

SCHEDA PROGETTO

Codice	09-035	Centro servizi
Titolo	<i>Chaussure Rwanda</i>	
Data inizio	Ottobre 2010	
Data fine	Novembre 2011	
Area Geografica coinvolta	Africa	
Paese coinvolto	Ruanda	
Area-Località di svolgimento	Kigali	
Settore	Calzatura	
Tipo di Progetto	Avviamento di un Centro servizi artigiano per la produzione di calzature	
Idea Progetto	<p>Il Ruanda è un Paese in crescita e beneficia di un notevole patrimonio di materia prima e di una pregressa esperienza nel campo dei calzaturifici. Attualmente la posizione geopolitica lo rende un Paese chiave nel commercio di manufatti con il Congo, la Tanzania, l'Uganda ed il Burundi. Il gusto locale è fortemente orientato al gusto della calzatura italiana. I funzionari del settore pubblico ed i borghesi ruandesi indossano calzature importate di marchio e fattura italiana. Gli altri indossano scarpe di seconda mano provenienti dall'Europa o scarpe "Simil Italiane" provenienti dalla Cina. Le calzature tradizionali chiuse sono molto importanti in quella zona dell'Africa dal clima piovoso e territorio collinare. L'idea del programma è di migliorare la specializzazione locale per produrre calzature tradizionali per la crescente classe media del Ruanda e dei Paesi limitrofi recuperando un mercato ora occupato dalle calzature di seconda mano e da calzature di bassissima qualità di origine cinese.</p>	
Obiettivi generali	<p>Programma di clustering per gli artigiani della calzatura di Kigali con l'installazione di un impianto meccanizzato per la produzione di calzature standardizzate all'interno del Centro Servizi per Artigiani. Il programma prevede anche la formazione sul metodo di produzione e la creazione di un sistema di microcredito per poter acquistare tecnologia e materie prime di qualità.</p>	
Obiettivi specifici	<ol style="list-style-type: none"> 1) Organizzazione di un cluster formalizzato tra gli artigiani 2) Selezione e preparazione dell'infrastruttura locale adatta ad ospitare il Centro 3) Fornitura e avviamento dell'impianto di prima meccanizzazione 4) Formazione di formatori tra gli artigiani associati 5) Avviamento di un sistema di microcredito 	
Tipo di attività svolte	<ol style="list-style-type: none"> 1) Formalizzazione del cluster 2) Identificazione e preparazione della struttura ospite 	
Valore del progetto	€135.000,00	
Finanziatori	CDE, ASSOMAC, ICE, RDB (Rwand Development Board)	
Esecutori	PISIE, Gatorano Juvenal, RDB	
Partner	L'iniziativa viene realizzata in collaborazione con il Minicom,	

	il Ministero del Commercio e dell'Industria del Ruanda, e si inserisce nel progetto "A leather bridge with Africa" a sostegno degli artigiani calzaturieri africani
Beneficiari	Artigiani della calzatura di Kigali
Risorse umane	6 esperti per organizzazione, formazione e assistenza tecnica

PROJECT: CHAUSSURE, RUANDA
INTERIM REPORT ON THE ACTIVITIES PERFORMED BY PISIE
AT THE SHOEMAKERS CLUSTER

INTERIM TECHNICAL REPORT

KIGALI - RWANDA

February 2011 – September 2011

PISIE Project Code n° 09035

File CDE no RWA/100/01

Vigevano, Saturday, 08 October 2011

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Introduction

This note summarizes the work done in the period February – September 2011 by PISIE and its partners for the artisans “Ateliers” in the Kigali area in the frame of the technical assistance offered to the association of artisans of the footwear sector led by the company Gatorano Juvenal aimed at preparing the staff of the Footwear Service Center managed by the selected number (11) of shoe companies .

It also includes a resume of the activities performed in the set up phase of the program (February to April) as a conclusion of the activities developed in Italy to design the Service Centre and the training.

The program was structured in order to develop three modules according to the work plan:

- Work package 1: Association of the Artisans
- Work package 2 Set up of the service Centre
- Work package 3: Set up of Financing Tools for the Enterprises for the purchase of intermediate goods and raw materials.

