UNICE
Union of Industrial and Employers' Confederations of Europe
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INDUSTRIAL SERVICES :

REQUIREMENTS FOR R & D AND RELEVANT STATISTICS

1. INDUSTRY TODAY

Industry today is characterised by rapid change, new structures and high-tech, value-added products. Global competition sets the frame within which companies must act. The rapid evolution of knowledge, especially information technology, results in increasingly knowledge intensive products, shorter and customer oriented product cycles, more efficient production and increased specialisation. Companies focus on satisfying customer needs by delivering systems and goods with extensive and integrated software and service elements.

To meet these challenges, companies radically change their structures and organise their activities differently. Companies concentrate on core businesses, more peripheral activities are outsourced; networks are formed and services are integrated with hardware production. Each employee is given a wider range of tasks and responsibilities, bosses become coaches; hierarchies are compressed, and decentralisation and autonomous teams develop.

Thus the traditional classification of businesses into manufacturing and services is becoming obsolete. Rather, we should discuss in terms of larger industrial systems. Such systems encompass large and small enterprises, manufacturers, R&D - companies, software companies, marketing specialists, suppliers, maintenance, etc. We are quickly moving into a new era, not from an industrial into an information society but into a different industrial world. Examples of such larger industrial systems are pharmaceuticals and instruments, energy supply and transmission, food supply and packaging, and so on. These should be looked upon as integrated entities. Interactive industrial services like transport, financing, engineering consultants, software specialists and others are an important part of these systems.

When analysing employment in such industrial systems we find that, e.g. in Sweden, at least 25% are employed in service companies. If we also add all employees within industry involved in such service activities, we find that more than sixty percent of employees in industrial systems are dealing with service functions. The number of employees in this area is rapidly increasing while the number employed in pure manufacturing remains unchanged or is decreasing.

2. INDUSTRIAL SERVICES

When using this basic concept of industrial systems it becomes clear that the service sector is not a natural entity, governed by uniform influences. Instead, services can be differentiated according to their

main customers. On the one hand are the personal or household customers, where we find actors like hotels, retailers, health-care and social services. On the other hand are the industrial services, which include logistics and transport, financing, engineering and software consultants, and others. These two sectors overlap in many respects. Also industry and the traditional service sector are mutually dependent on each other. Health-care is the market for the pharmaceutical industry, retailers for food and textile industry, and so on.

In this communication paper we concentrate on industrial services, which however involve a wide variety of activities. The landscape is moreover changing at an increasing speed. To define the boundaries we propose that in statistics and R&D programmes the industrial value chain should be focused upon.

3. FACTS AND STATISTICS

This emerging new industrial pattern is not taken into account when it comes to reports and statistics. Available data do not fit in the evolving new structures of networks and integration of services and manufacturing. Reliable data and studies are available neither on industrial services nor on organisation, structure and management of enterprises in this changing context. We propose the development of new useful statistical definitions and tools taking these new characteristics into account.

Intellectual capital, mainly embodied in skilled staff, is the primary asset for the competitiveness of knowledge-intensive businesses. Theory and tools of monitoring and evaluating intellectual capital are still embryonic and lag far behind refined financial analysis. We propose actions to speed up progress in this field. What is at stake is not the production of another host of figures and data which are barely useful, but tools that can be handled by the actual stakeholders to improve their knowledge of the present structure of industry and to use them to increase their own efficiency.

4. RESEARCH AND DEVELOPMENT

These fundamental changes in the industrial structure also have significant implications for research and technological development. Industry not only sells products but provides solutions to the needs and problems of the customer. In these solutions there is a continuum between product development, production and services. To label most enterprises as either manufacturing or service companies is becoming more and more difficult and irrelevant as these activities are increasingly interconnected. Growing crossborder collaboration and evolving supply chain structures across Europe are another feature. It should also be noted that focused service companies have an important role in creating and disseminating knowledge for a wide variety of businesses.

The same kind of new approach must also characterise research. Thus there is a need for integrated research, taking both soft and hard sciences into account. The objective should be to improving industry related processes and services as well as products. Accordingly, there is not a need for a completely new specific scientific discipline but rather a substantially widened perspective. The specificity should be the integration of disciplines and structures.

5. THE FIFTH FRAMEWORK PROGRAMME FOR RESEARCH AND TECHNOLOGICAL DEVELOPMENT

R&D has traditionally been discipline-oriented, focusing on narrow fields of science or technology, while systems-oriented research has been weak. The integration of several fields of science as well as their interfaces has been insufficiently explored. The European Framework Programmes for RTD have been strongly based on academic priorities and performances and only to some extent on the needs of businesses. Although the intention to raise the industrial competitiveness of Europe has been a guiding principle in general for the Framework Programmes, the influence of the market and application aspects has been weak.

The 5th Framework Programme will be composed of thematic and horizontal programmes.

UNICE is of the opinion that, in order to enhance employment, competitiveness and growth at European level, the thematic programmes should encompass research on scientific and manufacturing issues, including research on industry value added services such as RTD services, engineering, software, logistics, distribution, sub-contracting, financing, training, communication, management, etc. Projects should not be directed to theoretical socio-economic studies but rather to such studies whose conclusions can readily be incorporated by companies, and especially SMEs to improve their performances and their competitiveness.

It is imperative that, within this programme, significant actions are taken to encourage R&D in the field of industrial services. There is no need for the creation of separate programmes or key actions but we propose a thoroughly widened objective/*definition* of R&D, which should influence the entire Fifth Framework Programme. Within this context we envisage much interest in projects concerning management and organisation of the evolving new industrial structures, the "virtual company", including the integration and networking of industrial services, its effects on competitiveness, employment and human resource needs.

The specific programmes (key actions) should be designed accordingly. In this field, as well as in general, we feel that it is imperative not to give detailed directions on research areas or actions, but to impose clear goals and visions and let flexibility and the market needs guide the details.

6. PROPOSAL

UNICE proposes actions to provide better facts and statistics in relation to industrial services. Statistics of businesses including services and data on intellectual capital are the two principal areas where there is a profound need for the development of better factual information and tools.

UNICE proposes that all research funded by the framework programme must be linked to market objectives, focused on the industrial structures of today and the (near) future and meet the criteria of European added value.

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