Position of the European Chemical Regions Network (ECRN)

regarding

Innovation and Human resources

POSITION FOR
the Ad-hoc-Group Innovation and Human Resources within the
High Level Group on the Competitiveness of the Chemical Industry

Preamble

The European Commission adopted a resolution on 14th June 2007 to set up a High Level Group – HLG - on the competitiveness of the chemical industry in the European Union. Thereupon, the Vice-President of the European Commission, Günter Verheugen, invited the European Chemical Regions Network – ECRN – to participate in the consultations.

The High Level Group has set the following objectives:

- To develop a comprehensive analysis of the factors which determine the competitiveness of chemical industry in Europe in the coming years;
- To provide advice and formulate policy recommendations to be implemented at a European and national level.

In the preparation phase for the implementation of the High Level Group, the following topics were identified as the focus for discussions over the coming 18 months:

- Innovation and human resources;
- Raw materials supplies and energy;
- Infrastructure and regional aspects;
- Trade policies;
- Societal requirements on the chemical industry.

The aim is to focus on the topic of "Innovation and Human Resources" in the initial discussions and in the meetings of the High Level Group on 10.09.2007 and in December this year. At the first meeting of the High Level Group the work programme for a sub-group is to be determined, in which the perspectives and the challenges regarding Innovation and Human Resources for the chemical industry are to be discussed.

Herewith a first statement and comment on the topic of Innovation and Human Resources is submitted. This will serve as a basis for the ECRN's statement for the Ad-hoc Group on Innovation and Human Resources.

Innovation in Chemical Industry Regions

With regard to ensuring competitiveness of the chemical industry, innovation and the development of the human resources is for the ECRN of essential interest.

The European chemical industry has a success story to tell. It is a traditional industry whose future is just about to come. Mankind is confronted with many challenges, such as climate change or the shortage of natural resources to name the most important ones. The highly developed European chemical industry is a key to manage these challenges. There will not be any sustainable solution without the chemical industry. Thus two preconditions must be fulfilled:
1. The chemical industry must speed up its innovation processes.
2. The chemical industry needs the best-qualified human resources in an open climate for innovation.

The European chemical industry has always been at the forefront of innovation. Impressive demonstration of its capacity to reinvent and change can be witnessed not least in changing its feed stock from coal to oil. Now it is in the process of shifting from oil to renewable resources. We also witness a much stronger demand driven innovation which requires stronger links between global players and SMEs as well as between enterprises and research institutions.

To promote this ongoing process, the regional dimension is highly significant. Often regions can initiate and support innovative co-operation when working hand in hand with industry and sciences by providing the required infrastructure and by contributing towards financing co-operation models.

It is especially at the level of regions that many chemical companies, particularly small and medium sized enterprises, work in close co-operation with educational and technological centres and other regional facilities. This makes the spatial proximity a key factor of the innovation process and increases the effectiveness of the innovation policy when the latter are tailored to the regional and local requirements.

In many chemical regions for instance, dialogue is underway between local political administrations and the business sector to actively promote the process of conversion of chemical locations into chemical parks and to enhance their innovation potential. They are well equipped to organise these platforms and in addition, regional authorities can also play a key role to the process of demand-driven innovation.

In many cases, regions also have an important function regarding the provision and operation of educational infrastructure and in the development of human resources. In this regard, they can play a critical role to enhance the framework conditions which encourage the development and training of qualified personnel.

Central Aspects for Discussion in the High Level Group

Faced with increasing challenges on many fronts, maintaining high levels of innovation will be central for the chemical industry to be able to compete at a global level Therefore it is important for the regions of ECRN:

- to recognise the future trends in technology early on;
- to develop the growth potential of innovative companies along the value chains in all chemical/synthetic materials sectors;

- to increase the rate of technology-oriented company foundations with a high growth potential;

- to continue improvement of the networking between science and industry and the suitability of the main focuses set;

- to promote Europe as a location destination for companies and services with intensive research and development activities and;

- to organise company financing and research, and to promote development and innovation at a high level.

Therefore, with regard to the discussion in the High Level Groups, the following proposals are made by the European Chemical Regions Network:

- *Understanding education and further education as a key task*
  A pro-active innovation policy has no backing without the corresponding anchorage in education politics. Education politics must promote skills and creativity from a very early stage. Apart from the specialist abilities, business abilities in the furthest sense just as reading and writing, other scientific and mathematical abilities, languages, learning competence and social and cultural competence are among the demands which the chemical industry focus on. Furthermore, digital competence is a basic prerequisite for the implementation of ICT at a wide level and the utilisation of their innovation potential.

  For ECRN a cause for concern is that the declining number of specialist fields relevant for the chemical sector at universities and colleges in many chemical regions.

  This process can only be reversed if suitable solutions can be found at all levels to raise the interest in technical processes during schooling and to promote key competences, to increase the image of study courses relevant for the chemical industry and to maintain the courses of relevance for the chemical industry in Europe.

- *Regional dimension of the Instrument European Technology Platform – develop greater co-operation between SusChem and the Chemical Regions*
  It is an important concern of the chemical regions to increasingly transpose the process of the European technology platforms into the regions. In this respect, the European Network of the Chemical Regions has developed proposals to extend the good experience of SusChem at a regional level. In this connection a co-operation between the European Chemical Association Cefic and the ECRN for the development of regional technology platforms is under preparation.

