

# Management Information Systems

## Information Systems, Global Business and E-business

Lecturer:

**Richard Boateng, PhD.**

- *Lecturer in Information Systems, University of Ghana Business School*
- *Executive Director, PearlRichards Foundation, Ghana*

Email:

**[richard@pearlrichards.org](mailto:richard@pearlrichards.org)**



## Class Website

- **[www.vivaafrika.info](http://www.vivaafrika.info)**



**Use the class website WEEKLY, ask/comment on the articles on MIS and JOIN the FACEBOOK**

**Please Add your name and the course code**

- Group Term Paper and Presentations - **20%**
- Assignments & Participation - **10%**
- Exam - **70%**



### Chapters 1 and 2 of Laudon and Laudon (2011) Selected readings on class website

Laudon, K. C. and Laudon, J. P. (2011) Management Information Systems: Managing the Digital Firm. 12th Edition, Pearson Education Inc., Upper Saddle River, NJ 07458.

## LEARNING OBJECTIVES

**This session seeks to introduce the course and also explain the basic concepts of information systems, the digital firm and e-business. Learning objectives include:**

- 1. Understand information systems and how they are used in organizations.**
- 2. Describe how Internet technology has changed businesses.**
- 3. Identify the various types of information systems in organizations.**

Case Study: Adidas Eyewear Customization (2010)

## mi ADIDAS

[www.customize-eyewear.com](http://www.customize-eyewear.com)  
visit and create your own eyewear



customize  
eyewear

millions of combinations



share

help start again

euro\*  
99,00

your customize id

1 1 4 c 3 3

save style buy at

select shape

click a part to select color

# Visit Nike ID – [www.nikeid.com](http://www.nikeid.com) create your own shoe

**Tip and Heel** ✕

Choose a material

Full-Grain Leather ▾

Choose a color

■ ■ ■ ■ ■ ■ ■ ■ ■ ■



Nike Air Mogan ID Shoe  
\$105.00

DESIGN PROGRESS

10/10

Close ▾

Color

■ Tip and Heel

■ Base

■ Collar

■ Swoosh

■ Accent

■ Lining

■ Lace

Midsole

Size —

Add To Cart

Share

Save

More Views +



Shop All Departments

Search

Shoes & Accessories

[Brands](#)

[Bestsellers](#)

[Women's Shoes](#)

[Men's Shoes](#)

[Children's Shoes](#)

[Athletic & Outdoor Shoes](#)

## Dune Women's Alexi Flat

Dune

[Be the first to review this item](#) Like (0)

RRP: ~~£85.00~~

Price: **£25.50** & this item **Delivered FREE in the UK** with

[See details and conditions](#)

You Save: **£59.50 (70%)**

Size:

Select

[Sizing info](#)

Colour: **Natural**







## Osei Kwame Prempeh: One Year Rememberanc...

Journeying over many seas and through many countries we came dear Nana Kwame to this pitiful leave-taking the last gestures by your graveside the futility of words over your quiet remains.

|| > 1 2 3 4 5 6 7 8 9 10

### Welcome

Funeral planning is something most of us will have to do at one point in our lives, but how do you do it? Are you getting good value for your money? What do you really need? What do you have to do? Send us your funeral information for publication. It's FREE!!!

### Funerals In Ghana

Funeralsinghana.com is a FREE consumer information and education resource on funeral planning, financing funerals, funeral products, services, funeral newspaper online obituaries, videos, photos, tit-bits and more. Accessing information here is actually FREE!!!

## The Editor of The Spectator, Mr. Merari Alomele, is dead.

**WHAT A SHOCK**

Alor, as he was affectionately called, was the author of the popular 'Sikaman Palava' column – which won him

search...

Search

### One Year In Memorial



**One year in memorial**

Fondly remembered by  
your son Afotey Odarteifo,  
your siblings Esther,  
Emmanuel and Solomon,  
your grandchildren  
and the entire family.

Memorial service will be  
held at Alive Chapel Tesano  
on Sunday 28th November, 2010

**Madam Rose  
Dede Tetteh**

### Please Make a Donation

Thank you for your donation.

