



**MINISTRY OF TRADE AND INDUSTRY
GOVERNMENT OF RWANDA**

NATIONAL INDUSTRIAL POLICY

April 2011

LIST OF ACRONYMS

AGOA	Africa Growth and Opportunities Act
AfDB	African Development Bank
ATDCs	Appropriate Technology Demonstration Centres
BICS	Business investment climate survey
BNR	Banque Nationale du Rwanda
BPO	Business process outsourcing
BRD	Banque Rwandaise de Développement
CET	Common External Tariff
CIF	Customs, insurance, freight
CIP	Crop Intensification Programme
DRC	Democratic Republic of Congo
DTIS	Diagnostic Trade Integration Study
EAC	East African Community
EU	European Union
EBA	Everything But Arm Initiative
EDPRS	Economic Development and Poverty Reduction Strategy
EPA	Economic Partnership Agreement
FDI	Foreign Direct Investment
FEPA	Framework Economic Partnership Agreement
FWC	Fully washed coffee
GDP	Gross domestic product
GNI	Gross national income
GoR	Government of Rwanda
HACCP	Hazard Analysis and Critical Control Points
HEIs	Higher Education Institutions
HIDA	Human and Institutional Capacity Development Agency
ICT	Information and communication technology
IDEC	Industrial Development and Export Council
IDP	Integrated Development Programme
IRDA	Industrial Research and Development Agency
IRST	Institute of Scientific and Technological Research
KOICA	Korea International Cooperation Agency
Kwh	Kilowatt per Hour
LDC	Least developed country
MFI	Microfinance institutions
MHT	Medium and high technology
MIFOTRA	Ministry for Public Services and Skills
MINAGRI	Ministry of Agriculture
MINECOFIN	Ministry of Finance and Economic Planning
MINEDUC	Ministry of Education
MINICOM	Ministry of Trade and Industry
MININFRA	Ministry of Infrastructure
MINIRENA	Ministry of Natural Resources

MINICT	Ministry of Information and Communication Technology
MSME	Micro, small and medium enterprise
MTEFs	Medium Term Expenditure Framework
MVA	Manufacturing value added
MW	Megawatts
NAAPs	Needs Assessments and Action Plans
NBR	National Bank of Rwanda
NTBs	Non-Tariff Barriers
NGO	Non-Governmental Organizations
NICI Plan	National Information, Communication and Infrastructure Plan
NISR	National Institute of Statistics
OECD	Organization for Economic Cooperation and Development
OGMR	Rwanda Geology and Mines Authority
OTF	On The Frontier
PAYE	Pay as You Earn
PPP	Public private partnership
PSCBS	Public Sector Capacity Building Secretariat
PSF	Private Sector Federation
R&D	Research and development
RDB	Rwanda Development Board
REMA	Rwanda Environmental Management Authority
RICP	Rwanda Investment Climate Project
RRA	Rwanda Revenue Authority
RWF	Rwanda Franc
SACCO	Savings and Credit Cooperatives
SEZ	Special economic zone
SME	Small and medium enterprise
SNV	Netherlands Development Organization
SPS	Sanitary and Phyto-Sanitary
STI	Science, Technology and Innovation
TBT	Technical Barriers to Trade
TVET	Technical and vocational education and training
UBPR	Union des Banques Populaires du Rwanda
USAID	United States Agency for International Development
UNIDO	United Nations Industrial Development Organization
VAT	Value Added Tax
WDA	Workforce Development Agency

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1. ISSUE

The diversification of the Rwandan economy into new sectors of activity is essential for meeting the goals set by the Government of Rwanda (GoR) in Vision 2020. The 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 will reach 1.4 million*.¹ Industry currently employs just 4 per cent of the workforce or 170,000 people. This compares to agriculture which employs over 80 per cent of the population².

Rwanda is also now faced with the challenges and opportunities that greater regional integration presents. As a member of the East African Community (EAC) and the Common Market for East and Southern Africa (COMESA), Rwanda faces reduced costs in accessing a much larger market - the two areas have a combined population of over 450 million and a combined GDP of close to \$500 billion. Rwandan firms have an opportunity to serve this market, but will also face greater competition from businesses in countries with larger and more sophisticated industrial sectors, such as Egypt and Kenya. *Effective policy is required to ensure that Rwandan enterprise can compete regionally and beyond.*

Industrial development is structured upon two economic pillars of domestic production and export competitiveness. The construction of these pillars is built upon the foundation of a strong enabling environment. Doing so is essential in addressing Rwanda's increasing trade deficit, which currently exceeds US\$0.9 billion, by reducing dependence on imports and significantly boosting export revenues.

The role of industrial policy - as illustrated in international best practice - is to foster growth, value addition and dynamic expansion into new areas of comparative advantage³ where market failures would otherwise prevent or slow development. Tackling these market failures directly is seen as a first-best solution. As a result, this Industrial Policy is issue-specific and

¹ Rwanda Vision 2020

² NISR (2007) Labour market and economic activity trends in Rwanda: Analysis of EICV2 Survey

³ Rodrik, D., (2007), "Normalizing Industrial Policy", Paper prepared for the Commission on Growth and Development, Revised September 2007.

focuses on addressing the hindrances to Rwanda’s rapid industrialization, but also targets selected key growth clusters.

2. CONTEXT

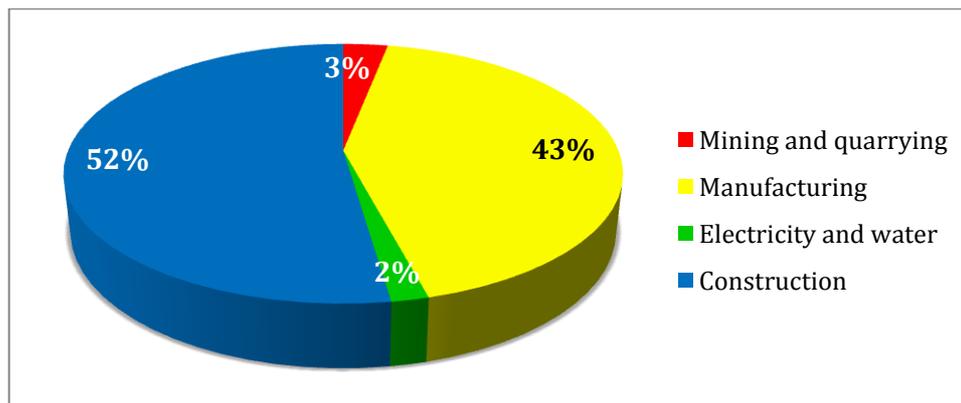
This section provides a background to the current status of industrial development in Rwanda with respect to the two pillars of export competitiveness and domestic production. In particular, it records the progress made so far in achieving the Vision 2020 goals.

2.1. RECENT INDUSTRIAL PERFORMANCE IN RWANDA

Rwanda’s GDP reached \$5.5 billion in 2010, translating into a GDP per capita level of \$540⁴. Rwanda’s productive structure is still dominated by agriculture and low-value services. Food crops form the largest single sub-sector of the Rwandan economy at 31 per cent of GDP. This is followed by wholesale and retail trade with 14 per cent, while other large service sectors predominate, including real estate and business services (10 per cent of GDP), transport and communication (8 per cent), public administration (5 per cent) and education (5 per cent).

The industrial sector contributed 15 per cent of GDP in 2010, less than half the size of the services and agricultural sectors and some way short of Vision 2020’s target of 26 percent. Construction is the largest industrial sub-sector, with 7 per cent of total GDP or 52 per cent of industrial output in 2010, up from 41 per cent in 2002. Manufacturing makes up 43 per cent of industrial output and just 7 per cent of total GDP, predominantly in food processing and beverages and tobacco. Other sub-sectors of manufacturing are negligible in total GDP.

Figure 1: Composition of Industrial Sector by Gross Domestic Product, 2010



A survey conducted in 2001 found that just 11 per cent of the working age population worked outside of agriculture. By 2007, it was estimated that this share of non-agricultural jobs increased to 21 per cent, or 170,000 people compared to 725,000 in services and 3,450,000 in

⁴ Source: NISR. GDP Annual Estimates (2010), March 2011

agriculture, fishing and forestry. Vision 2020 targets an annual creation of 140,000 jobs annually by 2020 to reach a minimum of 1.4 million for off-farm employment.⁵

Despite housing just one in ten of the Rwandan population, around one in three businesses in Rwanda are located in the capital, Kigali. The remainder are fairly evenly spread across Rwanda's provinces⁶. The vast majority of all business is classified as microenterprises (90 per cent), with the remainder mostly small enterprises. Just 0.2 per cent of businesses are medium sized, while just 0.15 per cent or around *100 businesses in Rwanda are classified as large*, according to the PSF Business Census.

2.2. BALANCE OF TRADE

Rwanda's exports of goods have increased significantly in the recent past, rising to \$254 million in 2010 from \$62 million in 2003. **Export revenues are highly concentrated in a few products**, with coffee, tea and minerals together making up 79 per cent of exports excluding re-exports. Considering services, tourism is also a significant earner of foreign exchange, bringing in \$200 million of exports in 2010.

