



**NIRDA**

National Industrial  
Research and Development  
Agency

NATIONAL INDUSTRIAL RESEARCH AND DEVELOPMENT AGENCY

# Textile and Garments Value Chain Assessment Report

**September 2017**

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#### **MORE INFORMATION**

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## KEY ABBREVIATIONS:

BDF	Business Development Fund
GTC	Garment Training Centre
HR	Human Resource
KOICA	Korea International Cooperation Agency
MINICOM	Ministry of Trade and Industry
NIRDA	National Industrial Research & Development Agency
PSF	Private Sector Federation
R&D	Research and Development
RDB	Rwanda Development Board
RMG	Ready Made garment Industry
RSB	Rwanda Standards Board
SME	Small and Medium-sized Enterprise
TEVET	Technical and Vocational Education and Training
TVTO	Technical Vocational Training Organisation
UNIDO	United Nations Industrial Development Organization

## 1. Background

Rapid technical change and accelerating globalization are radically changing the context for economic development in every country. These changes offer developing countries both significant opportunity – of massive productivity increase and more access to new resources and markets – and significant risk – of economic dislocation, stagnation and marginalization.

International competitiveness is at the core of industrial success, and is taking new forms. Trade liberalization is forcing enterprises to face unprecedented global competition in domestic as well as foreign markets. The falling "costs of distance" make this competition more immediate and intense than in the past. Rapid technical change forces producers to constantly upgrade their process technologies and introduce new products. It also changes patterns of trade, with product segments based on research and development growing faster than less technology-intensive segments.

The main reasons for the growing importance of international competitiveness are technological. The rapid pace of innovation – and the resulting promise of productivity increase – makes it costlier to insulate economies from international trade and investment. Since new technologies benefit all activities, traded and non-traded, rapid access to such technologies in the form of new products, equipment and knowledge becomes vital for national welfare. Insulation from global markets and technologies is no longer a viable option for any developing country.

Technology is therefore vital to developing countries, even though it is clear that they are not "innovating" at the frontier. They import new technology, equipment, and patents from more advanced countries, but they have to learn to use these inputs effectively.

There is clear evidence that research and development is a core element in the economic growth of developed countries. This might suggest that simply increasing research and development expenditure in developing countries will lead to rapid economic growth. However, the innovation needs of developing countries are both simpler and more complex than those of developed countries: simpler because to a large extent developing countries can attain increases in productivity by making effective use of existing knowledge<sup>1</sup>; more complex, because the key requirements of technology-driven development are not just new knowledge. In addition, technology-driven development requires education, packages of technical skills, and a whole series of institutions, networks and capabilities which enable the effective use of existing knowledge and must be part of, or even precede, any serious effort to create new knowledge.

Innovation in the context of developing countries is not so much a matter of pushing back the frontier of global knowledge, but more the challenge of facilitating the first use of new technology in the domestic context. Innovations should be considered broadly as improved products, processes, and business or organizational models. Developing countries should therefore be more interested in

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<sup>1</sup> For developing countries which are behind the "technological frontier", acquisition of existing knowledge may be expected to yield higher increases in productivity than would flow from a similar scale investment in R&D or other efforts to push back the technological frontier. There are many means of technology transfer for private goods. Direct foreign investment, licensing, technical assistance, importation of technology as embodied in capital goods, components or products, copying and reverse engineering, and foreign study are the key channels.

technology knowledge through its acquisition, adaptation, dissemination, and use in diversified local settings rather than in pure research and development and the creation of knowledge.

Using new technologies is not an automatic or simple process. It entails the conscious building of "technological capabilities", a mixture of information, skills, interactions and routines that firms need in order to handle the tacit elements of technology. Once imported, using technology efficiently is not easy, costless or automatic.

The efficient dissemination of knowledge requires appropriate mechanisms to educate potential users in the benefits of the related technology through the provision of technical information using explicit training, pilot demonstration projects, or technical assistance on how to use the technology.

In this context of rapid development and dissemination of new knowledge, innovation is becoming a more critical element of competitiveness. Firms have to be constantly innovating to avoid falling behind. This does not necessarily mean that they have to be moving the technological frontier forward. Only the most advanced firms do that. However, all firms need to be at least fast imitators and adopt, use and improve new technology in order not to fall behind. This puts a great deal of pressure on firms' technological capabilities. Moreover, innovation is not just a matter of new products or new processes and ways to produce them, but also better organization and management techniques, and better business models which facilitate doing business.

NIRDA's strategy is aimed at increasing the competitiveness of Rwandan enterprises through:

- Ensuring they have knowledge of the technologies that could improve their competitiveness
- Supporting them to identify and acquire specific existing technologies which can improve their competitiveness
- Developing purpose-built solution where existing technologies needed to improve competitiveness either do not exist or inappropriate to the Rwandan nosiness environment
- Ensuring that demonstrated success of pilot projects in replicated by a large number of enterprises to achieve impact at scale.

NIRDA cannot operate at significant scale: it cannot hope to be polytechnic in aiming to service wide-ranging customer needs across the whole spectrum of Rwanda's industrial economy. It certainly cannot go beyond the provision of technology support services into broader business development services for enterprises: it has neither the skills or capabilities to do this and this would only deflect from achievement of its main goal.

It must focus and specialise on those areas where it can have most impact and adopt matrix structures to allow it to be flexible and responsive rather than develop "knowledge silos" which reduce its agility.

A critical first phase of this process it to determine which value chains offer the best prospects of achieving NIRDA's objectives goal (either increased exports or import substitution) in the most cost effective and efficient manner. NIRDA will review value chains considering the potential for:

- Upgrading (actions to help Rwanda enterprises move to a higher value added component of a value chain);
- Extending (actions to broaden an existing value chain to increase its full potential job creation and value added impact);
- Optimising (actions to improve operation of certain links of the value chain to achieve greater value added);

- Targeting (identification of a new value chain or sector that Rwanda has the required endowments for but that has not been developed, or adequately developed).

It is in this context that textiles and garments has been determined to be a priority sector worthy of investigation. This report undertakes the first phase of that investigation.

## 2. Project Brief

### 2.1 Key tasks and deliverables for the assignment

The tasks of this assignment were split into two clear phases with the following deliverables:

#### Phase 1

- Produce a database of all enterprises producing textiles and garments in Rwanda
- Produce a diagnostic report detailing the technological capacity, production methods, and the needs of SMEs/Companies/Cooperatives operating in the textiles and garments value chain.
- Summary report with in-depth analysis conclusions and justification to whether the sector is one in which NIRDA should intervene with technological support aimed at improving exports/reducing imports

#### Phase 2

- Provide Guidelines for an Open Call for Project Proposals for projects in the Textiles and garments value chain with a covering report justifying all recommendations
- Create Awareness raising material including a report on available textiles and garments making technologies relevant to the Rwandan context aimed at raising the interest of Rwanda enterprises in applying for support from NIRDA with the introduction of relevant cost-effective technologies and processes to support upgrading or modernization of the textiles and garments value chain in Rwanda.
- Hold two dissemination workshops with actual and potential textiles and garments producers in appropriate locations in Rwanda
- Budget justifying overall allocation of funding for first open call including an Assessment of the total amount of funds that should be allocated from the NIRDA-KOICA-UNIDO project to co-finance the call the first open call.
- Advisory report to the NIRDA Selection Committee for the applications received through the call for textiles and garments value chain.

Progress to Phase 2 can only be commenced following the approval of the Project Steering Committee to progress following their review of this Phase 1 report.

## 3. Methodology

There are 25 textiles and garments factories in Rwanda. The Consultants selected 16 of them and a few Cooperatives to be assessed based on their preparedness to cooperate: this provides a very solid ratio of the entire industry. The methodology used to select the companies was:

- A list of garment and textile companies operating in Rwanda was collected from Ministry of Commerce
- Enquiries were made to find out their locations and size of their operations

- Companies were selected which are producing garments in organized manner and ready to answer the questionnaire; some companies were omitted because they do not produce garments and are only working as small merchandisers selling garments in their shops<sup>2</sup>
- Cooperatives were selected based on their organized production activities only.

The list of companies assessed using the questionnaire is shown in [Annex 3](#) and the questionnaire in [Annex 4](#).

The following diagnostics were undertaken based on visual inspection and study of the process workflow and detailed assessment using the comprehensive questionnaire. These included:

- Legal status
- Human resources
- Productivity and economic data
- Process description
- Quality control
- Qualification-certifications and standards
- Research and technological development, problems
- Technological needs and demand of related services
- Collaboration with other companies
- Competitive position
- Future trends and forecasts in key value chain areas.

The results of the analysis are illustrated below.

## 4. Report

### 4.1 Output 1: A database of all enterprises producing textiles and garments in Rwanda

Having gone through and contacted all possible formal business data sources, a database was developed of all textiles and garments enterprises in Rwanda

Annex 5 comprises a dataset of the vast majority of formalized entities engaged actively in textiles and garments production. The database comprises 24 enterprises.

### 4.2 Output 2: A diagnostic report on textiles and garments making in Rwanda

The consultants and key NIRDA staff contacted all the SMEs in the dataset requesting permission to make a site visit. Of the 24 enterprises contacted, only 20 enterprise where actively in business and ready to receive the team (with the remainder either not yet in production, unavailable, or unwilling to host the team).

The 20 enterprises do, however, provide a representative sample of the status of the textiles and garments value chain in the country as they are spread out across all regions of the country and represent the varied spectrum of the industry rms. The table below includes the full list of all the 24 textiles and garments enterprises that were visited and assessed using the standard questionnaire

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<sup>2</sup> There are some companies registered with MINCOM as garment producers, but they are still only in the planning stage and with no operational activities: in these cases we only discussed their future plans

(annex 1) submission and assessment across the country by the project team across the country and form the basis of the diagnostic report and its findings.

#### 4.2.1 Company size, ownership and location

**Table 1: Company size**

No of workers	Under 100 persons	100-200	200-500	500-1.000	Over 1.000
No of companies	16	2		1	1
Ratio- size of company (%)	80%	10%		5%	5%
Total No of workers	500	265		500	1500
Ratio – No of workers (%)	20%	10%		15%	55%

The Rwandan garment Industry is mostly comprised of small-scale enterprises and these, being small, cannot access good prices for fabrics and accessories nor competitive production costs. Of the Rwandan enterprises, only C&H GARMENTS is large with 1.500 workers (and still growing) is in line with the international trend to utilise a 1.000 worker-plus factory. There are 2 companies which are in the process of start-up which are expected to have over 200 workers each (BURRERA COLLEGE OF FASHION and HEMA GARMENTS).

There are no mid-size companies in the 200-500 worker range which usually are the core of the garment industry in manor player countries such as Turkey and Egypt.

Exporting can only be undertaken by companies with more than 300 workers so they have the necessary solid production infrastructure.

Being small is a risky situation from the garment industry perspective – with the target being to have the majority of companies in the 200-500 worker range.

**Table 2: Employment**

No of workers	100% Rwanda	Mixed	FDI
No of companies	18	0	2
Ratio (of companies %)	90%		10%
No of workers	750		2.000
Ratio of workers (%)	25%		75%

Only two of the enterprises are the result of foreign direct investment (UTEXRWA and C&H GARMENTS): together they employ 75% of the workforce of the assessed companies (2.000 workers out of 2.500 workers).

This is a visible sign that International investors have large-scale investment plans compared with those of Rwanda investors who apparently have insufficient access to investment funds and thus start and stay small.

Almost all the factories that were reviewed are located in or near to Kigali. This is acceptable at this stage of the industry’s development but presents a long term risk as textiles and garments is a low

wage industry and will thus find it hard to compete for workers as other sectors develop and offer higher wages.

