# RWANDA STANDARDS BOARD Quality Management System Guide















#### **Foreword from the Director General**



Dear Readers,

Welcome to the Rwanda Standards Board Quality Management System Guide (QMS Guide).

All over the world, the quality of provided service is a key factor in trade and industrial promotion to boost the social and economic growth. Currently in many countries more emphasis is on the integration of management systems' standards to achieve the target of attaining sustainable development.

When talking about service delivery, we automatically think about the Quality Management System, became intenationally which powerful tool in attaining an improved service delivery by implementing ISO 9001. which requirement for provides Management System. All global enterprises, government and society at large scale strive to share in the gains, efficiency and effectiveness offered by ISO 9001.

ISO 9001 gives requirements for quality management systems and is among ISO's mos well known and widely implemented International Standard. It is used in about 183 countries by enterprises both large, medium and small, in public and private sector, by manufacturers and service providers, in all sectors of

activity to achieve objectives such as the following:

- Establishing a framework for improvement and customer satisfaction.
- Providing assurance about quality in external provider (supplier) customer relationships,
- Harmonizing quality requirements in sectors and areas of activity,
- Qualifying external providers in global supply chains,
- Providing technical support for regulators,
- Giving organizations in developing countries and transition economies a framework for participating in global supply chains, export trade and business process outsourcing,
- Assisting in the economic progress of developing countries and transition economies,
- Transferring good managerial practice,
- Encouraging the rise of services.

RSB provides this guide to support all ISO 9001 implementers and potential implementers for easier understanding of ISO 9001 and its benefits.

RSB has hope that this will enable enterprises both large. medium and small, public and private sector, manufacturers and service providers, in all sectors of activity to draw the maximum benefits from ISO 9001, an International Standard that has become an essential tool of the world economy.

#### **Raymond MURENZI**

**Director General** 

#### ISO 9001, a Standard in a Family of Standards

The ISO 9000 family international quality management quidelines standards and has earned global reputation establishing basis effective and efficient quality management systems.

This family is composed of four standards; ISO 9000, ISO 9001, ISO 9004 and ISO 19011 as explained below:

The ISO 9000 standard provides the fundamentals and vocabulary used in the entire ISO 9000 family of standards. It sets the stage for understanding the basic elements of quality management as described in the ISO standards. ISO 9000 introduces users to the eight Quality Management Principles as well as the use of the process approach to achieve continual improvement (See figure 1)

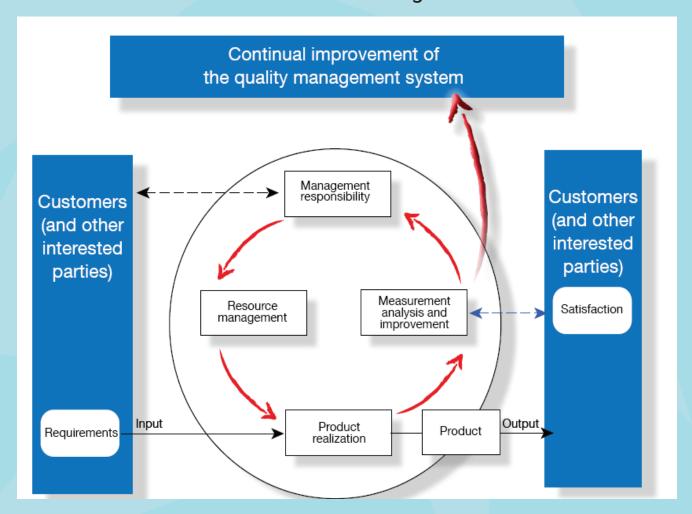


Figure 1: The ISO 9000 Process Approach.

ISO 9001 specifies the basic requirements for a quality management system (QMS) that an organization must fulfil to demonstrate its ability to consistently provide products (which

include services) that enhance customer satisfaction and meet applicable statutory and regulatory requirements.

ISO 9004 gives guidance on a wider range of objectives of a quality

management system than ISO particularly does 9001, in the for long-term managing success of an organization. ISO 9004 is recommended as a guidefor organizations whose top management wishes to extendthebenefitsofISO9001inpursuitof systematic and continual improvement of the organization's overall performance. However, it is not intended for certification or contractual purposes.