However, imports to Rwanda have grown faster, from \$325 million in 2003 to \$1,389 million in 2010⁷. The ratio of exports to imports fell from 23 per cent in 2008 to 18 per cent in 2010, with Rwanda's trade in goods deficit exceeding \$1 billion – representing around 20 per cent of Rwanda's GDP. **Rwanda therefore has a severe balance of payments deficit**, with the trade deficit slightly offset by tourist revenue, FDI, aid transfers and remittances. For long-term sustainability, Rwanda needs to increase its exports.

Alongside minerals, tea and coffee, Rwanda has a number of much smaller existing exports – including horticulture, pyrethrum, hides and skins, and handicrafts. These exports have shown significant volatility in recent years, particularly as a result of the global economic crisis.

Rwanda's imports largely constitute products that have had some degree of manufacturing especially raw materials whose prices have been rising steadily. Among the top 15 imports in 2008, 2009 and 2010, only vegetable oils, raw sugars, palm oil and soaps could be classified as commodities or low technology products. Other imports are predominantly medium technology products, such as vehicles, building materials, pharmaceuticals or computing.

2.3. INVESTMENT

Rwanda's investment levels have increased significantly in recent years, though they have been volatile. In 2010, registered investments totalled RWF 232 billion compared to RWF 645 billion in 2009. This is partially due to large, one-off entrants such as the Lake Kivu gas

⁵ Rwanda Vision 2020

⁶ PSF (2008) "Rwanda business operators census report"

⁷ Source BNR. Import figures are CIF.

extraction project. However, it may also reflect a mixture of external shocks - such as the financial crisis, which has dented global demand - and internal bottlenecks to investment. Local investment in recent years has been largely driven by the construction industry. **The investment rate must increase, especially in industry**, if the goals and objectives set out in this policy are to be achieved. Vision 2020 targets a gross domestic investment rate of 29 percent of GDP by 2020. In 2010, the investment rate stood at 21 percent of GDP in comparison to 13 percent in 2000⁸.

2.4. CURRENT STATUS OF INDUSTRIAL DEVELOPMENT INITIATIVES

- The Ministry of Trade and Industry has developed a number of key policies and strategies aimed at improving the business environment and complementing efforts to develop the industrial sector. These include the SME Development Policy (2010), Trade Policy (2010), Competition Policy (2010)
- The central remit of the Rwanda Development Board (RDB), established in 2008, includes providing current and potential exporters with trade and market information as well as advice and recommendations the Government on practical measures to stimulate export trade. It acts as a one-stop-shop for investors and has significantly reduced the cost of doing business, making Rwanda the most reformed in the region.
- The Private Sector Federation of Rwanda (PSF) aims to strengthen private companies, build human capacity for the private sector, facilitate sustainable funding sources for Rwanda's private sector, develop a vibrant membership association of private sector players and provide economic dispute arbitration.
- The industrial sector especially SMEs has also been supported by international NGOs including Netherlands Development Agency (SNV), UNIDO and USAID which have implemented industry support projects especially in support of rural small scale enterprises.
- Good governance and zero-tolerance to corruption has given Rwanda a competitive edge compared to its regional neighbours.
- Institutions charged with capacity building have been empowered to so such as WDA and PSCBS in conjunction with MIFOTRA.
- Land reform policies are being implemented and will impact on land availability for industries and agriculture.
- Rwanda has joined both the EAC and the Commonwealth bodies hence ensuring more partnerships and wider markets.

⁸ Gross Capital Formation, NISR Annual GDP estimates 2010

3. VISION AND OBJECTIVES

3.1. VISION

The vision of the policy is for Rwanda to have:

“Competitive industrial and advanced services sectors producing over \$1.5 billion of exports by 2020, while increasing the number of off farm jobs.”

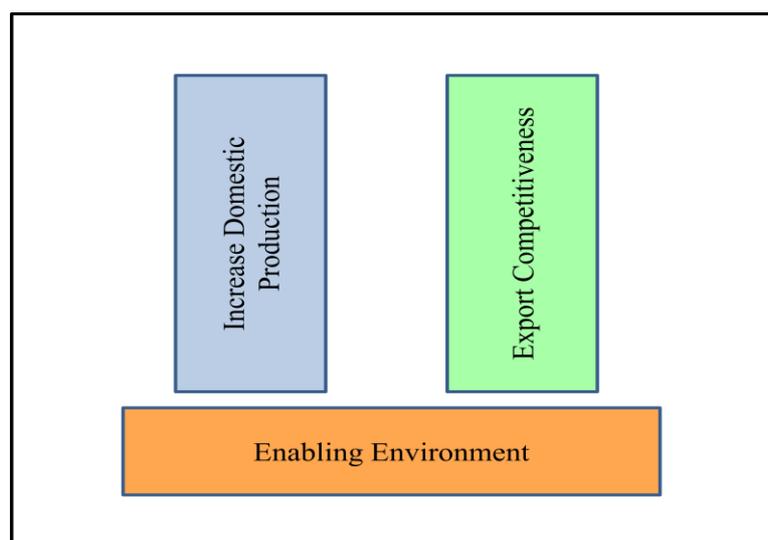
3.2. OBJECTIVES

The broad goals of the Rwandan Industrial Policy are those stipulated in the Vision 2020 and the Economic Development and Poverty Reduction Strategy 2008-12 (EDPRS). These include promoting the growth of the economy with the target of becoming a middle-income country by 2020 - requiring GDP growth of at least 8 per cent on average per annum. They also include the goal of structural transformation, with industry accounting for 26% of GDP by 2020; the national investment rate reaching 30 per cent of GDP; and non-farm employment reaching 1.4 million.

In order to achieve these high level goals, the Industrial Policy has three objectives. These include:

- 1) **Increase domestic production for local consumption**
- 2) **Improve Rwanda’s export competitiveness**
- 3) **Create an enabling environment for Rwanda’s industrialization**

Figure 2: The Foundation and Pillars of the Industrial Policy



4. ANALYSIS

This section looks at two main issues. Firstly, it addresses the need for Rwanda to increase its domestic production and improve its export competitiveness in order to drive Rwanda's industrialisation. Secondly, it also provides an analysis of the enabling environment necessary for Rwanda's industrial growth. The Figure 2 above illustrates the analytical framework utilised in guiding Rwanda's Industrial Policy.

4.1 DOMESTIC PRODUCTION

Rwanda imported \$1,227 million of goods in 2009, indicating a trade in goods deficit in excess of \$1 billion. This is fundamentally an unsustainable position and is only possible due to FDI and particularly large aid inflows. Beyond export diversification for long-term economic growth sustainability, Rwanda needs to look to boost production in industries in which it currently only imports.

Table 1: Rwanda's top 15 imports in 2009: \$ millions⁹

Rank	Product	Imports in \$ millions
1	Vehicles	110
2	Metal parts and structures	96
3	Petrol	96
4	Telecommunications equipment	83
5	Pharmaceuticals and medicaments	81
6	Electric generators	70
7	Computing and electronics	53
8	Electrical equipment	51
9	Cement	40
10	Vegetable oils	30
11	Manufactured fertilisers	30
12	Goods transport vehicles	29
13	Raw sugars	21
14	Palm oil	18
15	Soaps	17

Rwanda's imports largely constitute products that have had some degree of manufacturing. Among the top 15 imports in 2009, only vegetable oils, raw sugars, palm oil and soaps could be classified as commodities or low technology products. Other imports are predominantly medium technology products, such as vehicles, building materials, pharmaceuticals or computing. Competing with imports therefore requires significant investment and technological upgrading for Rwandan firms, with specific cluster focus required, particularly in advanced industries such as pharmaceuticals or building materials.

⁹ Source: UN Comtrade accessed by WITS. The nine areas are the high level classifications under SITC Ver.3.

4.2 RWANDA'S EXPORT COMPETITIVENESS

Rwanda's exports, including tourism, have increased significantly over the past decade, rising to US\$454 million in 2010. This marks an impressive trend in nominal export revenue growth since 2003. Export growth was led by tourism, tea, coffee and mining sectors, as well as strong growth of re-exports.¹⁰

Table 2: Rwanda's Exports in 2010: \$ millions¹¹

PRODUCTS	Jan-December 2010
Tourism	200,000,000
Total Mining	67,790,142
Cassiterite	42,207,860
Coltan	18,482,773
Wolfram	7,099,509
Coffee	56,081,155
Tea	55,709,223
Hides & Skins	3,743,825
Pyrethrum	1,406,548
Other exports	33,824,285
Re-exports	35,902,211
Total Receipts	454,457,389

The bulk of Rwandan exports, currently around 80 per cent, are concentrated in Rwanda's traditional commodity export sectors of tea, coffee and minerals. Other export sectors, such as hides and skins, handicrafts and horticulture, bring in much smaller amounts of foreign currency comparatively. There is therefore an evident need to diversify in greater quantities into alternative sectors for exports.

