



Laboratory Quality Management System

Module 18: Information Management

Venue:

Presenter:

Date:

Introduction

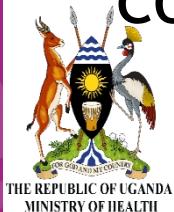
- Information management is a system that incorporates all the processes needed for effectively managing data—both incoming and outgoing patient information.
- The information management system may be entirely paper-based, computer-based, or a combination of both.



Learning Objectives

At the end of this activity, you will be able to:

- Describe important elements of an information management system.
- Explain things to consider when developing a manual, paper-based information system.
- Describe the advantages and disadvantages of a computerized information management system.



Module Outline

- Elements of information management
- Manual paper - based system
- Computerized Laboratory Information System



Activity 18-1

Assessing the Relevancy of a Computerized Laboratory Information System

Purpose: 10 minutes



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Scenario

“You manage a laboratory for a 300 bed hospital and the administrator has just notified you that funds are available for the purchase of a computerized laboratory information system.”



How do you assess the relevancy of such a system for your laboratory?



The Quality Management System



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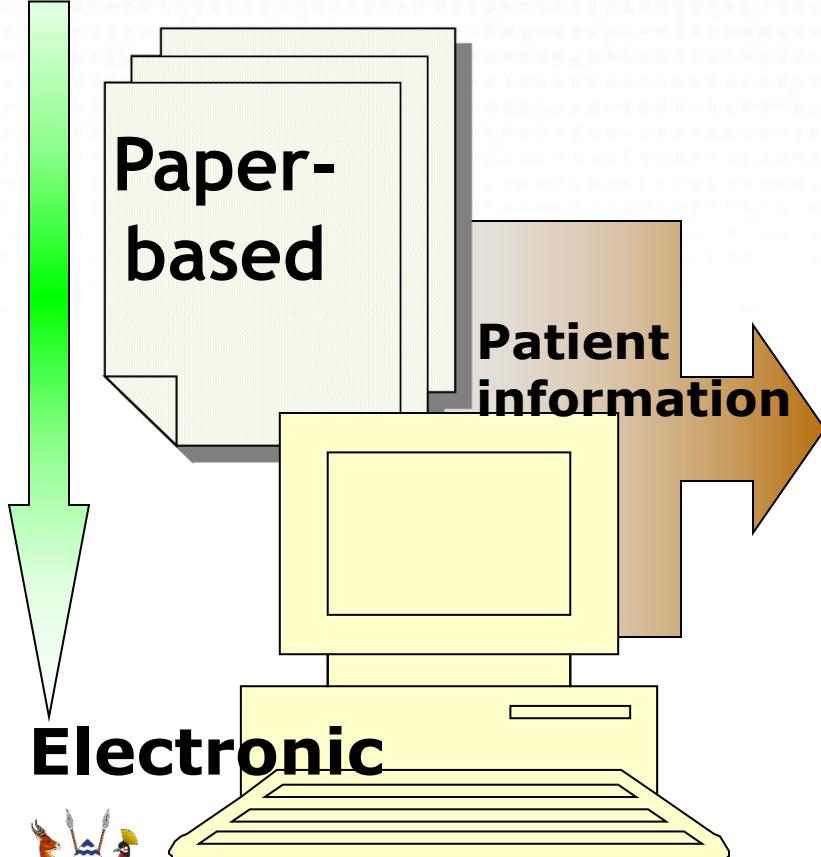
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- The test result is the final product of the laboratory.



