

**National Research and
Development Institute for
Textiles and Leather - INCDTP
Bucharest**



Institutional Development Plan 2012 - 2015

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Introduction

This is the **Institutional Development Plan** prepared by *Institutul National de Cercetare – Dezvoltare pentru Textile si Pielarie* (National Research and Development Institute for Textiles and Leather) – **INCDTP** in the context of new (national) certification process of Romanian research units or institutions¹.

For INCDTP the process has been (officially) initiated on 17.11.2011. The certification process will be coordinated by the Consultative Council for Research Development and Innovation at the request of the National Authority for Scientific Research.

The structure of this institutional development plan has been established by law².

The report begins with a **SWOT analysis** performed from scientific point of view to show the context, the strengths and weaknesses of the institute on scientific aspects (as internal factors) and to point out the potential influence of external factors (opportunities and threats) on the scientific activities of the INCDTP research teams.

The second section of the plan presents the **strategic scientific objectives and directions of research** of INCDTP / its research teams for the next 4 years (based on the scientific SWOT analysis mainly).

One of the main pillars of a research institute is its human resource and for INCDTP's managerial team human resources have a central position. For the next 4 years of activity the management proposes a strategy for the development of human resources (especially by attracting young people, support of young staff specialization– scholarships, PhD programmes etc.). A specific section into the report (the 3th chapter) is dedicated to this **human resource strategy**.

Maintaining a high level of knowledge being very important for a research institute, INCDTP has used **mechanisms and instruments to identify new research directions** (chapter 4). The financial aspects being equally important, the next section (chapter 5) presents a **financial SWOT analysis** that highlights both positive and negative internal and external issues that could affect the research and development activities of the research teams for the next 4 years.

High performance infrastructure is needed to reach the established objectives and the next chapter (the 6th) shows the **investment plan and the strategy** for developing INCDTP infrastructure over the next 4 years.

Given the high value of **TT, cooperation, communication and visibility** the final parts of the report presents the TT strategy and strategic partnerships that could be established in 2012-2015 (and possible related partners) and also specific activities that will increase the visibility of INCDTP – from scientific point of view – at national and international level.

1. Scientific SWOT analysis

The below scientific SWOT analysis focuses on identifying the internal factors (strengths and weaknesses) of the research teams that could be used to exploit the immediately existing opportunities and future possible threats - external factors - for the next 4 years (2012 – 2015) that could interfere with the institute's research and development activities in order to define the scientific objectives for the next 4 years. The strengths identified should help INCDTP managerial team to cope with possible threats from the external environment; the weaknesses should be diminished during the period and the existing strengths should be efficiently exploited in all identified opportunities.

Strengths (internal factors)

- The existence of a professional managerial team (focused on strategic planning, leadership management, application of modern operational management principles for communication and collaboration, quality assurance, objectives and market orientation (INCDTP strategy 2007-2013), involving staff in making decision process)
- Good cooperation with public and private entities (universities, other RDI institutes, economic partners, authorities) – perfect understanding of the target group / clients
- Possibility to approach more fields with RDI projects according to INCDTP expertise and competences (multidisciplinary research teams)
- High level of flexibility and adaptability of staff at the financial (national and European) instrument requests – matrix structure, competences for multidisciplinary research and development approach

¹ Government Decision 1062/19.11.2011

² *ibidem*

- High rate of capitalization of the RDI project results (upward trend of number of patent applications and patents – possibility to use own technology transfer entities: a business incubator (ITA-TEXCONF) and an innovative spin-off (MEDTEX))
- Highly specialized and skilled staff, highly committed to their career development in RDI sector
- Permanent effort of INCDTP management team to keep its staff at the highest competence level by training using various tools (PhD programmes, postdoctoral programmes, certified training courses, scholarships and internship, thematic courses, foreign languages) and competences evaluation – own training and professional qualification center
- Modern RDI infrastructure for RDI activities (attested laboratory apparatus and technological equipment for laboratory and pilot - scale experiments, computing, simulation and modeling programmes)
- Relevant capacity to attract funds, especially from international and private sources
- Good information, communication and documentation infrastructure at INCDTP (GRID network, libraries, databases, intranet, internet, wireless network)
- Good visibility of the RDI teams/researchers at national and international level (support of researchers to participate at conferences, symposia, fairs, exhibitions, thematic events, brokerage)
- Control Quality implemented at RDI and services level: Quality Management (ISO 9000); Environment (ISO 14000), OHSAS (18000); EN SR 13485, EN SR 17025
- Excellent brand and recognition of RDI competencies, at national as well as international level (awards, prizes, medals, diplomas, ISI rated journals)
- Strong reputation of INCDTP on the national market as main provider of RDI activities in the textile and leather sector (more than 60 years of experience)
- Member of European Bodies, National Advisory Boards / Councils, Thematic Networks, Associations, both at national and international level (EURATEX, TEXTRANET, GEDRT, COTANCE, INSME, ACTE, CLUSTERO, FEPAIUS, PRCP, IFATCC).

Weaknesses (internal factors)

- Personnel aging, especially in the RDI field
- Reduced rate of success within RDI international projects (especially the 7th EU FP for RDI)
- Unsatisfactory ratio between attested/certified (57) and auxiliary staff (90) for RDI activities (1.57)
- Low (still) number/share of PhD students and master's degree candidates in the total staff
- Old and outdated RDI infrastructure for pilot level experiments (80%) as well as the need for high-tech RDI technologies / infrastructure
- High rate of overhead in the total expenses of INCDTP
- Reduced productivity level in RDI activity (Euro/researcher³/year)
- Reduced (still) capacity for marketing / “selling” of our products and technologies to economic sector – lack of the efficient mechanisms / tools to improve INCDTP promotion (website, review)
- Insufficient incomes to satisfy the staff salaries requests
- Need to improve the staff skills for using foreign languages.