Rwanda depends on volatile commodity products within its tea, coffee, and minerals industries, for the vast majority of its export revenues. Over-dependence on commodities for exports can contribute to lower long-term growth.¹² While Rwanda's coffee, tea and tourism strategies focus on moving towards more targeted, high-end market niches, progress is not complete and a global downturn may impact these specialty markets as well. Rwanda can escape the "commodity trap" by diversifying its exports into targeted products and services, innovating, increasing productivity, and serving higher margin, niche markets. The global market is becoming increasingly complex, with value chains stretching across continents. By

¹⁰ Re-exports refers to foreign goods that are imported into the country and then re-exported, e.g., when minerals pass through Rwanda from Congo on their way to ports in Kenya and Tanzania.

¹¹ Source: UN Comtrade accessed by WITS. The nine areas are the high level classifications under SITC Ver.3.

¹² Farole, Reis, Wagle. "Analyzing Trade Competitiveness, A Diagnostics Approach". World Bank, Policy Research Working Paper 5329.

moving downstream, closer to end consumers, Rwandan firms can capture larger product margins and learn better from customers.

Rwandan exports are underdeveloped vis-à-vis the rest of Africa. Although the export sector is growing, Rwanda lags other African nations in terms of exports as a percentage of GDP. Closing this gap will require expansion of production and the creation of niche products and services that respond to the specific needs of target markets.

4.3 ENABLING ENVIRONMENT FOR INDUSTRIAL GROWTH

Co-ordination failures constitute a wide range of market failures impacting on the efficiency of the private sector and its ability to make confident long-term investments in growth. The key investments required to overcome co-ordination failures can be generally classified within skills and infrastructure. They also include the environment faced by the private sector and the provision of information between firms.

4.3.1 Infrastructure

Energy cost is a major impediment to the Rwandan industrial sector. Biomass, such as wood, charcoal and peat accounts for 85% of Rwanda's energy supply. The remaining share of energy is from petroleum (11%), and electricity (3%)¹³. Rwanda has an installed 95.24 Megawatts (MW) of electricity capacity, whereas the available capacity currently stands at 84.85 MW. Rwanda has low per capita electricity consumption relative to the East Africa Community: only 13% of the population has access to electricity, and there are reported power outages. Electricity generation cost is high and the feed in tariff of power is high with 112 RWF/kWh for households and RWF 102/kWh for industries, despite the Government subsidizing the utility. Rwanda's electricity cost at \$0.24/Kwh is at least double that of its neighbours. The 2008 Business Investment Climate Survey found that 64% of businesses surveyed cited access and cost of electricity as a major constraint.

Rwanda has a per capita energy consumption of 20-kilowatt hours (kWh). This is very low compared to other LDCs, with just over 50 kWh in Tanzania and Uganda, and a 112 kWh average for all LDCs and 125 kWh per capita for Kenya¹⁴.

¹³ NISR – In constant 2006 prices.

¹⁴ DFID (2008) Growth diagnostic: Sources of and obstacles to economic growth in Rwanda: An analytical overview.

Table 3: Energy costs: Rwanda and comparator countries¹⁵

Country	Energy Costs (USD/kWh)
Rwanda	0.24
Uganda, Burundi, Kenya, Tanzania	0.10-0.12
South Africa, China	0.04

As

illustrated

in

¹⁵ Source: World Bank (2009) The Republic of Rwanda, Investment Climate Assessment: Strategy for sustained employment and export growth. Rwanda data from MININFRA.

Table 3, energy costs in Rwanda are double that of EAC partners and far exceed larger industrial economies such as South Africa and China. This is *a severe competitive disadvantage for Rwandan business*, particularly in the industrial sector, which is the most energy intensive. There are plans to expand electricity capacity by 150 MW by 2012. Further, there is a high commitment by the Government to boost the power sector to serve as an engine for socio-economic development. A Power Sector Steering Committee chaired by the Prime Minister has been put in place and an inter-ministerial taskforce is in place to assist the Ministry of Infrastructure to implement the 7-year electricity development program, with the aim to have a cumulative installed capacity of 1000 MW and access rate of 50% by 2017.¹⁶

Transport is another major constraint faced by businesses in Rwanda. The MINICOM Investor Perception Index 2010 found that only 22 per cent of industrial firms cite the cost of transport services as low or very low¹⁷. Transport costs are further exacerbated by the quality of roads. As shown in 3 below, with the exception of the paved national roads, the majority of roads are in a bad condition. Furthermore, the majority of investment geared towards the road network is focused on national roads, which are often times already paved. As a result, district feeder roads are often neglected by investment programmes, thereby causing extra costs for agricultural suppliers to markets and to industrial buyers.

Table 4: Condition of Rwanda's road network¹⁸

Condition	Paved national roads		Earth national roads		Districts roads	
	Kilometres	Percentage	Kilometres	Percentage	Kilometres	Percentage
Good	495	45%	170	10%	170	10%
Mediocre	415	35%	260	15%	280	15%
Bad	210	20%	1,300	75%	1,400	75%
Total	1,120	100%	1,730	100%	1,730	100%

While poor quality of roads can increase the costs for businesses, particularly traders, high vehicle operating costs are also a problem. The 2005 DTIS report quoted a domestic freight rate of \$0.20 per ton/km, which is more than twice the rate for international transportation¹⁹.

4.3.2 Human Resources

In the 2009 HIDA Skills Audit Report, respondents assessed their staff capacity at 60 per cent of their short-term requirement, with capacity levels in the private and civil sectors at 40 and 70 per cent respectively. The skill deficit exists at all levels but is most acute at the technician

¹⁶ Source: MININFRA

¹⁷ Source: MINICOM

¹⁸ Source: MININFRA (2008) Preparation of Maintenance Programming

¹⁹ World Bank (2005) Diagnostic Trade Integration Study

cadre, where the gap is 60 per cent of requirement. Management cadre shortfall is the lowest at 12 per cent of requirement. Overall, the most severely affected sectors are tourism, construction and arts/craft industries, all with less than 30 per cent of skill requirement in place. Construction suffers from acute scarcity of professionals and artisans. The agro-processing industry leads in terms of scarcity of managers, with an 80% skill gap whilst auto repair leads in the scarcity of technicians. The financial sector leads in the scarcity of artisanal cadre skills.

According to the PSF census (2008), for industrial firms, 28 per cent of permanent staff have a university degree, 35 per cent have secondary education and 37 per cent have primary or less. In all sectors, only 2 per cent of permanent staff are university educated, and 11 per cent secondary school educated. High staff turnover and a lack of relevant local training are seen as the primary constraints to developing competent personnel. Furthermore, manufacturing firms find there is a shortage of skilled labour for technical positions.

For new industrial sectors to develop in Rwanda human capital must be developed beyond the current scope of skills available; industries such as biotechnology and Business Process Outsourcing (BPO) will require significant increases in the technical and vocational skill base before potential can be realised domestically.

With many young people not enrolled in secondary education, there are a large number of students who could potentially benefit from technical and vocational education and training (TVET) in Rwanda. At present, TVET schools only have about 40,000 students²⁰ while 170,000 young people are estimated to leave the school system every year without any vocational training.

More emphasis is required on TVET. An adequate TVET sector is crucial to overcome this constraint and ensure that a wide range of skilled technicians and professionals are available. To this end, the Workforce Development Authority in partnership with the World Bank created a Skills Development Fund, which can be accessed by the private sector and exporters that demonstrate export potential and alignment of their training needs with the industrial policy. In addition, there is a need to strengthen the overall management skills of businesses and entrepreneurs in Rwanda, as well as putting in place an effective framework for corporate governance.

In addition to TVET, there is a need to strengthen the overall management skills of businesses and entrepreneurs in Rwanda, as well as putting in place an effective framework for corporate governance. A number of the business failures are attributable to the poor business and

²⁰ Source: Per Ronnås (ILO), Elina Scheja (Sida) and Karl Backéus (Sida) (2009) RWANDA FORGING AHEAD: The Challenge of Getting Everybody on Board.

management practices of the enterprises; it is therefore necessary to address this by boosting the management practices in these firms.

4.3.3 Access to Finance

Rwanda's financial sector provides a significant constraint, particularly to the MSME sector. The savings rate is amongst the lowest in the world²¹. The low level of private savings is generally attributed to low real deposit rates combined with poor outreach of banking services. According to the 2008 Finscope Financial Access Study in Rwanda:

- More than half of the Rwandan adult population (52%) manage their lives without using any kind of financial product (formal or informal);
- More than half (54%) of the 47% of Rwandan adults who do use financial products, use informal products;
- Of those who are using formal financial products, most (67%) are using formal bank products;
- Bank usage is dominated by the *Union des Banques Populaires du Rwanda* (UBPR). Excluding UBPR, only 1% of the adult population use commercial bank products;
- Just over half a million adults in Rwanda are banked;
- Rwandans cite saving (69% of “banked” adults) and getting access to credit (52%) as the main reasons for having bank accounts.

