CHUKA UNIVERSITY

ISO 9001:2008 INTERNATIONAL STANDARD

QUALITY MANUAL
(CU/QMS/QM/01)

DOCUMENT REVIEW SHEET

	Name & Signature	Position	Date
Prepared by		**ISO Core Team**	**25.6.2012**
Reviewed by	**Prof. D. K. Isutsa**	**Management Representative**	**03.3.2014**
Approved by	**Prof. E. N. Njoka**	**Vice-Chancellor**	**24.3.2014**

PREAMBLE

This is a Quality Manual (QM) for Chuka University (CU). It describes the Quality Management System to ensure that CU provides quality products to its customers.

The reproduction or distribution in part or as a whole of this Quality Manual is only permitted with express authority of the Management Representative (M.R.) or the Vice-Chancellor.

This Quality Manual is intended for use within CU. However, it may be given to any person(s) as interested party/parties to explain CU institution and processes to such person(s), on grounds of mutual trust. Such a document is deemed and stamped uncontrolled.

Amendment Record

This Quality Manual is reviewed regularly to ensure relevance to the systems and processes that it defines. A record of contextual additions and/or deletions is given in Table 1 below:

Table 1. Amendment record

Amendment Date	Issue No. & Revision No.	Page No.	Context	Name of identifier	Revised by MR	Approved By
1.3.2013	02 and 00	ALL	Header: Inserted new logo, deleted QMS, changed issue date to 25.3.2013, Changed Document title to: Quality Manual	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	ALL	Changed Chuka University College to Chuka University everywhere it exists	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	ALL	Changed CUC to CU	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	ALL	Changed QMR to MR everywhere it existed	Auditor	MR	Vice-Chancellor
1.3.2013	02 and 00	ALL	Changed Principal to Vice-Chancellor everywhere it existed	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	ALL and 18	Replaced Quality Manag-ement Representative with Management Representative in footers	Auditor	MR	Vice-Chancellor
1.3.2013	02 and 00	8	Inserted new Philosophy	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	9	Inserted new mandates	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	10	Clarified Scope of ISO Certification	Auditor	MR	Vice-Chancellor
1.3.2013	02 and 00	33	Replaced Academic Board (ACAB) with Senate	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	33	Added MR to the organogram. Presently the MR is the DVC (AA)	Auditor	MR	Vice-Chancellor
1.3.2013	02 and 00	33	Changed Principal to Vice-Chancellor	Prof. Isutsa	MR	Vice-Chancellor
1.3.2013	02 and 00	34	Added list of records required by this International Standard	Prof. Isutsa	MR	Vice-Chancellor
30.1.2014	03 and 00	29	Corrected CU/GOP/IA/03			
30.1.2014	03 and 00	31	Corrected CU/GOP/CA/05			
30.1.2014	03 and 00	31	Corrected CU/GOP/PA/06			

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DISTRIBUTION OF THE QUALITY MANUAL

This Quality Manual has been issued to all Chuka University Heads of Departments (HODs), who are required to make it available to all staff under their supervision up to grade C/D through recorded lending/borrowing.

This Quality Manual is also available on the CU intranet server, and on the **CU website (www.chuka.ac.ke).**

All printed copies of this Quality Manual are deemed "Uncontrolled", unless stamped "Controlled" and distributed to the following:

- Vice-Chancellor
- Deputy Vice-Chancellors
- Registrars
- Deans
- Directors
- Management Representative (M.R.)/Assistant M.R.s
- Chair of Departments/Heads of Departments
- Heads of Sections
- ISO Steering Committee (Core Team/Champions/Secretariat)
- QMS Internal Auditors

INSTITUTIONAL PROFILE

Chuka University (CU) started as Egerton University Eastern Campus College, Chuka. Eastern Campus College of Egerton University was founded on 27th September, 2004 by Egerton University Council to give people in eastern region and Kenya at large access to high quality and affordable University education. This was after the local community donated 550 acres of land and facilities essential for current and future expansion of the institution. One of the major facilities donated was Chuka Polytechnic founded in 1956.

On 23rd August, 2007, Eastern Campus College was upgraded to a constituent college of Egerton University and gazetted through a Legal Notice Number 161. After the elevation, the name changed to Chuka University College. On 10th December, 2007, His Excellency President Mwai Kibaki visited and officially inaugurated the University College. On 8th January, 2013, H.E. President Mwai Kibaki visited again and inaugurated the Chuka University, making it the 2nd public university to be chartered and the 9th full-fledged public university in Kenya.

The home of the University is Chuka Municipality in Meru South District, Tharaka-Nithi County. The University is situated approximately 186 km from Nairobi along the Nairobi-Embu-Meru highway on the located on the slopes of the snow-capped Mt. Kenya at an attitude of approximately 2,000 m above sea level. It has a cool climate with temperatures ranging from 16^{o}C to 24^{o}C and an average rainfall of about 1,000 mm per annum. This climate offers excellent learning and working environment.

SLOGAN/MOTTO

Knowledge is Wealth (*Sapientia divitia est*) "Akili ni Mali"

PHILOSOPHY

Chuka University believes that sustainable national and global development can be achieved through nurturing an intellectual culture that integrates theory with practice to produce graduates with relevant knowledge, skills and responsible citizenry. The Institution also believes that education and training leads to social cohesion, human and economic development. This can be realized through passion for excellence, devotion to duty, accountability, prudent utilisation of resources, corporate citizenship, and teamwork.

To actualise these beliefs, the University is committed to generation, preservation and sharing of knowledge for effective leadership in education, training, research and extension. The ultimate goal of Chuka University is to be a Premier University for the provision of quality education, training, research and extension in both basic and applied environmental and related studies.

VISION

To be a Premier University for the provision of quality education, training and research for sustainable national and global development.

MISSION

To generate, preserve and share knowledge for effective leadership in higher education, training, research and outreach through nurturing an intellectual culture that integrates theory with practice and innovation.

CORE VALUES

(i)	Passion for excellence and devotion to duty	(vi)	Prudent use of resources
(ii)	Integrity, transparency and accountability	(vii)	Corporate citizenship
(iii)	Social fairness	(viii)	Customer focus
(iv)	Professionalism	(ix)	Teamwork
(v)	Timeliness	(x)	Confidentiality

MANDATE

The Mandates of Chuka University are enshrined in its **objects** and **functions**.

The **objects** of the University are to–

(a) Provide directly, or in collaboration with other institutions of higher learning, facilities for quality university education, including technological, scientific and professional education, and the integration of teaching, research, outreach and effective application of knowledge and skills to the life, work and welfare of the citizens of Kenya;
(b) Provide and advance university education and training to appropriately qualified candidates, leading to the conferment of degrees and award of diplomas and certificates and such other qualifications as the Council and the Senate determines from time-to-time and in so doing, contribute to realisation of sustainable national economic and social development;
(c) Provide programmes, products, and services in ways that reflect the principles of equity and social justice.

The **functions** of the University are to–

(a) Participate in technological innovation as well as discovery, transmission, preservation and enhancement of knowledge, and stimulate the intellectual participation of students in the economic, social, cultural, scientific and technological development of Kenya;
(b) Inculcate a culture of lifelong learning, responsible citizenry and innovation in technology, engineering and mathematics within the institution and society;
(c) Engage in teaching, training, scholarship, entrepreneurship, research, consultancy, community service, among other educational services and products, with emphasis on technology and its development, impact and application to society;
(d) Conduct examinations for and grant such academic awards as may be provided for in the Statutes, and syndicate examinations for award at other institutions as may be approved by Senate; and
(e) Facilitate the development and provision of appropriate academic programmes, and community services.

1. SCOPE

This Quality Manual specifies requirements for the Quality Management System as implemented by CU in compliance with ISO 9001:2008 International Standard. The implementation of a Quality Management System based on this International Standard is a demonstration of CU's ability to consistently provide products that meet customer requirements and applicable statutory and regulatory requirements.

The Scope for ISO 9001:2008 International Standard Certification for CU's Quality Management System includes **Provision of University Education, Training, Research and Extension Services** and covers the Main Campus, located 4 km from Chuka Town, 180 km north of Nairobi, along the Embu-Meru Highway, of P. O. Box 109-60400, Chuka.

This Quality Manual describes the fundamental roles, responsibilities, necessary procedures and processes for ensuring that quality requirements are determined and met with the aim of enhancing customer satisfaction.