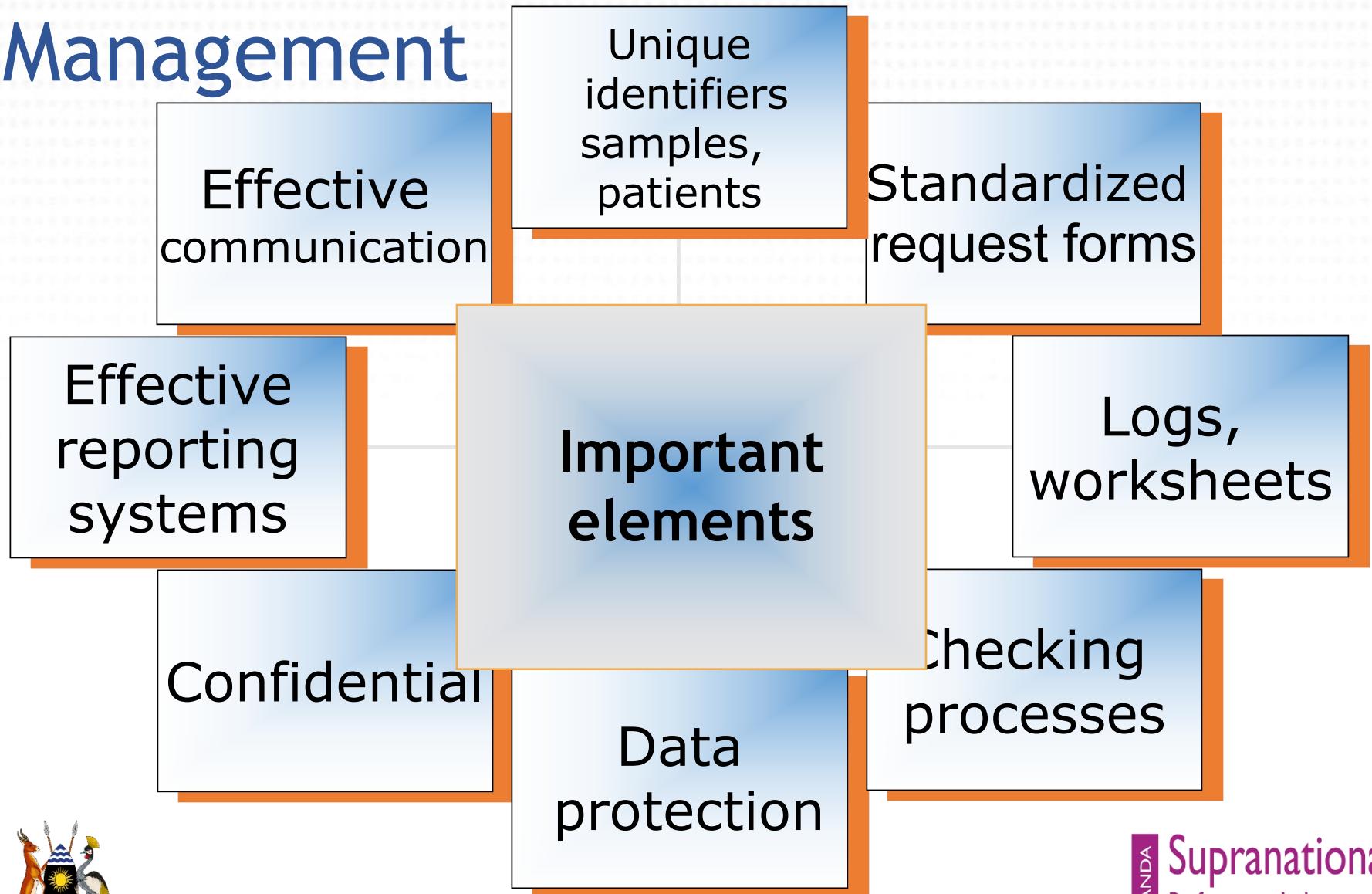
Information Management

Establish processes for managing data



Quality Lab Report	
	ID 0905120047
	accessible
	accurate
	timely
	secure
	confidential
	private

1. Elements of Information Management



Unique Identifiers

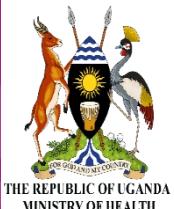


Patient
identifiers



Laboratories need to assign unique sample identifiers:

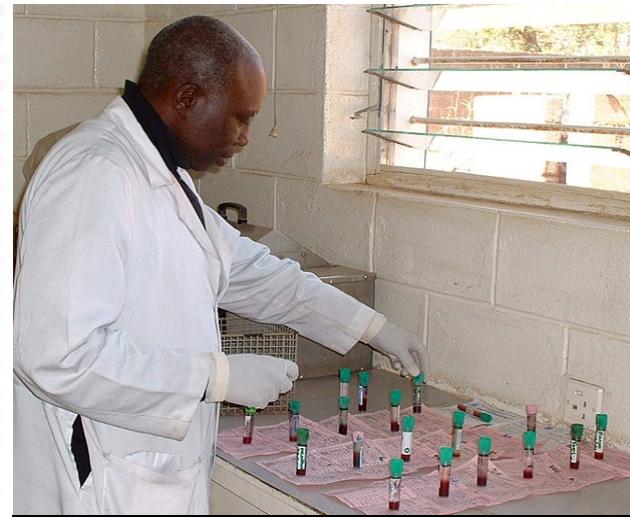
Code: YYMMDDXXXX - 0905120047 means
sample #47
received on May 12, 2009