Amount:  EUR



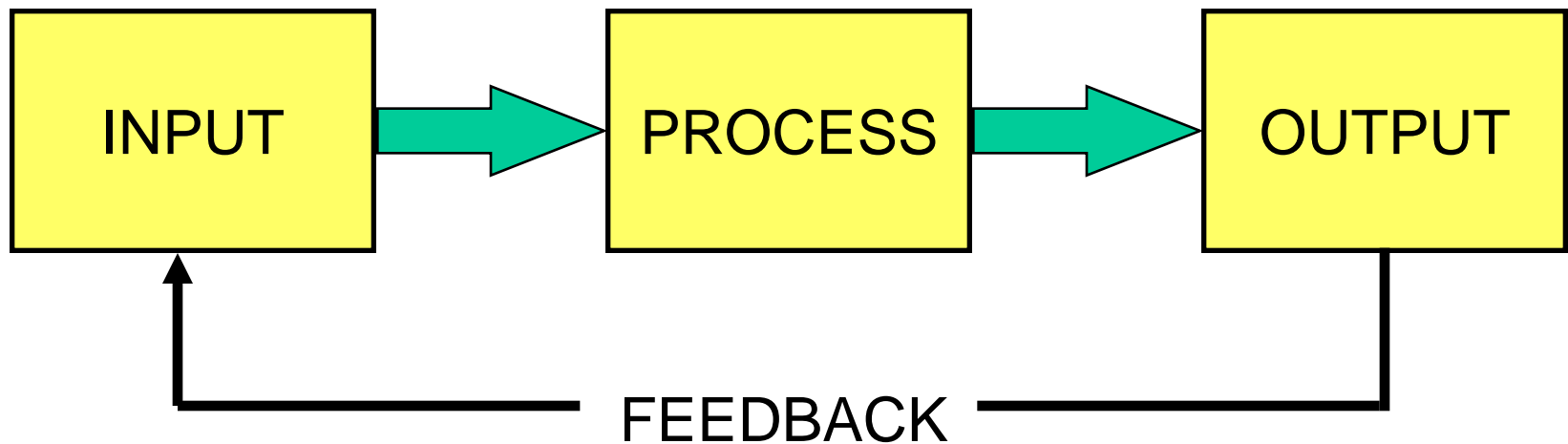


## What is an information system?



- **Information system:**
  - Set of interrelated components
  - Collect, process, store, and distribute information
  - Support decision making, coordination, and control
  
- **Information System**
  - IT + People + Processes and Policy

## Activities in an Information System



## Perspectives on Information Systems

- **Information system:** Three activities produce information organizations need
  - **Input:** Captures raw data from organization or external environment
  - **Processing:** Converts raw data into meaningful form
  - **Output:** Transfers processed information to people or activities that use it

