4 Cluster selection analysis (NEPIC, presentation at Workshop 2)

5 UBI France Presentations (Presentations at Workshop 2)

-USA

-Japan

-Brazil

-India