In general, the program was developed according to the structure and schedule that was preliminary designed at the beginning of the program, the attendance was good, both from the side of the staff of the Artisan and the local Coordinator that was selected. However it was not possible to complete at the present stage the training on the new equipment because some of the machines have not been imported, since the stakeholders are waiting for a clearance from RDB (Rwanda Development Board) to avoid the payment of the import duties. This clearance should have been achieved by September and for some more delay it has been achieved in these days only.

- a) In brief the training was a success. Before the mission, we had also useful contacts and meetings including RDB, the Chairman of the Association of artisans (Mr. Gatorano) to start - at least temporary-- the artisans machinery that are in place.
- b) Concerning the urgent points to be handled, the essential seems to be on good way:
 - a. About the ownership of the machines: the RDB suggested that PISIE can remain the only owner, just to facilitate their future transfer to the artisans' cooperative. It was underlined that the procedures of transfer can perhaps be complicated in the case of joint venture with any Governmental institution like RDB, since it can be possible only through the approach of an open privatization.
 - b. The issue of cooperative for artisans: the set-up of the cooperative has been completed, facilitated by the already existing text related to the Gatorano's cooperative covering usually his shoes workshop. By next, the relevant procedures related to the new cooperative will be concluded or updated. Then, it will be easy to progress with that text instead of creating a new cooperative.

- c. About the clearance of the machines, we agreed with RDB that the Italian/Rwandan company URUHU CENTER will solicit in Rwanda Revenue Services, the quitus/ exemption document for important equipment to be imported. Such request has to be approved by RDB for investors. This reply is ready in this days.
- d. About the location of the machines, It was confirmed a location in the area.
- e. Related to financing some expenses will be supported by RDB who have confirmed by means of a letter addressed to PISIE

The following specific comments and considerations apply to each one of the above modules.

Basic background Activities

1st Quarter

- The local Coordinator had been selected in agreement with the stakeholders of the local group of promoters leaded by Mr. Gatorano Juvenal (CV in Annex 1). The Local Coordinator is and Experienced former state officer, Mr. Wellars. His general impression on the group of persons who selected him was very good; the general feeling was that all the people involved in the program had a good level of technical skill, were highly motivated and eager to be acquainted on the most modern technologies, with a clear purpose of helping the local industry in advancing in terms of quality, competitiveness and modernity. The future phases of the cooperation program should take this attitude in clear consideration.
- The technical aspect of the Service Centre for the next development, as well as for this very beginning was studied by an experienced Italian Engineer, Mr. Sergio Dulio (CV in Annex2).
- The training has been outlined taking into account the preliminary information achieved by the missions that preceded this file.

Association of the Artisans

Leadership. The Artisans confirmed by means of a Memorandum (Annex 3) the leadership of Mr Gatorano Juvenal, the owner of the main workshop of Kigali shoemakers. This first group was able to include some more individual artisans that liked to join the program. The group started to select the location for training and for the enlarged Service Centre, and they also contacted the Rwanda Development Board, also for the location of the Center, as well as in order to organize the meeting between PISIE and the local Authorities.

It was requested then to start with the training utilizing the present infrastructures while other components of the project could follow a parallel road map in the meantime.

Association.. The group of Artisans, under the supervision of the Local Coordinator associated themselves to an already existing Cooperative , named “Cooperative de fabrication de chaussures de Bulinga” in short “CAFACHABU”. However in these days they are modifying the name of the Cooperative (CAFACHABU existed since 1977) and they are upgrading the partnership up to 15 members.

Set up of the service Centre

Service Centre. The Service Centre has been outlined by the PISIE expert (Annex 5).

Project working place. It was decided to locate the new Footwear Service Centre at CEFOTRAR (<http://www.facebook.com/people/Cefotrar-Rwanda-Cefotrar/100000988153316>), a multi-skills training centre located in the area and directed by Mr. Harerimana Jean Bosco, that confirmed the availability of the space and also said that, just in case and if needed, it will be possible increase the space regarding the square meters to place an improved Centre. Also the Ministry of Industry and Trade offered a place , but it is far away an it may be a solution only in the future, if it will be necessary to move out.