Opportunities (external factors)

- The existence of clear research and development and sectorial policies and strategies (from medium to long term) in the INCDTP domains of interest (textiles and leather), both at national and international level (National RDI Strategy 2007-2013, RDI Strategy in the textiles – leather 2007-2013, National Export Strategy of the textiles- leather industry, National Development Plan of Romania, EU Strategy 2020, etc)
- Exploitation of existing (financial) instruments for the achievement of the research and development objectives and sectorial strategies (such as National RDI Plan 2007 – 2013, European Fund for Regional Development (FEDR) / Structural Funds 2007 – 2013, the 7th EU Framework Program for RDI, Competitiveness and Innovation program – CIP, EU HORIZON 2020, other RDI related programs – EUREKA, COST, Cross Border Cooperation) in the INCDTP's sectors of interest
- An increased need (at national and international level) to foster the cooperation between education, research and innovation and economic environment

³ Full-time-equivalent

- Excellent opportunities to attract young people to research and innovation by using existing incentives (scholarships, masters, PhD and post-doctoral programmes) promoted by RDI financial instruments (Structural Funds / Sectoral Operation Plan Development of Human Resources 2007 – 2013, National RDI Plan 2007-2013 / Ideas and Human Resources sub-programmes);
- Strengthening of the national research and development, innovation and technology transfer system especially through Structural Funds (existence of ReNITT⁴ instrument; development of clusters, poles of excellence, poles of competitiveness, private and public RDI centres, establishing start-ups and spin-offs, financing innovative companies) – establishment of stronger partnerships for INCDTP for RDI collaborations;
- Lack (still) of powerful competitors on the domestic market on our RDI field of expertise

Threats (external factors)

- a low level of recognition of the RDI role in the country's economic and social development (the development of strategies / policies is not a sufficient condition. ... their implementation is important);
- a very low level of RDI expenses at national level as GDP percentage (on the last positions in Europe) (0.48% in 2011 as compared to 2.01% in EU27⁵)
- a reduced trust of the RDI actors (universities, RDI institutes, private sector) in the RDI (and sectorial) policy-makers
- a reduced culture and expertise in evaluation process in Romania - a too restrictive (new) certification process (HG 1062/2011) for RDI system – unprepared national institutes (for such a complex process), unbalanced criteria for evaluation (fundamental versus applied research activity), a barrier for young researchers to apply with projects (only PhD graduates can be PM)
- a (general) high level of bureaucracy and negative impact of the Government fiscal (but also human) and RDI policies
- high level of taxation (more than 100 taxes in Romania) which limits the development of business environment and innovation capacity
- lack of cooperation between sectorial and RDI (sectorial) policy makers
- the actual economic and financial crisis – a relevant impact at national level with strong implications at macroeconomic and social level;
- a continuous decrease of the number of researchers (aging of researchers, unattractiveness of the RDI jobs / salaries, more attractive salaries in private sector but not for RDI activities, uncertainty, lack of predictability, lack of safety of the working place in the RDI public system)
- practicing Lhon production system by the enterprises and re-allotment of the textile-clothing production in the Asian countries
- low level of Government support (by incentive programs and schemes /facilities) for the textile-leather domains in order to implement the provisions of the EU legislation and the integration of environmental aspects into the manufacturing processes
- brain drain process (abroad or to private sector) (Romania ranks 131 out of 142⁶);
- an increased interest of entities from abroad in the Romanian RDI market (more experienced entities entering the RO market – that will increase the competition)
- Losses of the scientific core competences – a big gap between the national core competences and worldwide scientific progress (important impact was the under-financing starting with 2009 in RO)
- Reduced capacity for innovation of the national private sector (rank 78 out of 142⁷), reduced competitiveness level of private companies – lack of incentives
- Unsatisfied level of university – industry cooperation on RDI (115 out of 142 countries)⁸
- Fragmentation of the national and European RDI market
- Reduced availability of engineers and scientists (59 out of 142)⁹
- Lack of investment in infrastructures (95 rank out of 142¹⁰)

⁴ National Network for Technology Transfer and Innovation

⁵ Innovation Union Competitiveness Report 2011

⁶ *Global Competitiveness Report 2010- 2011 – World Economic Forum, 2011*

⁷ *ibidem*

⁸ *ibidem*

⁹ *Global Competitiveness Report 2010-2011, World Economic Forum, 2011*

¹⁰ *ibidem*

- Low quality of the RDI institutions (91 out of 142 countries)¹¹
- Low level of knowledge of laws on intellectual property rights.

From our point of view, we have adequate “scientific” power (expertise, skilled people, good infrastructure, contacts, memberships, partners) to cover the identified threats (actual economic context, reduced public budgets for RDI, reduced trust of RDI system into policymakers, increased competition, etc) and we identified good opportunities (international funds, good European strategies connected to our fields of interest for next period, needs for cooperation with industry, etc) to deal with the existing weaknesses of our team (reduced productivity especially in international projects, aging of staff, need for young specialized people, lack of motivation). All of these will be easily covered by reaching the scientific objectives proposed for the next 4 years (see next section of this report) focusing our activity on the research directions based on our expertise, staff, collaborators, and new RDI directions.

The objective aimed by the managerial team of INCDTP is to have in the 12th month of each year an annual concrete analysis of the above mentioned SWOT indicators and to check their status, to see if unexpected threats occurred within the new context that can’t be covered with the existing strengths of the teams or other opportunities that could be better exploited by the research team in order to overcome its weaknesses. And if the results are positive we will use the same approach if not we will define other elements to rely on for our further RDI activities.

2. Strategic Scientific Objectives and directions

Based on the national and international strategies / policies / documents (such as: the existing strategy of INCDTP, National RDI Strategy 2007-2013, EU strategy 2020, new EU framework Program (HORIZON 2020)), taking into account our mission / vision (as national R&D institute) and relying on the expertise gained (from the past) INCDTP established its scientific objectives and research directions for the next 4 years (2012-2015).

Scientific directions

- Advanced, interactive, functionalized, micro and nanostructured textile products and systems;
- Advanced products and technologies for the leather-footwear-rubber goods domain;
- Advanced biomaterials and medical devices for the improvement of health and quality of life;
- Strengthening, improvement and implementation of green technologies for more competitive products that minimize the impact on the environment and the consumption of resources;
- Tools, methods and policies for applying the “knowledge triangle” (education – research- innovation) for eco-sustainable development of the textile, clothing and leather sector;
- Creative materials, preservation & restoration of cultural heritage.

