



PROJECT FOSTEX Deliverable

D.1.1. Definition of the Research Methodology and Tools



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Abbreviations and Acronyms

| Abbreviation | Full name |
|--------------|---|
| EACEA | Education, Audiovisual and Culture Executive Agency |
| EC | European Commission |
| EU | European Union |
| GA | Grant Agreement |
| HEI | Higher Education Institution |
| ICT | Information and Communication Technologies |
| PC | Project Coordinator |
| WP | Work Package |



1. Introduction

The textile industry is of utmost importance both in Morocco & Jordan, with over 165.000 people employed in 1.300 companies representing 27% of industrial jobs and over 3b€ in exports or the equivalent to 7% of industrial added value according to the Moroccan Ministry of Industry. Morocco is the 7th largest supplier of textiles of Europe with a market share of 3.1% in 2015. Jordan, on the other hand, has over 60.000 employees in the textile industry and generates 1.2b€ in exports according to the World Bank trade data. Jordan however has a largely concentrated textile industry in very few high-end brands which benefits from duty-free trade agreement particularly with US since 2001 when the sector began soaring. Recent EU decision (L233/6) to simplify the rule of origin for Jordan was aimed to enable the country facilitated access to market to EU and ultimately directed towards job generation in the region refugees with a target of 200.000 refugees.

Small and medium enterprises of the textile sector in both Jordan and Morocco are mainly of semi-industrial companies and small craft-oriented workshops combining manual and mechanical processes with basic equipment. Only a few large industrial companies exist with state-of-the-art facilities. Morocco textile industry, for example, is concentrated in 77 companies (5% of the total) according to AMITH reports. However, 90 % of companies of the sector are either small or medium-sized factories or workshops.

According to information from ACI in Jordan and AMITH in Morocco, the sector suffers from a high fragmentation and a lack of quality control in all stages of the value chain. Apart from a few large ones, the vast majority of companies involved in the textile manufacturing supply chain work on highly ineffective and low quality production techniques using outdated technology. Moreover, the Jordanian and Moroccan textile industries face the high competition from imported textile products from China (34% market share) and other Asia countries (Bangladesh, India, Cambodia and Vietnam accounting for another 32.6% of EU textile imports) that has the advantages of lower production costs as benefits of economy scale.

Some Moroccan HEIs, such ESITH have already some textile centers but are only used mainly for academic research. The fact that standardized quality check are not available has generated a lack of reach towards the industrial textile sector. In Jordan, on the other hand, there is lack of specialized support from higher education institutions and most of the companies of the sector cannot invest in quality, design and innovation and export their products. Thus, there is a need for strengthening the relationships



between higher education and the wider economic and social environment, particularly, for FOSTEX, the textile industry.

There is an urgent need for the sector in the two countries for:

1. Development of competitiveness through lowering production cost, for an increase in productivity, for the development of quality and design, and for training in addition to international conformity certification. Quality and innovation are very important for the textile industries in Jordan and Morocco in order to focus on the higher-end market segments that need such kind of characteristics as main competition driver instead of the low prices of Chinese imported products.
2. Keeping and increase of local market share and for the development and reliability of the image of the “Made in Jordan” and “Made in Morocco” products in comparison to Chinese/Asian products
3. Development of exports to surrounding markets, mainly European, US and Arab markets, as well as for the exploring of new export opportunities to non-traditional markets such as Canada and the African markets.
4. Development and exploring of more niche manufacturing opportunities where the competitive advantage is not mainly price (i.e. specialized products such as advanced/high end textiles).

2. Project Description

FOSTEX project aims to fill the gap in the area of specialized services for the textile sector, with the establishment of two textile centers at the Universities of Jordan (2) and one at UH2C center (1), and the upgrade of one textile center in Morocco (1). Through totally new and upgraded services such as a) quality testing, b) certification of products, c) training, d) informative seminars on fashion trends, e) on new ways of organization of production, f) on funding opportunities, g) the organization of trade missions, h) support of participation in exhibitions I) promote entrepreneurship and integration of refugees into the textile sector. Ultimately, the goal is to foster the university-industry collaboration to support the development of innovations in the textile sector in Morocco and Jordan to generate an ecosystem of advanced textile materials. Those centers will become a valuable ally for the textile sector for its further development.

The project also aims to reinforce the link between University research and the textile sector that will foster innovation and the manufacturing of high added value products.

The project complies with the recent national industrial policy for the years (2017 – 2021) that aims to develop competitiveness of Jordanian industries in the area of production cost, quality, certification, export and innovation in addition to linkage



between the industrial sector and Universities and research sector in order to establish partnership between the two sectors, encourage applied research and technology transfer.