Machinery Shipment. The stakeholders, also under pressure of RDB (see in Annex 4 the letter of RDB to PISIE: “...machines remain property of PISIE...”), decided that in order to avoid duty and import taxes, should be good to ship the machinery to URUHU CENTER (<http://www.awtplpgroup.com/>) and URUHU CENTER will deliver the goods to the Cooperative to be settle. This Centre is an Italian business set up for tanning, organized under the umbrella of the PISIE-MINICOM agreement and they agree to receive the machines. However a clearance from The MINICOM and RDB is still outstanding in order to avoid the payment of import duties.

Machinery on site. In this phase the associated to CAFACHABU operate as a network for the training and the design od a creative collection for the local market. They have several machines in their own workshops, but it was agreed to proceed through the machines of Gatorano Juvenal, that are in better condition.

- 5 Flat sewing machines for ADLER upper, with one needle.
- N. 2 Flat sewing machine NECCHI with one needle
- N. 1 Arm sewing machine ADLER, with one needle
- N. 1 Sewing machine CMCI for moccasin
- N. 2 Cutting machine for belts
- N. 1 pounding-up roller machine for shoes bottom
- N. 2 sewing machines SINGER
- N. 1 Edge bander for leather. It is used for cutting the sole leather
- N. 2 holemakers for upper
- N. 1 sewing machine for leather sole, Blake kind
- N. 3 brushing and grinding machines
- N. 1 Carding machine with COMELZ abrasive ribbon

- N. 2 hydraulic machines for cutting, ATOM king with moving arm
- N. 1 Splitting machine for leather, OMSA

Set up of Credit Tools

This activity has not been really initiated yet. However a small help it has been obtained by RDB who addressed a letter to PISIE (Annex4) confirming a small amount of RWA 6.325.000 (Eur. 7.726,00) for covering local expenses, like raw materials and accessories. This amount will be utilized as rotating saving and credit.

Training

The experience confirmed that the training activities launched by PISIE were on the right track. A good number of human resources were developed, who could play an important role in the process of development undertaken by the Service Centre. In particular the participants coming from the stakeholders CAFACHABU can guarantee as trainers a certain future for the Service Centre activities and upgrading the productivity of the local shoe sector in general. Their good will, skill and high level of participation are the bases for a positive growth of the shoes sector in Rwanda, that is entirely based on family cottage business. Moreover the stakeholders support to the organization of the course was very good in various aspects, from providing logistic support, materials, and all what was necessary in terms of training materials. The eleven trainers trained now will be able in a practical way to train another about twenty to thirty people with the next training segment of six weeks. Then by themselves the “leaders” will be able to train other people, about thirty people per time maximum.

The set up

Four major activities were performed during this first period of the program:

- 1) Preparation in Italy of the training programme and feedback (5 days)
- 2) General meeting with the members of the staff of the Artisans group of the Service Center (1 day)
- 3) Interactive workshop with the companies who took part in the CAFACHABU (4 days)
- 4) Short lecture on the role of technology as key quality enabler (1 day)

During this meeting the leaders of the group were met and several points were discussed in relation to the results of the training program and on the future steps of the cooperation between the local organization and PISIE. The national Project Coordinator also took active part in the discussions. The

quality and structure of the program performed was generally appreciated both by the members of the College Faculty and of the CAFACHABU Staff; among the remarks which were made in the discussion there were requests for a continuation of the training support possibly with courses of advanced level aimed at improving the level of knowledge. Study programs that would give the possibility to members of the CAFACHABU to spend sometimes in Italy were envisaged and this possibility will be explored as well as the request of organizing short exchange programs for entrepreneurs coming from Italy to experiment the opportunity of investing in the footwear market with the local artisans. This possibility will be examined and its feasibility will be analyzed after the forthcoming start up of the Service Centre. Comments were also made on the availability of the appropriate equipment in the Gatorano Juvenal in view of the organization of the first calendars of training. However the level of quality of these premises is not found appropriate to upgrade the production capacity as well as for the quality concern, since the shop floor machines that are used for the production training would need certainly maintenance and possibly upgrading and these aspects will have to be solved only when the new machines will be imported.