ISO 19011 covers the area of auditing quality management systems and enviro mental management systems. lt provides quidance on the audit programmes, the conduct of internal or external audits, and information on auditor competence. ISO 19011 provides an overview of how an audit programme should operate and how management system audits should take place.

#### Why implementing QMS?

The adoption of a QMS is a strategic decision that helps an organization to consistently improve its overall performance and to provide a sound basis for its sustainable development initiatives. Many organizations implement a formal quality management system after finding that their customers (in both the private and public sectors) assurance that the products and

services they are looking to purchase or obtain will meet their requirements for quality.

Those customers are looking for the confidence that can be provided by an organization offering products and services produced under an effective quality management system, such as one conforming to ISO 9001.

A quality management system, on its own, will not necessarily lead to an improvement of work processes or to improvements of your products and services. It will not solve all your problems. It is a means for you to take a more systematic approach to fulfilling your organization's objectives, which in turn should achieve such ISO improvements. 9001 contains requirements for improvement. You can use this approach to ensure that worthwhile and effective cost improvements are being achieved.

#### **QMS** principles

Quality management principles are a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management and the below are seven (7) quality management principles:

#### QMP 1 - Customer focus

#### Rationale and benefits

The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations where an organization attracts and retains the confidence of customers and other interested parties to achieve a sustained success as every aspect of customer interaction provides an opportunity to create more value for the customer.

Therefore, understanding current and future needs of customers and other interested parties contributes to sustained success of the organization.

This will allow an increased customer value, customer satisfaction, customer loyalty, revenue and market share; an enhanced repeat business, reputation of the organization and an expanded customer base.

#### Action that your organization can take

- Recognize direct and indirect customers as those who receive value from the organization.
- Understand customers' current and future needs and expectations.
- Link the organization's objectives to customer needs and expectations.
- Communicate customer needs and expectations throughout the organization.
- Plan, design, develop, produce, deliver and support goods and services to meet customer needs and expectations.
- Measure and monitor customer satisfaction and take appropriate actions.
- Determine and take actions on interested parties' needs and expectations that can affect customer satisfaction.
- Actively manage relationships with customers to achieve sustained success.

#### QMP 2 - Leadership

#### Rationale and benefits

Leaders at all levels establish unity of purpose and direction and create conditions in which people are engaged in achieving the organization's quality objectives where the creation of unity of purpose and direction and engagement of people enable an organization to align its strategies, policies, processes and resources to achieve its objectives.

This permits to achieve an increased effectiveness and efficiency in meeting the organization's quality objectives, a better coordination of the organization's processes, an improved communication between levels and functions of the organization and a development and improvement of the capability of the organization and its people to deliver desired results.

- Communicate the organization's mission, vision, strategy, policies and processes throughout the organization.
- Create and sustain shared values, fairness and ethical models for behaviour at all levels of the organization.
- Establish a culture of trust and integrity.
- Encourage an organization-wide commitment of quality
- Ensure that leaders at all levels are positive examples to people in the organization.
- Provide people with the required resources, training and authority to act with accountability.
- Inspire, encourage and recognize people's contribution.

#### QMP 3 - Engagement of people

#### Rationale and benefits

Competent, empowered and engaged people at all levels throughout the organization are essential to enhance its capability to create and deliver value.

Therefore, to manage an organization effectively and efficiently, it is important to involve all people at all levels and to respect them as individuals.

Recognition, empowerment and enhancement of competence facilitate the engagement of people in achieving the organization's quality objectives.

This allows to achieve an improved underst anding of the organization's quality objectives by people in the organization and increased motivation to achieve them, an enhanced involvement of people in improvement activities, an enhanced personal development, initiatives and creativity, an enhanced people satisfaction, an enhanced trust and collaboration throughout the organization and an increased attention to shared values and culture throughout the organization.

#### Action that your organization can take

- Communicate with people to promote understanding of the importance of their individual contribution.
- Promote collaboration throughout the organization.
- Facilitate open discussion and sharing of knowledge and experience.
- Empower people to determine constraints to performance and to take initiatives without fear.
- Recognize and acknowledge people's contribution, learning and improvement.
- Enable self-evaluation of performance against personal objectives.
- Conduct surveys to assess people's satisfaction, communicate the results, and take appropriate actions.

#### QMP 4 - Process approach

#### Rationale and benefits

The quality management system consists of interrelated processes.

Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system.