Ideally, the textiles and garments sector should have a more balanced geographic spread to reduce such risk – but logistics and human resource availability will also be key t is recommended to have a spread over equally of the factories all across Rwanda to reduce the risk; off course logistic part should be also highly considered.

#### 4.2.2 Activity type

**Table 3: Activity Type**

No of workers	Textile	Garment
No of companies	1	20
Ratio (%)	5%	95%

There is only one company (UTEXRWA) which is producing fabrics and this is inadequate to meet the industry demand. Usually a well balance value chain should produce a minimum of 50% of the fabric and 80% of the accessories needed locally<sup>3</sup>. In Rwanda, less than 5% of fabric needs are produced locally and no accessories are produced locally.

Increased local production of fabrics will secure on a long term basis, the textile industry against investors shifting production from one country to another to achieve short-term economic benefits. The attraction of foreign direct investment in textile mills should be targeted.

Local accessories production needs to be developed if the garment industry is targeted for growth.

The current dependence on imported fabrics and accessories constitutes a major risk to the sector.

#### 4.2.3 Export performance

**Table 4: Export performance**

No of workers	Textile	Garment
No of companies exporting	0	1
Ratio of companies exporting (%)		5%
Value of export (million USD/year)		1.6
Workers involved in export activities		1.500
Ratio of workers involved in Export activities (ratio calculated considering 20 selected companies)		55%

Out of 20 companies reviewed, only one exports (C&H GARMENTS). All the others are concentrated on supplying the local market which is limited and which price rather than quality is the driving factor.

<sup>3</sup> In Bangladesh 100% of the knit fabrics consumption is produced locally and in Turkey a surplus is produced allowing Turkey to be a major exporter of fabrics.

Export activities will raise the level of workers awareness, competitiveness, working standards and overall industry standards as enterprises have to meet the requirements of the more demanding export sector.

The current value of exports made by Rwanda is US\$ 1.4 million (coming entirely from C&H GARMENTS). This figure is insignificant. In comparison Turkey's exports were US\$ 15 billion, Bangladesh US\$ 30 billion, Egypt US\$ 3.5 billion, Ethiopia US\$ 0.1 billion, and Kenya US\$ 0.5 billion.

#### 4.2.4 Product Development

All companies are able to produce a sample and a pattern, but only two companies (UTEXRWA and C&H GARMENTS) are currently able to produce samples in a professional way to meet industry standard requirements.

Sample production is a very important part of the merchandising of products: in order to obtain an order you need to make a satisfactory sample. However, as most of the companies are local market-driven with no culture of sampling, this activity is not developed.

**Product Development** means also the capabilities to design a product and to add value to it with professional printing, embroidery and washes as well as in making complex pattern/fit designs and utilising innovation with fabrics types and the structure of yarns. Unfortunately, none of the companies in Rwanda have a professional Product Development Department as the local market does not require such product development.

The single export company (C&H GARMENTS) is undertaking product development – but not in Rwanda, but most probably in China and is using Rwanda only for sewing purposes.

It is important to understand that such product development capabilities are a vital attraction factor for potential export client: a company which is able to replicate a designer's idea, is able to find technical solutions, to handle fabrics, washes, complicated printings and complex patterns is likely to receive export orders. There is no such capability in Rwanda at present.

A strong recommendation is to encourage companies to develop a product development department (but their existing small size makes this unrealistic at present) or, in the case of C&H Garments encourage them to move product development capability to Rwanda.<sup>4</sup>

**Fashion design** skills exist in Rwanda as there are many small shops which have their own designers and create their own collections. This must be put into an industrial perspective where a design will not turn into 1-10 pieces but into 5-10,000 pcs/design. Rwanda should encourage factories to invest in this area and develop their capability beyond their current local market horizon<sup>5</sup>.

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<sup>4</sup> Turkey, which has a €1.000 cost/worker is still the 5<sup>th</sup> largest exporter of garments in the world with more than 15 billion USD - because of their capability in product development.

<sup>5</sup> Turkey started a decade ago to develop Fashion Design and launch Turkish brands which now are successfully competing Internationally with well establish brands: H&M, MANGO, TOMY HILFIGER children's, women's & man's casual and denim competes with LCWaikiki, COLIN'S, MAVI JEANS, KOTON; HUGO BOSS, M&S men's suits competes with BEYMEN and ALTINYILDIZ; ZARA, MASSIMO DUTTI – high end men's and women's compete with POLO GARAGE' INTIMISSIMI – women's underwear and brass compete with KOM. This was possible because Turkish manufacturers = besides producing for their Export clients - started to invest massively in organising Product Development departments, hiring fashion designers and started offering their export clients their own designs. This is how – despite Turkish production being relatively expensive = it cannot be moved out of Turkey as the design root is in Turkey.

Securing the basis of a textile industry on a long term is made using Product Development and Fashion Designing skills along with an abundance of fabric and accessories producers.

**Pattern making** in Rwanda is made 85% manually and 15% using CAD-CAM software. Modern industrial companies should use always CAD-CAM software as this is the only way to be competitive and have a low cost per pattern.

**The Sample Room** is an important department of a garment factory because receiving an order is often conditional on executing a correct and satisfactory sample. The level of professionalism of the personnel in the Sample Room should exceed that in production area. Technologies and machinery used in sampling should match exactly production process machinery and technologies so that no difference will arise between a piece produced in the Sample Room and one produced in normal production.

Unfortunately Rwandan companies do not pay attention to the necessity of having a Sample Room and consider it as unimportant part of the process - because of their focus on the local market.

Increasing awareness of the need for a sample room is essential if exports are to be increased and improved quality encouraged.

#### **4.2.5 Merchandising & Purchasing**

**Merchandisers** are the link with export clients: they take their requests, set prices, negotiate orders and contracts, receive orders, coordinates samples and approvals, follow up orders and keep clients informed, coordinate shipments, send the invoice to clients and follow up the payment. More than that, as the current international trend is to reduce the lead-times of deliveries, merchandisers plays a very important role in getting samples sent and approved in a short time so the whole lead time of the process is reduced.

Usually – according to international norms - an easy sample is obtained within 1-2 days (T-shirt with fabric development knitting + dyeing and pattern making) whilst complex dyed and washed trousers are obtained within 4-5 days (fabric exist + pattern making + washing and dyeing).

Only two companies operate a basic system of merchandisers but not yet at a satisfactory level (UTEXRWA and C&H GARMENTS). All other enterprises are handling their orders in the “old fashion way” without having professional personnel trained for this purpose.

Utilisation of merchandisers is essential for garment factories, and is a necessary step toward increasing competitiveness, regardless of whether this is for export or local market production.

The assessment undertaken shows an average order size of 40-50.000 pcs/order in the case of C&H GARMENTS (export orders) and 15.000 pcs in the case of UTEXRWA (local sales).

An export order of 50.000/order tends to occur in the low value-added side of the garment industry – mass production of a large number of styles which are very similar to each other. In reality, EU clients place orders of around 3-5.000 pcs/style with a high value added. Whilst US clients place 50-100.000 pcs/style with a very low value added. At this moment C&H GARMENTS is serving mass production clients and their order ratio is 50.000 pcs/style which is very easy to handle. We anticipate that in a few years, they will face the need to handle smaller order sizes and expect that this will be difficult for them to achieve.

In case of local orders UTEXRWA is producing 15.000 pcs/style and this is a relatively large order considering the size of the Rwandan market. We consider that they also will face difficulties in producing small order runs.<sup>6</sup>

**Purchasers** are professional trained persons able to understand the complexity of the international trade system and to find the best deals by finding suppliers, dealing with them, negotiate contracts, finding the best carrier and insurance company and getting the goods into the factory at the best possible price in the shortest possible time. All professional textile and garment factories should have a minimum of one professionally trained buyer to deal with buying yarn, fabrics, and accessories of any kind as well as spare parts.

Our assessment shows that small Rwandan enterprises do not have a proper purchasing mechanism, which definitely is affecting both their costs and performances.

Our assessment also shows that all the companies are obtaining their fabrics and accessories from imported sources - mainly from China and East Africa (Kenya, Uganda). As the average lead time for imported goods for fabrics from China is 3 months, this makes any Rwanda producer dependent on Chinese raw material non-competitive on the export market. The total lead-time for delivering an order is 3 months – including sample production, approvals, purchasing fabrics and accessories, and executing production.

In order to make the Rwandan garment Industry export competitive there is a need to upgrade the skills of purchasers so they can find the best sources and obtain rapid delivery. This will be a major challenge in developing an industry geared towards exports.

A combination of professional Merchandisers, professional Purchasers and a professional Sample Room (Pattern makers + Sample Operators) is the key to success in developing an export industry.

#### **4.2.6 Production planning**

Production planning is part of the production process and aims to coordinate all the activities within the process so that there is a smooth flow: with no missing items, no unbalanced capacities and that the delivery terms and quantity are met. The role of the planner is a highly important position: the planner should use professional software (ERP) to support data collections and decision making.

Our assessment found that only 2 companies are using professional planning tools and employ planners. All other companies do not employ a planner and do not use planning software of any kind, but using basic hand written formats or Excel-based formats.

This is because there is most local firms do not understand the need for effective planning and see planners more as a cost than as an advantage.

Increasing exports or increasing employment over 100 persons working without using a professional planner is difficult and will result in problems in production. Setting up a planning department is recommended as essential in all factories whatever their size.

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<sup>6</sup> As an example Turkey is handling 500-2.000 pcs/style trousers at a sales price of 15 EUR/pcs versus Bangladesh which handles 5-20.000 pcs/style at the price of 8 EUR/pcs.

#### **4.2.7 Cutting technology**

Every company with the exception of BURRERA COLLEGE OF FASHION utilises manual spreading and manual cutting technology: this is applied satisfactorily in the case of C&H GARMENTS and UTEXRWA and unsatisfactorily by all others. Manual cutting technology is the cheapest way to commence the development of the industry but, in the longer term, is more expensive and does not give the same quality, accuracy and productivity as automatic cutting technology does. Automatic cutting equipment is expensive (a cutter can cost over US\$ 130.000, 2 semiautomatic spreading machines + tables costs US\$ 60.000 and software to run the system costs US\$ 20.000 USD giving a total minimum investment of over 200.000 USD).

Developing an export industry will be difficult using manual technology: it can be started in this way but needs to be shifted to automation in a few years.

BURRERA COLLEGE OF FASHION has acquire an automatic cutter which is a very positive fact which will assure a high quality and productivity once the equipment is operational.

Fabric consumption is not monitored at all: as 60% of total production cost derives from fabric, this is very important parameter to be followed.

#### **4.2.8 Sewing technology and industrial engineering**

All the factories have basic sewing machines without automation, with the only difference being that UTEXRWA, C&H GARMENTS, BURRERA COLLEGE OF FASHION and HEMA GARMENTS have new machines or machines not older than 5 years, whilst the other factories have either all old machines or a mixture of old and new machines.

Automation is not present in any factory in Rwanda: this would normally include automatic attachment of pockets, automatic overlocking or hemming, automatic attachment of waistbands, automatic feeding of snap fasteners, automatic packing of T-shirts, and many other aspects of automation for T-shirt, trousers and shirt production.

Automation require a combination of:

- Funds available for investment
- Continuity of orders and good relation with clients
- Good mechanical skills and training for mechanics
- Experienced production supervisory level

It is not essential to have sewing automation: more than 60% of the garment factories in the world do not use automation. The difference that is provides is in productivity, consistent quality and the possibility to increase rapidly output without the need to hire and train new operators. As an example Turkey is now completely % automated in each factory, whilst factories in Bangladesh and China are about 30-60% automated.