The Future second Part of The Training

On the basis of the experience of the skills gathered with this first modules, the following lines of future activity can be (provisionally) proposed:

1. Consolidation of a first training, of both basic and advanced training, whose contents must be delivered to all workers involved taking into account the outcomes of the first training that involved mainly the “leaders”. The number of participants and the availability of an adequate number of operators will have to be considered as the constraints of this planning
2. Support by PISIE to CAFACHABU, with specific participation in the definition of the calendars, in the setting up of the selection criteria for the participants and in the structuring and consolidation of the training material
3. Support by PISIE to the setting up of the equipment of the Service Center and to the organization of the initial offer of services the center should be providing, in order to upgrade the productivity.

Delivered Training Modules

1. Basic Course

The course was aimed at transferring to people attending the training project the main knowledge regarding the footwear sector, letting them acquire a sector specific terminology but most of all a complete vision of the phases and different typologies of the footwear manufacturing process. The matters that were covered in the course gave the attendees a comprehensive insight into the many aspects of footwear technology and shoe making machines, from the simplest to the most modern and complex ones. (training courses annex 6)

Length and Venue

The training took place on May from 16th to 21st; the venue was the Garorano Juvenal workshop: Atelier Gatorano Juvenal Confection Des Chaussures Et Bottes Et Des Ceintures, en face de l'Onatracom, Nyamirambo, Kigali .

Contents

According to the PISIE program, the course was supposed to cover two main topics: general introduction to the footwear sector from a worldwide perspective and overview on the most relevant phases of the shoe design and manufacturing processes. The main goal in relation to this last point was to give the person attending the class some basic technological elements to be used in the following modules of the training and to allow them to gather the basis for a common language on the most important aspects of production and on the related technologies.

Module 1 was a general presentation of the footwear world in terms of macro economic aspects; the general situation of the sector was analyzed from the world shoe consumptions and productions stand points and from that one of the import and export flows. A special focus was given on the Italian situation and on its relevance in the world scenario. A part of this module was dedicated to synthetic introduction and presentation of the shoe machinery producers and of the most important aspects of this industrial sector.

Module 2 gave a “high level” description of the shoe product, of its function and of the many aspects that have to be considered in its design and of their specific relevance and contribution to the function and aesthetics of the finished product. The concept of “product life cycle” was also introduced and a first presentation of the most relevant, process specific enabling technologies was given.

Module 3 focused on the design process; the main aspects of the traditional (manual) and digital (CAD based) design processes were described. A complete presentation of the most modern CAD technologies and of the related design methodologies was given. The module was completed with a brief introduction on the so called “rapid prototyping technologies” and of their potential in terms of utilization in the footwear sector.

Module 4 was about the cutting phase and the related technologies; a complete presentation of the different techniques adopted to cut leather and synthetic materials was given. For each one of them the machines available were described and their technical characteristics were discussed. Manual and automatic die cutting machines were presented, as well as the most modern NC dieless cutting systems.

Module 5 introduced the general technical and operational aspects of the stitching (upper making) phase and of the lasting phases; the main steps of these two important manufacturing phases were presented (as an introduction to the more extensive treatment of these topics which will be the objects of the rest of the training program). Together with the meaning of the different steps, the most important machines used to perform such operations were presented and discussed, emphasizing aspects such as their technical evolution and their current level of automation.

Module 6 gave a synthetic outlook of many other relevant aspects of shoe manufacturing and of their technical implications. The use of robots in shoe production was presented and their level of penetration among shoe companies was discussed. Then a general presentation of the most

important machines and technologies used in the production of shoe components and equipments was given; this part covered the manufacturing of counters, toe puffs, insoles, soles (plastic and leather) and lasts. This module was concluded with a short presentation of the most relevant issues related to other aspects of shoe making operations like logistics, process planning and supply chain management.