The main scientific objectives of INCDTP for 2012-2015 are:

- **to support the national textile – leather sector in order to increase competitiveness of the enterprises** through/by:
 - development of private – public partnerships with enterprises in the textile – leather field through direct contracts with beneficiaries, research services for the set-up of innovative start-ups, using the research results; under evaluation there are projects submitted by private enterprises for the set-up of two innovative start-ups in the field of customized garments that will hopefully get materialized in the next period;
 - intensified technology transfer of the research results by an increase of the orders received for micro-production (technical textiles, leather articles, design) and services offered to enterprises (a minimum 10% increase of revenues from testing activities);
 - the increase of INCDTP’s involvement in the professional training of employees from the textile – clothing industry; two projects that are part of Leonardo da Vinci programme are being prepared and they aim at adapting the professional training to the needs of the textile – clothing labor market;
 - increased involvement of INCDTP in the practical training of students and the organization of «Open doors days» events with pupils and students;
 - intensified activity of the Technological and Business Incubator - ITA TEXCONF through the development of an interactive system to promote the concept of “incubation center”, a 20% increase of the number of incubated companies, TT specialists training, entrepreneurship, innovation manager by the participation in specialized training; during 2012-2013 INCDTP shall provide entrepreneurship training courses within the project “Entrepreneurial Culture – a chance to develop the entrepreneurial spirit of employees from the textile industry” financed through Structural Funds.

¹¹ *ibidem*

- **to preserve its elite position in the Romanian RDI field and to increase its scientific performance** through:
 - a 5% yearly increase in scientific production: ISI rated articles, patents, patent applications, papers presented at national and international scientific events, number of citations;
 - the RDI activity of INCDTP shall preserve its orientation towards excellence research (development of new multidisciplinary research directions in niche fields of textile – leather sector, participation in national and European research consortia, increase of the number of projects and an 10% increased participation in national and European RDI programmes, programmes financed by Structural Funds and Regional Development Funds;
 - maintaining and increasing the critical mass of researchers in the research team especially in under-staffed and over-aged sectors, by recruiting young graduates and training them for a research career;
 - maintaining an infrastructure that is adequate for the approach and development of complex research at national and European level;
- **to increase its visibility** at national and international level through:
 - an active participation in scientific events and exhibitions in Romania and abroad – a 10% increase is estimated;
 - participation at work groups (in Romania and abroad) to identify new project ideas /research directions/ new partnerships; a 5% increase is estimated;
 - development of **strategic collaboration partnerships** with prestigious institutions (especially private, universities and research institutes but also multinational private companies; as main targets, there are some national public institutions (we are for instance very interested in **new collaborations/contracts with aeronautics, military and medical actors** – private and public, based on our previous contracts / experience); a 10% increase is estimated;
 - organization of the 5th and 6th editions of TEX TEH international conference in 2013 and 2015 and 4th and 5th editions of ICAMS international conference in 2012 and 2014;
 - further on editing of high scientific level magazines for textile-leather sector: Industria Textila- increasing the impact factor and obtaining a high relative influence score, Leather and Footwear Journal – becoming ISI rated;
 - the first cooperation protocol concluded with ROST (Romanian Office for Science and Technology, Brussels office) in order to maintain the permanent contact with the European scientific community and promote our expertise abroad;
 - dissemination of own research results through available media, newsletters, press releases, participation in TV or radio debates, by means of own web-sites (www.certex.ro, www.industriatextila.com), but also by creating partnerships with other similar websites;
 - new affiliation to national and international bodies from the textile-clothing and leather and related domains – actions are taken for the affiliation of INCDTP with the Employers Association of Professional Training Providers in Romania; there is a possibility to set up an observer regarding national competences in the textile – leather field, that will cooperate with EURATEX, COTANCE and ETUF: TCL;
- **to increase the degree of exploitation of RDI results** especially by the usage of spin-off and TT center by:
 - organization of promotion events;
 - creation of new data bases and use of the existing ones;
 - diversifying the offers to clients and identification of their needs.

3. The human resources strategy

At the European Council which took place in May 12th 2009 on the theme of strategic framework for the European cooperation in the area of education and professional formation („ET 2020”), the following conclusions were made:

- ✓ Education and training play a fundamental role in accomplishing the objectives of the Strategy *Europa 2020 regarding* an intelligent and durable growth, favorable to inclusion, especially by providing the people with the skills and abilities that the economy and the European society require to remain competitive and also by their contribution to the conveyance of social inclusion and cohesion.
- ✓ The new strategy regarding professional training aims to facilitate the development of both general as well as specific competences, adequate for a modern economy, improving the quality of the educational training system, encouraging creativity and entrepreneurship and facilitating learning through life experience for people of any formation or qualification.

Also, the (next) EU Framework Program for Research and Innovation Horizon 2020 established that the development and implementation of research and innovation agendas impose public-private partnerships, building of effective industry-research links, speed up innovations, strong support for human resources development.

What do we propose?

Defining the human resources strategy 2012 – 2015 for INCDTP was achieved in accordance with the EU and national strategic documents for research and development and correlated with its own research and development vision, mission, strategy and objectives. Considering the 2007-2011 accomplishments of our team but also some failures (positive and negative issues – both being used for further improvements) as well as the scientific (new) directions of RDI (including the appearance of the new research directions on our field of interest in the next future), INCDTP has the following objectives:

1. supporting the constant professional training of its staff;
2. hiring highly educated young people and doctoral students and support / prepare them to become researchers on our competence/interest fields;
3. attracting specialized and certified personnel.

How to do that?

For these proposed objectives we will perform the following actions:

1. Supporting the permanent **professional training of our staff** represents a primordial course of action for the managerial team. This will be accomplished through **material and financial support (a percentage of 50% of the taxes)** for our personnel that undergo graduate (master's, doctoral, postdoctoral degrees), specialized courses on professional and/or related fields (professional, specialization, instrumental analysis, project management, quality management, trainers, etc.), foreign language training, individual development through information and documentation, publishing of technical papers, participation to national and international scientific meetings, fairs, exhibitions etc.

All of these actions will prompt the continuous development of the staff, will sustain the promotion of our institute to higher levels within the national RDI system of activity, will increase the attractiveness of a carrier in research and will ensure the development and implementation of new projects and new research fields, accessing European instruments by INCDTP. Also, a continuous training of staff according with scientific needs will assure the needed critical mass in the field of interest but also for the new opportunities (researcher directions) to be exploited by our research teams.

2. by **hiring highly educated young people** (competent) we want that within the next 4 years **7% of the employed personnel to be young people (25-30)** with higher education degree, out of which **a minimum of 30% to be represented by PhD students**. Taking into consideration both the current and the future (new) research directions of the Institute, the following specializations are targeted: chemists/biochemists, technology engineers, biotechnologists, physicists, IT technicians.

3. Regarding **specialized / certified personnel** currently there is a deficit of certified researchers, especially for levels I and II, but also of personnel with secondary education (such as technicians).