The maintenance of effective control through formal reporting structures and written procedures are also covered in this Quality Manual.

Exclusion: CU's activities cover all the requirements of the Standard, hence there are no exclusions made from this International Standard for the Institution.

2. REFERENCES

(i) Chuka University Charter, 2013 and Statutes, 2014
(ii) Code of Conduct for Public Universities, 2003
(iii) Collective Bargaining Agreements (UASU, UNTESU and KUDHEIHA workers)
(iv) CU Strategic Plan, 2012-2017
(v) Current CU Performance Contract
(vi) Current CU Work Plans
(vii) Customer Service Charter, 2012
(viii) Government Circulars
(ix) ISO 19011:2002 Guidelines for Quality/Environmental Management Systems Auditing
(x) ISO 9000:2005 Quality Management Systems – Fundamentals & Vocabulary
(xi) ISO 9001:2008 Quality Management Systems – Requirements
(xii) Kenyan Constitution, 2010
(xiii) Leadership and Integrity Act, 2012
(xiv) Procurement and Disposal Act, 2005
(xv) Procurement and Disposal Regulations, 2006
(xvi) Public Officer Ethics Act, 2003
(xvii) State Corporations Act, 2009
(xviii) The Exchequer and Audit Act, 2003
(xix) Universities Act, 2012

3. DEFINITIONS AND ABBREVIATIONS

3.1. Definitions

a) **Core processes**: These are the main value adding operations within CU.
b) **Core team:** Refers to the ISO Steering Committee or Champions.
c) **Customer**: This is a recipient of a product offered by CU.
d) **HOD**: Refers to the Head of Department who is accountable for certain products and services of CU. In this context, Department broadly refers to Office, Division, Directorate, Institute, School, or Section of CU.
e) **MOU**: Memorandum of Understanding
f) **Outsourced process**: This is a process that CU needs for its Quality Management System and which CU chooses to have performed by an external party.
g) **Product**: An output of a process that utilises inputs. Where the term "product(s)" is used in this Quality Manual, it can also mean "service(s)".
h) **Product**: Refers to services, procedures, processes and activities undertaken by CU. The products of Chuka University include: Graduates, Publications, Patents, Biological, Industrial and Engineering Products. The Services of Chuka University include: Teaching, training and examination; Research and publication; Extension and outreach; Consultancy and innovation; Library and computing; Student welfare; Staff welfare; Environmental conservation; and Conferencing, catering and procurement.
i) **Support processes**: These are operations that assist the functioning of the core processes.
j) **Training**: Refers to induction or orientation of an employee in his/her duties, roles and responsibilities for and within Chuka University.

3.2. Abbreviations

AMR	Assistant Management Representative
COD	Chair of Department
CU	Chuka University
GOP	General Operating Procedure
HOD	Head of Department
HRM	Human Resource Management
ICT	Information and Communication Technology
ISO	International Organization for Standardization
MgR	Management Responsibility
MR	Management Representative
MRM	Management Review Meetings
QMS	Quality Management System
SOP	Standard Operating Procedure

4. QUALITY MANAGEMENT SYSTEM

4.1 General Requirements

Chuka University operates and maintains a Quality Management System in accordance with the requirements of the International Standard. Through its application CU ensures that both the operation and control of relevant processes is effective by ensuring the availability of resources and information needed to support the QMS.

CU monitors, measures and analyses relevant processes and takes action(s) to achieve planned results and the continual improvement of the effectiveness of the QMS.

In implementing the Quality Management System, CU:

(a) Has determined the processes needed for the Quality Management System and their application throughout the Institution;
(b) Has determined the sequence and interaction of these processes;
(c) Has determined criteria and methods required to ensure the effective operation and control of these processes for various sections;
(d) Is ensuring the availability of resources and information necessary to support the operation and monitoring of these processes in the form of work instructions;
(e) Is monitoring, measuring where applicable, and analysing these processes, and
(f) Is implementing actions necessary to achieve planned results and continual improvement.

Where CU out-sources any process that affects product conformity to requirements, CU controls such processes. Control of such outsourced processes has been defined and documented in relevant departmental operational manuals as necessary. The controls include **Service Contracts, Agreements and MOUs**, among others.

The outsourced processes include:

1. Calibration, configuration, repair and maintenance of equipment
2. Consultancy services for surveys, and training of staff
3. Printing of ID cards, and examination scripts
4. Waste management by **Rentokil Kenya Limited**
5. Financial audits by **KNAS**

4.2 Documentation Requirements

4.2.1 General

The four-tier QMS documentation for CU includes:

(a) Quality Manual with the Quality Policy and Quality objectives.
(b) Documented Procedures as required by this International Standard (GOPs) and as established by the CU QMS (SOPs).
(c) Documented Work Instructions as established by CU (**See 7.5.1**).
(d) Documented records as required by this International Standard (**See 4.2.4's, Appendix 3**) and as established by **CU (CU/GOP/CR/02).**

4.2.2 Quality Manual

This Quality Manual has been developed and distributed among the HODs and all relevant staff members. It is maintained, reviewed and continually improved by the Management Representative (MR), in liaison with the ISO Core Team.

It details the following:

(a) The scope of the QMS, including details of and justification for any exclusion. See Clause 1.

(b) The documented procedures required by this International Standard (GOPs), namely:

SN	General Operating Procedure (GOP)	Code
1	Control of Documents (CD)	CU/GOP/CD/01
2	Control of Records (CR)	CU/GOP/CR/02
3	Internal Audits (IA)	CU/GOP/IA/03
4	Control of Non-Conforming Product (CN)	CU/GOP/CN/04
5	Corrective Action (CA)	CU/GOP/CA/05
6	Preventive Action (PA)	CU/GOP/PA/06

(c) A description of interactions between processes (SOPs) of the QMS. Refer to Appendix 1.

4.2.3 Control of Documents

Documents required by the QMS are controlled by the CU General Operating Procedure ***(CU/GOP/CD/01)***, which documents the system established to define the controls needed to ensure that:

(a) Authorised personnel review, update and approve new documents for adequacy prior to distribution and use.
(b) Changes and the current revision status are identified.
(c) Up-to-date documents are available at all work locations.
(d) Documents remain legible and readily identifiable.
(e) Documents of external origin determined by the CU to be necessary for the planning and operation of the QMS are identified and their distribution is controlled.
(f) Obsolete documents are suitably identified and appropriately discarded to prevent unintended use.

The MR is responsible for the issuance and control of the QMS documents, including an original copy of the ISO 9001:2008 Standard. The MR maintains records of the documents of external origin within the Institution ***(Ref: CU/MR/FORM/04)***.

Each document is uniquely identified and its distribution is controlled. All printed copies are stamped **"Controlled"** and any copies not labelled as such are considered **"Uncontrolled".** Procedures and/or Work Instructions are approved by authorised personnel and their distribution is **"Controlled".**

The Vice-Chancellor/CEO approves the Quality Manual, Quality Policy and General Operating Procedures (GOPs). The MR and respective HODs approve Standard Operating Procedures (SOPs) and Work Instructions (WIs).

Controlled documents include, but are not be limited to, the Quality Manual, Quality Policy, Procedures and Work Instructions.

Documents of external origin are controlled at departmental level with the MR being notified by respective HODS of the documents of external origin in their respective departments.

All these are controlled through the Document Control Schedule or through the External Documents Control Schedule.

Uncontrolled copies are issued only to outside organizations such as customers and suppliers. These copies are current when issued but the holders do not receive subsequent amendments. The copies are essentially/marked/stamped "Uncontrolled".

The MR controls the soft copies of the QMS documents.

4.2.4 Control of Records

The University has established records required (**see 4.2.4's**) and others established to provide evidence of conformity to requirements and of the effective operation of the QMS (**See Appendix 3)**.

All records maintained by CU are legible, readily identifiable and retrievable. The General Operating Procedure **(CU/GOP/CR/02)** and the **Chuka University Records Management Policy** documents the system established to define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records.

Records that demonstrate conformity to specified requirements have been established for the various processes that directly or indirectly impact on product realization. All records are kept legible, readily identifiable and retrievable to each type of process or activity involved.

Records are kept in a way, which allows for easy retrieval and analysis of trends where applicable. Storage methods ensure that records are kept safe from deterioration or damage and to prevent loss.