Module 7 in this last module some indications on the future evolution of the shoe products and of the impact of this evolution on the related design and manufacturing technologies was. Some emerging “new product concepts” and “business paradigms” were presented and discussed.

2. Design

Objective

The course was aimed at training to use the the cutting and the sizes’ grading, as well as to transfer them some knowledge about the 3D CAD software for the stylistic changes to shoe’s shape.

Length and Venue

The training took place on May from 23th to 28th; the venue was the Garorano Juvenal workshop.

Contents

The training was prevalently practical. The training was about footwear development, following the traditional methodology of pattern grading with a manual pantograph.

Different footwear patterns have been analysed:

- Décolleté with lining
- Lady and man’s sandals
- Lady and man’s training shoes (sneakers)
- Man’s boots.

Afterwards, the sizes’ grading of some patterns with French, English and American stitch grading, with the measurements on last, has been explained.

3. Cutting and Stitching

Objective

The cutting and stitching training was aimed at providing the technical bases, besides the importance of the manual practice of the several phases of the realization of the complete uppers.

Length and Venue

The training took place from May 30th to June 18th; the venue was the Garorano Juvenal workshop.

Content

The course was based on the following models:

- Décolleté with lining
- Lady and man's sandals
- Lady and man's training shoes (sneakers)
- Man's boots.

All the training material has been provided by URUHU Centre, included the necessary tools, leathers and linings bought on the local market.

The practical lessons occurred in the work shop, carrying out all the necessary phases to realize the final upper.

Theoretical phase

- a) introduction to the operative system
- b) vision of the different types of leathers (calf, goat and suede)
- c) vision of the linings
- d) explanation of leathers specifications, like substance, tenseness, faults' control, cut direction
- e) reckoning of the consumptions on paper, basing on the different models and related leathers and subsequent control on leathers
- f) control of the cutting system basing on leathers and models to be used
- g) control of cutting dies with related small cardboards before their use
- h) explanation of the different types of skiving processes, of application of reinforcements and of folding methods
- i) explanation on the blackboard of the process, phase by phase, of the components related to the different models for the realization of an upper
- j) explanation of the different types of cotton threads
- k) explanation of the different types of needles
- l) explanation of the different types of seams

Practical phase:

Cutting

- a) introduction to the manual cutting
- b) test of manual cutting
- c) manual cutting on linings
- d) manual cutting on the different types of leathers on 4 models (the trainees were very interested in this phase)
- e) introduction to the specific techniques of the clicking press and related set up
- f) cutting of the linings with cutting dies on 4 models
- g) cutting of the leather with cutting dies on 4 models

Skiving

- a) introduction to machine's specifications
- b) demonstration of the different inclinations of the presser foot.
- c) knife feeding – grindstone insertion – knife sharpening
- d) different tests on linings and leathers have been carried out
- e) definitive skiving on complete linings and leathers of the 4 models

Stitching:

- a) different tests of manual folding have been carried out

- b) folding with net pattern
- c) direct folding without net pattern
- d) positioning of the jacks
- e) positioning of the reinforcements, if required
- f) final folding on uppers
- g) introduction to the specifications of the different types of stitching machines
- h) seams on paper with different drawings have been carried out, without needle and with needle without yarns to acquire a greater sensibility and practice with the presser foot
- i) different tests of seams with needles and yarns on linings and leathers with different drawers, in order to acquire deftness and practicalness
- j) final seams, first of all on linings and then on leather on 4 models
- k) practical demonstration of folding:
 - French binding
 - u binding
 - roll top line
- l) different folding tests have been carried out, using the components of the different models, using a machine
 - 160 pairs have been totally stitched.

The 160 pairs will be used for the lasting and finishing course.

4. Lasting And Finishing

Objective

The lasting and finishing course was aimed at providing the technical basis, besides the importance of the manual experience of the numerous phases to manufacture finished shoes.

Length and Venue

The training took place from June 20th to July 16th; the venue was the Garorano Juvenal workshop.

Content

The course was carried out on the basis of the previously assembled uppers during the cutting and the stitching course.