In order to reduce this weakness, we want that within the next 4 years to support researchers to meet performance indicators, organizing certification competitions, leading to an increase with **5% of certified staff** (relative to the current number of employees). Facilitating researchers' access to state of the art equipment and informational resources by providing a coherent and efficient research infrastructure and motivating the RDI personnel by granting labor rights in accordance with the responsibilities afferent to the research projects.

Apart from these main objectives we will:

- **increase the efficiency of the existing human resources** (by creating motivation schemes, by establishing performance criteria, by increasing the performance standards, increasing the managerial abilities, diversification of communication and collaboration schemes, rewarding the success, periodical evaluation)
- **create a modern management** (create an attractive institute for research career, permanent adaptation of human resource policy in order to cultivate the professionalism, the competences criteria, the values; permanent evaluation of staff competencies; reduce the overloading of valuable staff with inefficient works; institutionalization of mentoring issue in each research team with a major scope in training, selection, development and socialization for young specialist/researchers)

All of the above mentioned measures for the development of the human resources of INCDTP are observing the trends and policies at national and European level and through a greater investment in human capital, for the improvement of its skills and competences, the premises of achieving the strategic scientific objectives of the institute will be ensured.

This strategy will be based on constant communication with the employees, communication in terms of the objectives regarding the Institute's policy, in order to raise awareness, to timely achieve the established objectives and to motivate.

Certainly, we established these objectives in order to reach them but also for creating proper tools / mechanism, to have some sort of a focusing device which helps us to check where we stand/are and whether the goals / strategy is still relevant, if we are (still) on the good way. According with the results of the periodic evaluation / analysis we will continue to improve this proposed human resources strategy.

4. Mechanisms for stimulating the appearance of new research directions

Mechanism: an assembly of inter-coordinated elements that are part of a whole that functions like a living organism. (Nodex)

In our days scientific information flows through various channels with a stunning speed, therefore INCDTP has no major problems to identify new research directions. The challenges to identify the better new research directions are determined by two aspects that are the basis for defining the stimulation mechanisms:

- the **capacity of INCDTP to approach new RDI fields**: nanotechnologies, advanced materials (composite and smart materials for constructions, agriculture, transport infrastructure, medicine, cosmetic textiles);
- the **capacity of the textile – leather field in general to absorb RDI projects results**: the globalization of research limits to a certain extent the effect of this challenge.

In our institute, the proposed¹² mechanisms to stimulate the appearance of new research directions for the next period focus on:

- **Collaborations with the educational system:**
 - defined as a main instrument for the development of the knowledge – based society, the higher education system in Romania is a strategic partner for INCDTP in research projects (30-35%). The approach of common or specific research directions through the consolidation of cooperation of specialist teams shall stimulate the connection between the fundamental and applicative aspects of projects;
 - development of the research triangle in the textile – leather field: INCDTP (research and innovation) – universities (education and research) – enterprises (research and innovation) (based on the triangle EDUCATION – RESEARCH-INNOVATION) in order to define a common research agenda that would mobilize both public and private financial resources, new partnerships;
 - consolidation of the cooperation aimed at supporting doctoral and postdoctoral schools by providing INCDTP with research expertise and infrastructure in preparing young specialists for a research career and identifying new research directions;
- **Investment in the human resource:**
 - support the specific RDI promotional activities: participation in scientific events, fairs and exhibitions, inventions and innovation exhibitions (followed by discussions with colleagues of each team on the subjects presented);
 - support for specialization of technology brokers for textile – leather sector;
 - support of professional improvement through doctoral and postdoctoral programmes, scholarships and research programmes abroad;
 - support for participation at the multidisciplinary training and in RDI convergent fields;
 - initiation of research circles for pupils and students;
- **Investment in the infrastructure:**
 - development of virtual centers with libraries of ideas in research and industry; these should operate as interfaces between the two systems in order to generate RDI projects;
 - elaboration of catalogues with products, technologies, services resulted from RDI;
 - acquisitions of new state-of-the art equipments, that will support the participation of the institute to new national and international research programmes;
 - organize and participate at specific event for stimulation the identification of the innovation needs of the clusters, technological parks, business incubators etc (exploit better the results of existing national and international clusters, incubators, networks);
 - dynamic multidisciplinary framework for identifying the border ideas (trans-disciplinary): accessing new national and European platforms of interest / related domains; new partnerships with RDI units / organizations which are members of traditional professionals bodies (national and European level); bilateral RDI projects;

¹² In fact, part of them are proposed because they were already used successfully by our research teams
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- **Exploit the European projects role & results:**
 - EU framework programmes have a decisive role in promoting multidisciplinary researches and scientific partnerships and they represent a challenge for INCDTP and, at the same time, open opportunities for: development of common RDI initiatives, launch of joint calls (for example, CROSSTEXNET) with the purpose of bringing the own research programmes closer to those of European RDI units that have a higher level of expertise and knowledge; new partnerships with more experienced researchers, scholarships;
- **Exploit end-users feedback & needs:**
 - the research – industry partnership promoted by attracting the enterprises in conducting research projects that facilitate a rapid assimilation of results and also the generation of new ideas correlated with the innovation needs imposed by the increase of competitiveness on the global market;
 - the development of research culture at the level of associative system in the textile – clothing field by the promotion of results and chiefly of their economic – social effects shall open the way for new ideas and RDI directions;
 - the development of market survey to identify the demands of the markets and consumers;
- **Membership Quality of Scientific Advisory boards/councils/committee:**
 - improvement of INCDTP relation framework by affiliation to professional associations, employers' associations, chambers of commerce, clusters, national and European technological platforms etc. with the purpose of rapid identification of the development tendencies and of the challenges entailed by a global market that is increasingly dynamic and competitive in generating new ideas and research directions;
 - making use of instruments to identify market and clients' requirements: market survey, foresight exercises, exploratory workshops, prospective studies etc.

5. Financial SWOT analysis

Based on our proven strengths and identified weaknesses (as internal factors of our institute) and relying on the existing opportunities and possible future threats (as external factors that could influence our activity) below is presented a FINANCIAL SWOT analysis for the next 4 years.