Similarly, the Moroccan Government established an industrial acceleration plan (2014-2020), being the 1st strategic line the creation of industrial ecosystems with the aim to promote an integrated development of industrial sectors. The textile sector has 6 ecosystems, being technical textiles one of them. There is a trend to move moving toward high-end textiles and diversification with ambitious goals for the textile sector of increased of turnover (+1.5Bn€), jobs (+100k), exports (+500M€) by 2020.

2.1. Project objective

FOSTEX project aims at the establishment of two textile centers at the in Universities of Jordan (2) and one at UH2C center (1) the upgrade of two one textile centers in Morocco (12). This will be accomplished through the experience of European partners: INCDTP (Romania), UNIWA (Greece) and CRE.THI.DEV. (Greece) that have expertise in setting up, equipping and operating such centers in their countries and the experience of other EU partners from their involvement in similar projects. UNIWA, CIAPE, INCDTP and CRE.THI.DEV have also experience from setting up a similar center in Turkey and they have ongoing activities towards setting up leather centers in Jordan and Egypt.

Besides, UPC, CIAPE, MCI, AEI TEXTILS and other European partners have worked together on textile projects such as TECLO and/or TEXSTRA with focus toward capital talent building by creating of training courses for the textile sector in HEIs and industry focus, with outputs such as MOOCs and books of lectures.

2.2. Project consortium

The Consortium was established on the basis of combining the different backgrounds, experience and expertise of the partners. It includes all the skills, recognized expertise and competences required to carry out all aspects of the work plan, and there is an appropriate distribution of tasks across the partners.

The consortium comprises 13 institutions from 6 countries representing different parts of Europe and the Mediterranean, presenting thus a balanced geographic coverage. There is a mixture of institutions with different profiles, capacities and complementary competences that are appropriate for the development of the work plan (public higher education institutions, companies and non-profit institutions, research and training centers and business associations).

Most of the partners have already worked together implementing transnational projects and have the capabilities and complementarities to carry out the project activities according to their role. Thus, the consortium is comprised within a stable collaboration framework. Most of the partners already have cooperated in different transnational



projects. CRE.THI.DEV, UNIWA, INCDTP, AEI TEXTILS, MCI, CIAPE, JUST, BAU and ACI have and are cooperating in several textile projects. AEI TEXTILS has recently started a collaboration with Moroccan partners in the field of technical textiles. New partners involved in the project shall reinforce cooperative work by the implementation of specific actions.

All partners have extended capacity in terms of staff and equipment in order to meet the training and planned development needs, as well as financial resources to handle and manage the project and its budget.

All partners will contribute to the activities of the project but, depending on their area of expertise and experience, each of them will play a more important or leading role in the tasks to be accomplished. The EU partners have complementary experiences in the field of advanced textiles' research and training. The Universities UPC and UNIWA possess competencies in textile and advanced textiles' research, while bringing experience and academic gravitas; the textile center from Romania, INCDTP, has many years of experience in textile research, training and quality, while being in communication with the textile industry. CRE.THI.DEV has experience and expertise in development of training materials, operational design of centers, and quality management of project and monitoring, and specific experience relating to textiles. MCI has a strong experience in communication strategies, design and organization of events as well as participation in transnational projects. CIAPE has a strong experience in managing and implementing projects in the field of training. AEI TEXTILS has a strong experience as SMEs cluster in managing and implementing projects for the benefit of its associates and its ecosystem.

2.3. Project results

The basic results of the project activities are the establishment of two advanced textiles' centers in Jordan universities and upgrade textile centers in Morocco.

3. Project activities

FOSTEX is a multinational project with the duration of 3 years.

The project will be implemented through a series of Work Packages that aim to materialize the project objectives, supported by suitable management activities that will ensure that the project results will be achieved in a timely fashion, and with proper budget control.

For each WP a leader is appointed, who will be responsible for the detailed co-ordination and reporting of the specific WP. In specific:

WP 1-Preparation (research and state of the art) led by JUST.

WP 2-Development (Capacity building, setting up and upgrading of advanced textiles' centers) led by ESITH.

WP 3-Quality and evaluation coordinated by CRETHIDEV.



WP 4-Dissemination & exploitation coordinated by CIAPE.

WP 5-Project Management and Coordination coordinated by UPC.

4. Research Methodology and Tools

JUST will be the WP 2 leader and responsible for the methodology pack, Jordan reports and compilation of national reports. UH2C will be participating in the activity leading the Moroccan report. Other local partners could provide these two organizations with contacts, namely AMITH and ACI for market related data and field research.