The understanding of how results are achieved by this system enables an organization to optimize the system and its performance.

#### This allows:

- Enhanced ability to focus effort on key processes and opportunities for improvement
- Consistent and predictable outcomes through a system of aligned processes
- Optimized performance through effective process management, efficient use of resources, and reduced cross-functional barriers
- Enabling the organization to provide confidence to interested parties as to its consistency, effectiveness and efficiency

- Define objectives of the system and processes necessary to achieve them.
- Establish authority, responsibility and accountability for managing processes.
- Understand the organization's capabilities and determine resource constraints prior to action.
- Determine process interdependencies and analyse the effect of modifications to individual processes on the system as a whole.
- Manage processes and their interrelations as a system to achieve the organization's quality objectives effectively and efficiently.
- Ensure the necessary information is available to operate and improve the processes and to monitor, analyse and evaluate the performance of the overall system.
- Manage risks that can affect outputs of the processes and overall outcomes of the quality management system.

#### QMP 5 - Improvement

#### Rationale and benefits

Successful organizations have an ongoing focus on improvement, which is essential for an organization to maintain current levels of performance, to react to changes in its internal and external conditions and to create new opportunities.

#### Through this, an organization will achieve an:

- Improved process performance, organizational capabilities and customer satisfaction
- Enhanced focus on root-cause investigation and determination, followed by prevention and corrective actions
- Enhanced ability to anticipate and react to internal and external risks and opportunities
- Enhanced consideration of both incremental and breakthrough improvement
- Improved use of learning for improvement
- Enhanced drive for innovation

#### Action that your organization can take

- Promote establishment of improvement objectives at all levels of the organization.
- Educate and train people at all levels on how to apply basic tools/methodologies to achieve improvement objectives.
- Ensure people are competent to successfully promote and complete improvement projects.
- Develop and deploy processes to implement improvement projects throughout the organization.
- Track, review and audit the planning, implementation, completion and results of improvement projects.
- Integrate improvement considerations into the development of new or modified goods services and processes.
- Acknowledges the improvement

#### QMP 6 - Evidence-based decision making

#### Rationale and benefits

Decisions based on the analysis and evaluation of data and information are more likely to produce desired results. Decision-making can be a complex process, and it always involves some uncertainty.

It often involves multiple types and sources of inputs, as well as their interpretation, which can be subjective. It is important to understand cause-and-effect relationships and potential unintended consequences. Facts, evidence and data analysis lead to greater objectivity and confidence in decision-making.

#### This has a positive impact on an:

- Improved decision-making processes
- Improved assessment of process performance and ability to achieve objectives
- Improved operational effectiveness and efficiency
- Increased ability to review, challenge and change opinions and decisions
- Increased ability to demonstrate the effectiveness of past decisions

- Determine measure and monitor key indicators to demonstrate the organization's performance.
- Make all data needed available to the relevant people.
- Ensure that data and information are sufficiently accurate, reliable and secure.
- Analyse and evaluate data and information using suitable methods.
- Ensure people are competent to analyse and evaluate data as needed.
- Make decisions and take actions based on evidence, balanword with experience and intuition.

#### QMP 7 - Relationship management

#### Rationale and benefits

For sustained success, an organization manages its relationships with interested parties, such as suppliers. Interested parties influence the performance of an organization.

Sustained success is more likely to be achieved when the organization manages relationships with all of its interested parties to optimize their impact on its performance. Relationship management with its supplier and partner networks is of particular importance.

#### This allows:

- Enhanced performance of the organization and its interested parties through responding to the opportunities and constraints related to each interested party
- Common understanding of goals and values among interested parties
- Increased capability to create value for interested parties by sharing resources and competence and managing quality-related risks
- A well-managed supply chain that provides a stable flow of goods and services.

- Determine relevant interested parties (such as suppliers, partners, customers, investors, employees, and society as a whole) and their relationship with the organization.
- Determine and prioritize interested party relationships that need to be managed.
- Establish relationships that balance shortterm gains with long-term considerations.
- Pool and share information, expertise and resources with relevant interested parties.
- Measure performance and provide performance feedback to interested parties, as appropriate, to enhance improvement initiatives.
- Establish collaborative development and improvement activities with suppliers, partners and other interested parties.
- Encourage and recognize improvements and achievements by suppliers and partners.

