

ICT Enabled Systems

SEMIS UON

Seed Enterprises Management Institute

University of Nairobi

Dr. Hillary T. Nyang'anga

Gap In the Industry

- Seed is key to improving agricultural productivity across the sub-Saharan Africa
- Crop Varieties/Seeds varieties are specific to various factors which include, temperature, rainfall, soil type, climatic zone, season, soil moisture content, source, generation among others

Notes

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- Regions in Sub-Saharan Africa share some of these characteristics
- In addition, some countries within the region over produce quality seeds while other under produce.
- The countries which produce excess of what is demanded end up with some wastages or over stayed seed while countries which under produce quality certified seeds under supply their countries.

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- Semis has over the years trained seed experts across the region, however the players do not know each other or if they do, very little is done in terms of sharing seed varieties across their borders.
- More over, several sub-Saharan Africa countries Government have heavily invested in ICT in the past decade
- It is for this purpose that the need for a seed marketing platform arise.

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Information Systems

Information system, an integrated set of components for collecting, storing, and processing data and for providing information, knowledge, and digital products.

Business firms and other organizations rely on information systems to carry out and manage their operations, interact with their customers and suppliers, and compete in the marketplace.

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Information Systems

- Information systems are used to run interorganizational supply chains and electronic markets. For instance, corporations use information systems to process financial accounts, to manage their human resources, and to reach their potential customers with online promotions.
- Many major companies are built entirely around information systems. These include eBay; Amazon, Alibaba, and Google

Notes

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Types of Information Systems

- Transaction Processing Systems (TPS)
- Decision Support Systems (DSS)
- Expert Information Systems (EIS)
- Management Information Systems (MIS)
- Office Automation Systems (OAS)

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Transaction Processing Systems (TPS)

- A transaction processing system (tps) collects, stores, modifies and retrieves the transactions of an organization. Examples of such systems are automatic telling machines (ATMs), electronic funds transfer at point of sale (EFTPOS – also referred to as POS).
- There are two types of transaction of processing:
- **Batch processing:** where all of the transactions are collected and processed as one group or batch at a later stage.
- **Real-time processing:** where the transaction is processed immediately

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Management Information Systems

- Management Information Systems provide information to managers of an organization.
- This relates to reports, statistics, stock inventories, payroll details, budgets or any other details that assist managers with running an organization. An EIS, executive Information System is a form of MIS designed for upper management and provides information which might help them make decisions on a strategic level about future directions or issues concerning managers. MIS and EIS are really specialist examples of Decision Support Systems (DSS)

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Decision Support Systems

- Decision Support Systems are created to help people make decisions by providing access to information and analysis tools. many stockbrokers now use programs that automatically put in requests to sell shares once they reach a certain price (either high or low).
- A DSS creates a mathematical model of the system which helps decision making about actions affecting a person organization. Another example of a decision support system is the simple analysis tools that banks use to help formulate loans for prospective customers.

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Decision Support Systems

- A DSS allows the users to pose what-if questions and by changing a number of variables and then find out what the outcomes would be
- A DSS depends upon the accuracy of the mathematics involved in creating the model and the ability of the user to accurately interpret the resulting data.

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Expert Systems

- Expert systems help to guide users to find solutions to problems that would otherwise need expert advice. They are useful in diagnosing, monitoring, selecting, designing, predicting and training.
- An expert system will ask the user to answer series of questions after which it will provide a suggested course of action. Expert systems will not take over but requires the user to make the final decision. Expert systems will advise. Some examples of expert systems are programs which help Doctors to diagnose a patient. In fact there are some web sites that will even diagnose patients. Another example of an expert system might be a program where a person puts in all of the vital statistics and then the program helps to advise about a fitness program which that person can then follow.

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Office Automation Systems

- Office Automation Systems are software packages such as MS Office which include word processors, spreadsheets, databases, presentation software, email, internet, desktop publishing programs and project management software. In office automation much work is processed electronically with the aim of saving space, being more efficient, and reducing paper usage. In reality, since office automation began in the mid 1980s, paper usage has soared as more people demand hard copies purely because they are easier to produce. Also as a function of the ease with which documents are produced compared to type writers higher standards of presentation are now expected

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<http://semis-africa.org/shop/>

- SEMIS therefore has developed a platform for seed marketing to help fill this gap
- Practical at: <http://semis-africa.org/shop/>

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Thank You
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