INCDTP supported by UNIWA will be involved in the activity with the objectives of identifying and analyzing best practices and success stories which can be transferred to target countries. This study will include the analysis of other projects

JUST from Jordan and UH2C from Morocco will prepare a Research Report about the local needs and anticipations of the Textile sectors in Jordan and Morocco using desk and field research. They will perform:

- The desk research: through search of data about the sector, analysis of relevant reports and strategic documents;
- The field research: through questionnaires and focus groups;
- Good practices database for collaborations between EU and Jordan/Morocco.

4.1. Methodology for the Desk Research

This document presents the methodological approach and the tools that partners will use to carry out the research activities. These include surveys, templates for collecting data, guidelines for the focus group, template for the collection of best practices). The research consists of 3 components:

- o Desk research
- o Field research through interview
- o Field research through focus groups:

4.1.1. Implementation of the Desk Research

For the implementation of the desk research, partners involved with this task must:

- Carry out a background and context analysis based on actual statistical data at national level and future trends of textile in Europe,
- Identify reports and papers dealing with skills anticipation and training needs in the textile centers

This phase will be carried at national levels in Jordan and Morocco.



4.1.1.1. Short Overview of the Textile Sector

The overview will provide a brief analysis of the state of the art in Jordan and Morocco in order to identify the national characteristics of the textile sector. This outcome will be used to adapt the content of the questionnaire (for field research) to the existing situation. Therefore, this section should include the following topics:

- Current state of the textile sector at national level.
- Opportunities and constraints characterizing the textile sector at national level.

Data must be as recent as possible. The recommended key figures should include, but not be limited to: turnover figures, number of companies, employment figures, etc. The survey data should concern the most recent possible year. Partners could add any other relevant information.

Each partners' overview must be up to 3 pages. Tables and statistical data may be included in an Annex. The inventory of sources will be included in the report as "References".

4.1.1.2. Skills anticipation and training needs of the textile centers

This task aims to identify and analyze those characteristics of the textile, regarding the provided training, the existing trends in the industry, the anticipated skills, and the training needs. This will be done using two methods:

- a) by analyzing the literature available about the training needs and the skills anticipation for the textile industry;
- b) by analyzing the existing training courses available for the textile sector, either using traditional means or long-distance learning tools (official, higher education, vocational or other).

The two methods of research are described below:

4.1.1.2.a. Main European sectoral reports and papers dealing with skills anticipation and training needs in the textile industry

Within this task, partners are required to perform an analysis of the relevant European reports and studies in order to gather conclusions about the needs on new skills for the textile sector and connected ones, as well as needs for innovation and technological transfer in textile companies.

Documents prepared by the European Commission, European Bodies, professional associations, research centers, training bodies etc., regarding textile and its connected industries are to be analyzed and reported in a literature review, which will be based on this analysis of the gathered documentation: scientific articles, books, conferences proceedings, case study papers, review papers, etc.



Partners will present the synthesis of the main results of the literature review in 5-6 pages max. The inventory of searched publications will be included in the report as "References".

4.1.1.2.b. Analysis of the existing training and/or study programs for the textile sector in Jordan and Morocco

Within this task, both the local coordinators in the target countries (Jordan and Morocco) are required to gather information about the training that is currently being offered to the existing and aspiring professionals for the textile industries in order to provide them with the necessary skills and competences.

The study and training programs for qualified professionals having both non-tertiary (EQF 5) and tertiary level qualifications (EQF 6 and 7) in Jordan and Morocco are of particular interest and must be thoroughly analyzed in order to understand the gap and mismatches of skills and competences in the textile sector. The targeted qualifications are: engineers and technicians, managers, designers and product developers.

Each study program/course will be analyzed according to the examples provided, at least about the following topics:

1. Presentation of the study program: mission and objectives, duration, entry requirements.
2. Key learning outcomes: Knowledge, Skills, and Competencies
3. Course content: Modules and Units, teaching methods, Contact hours (for teaching in class, for individual study, for internship, etc.), Assessment and validation based on accumulation of ETCS points (for HE programs)

4.2. Methodology for the Field Research

The field research seeks:

- Assessing the importance of the textile sector for the economies of Morocco and Jordan and collaboration between universities and companies in the textile sector
- Assessing training needs for experts in textile centers
- Assessing the most favorite pedagogical approach for experts in the textile centers

Two organizations will be involved in the study in target countries: contact partners in the target countries (JUST and UH2C) will be participating in the activity.