At this point a special topic is addressed by Consultant: the overall efficiency of the assessed factories compared with international best practice. Our assessment finds 50-60% overall efficiency in the case of C&H GARMENTS and UTEXRWA and 30-40% in case of all other factories. Whatever machinery and technology are used, overall efficiency is linked to the way that production management maximises training, education and coordination of the workforce to use their abilities to the maximum advantage.

Best practice around the world aims at 85-90% overall efficiency for the world class factories and 75-80% at extremely good ones.

There is a substantial efficiency gap between Rwandan and International practices resulting from the limited industrial culture, limited training availability and relatively poor management skills of Rwandan small companies.

This can be overcome only by setting up industrial engineering departments which are responsible for improving productivity through the training of workers, improved use of production technology and maximising machine usage.

Our assessment found that only the largest Rwandan enterprises have an Industrial Engineering department – and this is why they achieve 50-60% efficiency, whilst all the other enterprises do not have such a department and their performance is therefore poor.

Having low efficiency results in:

- Having high production costs resulting in high product price and low competitiveness
- Export clients will place orders because prices are too high
- Companies are forced to sell locally

Industrial education would normally be undertaken in universities or colleges with a specialist textile department or, until local skills are developed, by using expatriate staff hired by local companies to provide the necessary training. This is a long term process but it provides significant benefits within a few years.

#### **4.2.9 Finishing technology**

Finishing is the last part of the production process during which the garments have to be made as attractive as possible so as to ensure client satisfaction. This stage is also the last possibility to identify quality problems and correct them before shipment is made. The finishing area should always be a very well organised, clean, well-lit area operated with a well trained workforce.

Our assessment is that none of the enterprises in Rwanda scores well in this regard: although C&H GARMENTS is the best set up of the assessed companies. Smaller companies are very poor in this regard; they do not have a proper finishing space and what does exist is often dirty and disorganised.

Equipment used in the finishing process should be of the best quality: always cleaned and well maintained and this is not what the assessment found. In most of the companies visited finishing equipment was rusty, the space was dirty and staff exhibited carelessness.

Improving finishing does not require a high investment: mainly improved management, greater emphasis on cleanliness and instilling the right attitude into staff.

The finishing area should always exhibit these key factors whether for local or export production: it helps create the appropriate state-of-mind in the workforce and thus contributes to the improved quality of products.

#### **4.2.10 Quality Assurance**

The description of quality assurance here does not refer to ISO 9001 Quality Management Systems, but refers only to the far simpler standard procedure for controlling the quality of products, identifying

problems and undertaking corrective action and management reporting systems to allow effective management and decision making.

Most Rwandan enterprises scored very low on quality assurance with only UTEXRWA and C&H GARMENTS receiving satisfactory scores.

Overall, most small enterprises do not operate a Quality Assurance department: they have no control over fabrics and accessories when they are received in the factory and process control is not undertaken during production. Management reporting system aimed at increasing management awareness and decision making do not exist in most of the small companies.

The overall conclusion is that the larger enterprises operate quality assurance procedures and systems to a reasonable (if not yet satisfactory) level, whilst the smaller ones have no quality assurance systems at all.

This is a major factor in their limited development and the poor (and not improving) quality of their products.

Quality Assurance trainings is a foundation stone for any factory, as production and quality assurance should go “hand in hand”. Quality assurance is not an optional extra.

Exporting cannot be undertaken without a well implemented quality assurance system which assures the quality of products expected by the client.

#### **4.2.11 Printing - Embroidery – Washing**

80% of companies (large and small) have printing facilities: 50% of the total undertaking printing manually for promotional T-shirts and 30% use screen printing machines. 20% of enterprises do not have any printing facility. Printing skills are basic: 1-4 colour printing mainly for promotional products without more complex techniques such as 3D, PUFF print, High Density or other special print techniques.

Embroidery equipment exists in around 40% of the companies: a good ratio. Embroidery skills are basic: no use is made of high complexity embroidery techniques using laser cut-parts and patching.

At this moment both printing and embroidery are suitable for the promotional products which are produced, but cannot be used for export production without technical training and perhaps some additional investments in screen films and design tools.

Washing and dyeing capabilities are absent from all companies. No company possesses the equipment or technical knowledge to undertake washing or dyeing of finished products. These techniques are essential in the denim industry and in high-end value-added knits or woven products which are piece dyed.

#### **4.2.12 Warehousing**

Warehousing exhibits the same symptoms as the finishing department and thus is generally unsatisfactory: disorganised warehouses, lack of cleanliness, lack of registration and an overall unattractive appearance of the Finished Good Warehouse or Fabric and Accessories warehouse is the norm. Smaller companies often do not have a properly allocated warehouse, but use different rooms in which they operate.

Improving warehousing does not require high investment but does require proper management attention.

#### **4.2.13 Textile capabilities**

There is only one textile company (UTEXRWA) which has spinning, weaving, processing capability and is able to produce 100% cotton or cotton PES blend yarns, plain, twill and jacquard woven fabrics and dyed fabrics as well as printed fabrics.

The layout of the factory is satisfactory and very professional: machinery is properly maintained and staff are very well trained to operate the machinery. However, it appears for marketing and management reasons, this facility operates at only 10-20% of their possible capacity. This is hard to understand as the company is the only textile factory in Rwanda. Whatever are the reasons, it is strategically important to develop this existing facility with minimum investment and operate it at maximum capacity so as to supply fabrics for local demand (including government demand - military, police, schools, hospitals, and corporate government bodies).

UTEXRWA is not able to produce export quality products as their equipment is over 15 years old and the technology is outdated - even though maintenance is kept at a satisfactory level. It is perfectly adequate to supply local industry demands.

If, for strategic reasons, the Government of Rwanda decides to invest in this facility to make it suitable for exporting then production should switch to twill fabrics for chinos and plain fabrics for shirts rather than the existing production for bed-sheets and home textiles.

#### **4.2.14 Management & Human Resource**

Human resource systems are satisfactory in the large companies and non-existent in small companies.

- Only C&H GARMENTS has a clear and professional human resource management system with clear procedures.
- No bonus systems to incentivise workers exist.
- Hiring based on selection tests of workers skills are applied only in C&H GARMENTS: all the other companies are hiring based on non-professional standards.
- Professional training for non-skilled workers exist only in two companies (C&H GARMENTS and BURRERA COLLEGE OF FASHION), all the other companies are hiring existing tailors who do not have the skills to operate effectively in an industrial work environment
- Cross training of operators (teaching operators how to undertake more operations and use more machines) is undertaken only in C&H GARMENTS: none of the other companies have a professional skills upgradation system for workers
- Line Supervisor and Management Training is only undertaken in the large companies.

Human resource management procedures need to be applied in all companies regardless of size as the garment industry is highly labour intensive and creating a trained workforce is the key to good performance.

Management skills can be split into two categories:

- Large companies with professional and well trained management. Even though there are still gaps in their behaviour and practices, those can be easily corrected with management training.
- Small companies do exercise proper management practices. They usually started as a small workshop and developed gradually into a small size company without any properly trained management. This lack of management skills is not unusual in an SME, but is a reason for their lack of growth and limited performance.

#### **4.2.15 Waste Management**

Waste is produced during the Textile and Garment process as follow:

- Cotton lint during the spinning and weaving process
- Chemical discharge of dyes during the dyeing and finishing process
- Fabric waste during cutting
- Fabric waste and lint during sewing

All the waste mentioned above (other than chemical dyeing waste) can be recycled and turn into products instead of being throw away, burnt or sold at insignificant price to local dealers.

Small pieces of fabric resulting from cutting may be sewn together into pillows, mattresses, blankets and toys and filled with cotton lint from the spinning and weaving process. Products may than be sold on the local market for a satisfactory profit (as the raw materials are waste). This would require technical upgradation to producing those products that are new to Rwanda as well as machinery and equipment.

- Pillows & mattresses & blankets – there is no industry producing such items in Rwanda: all are imported.
- Children toys – there is no industry producing such items in Rwanda, and this is a highly value-added product requiring a high degree of technicalities and professionalism and requiring high levels of manpower for manual work.

In case of chemical dyeing waste there is no satisfactory solution to recycle such waste: instead the waste water needs to properly cleaned and the resultant solid chemical waste should be neutralised using chemical methods.

#### **4.2.16 Microscale organizations**

During the assessment visits, special attention was given to the Associations and Microscale Garmenting Industry (Tailors), including:

- Association of Professional Tailors
- COCOKI – Tailor cooperative
- City Market Tailors Group

Discussions concentrated on assessing their status and discussing ways to upgrade them to operate as a small scale business.

Findings during assessment are presented below:

## **The Association of Professional Tailors**

179 members registered out of 2.028 tailors identified

**Table 5: Location of tailors by district**

	DISTRICT	NO. OF TAILORS
1	NYARUGENGE	595
2	GASABO	101
3	KICUKIRO	234
4	MUSANZE	213
5	RUBAVU	206
6	GAKENKE	147
7	MUHANGA	42
8	RWAMAGANA	185
9	RUSIZI	154
10	HUYE	151
	<b>TOTAL</b>	<b>2.028</b>

The objective of the Association is to create a consistent organization spread over each district, which will create a “MADE IN RWANDA” brand and produce garments of a satisfactory quality level. The wish to provide training programmes for their members in tailoring skills and are keen to see a Garment Training Centre be established.

The Association wishes to secure orders of school uniforms, corporate uniform, traditional dresses. They also wish to serve the regional market in nearby countries.

The Association tries to use locally produced fabrics (from UTEXRWA), but complain that UTEXRWA does not produce all the required woven fabrics (especially shirt and suit fabrics) so around 70% of their fabric requirements must be imported.

Currently, the Association is focused on visiting all tailors in the country and encouraging them to join the Association.

### **COCOKI – Tailors’ Cooperative**

This Kigali-based Garment Cooperative comprises 21 actively engaged tailors - mainly women - producing fashion items for Kigali’s fashion boutiques. 30 basic manual “old school” machines are used to produce an average of 3.000 garments monthly with earnings of around 1 million RWF / month equally distributed among the member tailors.

Besides production, this Cooperative also trains students in basic garmenting activities: at the time of the visit 10 Students were undergoing training.

The main challenges that they face are poor access to quality fabrics and accessories, which are not available on the local market at affordable prices.

The Cooperative is aware that their existing space and machines is a limitation for further development and growth.

### **City Market Tailors Group**

A Kigali-based organisation with more than 100 tailors working in a 2 floor workspace. It operates by 6 to 10 tailors creating a group which then rents space and shares all operational costs. Each tailor is handling his orders independently, clients are providing the fabrics and accessories, whilst the tailor is creating the patterns, cutting and sewing the garment.

There are a few embroidery and printing machines available, but with a small scale capacity and not organised.

Overall, this is a tailor-driven activity based on very basic manual machines and the independent activity of each tailor. There is no consistency to earnings as the tailors approach is reactive (producing garments which consumers are ordering) and not proactive (producing garments in advance which consumers may purchase).

### **Other microscale tailoring organizations**

All over Kigali there are many other groups organized in a similar way to the City Market Tailor Group: all producing individual orders or from time-to-time obtaining larger orders of school uniforms and corporate uniform. In these cases they tend to group themselves together temporarily to handle such orders.

Such small-scale tailors' cooperative have the potential to grow into a mid-range factories if they are provided with technical and financial support. This might be the potential "wave" to move from the existing microscale tailors to midsize garmenting operations.

It is important that there exists significant entrepreneurial experience amongst them and most probably there will be individuals which will get the satisfactory skills during Technical Upgradation and they will be able to form midsize factories and run the business.