Test request form

*****QUALITY LAB*****
Test order form

Patient name:
 DOB
 Address/Ward:
 Doctor:
 Sample:
 Date: Time: _____



Laboratory



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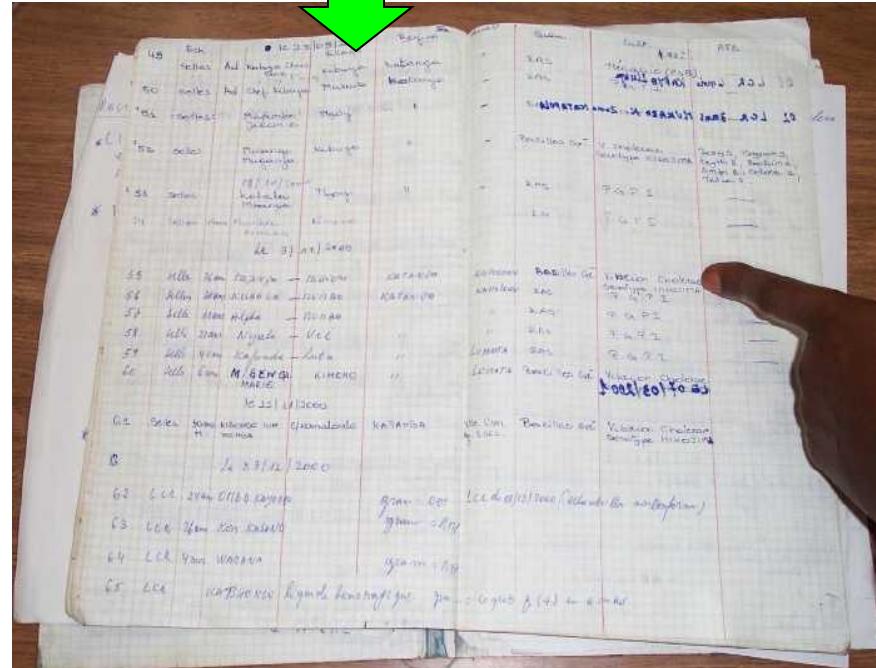
ISO
requiremen
t

Logs/worksheets and checking processes

.....

<input checked="" type="checkbox"/>	****QUALITY LAB****
<input checked="" type="checkbox"/>	Test order form
<input checked="" type="checkbox"/>	Patient name:
<input checked="" type="checkbox"/>	DOB
<input checked="" type="checkbox"/>	Address/Ward:
<input checked="" type="checkbox"/>	Doctor:
<input checked="" type="checkbox"/>	Sample:
<input checked="" type="checkbox"/>	Date:
	Time: <input type="text"/> <input type="text"/>

Laboratory



Data Protection

Paper-based systems

- use durable materials for recording
- store records properly

Computerized systems

- schedule regular backup of data



Protect confidentiality / security

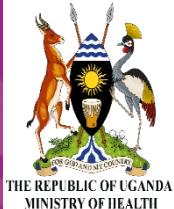
The laboratory director is responsible for establishing policies and procedures to:

- 📖 safeguard a patient's privacy
- 📖 assure laboratory data confidentiality



Test results reporting systems

	Patient: Mary J Johnston DOB: 28 Mar 1949 Address: 1234 Littletown Road, Bergly Bay Patient ID No.: ab907823_001
Quality Lab Report	timely
ID 0905120047	accurate
Sample: MSU	legible
Test: C&S	
Report to: Dr RB Brown	easily understood
Date: 09.06.27	



Communication

Develop a good system for communication

within the laboratory

with clients

other health care providers

reference laboratories

with official agencies



Different



Data incomplete

Computer systems incompatible

ID insufficient

Common problems

Transmission errors

Forms inadequate

Data organized poorly

Archiving poor



2. Manual paper-based system

Requires registers and logs with good design that are:

- 📖 practical to use and easy to complete
- 📖 make it easy to find data
- 📖 make summarizing data and writing reports easier