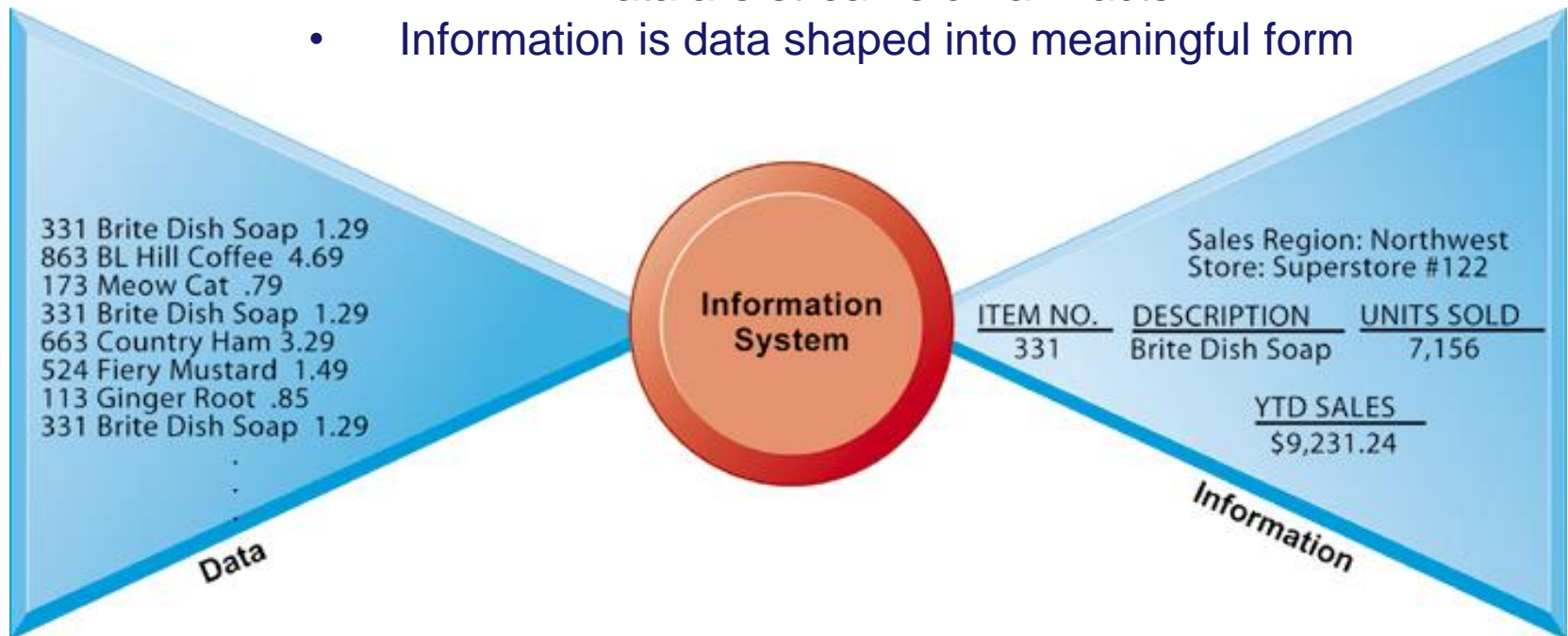
## Perspectives on Information Systems

- **Feedback:**
  - Output returned to appropriate members of organization to help evaluate or correct input stage
- **Computer/Computer program vs. information system**
  - Computers and software are technical foundation and tools, similar to the material and tools used to build a house

## Data and Information

### Information vs. data

- Data are streams of raw facts
- Information is data shaped into meaningful form



Raw data from a supermarket checkout counter can be processed and organized to produce meaningful information, such as the total unit sales of dish detergent or the total sales revenue from dish detergent for a specific store or sales territory.

## Business Processes and Information Systems

- **Business processes:**
  - Workflows of material, information, knowledge
  - Sets of activities, steps
  - May be tied to functional area or be cross-functional
- **Businesses:** Can be seen as collection of business processes
- Business processes may be assets or liabilities



## Business Processes and Information Systems

- **Examples of functional business processes**
  - **Manufacturing and production**
    - Assembling the product
  - **Sales and marketing**
    - Identifying customers
  - **Finance and accounting**
    - Creating financial statements
  - **Human resources**
    - Hiring employees

# Types of Information Systems

**1. Executive Support System (ESS)**

Strategic-Level

Plan and Project,  
Forecast  
- Senior Managers

**2. Decision Support Systems (DSS)**

Management-Level

Decision Analysis;  
Summary Reports  
- Staff Managers &  
Middle Managers

**3. Management Information Systems (MIS)**

Knowledge-Level

Models; Graphics;  
Documents & Mail  
- Professionals &  
Clerical Workers

**4. Knowledge Work Systems (OS)**

**5. Office Systems (OS)**

Operational-Level

Sorting; lists; Detailed  
Reports; Pay Slips  
- Operations  
Personnel; Supervisors

**6. Transaction Process Systems (TPS)**

## Systems that Span the Business

SAP ERP:

Human Resource Systems - Leave Request  
Example

Executive Support Systems – Sales Planning and  
Forecasting

<http://vivaafrika.info/videos-on-technology-and-business/>

## Types of Business Information Systems

- **Transaction processing systems**
  - Perform and record daily routine transactions necessary to conduct business
    - Examples: sales order entry, payroll, shipping
  - Allow managers to monitor status of operations and relations with external environment
  - Serve operational levels
  - Serve predefined, structured goals and decision making