5 MANAGEMENT RESPONSIBILITY

Continued process improvement is enabled through the Quality Policy, Quality Objectives, planned Management Review Meetings (MRM) and the provision of resources towards the Quality Management System.

5.1 Management Commitment

The University Management is committed to implementing and developing the Quality Management System to continually improving its effectiveness. This commitment is assured through the Quality Policy located in clause 5.3 of this Quality Manual.

The University ensure that the Quality Policy is understood, implemented, and maintained at all levels of the Institution through distribution of printed Quality Policy statement and sensitizations, and is reviewed during Management Reviews. In addition, quality objectives are communicated and implemented throughout the University via individual performance objectives/targets established and reviewed during employee performance reviews/appraisals.

The University Management of CU ensures availability of resources (human and physical) required for the implementation and maintenance of the QMS.

The University Management is committed to the development, implementation and continual improvement in the effectiveness of the Quality Management System.

The commitment of CU is evidenced by communicating to the employees of CU, the importance of meeting customer requirements as well as regulatory and statutory requirements.

5.2 Customer Focus

The Management of CU ensures that customer requirements are determined and are met with the aim of enhancing customer satisfaction. This is achieved by operating an effective, documented QMS based on the ISO 9001:2008 Standard.

The University Management's primary concern is the provision of quality products to its customers. In accomplishing this goal, the Management is dedicated to satisfying and exceeding the customer's expectation and requirements through:

a) Setting up processes to determine customer requirements and monitoring customer satisfaction through customer satisfaction surveys, establishing and reviewing service delivery charters.
b) Reviewing of products offered by CU with a view of improving their quality.

5.3 Quality Policy

The Quality Policy is communicated to the entire CU fraternity. Communication of the CU's Quality Policy is achieved through, but not limited to visual display at strategic areas, awareness creation sessions and team meetings. The Quality Policy is continually reviewed by Management to ensure continued suitability.

CU QUALITY POLICY STATEMENT

Chuka University is committed to provision of quality education, training and outreach services through teaching, research, innovation and extension for sustainable national and global development. The University nurtures an intellectual culture that integrates theory with practice to produce graduates with relevant knowledge, skills and responsible citizenry.

In this regard, Chuka University is guided by passion for excellence, integrity, transparency, professionalism, devotion to duty and good corporate governance. The University Management communicates this Quality Policy through framed displays, meeting talks and publication in key documents.

Chuka University appraises and reviews its quality objectives, programmes, products, services and performance to continually improve the effectiveness of the Quality Management System based on the ISO 9001:2008 Standard.

Professor Erastus N. Njoka, Ph.D.
VICE-CHANCELLOR/CEO

20th March, 2013

5.4 Planning

Through Strategic Planning process and budgeting, CU carries out quality planning in a practical and focused manner which defines the methods, means and resources needed to achieve specific objectives. This process is controlled through documented procedures.
(CU/SOP/DVCF/02; CU/SOP/FIND/24)

5.4.1 Quality Objectives

At relevant functions and levels within the University, Management in liaison with the relevant stakeholders sets Quality Objectives which are measurable and consistent with the Quality Policy. The Quality Objectives are documented and established by the respective HODs and staff members. Implementation of the Quality Objectives is monitored by the HODs and also reviewed during the Management Review Meetings.

In addition to the Quality Objectives, Work Plans are established and documented at relevant departments within the organization. These Quality Objectives and Work Plans are measurable and consistent with the Quality Policy including the commitment to continual improvement. Respective HODs are responsible for establishing the set targets/objectives for their departments and implementing them. The status of these targets/objectives is reviewed by the Department and Management on a quarterly and yearly basis. The broad objectives for Chuka University are as follows:

1. **To provide quality higher education and training for skilled human resource.**
2. **To participate in research, innovation, consultancy, dissemination of knowledge, skills and competence development for industrial and socio-economic development.**
3. **To engage in priority areas of community outreach to provide extension services to solve problems in the society and industry.**
4. **To mobilise CU fraternity to address HIV/AIDS pandemic as a national disaster.**
5. **To improve corporate governance, leadership, administration and management of University business.**
6. **To attract, train and retain highly qualified and motivated staff.**
7. **To guarantee quality of processes, products, and services.**

5.4.2 Quality Management System Planning

Heads of Departments ensure that:

(a) The planning of the QMS is done through the daily operational activities. This planning is considered to be a fundamental element of all aspects of relationships with customers, to meet the requirements of ISO 9001:2008 Standard as well as the Quality Objectives with the view to providing the best possible products and services.

(b) The Management ensures that the planning of the QMS is carried out in accordance with the requirements of the ISO 9001:2008 Standard, and that the integrity of the QMS is maintained when changes are planned and implemented. Such changes can result from:

(i) Modification of the institutional structure
(ii) Employee turnover/separation
(iii) Introduction of new technology
(iv) Need for improvements in the system's efficiency

Such changes that could affect the QMS are identified as part of the input for MRM. The QMS planning process considers the ISO 9001:2008 Standard requirements including the actions needed for continual improvement of the processes of the system. The measurement, analysis

and review processes needed for achieving the enhanced effectiveness of the QMS have been identified and linked as a set of mutually supporting activities as stated in sections 8.1 and 8.5.1 of this Quality Manual.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

Chuka University organizational structure has been established to show the interrelationships of positions in the University. Responsibilities and authorities for each of the positions have been defined and communicated through job descriptions within the University. Job descriptions and the organisational structure are reviewed and approved by the University Management for adequacy. See Appendix 2: CU Organogram.
Refer to: Duty/Job Descriptions in Staff Files in R (A&P)

5.5.2 Management Representative

The University has appointed the Deputy Vice-Chancellor in-charge of Academic Affairs to serve as the MR, with the following duties and responsibilities:

(a) Ensuring the establishment, implementation and maintenance of the QMS processes.
(b) Reporting to the Management on the QMS performance with a view of improving it.
(c) Ensuring promotion of awareness of customer requirements throughout the University.
(d) Communicating and liaising with external parties on all matters relating to the QMS.

5.5.3 Internal Communication

The required communication channels have been established within CU. This broadly comprises: Memos, SMS, E-Mails, Suggestion Boxes, Posting of Notices regarding policies and related information at strategic points, Planned Management Review Meetings, Staff Meetings, Seminars and Workshops, among others.

Management Review and Departmental Meetings are regularly held to enable staff members articulate their views on the effectiveness of the QMS.

5.6 Management Reviews

5.6.1. General

The Quality Management System is reviewed during Management Review Meetings (MRM) to ensure continued suitability, adequacy and effectiveness. Management Review Meetings are held twice a year, at minimum, under the auspices of the Vice-Chancellor or his appointed delegate.

The participants include Heads of Departments and other respective staff members as required to report on the performance of the Quality Management System. Records (minutes, reports, briefs) from the MRM are maintained by the **C**huka **U**niversity **M**anagement **R**epresentative in the **M**anagement **R**eview **M**eetings file (**CU/ISO/QMRM-4.2.4, Appendix 3**).

5.6.2. Review Input

The members of the review team receive the Management Review Meetings inputs/agenda in advance. The Management Review Meetings inputs form the agenda and include:

- Review of Quality Policy
- Review of Quality Objectives
- Review results of audits
- Review customer feedback
- Process performance and product conformity
- Status of preventive and corrective actions
- Follow-up actions from previous Management Review Meetings
- Changes that could affect the Quality Management System
- Recommendations for improvement

5.6.3. Review Output

The MR documents and maintains the Management Review Meetings outputs, which include deliberations and actions on the issues related to resource requirements, improvements of the effectiveness of the Quality Management System and its processes and improvements of products related to customer requirements.

6. RESOURCE MANAGEMENT

6.1 Provision of Resources

Resource management is aimed at identifying the required and available resources, their timely as well as correct allocation for implementation, maintenance and continual improvement of the effectiveness of the Quality Management System. The resources include: Human, infrastructure and work environment.

6.2 Human Resources

6.2.1 General

The Management of CU ensures that its workforce is competent to perform its functions and duties on the basis of education, training, skills and experience. Competencies are identified at various levels in CU and these offer guidelines for employment of new staff.