Theoretical phase

- a) introduction of the operating system
- b) introduction of the specifications of the different kinds of soles cementing and washing by PU adhesive
- c) halogenating for TR and rubber soles
- d) roughing or halogenating for PU soles
- e) primer (mek) for PVC soles
- f) drying times after washing
- g) adhesive spreading times after washing
- h) next spreading time only for shoe
- i) for TR, PVC, rubber and PU it's enough to spread adhesive once only
- j) neoprene adhesive, spreading times for uppers, leather and leather soles

- k) spreading times for the first and the second time both for soles and roughed uppers
- l) waiting times before PU and neoprene adhesive reactivation
- m) reactivation temperature and standing times
- n) moulding and toe-puff attaching - temperature and standing times according to the different types of leathers and lining materials
- o) upper conditioning - temperature and standing times according to the different types of leathers and linings

Practical phase:

1) Introduction to the technical details of the moulding and toe-puff attaching machines

- Solvent dip material
- Pre-cemented
- Time and temperature control (see theoretical part)

2) Assembling of lining to upper by latex or neoprene and stitching

3) Insole attaching

- By tacks
- By adhesive tape

4) Introduction to uppers conditioning machines

- Times, temperature and steam control

5) Introduction to the technical details for pulling over lasting

- functions

6) Introduction to the technical details of the side closing and heel seat lasting machine

- pressures adjustment functions
- heel rest adjustment according to the shape of the die

7) Introduction to the heat setting

- temperatures according to the different types of leathers
- humidification times of the different types of leather
- standing times of the different types of leather

8) Roughing

- by paper tape
- by steel wires wheel
- for a good test bond the technical differences were explained and emphasized

9) Adhesive attaching on shoes and soles

- PU adhesive

10) Introduction to the technical details of the reactivator

11) Introduction to the technical details of the sole press

12) Finishing

- trimming of the linings in excess
- burnishing and dyeing of the sharp cut edges
- threads burnishing
- upper cleansing by chemical washer
- upper ironing by irons
- spreading of creams or spray polish
- brushing by wax and carnauba wax
- brushing by abrasive wax for antique look and burnish
- insole placing
- lacing if necessary
- final quality control
- boxing

Tools

For the practical training there were the necessary tools (rulers, knives, hammers, brushes, glue containers, etc), and also the blades and the cutting dies, plus the machines at Gatorano Juvenal.

For the slides, no specific equipment were required, only a personal computer with power point and a projector for slides.

Considerations

Debriefing may 18th

Each attendee followed, showing also a particular interest in the different types of finishing and in the basic quality control.

The training of 10 weeks, the short availability of the workshop didn't allow to carry out a more pregnant course.

The upgrading of the production capacity will be achieved when next training, after the installation of the new machines will be completed. Now we have trained 11 trainers that will help to train then another about 25 people. Then the training will be carried out by local people in order to involve the other artisans: about 200 people will be trained.

Trainees

- | | | | |
|-------|--|--------|------------------------|
| I. | Atelier Gatorano Juvenal | Mr. | Gatorano Juvenal |
| II. | Acoki Nyamirambo | Mr. | Damas Gatete |
| III. | Terimbere Munyarwandakazi | Mrs. | Dont Uwamahoro |
| IV. | Atelier Aco | Mr. | Eugene Karinganire |
| V. | Cobi Cordonnier De Biryogo | Mr. | Vincent Ndayambaje |
| VI. | Atelier “Chez Augustin” | Mr. | Augustin Mugemangango |
| VII. | Assomaco Fabbriation Et Reparation Des Chaussures | Mr. | Filicie Bawibanza |
| VIII. | A.T.C.M. Association Des Technicien De La Chaussures | i. Mr. | Frodaole Mbandiwimfura |
| IX. | Shoe Makers | Mr. | François Ntacogora |
| X. | Cado Shoes | Mr. | Fidele Ndungtse |
| XI. | Acomarwa | Mr. | Dominique Msengiunva |
| | | Mr. | Emanuel Mugenmanxi |

Annexes