## **4.3 Output 3: Summary report containing an analysis of the collected data and conclusions**

### **4.3.1 Conclusions as to the capacity of Rwandan companies to serve local demand**

The existing companies in Rwanda are not able to meet local market demands. In terms of quantity, the installed capacity of textiles and garments is far below the country's consumption. Annually, a total of 3 million garments products and 800.000 pieces of bed-sheets could potentially be produced by Rwandan companies. If one extracts the exports undertaken by C&H GARMENTS, these figures are insufficient to cover the consumption of Rwanda's 12 million population. In order to cover internal consumption, a minimum 20 million pcs yearly should be produced (assuming a minimum of two products purchased annually by each citizen) and could be expected to climb to 50 million pcs/year.

Product profile of the existing production of 3 million garments is:

- 2 million pcs - 70% - work wear, corporate uniform, school uniforms
- 10.000 pcs – 0.5% - fashion items – women's dress, shirts, skirts, men's trousers
- 1 million pcs – 29.5% - T-shirts especially promotional not fashion T-shirts

There is no production of denim trousers: a product like T-shirts and shirts for which there is a clear local demand.

Clearly, there is a very low coverage of the Rwandan consumption by local garment factories: Chinese and East African imports and the import of second-hand garments from EU and US are the main source of garments in Rwanda at present.

This is a significant opportunity for Rwandan garment factories to start producing in a professional way to meet this demand.

Professional garment lines of shirts-trousers-T-shirts could be launched under local brands and be sold in retail shops and on-line.

There is no local brand which is well known in the garment retail area: this provides a major opportunity for existing Rwandan companies, but if this opportunity is not taken up by a Rwandan company then foreign retail groups will fill the gap in the next 5 years.

#### **4.3.2 Conclusions as to the capacity of Rwandan companies to export**

Exporting is currently undertaken by only one company – C&H GARMENTS - which operates in a professional manner and will achieve success. Their products are mass produced, low value-added and not fashion driven products. However, they could move into higher value products at a later stage.

There are two new factories (BURRERA COLLEGE OF FASHION and HEMA GARMENTS) which aim to export - but both of them are at the start of the process and are unlikely to export for at least two years.

Rwanda export is not an easy task because there are challenges:

- Fabric availability – since local produce fabrics are not available or is not of the required quality level, the only option is imported fabrics from China (woven fabrics) or East Africa – primarily Kenya and Uganda (knit fabrics). In both cases the lead time in obtaining the fabrics is more than two months which is far too long considering that 2-4 weeks is the industry standard.
- Accessories availability – locally produced accessories are not available so imports are the only solution. Again lead time are around 1-2 months which is a major problem.
- Professional Printing – Embroidery – Washing capacities: these are not available at this time. These are essential for exporting.
- The industrial culture of the workforce: this is currently a problem, but actions by the Rwandan management could change the culture in 2-3 years with appropriate training.
- Limited management skills of companies: this is a problem – especially for small enterprises – but can be overcome through management training and interaction with export clients.

However despite these challenges, progress in developing exporting can be achieved and at least 200.000 people could be engaged in the exporting of garments.

Our assessment is that Rwanda has the potential for garment export based on the use - temporarily – of imported fabrics as this can be develop relatively easy and with low investment. The garment Industry could grow to US\$100 million in 15 years if proper steps are taken.

The textiles industry requires a massive investment and having only limited textile production in Rwanda at present the challenge is significant. The textile sector should be developed through the attraction of foreign direct investment.

### 4.3.3 Conclusions on the upgrading of microlevel tailors to a competitive level

The main conclusions are:

- Micro-level tailor need to be trained in using the proper technology for garment production. Subsidisation of training expenses may be necessary and qualifications awarded to increase their employability in clothing companies
- Micro-level tailors would benefit from an industrial facility aimed at micro-level tailors: this would provide small scale production space at affordable rentals and might also provide centralised service facilities in areas such as accessories and maintenance, CAD-CAM cutting system, pattern grading, preparing markers, computerized cutting services, purchasing and warehousing.
- Micro-level tailors would benefit from support from a professional merchandising team to market their products

### 4.3.3 Summary of findings

Table 6: Summary of findings

Criterion	Findings	Analysis
1. Company size – Ownership - Location	20% Small companies under 50 workers – 10% over 500 workers  90% Rwandan owned – 10% FDI  Location almost all Kigali area	Selected companies represent a small part from the total No of persons involved in Textiles, as there are many small size workshops or independent tailors activating on the informal market. Out of selected companies there are only 2 companies bigger than 500 workers (count as big factories), all the rest are less than 50 workers (small size factories). There is no mid-size factories activating there (100-500 workers).  <b>Developing mid-size companies should be a priority</b> as they are the one developing local brands, supply local market and generate the much needed T&G activity.  FDI is only 10% of the companies but covers 80% of the workers from the selected companies.  Rwandan own companies are small size / FDI companies are big size. There is no mid-size range.

Criterion	Findings	Analysis
2. Activity type	5% Textile 95% garment	<p>Producing textile fabrics there is only 1 textile company which is operating at less than 20% of it's capacity. Local suppliers still prefer imported fabrics instead of using local produced fabrics.</p> <p><b>Upgrading the textile company will benefit the whole Garmenting chain of locally executed fabrics based on imported cotton from nearby countries.</b></p> <p>Produced garments are at basic level of complexity and designing, all create promotional or corporate products with low level of requests.</p>
3. Export performance	5% companies make Export 55% workers working for Export	<p>Only 1 company export garments, same company is the biggest employer within the selected companies and account 55% of the workforce within selected companies.</p> <p>At this moment small companies they do not have the skills and capability to make export, and the big companies are only 2 out of which the biggest one already is doing export. Upgrading the 2<sup>nd</sup> one UTEXRWA it is recommended for Local Market (producing fabrics).</p> <p><b>Developing Export capabilities along with developing mid-size range Rwandan own factories it is recommended.</b></p>
4. Product Development	Product Development – poor ability  Industrial Fashion Design – not existing  Pattern Making skills – poor and using manual methods. Only 15% using CAD-CAM software's	<p>Product Development skills are not satisfactory for Rwandan market as well as for Export. There are no Trained persons to be able to design “attractive garments” in an Industrial way.</p> <p>Pattern makings are rather manual made than modern CAD-CAM software's made, so quickness and accuracy is missing.</p> <p><b>Improving the Product Development skills is a must for both Internal Market as well as for the companies aiming to Export.</b></p>

Criterion	Findings	Analysis
5. Merchandising & Purchasing	<p>Merchandisers do not exist in small companies. Big companies have Merchandisers at a basic level skills</p> <p>Purchasing activity is not developed and do not have proper trainings, procedures and tools.</p>	<p>Well trained Merchandisers is the foundation for Local Market and Export growth, as this position is handling clients and market. At this moment companies are not able to address their orders in a professional way → companies cannot grow.</p> <p>Purchasing is made almost with Imported Goods, this position become vital to achieve a competitive cost for a company. At this moment Purchasers are not trained to handle complex International Import-Export procedures which they need to.</p> <p><b>Both Merchandisers and Purchasing needs quick technical upgradation.</b></p>
6. Production Planning	<p>90% of the companies do not have Planning activity</p>	<p>Developing an Industrial scale production requires Planning skills and coordination. At this moment Production Planning skills does not exist in Rwandan companies.</p> <p>Without this upgradation, small companies will stay small, and big size companies will not be organized and coordinated → not competitive.</p> <p><b>Professional Training in Production Planning will create a better coordination at the production dept level and remove waiting time and unbalanced processes.</b></p>
7. Cutting technology	<p>All manual, there is 1 company – 5% which acquire automatic cutting equipment.</p> <p>Small companies have unsatisfactory cutting practices. There is no calculation of Fabric Consumption</p>	<p>Manual methods can be improved by purchasing simple cutting equipment's with the lowest capital investment, which will improve quality and productivity.</p> <p>Only for big companies acquiring automated spreading and cutting equipment's is recommended on a long term strategy → improve their competitiveness.</p> <p><b>Professional Training in getting a low fabric consumption is highly recommended as this affect directly the price of the products.</b></p>

Criterion	Findings	Analysis
<p>8. Sewing Technology &amp; Industrial Engineering</p>	<p>Basic sewing machines with no automation available</p> <p>Layout &amp; technology – 10% big company is satisfactory, 90% small companies is poor and not correct</p> <p>Overall efficiency – 50% big companies and 30-40% small companies</p>	<p>Sewing technology is basic and used for simple products, there are no technical skills or either equipment has to approach Export product except C&amp;H GARMENTS.</p> <p>In the big companies, there is necessity to purchase automated machines to raise the quality and productivity influencing positively the Export capabilities.</p> <p>For the small size Rwandan companies, investment in automation is not required, but purchasing simple and basic equipment has to enhance productivity.</p> <p><b>Instead for both small and big size companies is highly required professional Training of Line Supervisors and organizational structure changes to prepare them and make them competitive.</b></p>
<p>9. Finishing technology</p>	<p>Satisfactory is 10% big companies and totally inappropriate in 90% small companies</p>	<p>Finishing equipment's are poor in almost all companies except C&amp;H GARMENTS, which have appropriate and new equipment's.</p> <p>All the others do not have proper space allocated to Finishing, or machines are old, dirty and not well maintained.</p> <p><b>There is a general lack of attention over Finishing conditions for a product, this can be changed with Training and new investments. Investment in new machines are recommended as well as allocate funds to build or move into appropriate Industrial spaces where Finishing activity can be organized performed at required level and quality.</b></p>

Criterion	Findings	Analysis
10. Quality Assurance	<p>Big companies have an average level of QA systems</p> <p>Small companies do not have any workable QA system</p>	<p>Quality Assurance is not a top priority for any of the companies mostly because 95% of the selected companies are not making Export but dealing with low quality promotional &amp; corporate garments for Local Market. This situation do not put pressure on companies to improve and invest in Quality Assurance.</p> <p>As a result, they are not able to approach Export market because there is no skills in Quality and there is no Quality System implemented in small companies.</p> <p><b>Whatever market is serving, Consultant recommends Quality Assurance Training for all the companies with Trainings approaching differently the small companies and big companies.</b></p>
11. Printing – Embroidery – Washing	<p>Manual printing - 50%, screen printing machines - 30%. Poor printing skills.</p> <p>40% companies have embroidery machines and able to make medium complexity embroideries.</p>	<p>Screen printing skills are at basic levels, and quality of prints are low.</p> <p>At the moment, there are no chances to create “attractive” T-shirts to compete with Imported ones, especially knowing that print and embroidery is selling the T-shirt.</p> <p>Investing in machines and training (design &amp; printing capabilities) is recommended, both for Local Market as well as for Export companies.</p>
12. Warehousing	<p>Only 5% companies have a proper warehouse</p> <p>95% companies do not have proper warehouse (dirty, unorganised, place in inadequate rooms)</p>	<p>Similar with Finishing case, Warehousing is not a priority also the local market demands are not there so this is not a focal point for producers. Warehousing is poor and do not proper; →</p>
13. Textile capabilities	<p>Only 1 Textile company with old technology, but in good working condition, which can supply local market</p>	<p>Paradox in a country with only 1 textile mill which is working at 20% of its capacity, all garments producers are using Imported Fabrics. UTEXRWA is only able to produce fabrics for local consumption but at an higher quality standards if factory gets upgraded.</p>