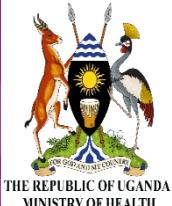
Data entry

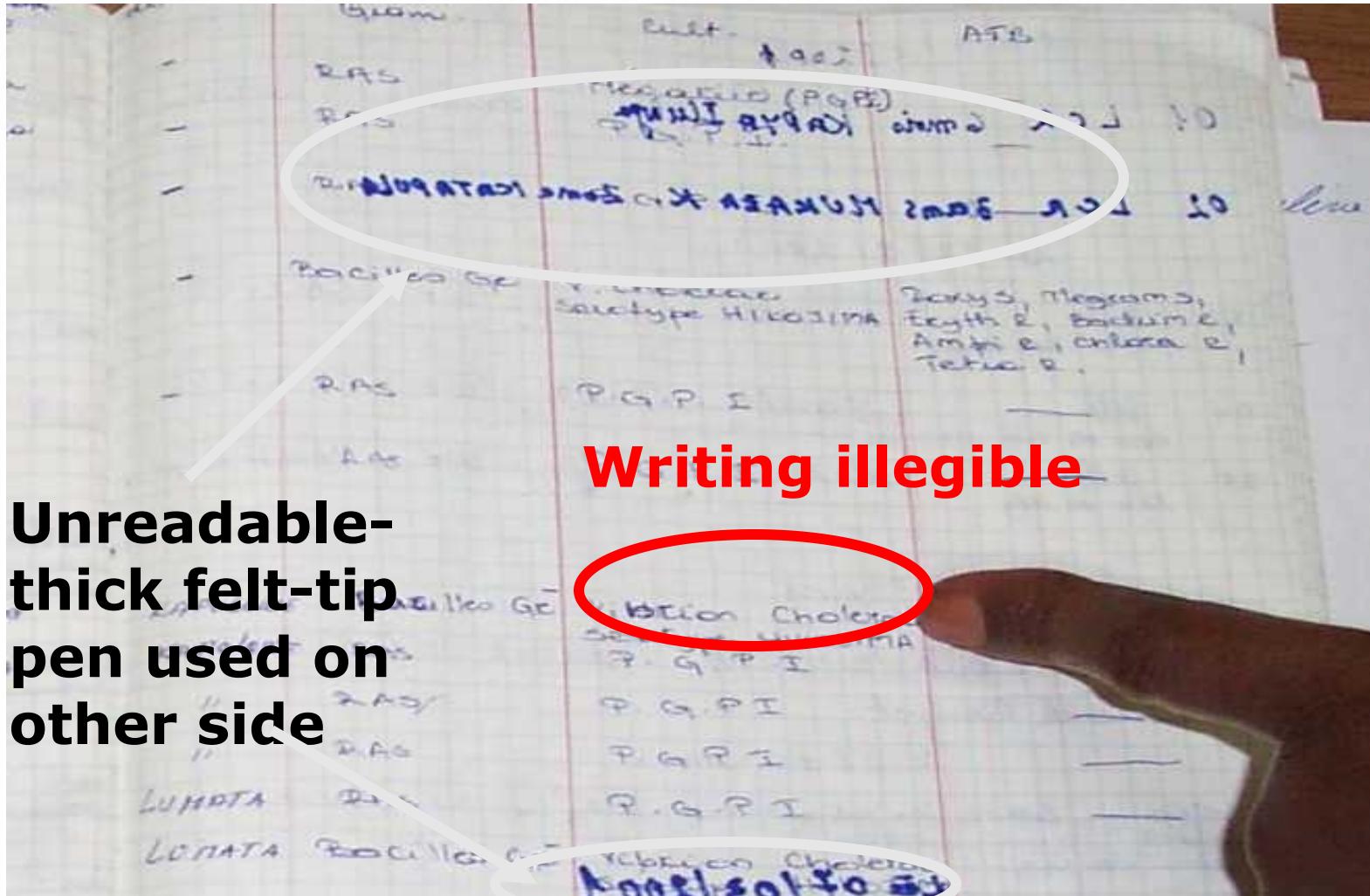
*	53	Sellos	19/10/2000 Kolala Mpanga	"	-	-
*	54	Sellos	14ans Mumbwa Kimono Le 1/11/2000	"	-	-
*	55	Sellos	36ans 14jrs po - Mission	KATANGA	KAPOLONE	Basilico
*	56	Sellos	30ans KIBOMBO - RUMBA	KATANGA	KAPOLONE	RAS
*	57	Sellos	14ans Alpha - RUMBA	"	"	RAS
*	58	Sellos	23ans Nyala - Vie	"	"	RAS
*	59	Sellos	44ans Cafunda - Luta	"	LUMATA	RAS
*	60	Sellos	6ans MISENGA MARIE Le 22/11/2000	"	LUMATA	Bacille
*			Sellos 50ans KIBOMBO KIM M. WANGA	KATANGA	Ville LISHI Ag. 25E5.	Bacille
*			Le 23/12/2000			
*	62	LCR	24ans OMBA KAYORGO	gram = kwi	Le du 18/12/2000	
*	63	LCR	2ans Kon KASANTO	gram = RNY		
*	64	LCR	4ans WANAAN	gram = RNY		
*	65	LCR	ICAGU NGO	gram de fermentation	92%	Co plus