While the Doing Business indicators show that Rwanda has made remarkable progress in terms of registering property, accessing credit, and protecting investors, there is still room for improvement in sub-areas such as the number of days to register property (55 in Rwanda vs. the OECD average of 25), the development of credit registries (which until recently existed in much of sub-Saharan Africa, but not Rwanda), and in shareholders' rights to sue officers and company directors for misconduct (Rwanda lags both Sub-Saharan Africa and the OECD)²². This impacts the long-term investment and financing levels in the country, and will need to be addressed to unlock financing in Rwanda's private sector.

The 2010 Investor Perception Index Report found the access and cost of finance to be the single most problematic issue for both domestic and foreign investors in Rwanda. Over two-thirds of businesses queried in the Private Sector Federation's 2008 Business Investment Climate Survey cite finance as a major challenge.²³ Lack of collateral is ranked as the biggest

²¹ DFID (ibid.) Sources of and obstacles to economic growth

²² World Bank Doing Business Indicators for Rwanda:

<http://www.doingbusiness.org/exploreconomies/?economyid=160#GettingCredit>

²³ PSF Business Investment Climate survey, July 2008, n=909: Qn. 8. How important are the following issues in constraining your access to finance?

challenge, but there are additional constraints including high interest rates, lack of detailed business plans, lack of information, and a lack of understanding by banks.

These constraints are particularly difficult to overcome for the private sector players as they seek new market access, relationships with foreign traders, and lines of credit to develop distribution.

Notwithstanding the chart below, progress has been registered in several areas including:

- Use of formal financial services increased from 1.4 million citizens in 2007 to almost 2 million in 2009.
- GoR reduced bank reserve requirements from 8% to 5%, and BNR's lending interest rate to commercial banks decreased from 9% to 7% in 2010.
- Private sector credit surged 40% in 2008 and held fairly steady in 2009 (with only a 2% decline).

Economic development agencies around the world have recognized the role start-ups and other high-risk/high-reward ventures can play in improving an economy's trajectory. Rwanda in particular needs a mixed approach to boost exports – adopting financing schemes to continuously push incremental gains as well as venture financing to support non-collateralised opportunities (e.g. commercialising research). Therefore, Rwanda through the Development Bank of Rwanda (BRD) will design special financing schemes targeting key sectors in order to drive export growth. Rwanda will borrow from best practices of countries including Mauritius, Malaysia, South Africa, South Korea and China.

4.3.4 Trade Facilitation

Rwanda is 1,740 km from the Port of Mombasa and 1,480 km from Dar es Salaam and faces significant challenges and costs in getting its goods to international markets. The *principal constraints faced by Rwandan traders are non-tariff barriers (NTBs) to trade*. Many NTBs are due to the transit of Rwandan goods along the Northern and Central corridors to Mombasa and Dar es Salaam respectively. An EAC Regional Forum on NTBs was launched in December 2008 in order to tackle the problems. NTBs targeted include delays at ports, lack of harmonisation in documentation and processes, as well as the existence of weighbridges and roadblocks²⁴.

Transport costs are further exacerbated by unequal flows on the trading route – many vehicles bringing goods to Rwanda have no goods to take back to Kenya and Tanzania, increasing the overall cost. Furthermore, restrictions in neighbouring countries currently prevent Rwandan

²⁴ EAC African Community Secretariat (2009) Draft EAC time-bound programme for elimination of identified non-tariff barriers (NTBs)

transporters taking loads between countries (i.e. a truck returning empty from Rwanda is not allowed to pick up a load in Uganda for delivery in Kenya)²⁵. Foreign-based operators provide the majority of trade logistics services in Rwanda²⁶.

The importance of a national logistics and distribution services industry as a driver of national competitiveness has considerably increased recently due to the increasing global and regional trade and the complex demands it creates on various players. Rwanda is strategically located and is surrounded by larger countries with (potentially) larger markets. The big markets that Rwanda hopes to tap are Eastern DRC and Southern Uganda, Western Tanzania and include smaller ones as well, such as Burundi. Rwanda also seeks to serve other markets in Central Africa including Congo Brazzaville and Gabon. To this end therefore, GoR is developing a logistics and distribution services strategy that will position Rwanda as a trade logistics hub in the region and also further improve trading across borders.

A number of transport projects are underway in Rwanda and regionally and could significantly reduce the cost for Rwanda's international transport. These include the planned railway that would provide transit from Kigali to Dar es Salaam, and a new airport at Bugesera. Regional projects also include the rehabilitation of the 440 km Kampala – Gatuna road, roughly a quarter of the Northern Corridor, as well as smaller stretches of road in Kenya.

Another barrier for Rwandan firms to access international markets is in the area of product standards. The particular area with heavy standards implications for Rwandan firms is in the exportation of food products to the EU. The challenges faced are in quality control of processed food products and packaging. The use of traditional technology to process different products has revealed challenges in exporting to the European market. The EU requires the use of Hazard Analysis and Critical Control Points (HACCP) as a minimum for the processing of food, but importers often apply private standards which are much more onerous.

The issue of packaging is common to all exporters but affects specifically exports of fruits and vegetables. Rwanda's exporters have to first import packaging before they can export since there is no packaging plant in Rwanda, but the ban on the import of plastics has meant that exporters struggle to import optimal packaging products. A long-term solution is that RDB continues its efforts to encourage investors to invest in packaging plants, which will produce packages of high standards. In the short-term, there has been some progress on the plastic packaging issues, as exporters who write officially to REMA can gain authorisation to use plastic packages for export purposes.

²⁵ DFID (ibid.)

²⁶ Source: DTIS

4.3.5 The Regulatory Environment

The manufacturing sector also complains of uncertainty over policies and rapid regulatory changes without sufficient consultation, as well as inadequate information on recent pro-business reforms that have been implemented (e.g. improvement of land registration processes).

The cost and lack of availability of land are rated the greatest constraints to starting and expanding a business according to the 2010 Investor Perception Survey. Land also ranked as the second highest issue faced by firms in the PSF Business Investment Climate Survey.

The GoR is currently implementing land registration in order to streamline land registration processes. Through the Rwanda Investment Climate Project (RICP), GoR aims to build capacity within the national land registration office, convert land titles to the new system under the new Organic Land Law and develop a strategy to support and promote the mortgage industry in Rwanda. The Office of the Registrar of Land Titles (ORLT) has been established and equipped.

Paying taxes should not have to be onerous. Businesses face a range of taxes, including corporate income tax, PAYE, VAT, excise duty and withholding tax levied by the Rwanda Revenue Authority (RRA), as well as property tax, trading licenses and rental tax income administered by the Districts. Processes for paying should be simple and compliance costs should be kept low.

Rwanda will continue improving the regulatory environment directly affecting businesses and industry.

4.3.6 Raw Materials and Industrial Inputs

Rwanda's integration into global value chains will be determined by its ability to access inputs at world prices, whether produced domestically or internationally.

As industries become increasingly technologically intensive in Rwanda and result in a higher value-added end product, the access and cost of raw materials and other industrial inputs becomes a central issue. For a sector to be profitable domestically and competitive internationally, the supply of affordable raw materials and inputs must be ensured. This can be achieved through two channels, namely 1) utilising and developing linkages with domestic suppliers of inputs, and 2) reducing the cost of imported inputs.

Domestic supply in Rwanda is determined by factors such as the availability of raw materials, whether from the mineral, forestry or agricultural sectors or processed and manufactured

intermediary goods. Policies aimed at addressing the cost and availability of raw materials and inputs from domestic producers can be focused on targeted support to these industries, or activities that enhance the supply chain linkages through infrastructural development, transport and distribution and marketing improvements. Tackling the latter group of root problems is a first best scenario for Rwanda as it directly addresses market failures.

Where inputs are unavailable or uncompetitive domestically in the short- and medium-term, policy actions should be tailored to securing sufficient and affordable imported inputs. The cost of imported inputs is predominantly a function of cross-cutting trade-related factors such as infrastructure, trade facilitation, customs procedures, standards, and regional and international commitments such as the EAC Common External Tariff and associated list of sensitive items. The Doing Business Report 2011 found that the import cost per container to Rwanda totalled \$4,990, compared to \$3,275 for a container for export and rated in the bottom 10 percent of nations.

The Investor Perception Index report produced in 2010 found that the domestic and foreign investors interviewed rated the availability and cost of raw materials as 5.2 out of 7, and the availability of local suppliers at 4.8 out of 7 (where 7 is very favourable). Whilst the ratings were positive, the report focuses on current investors and thus current sectors in which Rwanda is producing; to move into more dynamic, technology intensive industries will require an increase in the scale and a broadening of the type of inputs supplied.

Further analysis of the availability and cost of inputs can be found in value chain analyses already conducted by GoR in relation to cluster strategies, and should be updated in line with this policy.