#### **Quality Management System implementation benefits**

An effective implementation of Quality Management System for an organization will not only allow the full compliance with ISO 9001 requirements, but also will lead to achieve the below highlighted benefits for the implementing organization:

- Customer satisfaction:
  - Attaining customer satisfaction is a great achievement for the organization that will assist in capturing the market, or increase the market share.
- Consistent products: Enhance the effectiveness by improvement in the resources and time usage.
- Increase in production: Improved production is achieved due to proper evaluation techniques being applied, and better training of the employees.
- Less rework: Quality is measured continuously due to the appropri-

- ate procedures that ensure immediate corrective actions on occurrence of defects. Reduction increases customer confidence, and increase in business.
- Increased financial performance:
   Investment in quality management systems are rewarded by improved financial performance.
- Increase in market share, reputation and capability to react to industry opportunities.
- Improvement in internal communications: encourages frequent interaction between project departments or groups, and promotes harmony. All these factors contribute to improved quality, and customer satisfaction.

#### **Success stories**

Locally, manufacturers and service providers become progressively aware of how the Quality Management System is a booster of their productivity, and can enhance improvement of their day-to-day operations in a consistent manner.

Below are the four selected companies, amongst

others, with registered success in the journey of quality management implementation towards improvement of their processes, and we believe sharing their success stories inspires your devotion to implementing Quality Management System.

#### **QMS Success at KIM Univeristy**



Prof. Peter John Opio Vice Chancellor

KIM University is the first University in Rwanda that has implemented a Quality Management System (QMS) according to the standard of ISO 9001:2015.

The QMS covers all the University's academic and support operations. The QMS ensures that the academic and support processes of the University serve the best interests of its clientele, students in particular; and are responsive to the requirements of its various stakeholders. To be able to sustain this, the QMS is supported by continuous improvement mechanisms like monitoring customer feedback, departmental trimester per-

formance evaluation, internal audits and management review. In this regard KIM University is in to process of implementation of ISO 9001: 2015 QMS since September 2015 and striving for its certification.

# Reasons for implementing ISO 9001:2015

Institutes of Higher Learning (IHL) like KIM University, implement ISO 9001:2015 QMS for several reasons. First, it can be a means of improving internal processes and providing quality services. Secondly, ISO certification is a mark of quality that is likely to increase institutional brand image, both locally and internationally. KIM University therefore views QMS certification as an opportunity to improve internal processes and systems rather than merely seek to get a certificate on the wall.

Specifically it is anticipated that through implementation of ISO 9001:2015, KIM University will;

Better control and manage

- universityinternal activities (both academic and non academic)
- Improve understanding and implementation of university policies and procedures
- Improve documentation & knowledge management
- Improve compliance with regulators'requirements at both national and regional requirements (High Education Council-HEC and Inter-University Council of East Africa - IUCEA respectively).
- Improve a two way communication between university and students and other interested parties (both internal & external) leading to better customer satisfaction
- Monitoring of processes by all staff members and not only by the Director of Quality Assurance
- Enhance evaluation and selection of suppliers / external service providers

# Potential benefits after certification of ISO 9001:2015

It is anticipated that following ISO 9001:2015 certification, there will be

- Enhanced level of managing processes in the university
- Better set of activities inside the university, accurate definition of authority and responsibility
- Clearly identified the needs and expectations of our customers v<sup>\*</sup>

- students and other stakeholders (both internal and external)
- In addition, ensure Quality is an all-envisaged driving force, setting the tone for every player and driving every activity at KIM; inspire institution-wide commitment
- ISO 9001:2015 QMS principle of process approach provides that all activities must be planned before execution and checked for effectiveness. In this regard by implementing QMS will increase proactive behaviour of employees who will have planned their activities in the first hand
- Enhance student engagement, generate greater involvement by students and other stakeholders, especially staff and management
- The benefit that we will accrue from the above will effectively lead to better compliance with the regulatory provisions of High Education Council (HEC) andachieve better 'fit' with industry wide requirements
- In the long run champion QMS in the education sector in Rwanda and the Great Lakes region as a whole

#### Challenges faced

While the most apparent challenges in QMS implementing institutions is bureaucracy, which can lead to reduced flexibility and clear understanding of ISO 9001:2015 requirements for their implementation in the education sector.