  Using Regional Clusters for the steering of innovation processes in Europe
  The regional level has the capacity to promote the building up and/or the development of successful clusters along the supply chain. SMEs in particular need the backing for instance of professional – and neutral – cluster management. Private Public Partnerships (PPPs) between region administrations, industry and academia should support and, especially in the early stages, help to steer the innovation processes. The goals of the PPPs should be to speed-up innovation, focussing on sustainable contributions and the establishment of “self-running”, open, innovation processes. The chemical industry is a huge enabler for innovation

in Europe. Other sectors such as electronics, automotive, life science or new energy need new materials and new products to implement into their portfolio and wll will benefit if the chemical industry is able to lower the time-to-market period,

- *Create links between education and chemical industry*
  Attracting graduates and experts with high levels of relevant skills and education to chemical regions is essential in order to maintain the competitiveness of this sector. The ECRN recognized the importance of this issue which provided the focus for the "Skills" study which is produced. This study will be presented during the preparation of the next High Level Group. Other future fields of discussion include the ongoing exchange for skills and training between educational institutions and the chemical industry which is supposed to lead into a long-term-plan for skill development.

- *Create Connection Mechanisms for the Link-up of Regional Initiatives at a European Level*
  The new generation of the European Structural Funds is a central instrument for the promotion of research and innovation at regional level[1]. In many chemical regions, the new structural funds programmes are a vital instrument for supporting innovation and research policy. An enhancement of innovation capabilities should therefore also be mirrored in the level of support given by these instruments in these regions.

- *Exploit the Possibilities offered by EU-competition policy for the promotion of innovation*
  The new Community framework for state aids in the field of research and development - which is to be adopted at the end of this year by the Commission - is to pave the way for the Member States to better assign their available funds for supporting innovation. This potential should be used to find more targeted and joint solutions to enhance the innovation potential in the chemical industry sector

- *Further Development of Regional Clusters in Chemical Regions*
  In the course of the reorganisation of chemical industry locations towards chemical parks, the cluster strategies have gained further importance. Being part of a cluster is usually an important competitive edge for companies. Clusters contribute towards closing the gap between companies, research and human resources and thus to bringing know-how quicker onto the market.

  Successful clusters enhance intensive competition just as co-operations do. They improve productivity, attract investments, promote research, enhance the industrial base, develop specific products or services and become the centre for the development of skills.

  To ensure that Europe can fully exploit the potential of its clusters, these indeed have to achieve a critical mass and a strategic alignment by more and better trans-boarder European co-operation (beyond the national boarders). Furthermore, they have to function as motors with greater drive for the development of innovation and human resources at a regional level. In this sense special attention has to be given to SMEs.

- *Push the European Exchange of Experience in the Sector Research and Innovation.*

[1] Also underlined in the recent Commission Communication „Competitive European Regions through Research and Innovation", 16.08.2007 COM(2007) 474.

In the course of the bottlenecks which are becoming apparent where the provision of sufficiently qualified specialists is concerned, the mobility of researchers and employees is becoming increasingly important. Both the geographical mobility and the mobility between the sectors has to be improved. From the point of view of acquiring new know-how and skills and the discovery of new applications a more sophisticated interaction between research facilities and industry is important. Therefore, the implementation of a European strategy developed by the Community and the Member States to create an open, common and competitive employment market for researchers which offers attractive possibilities for a career is of utmost importance. Both the Community and the Member States have to fulfil their tasks when implementing the strategy, also to ensure that researchers who leave a sector or a country for reason of a temporarily more attractive career are not lost forever.

- *Improving European and National Legislation in the Innovation Sector.*
  Innovation calls for a regulatory environment that is predictable, that allows for new developments in the sector of commodities and services and even promotes the latter, protects intellectual property rights and provides open and universal standards. The reduction of administration costs for the regulation of companies is an important contribution towards innovative measures. At the same time, the regulatory environment must also bringn about increasing levels of consumer confidence , indeed by ensuring that existing protection measures can just as effectively be applied to innovative products as to products which already exist. Evaluation of potential impacts of new legal regulations on innovation must be improved. The regulation measures should be predictable, flexible, simple and efficient.

  Regulatory measures which set targets, without giving preference to special technical solution, leave space for innovative solutions. For the ECRN, the protection of intellectual property rights is a further indispensable prerequisite for innovation. Motivation for invention is lost without appropriate protection of invention and intellectual creations,.

- *Creating a Balance between Technological Progress and Public Acceptance*
  The corresponding demand of consumers and citizens for new, innovative products and services is decisive for innovations. Apart from the creation of the optimum framework conditions and possibilities for innovation, there must also be an innovation-friendly market and a demand for the products. The prerequisite in this connection is particularly that the consumers have confidence in the products and services, and not least in a verifiable safety. The members of the ECRN therefore propose a strong cooperation between political administrative bodies and enterprises in this context, to overcome the concerns of consumers and citizens and to develop a stronger acceptance for innovation.