Criterion	Findings	Analysis
		<p>Technical skills are satisfactory, factory needs capital investments in repair some of the equipment's, build up a spare parts stock, and purchase raw material at full capacity for 2-3 months of activity.</p>
14. Capabilities of companies to cover Local Market	<p>Actual capacity is very low comparing with country consumption</p> <p>Basic items are produced mostly promotional T-shirts. There is no dedicated Industrial producer of shirts, trousers or T-shirts. Denim is not produced – there is lack of know-how</p> <p>No local retail brand on the market</p>	<p>Promotional items are covered quite satisfactory with Imported fabrics.</p> <p>Locally produced garments cannot compete with Imported Goods because there are not attractive (design and Product Development are missing), as well as fabrics and prints &amp; embroideries are at low level. Small companies can develop local brands and move into Retail chains and start compete with Imported Goods if are technical sustained by a upgradation project (both equipment's, technical skills as well as Product Development skills)</p>
15. Capacity of companies to make Export	<p>Only 1 company – 5% is making Garments export.</p> <p>The other 95% do not have capabilities to perform Export.</p> <p>Textile Export do not exist, actual UTEXRWA is not able to perform export.</p>	<p>As of now only 1 company is Exporting, the other do not have the capabilities nor the size or financial power to sustain Export.</p> <p>Short term strategy - only FDI can be attracted to create new Garmenting facilities in which Rwandan workers &amp; Supervisors can contribute to Export activity using Imported Fabrics &amp; Accessories.</p> <p>Long term strategy - Rwandan owned companies needs to be encouraged to grow (become midsize factories), upgrade (buy new equipment's, being trained and upgrade technical and professional skills, build new factories which can pass the SOCIAL COMPLIANCE STANDARDS) and invest into Export activity (fabrics &amp; accessories stocks, cash flow to sustain late payment terms of Export activities) with high value added products.</p>

Criterion	Findings	Analysis
<b>16. Management &amp; HR</b>	<p>10% of companies (big ones) they have a satisfactory HR approach, 90% - small ones is making a “tailor” approach with no HR knowledge.</p> <p>Small companies miss the HR culture and they cannot develop themselves further</p> <p>Hiring in small companies is made based on unprofessional evaluation. Big companies have hiring procedures.</p>	<p>Having lots of small companies dealing with Local Market, there is no proper Industrial culture where Management &amp; Hr procedures are clear, implemented and followed by the workers. Instead there is a sense of “tailorship” a kind of cluster attitude.</p> <p>This will be a barrier for a small company to grow and develop into a midsize company.</p>

#### 4.4 Summary of key recommendations and justification to whether the sector is one in which NIRDA should intervene with technological support aimed at improving exports/reducing imports

4.4.1 Recommendations for NIRDA	Expected results	Short term		Medium term		Long term	
		Small & Micro Tailors	Large	Small	Large	Small	Large
1. Pilot actions aimed at encouraging investment in new equipment and machinery	Improved productivity and competitiveness of Rwanda's textiles and garments sector	<p>Recommendation 1: Pilot actions to promote use of devices attached to existing machinery to increase sewing productivity (lasers, cutters, tape folders).</p> <p>Justification: A pilot operation is needed to demonstrate to Rwandan companies that they can increase their productivity and quality whilst reducing their production costs. It is envisaged that this will be a transition phase moving towards the medium-term recommendations.</p>	<p>Recommendation 2: Pilot actions to promote purchase of appropriate new sewing and cutting manual machines according with specific activities of each factory</p> <p>Justification: The pilot will demonstrate to small companies the value of acquiring manual cutting equipment so as to achieve an improved cutting quality and productivity replacing the basic tools which they are using currently</p>	<p>Recommendation 3: Pilot actions to promote larger enterprises to purchase automatic sewing machines</p> <p>Justification: The pilot will demonstrate to larger enterprises the need to replace all basic machines with automation (where possible) in order to increase both productivity and the quality of their products. Automation can reduce sewing time by 20% and this accounts for 3-5% of total cost.</p>	<p>Recommendation 4 (for both small and large enterprises): Pilot actions to promote the purchase of professional printing machines</p> <p>Justification: Replacing the existing manual or basic printing machines with professional ones of small capacity (up to 10.000 pcs/day) will significantly increase the quality of the prints and upgrade technical capabilities to Industry norms</p>	<p>Recommendation 5: Pilot actions to promote the purchase of automatic equipment for spreading and cutting</p> <p>Justification: Upgrading cutting technology from manual to automatic will increase productivity by 30% and result in consistent quality.</p>	

4.4.1 Recommendations for NIRDA	Expected results	Short term		Medium term		Long term	
		Small & Micro Tailors	Large	Small	Large	Small	Large
2. Pilot actions to support the acquisition of essential software aimed at improving productivity	Improved productivity and competitiveness of Rwanda's textiles and garments sector			<p>Recommendation 6: Pilot actions to promote the acquisition of CAD-CAM software for Pattern Making and Marker Making (Fabric Optimization)</p> <p>Justification: Modern pattern making will allow products to be more rapidly, to a higher quality and to unified pattern rules (which can be shared between companies. A Rwandan Pattern Database could be created so small company (and even tailors from cooperatives) could access and obtain styles very rapidly. Using CAD-CAM, will generate Markers and Fabric Consumptions will start to be followed and reduced. This could be a major cost reduction factor</p>		<p>Recommendation 7: Pilot actions to promote the acquisition of Planning – Stock Control – Production ERP software.</p> <p>Justification: This will be a significant step towards the professional management of T&amp;G enterprises. The software will support management to control every step of the process: purchasing activity will be linked to and synchronised with production planning</p>	

4.4.2								
Recommendations for other agencies	Expected results	Short term		Medium term		Long term		Responsible agency
		Small	Large	Small	Large	Small	Large	
1. Improve capacity and capability of enterprise management and staff	Improved productivity and competitiveness of Rwanda's textiles and garments sector	<p>Recommendation 8: Management Training – crash course for owners aimed at creating awareness in how they should manage their companies and to introduce them to international best practice globally – this can involve Micro Tailors</p>		<p>Recommendation 14: Pattern making training in manual methods for small companies which do not acquire CAD-CAM software covering manual pattern making for the important products group (trousers, shirts, skirts, jackets). – this can involve Micro Tailors</p>		<p>Recommendation 18: Management and HR Development Training: focused on practical topic of T&amp;G management (Reporting, Cost Control, Productivity follow up, Production Planning).</p>		PSF, MINICOM, RSB, TVET (MINEDUC)
		<p>Recommendation 9: Line Supervisor Training - Practical training for supervisors in which they are trained in practical supervisory skills and in the practical tasks they should undertake every day</p>		<p>Recommendation 15: Pattern Making Training using CAD-CAM software for companies which will acquire CAD-CAM software, Professional training in the use of such software is required for important product groups (trousers, shirts, skirts, jackets). This will cover; (i) Executing base pattern starting from size chart; (ii) Modifying existing base patterns; (iii) Executing grading on all sizes; and (v) Executing markets.</p>		<p>HRD Training will concentrate on practical T&amp;G Industry needs (Organigrams, Head count, HR reporting, Tools (bonus, absenteeism, training centres and hiring procedure)</p>		
		<p>Recommendation 10: Production Planning Training: Practical training for planners to develop their skills and to develop expertise in using industry standard planning tools</p>		<p>Recommendation 16: Fashion Design and Product Development Training: Practical training in fashion design and modern techniques of producing Industrial designs using modern Industrial technologies in fabrics, printing, embroideries, washing, sewing. The outcome of this training will be that participating companies</p>		<p>Recommendation 19: Cost Control Training: Practical training concentrating on how to calculate costs, controlling costs and establish prices</p>		
		<p>Recommendation 11: Quality Assurance Training: Practical training for quality controllers and quality assurers in which they are trained in quality assurance processes and</p>						

4.4.2 Recommendations for other agencies								
	Expected results	Short term		Medium term		Long term		Responsible agency
		Small	Large	Small	Large	Small	Large	
		<p>determine how to check different products to ensure they meet defined standards and international norms.</p> <p>Recommendation 12: Purchasing Training: Practical Training to perform efficient purchasing from international sources, planning, controlling and correct comparison of landed costs of purchased goods</p> <p>Recommendation 13: Fabric Optimization Training: practical Training in reducing fabric consumption in cutting room. Minimum 2% cost reduction will result from this training</p>		<p>will have a better understanding of International procedures and will be able to execute better designs</p> <p>Recommendation 17: Merchandiser and Buyer Training: increasing the skills of merchandisers and buyers; this will train in the requirements of the separate jobs and explain required international best practice.</p>				
2 Upgrade existing T&G factories & facilities	Improve productivity and competitiveness of Rwanda's textiles and garments sector			Recommendation 20: Execute new factory layouts designed in accordance with international best practice and export buyers' requirements: existing facilities normally do not meet export standards - - this		Recommendation 21: Build – based on new factory layouts – new production facilities for rent/purchase by T&G SMEs. – this can involve Micro Tailors		PSF, RDB, BDF, MINICOM

4.4.2 Recommendations for other agencies								
Expected results	Short term		Medium term		Long term		Responsible agency	
	Small	Large	Small	Large	Small	Large		
				can involve Micro Tailors				
3. Develop local "Made in Rwanda" brands	Improved productivity and competitiveness of Rwanda's textiles and garments sector			Recommendation 22: Technical support in fashion design and product development from International Experts: support will cover developing retails concepts, design collections and brands. The result of this practical training and technical support will be the development of "Made in Rwanda" brands that are attractive and can compete with imports.		Recommendation 23: Support local enterprises to develop marketing strategies and local logistic distribution networks (local shops and online sales).		MINICOM, PSF
4. Develop a Garment Training Centre: skills levels are extremely low in the T&G sector. Those have to be developed and a training centre is an effective tool to spread operational costs and knowledge over the industry	Improved productivity and competitiveness of Rwanda's textiles and garments sector			Recommendation 24: Feasibility study undertaken on the establishment of a Garment Training Centre (scale, funding basis, strategic direction and main activities)		Recommendation 25: Establish (assuming a positive result from the feasibility study) the Garment Training Centre and (i) undertake training of its staff; (ii) develop curricula; (iii) provide international technical expertise to ensure centre operates in accordance with international best practice		CESB (Capacity Building Secretariat), WDA (work force development agency, MINEDUC (TVET)
5. Study tour to Bangladesh for owners to familiarise them	Improved productivity and competitiveness of Rwanda's			Recommendation 26: Organize and deliver a study tour to Bangladesh: visit leading companies in Bangladesh and understand how industrial				PSF, MINICOM

4.4.2 Recommendations for other agencies								
	Expected results	Short term		Medium term		Long term		Responsible agency
		Small	Large	Small	Large	Small	Large	
with export requirements and industrial factory settings	textiles and garments sector			garment factories operate on a mass scale, how export goods are produced, and to understand international norms and requirements				
6. Study on How to develop Rwandan T&G exports - no such study exists but the Rwandan T&G sector needs a clear direction and focus rather than an ad hoc approach to investment	Improved productivity and competitiveness of Rwanda's textiles and garments sector			<p>Recommendation 27: undertake a study on the export potential of the Rwandan T&amp;G sector:</p> <ul style="list-style-type: none"> <li>→ Identify the characteristics of East African export enterprise buyers – product range, prices, lead-times and payment conditions</li> <li>→ Identifying the International fabric and accessories suppliers – landed cost, lead-times, payment terms</li> <li>→ Calculate costs of Rwandan producers for different types of products with imported fabrics and accessories</li> <li>→ Identifying the products to develop for export where Rwanda is competitive on a long term basis</li> </ul>				MINICOM
7. Financial support for exporters - this is a standard practice in T&G	Improved productivity and competitiveness of Rwanda's			Recommendation 28: Facilitate access for T&G enterprises to finance to purchase machinery and/or build new	Recommendation 29: Facilitate access to working capital finance (letters of credit, short-term loans) to cover the 3 months raw material purchase and			BDF, PSF,

4.4.2 Recommendations for other agencies								
	Expected results	Short term		Medium term		Long term		Responsible agency
		Small	Large	Small	Large	Small	Large	
export countries	textiles and garments sector			factories and for working capital		3 months production & cashing period		MINICOM
8. Facilitate access to International buyers and fairs - at this moment Rwanda producers do not have financial power to access key trade fairs. The promotion of exports must be undertaken in a coordinated manner led by MINICOM if it is to be successful (the Ethiopian Government's actions in this respect provide a clear example)	Improved productivity and competitiveness of Rwanda's textiles and garments sector						<p>Recommendation 30: Identify key buyers and facilitate meetings with them. Following on from the export study which will identify products in which Rwanda is internationally competitive, this stage will approach key international buyers to introduce them to these products and encourage procurement</p> <p>Recommendation 31: Support structured attendance at key International Trade Fairs to present Rwanda and the T&amp;G opportunities that it offers.</p>	PSF, MINICOM,RDB

## Annex 1: Job description of international expert

### UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**Project: 150442**

*Capacity-building for industrial research and development in Rwanda*

#### **TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)**

<b>UNIDO project number &amp; Title</b>	150442 – Capacity-building for industrial research and development in Rwanda
<b>Title</b>	International Garment Expert
<b>Duty Station and Location:</b>	Kigali and other locations in Rwanda as needed
<b>Start of Contract (EOD):</b>	01 July 2017
<b>End of Contract (COB):</b>	30 October 2017
<b>Number of Working Days:</b>	150442 - 24 w/ds including two missions ( 16 days to Rwanda)

#### **ORGANIZATIONAL CONTEXT**

UNIDO is a specialized agency of the United Nations that promotes inclusive and sustainable industrial development (ISID) as the key driver for the successful integration of the economic, social and environmental dimensions required to fully realize sustainable development for the benefit of future generations. Private sector development through an improvement of the business environment and the strengthening of public and private sector support institutions is among the core services of the Department of Trade, Investment and Innovation (PTC/TII).

