

R&D in the view of a textile testing and research institute

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In today's Europe, the only possibility for the textile and apparel industry to move ahead is the intensification of R&D activities through close international cooperation. Research Framework Programs and Leonardo da Vinci programs both serve this purpose. Within the framework of these R&D projects implemented with EU support, multi-language training programs and databases, cooperation aimed at the dissemination of the Best Practice and new, modern products with special features are developed.

1 A textile testing and research institute

INNOVATEXT® Textile Engineering and Testing Institute - founded in 1949 - is the central research, development and testing basis of the Hungarian textile and textile-apparel industry.

1.1 Major spheres of activity

INNOVATEXT® is the only institute in Hungary that has a laboratory accredited according to MSZ EN ISO/IEC 17025 for the testing of textile basic materials, inter-mediate and final products, textile floor-covering, textile apparel products and is also involved in labor-safety conformity testing of machines and equipment. As a centrally authorized institute, **INNOVATEXT®** is engaged in the testing of protective clothes and other individual protective devices. In this field of activity, the Institute represents Hungary in respect of the PPE directive in the cooperation group of EU-registered organizations. Accordingly, the activities of the **Institute** also cover fields such as consultation on quality control, environmental protection and recycling in the textile industry.

Priority fields of activity:

- applied research and technical development in the textile industry in Hungarian and international cooperation
- engineering service
- laboratory quality control tests and site inspection of textiles and clothes
- labor-safety conformity testing of machines and equipment
- testing of protective clothes, hand and head protective devices as an authorized laboratory
- special international qualification tests (e.g. ÖKO-TEX)
- standardization
- distribution of own-developed branded textile products
- technical-scientific information and library service
- special further training courses

In addition to providing quality control testing services to Hungarian companies, the **Institute** receives regular orders for such services from famous store chains, for example, Karstadt-Quelle and IKEA, and also from internationally known certification bodies such as SGS.

Our **Institute** is a member of several international associations such as

- Managers' Council of the European Research Institutes of Textiles (**GEDRT**)
- International Association for Research and Testing in the Field of Ecology (**ÖKO-TEX**)
- Association for the Assessment of Environmentally Friendly Textiles (**ÖKO-TEX International**)
- European Network of Textile Research Organizations (**TEXTRANET**) and
- International Testing Association for Applied UV Protection

1.2 R&D activity with testing background

Over the past few years, **INNOVATEXT®** has participated in a number of Hungarian and international R&D projects and is currently involved in several international projects within the framework of the **Leonardo da Vinci Programme** and the **5th Framework Program** of the EU. Being a member of the consortia set up through an "Expression of Interest", **INNOVATEXT®** has played an active role in the preparations of the new projects for **EU FP 6 (2002–2006)**.

INNOVATEXT® continuously monitors the latest EU and other international requirements in order to assist textile companies by providing them with the most recent information. In possession of the latest knowledge, the staff members of the Institute give regular lectures at the Budapest University of Technology and Economics and at the Budapest Polytechnic, as well as at further training courses organized by the Hungarian Society of Textile Technology and Science.

Through its extensive international relations, the **Institute** plays an important role in the EU accession process by the technical preparation of the Hungarian implementation of international and European standards and EU directives relating to the textile industry. Further, as a technological center **INNOVATEXT®** plays an active part in the involvement of SMEs in the European innovation processes.