<i>STRENGTHS</i>	<i>WEAKNESSES</i>
<ul style="list-style-type: none"> • The capacity of INCDTP to access attract financial sources (European funds) allowed the partial coverage of the deficit of national financial resources in RD activity (from 3.4% in 2007 to 20.3% in 2010); • Winning bilateral projects with countries within and outside EU has opened new horizons on the cooperation with external partners and attracting new external European funds in INCDTP (for ex. SEE ERA_NET); • Financial stability in the period 2008-2011, despite the problems caused by the inconstant collection of the amounts due from national and structural stages, allowed the retention of the INCDTP attested research personnel; Increasing the number of RD personnel from 52 persons in 2007 to 59 persons in 2011 will contribute to a high scientific level and to the capacity of winning new RDI projects. • Financing investment programmes such as CAPACITIES, GRID and other structural projects has opened new opportunities for the capitalization of research results, by creating new services for the private environment, bringing additional revenue to the turnover; • The financing of the laboratory certification activity contributed to the attraction of extra-budgetary revenue in the turnover of INCDTP; • Rental of unused spaces for the RD activity to the enterprises contributed to the supplementation of extra-budgetary revenue able to take over the financial overhead 	<ul style="list-style-type: none"> • Low level of researchers salaries, unmotivated staff from financial point of view • Reduced incomes from national public sources - The negative effects of the national and international economic crisis determined: <ul style="list-style-type: none"> - reduction by approx. 32% of the value of PNCDI 2 projects during 2008-2011; - lack of PNCDI II competition launch during 2009-2010; • Budget cut of our running projects - Lack of payments in advance to INNOVATION Programme Module I and Module V and financing of a single stage per year generated financial imbalances; • Sub-financing of national projects during 2008-2011 has led to: <ul style="list-style-type: none"> - The limitation of acquisitions of new and high performance equipment; - The reduction of travel expenses in Romania and abroad and expenses with services and materials have negatively influenced the project achievement indicators; • Lack of efficient fiscal policies - In the period 2008-2011 no financial resources (subsidies) were allocated for buying “scientific publications and specialized books” to raise the scientific level of researchers; • System sub-financing generated a deficient marketing in promoting research results; • Financing by commitment appropriation of national

<p>of INCDTP;</p> <ul style="list-style-type: none"> • Hiring a foreign specialist within INCDTP having as support a structural project won allowed the connection of INCDTP specialists with EU specialists in order to start new RDI collaboration premises; • The reduction of non-CD personnel from 242 persons in 2007 to 144 persons in 2011 reflects the concern of INCDTP management to reduce the administration costs; • The payment to date of all tax liabilities allowed the good development of RD activity, the reliability being a prerequisite for the INCDTP participation in contracting new RD projects. • The financial capacity of institute to co-finance the project costs until the financier reimburses the eligible costs/share • Good financial management – proper instruments used (financial audit, monitoring and control of costs etc.) 	<p>programmes, collection of reimbursement claims with an overdue payment of more than 90 days caused disruptions in the institute cash flow;</p> <ul style="list-style-type: none"> • Getting medium-term loans to cover the budgetary deficit increased the INCDTP indebtedness.
<p>OPPORTUNITIES</p>	<p>THREATS</p>
<ul style="list-style-type: none"> • National funds for RDI - financing opportunities through the participation of INCDTP with 35 eligible project proposals in the 2011 competition (in evaluation); • International funds for RDI - Financing opportunities for the RDI projects through FP7 programs, CROSSTEXNET, structural funds etc; • Exploitation of own know-how on TT and spin-off / The possibility to develop business incubators can lead to an increase of the turnover and to the valorization of the research results; • Attracting national and international private sources by selling “RDI PACKAGES” can lead to the consolidation of the financial stability and to the creation of jobs in research; • The opportunity to set up social-professional training centers led by researchers from INCDTP through POSDRU projects; • Diminishing the financial deficit by attracting new RD projects privately financed; • The opportunity to efficiently use the research dedicated spaces and equipment aims at developing high performance cost centers in RD activity; • The endowment with high performance RD equipment can open new horizons for the valorization of results such as: setting up new high performance laboratories, unique research services dedicated to the Romanian private environment; • The opportunity to rent new spaces to private enterprises in order to cover INCDTP general expenses; • Exploit the existing memberships and collaboration partnerships for further common RDI activities 	<ul style="list-style-type: none"> • Incoherent Governmental policies (personal – salaries, financial – fiscal, supporting SMEs to participate at RDI – incentives, attracting of funds – reduced rate of absorption of funds through Structural Funds) • Low financing of the projects won at the 2011 competition through the National Research Program; • The rise in indebtedness due to: <ul style="list-style-type: none"> - overdue payments of the reimbursement claims for the structural projects; - incurring expenses that subsequently prove to be non- eligible for the RD projects can lead to major financial blockages; • Instability of the cohesion between the European and national legislations on issues referring to RD reimbursements; • Migration of young RD personnel to other fields of activity due to low RD financing; • The lack of efficiency in the use of spaces/equipment for research can lead to high financial overhead that cannot be covered and reimbursed through projects; • Sub-financing of the RD activities can lead to an increased ageing and obsolescence of the existing research equipment; • The lack of subsidies for the subscriptions to specialized literature can have a negative influence on RDI activity; • Reduced and inefficient communication between ministries and RDI state agency (at elaboration of strategies, policies or creation of proper and necessary tools to attract investments to RDI – incentives, co-financing rate, bureaucracy, lack of management skills into AM/OI, etc) ; • Reduced level of Foreign Direct Investment in Romania in the last years; • Reduced share of financing for RD sector as % from GDP in the last years

By taking into consideration of all the above issues the managerial team is convinced that from financial point of view the strengths of our team could cover the possible threats identified for 2012 – 2015 and the possible opportunities that could be exploited into the next future to help us to improve all our identified weaknesses. For that, is proposed a yearly

checking of these SWOT analysis indicators to be informed in time about the status and be able to take decisions for further actions. According to the specific financial context we will develop our RDI activities.

6. Infrastructure: investment plan and strategy

By investing in its R&D infrastructure INCDTP aims to stimulate and enhance the productivity on short and long term with a multiplier effect for generating scientific, economic, social and environmental benefits.

R&D projects can be achieved only with the contribution of resources (human, material and financial) and specific infrastructure goals. At the same time projects must contribute to the development of a collaborative research infrastructure that enables researchers to work with advanced equipment, supporting the participation of the institute in both national and international research, development and innovation programs.

Within the next four years (2012-2015) INCDTP has as objectives to invest in order to support RDI activities (ongoing projects: ERA NET – CROSSTEXNET, EC FP7, EUREKA, EUROSTARS, RO-BG Cross Border Cooperation 2007-2013) and to improve the work environment as well as being compliant with environmental legislation and quality requirements. Funding resources for these investments will be represented by budgetary funds (especially funds allocated for acquisition of tangible and intangible assets in research contracts) such as PNCDI II, Structural Funds / axis 2 for research, Romania-Bulgaria Cross Border Cooperation Program 2007-2013, EC FP7, EC CIP, and own funds intended for repair and maintenance of existing infrastructure.