#### **PROJECT CONTEXT**

The Government of Rwanda has set itself challenging targets for the growth of the industrial sector: it is expected to play a critical role in export generation, import substitution and job creation. The diversification of the Rwandan economy is essential for meeting the goals in Vision 2020. The Rwandan industrial sector is currently small, contributing on average around 15 per cent of GDP. For Rwanda to reach the Vision 2020 target, it requires the share of industry to increase to 26% of GDP. This will oblige the industrial sector to outstrip services and agriculture by recording at least 12%

growth annually. Achieving this transformation requires a dynamic and coherent industrial policy for Rwanda.

An industrial transformation is also required in order to achieve the employment targets of Vision 2020 - non-farm employment is expected to reach 1.4 million against industry’s current employment of just 4 per cent of the workforce or 170,000 people.

The Government has taken significant steps to improve the enabling environment for the growth of the sector to support such growth. One aspect of this is converting the former Institute for Scientific and Technological Research (ISTR) into the National Industrial Research and Development Agency (NIRDA). This reflects a global trend for Governments to reduce funding on pure research and switch to applied research aimed at increasing the competitiveness of a nation’s enterprises.

Razvan Ionele, Senior Adviser, Textiles and Garments Value Chain Development 2

For NIRDA, this has involved – relatively recently – a change in the organisation’s mandate and leadership with the goal of converting a research institution into a service institution with a simplified research business interface to help enterprises address technological and technical barriers to their growth and competitiveness.

In July 2015 UNIDO undertook a review of NIRDA and determined that NIRDA needed support to: (i) develop a strategy and action plan to provide technological support to selected value chains to increase their competitiveness (which should lead to export growth or the substitution of imports); (ii) The development of an organisational structure appropriate to its new mandate and role; (iii) development of a wide range of standardised systems and procedures (including an internal monitoring system); (iv) capacity building of staff based on a thorough training needs analysis; and (v) capital investments in facilities and investments to improve the efficiency and efficacy of NIRDA and to pilot opportunities in new value chains.

UNIDO will implement the project with US\$2.3 million financial support from KOICA.

Activities	Concrete/measurable results to be achieved	Duration	Expected results
1. Identify SMEs/Companies/ Cooperatives across the various stages of the Textiles and Garments value chain in Rwanda	Database of all enterprises across the various stages of the Textiles and Garments	21, of which 13 days in Rwanda	Home based, Kigali and other locations in

as well as their location.	value chain in Rwanda.		Rwanda
<p>2. Administer Questionnaire in Annex I designed to collect data and information, including</p> <p>(a) technological capacity,</p> <p>(b) production methods, and</p> <p>(c) needs of SMEs/ Companies/Cooperatives operating in the Textiles and Garments products value chain.</p> <p>Note: mission timings agreed as follows:</p> <p><i>Mission 1: 16 July – 21/22 July 2017</i></p> <p><i>Mission 2: 28 August – 1/2 September 2017</i></p>	Diagnosis Report on Textiles and Garments products manufacture		
3. Analyse and synthesize the data and information collected.	Summary report containing an analysis of the collected data and drawing conclusions (with full justification) as to whether the sector is one in which NIRDA should intervene with technological support aimed at improving exports/reducing imports		
<p>4. Make recommendations to the Project Steering Committee as to whether Phase 2 should be entered into on the basis of research under steps 1 – 3.</p> <p><i>Note: timing for Mission 3 agreed as 12-14 September 2017</i></p>	Presentation to Project Steering Committee	3	Kigali

### **IMPLEMENTATION PARTNERS**

UNIDO will have two main partners in the implementation of the project:

- The Ministry of Trade and Industry (as the Ministry responsible for NIRDA and UNIDO's overall counterpart for its actions in Rwanda) will act as National Coordinating Partner with responsibility for ensuring effective interactions with other agencies and ministries and that the project remains aligned to national priorities thus ensuring national ownership.

Razvan Ionele, Senior Adviser, Textiles and Garments Value Chain Development 3

- NIRDA will act as National Implementing Partner with responsibility for ensuring that the project is implemented in accordance with the approved project document with respect to Rwandan inputs and actions. NIRDA has appointed a National Project Director (NPD) to manage all aspects of NIRDA's involvement in the project.

UNIDO will implement the project in a collaborative exercise between NIRDA staff and UNIDO experts to ensure knowledge transfer and "learning by doing". The process will be overseen jointly by the UNIDO Project Manager and the NIRDA NPD with a view to empowering and enabling NIRDA Staff to learn as much as possible from the project, from selecting project items to methodology, tools, and how to use them. The planned pilot project will act as a test bed to allow continuing NIRDA Staff capacity development through 'learning by doing'.

The UNIDO Project Manager will be supported by a National Project Coordinator based in Rwanda.

#### MAIN TASKS OF THE SENIOR ADVISER, TEXTILES & GARMENTS VALUE CHAIN DEVELOPMENT

The Textiles and Garments Value Chain Expert will report to the UNIDO Project Manager, the Senior Adviser, Strategy & Value Chain Development and the National Project Director (NPD), NIRDA, to undertake the following tasks: more details of the expected subtasks inherent in these main duties are contained within Annex 1 and these should be considered part of this contract. Working as a team, the tasks shall be undertaken jointly with a Business Development Specialist also contracted under this project. The two Experts are to work with a designated NIRDA Staff and in close collaboration with the management and personnel of the Firms/SMEs/Cooperatives operating in the Textiles and Garments value chain in Rwanda.

#### **QUALITY ASSURANCE**

All deliverables must be submitted to the Senior Adviser: Strategy & Value Chain Development and

Senior Adviser: Coordination & Quality Control for quality control and assurance prior to submission to other parties.

## Annex 2 – Persons met / Activities during the visits

Date	Organization	Persons & Position
17.07.2017	Kick-off meeting with NIRDA management - Kigali	Mr. James KAGABA – Division Manager NIRDA Mr. George NYOMBAIRE – Head of Research and development NIRDA
	Preparing logistics of the project - Kigali	
18.07.2017	Assessment at UTEXRWA – Kigali	Mr. Ritesh PATEL – CFO UTEXRWA
	Assessment at C&H GARMENTS - Kigali	Mr. Hitimana SAIDI – Assistant GM C&H GARMENTS
19.07.2017	Assessment at RWANDA CLOTHING – Kigali	Mrs. Joselyne UMUTONIWASE – Creative Director
	Assessment at NEW KIGALI DESIGNERS - Kigali	Mr. Andrew – Owner, GM
20.07.2017	Assessment at BURRERA COLLEGE OF TRADE - Burrera	Mr. Jean MARIE – Partner
	Assessment at HEMA GARMENT - Byanbago	Mr. Martin - Owner
21.07.2017	Assessment at COOPERATIVE BUZIMA - Kigali	Meet tailors
	Assessment at HAUTE BASO - Kigali	Visit shop
	Assessment at PROMOTA CREATION - Kigali	Mrs. Margaret - Supervisor
22.07.2017	Assessment at KACHIRU - Kigali	Mrs. Christine FURAHA – Production in charge

## Annex 3: Companies selected for detailed review

NO	NAME OF THE COMPANY	LOCATION
1	C & H GARMENTS	FREE ZONE, KIGALI
2	UTEXRWA LTD	GACULIRO, KIGALI
3	BUSINESS COLLEGE OF TRADE	BURERA, RWANDA ( 113 KM FROM KIGALI)
4	NEW KIGALI DESIGNERS	AND DISCUSSED
5	GAHAYA LINKS LTD	KICUKIRO, KIGALI
6	PROMOTA CREATIONS	KIMUHURURA, KIGALI
7	AZ MEDIA PLUS	NYAMIRAMBO, KIGALI
8	RWANDA CLOTHING HOME LTD	NYARUGENGE, KIGALI
9	ALBERT SUPPLIES	FREE ZONE, KIGALI
10	SS APPARELS LTD	KACYIRU, KIGALI
11	AFRICAN SEWING CLUB	FREE ZONE, KIGALI
12	HEMA GARMENTS	BYANGABO, NEAR MUSANZE, 110 KM FROM KIGALI
13	TRADE LINKS VENTURES LTD	TO BE LOCATED IN RWAMAGANA, 45 KM FROM KIGALI
14	IPM (IMPRIMERIE PAPATERIEMODERNE)	KICUKIRO, KIGALI
15	HOUSE OF TAYO LTD	KIMIRONKO
16	HAUTE BASO	NYARUTARAMA, KIGALI
17	COOPERATIVE - KIGALI GARMENT CENTER	FREE ZONE, KIGALI
18	COOPERATIVE - BUZIMA	KIGALI
19	COOPERATIVE – MUSANZE GARMENTS	KIGALI
20	COOPERATIVE - KIGALI GARMENT CENTER	FREE ZONE, KIGALI
21	COOPERATIVE – CITY MARKET TAILOR CLUB	KIGALI CITY CENTRE
22	COOPERATIVE - COCOKI	KICUKIRO, KIGALI
23	ATP – ASSOCIATION OF PROFESSIONAL TAILORS	KIGALI

## Annex 4: Questionnaire utilised in survey

<b>Date</b>							
<b>Company name</b>							
<b>Location</b>							
<b>Type of organization</b>							
<b>Yearly turnover (mil USD)</b>	Products						
	Value						
	Qty						
<b>Monthly output</b>	Products						
	Qty						
<b>No of workers (direct workers only = Sewing Operators + Handlers + Ironing + Manual Operations + Quality Controllers)</b>	Products						
	Workers						
	No of sewing lines						
<b>Productivity</b>	Products						
	Daily qty						
	Working hours						
	Workers						
	Productivity (pcs/hour/operator)						