4.3.7 Environmental sustainability

Economic activities are intrinsically linked with the physical environment. Externalities, unaccounted side effects to economic activity, are a fundamental part of all production. These externalities can be positive, for example when a beekeeping business helps a horticultural producer due to the pollinating behaviour of its bees; but externalities can also be negative, where the waste produced by industrial processes is harmful to the environment and to the businesses and people who rely on it. It is therefore paramount that mitigating measures are taken so that growth can take place in a sustainable long-term manner.

It is estimated that close to 70 per cent of industry in Rwanda is located in Kigali, which implies concentration of pollution in the capital²⁷. While most industrial firms have

²⁷ Kigali Master Plan of Waste Water Management (2008)

traditionally been separated from dwelling houses, they have often been placed in the valleys or marshes bordered by heavily populated areas. In Kigali, industry is principally localised in the industrial park of Gikondo, in the zone of Kicukiro, as well as in periphery of the hill of Nyarugenge. Where toxic materials are produced as waste products there has therefore been a danger of contamination of local water supplies among other risks.

The majority of industrial firms are not endowed with equipment for treatment of their industrial waste in the natural environment. Effluents are poured mainly in waters such as the river Nyabugogo. As the table shows, this includes disposals of biodegradable organic products, oils, and heavy metals such as the chrome, lead, zinc and copper among others. The recent Kigali Master Plan of Waste Water Management (2008) states that the best outcome is to systematically treat pollutants at the source of industry. This is recommended due to technical reasons, in which firms may be more specialised to deal with the varieties of effluent to treat, as well as to institutional problems, such as the difficulty for different private partners to share the use of an installation.

The Rwanda Cleaner Production Centre was established to promote an integrated strategy applied to the whole of the production cycle to improve environmental performance of industrial firms in Rwanda.²⁸ The Centre promotes more efficient use of raw materials, energy and water and aims to ensure a life cycle production approach ensuring environmental sustainability. A number of firms have now been supported by the Centre, which is funded by UNIDO. The Centre is the key base for promoting the environmental sustainability in industry.

The Rwanda Environmental Policy highlights the effects of trade and tourism on the environment. Under the new Rwanda Tourism Policy²⁹, destinations will be encouraged to develop guidelines and tools for the development of responsible tourism, including codes for tourists and operators on sustainability issues, including waste disposal, energy use, local economic impact and cultural sensitivity. The Policy highlights the need for a suitable waste management policy. As it currently stands, hotels have to install a waste management system that can be very costly. Waste management services are part of the key infrastructure required and should be provided for by Government.

The Rwanda Industrial Policy will enforce the implementation of Rwanda's environmental laws and policies, such as the requirement for industry relocation from marshland areas.

²⁸ UNEP (2009) Rwanda State of Environment and Outlook

²⁹ Rwanda Tourism Policy (2009)

4.3.8 Technology, Research and Innovation

In order for Rwanda to compete in an increasingly competitive global economy and open trading system, it must build and acquire appropriate science, technology, innovation-entrepreneurial, engineering, and technical/vocational capacity to produce more value added goods and services.

The Government of Rwanda with the support of key donors embarked on a two-stage STI capacity-building program³⁰. The first stage involved assembling teams of Rwandan and international experts to prepare a series of STI capacity-building needs assessments and action plans (NAAPs). This stage is expected to be followed by a second stage, in which the Bank and donors finance the implementation of the recommendations in the NAAPs. Several broad principles for building STI capacity emerged from the NAAPs and related work, some of which are directly relevant for the development of a successful Industrial Policy, including:

- STI capacity building should focus on finding practical solutions to practical problems. Especially for small countries like Rwanda that are at an early stage of the development process, broad, unfocused efforts to build science in general are unlikely to have the desired developmental impact.
- STI capacity building is a cross-cutting issue with a direct impact on such diverse programs as private sector development, rural and agricultural development, e-Rwanda, infrastructure and sustainable energy development, and education, among others.
- STI capacity building is not only about scientists working in research laboratories. All levels of technology and skills—ranging from sophisticated scientists to engineers and technical and vocational workers—have to be developed, in the appropriate proportions and sequence.
- STI capacity building extends beyond research and development. It is also about getting knowledge out of the laboratory and into the market. Knowledge diffusion is a critical component of the capacity building process. Therefore Rwanda's private sector must have the marketing, management, and entrepreneurship capacity to utilize new and existing knowledge to produce higher-value-added, more knowledge-intensive goods and services.
- Public-private partnerships are an essential aspect of STI capacity building. GoR has an indispensable role to play in supporting essential research, providing basic education, and creating an environment that will enable the private sector to create the jobs that will diversify the economy and generate wealth. However, government investments in science and education will not bear fruit unless government capacity-building programs are consistent with the needs and requirements of the private

³⁰Building Science, Technology, and Innovation Capacity in Rwanda, The World Bank Group (2008)

sector. Developing these programs in partnership with the private sector is the best way to ensure the required consistency.

- There are potential advantages to being a latecomer. A latecomer such as Rwanda does not have to invent everything it needs. It can achieve significant results and solve many problems by adapting and using off-the-shelf technology. However, even this seemingly simple task will require significant investments in capacity building.
- STI capacity building extends beyond high tech. Producing high quality coffee, silk, and roses - as Rwanda expects to do - requires significant scientific, engineering, and technical capacity.

5. PREFERRED OPTION

The preferred option for the Industrial Policy focuses on the development of domestic production for local consumption and export competitiveness. This will be achieved through an enhanced enabling environment for industrial development, as reflected in the analytical framework presented in Section 4 above.

5.1. POLICY DESIGN: INCREASE DOMESTIC PRODUCTION FOR LOCAL CONSUMPTION AND EXPORT COMPETITIVENESS

Based upon the vision and objectives formulated in Section 3, and the analysis conducted in Section 4, the Industrial Policy preferred option makes three policy statements:

- Government will provide sector-specific support for existing dynamic clusters to boost domestic production and foster export competitiveness.
- Government will promote future sectors with a focus on medium and high-tech industries
- Government will provide an enabling environment to achieve the above

The need to diversify the productive base for both export growth and the reduction of the over-reliance on imports means that the Government must take proactive actions to support the development of new economic sectors. However, with limited budgetary and managerial resources, Government cannot promote all sectors in which Rwanda could potentially flourish. It is therefore said that Government is “*doomed to choose*”³¹.

A framework was required for identifying new clusters. This framework needed to be flexible in order to ensure that as new opportunities arise, evolution into new sectors is possible. There should be strong public-private dialogue with an open process of selection. Further, when Government provides encouragement to the private sector, it must show the necessary high-

³¹ Haussman et al.(ibid).

level commitment itself. The framework developed includes an assessment of the following criteria:

Table 5: Criteria for Cluster Selection Framework

DESIRABILITY	FEASIBILITY
Potential for economic and social returns	Export potential
Potential for linkages to other sectors	The presence of domestic demand
Dynamic technological trajectories	Availability of inputs

The key overarching factors for selecting dynamic clusters are *desirability* and *feasibility*. As illustrated in Figure 3 below, Government in the short-term should support the new feasible sectors while promoting the future viability of desirable sectors. In the medium-term, desirable sectors can also receive support as they become feasible. In the long-term, resources can be shifted to new sectors that are feasible and Government can wean off successful sectors through reduced support.

Figure 3: Time based model for providing sector-specific support



A number of potential industrial clusters have been identified in different exercises undertaken by the Rwandan Government – principally by RDB with the OTF Group and by the Office of the President and Korea International Cooperation Agency (KOICA).