6.2.2 Competence, Awareness and Training

CU has established processes for:

(a) Determining the necessary competence for personnel performing work affecting conformity to product requirements;

(b) Providing training or taking remedial actions to achieve the necessary competence;

(c) Evaluating the effectiveness of the actions taken, where applicable;

(d) Ensuring that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives;

(e) Maintaining appropriate records of education, training, skills and experience (**See 4.2.4**).

Before any recruitment is done, a job description and specification, including full competence criteria on which recruitment is based, is developed. Recruitment, performance determination/job evaluation, staff development and training are conducted as per the documented procedures.
(Refer to Staff Recruitment Procedure in CU/SOP/DAFP/02)

All new staff members are taken through induction and orientation programmes. The details of such induction and orientation programmes are documented and records maintained.
(*Refer to Staff Induction Procedure in CU/SOP/DAFP/02*)

Training needs assessment and staff performance appraisals are conducted regularly to identify competence gaps. The effectiveness of any actions taken to satisfy competency requirements are evaluated appropriately and the appropriate records are maintained.
(Refer to Training Needs Assessment Procedure in CU/SOP/DAFP/2)

General awareness creation of the relevance and importance of various activities and their contribution to the achievement of quality objectives are carried out through, but not limited to, meetings and sharing of job evaluation reports.

The Administration and Planning Department is responsible for ensuring that all staff records, including those of education, training, skills and experience, are obtained and maintained.
(Refer to Staff Registry Procedure in CU/SOP/RADP/4).

6.3 Infrastructure

In order to achieve conformity to product requirements, necessary infrastructural requirements are determined, provided and maintained. These include:

- Buildings, workspace and associated utilities,
- Process equipment (hardware and software)
- Supporting services (transport, communication, information systems etc).

Chuka University has put in place and maintains infrastructure that supports the realization of its mandate. Through the Administration, Finance and Planning (AFP) Department, CU in conjunction with other development partners has put up facilities to enhance product realisation.

The University Management ensures and maintains adequate provision of infrastructure, transport, communication and information management systems.
(Refer to CU Master Plan)

At the moment the University has 6 ultra-modern multi-storeyed buildings, butimen-covered road network, 13 vehicles (buses, lorries, saloons, vans, pick-ups), wireless mobile lines, official cellphones, Internet connectivity, intercom and NAVISION IMIS.

6.4 Work Environment

Chuka University determines and manages the work environment needed to achieve conformity to product requirements.

The work environment is determined through regulatory and statutory requirements as well as meetings and committees in various departments. Resources required are approved by the Vice-Chancellor in consultation with the relevant committees. On a regular basis, CU conducts a work environment survey to determine areas of improvement.
(Refer to Work Environment Survey Procedure in CU/SOP/RADP/4)

7 PRODUCT REALIZATION

7.1 Planning of Product Realisation

Chuka University has planed and developed processes needed for product realization. The planning of product realization is consistent with the requirements of other processes of the QMS. In planning of the product realisation, CU has determined the following:

- Quality objectives and requirements of the production processes, documents and necessary resources.
- Established processes and documents and provision of resources specific to the product.
- The necessary verification, validation, monitoring, measurement, inspection and test activities and the criteria of product acceptance.
- Records needed to provide evidence that the realisation processes and resulting product(s) meet requirements (**See 4.2.4, Appendix 3**).

Planning of product/service realization activities is carried out in accordance with an established CU Quality Management System. The output of quality planning includes documented resource requirements and processes.

The products of Chuka University include: Graduates, Publications, Patents, Biological, industrial and engineering products.

The Services of CU include: Teaching training, examination, research, publication, extension, outreach, consultancy, innovation, library and computer access; Student and staff welfare promotion; Environmental conservation, conferencing, catering and purchasing provision.

7.2. Customer Related Processes

7.2.1. Determination of Requirements Related to the Product

In addition to satisfying customer requirements, CU through the QMS ensures that both statutory and regulatory requirements related to the product are determined and agreed upon at the relevant department.

In determining the requirements related to product, CU has considered the following:

- Requirements not stated by the customer but necessary for specified or intended use, where known.
- Requirements specified by the customer, including the requirements necessary for delivery and post-delivery activities.
- Statutory and regulatory requirements applicable to the product, which include:
  - Kenya Constitution, 2010,
  - State Corporations Act, 2009,
  - Exchequer and Audit Act, 2003,
  - Procurement and Disposal Act, 2005,
  - Procurement and Disposal Regulations, 2006,
  - Public Officer Ethics Act, 2003
  - Universities Act, 2012

- Other relevant national Acts.
- Chuka University Charter, 2013
- Chuka University Statutes, 2013

- Any other requirement considered necessary by CU.

7.2.2 Review of Requirements Related to the Product

Chuka University reviews the requirements related to the product and ensures that customer requirements are adequately determined, understood and that CU understands what is expected and can judge the ability to meet requirements.

Where applicable, amendments to the existing syllabi, contracts, agreements and orders are acceptable, provided that the changes are agreed upon with the customer before supply of the service in question. Such changes are only implemented if they are in line with CU, customer and applicable statutory and regulatory requirements. Records of the result of the review and actions arising from the review are maintained (**See 4.2.4, Appendix 3).**

Where the customer provides no documented statement of requirement, the customer requirements are confirmed by CU before acceptance. Where product requirements are changed, CU ensures that the relevant documents are amended and that the relevant personnel are made aware of the changed requirements.
(Refer to: Admissions and Timetabling Procedures in CU/SOP/RACA/5; CU/SOP/EXTT/12)

7.2.3 Customer Communication

Chuka University recognises effective customer communication as an essential element of customer satisfaction.

Product information is available at the registry, in the Library, website and public notice boards in any of the following forms: catalogue, brochures, and service charters. Information about existing and new product lines is disseminated through CU mailing list and mass media.

The Customer Care Desk and Public Complaints Committee handle customer enquiries and complaints which then form the basis for continual improvement of products as stated in the Quality Policy.

Public and customer complaints and compliments registers are also installed at strategic locations within the University premises. The University has put up suggestion boxes at strategic positions in the University to capture customer complaints, compliments, queries and enquiries.

7.3 Design and Development

7.3.1 Design and development planning

The University plans and controls the design and development of products that include academic programmes and curricula. During the design and development stage, CU determines:

a) The design and development stages of each product provided

b) The review, verification and validation processes that are appropriate to each design, and
c) The responsibilities and authorities for design and development.

The University manages the interfaces between different groups involved in design and development to ensure effective communication and clear assignment of responsibility. Planning output is updated, as appropriate, as the design and development progresses.

7.3.2 Design and development inputs

The University has determined the inputs relating to products and appropriate records are maintained. These inputs include:

a) Functional and performance requirements of the programmes and projects,
b) Applicable statutory and regulatory requirements (**See 7.2.1**),
c) Where applicable, information derived from previous similar designs (**See Catalogues**),
d) Other requirements essential for the design and development.

Refer to CU/ACAD/Course outlines/timetables, CU/EXTT/Course outlines/timetables

The inputs are reviewed for adequacy. Requirements are complete, unambiguous and not in conflict with each other.

7.3.3 Design and development outputs

The outputs of design and development of the programmes are provided in a form that enables verification against the design and development inputs. The same is approved by the relevant committee prior to their release. The design and development outputs achieve the following:

a) Meet the input requirements for design and development,
b) Provide appropriate information for purchasing, production and service provision,
c) Contain or reference product acceptance criteria, and
d) Specify the characteristics of the product that are essential for its safe and proper use.

7.3.4 Design and development review

At suitable stages, CU carries out reviews of design and development processes in accordance with planned arrangements to:

a) Evaluate the ability of the resultant product to meet customer, statutory, regulatory and other requirements, and
b) Identify any problems and propose necessary actions.

Participants in such reviews include representatives and stakeholders of functions concerned with the design and development stage(s) being reviewed. Appropriate records of the results of the reviews and any necessary actions are maintained (**See 4.2.4, Appendix 3).**

7.3.5 Design and development verification

The University verifies products in accordance with planned arrangements. This is to ensure that the design and development of these products have met the input requirements.

Appropriate records of the results of the verification and any necessary actions are maintained (**See 4.2.4, Appendix 3)**.

7.3.6 Design and development validation

Design and development validation is performed in accordance with planned arrangement. This ensures that the resulting outputs are capable of meeting the requirements for the specified application or intended use where known. Wherever practicable, validation is completed prior to the delivery or implementation of the product(s). Records of the results of validation and any necessary actions are maintained (**See 4.2.4, Appendix 3)**.