The selected respondents will belong to the following profiles:

- Staff of the future textile centers (universities)
- Experts from the textile sector (companies' managers, engineers/ technicians, designers, trainers, textile and innovation experts)



The survey should result in completed 40 questionnaires obtained from staff of the future textile centers, 40 questionnaires obtained from the industry and 6-7 focus groups will be organized in Morocco and 1 in Jordan.

In all cases, the balance between younger and older persons will be considered, as well as a relatively balanced gender representation.

4.3. Implementation of the Field Research

4.3.1. Steps to follow in obtaining replies to the questionnaire:

- a) Contact the relevant stakeholder (included in the list from each country) for introducing project and confirming the participation in survey
- b) Send the questionnaire (via e-mail, mail, fax or link to on-line form) mentioning the deadline for completing
- c) Check the replies to the questionnaire
- d) Re-contact the respondent(s) in case on missing or confused replies to clarify content
- e) Collect the questionnaires from the respondents
- f) Create a data base to enable statistical analysis
- g) Check data base for errors and submit the results (excel file)
- h) Perform the survey analysis

4.3.2. Steps to follow in obtaining replies from the Focus Groups

The Focus Groups research study can be executed in three stages:

- i) planning;
- j) conduct of the interviews
- k) analysis of the data.

4.4. Methodology for the Field Research through questionnaires

The tools used for the field research consist of a set of survey questionnaires that will be defined based on the desk research results and designed according to standard research methodology.

The survey for the staff of the future textile centers is shown in Annex I, and the survey for experts from the textile industry is shown in Annex II.

For each country, 40 questionnaires on the primary target group (staff of the future textile centers) and 40 questionnaires from experts (companies, trainers, BIOs, textile and innovation experts) will be collected and analyzed.

4.4.1. Definition of the questionnaire content for the Field Research



The questionnaire contains specific questions according to profile of the respondents. Also, common questions are included. The questionnaire contains the guidance on the group of questions to be answered. The questionnaire structure is:

Part A. Introduction

- Aim of the questionnaire within the framework of the project
- Invitation to the respondent to participate
- Indications for selecting the questions according to the profile of the respondent

Part B. Main body of the questionnaire

The main body of the questionnaire differs according to the group of respondents. An appropriate adjustment of the content of this part is suggested, seeking the respondents' opinion on the same topics. Common questions are about the background of the respondent (e.g., age, gender, position, education), as well as the general assessment about the company/organization characteristics (size, type of product, number of employees, production figures etc.).

This part of the questionnaire covers issues of skills present and anticipated for the managers (junior and senior), training already received and the effectiveness of those, existing qualifications requirements for the managerial positions, subsequent training arrangements by companies, access to training, access to innovation and research, as well as environmental awareness. **Other sections can be also included.**

Part C. The questionnaire ends by thanking the respondent for participating and asking whether they would like to receive a brief report on the results.

4.4.2. Methodology for the Field Research through Focus Groups

Focus Group is a qualitative research method. Its general characteristics stand out: the homogeneity of the group, the sequence of the sessions, the obtaining of qualitative data, and focus on a topic.

A focus group typically consists of a small number of participants, usually around 6 to 12, representing a qualitative research technique. A focus group is useful in analyzing a topic or getting an opinion on a predetermined topic for research.

A focus group is qualitative research because it asks participants for open-ended responses conveying thoughts or feelings.

A focus group is generally more useful when outcomes of research are very unpredictable and the researcher is looking for more open feedback, as opposed to comparisons of potential results as in a quantified research method. A focus group also allows participants to express clear ideas and share feelings that do not typically come out in a quantified survey or paper test. Because of the open conversation among



group members, topics and discussion are more free-flowing and members can use comments from others to stimulate recall.

4.4.2.1. Planning of the Focus Groups for the Field Research

In Focus Group planning, a chronological plan should be developed, including the following activities: development of the subjects, identification of the participants' characteristics, drafting a list of the potential participants, recruiting the participants, conduct of the meetings, feedback from the planning, transcription, analysis and composition of the report. The Guidelines for conducting the focus groups and the questions are shown in Annex III.

The number and size of the groups

In focus groups implementation, the researchers favorite groups are 6 to 8 people.

The participants

The composition of the focus group should be – people who usually share common characteristics such as: age, background, geography etc.

Recruiting participants can consume plenty of time when specialized populations or experimental designs are used. A questionnaire should be developed for recruiting participants. This instrument should have about four to six questions, to determine whether the participant possesses the indispensable characteristics to participate in the sessions.