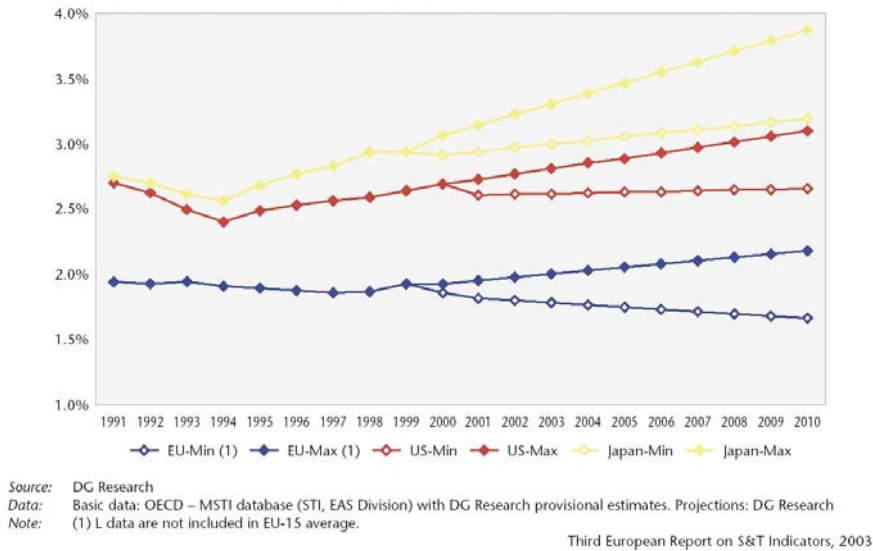
2 Technological Center and R&D

2.1 About R&D in general

Although the increase of R&D expenditure is a priority objective in the European Union, the 3% (of GDP) set as a target for 2010 will be difficult to reach under the present circumstances. This is well illustrated by the following diagram published

by DG Research on the basis of the OECD database:

Figure 2.1.6 R&D intensity (%) – forecast to 2010 with minimum and maximum projections, and with the presumption that no major changes in policy or in the R&D environment as a whole will occur



2.2 Innovation in the textile and apparel industry

Introducing R&D in this sector should be started with an analysis of the European situation but, unfortunately, we do not have time enough for this. Nevertheless, it is important to mention that in the next decades, the job safety of the almost 3 million people engaged in this sector in the European Union can only be created by persistent intensive R&D.

Based on the above, it is obvious that Hungary needs to join this innovation process as soon and as effectively as possible.

2.3 Overview of R&D projects

In the period from 2001 through 2003, the Institute was engaged in the following projects:

- Successfully finished projects
 - 1 Leonardo da Vinci
 - 2 EU 5 FP(RTD, IST)
- Projects in progress
 - 4 Leonardo da Vinci
 - 1 EU 6 FP(ETI-SSA)
- In preparation
 - 3 EU 6 FP(CA, CRAFT, Collective Research)

Now let me give you a brief overview of the projects currently in progress.

2.3.1 Leonardo da Vinci projects

We regard it as a very important result that projects of this type are accepted in a relatively large number, as special educational materials are indispensable for further training.

These projects are as follows:

FIBRONET – Development of a Vocational Tool on Textile Fibres designed for the New Work Situations in the European SMEs based on the use of new information and communication technologies

Partners:

1. CENTEXBEL (B)
2. INSTITUT NATIONAL de CRIMINALISTIQUE et de CRIMINOLOGIE (B)
3. Haute ECOLE „CHARLEMAGNE” (B) 4. CEFRET asbl (B)

5. TECHNICKA UNIVERZITA v LIBERCI (CZ)
6. DWI an der RWTH Aachen (D) 7. IFTH (F)
8. PEIGNAGE DUMORTIER s.a. (F)
9. SUBRENAT EXPANSION s.a. (F) 10. DUBAR-WARNETON (F)
11. ENSAIT (F) 12. ESTIT (F) 13. INNOVATEXT (H)

SMADETEX – System for the Analysis and Prevention of Defects in Textile Products

Partners:

1. CITEVE (P) 2. AITEX (E) 3. INNOVATEXT (HU)
4. SEPVE (GR) 5. APT (P)

TEXTILE AND CONSTRUCTION – Development of a training tool for the interpretation of standardised test results in the textile for the construction sector

Partners:

1. CENTEXBEL (B) 2. COBOT (B)
3. INSTITUT SUPÉRIEUR D'ARCHITECTURE SAINT-LUC DE WALLONIE (B)
4. TZU (CZ) 5. TFI (D)
6. INSTITUT für TEXTILTECHNIK an der RWTH Aachen (D)
7. UNIVERSITAT POLITECNICA CATALUNYA (E)
8. INNOVATEXT (H) 9. TMTE (H)

SEWNEW – Multimedia Advanced Training for Sewing New Textile Materials

Partners:

1. CITEVE (P) 2. AITEX (E) 3. BTTG (UK)
4. INNOVATEXT (HU) 5. LOUSAFIL (P) 6. SEPEE (EL)

2.3.2 A project in the 6th Framework Programme

The project to be introduced was preceded by a successful benchmarking program implemented under Framework Program 5 (**BENTEX** – Technology Management Benchmarking in the Textile Industry Across Europe).