KIM University being the first Higher Institution of Learning (HIL) in Rwanda to implement QMS, there was no peer to learn from. In addition limited resources (financial, skilled manpower and time) to implement QMS were also a challenge.

Despite these challenges, thanks to the commitment of management and staff we so far successfully completed stage one certification audit by RSB and are set for final stage of audit leading to certification.

#### Message for new starters

KIM University didn't go for implementation of QMS overnight nor are we seeking certification for sake of it. We have gone through a long process of QMS implementation. Any new starter has to understand that QMS is a process and implementation is not one off activity. Quality is not achieved by chance nor is it achieved once, it a matter of continuous commitment and improvement. In conclusion organization ought to establish systems that work for them rather than working for the systems. "No one size fits all"

#### **Ruliba Clays and the QMS Journey**



Michel Kayihura Makolo Managing Director

If Ruliba Clays Ltd could be described in one word, that word would be "Quality". The company which is Rwanda's leading manufacturer of clay based construction materials, has distinguished itself for its top quality systems, procedures, processes services and products. Our QMS is made of a set of policies, processes and procedures required for planning and execution of work in our company.



The company offers a wide range of quality products for all stages of construction from walling to roofing and flooring and other accessories like ventilators, and other customized products.

Among Ruliba's products are bricks, blocks, partitioning blocks, facing slips, and coping blocks; Mangalore tiles, Portuguese tiles, Roman tiles as well as pavers, floor tiles and Maxpans.

At Ruliba Clays products meet the highest quality requirements and bear the "S" Mark, an international assurance of quality and safety.

Ruliba Clays Ltd was the first Rwandan industry to be ISO 9001 QMS certified by the Rwanda Standards Board.

There were several push factors that led us to seek QMS implementation and ISO 9001 certification, these included:

Some customers especially the foreign developers were asking for certified products, this gave us the challenge on proving that our products are indeed quality products. Also with the need of achieving higher sales targets we had to find ways to increase efficiency and effectiveness in our company. Finally, with competition in mind we wanted to improve our product quality and services to be ahead of our competition.

Now that we are certified, Quality assurance of our products starts from the quarries where we get our raw materials, through the plant to productdelivery. Wearetherefore stricton quality checks, we have a robust quality control team that monitors every detail so that nothing goes out of the plant with quality deficiencies. Apart from in-house quality checks, we send our products to other compentent laboratories within the country and within the region.

It is important to note that the journeytocertification was not averyeasy one. Like other organizations that have dared to take up the challenge, we had some challenges, for example we had to carry out investiment in new production equipment, a laboratory with testing equipment and these required monetary resources. There was a skills gap in the organization especially in the technical area which was coupled with a poor mind set which was a hinderance to embrace change.

The above challenges were addressed thanks to the full support and comittment of the top management and the Board of Directors. The success was attained due to full involvement and participation of all employees of Ruliba Clays Ltd.

The benefits for implementing the Quality Management system Ruliba are numerous that can not be over looked. The key benefits include; Improved quality of **products**: We were able reduce the number of product returns from about 0.5% to below 0.1%. Reduction in waste: The waste for product breakage reduced from 5% to below 3%. Reduction in time loss: The time lost on machinery breakdown reduced from 2 major breakdowns per week to only 1 major breakdown per 3 months on average. Customer satisfaction: The time to respond to customer complaints reduced from 2 weeks to 2 days. Increased production: Productivity increased from 50 tons per day to 180 tons of finished products within 2 years. Workers' safety: The injuries of workers reduced from 3 major inuries weekly to only 1 major injury in 2 months. **Product certification**: All our main products have been certified with the RSB Quality mark. **Improved sales**: We have realized an increase in our sales and also introduced new products through research. **Employee retention**: Turn-over of workers was sharply reduced

Overall after attaining certification in 2015, we have attained leverage on the market and we have been able to export our products in East and Central Africa dur to the superiority of the quality of our products. Certification has boosted our brand recognition and enlarged our market reach.



Lastly, a word to those organizations planning to implement a QMS, you should know that a QMS will integrate the various internal processes within your organization and intends to provide a process approach for project execution. A Process Based QMS will enable your organizations to identify, measure, control and improve the various core business processes that will ultimately lead to improved business performance. Achieve greater consistency in the activities involved in providing products or services. QMS will help you reduce expensive mistakes, Increase efficiency by improving use of time and resources. It will also Improve customer satisfaction and Market your business more effectively.