## Types of Business Information Systems

- **Management information systems**
  - Serve middle management
  - Provide reports on firm's current performance, based on data from TPS
  - Provide answers to routine questions with predefined procedure for answering them
  - Typically have little analytic capability

## Types of Business Information Systems

- **Decision support systems**
  - Serve middle management
  - Support nonroutine decision making
    - Example: What is impact on production schedule if December sales doubled?
  - Often use external information as well from TPS and MIS
  - Model driven DSS
    - Voyage-estimating systems

- **Executive support systems**

- Support senior management
- Address nonroutine decisions requiring judgment, evaluation, and insight
- Incorporate data about external events (e.g. new tax laws or competitors) as well as summarized information from internal MIS and DSS
- Example: ESS that provides minute-to-minute view of firm's financial performance as measured by working capital, accounts receivable, accounts payable, cash flow, and inventory

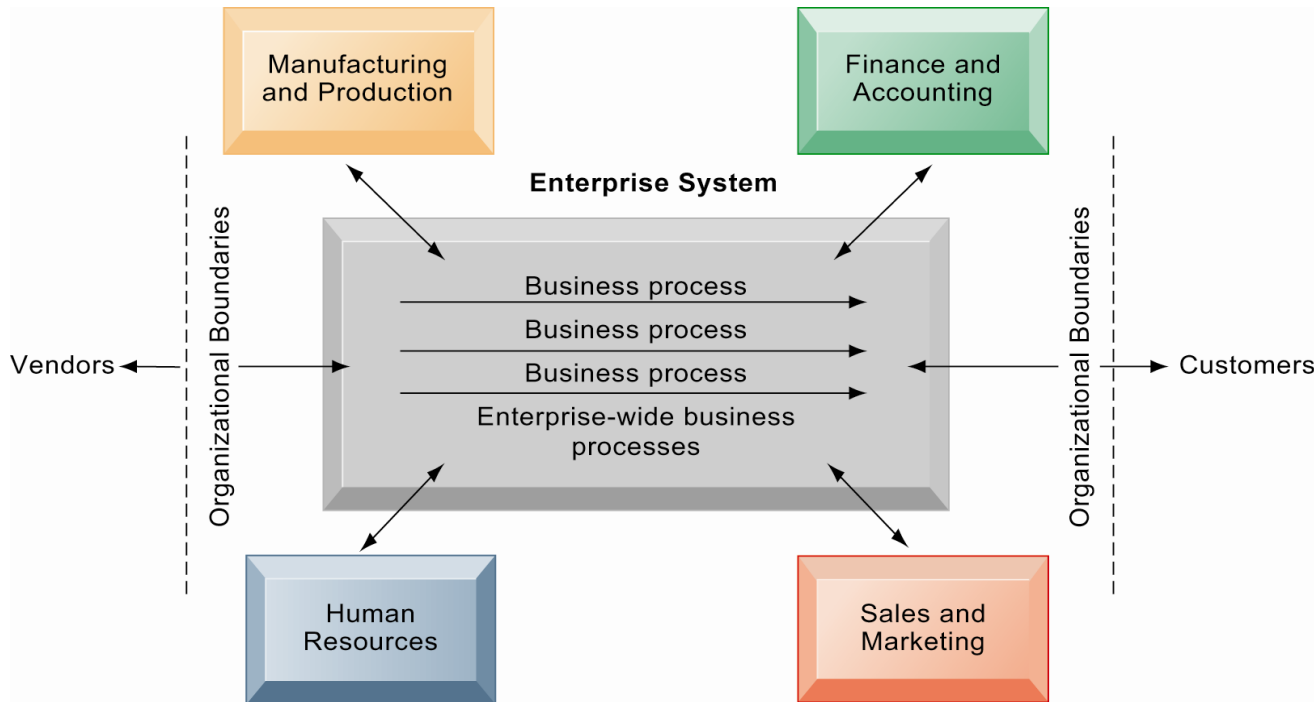
- **Systems from a constituency perspective**
  - **Transaction processing systems: supporting operational level employees**
  - **Management information systems and decision-support systems: supporting managers**
  - **Executive support systems: supporting executives**