7.3.7 Control of design and development changes

Any changes to the design and development of products are identified. The changes are reviewed, verified and validated, as appropriate, and approved by relevant committees before implementation. The review of design and development changes includes evaluation of the effect of the changes on constituent parts and product already delivered.

Appropriate records of the results of the review of changes and any necessary actions are maintained (**See 4.2.4, Appendix 3)**.

7.4 Purchasing

7.4.1 Purchasing process

The University has established and maintains a documented purchasing procedure which ensures that products purchased meet specified requirements. The products are purchased from reputable suppliers. CU has established criteria for selection, evaluation and re-evaluation of suppliers.

The mandatory criteria include the following:

(i) Having a certificate of registration or incorporation
(ii) Provision of evidence of registration/accreditation with the relevant Ministry/Body
(iii) Provision of proof of completion of work of similar nature
(iv) Provision proof of adequate equipment and qualified personnel
(v) Provision of certified audited accounts for specified number of years
(vi) Provision of evidence of average annual turnover of specified threshold
(vii) Provision of evidence of access to credit
(viii) Provision of valid PIN and VAT certificates
(ix) Provision of tax compliance certificate
(x) User specifications
(xi) Any other specified criterion

Re-evaluation criteria include: past performance of the supplier, price consistency, quality of product/services supplied, communication/feedback provision.

As applicable, suppliers are selected from reputable organizations that appear on the list of prequalified suppliers. The list is reviewed annually. **Ref. CU/SOP/PROD/25**

The records of the results of the selection, evaluation, re-evaluation and necessary actions arising from these processes are maintained (**See 4.2.4, Appendix 3)**.
(Refer to Procurement Procedure in CU/SOP/PROD/25)

7.4.2 Purchasing information

The necessary purchasing information is contained in the relevant purchase order documents. The purchase order documents are checked for adequacy of specified purchase requirements by the Head of Procurement and any other authorized officer.

7.4.3 Verification of purchased products

Purchased products are verified on receipt at the CU premises by the Inspection and Acceptance Committee and/or authorised agent. The verification is done to ensure that the products meet the specifications of all defined requirements.

Where there is need for CU or its customer to perform verification at the supplier's premises, CU states the intended verification arrangements (site visits) and method of product release.
(Refer to Procurement Procedure in CU/SOP/PROD/25)

7.5 Product and Service Provision

7.5.1 Control of production and service provision

Service provision processes are identified, planned and carried out under controlled conditions. Such controlled conditions include:

(a) Availability of information describing the characteristics of the product
(b) Availability of work instructions, as necessary (**See below**)
(c) Use of suitable equipment/hardware/software
(d) Availability and use of monitoring and measuring equipment
(e) Implementation of monitoring and measurement
(f) Implementation of product release, delivery and post-delivery activities

Present Work Instructions are:

(i) Chemistry Practical Sessions (CU/WI/CHEM/01)
(ii) Biological Sciences Practical Sessions (CU/WI/BIOL/02)
(iii) Computer Science Practical Sessions (CU/WI/COMP/03)
(iv) Wildlife Practical Sessions (CU/WI/WILD/04)
(v) Animal Health Practical Sessions (CU/WI/ANHE/05)
(vi) Geography Practical Sessions (CU/WI/GEOG/06)
(vii) Media Practical Sessions (CU/WI/MEDIA/07)

7.5.2 Validation of processes for production and service provision

The University validates the processes for service provision where the resulting output cannot be verified by subsequent monitoring and measurement. This validation includes any processes where deficiencies become apparent only after the product has been delivered or used.

Therefore, the University identifies all the special processes whose deficiencies become apparent only after delivery or use.

Systems are in place to ensure that such processes are validated to demonstrate their ability to achieve planned results as follows:

(a) Defined criteria for review and approval of processes, (**See CU Statutes, 2013**)
(b) Approval of equipment and qualifications of personnel,
(c) Use of specific methods and procedures,
(d) Establishment of requirements for record keeping,
(e) Determination of criteria for re-validating the process capability.

7.5.3 Identification and traceability

The University identifies its products throughout product realization as outlined in various University documents such as: Serialisation, Programme Titles, Course Codes and Admission Numbers schedule (**See 4.2.4**). Traceability is made possible through the records retained in the University and delivery records.
See CU/RACA/ADMI, CU/RACA/TRAN, CU/RACA/CERT, CUC/FIND/assets, Appendix 3

7.5.4 Customer property

Chuka University exercises care of customer property in its custody to prevent it from damage or loss or unauthorised access. In case of loss/damage or unsuitability for use, this is noted, recorded and reported to the customer (**See 4.2.4, Appendix 3**). Other confidential customer property such as customer information is kept safely by, but not limited to, locked areas, fireproof safes, or password-protected areas if it is in soft form.

7.5.5 Preservation of product

Through specific responsibilities as defined in relevant procedures, products are handled with care by the various employees to ensure prevention of damage and maintenance of quality of the products. Preservation includes: Confidentiality, identification/labelling, handling, sealed packaging, storage, and password protection. ***Refer to: CU/SOP/EXTT/12, CU/SOP/RACA***

The University organizes and shelves information materials according to specified systems for ease of storage, retrieval, and preservation.
Refer to CU Filing Index (CU/MR/FORM/14)

7.6 Control of Monitoring and Measuring Equipment

The University has determined the monitoring and measurement requirements needed to be undertaken and the equipment needed to provide evidence of conformity of products to the determined requirements. The requirements include weight, speed, concentrations, pathogens, vital signs and grades. Equipment include: Weighing Balances, Generators, AA and UV Spectrophotometers, Protein Analysers, Digester, Gas Chromatographs, Centrifuges, Medonic Hematology Analyzer, Computers, Softwares, and Servers.

The University has established processes to ensure that monitoring and measurement are carried out in a manner that is consistent with the monitoring and measurement requirements. Such processes include: calibration, verification, or both, servicing and maintenance of monitoring and measurement equipment in respective departments.

Where necessary to ensure valid results, the above mentioned measuring and monitoring equipment are:

(a) Calibrated or verified or both at specified intervals, or prior to use and records maintained (**See 4.2.4, Appendix 3**). This is achieved by the respective outsourced service providers, who service equipment within the University (Ref: **DBSC & DICT labs and MEDD)**.
(b) Adjusted or re-adjusted as necessary,
(c) Labelled to identify calibration status,
(d) Safeguarded from adjustments that invalidate the measurement results, and
(e) Protected from damage and deterioration during handling, maintenance and storage.

The University assesses and records the validity of the previous measuring results when the equipment is found not to conform to requirements. The University takes appropriate action on the equipment and any product affected.

The University selects and identifies relevant service providers to undertake calibration, verification and servicing of monitoring and measurement equipment in the institution. The contracted service providers include: Medipharm East African Ltd certified by Boule Medical AB of Sweden, Collinbet Electech Mechanical Engineering by Ministry of Health Services, Educational Scientific and Technical Equipment Company for Shimadzu International, Kyoto-Japan, Grand Photolab East African Ltd by P. G. Instruments, UK, and LEUD (A) Chemicals Ltd by FOSS International, Sweden.

Records of the results of calibration and verification are maintained (**See 4.2.4, Appendix 3**).
Ref: CU/DBSC/Equipment; CU/MEDD/Equipment

When used in the monitoring and measurement of specified requirements, the University determines and confirms the ability of computer softwares to satisfy intended application prior to initial use through configuration by licensed agents such as CorTEC Systems & Solutions Limited authorised and certified by Microsoft (R) to implement, develop and support the world class Microsoft Business Solutions- NAVISION Integrated Management Information System software. The agents have signed a Contract with the University for NAVISION. The software processes financial, examination and procurement operations.
Ref: CU/DICT/Software

8 MEASUREMENT, ANALYSIS AND IMPROVEMENT

8.1 General

The University has put in place structures to enable it plan and implement the monitoring, measurement, analysis and improvement processes needed to:

(a) Demonstrate conformity to product requirements
(b) Ensure conformity to the QMS, and
(c) Continually improve the effectiveness of the QMS

Applicable methods for the monitoring, measurement and analysis, including statistical analysis techniques, and the extent of their use, has been determined by the departments concerned with the operations. ***Ref. CU/SOP/QAPC/11, Ref. CU/SOP/RADP/04, CU/SOP/IAUD/26***

8.2 Monitoring and Measurement

8.2.1 Customer satisfaction

The University monitors customer satisfaction by undertaking annual evaluations to determine the level of CU's ability to meet customer requirements.