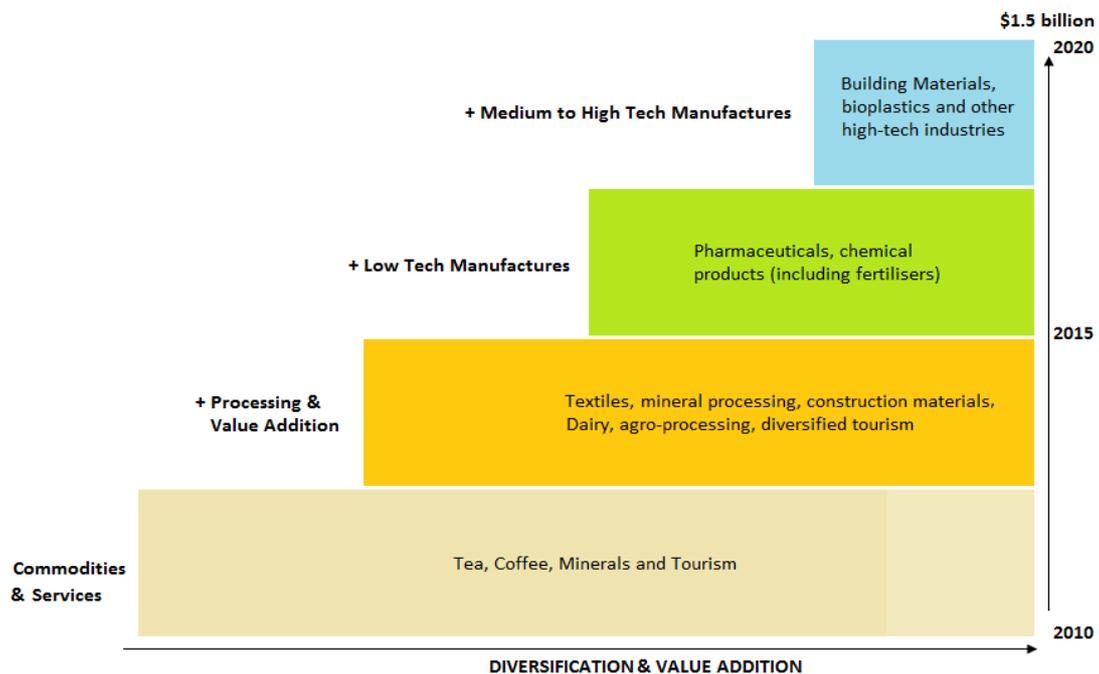
This Industrial Policy uses existing cluster selection exercises and brings them together to specify a clear focus for clusters to be prioritised according to the criteria in Table 5. This makes the distinction between clusters that are *desirable but only feasible in the longer term* and clusters that are *desirable and feasible in the shorter term*. Thus planning will look to promote the feasibility of all selected clusters while fast-tracking those that are most feasible.

The Industrial Policy selects ten clusters:

- Short Term:** Agro-processing (*including pyrethrum, dairy, vegetable oil, soaps and detergents*); ICT; high-end tourism; textiles (*including silk, leather & leather goods*); minerals processing;
- Medium Term:** Construction materials (*including cement*); Pharmaceuticals; chemical products (*including fertilizers*);
- Long Term:** Building materials (*metal parts and structures*); bio plastics; other high-tech industries.

Figure 4 illustrates the growth and diversification of clusters that Rwanda will focus on in the short, medium and long term, towards value addition in existing sectors as well as the emergence of new export sectors that will accelerate Rwanda’s industrial transformation to higher value, more technology-intensive products. The prioritised sectors in this policy are consistent and have informed the GoR’s 7-year programme.

Figure 4: Cluster Progression Ladder, 2011 - 2020



Leapfrogging and unforeseen new industries: The ladder above is *adaptable and responsive* to changes in the operating environment and *should not be seen as static*. Whilst there are complementarities between initial sectors and future sectors that will develop in a cumulative manner, leapfrogging to higher value-added sectors is both desirable and feasible if *demand-driven*. Whilst leapfrogging may not be possible where supporting infrastructure **will take time to develop (generation and supply of energy for factories, for example),**

the key objective of the policy is to provide the general framework under which any emerging sector can succeed.

5.2. POLICY ACTIONS

The eight sets of policy actions outlined below and detailed in depth in the Implementation Matrix provided as an Annex to this document are centred upon the analytical framework used in Section 4, so as to directly address the opportunities and constraints identified regarding Rwanda's industrial development. The prioritised policy actions are as follows:

A. Infrastructure

- **Increase Government Investment in Energy** – by focusing on mobilising of heavy investment in the energy sector with a target to bring tariffs of electricity down. This should also be supplemented by the continued search for alternative sources of energy including wind, peat and solar energy and possibly nuclear energy in the long run.
- **Allocate land for industries, develop industrial parks and SEZs** – leveraging Public-Private-Partnerships (PPPs) for development and management of SEZ such as the new Kigali SEZ, Technopole (park for ICT, nanotechnology, etc); agro-processing parks, Tourism resort city (Kivu Belt), and Biotech park in Bugesera. Support district level efforts to allocate land for industries;
- **Transport** - Improve district road programmes targeting feeder roads connecting farms and food processing hubs. Investment should also focus on improved maintenance of the road network.

B. Human Resources

- **Provide capacity building support to manufacturers** - Government through higher education institutions (HEIs), WDA, and the private sector shall provide capacity building support to manufacturers including TVET. Government will conduct a skills audit to identify the projected number of skilled professionals necessary to enable Rwanda meet her industrialisation targets.
- **Design courses that are focused on the management and technical needs of firms in targeted sectors.**
- **Increase scholarships to international higher learning institutions, focusing on science and technology.** Government will also encourage the return of skilled Rwandan Diaspora to support the Rwanda industrialisation efforts.

C. Improved Access to Finance and Investment

- **Mobilise long term funding for industrial development through BRD.**
- **Develop feasibility studies to investigate the viability of potential investments in selected clusters** and, where necessary, take the lead in providing the required funding.

- **Fast track the development of the Rwanda Capital Market** as a source of long term funding for industries.

D. Trade Facilitation

- Strengthen the effectiveness of Sanitary and Phyto-Sanitary measures (SPS) and Technical Barriers to Trade (TBT) enquiry points and consumer protection systems.
- Promote co-operation on productivity and technical improvements by manufacturers to meet compliance with international standards, including harmonisation with EAC standards.
- Increase efforts at eliminating regional NTBs through the national and regional mechanisms.

E. Technology, Research and Innovation

- Restructure and expand the Institute of Scientific and Technological Research (IRST) to become the Industrial Research and Development Agency (IRDA) to facilitate the transfer of innovative technologies, to carry out industrial research and to stimulate national and international partnerships.
- Establish Appropriate Technology Demonstration Centres (ATDCs) in industrial parks.
- Increase funding to research institutions and higher-level academia to support desirable targeted industrial sectors.

F. Raw Materials and Industrial Inputs

- **Conduct or update value chain analyses for targeted clusters** as a key component of cluster strategic plans to investigate ways in which supply linkages can be improved both domestically and for imported inputs. This should include study of international value chains;
- Undertake a review of the EAC Common External Tariff (CET) and **develop negotiation positions to reduce tariffs on key inputs** not produced competitively domestically, particularly those on the sensitive items list;

G. Regulatory Environment

- Provide incentive packages that are time bound and based on a monitoring and performance measurement system for targeted viable industries;
- Update the 1956 Law on Industrial Development;
- **Promote the development of cottage industries** through appropriate technologies and other business development support;
- Establish corporate governance rules to guide businesses;
- Conduct Regulatory Impact Assessments before putting in place regulations affecting business.

H. Environmental Sustainability

- **Enforce the establishment of industry specific waste management systems** – Encourage industries to locate in industrial parks and special economic zones to benefit from centralised industrial waste management systems;
- **Through the use of PPPs, construct factory and warehouse facilities in the SEZ** for the relocation of industries in the Gikondo industrial area that has been gazetted as a marshland;
- **Sensitize Industrialists and enforce cleaner production systems in all industries;**
- Allow the use of biodegradable plastics in industrial applications within the framework of appropriate standards, and promote recycling systems in industry.

6. IMPLEMENTATION PLAN

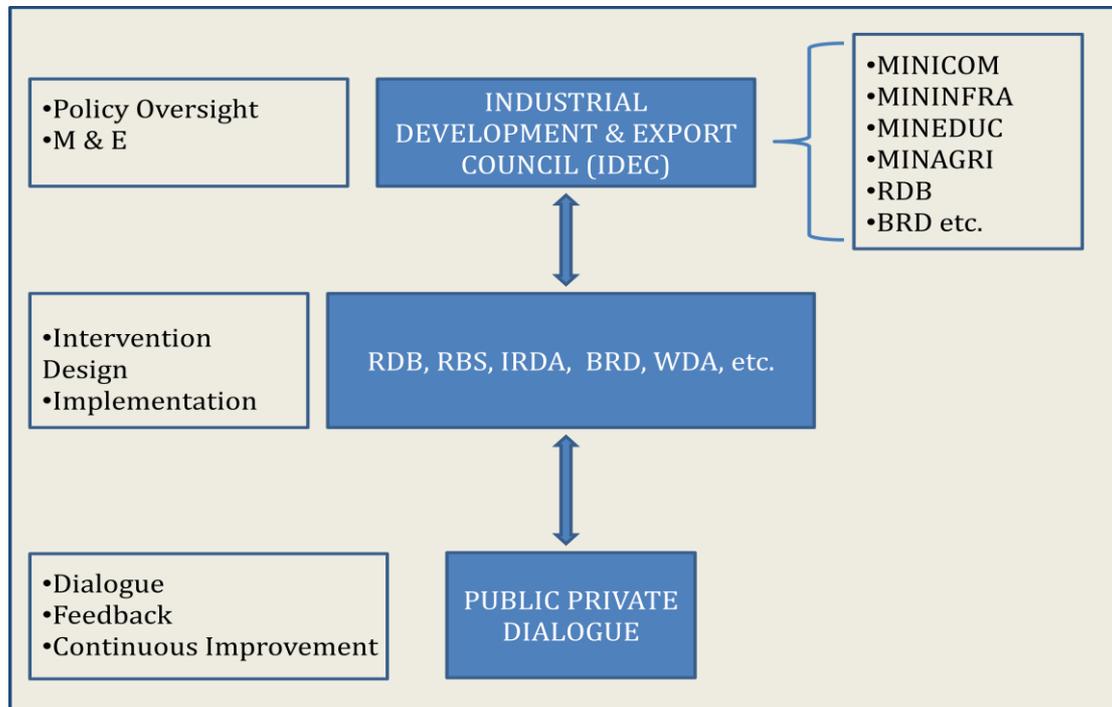
The Policy will ensure high-level ownership and institutional co-ordination to promote industrial development and diversification.