## Systems That Span the Enterprise

- **Enterprise applications**
  - Span functional areas
  - Execute business processes across firm
  - Include all levels of management
  - Four major applications:
    - a) Enterprise systems
    - b) Supply chain management systems
    - c) Customer relationship management systems
    - d) Knowledge management systems

### Enterprise Systems



Enterprise systems integrate the key business processes of an entire firm into a single software system that enables information to flow seamlessly throughout the organization. These systems focus primarily on internal processes but may include transactions with customers and vendors.

Figure 2-8

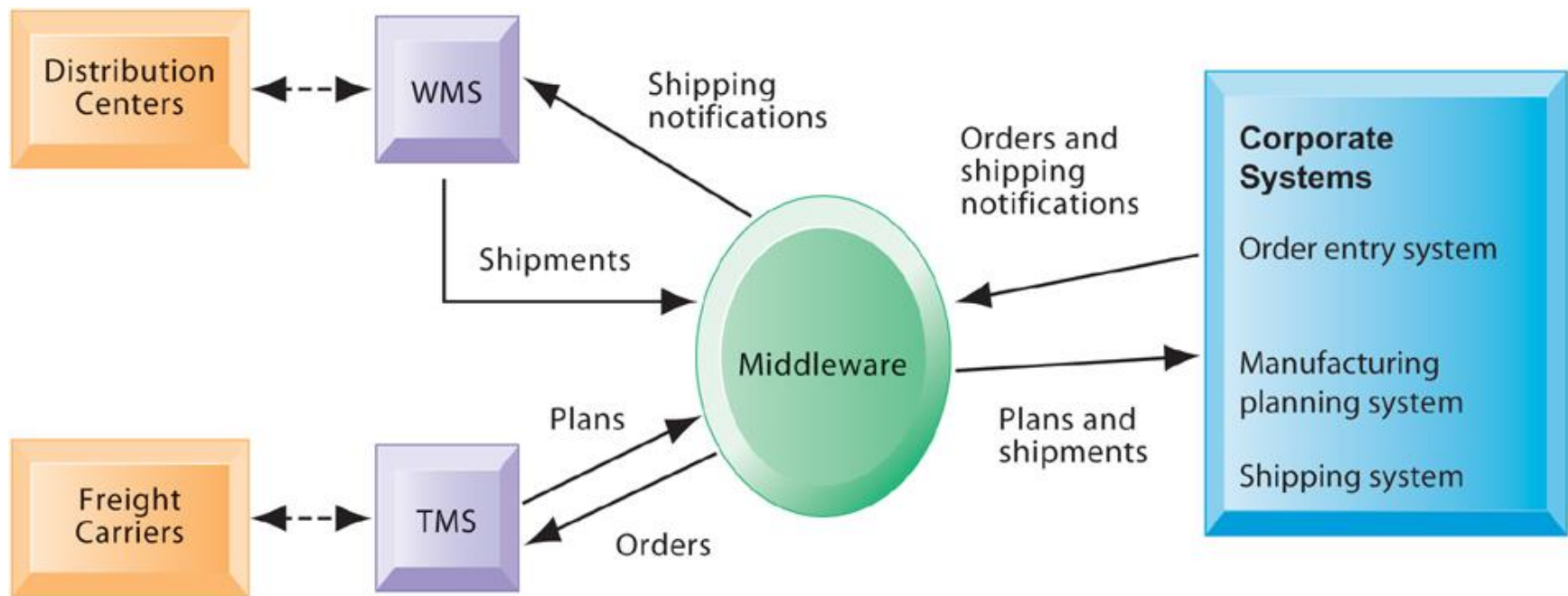
## Systems That Span the Enterprise

- **Enterprise systems**
  - Collects data from different firm functions and stores data in single central data repository
  - Resolves problem of fragmented, redundant data sets and systems
  - Enable:
    - Coordination of daily activities
    - Efficient response to customer orders (production, inventory)
    - Provide valuable information for improving management decision making