Ref. Human Resource Management Process in CU/SOP/RADP/04
Ref. Quality Assurance Procedure in CU/SOP/QAPC/11

8.2.2 Internal audit

The University conducts Internal Audits at least twice a year to determine whether the Quality Management System is:

(a) In conformity with the planned arrangements
(b) In conformity with the QMS requirements established by the CU
(c) In conformity with the requirements of this International Standard
(d) Effectively being implemented and maintained.

Internal Audit programme is planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods are defined **(See CU/GOP/IA/3).** Conduct of audits ensures objectivity and impartiality of the audit process. Auditors do not audit their own work.

The HODs responsible for the area being audited ensures that any necessary corrections and corrective actions are taken without undue delay to eliminate detected or potential non-conformities and their causes. Follow up activities include verification of the actions taken and reporting of the verification results.

Records of audits and their results are maintained (**See 4.2.4, Appendix 3**).
(Ref. Internal Audit Procedure, CU/GOP/IA/03)

8.2.3 Monitoring and measurement of processes

The University's monitoring and measurement of processes is undertaken through departmental meetings and task teams where performances on the various objectives are reviewed and new ones set if necessary.

Appraisals are also used to evaluate the performance of staff and processes. Conformity to the Quality Management System is monitored through Internal Audits. Where planned results are not achieved, correction and corrective actions are undertaken. The necessary records generated by this undertaking are maintained.
Ref. CU/SOP/QAPC/11; CU/GOP/IA/03; All Departments' meeting minutes

8.2.4 Monitoring and measurement of product

Monitoring and measurement of the product being offered is undertaken through monitoring of information related to the performance of the product.

The Management of CU ensures that product and service delivery to the customer does not proceed until the planned arrangements have been satisfactorily completed, unless otherwise authorised by a relevant authority and, where applicable, by the customer. Records are maintained to show evidence of conformity with the acceptance criteria and authority for release of the products (**See 4.2.4, Appendix 3**).
Ref. CU/RACA/CATA or TRAN or CERT; CU/ACAD, CU/FACU

8.3 Control of Non-Conforming Products

Chuka University has documented a procedure to deal with non-conforming products such as: Non-conforming course delivery; curriculum design; student pass rate performance; or examinations setting and conduct. The procedure elaborates corrective action for non-conforming products such as: taking action to eliminate the detected non-conformity, controlling the use of the non-conforming product, and segregating the product so that it is not used inadvertently. The ways include: make-ups, curriculum revision, cancellation, moderation, compensation, re-marking, blending, re-grading, re-setting, re-sitting or re-taking.

In case any non-conforming products/service is released under concession such authorization is given by the Vice-Chancellor, Heads of Departments and where applicable in consultation with the customer. Records (**See 4.2.4, Appendix 3**) are maintained to cover the nature of non-conformity and any subsequent actions taken including any concessions obtained. Any corrected non-conformity is subjected to re-verification.

Chuka University takes action appropriate to the effects of the non-conformity when non-conforming product is detected after delivery or use has started. This includes recall/cancelation.
(Refer to CU/GOP/CN/04; CU/SOP/EXTT/12); CU/SOP/ACAD/16-21)

8.4 Analysis of Data

CU determines, collects and analyses appropriate data (such as customer satisfaction and teaching effectiveness) to demonstrate the suitability and effectiveness of the QMS and to evaluate where continual improvement is to be made.
The analysis of data provides information relating to:

1) Customer satisfaction
2) Conformity to product requirements

3) Characteristics and trends of processes and products
4) Corrective and preventive actions
5) Suppliers of products

8.5 Improvement

8.5.1 Continual improvement

The University continually improves the effectiveness of the QMS through the review of the Quality Policy, Quality Objectives, use of audit results, analysis of data, corrective actions, preventive actions, and management reviews ***(See CU/ISO/QMRM, CU/GOP/IA/03)***.

8.5.2 Corrective Action

The University takes appropriate corrective actions to eliminate the cause(s) of non-conformities to prevent recurrence. The documented procedure established by CU covers areas on:

(a) Identification and Recording of Non-conformities
(b) Registration and Processing of a Corrective Action Request
(c) Investigation of the Causes of Non-conformity
(d) Corrective Action
(e) Verification
(f) Follow-up
(g) Reviewing Non-conformities
(h) Customer Complaints Handling
(i) Summary Report

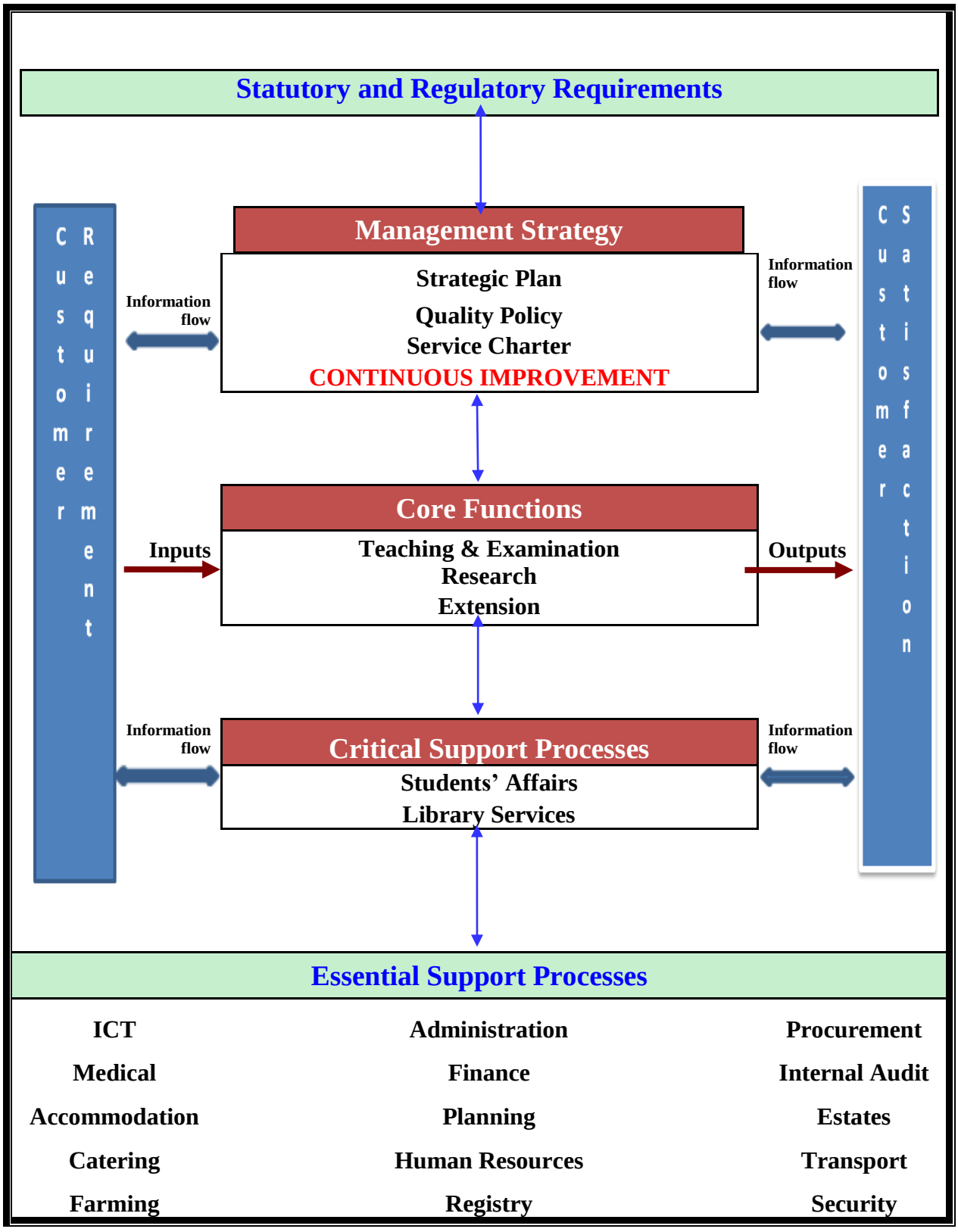
Corrective actions broadly include:

(a) Taking action to eliminate the detected non-conformity e.g. reworks;
(b) Authorizing its use, release or acceptance under concession by a relevant authority and where applicable by the customer;
(c) Taking action to preclude its original intended use or application (e.g. by re-grading or blending and releasing as a different product);
(d) Taking action appropriate to the effects, or potential effects, of the non-conformity if detected after delivery or use has started. This may include initiating a product recall/withdrawal.
(e) Any other action ***(Refer to Corrective Action Procedure in CU/GOP/CA/05)***

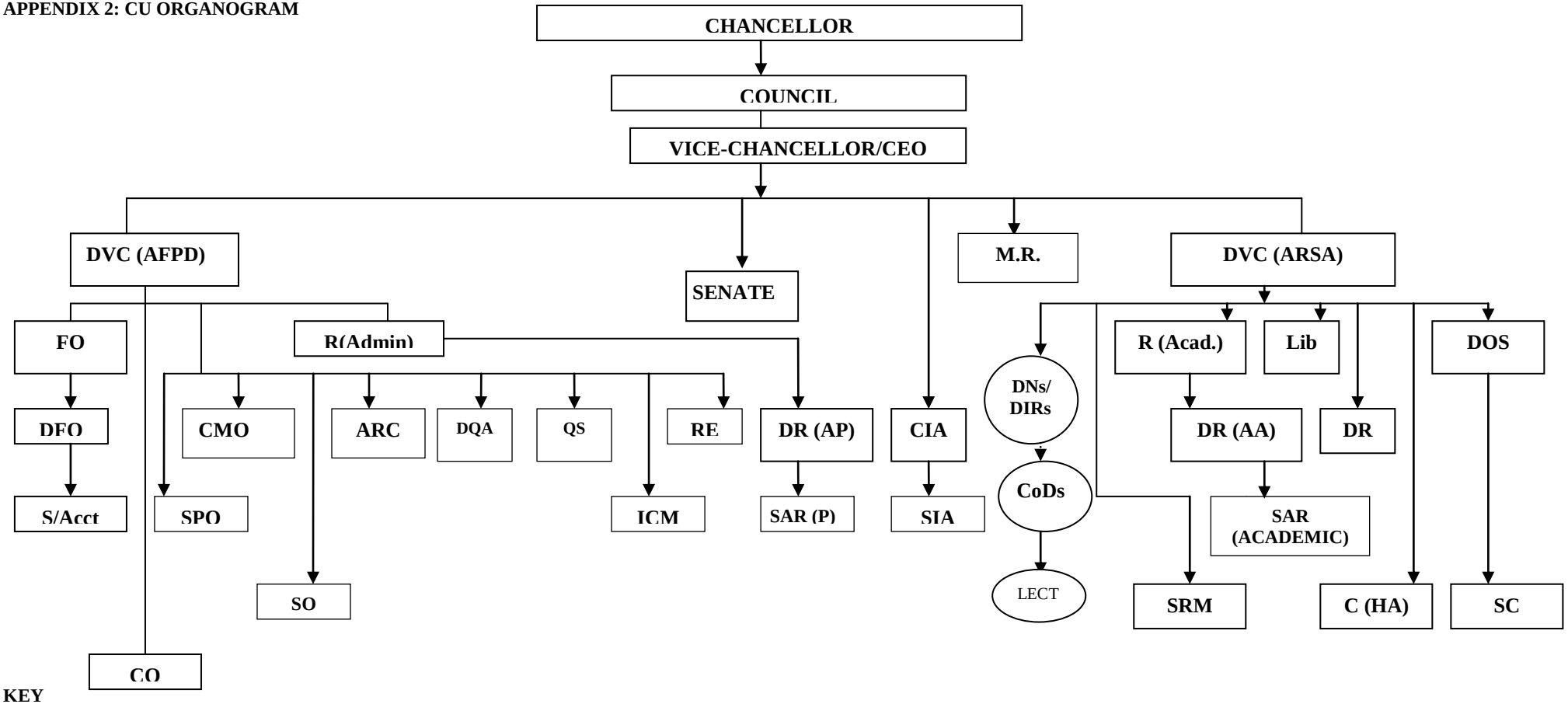
8.5.3 Preventive Action

The University determines appropriate action to eliminate the causes of potential non-conformities to prevent their occurrence. The documented procedure established by CU covers: Identification and recording of potential non-conformities; Registration and processing of a preventive action request; Investigation of the causes of a potential non-conformity; Undertaking, Verification and Follow-Up of preventive action; Summary report of outstanding preventive action. Preventive actions include: (a) Pre-qualification of suppliers, (b) Make-up teaching, (c) Cancellation of examinations with malpractices, (d) Moderation of examinations before release to students, (e) Compensation of marks, (f) Interview of job applicants.
(Refer to Preventive Action Procedure in CU/GOP/PA/06)

APPENDIX 1: CHUKA UNIVERSITY PROCESS MAP



APPENDIX 2: CU ORGANOGRAM



KEY

VC/CEO Vice-Chancellor/Chief Executive Officer **DVC (AFP)** Deputy Vice-Chancellor/ (Administration, Finance and Planning) **DVC (AA)** Deputy Vice-Chancellor/ (Academic Affairs) **M.R.** Management Representative **R (AP)** Registrar (Administration and Planning) **R (AA)** Registrar (Academic Affairs) **EM** Estates Manager **CIA** Chief Internal Auditor **LIB** Librarian **DOS** Dean of Students **FO** Fiance Office **DFO** Deputy Finance Officer	**S/Acct** Senior Accountant **CMO** Chief Medical officer **DNs** Deans of Faculties and Schools **CODs** Chairman of Departments **LEC** Lecturers **CIA** Chief Internal Auditor **DR (AP)** Deputy Registrar (Administration & Planning) **DR (AA)** Deputy Registrar (Academic Affairs) **DR** Director (Research & Extension) **SPO** Senior Procurement Officer **DQA** Director (Quality Assurance) **ICM** ICT Manager	**SAR** Senior Assistant Registrar **SIA** Senior Internal Auditor **SO** Security Officer **SRM** Sports and Recreation Managers **C(HA)** Custodian/Head of Accommodation **SC** Student Counselor **CO** Catering Officer **AB** Academic Board **QS** Quantity Surveyor **DIRs** Directors **RE** Resident Engineer

APPENDIX 3: REQUIRED DOCUMENTS AND RECORDS

(A) LIST OF DOCUMENTS REQUIRED BY THIS INTERNATIONAL STANDARD WITHIN CU

SN	DOCUMENT	REF. CODE
1	Quality Manual (QM)	CU/QMS/QM/01
2	Quality Policy (QP)	CU/QMS/QP/01
3	Quality Objectives (QO)	CU/QMS/QO/01

SN	General Operating Procedures (GOPs)	
1	Control of Documents (CD)	CU/GOP/CD/01
2	Control of Records (CR)	CU/GOP/CR/02
3	Internal Audits (IA)	CU/GOP/IA/03
4	Control of Non-Conforming Product (CN)	CU/GOP/CN/04
5	Corrective Action (CA)	CU/GOP/CA/05
6	Preventive Action (CP)	CU/GOP/PA/06