#### **COMRIGHT Ltd**



GASHUGI Jean Pierre
Managing Director

We decided to implement QMS, just because we wanted to meet the requirement of our clients and also to improve the quality of our services, so that our customers can have confidence that our services are safe, reliable and of good quality.

#### What were the faced challenges?

- To ensure that the processes are understood by employees,
- To ensure that top management understood the requirements of ISO 9001:2015 standard and behave in such a way that these terms are met
- There tends to be rumors among the employees as of why QMS is being implemented that it is to reduce the number of employees.

# What were the benefits after implementation/after being certified against ISO 9001?

There are many benefits;

- we are now able to meet our customer requirement,
- We are getting more customers,
- We can now understand and describe our process
- We have reduce waste and save the money
- Empowering our employees to be more professional staffs through Quality objective and job description, procedures and work instructions.

#### Message for new starters

Dear New starters, it may seem too difficult at first, but the implementation of QMs according to ISO 9001 will help you to describe, understand and communicate your company processes for better management and control of your business and company will keep focusing on its goals.

#### Experience Sharing on Implimentation of ISO 9001:2015 at Master Steel Ltd



Mukooli Denis Tonny.
Plant Manager and Quality Management
Systems Coordinator.

#### **Company brief history**

We are located at Gahanga sector, Kicukiro district in Kigali.

The organisation was established in 2005 under the license of Rwanda Development Board. We started operation in July 2007 at Gatenga with a labour force of 30 workers. We later expanded and shifted our operations to Gahanga. The organisation now has a team of 256 employees.

From a humble beginning, Master Steel is today among the leading quality steel construction materials in East Africa and a market leader in Rwanda.

We specialize in production of products like roofing sheets, hollow sections, open sections, wire nails, MS plates, and many others in that category. Most of our products are certified by RSB.

Our annual sales turnover stands at 74000 metric tons for both domestic and export market. Our strength is encapsulated in using exceptional raw materials from ISO: 9001 certified organizations, well trained and skilled manpower and modern technology.

At present the organization is implementing QMS and has applied for certification.

# Why Master Steel decided to implement QMS.

- Improving domestic market share and stimulating export market.
- Improving plant reliability.
- Minimize variation in the manufacturing process
- Increasing efficiency in operational processes to yield continuous revenue growth.
- Achieve international quality recognition.
- To improve the following:
  - Employee motivation and job satisfaction
  - Optimum equipment effectiveness
  - Process yield by reducing waste
  - Evaluation and selection of suppliers
  - Customer retention and customer satisfaction
  - Capacity utilization and reduce break even period and investment pay back period.

# Challenges faced during implementation of QMS

- Parallel routine assignments given to the targeted implementation group stagnated progress on several occasions.
- Language problems created double work especially at a time of implementing a quality policy and some standard operating procedures.

- Introduction of ERP system created conflicting interests amongst the management team.
- Reduced interest by some members due to laborious documentation and record keeping.
- Constraints arising from complex technical terminology in the standard during training of the shop floor workers
- Relating the clauses in the standard with daily operations and making it part of life at work.

# Benefits to the organization after implementation of QMS

- Reduction in scrap percentage by 0.8%
- Reduction in operating costs by 12%
- Brought down slow moving product stock by 10%
- Increased the market share by 10%
- Improvement in optimum equipment effectiveness by 8%
- Reduced labour turnover by 20%
- Improved plant reliability by 18%

#### **Message to QMS beginners**

QMS should be seen as a holistic management tool that aids business Excellence in planning, development and continual improvement. It is a framework of a business notion that captures, preserves, and disseminates business knowledge.

For organization to be an effective in truly implementing QMS each component of the organization must work together in harmony, recognizing every person and every activity all at levels of business management, leadership and operations. Above all, implementation of QMS requires a clear road map agreeable across the entire organization.

Message from Rwanda Standards Board to QMS implementers and potential implementers

"In simple words, do not work for or drive the system; rather let the system drive you and work for you!"



The system is working for you

►The system is working for you (the system is fully integrated along your processes and eases your operations).



You are working for the system

► You are working for the system (the system is aside to your operations and looks as an additional burden.)



#### **RWANDA STANDARDS BOARD QUALITY MARKS**











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**Environmental Management System** 

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