Industrial policy entails the interaction between Government and the private sector. Dialogue is extremely important to ensure that the private sector's knowledge of its own challenges reaches policy makers. It is also of paramount importance that industrial policy has clear lines of accountability to a high-level of political ownership. This is also important because it will add strength to implementation and demonstrate that there is political will behind the process of industrial development and diversification.

The preferred option for the Rwanda Industrial Policy is the creation of an Industrial Development and Export diversification Council (IDEC). *This body will be chaired by the Ministry of Trade and Industry, with RDB providing the Secretariat.* Membership will include a wide range of other institutions involved in industrial development and the body will draw on consultations through forums such as the Public Private Dialogue (PPD). IDEC's activity shall include the monitoring of implementation of cluster strategies and the design of new

interventions in financing, infrastructure, skills, trade facilitation and the regulatory environment. Figure 5 illustrates the configuration of the institutional framework.

Figure 5: Framework for implementing the Industrial Policy



The key actions for the setting up and maintaining of this IDEC will be as follows:

- **Policy oversight** - Organise meetings at technical level every two months for policy implementation and meetings of the highest-level decision makers taking place twice a year. In addition to the IDEC, there is a need for a forum whereby private sector issues can be raised. This will be through the Public Private Dialogue (PPD). This will be complemented by an annual private sector conference where major issues will be presented and discussed, as well as more locally-oriented forums, which could be discussed through the District Joint Action Development in cooperation with the PSF.
- **Monitoring & evaluation** - Carry out annual review of policy implementation. The annual review will be prepared for the annual Kivu Retreat. Establish an annual private sector conference as well as sector-specific consultation including the Private Sector Development Cluster forum, at the RDB and MINICOM level. Put in place mechanisms for regularly receiving updated data on industrial performance – from MINICOM with the collaboration of the UNIDO Industrial Observatory. Link performance measures to incentive packages offered to private sector firms

- **Budgeting** - Provide budget oversight of implementing institutions and allocations towards industrial policy implementation. Prepare a joint budget for Industrial Development and Export diversification efforts in the medium term.

7. STAKEHOLDER VIEWS

Stakeholders have been widely consulted in the development of the Rwanda Industrial Policy. A meeting was held in MINICOM on the 20th August 2010. The Workshop was at the level of technicians from key stakeholders. It aimed to provide the opportunity for discussing the finalisation and implementation of the Rwanda Industrial Policy.

Another high level stakeholder meeting (IDP National Steering Committee) was held at Hotel LAICO which included Ministers, Permanent secretaries, all Governors, all Mayors and Executive Secretaries, Director Generals and CEOs on 12th November 2010

In addition, an inter-ministerial meeting was held on the 24th of March 2011 at the Prime Minister's office where the Industrial Policy was discussed and key recommendations were made towards the strengthening of the Policy.

8. FINANCIAL IMPLICATIONS

The financial implications of this policy are complex since they involve an array of institutions and a number of measures that are already accounted for in MTEFs, as well as new measures. The details of this breakdown are set out in the Implementation Matrix. The total budget is estimated at USD 29.51 million over a five-year period (2011-15). This figure is subject to revision based on periodic (annual or bi-annual) reviews by IDEC and sectoral agencies.

It is important to note however that this excludes investments in infrastructure, as well as large sector strategic investments that will be developed by MININFRA and the RDB Strategic Investment Unit respectively.

Source of Funding:

The Government of Rwanda will provide the main source of direct funding for the Industrial Policy. However private investment will be leveraged as an essential driver of industrial development.

Other sources of funding can include:

- i. Financing and technical assistance from Development Partners, e.g. The World Bank Group, EU, AfDB, One UN and additional multilateral and bilateral partners;

- ii. The Rwanda Development Bank and commercial banks. Banks will prioritise the industrial sector by facilitating financing of viable industries. This can be achieved through the development of suitable financing mechanisms;
- iii. Borrowing from international financial markets;
- iv. Domestic capital markets, for instance through the issuance of bonds and other securities;
- v. Other means of support from Development Partners and global industry, such as internship and apprenticeship schemes.

9. LEGAL IMPLICATIONS

The Rwanda Industrial Policy will require:

- A review of the existing Industrial Law (1956) in Rwanda. This review should ensure that the Law is compatible with the aims of this policy;
- The new mandate and restructuring of the IRST into the IRDA will require a new bill and law to be passed;
- Undertake a review of the Investment Code to adapt incentive mechanisms for target growth sectors.

10. IMPACT ON BUSINESS

Business is the central focus of the Industrial Policy. The Policy aims to expand the horizons of the private sector in terms of new sectors for increasing value addition and growth. Business as a whole will benefit from efforts to remove co-ordination failures by investing in key infrastructure such as special economic zones, roads improvements and waste disposal.

The private sector will be widely and regularly consulted during the policy implementation stages. This input will be used to identify market failures and to evaluate the efficiency and effectiveness of policy implementation to address these failures. This is particularly important where businesses are engaged in innovative and new activities, where they are discovering comparative advantage. Through this process, businesses will receive support from Government, although incentives will be time-bound. Where businesses fail, the Government will support them if they are likely to prove competitive in the longer-term.

11. IMPACT ON EQUALITY, UNITY AND RECONCILIATION

Industrial development impacts social goals of equality, unity and reconciliation through two channels: SME development and job creation. In line with Vision 2020, the Industrial Policy is designed to achieve off-farm employment totalling 1.4 million people by 2020, which will require the creation of 140,000 new jobs per annum. The welfare gains for the Rwandan

people arising from job growth places the country on a path for sustainable and equitable social development.

12. HANDLING PLAN

Following adoption by Cabinet, the Industrial Policy will be disseminated to the private sector. There will be an inaugural meeting of the Industrial Development and Export Council (IDEC) upon the adoption of both the Industrial Policy and National Export Strategy. This body will be the key institution for overseeing implementation of the Industrial Policy at the national level.

5-YEAR IMPLEMENTATION MATRIX

INCREASE DOMESTIC PRODUCTION FOR LOCAL CONSUMPTION AND EXPORT COMPETITIVENESS					
AREA OF INTERVENTION	POLICY ACTIONS	PERFORMANCE INDICATOR	RESPONSIBLE AGENCIES	TIMELINE	BUDGET (USD)
INFRASTRUCTURE	Increase government investment in the energy sector with a target to bring tariffs of electricity down.	Tariffs for industrial usage down to \$0.15 per kWh and even further to the regional average of 0.10-0.12 \$/kWh.	MININFRA, MINICOM, RDB PSF	2011-2015	TBD
	Ensure that the oil pipeline from Kenya to Rwanda is expedited so that fuel costs can be reduced.	The Kenya-Rwanda oil pipeline having reached Kigali and fuel costs reduced	MININFRA, MINICOM, RDB PSF	2011-2015	TBD
	Continue the search for alternative sources of energy for industrial use	Alternative sources of energy being used in industries	MININFRA, MINICOM, RDB PSF	2011-2015	TBD
	Allocate land for industries, develop industrial parks and SEZs	Kigali SEZ Operational, number of firms in SEZs and Industrial Parks	MINICOM, RDB, MINIFRA	2011-2013	TBD
	Improve district road programmes targeting feeder roads connecting farms and food processing hubs.	50% of District feeder roads from farms to processing factories and markets in good condition during all seasons	MININFRA, MINICOM, RDB	2011-2015	TBD
HUMAN RESOURCES	Provide capacity building support to manufacturers including TVET	Clear capacity building programme for manufacturing firms ready including improved TVET	WDA, MINEDUC, RDB, HEIs	2011-15	1.0m
	Provide incentives to the best students to study science and technology subjects and increase scholarships to international higher learning institutions.	-Scholarships availed to students studying the needed and most relevant science subjects given priority	MINEDUC, PSF	2011-2015	6.0m
	Design courses that are focused on the management and technical needs of firms in targeted sectors	Curricula and short courses relevant to the needs of targeted firms in place	WDA, MINEDUC, RDB, HEIs	2011-12	0.2m