(B) LIST OF RECORDS REQUIRED BY THIS INTERNATIONAL STANDARD WITHIN CU

Description, code(s) and clauses	Description, code(s) and clauses
1. -Control of documents, records, CU/MR/FORM/01, CU/MR/FORM/02, CU/MR/FORM/03, CU/MR/FORM/04, CU/MR/FORM/05, CU/MR/FORM/06: **Clause 4.2.3** 2. -Management Reviews Meetings, related records, CU/MR/MRM. **Clause 5.6.1** 3. -Human resource, records of education, training, skills & competence, CU/RADP, CU/QAPC. **Clause 6.2.2** 4. -Planning of product realisation, records that realisation processes & resulting products meet requirements, CU/ACAD, CU/BUSF, CU/BPSR, CU/RACA, CU/DICT, CU/FACU, CU/MEDD. **Clause 7.1** 5. -Review of requirements related to the product, records of results of review & arising actions, CU/PROD, CU/ACAD, CU/DICT, CU/EXTT. **Clause 7.2.2** 6. -Design and development inputs, records of inputs, CU/MR/ACTS, REGU, SURV; CU/PROD. **Clause 7.3.2** 7. -Design and development review, records of results of reviews, CU/FACU, CU/DICT. **Clause 7.3.4** 8. -Design & development verification, records of results of verification, CU/BUSF, CU/BPSR. **Clause 7.3.5** 9. -Design and development validation, records of results of validation, CU/RACA, CU/DAFP. **Clause 7.3.6** 10. -Control of design & development changes, CU/DACA, CU/DAFP. **Clause 7.3.7** 11. -Purchasing process, records of results of selection, evaluation, re-evaluation, CU/PROD. **Clause 7.4.1**	12. -Validation of processes for production and service provision, accompanying records, CU/ESTD, CU/DICT, CU/RACA, CU/FIND. **Clause 7.5.2** 13. -Identification and traceability, records of product unique identification, CU/FIND/ASSETS. **Clause 7.5.3** 14. -Customer property: Loss, damage, unfit records, CU/BPSR, RACA, RADP, PROD. **Clause 7.5.4** 15. -Control of monitoring & measuring equipment, records of calibration & verification basis, CU/DICT, CU/DBSC, CU/MEDD. **Clause 7.6** 16. -Internal Audit, records of audits, their results, programme, schedule, work plans, CU/MR/FORM/10, CU/MR/FORM/07, CU/MR/FORM/08, CU/MR/FORM/09. **Clause 8.2.2** 17. -Monitoring and measurement of process, records generated by this undertaking, CU/QAPC. **Clause 8.2.3** 18. -Monitoring and measurement of product, records to indicate person(s) authorising release of product, CU/RACA. **Clause 8.2.4** 19. -Control of non-conforming product, records to indicate nature of NC & subsequent action taken, CU/RACA, CU/DICT, CU/MR/FORM/11. **Clause 8.3** 20. -Corrective action, records of results of action taken, CU/MR/FORM/12. **Clause 8.5.2** 21. -Preventive action, records of results of action taken, CU/MR/FORM/13. **Clause 8.5.3**

APPENDIX 4: QUALITY GLOSSARY

Assurance

- Providing an optimal degree of confidence to Internal and External Customers regarding establishing and maintaining in the organization practices, processes, functions and systems for accomplishing organizational effectiveness.

- Establishing and maintaining an optimal degree of confidence in the organizational practices, processes, functions and systems for accomplishing organizational effectiveness.

Corrective Action

An action intended to eliminate the cause of a detected non-conformity. Corrective action is taken to prevent recurrence. Correction relates to containment of non-conformity, whereas corrective action relates to the root cause of non-conformity.

Continuous Improvement (CI)

Continuous Improvement (CI): Adopting new activities and eliminating those which are found to add little or no value. The goal is to increase effectiveness by reducing inefficiencies, frustrations, and waste (rework, time, effort, material, etc).

Defect

- A defect is any type of undesired result, a failure to meet one of the expected criteria of your customer; a defective unit may have one or more defects.
- A defect is a failure to conform to requirements whether or not those requirements have been articulated or specified.

Gap Analysis

Gap analysis is done to map the variation, which exists between implied and specified customer requirements and existing process.

Inspection Plan

What is an inspection plan?
1. Check machine tool for accuracy
2. Select the critical and important dimensions to inspect
3. Select the measuring instruments
4. Construct SPC charts for all dimensions

The general purposes of a Plan are these: To identify the goal(s) to be achieved; to specify the best route (methods, processes) for arriving at the goal(s); to catalogue resources (tools, time) needed to pursue the chosen route; to assign responsibilities for controlling and consuming those resources; and to secure agreement by relevant stakeholders. (This is not an exclusive list!)

Management
Management is a rational social phenomenon based on planning, organising, directing, coordinating, staffing, and control principles. It aims a facilitating individuals and people to establish their organizations and projects for accomplishing their objectives and the organization's purposes efficiently and effectively, it could be a process, system or behaviour. It can be applied to people, things, ideas, and on any activity or function.

Preventive Action
Long term cost/risk weighted action taken to prevent a problem from occurring, based on an understanding of the product or process. Preventive action will address inadequate conditions which may produce non-conformances.

Quality Assurance
Quality assurance is a planned and systematic set of activities to ensure that variances in processes are clearly identified, assessed and improving defined processes for fulfilling the requirements of customers and product or service makers.

Quality assurance is also a planned and systematic pattern of all actions necessary to provide adequate confidence that the product optimally fulfils customer's expectations.

A planned and systematic set of activities to ensure that requirements are clearly established and the defined process complies with these requirements.

Quality Attribute
A property of a work product or goods by which it's Quality will be judged by some Stakeholder or stakeholders. Quality attributes are and should be quantifiable in specifications by the definition of some appropriate and practical scale of measure.

Quality Control
- The managerial process during which actual process performance is evaluated and actions are taken on unusual performance.

- It is a process to ensure whether a product meets predefined standards and requisite action taken if the standards are not met.

- Quality Control measures both products and processes for conformity to quality requirements (including both the specific requirements prescribed by the product specification, and the more general requirements prescribed by Quality Assurance); identifies acceptable limits for significant quality attributes; identifies whether products and processes fall within those limits (conform to requirements) or fall outside them (exhibit defects); and reports accordingly.

- Correction of product failures generally lies outside the ambit of Quality Control; correction of process failures may or may not be included.

Quality Improvement
Improvement is a systematic and continuous activity to improve all processes and systems in the organization to achieve optimal level of performance or the organised creation of beneficial changes in process performance levels.

Quality Management
Quality management is a systematic set of activities to ensure that processes create products with Maximum Quality at minimum Cost of Quality. The activities include Quality Assurance, Quality Control, and Quality Improvement.

Quality Record
Quality record indicates that a control has been made or an observation has been done.

Supplier
A supplier is a person or an organization that provides products. Suppliers can be either internal or external to the organization. Internal suppliers provide products to people within their own organization while external suppliers provide products to other organizations. Examples of suppliers include organizations and people who produce, distribute, or sell products, provide services, or publish information.

SWOT Analysis
It refers to a scan of the internal and external environment during strategic planning process.

Environmental factors internal to the firm are classified as strengths (S) or weaknesses (W), and environmental factors external to the firm are classified as opportunity (O) or threats (T).

Such an analysis of the strategic environment is referred to as a SWOT analysis.

The SWOT analysis provides information that is helpful in matching the firm's resources and a capability to the competitive environment in which it operates. As such, it is instrumental in strategy formulation and selection.

Top Management
Top management refers to a person or a group of people at the highest level within an organization. It refers to the people who coordinate, direct and control organizations.

The term management refers to all the activities that are used to coordinate, direct, and control an organization. The term management does not refer to people, it refers to activities.

Total Quality Management
A conceptual and a philosophical context which requires management and human resources commitment to adopt a perpetual improvement philosophy, through succinct management of all

processes, practices and systems throughout the organization to achieve effectiveness in the organizational performance and fulfilling or exceeding the community expectations.

Traceability
Traceability is the ability to identify and trace the history, distribution, location and application of products, parts and materials. A traceable system follows the trail as products, parts, and materials come from suppliers and are processed and ultimately distributed as end products.

Waste
Waste in a process is any activity that does not result in moving the process closer to the final output or adding value to the final output.

Verification
Verification is a process. It uses objective evidence to confirm that specified requirements have been met. Whenever specified requirements have been met, a verified status is achieved.

In the context of this standard, the term verification is used in at least two different situations: design and development and purchasing.

Design and development verifications use objective evidence to confirm that design and development outputs meet specified input requirements. Similarly, objective evidence must be used to verify or confirm that purchased products meet specified purchasing requirements.

There are many ways to verify that requirements have been met. For example, you could do tests, perform demonstrations, carry out alternative calculations, compare a new design specification with a proven design specification, or you could inspect documents before you issue them.

Work Environment
The term work environment refers to working conditions.

It refers to all of the conditions and factors that influence work. In general, these include physical, social, psychological, and environmental conditions and factors.

Work environment includes lighting, temperature, and noise factors, as well as the whole range of ergonomic influences.

It also includes things like supervisory practices as well as reward and recognition programmes.

All of these things influence work.