Beyond academic results, the successful implementation of the BENTEX project and, in particular, the results of clustering benchmarking results from over 300 companies in 8 European countries proved that it is a company's human capital that is the burden or thrust factor towards innovation.

The following project was carried out as a continuation of that project:

ITE – Towards a European Wide Intelligent Textile Environment:
Building, Linking and Bonding

Partners:

1. CLOTEFI (EL) 2. BPM (EL) 3. TECNOTESSILE (I) 4. CITER (I)
5. AITEX (E) 6. CERTEX (RO) 7. ITV Denkendorf (D) 8. IPI (I)
9. LIC (LT) 10. INOTEX (CZ) 11. Inst. of Textile Architecture (PL)
12. INNOVATEXT (HU) 13. ACR Fund (BG) 14. LTC (LV)
15. Firenze Tecnologia (I) 16. TUTSIS (TR) 17. ITK (CY)
18. VUTCH (SK) 19. IRC Malta (MT) 20. CITEVE (P)
21. SEZ (D) 22. Agencia de Inovacao (P)

The combination of the rich and interesting experience of the BENTEX project and the most recent outcomes in the field of innovation research have given birth to ITE project, which aims at:

- The **creation of bridges** with the BENTEX project by further diffusing and disseminating technology benchmarking practices and results and by exploiting its “products” and “achievements”, i.e. databases, benchmarking self-audit tool, web platform, etc to enforce research cooperations
- The **establishment of a trans-sectoral network of experts** to transfer successful paradigms from other sectors and business environments

- The in **depth analysis of the role of human factor** in the adoption of innovation within SMEs, as a response to changes and undertaking new challenges (such as for example their participation in new research projects),

- The **extraction of best practices** in human resources deployment within the top performing European textile companies - derived from the BENTEX project- and their dissemination to a wide audience of SMEs,

- The wide and intense **dissemination of Community initiatives and FP6** to the textile SMEs in old EU member states (Greece, Italy, Spain, Portugal, Germany), new EU members (Lithuania, Latvia, Czech Republic, Poland, Hungary, Malta, Slovakia and Cyprus) and candidate countries (Romania, Bulgaria and Turkey),

- The **coaching of companies towards FP6** research projects and particularly the new instruments adopted

The project in figures

- 22 institutes from 16 countries participate as technological centers

- 9000 SMEs will be provided with information

- 305 SMEs will be directly contacted

- 105 enterprises will be involved in research proposals

- benchmarking will be implemented at 130 companies

3 Our major tasks for 2004 and 2005

- Through its extensive international relations, INNOVATEXT® is committed to continuously monitoring the latest EU and other international requirements in order to assist textile companies by providing them with the most recent information.
- The Institute plays an important role in the EU accession process by the technical preparation of the Hungarian implementation of international and European standards and EU directives relating to the textile industry.
- As a technological center, INNOVATEXT® is committed to playing an active part in the involvement of SMEs in the European innovation processes, in particular, in EU FP 6.
- We need to find ways to continue the modernization of our laboratory equipment in order to conduct tests related to public procurement tenders to the highest possible standards on the one part and in the area of protective clothes testing on the other. We carry out these activities as a centrally assigned laboratory, and our objective for 2004 is to obtain EU notification.
- We need to enhance the knowledge of our engineers in order that we can continue to participate in new projects as a reliable partner.

Conclusions

With this brief overview, my intention was to give you an insight into the development of the textile and apparel industry through some EU R&D projects.

Let me emphasize that in addition to R&D, universities and colleges play a very important part in training and further training which are equally essential for the maintenance of the high standards of innovation. Cooperation between international organizations (AUTEX, EURATEX, TEXTRANET) is increasingly stronger, which is a very positive factor in this development. In addition to universities and colleges, institutes involved in testing and R&D, operating as technological centers, also play an important role.