<b>Production process</b>	Types of automatic machines						
	Numbers & types						
	Questions	Technology used in cutting	Technology used in Sewing	Technology used in Finishing	Factory have ERP systems softwares?		
	Answer						
<b>Training Programs</b>	Positions	Workers - Selection tests at hiring	Workers - Training Center for the unexperienced ones (how many	Workers - Cross Training	Quality Controllers - yearly eye checking & retraining on	Line Supervisors - Training at appointment	Line Supervisors - yearly Cross Training
	Answer						
<b>CAD-CAM activity</b>	Questions	Numbers of CAD-CAM station	Numbers of CAD-CAM Trainees	When was the last CAD-CAM Training had?	Time for making a FIT PATTERN (hours) ?	Time for making a SIZE SET (hours) ?	
	Answer						
<b>Sample room activity</b>	Questions	How many samples you do / month?	How many sample operators exists?	Lead time to make a Samples - time from issuing SAMPLE ORDER REQUEST (days)	Sample Rejection rate?	Main reason of rejection for samples?	
	Answer						
<b>Pre-production activity</b>	Questions	How many clients do you have?	How many Export clients do you have	How many orders you get / month?	Average size of the orders?	Lead time of orders	PO rejection rate?
	Answer						
	Questions	Where are you purchasing fabrics?	Where are you purchasing accessories?	What is the lead-time for raw materials? From placing orders till get them in			
	Answer						
<b>Quality Assurance</b>	Questions	Do you have Quality Assurance dept?	How you control raw materials?	How you control Production?	How you control Finished Goods	RFT rate (in sewing)? (Right First Time)	PO audit is made with which system and level?
	Answer						
<b>SPECIAL OPERATIONS</b>	Questions	Printing facility - how many machines? What capacity?	Embroidery facility - how many machines? What capacity?	Washing facility - what kind of processess? What capacity?			
	Answer						
<b>Other remarks</b>							

## Annex 5: Database of all textiles and garments enterprises in Rwanda

NO	NAME OF THE COMPANY	LOCATION
1	C & H GARMENTS	FREE ZONE, KIGALI
2	UTEXRWA LTD	GACULIRO, KIGALI
3	BUSINESS COLLEGE OF TRADE	BURERA, RWANDA ( 113 KM FROM KIGALI)
4	NEW KIGALI DESIGNERS	AND DISCUSSED
5	GAHAYA LINKS LTD	KICUKIRO, KIGALI
6	PROMOTA CREATIONS	KIMUHURURA, KIGALI
7	AZ MEDIA PLUS	NYAMIRAMBO, KIGALI
8	RWANDA CLOTHING HOME LTD	NYARUGENGE, KIGALI
9	ALBERT SUPPLIES	FREE ZONE, KIGALI
10	SS APPARELS LTD	KACYIRU, KIGALI
11	KIGALI GARMENT CENTER	FREE ZONE, KIGALI
12	HEMA GARMENTS	BYANGABO, NEAR MUSANZE, 110 KM FROM KIGALI
13	TRADE LINKS VENTURES LTD	TO BE LOCATED IN RWAMAGANA, 45 KM FROM KIGALI
14	IPM (IMPRIMERIE PAPATERIEMODERNE)	KICUKIRO, KIGALI
15	DACO MODE LTD	NYARUGENGE, KIGALI
16	EXCELLENT DESIGNS	KIGALI
17	ENTREKA LTD	MUSANZE
18	JO CAMANA CREATIONS LTD	KICUKIRO, KIGALI
19	NADINE DJAZ LTD	CHICK BUILDING SHOW ROOM
20	HOUSE OF TAYO LTD	KIMIRONKO
21	INZUKI DESIGNS LTD	NYARUGENGE, KIGALI
22	INCO ICYUSA LTD	NYARUGENGE, KIGALI
23	HAUTE BASO	NYARUTARAMA, KIGALI
24	MADE IN KIGALI	KIMUHURURA, KIGALI
25	AFRICAN SEWING CLUB	FREE ZONE, KIGALI



Company name	9 - PROMOTA CREATION				10 - KACHIRU			11 - AZ MEDIA PLUS	12 - AFRICAN SEWING CLUB	13 - IMPRIMERIE PAPERIERE MODERNE -IPM	14 - GAHAYA LINKS LTD	15 - HOUSE OF TAYO	16 - ALBERT SUPPLIES	17 - EXCELLENT DESIGNS	18 - MUSANZE GARMENT COOPERATIVE	19 - TRADE LINKS VENTURES LTD	20 - KIGALI GARMENT CENTER	
Location	Kigali				Kigali			Kigali	Kigali, Free Zone	Kigali	Kigali	Kigali	Kigali	Kigali	Kigali	Kigali	Rwamagana	Kigali
Year of establishment	2010				no available data			2005	2017	2009	2003				2016	2017	2017	
Ownership type	100% private				100% private			100% Private	Private without Limitations	100% Private	100% Private	100% Private	100% Private	100% Private	Cooperative	100% Private	Cooperative	
Ownership nationality	Rwandan				Rwandan			Rwandan	Rwandan	Rwandan	Rwandan	Rwandan	Rwandan	Rwandan	Rwandease	Rwandan	Rwandease	
Activity	Garmenting				Garmenting			Garmenting & Stationary printing	Garment Production	Garment Production and Stationary Printing	Garments and Handicrafts Production	Only Show Room for Fashion Garments and Accessories	A NEW FACTORY IS PLANNED AND AT PRESENT THE CONSTRUCTION WORK IS JUST STARTED, A LARGE SCALE PRODUCTION OF GARMENTS AND SHOES ARE IN THE PLANNING, ACCORDING TO THE ENTREPRENEUR, HE WILL IMPLEMENT THE PROJECT BEGINNING NEXT YEAR IN FREE ZONE, KIGALI	Production Woven and Knit Garments, Sweaters	AT PRESENT HAVING A TRAINING CENTER WITH 20 MACHINES AND PLANNING FOR PRODUCTION UNIT IN THE NEAR FUTURE, ON TRAINING TAKING SCHOOL UNIFORM ORDERS IN SMALL QUANTITIES	AN UPCOMING GARMENT UNIT THE IDEA IS TO CREATE A POOL OF SMALL OPERATING STITCHERS WITH CENTRALIZED FACILITY- YET TO TAKE SHAPE	IT IS STILL UNDER PLANNING STAGE, THE IDEA IS TO CREATE A POOL OF SMALL OPERATING STITCHERS WITH CENTRALIZED FACILITY- YET TO TAKE SHAPE	
Yearly quantity (pcs)	660,000				no available data			140,000	new venture	48,000	29,000	5,000		23,000				
Yearly turnover (USD)	no available data				144,000			0	Under Training	310,000	120,000	40,000		110,000				
Yearly turnover (USD/product type)	no available data				144,000			0		Knit & woven mix garments	Knit & woven mix garments	Selling High Fashion Garments		T Shirts, Polo shirts, school uniforms and Sweaters				
Local sales (USD/year)	no available data				144,000			0		110,000	120,000			110,000				
Local clients	no available data				25			25		30	25			9				
Export sales (USD/year)	no export - intentions for future				no export			no export	no export	no export	no export	no export	no export	no export	no export	no export	no export	
Export (USD/product type)	no export - intentions for future				no export			no export	no export	no export	no export	no export	no export	no export	no export	no export	no export	
Export clients	no export - intentions for future				no export			no export	no export	no export	no export	no export	no export	no export	no export	no export	no export	
Product type	T-shirts	Security uniforms	School uniforms	Corporate uniforms	Woven shirt	Woven trousers	Workwear overall	Promotional wear, Security Uniforms and Corporate Uniforms	Presently Planning mainly for Shirts Production and Future plan for Trousers	Mix Production of School Uniforms, Security uniforms, T.Shirts, Polo shirts etc	Mix Production of School Uniforms, Security uniforms, T.Shirts, Polo shirts etc	Gives Job orders to Community cooperative Tailors in Rural Area	T Shirts, Polo shirts, Security Uniforms, School uniforms, sweaters					
No of sewing lines/product type	1 common line for all products				1 common line for all products			2 Lines	At present 20 workers are recruited and they are under training. Planning to go for production by end of this year only (15 machines)	2	2			1				
No of sewing lines/factory	1				1			2		2	2			1				
Monthly production output (pcs/product style)	50,000	2,000	2,500	500	no available data			Assorted garments 6,000 pcs		4,000	3,000			2,500				
Monthly production output (pcs/factory)	50,000				no available data			6,000						2,500				
Monthly production output - loading	140 workers + 20 subcontractors				20			62		30	30			20				
Total No of workers / product type	150				20			62		40	35			25				
SAM - given by factory	no available data				no available data			no available data										
SAM - estimated by Consultant	no available data				no available data			no available data										
No of workers / line	40	no available data	no available data	no available data	15	15	15	24		30	15			20				
Quantity per line (pcs/shift)	200	no available data	no available data	no available data	150	50	50	240		250	135			140				
Working time (hour/shift)	8	no available data	no available data	no available data	9	9	9	8		8	8			8				
Productivity (pcs/operator/hour)	0.63	no available data	no available data	no available data	1.11	0.37	0.37	1.25		1.04	1.13			0.88				
KPI Productivity (pcs/operator/hour) - BEST PRACTICE	12.22				2.67	2.00	2.21											
Pre-production abilities																		
Merchandisers skills	poor				no available data			Not exist		Not exist				Not exist				
No of Merchandisers	no available data				no available data			0		Nil				Nil				
No of clients - total	25				no available data			25		30	15			8				
No of clients - export	no export				no available data			Nil		Nil				Nil				
Export competitiveness	not competitive				not competitive			Average		Low				Low				
No of orders (PO) / month	5-6				no available data			6		7	5			4				
Average size of order (pcs/PO)	1,500				no available data			Min: 100		150	50			30				
PO lead time (months)	3-6 days				no available data			2		1	1			1				
PO rejection rate (%)	no available data				no available data			0		0								
Merchandisers scoring	2				1			0										
Purchasing skills					medium			3		2	2			1				
Import - accessories & trims	100% - China				Uganda			100%		65%	85%			50%				
Import - fabrics	knit fabrics - Kenya / woven fabrics - China				Uganda			65%		80%	90%			65%				
Importing countries	Kenya - China				Uganda			Kenya, Uganda, China, Dubai		China, Dubai, Kenya	Uganda, Kenya, Dubai			Kenya, Dubai				
Lead time (months)	30-45 days				no available data			2		1	1			1				
Local origins - accessories & trims	no local origins				local origins			Nil		Nil	15%			50%				
Local origins - fabrics	no local origins				local origins			35%		35%	10%			40%				
Purchasing scoring	3				3			3		3	2			3				
Product Development & Sampling skills	poor				average			Average	there is one pattern maker and 2 sample makers, making samples for display and also they are taking care the training	Average	Low			Average				
Sample lead-time (to issue SQR till approved by QC) (days)	1 day				no available data			3 days		3	8			5				
No of samples (pcs/day)	2				no available data			2		1	2			2				
No of sample operators	4				no available data			2		1	2			2				
Sample rejection rate (%)	no available data				no available data			10%		0				0				
Reasons of rejection for sample	no available data				no available data			Fabric										
Product Development & Sampling scoring	2				2			2		1	1							
Pattern making skills	poor				poor													
HT PATTERN lead-time (hours)	no available data				no available data			Average	N/A at present	Basic	Basic			Basic				
SQR SET lead-time (hours)	no available data				no available data			3 hours		5	4			3				
Pattern making system used	manual				manual			2 Hours		4	2			1				
No of CAD-CAM workstation	not exist				not exist			Manual		Manual	Manual			Manual				
CAD-CAM type	not exist				not exist			Nil		Nil	Nil			Nil				
No of Pattern makers - CAD-CAM	not exist				not exist			Nil		Nil	Nil			Nil				
No of Pattern makers - manual	4				Nil			Nil		Nil	Nil			Nil				
Pattern making scoring	2				2			2										