	Ensure that work placements and student industry internships are the norm for university students.	Internships designed and focused to build capacity relevant to industries implemented	WDA, MINEDUC, RDB/HCID, HEIs, PSF	2011-15	0.3m
	Look into the feasibility of providing further tax incentives for on the job training	Firms that provide on the job training getting a tax incentive with evidence reports.	MINECOFIN, WDA, MINEDUC, RDB/HCID, HEIs, PSF	2011-2013	0
	Conduct a skills audit to identify the projected number of skilled professionals necessary to enable Rwanda meet her industrialization targets.	Audit Report Published	RDB/HCID, MIFOTRA	2011-12	0.3m
	Undertake a review of the Investment Code to adapt incentive mechanisms for target growth areas.	Review of the Investment Code carried out	RDB, MINICOM	2011	0.03m
	Develop and update Cluster Strategic Plans for – building materials, ICT, leather and leather products, textiles, pharmaceuticals, bio-plastics, minerals processing, dairy products, agro-processing, and tourism & culture. Develop feasibility studies for government investment in specific sectors	Cluster Strategic Plans developed and adopted and used to get investors	RDB, MINAGRI, PSF, MINICOM	2011-2012	0.25m
	Government to make strategic investments in the selected target clusters	Level of investment in the key strategic clusters. Investment reports.	MINICOM, RDB	2011-2015	TBD
	Mobilise long term funding for industrial development through BRD.	Loans granted to industries	BRD, RDB	2011-2015	TBD
	Fast track the development of the Rwanda Capital Market as a source of long term funding for industries.	Number of firms accessing funds from the capital market	CMAC, RDB	2011-2015	TBD
TRADE FACILITATION	Initiate a joint forum among EAC partner states to establish an investment plan to develop the infrastructure of the Northern and Central Corridors.	Infrastructure plan and Investment plan for EAC ready for implementation	MINEAC, MINICOM, RDB, PSF, MININFRA	2012	0
	Increase efforts at eliminating regional NTBs through the	Reduction in NTBs	MINEAC, RDB,PSF,MINICOM,	2011-2015	0

	national and regional mechanisms.		MININFRA		
	Promote co-operation between the Rwanda Bureau of Standards (RBS) and manufacturers, particularly in food processing sectors.	Greater cooperation and working relationships well established between RBS and agro-processing firms	RBS, MINICOM, RDB MINAGRI, PSF	2011-2015	0.3m
	Strengthen the effectiveness of Sanitary and Phyto-Sanitary measures (SPS) and Technical Barriers to Trade (TBT) enquiry points and consumer protection systems.	SPS and TBT effectiveness strengthened	RBS, MINICOM, RDB MINAGRI, PSF	2011-2015	0.1m
	Promote co-operation on productivity and technical improvements by manufacturers to meet compliance with international standards.	Compliance with international standards by a greater proportion of Rwandan firms	RBS, MINICOM, RDB MINAGRI, PSF	2011-12	0.08m
TECHNOLOGY, RESEARCH AND INNOVATION	Increase funding to research institutions and higher-level academia to lead research into requirements for desirable targeted industrial sectors.	Percentage of budget for research	MINEDUC, IRST PSF, MINICOM	2011-15	TBD
	Restructure and expand the Institute of Scientific and Technological Research (IRST) to become the Industrial Research and Development Agency (IRDA) to facilitate the transfer of innovative technologies, to carry out industrial research and to stimulate national and international partnerships.	IRDA established, equipped and supported with skilled personnel and budget.	MINEDUC, IRST PSF, MINICOM	2011-2012	TBD
	IRST/IRDA enables partnerships between Rwandan firms and international firms and institutions in providing technological solutions.	IRST serving a greater role in providing technological solutions to firms. Number of regional and international collaborating institutions	IRST, MINICOM, RDB	2011 - 2015	0
	Put in place tax incentives for research and development (R&D) expenditure	Incentives for research and development expenditure proposed and approved	MINECOFIN, IRST, MINICOM, RDB, PSF	2011-2012	TBD
	Establish Technology Demonstration Centres (TDCs) in industrial parks.	Technology Development Demonstration Centres established in all industrial parks	IRST, MINICOM, RDB	2011-2012	1m

	Implement NICI Plan III business related applications of ICT.	Implementation of NICI III	RDB	2011-2012	TBD
	Fast-track the implementation of the recommendations produced in the 2008 World Bank report 'Building Science, Technology and Innovation Capacity in Rwanda'	Implementation of World Bank study	MINICOM, IRST, RDB	2011-2012	TBD
REGULATORY ENVIRONMENT	Provide incentive packages that are time bound and based on a monitoring and performance measurement system for targeted viable industries.	Performance report on targeted viable industries available and incentive packages provided to them	MINICOM, RDB PSF, MINECOFIN, RRA	2011-2020	TBD
	Update the 1956 Law on Industrial Development.	New law enacted	MINICOM, MINIJUST	2012	0
	Promote the development of cottage industries through appropriate technologies and other business development support.	Increase in number of cottage industries	MINICOM, MINALOC, RDB, Districts	2011-2015	3m
	Enforce corporate governance rules to guide businesses	Corporate governance rules enforced	RDB/Registrar General's Office, PSF	2011-12	TBD
	Conduct Regulatory Impact Assessments before putting in place regulations affecting businesses	Number of RIAs conducted	All Institutions	2011-15	TBD
RAW MATERIALS AND INDUSTRIAL INPUTS	Conduct or update value chain analyses for targeted clusters as a key component of cluster strategic plans	Value chain analyses conducted	RDB, MINAGRI, PSF, MINICOM	2011-2012	[Within cluster strategies]
	Undertake a review of the EAC Common External Tariff (CET) and develop negotiation positions to reduce tariffs on key inputs not produced competitively domestically, particularly those on the sensitive items list;	Negotiation positions developed	MINICOM, MINEAC	2011	0

ENVIRONMENTAL SUSTAINABILITY	Ensure regulation and support is in place for industries to deal and treat specific wastes.	90 per cent of industrial firms with waste treatment in place	MININFRA	2011-2012	0.5m
	Enforce the establishment of industry specific waste management systems – Encourage industries to locate in industrial parks and special economic zones to benefit from centralised industrial waste management systems.	Number of firms utilising waste management systems	MININFRA, MINICOM, RDB PSF, REMA	2011-2014	TBD
	Through the use of PPPs, construct factory and warehouse facilities in the SEZ for the relocation of industries in the Gikondo industrial area that has been gazetted as a marshland.	Number of industries relocated	MINICOM, RDB, MININFRA	2011 - 2013	16m
	Sensitize Industrialists and enforce cleaner production systems in all industries	Number of industries using cleaner production systems.	RDB, MINICOM, PSF	2011-2012	0.2m
	Allow the use of biodegradable plastics in industrial applications within the framework of appropriate standards, and promote recycling systems in industry	Number of industries using biodegradable plastics and recycling systems	REMA, MINICOM, MINELA	2011-2015	TBD
SUB-TOTAL					USD 29.26M

ENSURE HIGH-LEVEL OWNERSHIP AND INSTITUTIONAL CO-ORDINATION TO PROMOTE INDUSTRIAL DEVELOPMENT AND DIVERSIFICATION					
KEY STRATEGY	DETAILED ACTIONS	INDICATOR	RESPONSIBILITY	TIMELINE	BUDGET (RWF)
Put in place the institutional framework for the implementation of the Industrial Policy	Set up the high-level Industrial Development and Export Council (IDEC) as a decision-making forum for the implementation of industrial policy.	IDEC set up and operational with a wide membership including private sector participation	MINICOM, RDB	2011	0

	Organise meetings at technical level every two months for policy implementation and meetings of the highest-level decision makers taking place twice a year.	Number of meetings held	RDB, MINICOM	2011	0
	Carry out annual review of policy implementation. The annual review should be prepared for the annual Kivu Retreat.	Annual report to Kivu on Industrial policy implementation takes place.	RDB, MINICOM	2011-15	0
Strengthen consultation with the private sector	Establish an annual private sector conference as well as sector-specific consultation including the Private Sector Development Cluster forum, at the RDB and MINICOM level.	Annual private sector conference held	MINICOM, RDB, PSF	2011-2015	0.25m
		Sector specific consultations carried out as a sub-set of IDEC's work	RDB, MINICOM, PSF	2011-2015	0
Strengthen data collection and monitoring activity	Put in place mechanisms for regularly receiving updated data on industrial performance – from MINICOM with the collaboration of the UNIDO Industrial Observatory.	System in place capturing up to date information on industrial performance – feeding into IDEC forum at beginning of meetings	MINICOM, RDB MINAGRI, PSF	2011-2015	0
Ensure the effective implementation of the Industrial policy	Provide budget oversight of implementing institutions and allocations towards industrial policy implementation.	Annual monitoring report including budget information – feeding in to the JSR process (2011 and ongoing)	MINICOM, RDB	2011-12	0
	Prepare a joint budget for Industrial Development and Export efforts in the medium term.	Joint Industrial Development and Export budget through sector wide approach (SWAP)	MINICOM, RDB	2012	0
SUB-TOTAL					USD 0.25M
TOTAL [Excluding Infrastructure and Sector-Specific Investments]					USD 29.51M