Effective MANAGEMENT OF INFORMATION AND KNOWLEDGE

The components of IKM

A knowledge-intensive organisation is committed to creating, applying, measuring and managing information, knowledge and Intellectual capital as well as its other assets.

Intellectual capital **(IC)** has two components: human capital **(HC)**, in our case the research staff, and intellectual outputs **(IO)**, which are the research results of the MRC. Therefore, Heckrath defines intellectual capital as follows: **IC = HC + IO**.

Any research organisation, including the MRC has hard assets, e.g. lab and office equipment, blood pressure monitors, etc. Then there are funding and funding sources, research processes and IC - these are also known as the knowledge assets.

The process of IKM

This leads us to the question, what then is IKM? The answer is found in applying the process described above to the creation, application, measurement and management of knowledge assets.

Certain issues face information and knowledge managers, and we can identify two major problem areas, which are related to information and time.

We should ask ourselves how we spend our time? Is it by collecting, processing and disseminating information to produce reports of various kinds, i.e. progress, technical, budget to actual reports, expenses and other paperwork?

Is what we ideally should be doing the same as what we are actually doing? In the following diagram we can in fact see that a time gap is created between what we ideally should be doing and what we actually do.

IDEAL		ACTUAL
Planning research	↔	Administering research
Developing assets		Administering assets
Optimising research outputs		Budget requests
creating impact	The TIME gap	Reporting expenses, etc

Therefore, we need to provide better information by making this easily accessible, giving accurate information and breakdowns; providing historical figures and details; using 'cut and paste' reporting templates; and ultimately creating less paperwork. Our time will be utilised more efficiently with the automation of processes and implementation of effective systems.

To enable provision of better information and time management, we need to look at some newer paradigms in information technology:

Employee self-service (ESS)

In the past, the method followed was one of information flow via paper, or the traditional approach. However, the ESS approach offers direct access to data by users, see the following flow diagram:

The traditional approach		
Information Knowledge Management Directorate	↔	Users
Custodians of data		User of data
Centralised		Distributed
No control		Control
Responsibility		No responsibility
The ESS approach		
Custodians of data		Users of data
Distributed		Distributed
Control		Responsibility

The ESS approach clearly leads to empowerment and transparency, and is therefore suggested as the preferred approach.

Workflow systems

The traditional approach involved multiple copies of paper moving from desk to desk, whereas the workflow system, which involves electronic moving of data, allows the system to do the work:

Traditional	vs	Workflow systems
Paper gets lost		No paper to get lost
Delays in attending to these (in-tray syndrome)		Automatic system alerts prevent in-tray syndrome
Multiple copies are needed		Built-in standards can be applied to processes
It is expensive		Automatic escalation process to prevent in-tray syndrome
		System reminders for critical documentation
Trees have to die		Trees get to live

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You have to agree that the workflow system is more advantageous than the traditional approach ever can be.

These systems provide for the following:

Data accessibility systems

- easy availability of necessary data;
- data search facility;
- pre-formatted reports;
- user-customisable reports;
- free-format report generation;
- 'cut and paste' report generation;
- interface to other data sources (import and export).

Web enablement

- puts system power in the users' hands – any time;
- connects users without geographical constraints;
- creates 'collaboration communities' of users;
- allows work anywhere/anytime there is a connection;
- provides a genuine 'user-friendly' user-system interface;
- low cost systems and system maintenance;
- easy installation and user training;
- facilitates information exchange.

The way we can apply newer information technology concepts to information and knowledge management can be explained in two steps:

Step 1 Understand a few truths

People power is valuable... machine power is cheap.
People should not waste time on tasks that a machine can do.
Apply people to creating information and knowledge.
Apply machines to managing information and knowledge.

Step 2 Apply these truths

Focus on activities that produce outputs – not paper
Research people must be applied creatively – not administratively
Use electronic systems for knowledge asset management – systems that:

- are transparent;
- are web-enabled;
- have embedded workflow functionality;
- provide functional data access facility;
- focus on ESS.

The benefits of applying management of information and knowledge effectively, as described in the foregoing, are:

- better information flow;
- more time to focus on output-related tasks;
- more funding applied to research;
- increased operational effectiveness;
- improved innovation processes;
- existing systems supplemented and enhanced;
- more impact by MRC on South African health;
- more trees.

The right/correct information and knowledge management support systems will afford the MRC the opportunity to better address its strategic and operational goals.

This will extend the influence of the MRC within the local and global, publicly funded and commercial communities, thus promoting the MRC to a true leadership position in research and innovation.