Currently the institute has a basic infrastructure that ensures the development of RDI projects and activities as well as achieving the expected results. However some of the equipment is old and outdated and needs to be replaced with newer and more advanced endowments.

In addition to developing new scientific directions INCDTP needs to supplement its specific endowment to ensure the implementation of the new objectives targeted.

Thus, for the development of the research infrastructure, the institute has proposed the following strategic objectives:

- ✓ Developing its own infrastructure in correlation with other research infrastructures (infrastructures of potential partners: research centers, universities, SMEs);
- ✓ Increasing the utilization degree of the research infrastructure;
- ✓ Developing the scientific information and documentation infrastructure;
- ✓ Capitalizing on the potential of research, development and innovation resources, on a regional, national and European level.

Given that the INCDTP's main activity is **applicative research**, carried out in complex consortia which include research institutes, universities and SMEs in the textile- leather industry, INCDTP has planned for the coming years the acquisition of the following types of equipment:

- **Laboratory equipment** for specific trials and testing applicable for advanced materials and nanomaterials from the textile and leather field; PNCDI II-Partnerships Programme and FP7, for which there are project proposals submitted at the November 2011 calls.
- **Equipment** for achieving new biomaterials and for the development of medical devices designed to increase the quality of life and health; PNCDI II-Partnerships Programme, for which there are project proposals submitted at the November 2011 calls.
- **Equipment** for waste water analysis, Romania-Bulgaria Cross Border Cooperation Programme 2007-2013.
- **Equipment** for the development of new polymers and composites with diverse applications; PNCDI II-Partnerships Programme and FP7, for which there are project proposals submitted at the November 2011 calls.
- **Specialized ESP-type software** for financial management, project management and multivariate analysis. PNCDI II-Partnerships Programme and FP7, for which there are project proposals submitted at the November 2011 calls.

List of priorities:

Infrastructure equipment /	Estimated costs (euro)	Expected period (year)	Source of funding	Comments
Electrical circuits printing system for textile materials	40.000	2013	Public: PNCDI II / Partnerships	The equipment was included in a project that is presently under evaluation
Laboratory equipment for water analysis	80.000	2012-2013	Public: RO-BG Cross Border Cooperation Programme 2007-2013, project ENVICONTECH	ongoing project

Foot Scanner PEDUS	40.000	2012 -2014	Public: PNCDI II, Partnerships Programme	The system was included in a project that is presently under evaluation
Martin Christ lyophilizer for research pilot scale - 120 L capacity;	400.000	2012-2014	Public: PNCDI II, Partnerships	The system was included in a project that is presently under evaluation
Autoclave, loading capacity 300 liter;	18.000	2013	Public: PNCDI II, Partnerships	The equipment was included in a project that is presently under evaluation
Moisture analyser balance, 45 g capacity x 0.001 g resolution;	10.000	2012-2013	Public: PNCDI II, Partnerships	The equipment was included in a project that is presently under evaluation
In-shoe pressure measurement system	25.000	2013	Public: PNCDI II, Partnerships	The system was included in a project that is presently under evaluation
TRICANTER system	75.000	2013-2014	Public: PNCDI II, Partnerships	The system was included in a project that is presently under evaluation
Extruder granulator (5kg/h);	82.000	2013	Public: PNCDI II, Partnerships	The equipment was included in a project that is presently under evaluation
TOTAL	770.000		80% public funds + 20% other sources	Other sources = own funds and attracted private sources

Accomplishing the Strategy regarding the RDI infrastructure of the institute will enable the adoption of complex projects, participation in international projects on equal scientific level with external partners, as well as the development of advanced services for SMEs in the field of textiles – leather, services consisting of creativity and innovation which will lead to the overall competitiveness increase of the sector.

The improvement of environmental working conditions will also be pursued by:

- Ensuring the working conditions imposed by the regulation regarding the protection of classified information;
- Modernization of the premises, in compliance with legal regulations regarding labor;
- Waterproofing and rehabilitation works for facilities, plumbing, water and heating installation;
- Rehabilitation works for the electronic equipment, external networks as well as firewalls

7. Technology transfer and the attraction of non-public funds

INCDTP strategy to intensify technological transfer actions and to attract extra budgetary funds is directed towards subfields in which there is an **already existing client portfolio** (filter materials, medical devices – MEDTEX spin-off, unique and short series fashion design/leather accessories, services for the physical – chemical and physical – mechanical testing of the textile and leather materials etc.) as well as by the **development of new directions of interest** (new types of biomaterials and medical devices conceived to improve health and increase the quality of life: surgical gowns, surgery theatres, customized fashion design and footwear, leather products).

INCDTP strategy in this field focuses on the following directions:

⇒ **ITA TEXCONF - Technological and Business Incubator** - entity from the innovation and technology transfer infrastructure, without legal personality, established within INCDTP on the basis of Governmental Decision 406/2003, accredited for a 5 years period, with certificate no. 26/17.12.2007 whose mission is to support the development of the private sector through innovation and technology transfer, through the valorization of the research results in the textile field. An application for the reaccreditation of the entity shall be submitted at the end of 2012 according to the legislation in force.

Taking into consideration that within ITA TEXCONF **a number of 11 companies were incubated during 2008 - 2011** and that these companies were provided with logistics and specific consultancy and technology transfer services, we estimate that for the next 4 years the number of incubated companies **shall increase by at least 20%**.

Special attention shall be given to the development of collaboration relationships in the National Network for Innovation and Technology Transfer-ReNITT, to which ITA TEXCONF is affiliated.

The development strategy for the next period also includes:

- creation of interest groups and strategic partnerships in the field in order to attract public and private financing;

- promotion and development of a relational system that is capable of leading to the integration of Romanian textile SMEs into European specialized organizations and networks in order to facilitate business contacts;
- training of TT specialists, entrepreneurship, innovation manager, technologies broker;
- building up partnerships, development of interest groups for the transfer of innovative products/technologies to industry, especially to SMEs;
- integration of the entity in EU organizations and networks in the field.

⇒ **Marketing – Production – Services Department** conducts activities in the conception of products with direct applicability to the business environment. The products are the result of research developed in the research projects and of specific services/creations developed upon request of the enterprises. Taking into consideration the achievements during 2007 - 2011 (374 clients and experimental production output of 1,068,081 euro), we estimate that in the next 4 years **there will be a value increase by at least 15%**.