The level of moderator involvement

The level of the moderator's involvement is always treated as a continuum: at one extreme, it is low, where the moderator has a small part in the group discussion; and at the other extreme, it is high, where the moderator controls the topics that are discussed and the dynamics of the discussion.

The interview content

The topics of the discussion are carefully elaborated, based on the analysis of the situation. The objective is to build an interview that covers the topic, while it supplies observations that satisfy the wide demand of an effective Focus Group. The most obvious restriction of the content of the interview is the duration of the session, between one and two hours.

The beginning of the sessions the moderator makes an introduction regarding the topic. During the introduction, the moderator presents some basic rules; such as: only one person speaks at a time; lateral chats should not take place; everybody should speak, etc. The members of the group should be told that the session will be recorded or filmed. The discussion begins with each participant introducing himself, which serves as an icebreaker.

The closing of the session is when the moderator returns to the discussion and offers a concluding statement.



The questions are the essence of a Focus Group interview.

Typically, an interview in a Focus Group will include about twelve questions. Focus Group subjects can be of several types, each one with its own purpose. The questions can be classified in the following categories:

- **Opening questions.** The first round of questions allows a quick answer (10 to 20 seconds), and it enables identification of characteristics that the participants have in common.
- **Introductory questions.** Introductory questions introduce the general topic of discussion, and they provide the participants an opportunity to contemplate previous experiences.
- **Transition questions.** Transition questions move the conversation toward the key questions.
- **Key questions.** Key questions address the study. They usually vary of two to five questions, and they are the ones that require more attention and analysis.
- **Ending questions.** Ending questions close the discussion. They consider everything that was said until then. They allow the participants to consider all of the comments shared in the discussion and to identify which the most important ones.
- **Summary question.** The moderator summarizes in two to three minutes the key questions and main ideas that emerged during the discussion. After this, he asks the participants: "Was this an appropriate summary?"
- **Final question.** Following the summary question, the moderator makes a brief explanation of the purpose of the study, and then he presents the final questions: "Did we forget something?" and "What advice would you have for us?" This is still more important since we are in the beginning of a number (series) of sessions.

In the elaboration of the questions, care should be taken:

- to avoid dichotomous questions that can be answered with only a "yes" or "no".
- to contemplate the open questions because they allow the respondents to choose the way to answer.
- to ponder on questions of the type "Why?" because they imply a rational answer, developed by thought and reflection.
- to avoid jargon, technical terms, or vocabulary specific to a group.

4.4.2.2. Conduct of the sessions

The introduction of the discussion, including the welcome, the general vision of the topic, the rules of the meeting, and the first subject, should follow the same pattern in the several sessions. In the invitation phase, or in the beginning of the session, the following information should be given to the participants: why the session is happening, how the information will be used, and who is interested in it.

4.4.2.3. The data analysis

Production of the transcriptions and the analysis is laborious, because the group discussions are conducted several times, usually a minimum of three, with specific



types of participants to identify tendencies and patterns in the participants' perceptions. Careful and systematic analysis of the discussions supplies signs of how a product, service, or opportunity is perceived.

The analysis should be systematic, verifiable, and focus on the topic of interest and with an appropriate degree of interpretation. Each session produces approximately 50 to 70 pages of transcripts and about 10 to 15 pages of field notes. In the analysis, the words and their meaning, the context in which the comments were made, the internal consistency, frequency, the extent of the comments, the specificity of the answers, and the importance of identifying the main ideas, all should be considered.

4.5. The National Reports for Jordan and Morocco

The National Reports for Jordan and Morocco that will be made by JUST and UH2C, respectively, must follow the logical structure that is presented below, in order for the final integrated report to be easily constructed. The template for the national report is shown in Annex IV.

Part A: Results of Desk Research

Section A. Short Overview of the National Textile Sector and Connected ones

- Current state of the Textile sector at national level. Data must be as recent as possible. The recommended key figures should include, but not be limited to, turnover figures, number of companies, employment figures, and turnover per employee.
- Opportunities and constraints characterizing the textile sector at national level.

2-3 pages.

Section B. Skills anticipation and training needs of the national Textile sector and connected ones

B1. Main European sectoral reports and papers dealing with skills anticipation and training needs in the textile industry

5-6 pages.

B2. Analysis of the existing training and/or study programs for the textile sector

- Long-term study programs addressed to highly qualified professionals
- Vocational training programs for the textile industry (medium-term; 1-2 years)
- Training programs (short courses) for the textile industry
- Existing long distance training programs in the textile sector and connected industries



The description of the training courses will be as simple as possible, based on the examples provided.

Section C. References

Part B: Results of Field Survey (Questionnaires and Focus groups)