Age not recorded

Results recorded in village column

Village name not recorded





Unreadable-thick felt-tip pen used on other side

Writing illegible

Manual paper-based system

- final report is primary product - make it professional
- need a system for obtaining duplicates or copies of reports for archiving
- assure safe storage of paper records



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Manual paper-based system-storage

Goals:

- find results
- trace samples
- evaluate occurrences

Useful rules:

- keep everything for a designated time
- ensure easy access
- use a logical system for filing
- number in chronological order





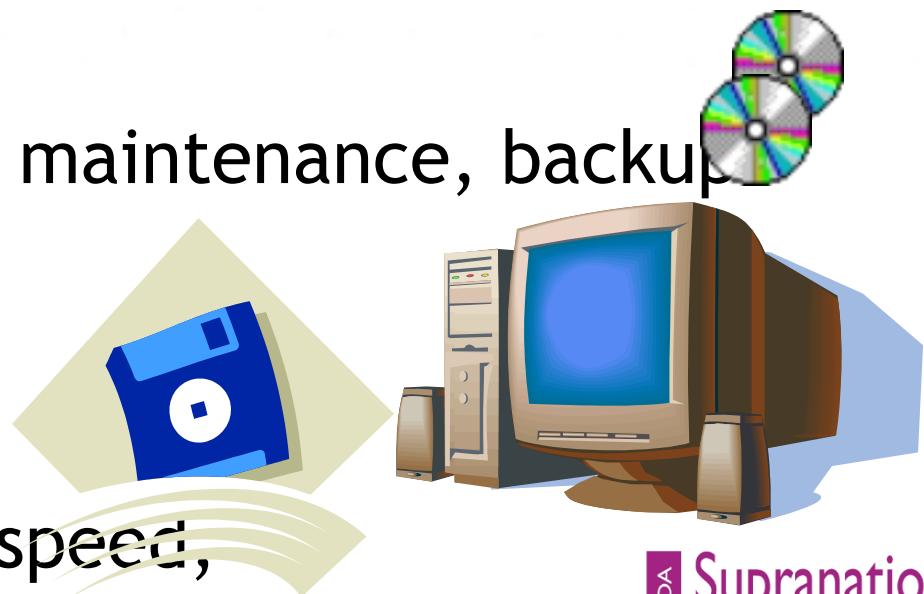
3. Computerized LIMS

Software options

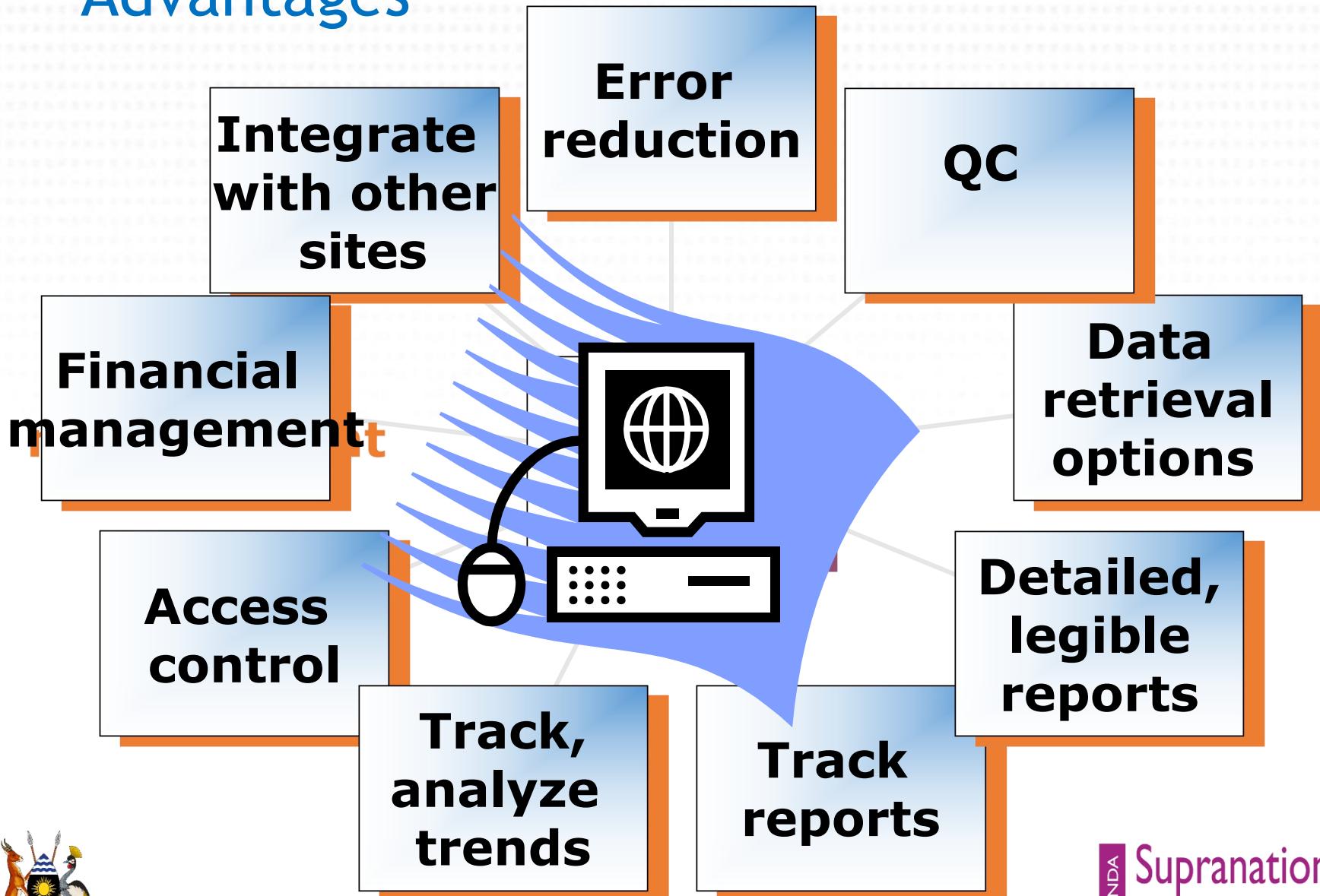
- in-house developed systems using commercial database software
- fully developed commercial systems

Look for:

- permanence
 - computer system maintenance, backup
- security
 - access
 - confidentiality
- Traceability system speed, flexibility



Advantages



Disadvantages

Back-up requirements

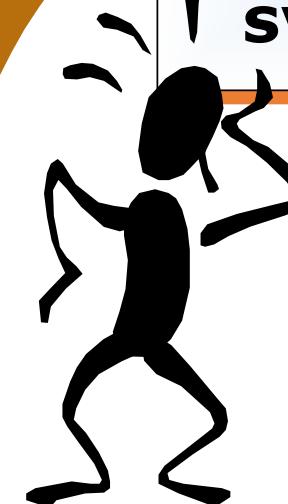


Training:
time
and money

Costs:
purchase
and
maintenance



Adapting
to a new
system



Assessment

- What will a good information management system ensure?



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Summary

- System for managing both incoming and outgoing data.
- May be paper-based or computer-based
- Both require a similar framework, including unique identifiers, forms, logs and worksheets.
- Cost is a major factor in using a computer-based system.



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Key Messages

A good information management system will:

- ensure all data—the final product of the laboratory—is well managed
- consider all the ways laboratory data will be used when planning a system
- assure the accessibility, accuracy, timeliness, and security of data
- ensure confidentiality and privacy of patient information



Reference



**ISO 15189:2012 Medical Laboratories -
Requirements for Quality and Competence**

« Clause 5.8, 5.9, & 5.10»



CLSI



ASLM



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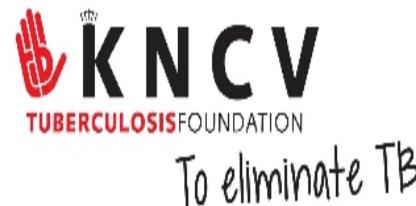
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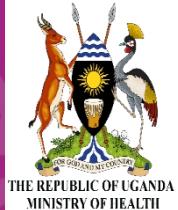
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Acknowledgement



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