⇒ **RENAR accredited laboratories for the testing of textile and leather materials** according to SR EN ISO/CEI 17025:2005 for a number of approximately 100 physical – chemical and physical-mechanical tests specific to textile, leather and rubber materials, offer quality testing services to enterprises that conduct technology processes and are interested in participating in tenders.

Considering the achievements during 2007-2011 (3,030 orders for a number of 603 beneficiaries with total collected revenues of 426,845.5 euro), **an increase by at least 10% of the revenues** obtained from the activity of quality testing and control in textile and leather fields is estimated for the next years.

The development strategy of the Marketing – Production – Services Department and of the testing laboratories for the next period include:

- market research and identification of the directions of interest for the activity of research, production and services;
- application in own experimental production of approx. **50%** of the results obtained in the research projects;
- promotion in enterprises of results with potential of industrial valorization all over the country;
- increase/diversification of the range of products and services by:
 - inclusion of new tests in the existing laboratories and the expansion of the testing capacity by accrediting a microbiology laboratory;
 - development of customized textiles and leather garments based on tri-dimensional anthropometric measurements;
 - intensification of marketing and prospecting activities by participation in events organized especially by textile clusters and sectorial associations.

⇒ **Centre for training, evaluation and certification of professional competences**

Considering the industry needs to work with qualified personnel, the institute has been CNFPA authorized as professional training provider for **4 qualification courses**: *Industrial garment operator* (code COR 8263.1.1), *Textile and leather finisher* (code COR: 7441), *Leather and substitutes garment worker* (code COR: 7422), *Shoemaker* (cod COR: 7442) and **2 training courses**: *Common competences – entrepreneurial competences and Shoemaker-footwear worker that offers customized services*.

⇒ **Use and exploitation of all technological networks** of which INCDTP is a member in order to promote the existing technology offer / research project results and the identification of the needs from potential competitors/customers;

⇒ The development strategy of TT activity has also in view the **strengthening of collaboration relations with the 3 textile clusters** in Romania of which INCDTP is a member and which are affiliated to the Romanian Cluster Association, CLUSTERO. This way the reduction of the circuit from the emergence of the novelty element to its implementation into production shall be ensured and the portfolio supply necessary for the substantiation of new research projects in partnership with the enterprises which are members of these clusters shall be also ensured.

The attraction of extra budgetary funds will be done mainly by involving enterprises in cooperation with INCDTP in solving actual problems for the introduction and promotion of research results and novelty elements in the textile-leather sector activity in order to generate high added value and to support its competitiveness.

8. Strategic partnerships and visibility: events, communications, collaborations

For 2012-2015 period INCDTP proposes to develop **strategic collaboration partnerships** with prestigious institutions (especially private, universities and research institutes but also multinational private companies). As main targets, there are some national public institutions (we are for instance very interested in **new collaborations/contracts** with **aeronautics, military and medical** actors – private and public, based on our previous contracts/experience). Furthermore we will support the researchers for **exploring new (strategic) fields** (by investment in infrastructure, training, participation at events to establish new collaboration, etc). In the same time, to have new collaboration partnerships we will valorize our membership at various national and international prestigious organizations (see below).

A **strategic recruitment campaign** will be also performed by our institute during next years in order to assure / create the critical mass of personnel for the new strategic research fields / new research directions to be exploited by INCDTP research teams. The recruitment will be oriented to students (for full-time cooperation) but also professors (part-time collaboration) and other experts from private sector / competitors.

Another target of our institute for the next years is participation in **big projects** financed by national or international programs on our field of interest, as partner or sub-contractor. In order to do that, we will be more concentrated on public partnerships to find out firstly the big projects in our domains and further to offer our expertise.

In the same period, INCDTP aims to increase its **visibility** at national and international level, by:

- new affiliation to national and international bodies from the textile-clothing and leather and related domains;
- organization and participation at relevant international conferences to promote our achievements;
- editing of high scientific level magazines for the textile-leather sector;
- participation at working meetings (Romania and abroad) to identify new project ideas /research directions/ new partnerships;
- one cooperation protocol concluded with ROST (The Romanian Office for Science and Technology, Brussels office) in order to maintain the permanent contact with the European scientific community and promote our expertise abroad;
- participation in national fashion fairs or fairs for the promotion of the research results;
- registration in databases for project evaluation and coordination of international scientific events;
- organization of « Open doors days » events with pupils and students as well as with the large public;
- dissemination of own research results through available media, newsletters, press releases, participation in TV or radio debates, by means of own web-sites (www.certex.ro, www.industriatextila.com), but also by creating partnerships with other similar websites.

Also, INCDTP will exploit the existing tools to increase its visibility, namely:

⇒ **International conferences organized by INCDTP:**

- **TEX TEH – international conference**, being already in its fourth edition, which brings together researchers and specialists from all over the world, being focused on large interest issues from the textile-clothing and related domains - nanotechnology, technical textiles, textile finishing, management, ecology, being a good opportunity to present the ongoing project results and establishing new partnerships and consortia. It is worth mentioning the conferences progress, both from the point of the number of participants, as well as their geographical distribution. Two editions will be organized (in 2013 and 2015) and an attempt will be made for the creation of a partnership with a university from abroad in order to organize the conference annually.
- **ICAMS** – event organized by INCDTP – Division ICPI, in partnership with Ege University in Turkey, which brings together specialists from the following domains: leather-footwear, biomaterials, advanced materials, environment and environment safety. As part of the three editions, new partnerships with participants from China, Turkey and Greece were created. Two editions will be organized (in 2012 and 2014).

⇒ **“Industria Textilă” (Textile Industry journal – edited by INCDTP**, with a non-interrupted issuing of over 60 years, being ISI Thomson Reuters rated starting with 2007 (in 2010 had an impact factor of 0.853). It is the only magazine in the domain of textile materials sciences in Romania, where articles of many specialists from various countries such as China, Japan, Turkey, Germany, France, Pakistan, India, Egypt etc. are published. The necessary steps will be taken to include the journal in major international databases such as ProQuest and EBSCO Publishing.