Company name	1 - UTEMWA					2 - CBH GARMENTS					3 - RWANDA CLOTHING		4 - NEW KIGALI DESIGNER		5 - BARRERA COLLEGE OF TRADE		6 - HEMA GARMENTS		7 - COOPERATIVE BUZIMA		8 - HAUTE BASO	
Production abilities																						
Cutting technology - spreading					manual					manual		manual		manual		manual		manual		manual		0 working with subcontractors
Cutting technology - cutting					manual					manual		manual		manual		automatic cutter		not available		manual		0 working with subcontractors
Fabric usage - marker efficiency (%)					not exist					no available data		not exist		not exist		not exist		not started yet		not exist		0 working with subcontractors
Fabric usage - BEST PRACTICES marker efficiency (%)					87%	89%	90%			87%	89%	88%	90%	87%		87%				85% dresses / 87% trousers		0 working with subcontractors
Cutting scoring					3					3		2		2		4		3		1		2
Sewing technology					manual - advance level					manual - advance level		manual - basic level		manual - basic level		not started yet - 270 machines available		not started yet - 80 machines available		manual - tailoring way		0 working with subcontractors
Sewing automation					no automatin					no automation		no automation		no automation		no automation		no automation		no automation		0 working with subcontractors
Sewing discipline / production system					satisfactory					satisfactory		poor		poor		not started yet		not started yet		poor		0 working with subcontractors
Sewing - overall efficiency - given by company (%)					no available data					no available data		no available data		no available data		not started yet		not started yet		no available data		0 working with subcontractors
Sewing - overall efficiency - estimated by Consultant (%) - GOOD PRACTICE = 85% / BEST PRACTICE = 90%					50%					50%		30%		30-40%						30%		
Sewing scoring					3					4		2		2		3		3		1		1
Packing/ironing technology					manual - medium level					manual - medium/advance level		manual - basic level		manual - basic level		manual - basic level		manual - basic level		manual - basic level		0 working with subcontractors
Packing& Ironing scoring					3					4		2		2		2		2		1		2
Warehousing technology					basic level					organised		basic level		basic level		not started yet		not started yet		not existing		basic level
Warehousing scoring					2					4		2		2		3		3		1		2
Planning skills					3					satisfactory		not exist		not		not started yet		not started yet		not existing		no available data
Planning systems - formats / softwares					SAP exist - limited usage					existing ERP - made in house		manual		no software, no formats		not started yet		not started yet		not existing		no available data
Planning scoring					3					4		1		1		not started yet		not started yet		not existing		1
Industrial Engineering skills					3					satisfactory		not exist		not exist		not started yet		not started yet		not exist		not exist
Workers sewing handlings					3					4		basic		basic		not started yet		not started yet		not exist		not exist
Industrial Engineering scoring					2					3		1		1		not started yet		not started yet		1		1
Quality Assurance skills					medium					medium		poor		poor		not started yet		not started yet		not exist		medium
Quality Assurance procedures					basic level					exist and applied		not exist		not exist		not started yet		not started yet		not exist		0 working with subcontractors
Quality Assurance systems - raw material audit (Fabric - 4 POINT SYSTEM / accessories - AQL)					not exist					not exist		not exist		not exist		not started yet		not started yet		not exist		0 working with subcontractors
Quality Assurance procedures - process control					exist basic level					exist and applied		not exist		not exist		not started yet		not started yet		not exist		0 working with subcontractors
Quality Assurance procedures - Finished Goods PO audit - AQL					not exist					exist and applied - AQL 2.5		not exist		not exist		not started yet		not started yet		not exist		no available data
Quality Assurance procedures - RFT ratio - Right First Time (%)					not exist					not exist		not exist		not exist		not started yet		not started yet		not exist		no available data
Quality Assurance systems - formats / softwares					no softwares - all manual					softwares		not exist		not exist		not started yet		not started yet		not exist		no available data
Quality Assurance scoring					3					4		2		2		not started yet		not started yet		1		3
Special operations - printing skills					basic level up to 6 colors					no available data		not exist this facility		basic level screenprinting - manual machines		not exist this facility		not exist this facility		not exist this facility		basic level screenprinting - manual machines
Special operations - printing machines no / heads					10 heads					no available data		not exist this facility		manual rotary printing - 4 colours		not exist this facility		not exist this facility		not exist this facility		0 working with subcontractors
Special operations - embroidery skills					basic level					no available data		not exist this facility		medium embroidery level		not exist this facility		exist machines - not started yet		not exist this facility		not exist this facility
Special operations - embroidery heads					3 heads					no available data		not exist this facility		not exist this facility		6 machines - 38 heads		not exist this facility		3 machines - 3 heads		not exist this facility
Special operations - washing skills					not exist					no available data		not exist this facility		not exist		not exist this facility		not exist this facility		not exist this facility		not exist this facility
Special operations - washing capacity (pcy/day)					not exist					no available data		not exist this facility		not exist		not exist this facility		not exist this facility		not exist this facility		not exist this facility
Special operations scoring					2					no available data		2		1		1		1		1		2
Factory management scoring					3					4		3		2		not started yet		not started yet		1		2
Factory cleaning scoring					3					5		4		2		not started yet		not started yet		1		0 - working with subcontractors
HR skills					satisfactory					satisfactory		not existing		poor		not started yet		not started yet		not existing		not existing
HR procedures					no available data					exist and applied		not existing		not exist		not started yet		not started yet		not existing		not existing
HR - bonus system in place					no available data					not exist		not existing		not exist		not started yet		not started yet		not existing		not existing
Daily absenteeism (%)					1-2%					not exist		not existing		no available data		not started yet		not started yet		not existing		not existing
Quality turnover (%)					15-20%					not exist		not existing		no available data		not started yet		not started yet		not existing		not existing
Worker selection at hand - SELECTION TESTS					not exist					exist and applied		not exist		not available		not started yet		not started yet		not existing		not existing
Training programs for Workers - TRAINING CENTER					workers comes from tailor school					6 months - government project		not exist		not exist		yes - 2 months		not started yet		not existing		not existing
Training programs for Workers - CROSS TRAINING / JOKER OPERATORS					not exist					exist and applied		not exist		not exist		not started yet		not started yet		not existing		not existing
Training programs - Line Supervisors					given by dept head					exist and applied		not exist		not exist		not started yet		not started yet		not existing		not existing
Training programs - Pattern Makers - CAD-CAM					not exist					not exist		not existing		not exist		not started yet		not started yet		not existing		not existing
Training programs - Management					not exist					not exist		not existing		not exist		not started yet		not started yet		not existing		not existing
HR scoring					3					4		2		2		3		2		1		2
Others					Water, electricity are very expensive					Good potential - organised factory		Good potential as FAST FASHION boutique		Management wants to expand and build new factory		No production experience - good potential		No production experience - good potential		Basic tailoring skills		New designs and good subcontractor setting
Technical support required					CAD-CAM Pattern making training					Line Supervising/Training + Soft Skill Training - Existing Operators		Product Development Training + Quality Assurance Training		Needs technical support in organizing production		Training for Line Supervisors + factory layout		Training for Line Supervisors + factory layout				Product Development Training + Quality Assurance Training
Factory comments					Banking interest high at 22-24%/year - workers net salary + 120 USD																	
Technical recommendations					Acquire CAD-CAM system for pattern making + increase the Product Development and Merchandiser activity. Company has good potential to sell on local market					Introduce more automations and increase productivity.		Acquire CAD-CAM for tailors for a quick pattern making + purchase digital printer for fabrics		Acquire CAD-CAM for tailors for a quick pattern making		Need support & training in setting up factory		Need support & training in setting up factory		Acquire CAD-CAM for tailors for a quick pattern making		Acquire CAD-CAM for tailors for a quick pattern making

9 - PROMOTA CREATION		10 - KACHIRU	11 - AZ MEDIA PLUS	12 - AFRICAN SEWING CLUB	13 - IMPRIMERIE PAPERIERE MODERNE -IPM	14 - GAHAYA LINKS LTD	15 - HOUSE OF TAYO	16 - ALBERT SUPPLIES	17 - EXCELLEN DESIGNS	18 - MUSANZE GARMENT COOPERTIVE	19 - TRADE LINKS VENTURES LTD	20 - KIGALI GARMENT CENTER
basic - manual		basic - manual	Manual	Manual	Manual	Manual			Manual			
basic - manual		basic - manual	Manual		Manual	Manual			Manual			
not exist		not exist	98%		92%							
88%	87-89%	87-89%	Manual		Manual							
2		2	3		2				1			
manual - medium level	all products are made on same machineries which is not recommended		manual - basic level	Basic	Basic	Basic	Basic		Basic			
no automation		no automation	No automation		Nil	Nil			Nil			
poor		poor	Normal		Manual	Manual			Manual			
not exist		not exist	90%		90%	85%			75%			
30-40%		30%	75%		65%	70%			70%			
2		2	3		2	2						
manual - basic level		manual - basic level	Manual		Manual	Manual			Manual			
2		2	2		2	2			2			
basic		basic level	Manual		Manual	Manual			Manual			
2		2	1		1	1						
poor		poor	Average		Average	Low			Average			
not exist		not exist	Uses formats		Manual	Manual			Nil			
1		1	3		2	1						
not exist		not exist	Yes	Available	Not exist	Not exist			Not exist			
not exist		not exist	Manual		Manual	Manual			Manual			
1		1	1									
poor		poor										
not exist		not exist	Not exist		Not exist	Not exist			Not exist			
not available data		not exist	Not exist		Not exist	Not exist			Not exist			
not exist		not exist	Not exist		Not exist	Line Qc			Line Qc			
not exist		not exist	Final Check before packing		Final Check before packing	Pre packing QC			Pre packing QC			
not exist		not exist	Not exist		Not exist	Not exist			Not exist			
not exist		not exist	Not exist		Not exist	Not exist			Not exist			
2		2	1		1	2			1			
basic level screenprinting - manual machines		basic level screenprinting - manual machines	Screen Printing	Not exist	1	Screen Printing			Screen Printing			
manual - 500 pcs/day		no available data	1	Not exist	Screen printing	1			1			
exist machines		not exist	Multi Head Embroidery	Single Head Embroidery	Multi Head Embroidery	Nil			Single Head			
8 heads		not exist	12	1	12	Nil			2			
not existing		not exist	Nil		Nil	Nil			Nil			
not existing		not exist	Nil		Nil							
2		2	2		1							
2		3	3		2	1			2			
2		2	3	5	3	2			2			
poor		poor										
poor		poor	recruit on demand		recruit direct and train	recruit on demand			Redcruit on demand			
no available data		no available data	Not exist		not exist	Not exist			Not exist			
no available data		no available data	7%		4%	2%			3%			
no available data		no available data	15%		8%	5%			8%			
not exist		not exist	By practical test		By practical test	By practical test			By practical test			
not exist		not exist	Yes 2 months	On going for four months	No fixed procedures	No fixed procedures			No fixed procedures			
not exist		not exist	Yes		yes	Yes			not exist			
not exist		not exist	Yes		yes	Nil			not exist			
not exist		not exist	Nil		not exist	Nil			Nil			
not exist		not exist	Nil	Manager Trained	not exist	n			Nil			
2		2	1		1	1			Nil			
needs technical support - Quality Assurance, CAD-CAM, factory layout, Quality improvement		Good potential on promotional products due to the Radio & Tv station promotion channel										
needs technical support - Quality Assurance, CAD-CAM, factory layout, Quality improvement		Factory layout + Improving sewing technology + Upgrade printing & embroidery facilities										
			salary 75 USD/month / bank interest 20-25%	salary 80 USD/month / Looking for working capital support	salary 60 USD/month / Lack of Marketing (orders)	salary 75 USD/month / Lack of orders			Lack of Technical guidance			
Acquire CAD-CAM for tailors for a quick pattern making		Change actual Garmenting location into a much appropriate space - Industrial oriented										