⇒ **“Revista de Pielarie Incaltaminte” (Leather and Footwear Journal)** is published by INCDTP - Division: Leather and Footwear Research Institute, Bucharest, Romania, at CERTEX Publishing House, which is acknowledged by CNCSIS (The National University Research Council). It has been released since 2000, in quarterly issues. The journal is coordinated by an Editorial Board consisting of national and international recognized specialists, researchers, professors, and experts from

governmental organizations. The articles are scientifically revised by two national and international experts in the field, from research institutes or universities. Journal is acknowledged in Romania by CNCSIS - B+ category (starting from the March 2010 issue).

⇒ **Active participation as a member of international organizations:**

- **TEXTRANET/ GEDRT**¹³ (*European Network of Textile Research Organisations/ European Group for the Exchange of Information on Textile Research*)
- **EURATEX**¹⁴ (*European Apparel and Textile Confederation*)
- **INSME**¹⁵ (*International Network of SMEs*)
- **ACTE**¹⁶ (*European Textile Collectivities Association*)
- **EUROCOTON**¹⁷
- **ISPIM**¹⁸
- **EUROPEAN FASHION COUNCIL**¹⁹
- **COTANCE** - *Confederation of National Associations of Tanners and Dressers of the EC - Belgium, being GERIC (Grouping of European Leather Technology Centres) member*
- **IULTCS** - International Union of Leather Technologists and Chemists Societies

⇒ **Affiliation with the following Romanian organizations:**

- **SIT AGIR**²⁰ (*Textile Engineers Society – General Association of Engineers in Romania*);
- **FEPAIUS**²¹ (*Employers' Federation of Light Industry*);
- **SCCR**²² (*Society of Colourist Chemists in Romania*) affiliated to IFATCC (*The International Federation of Associations of Textile Chemists and Colorists*);
- **AITPR**²³ (*Romanian Association of Specialists in the Maintenance of Textile and Leather*);
- **Employers' Federation TRICONTEX**²⁴;
- **ADTP** (*Textile and Leather Design Association*).

⇒ **Activity as active member of the clusters in the textile - clothing:**

- **ASTRICO NE TEXTILE CLUSTER (Nord East Region)** - with the purpose of creating the premises for sustainable development and of assimilating new products, with high added value;
- **ROMANIAN TEXTILE CONCEPT CLUSTER (Bucuresti – Ilfov Region)** – with a strategy that aims to consolidate its members' position in the industry and to promote the cluster's image;
- **TRADITIONS – MANUFACTURING – FUTURE CLUSTER – TMV (South – Eastern Region)** – with a purpose to increase competitiveness of the textile industry in the South Eastern Region;
- **CLUSTERO** – Romanian Cluster Association.

¹³ www.textranet.net

¹⁴ www.euratex.org

¹⁵ www.insme.org

¹⁶ www.acte.net

¹⁷ www.eurocoton.org

¹⁸ www.ispim.org

¹⁹ www.europeanfashioncouncil.eu

²⁰ www.agir.ro

²¹ www.fepaius.ro

²² www.certex.ro/sccr.htm

²³ <http://www.infocompanies.com/Asociatia-Intretinatorilor-de-Textile-Piele-din-Romania-Craiova-67195.htm>

²⁴ www.businessvibes.com/.../Organizatia_Patronala

LEGEND

A

ACTE	European Textile Collectivities Association
ADTP	Textile and Leather Design Association
AITPR	Romanian Association of Specialists in the Maintenance of Textile and Leather
AM	Management Authority

C

CAPACITIES	Funding programme of National Plan for Research, Development and Innovation that relates to developing research capacity, by RDI system by opening the international scientific environment and connection to the national socio-economic
CIP programme	Competitiveness and Innovation Framework Programme
CLUSTERO	Romanian Cluster Association
CNCSIS	National Council of Scientific Research in Higher Education
COST	Intergovernmental framework for European Cooperation in Science and Technology, allowing the coordination of nationally-funded research on a European level
COTANCE	Confederation of National Associations of Tanners and Dressers of the European Community
CROSSTEXNET	European funding programme for the European textile research coordinated by ERA-NET

E

EC	European Commission
EN	European standard
ERANET	European funding scheme created to step up the cooperation and coordination of research activities carried out at national or regional level in the Member States and Associated States
ETUF-TCL	European Trade Union Federation of Textiles, Clothing and Leather
EU	European Union
EU HORIZON 2020	Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020
EURATEX	European Apparel and Textile Organization
EUREKA	European funding programme that supports the competitiveness of European companies through international collaboration and in creating links and networks for innovation
EUROCOTON	Allied Textile Industries of the European Communities
EUROSTARS	European Joint Programme dedicated to the R&D performing SMEs

F

FEDR	European Fund for Regional Development
FEPAIUS	Federation of Textiles, Apparel and leather
FP7	Seventh Framework Programme

G

GERIC	Research & Development in the European Leather Industry
GDP	Gross domestic product
GRID	Computing network representing a combination of computer resources from multiple administrative domains to reach a common goal

H

HG	Government decision
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I

ICPI Division	Leather – Footwear Research Institute - Division
IFATCC	The International Federation of Associations of Textile Chemists and Colorists
INCDTP	National Research and Development Institute for Textiles and Leather
INNOVATION	Funding programme of National Plan for Research, Development and Innovation that relates to increased capacity for innovation, technology development and uptake of research results into production, to improve the competitiveness of national economy and quality of life
ISI	Institute for Scientific Information
ISO	International Organization for Standardization
INSME	International Network for Small and Medium Sized Enterprises
IT	Information technology
ITA-TEXCONF	Technological and Business Incubator
M	
MEDTEX	Spinn-off
O	
OHSAS	Occupational Health and Safety Advisory Standards
P	
PARTNERSHIP	Funding programme of National Plan for Research, Development and Innovation that aims to create conditions for better cooperation between different entities of RDI, business and / or government units to address the problems identified
PhD	Doctor of science
PM	Project manager
PN	National plan
PNCDI	National Plan for Research, Development and Innovation
R	
RD	Research and Development
ReNITT	National Network for Technology Transfer and Innovation
RDI	Research-Development-Innovation
RO	Romania
ROST	Romanian Office for Science and Technology
S	
SCCR	Society of Colourist Chemists in Romania
SEE	South East Europe Transnational Cooperation Programme
SIT – AGIR	Textile Engineers Society - General Association of Engineers in Romania
SME	Small and medium-sized enterprises
SR	Romanian standard
SWOT analysis	A strategic planning method used to evaluate the strengths, weaknesses, opportunities and threats
T	
TEXTRANET/GEDRT	European Network of Textile Research Organizations
TRICONTEX	Organization of Textile Industry - Knitwear
TT	Technological transfer

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