## Systems That Span the Enterprise

- **Supply chain management systems**
  - **Manage firm's relationships with suppliers**
  - **Share information about**
    - **Orders, production, inventory levels, delivery of products and services**
  - **Goal: Right amount of products to destination with least amount of time and lowest cost**

## Example of a Supply Chain Management System



Customer orders, shipping notifications, optimized shipping plans, and other supply chain information flow among Haworth's Warehouse Management System (WMS), Transportation Management System (TMS), and its back-end corporate systems.

**Figure 2-9**

## Systems That Span the Enterprise

- **Customer relationship management systems:**
  - Provide information to coordinate all of the business processes that deal with customers in sales, marketing, and service to optimize revenue, customer satisfaction, and customer retention
  - Integrate firm's customer-related processes and consolidate customer information from multiple communication channels



## So what is the DIGITAL FIRM?





A firm which uses information systems to become networked and decentralized and to digitalize their business processes and foster innovation and creativity.





- **Electronic Commerce:** Sharing business information, managing business relationships and facilitating transactions with Internet technology. (linking buyers and sellers).



- **Electronic Business:** Executing all the firm's business processes with Internet technology. (sales, finance, human resources, manufacturing)

- **Intranet:** Business builds private, secure network based on Internet technology

- **Extranet:** Extension of intranet to authorized external users

## Systems That Span the Enterprise

- **Intranets:**
  - Internal networks built with same tools and standards as Internet
  - Used for internal distribution of information to employees
  - Typically utilize private portal providing single point of access to several systems
  - May connect to company's transaction systems

## Systems That Span the Enterprise

- **Extranets:**
  - Intranets extended to authorized users outside the company
  - Expedite flow of information between firm and its suppliers and customers
  - Can be used to allow different firms to collaborate on product design, marketing, and production

## Systems That Span the Enterprise

- **E-business (Electronic business):**
  - Use of digital technology and Internet to execute major business processes in the enterprise
  - Includes **e-commerce** (electronic commerce):
    - Buying and selling of goods over Internet
- **E-government:**
  - The application of Internet and networking technologies to digitally enable government and public sector agencies' relationships with citizens, businesses, and other arms of government

## The Role of Information Systems in Business Today

- **Growing interdependence between ability to use information technology and ability to implement corporate strategies and achieve corporate goals**
- **Business firms invest heavily in information systems to achieve six strategic business objectives:**
  - Operational excellence
  - New products, services, and business models
  - Customer and supplier intimacy
  - Improved decision making
  - Competitive advantage
  - Survival

## The Role of Information Systems in Business Today

- **Operational excellence:**
  - Improvement of efficiency to attain higher profitability
  - Information systems, technology an important tool in achieving greater efficiency and productivity
  - Nike ID, BMW USA – linking the website with suppliers
- **New products, services, and business models:**
  - Business model: describes how company produces, delivers, and sells product or service to create wealth

## The Role of Information Systems in Business Today

- **Improved decision making**
  - Without accurate information:
    - Managers must use forecasts, best guesses, luck
    - Leads to:
      - Overproduction, underproduction of goods and services
      - Misallocation of resources
      - Poor response times
    - Poor outcomes raise costs, lose customers
  - Example: **www.ibrokerghana.com** – check and manage your shares online.

**Main Menu**

- Home
- About i-Broker
- Open Account
- Trade & Track Online
- News & Market Information
- Downloads
- Contact Us

We increase your  
**Cash Flows**

Profit is an opinion,  
cash is a fact

**Latest Events**

Fri, Jan 20th, @9:00am - 01:00PM  
Ecobank Ghana Limited-EGM  
Notice

January 2012						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

**Live Chat**

**iBroker Department**  
Online. chat with us

### Welcome to i-Broker Ghana - Hassle Free Investing

i-BROKER Ghana is a free online trading platform designed to help investors trade and monitor their securities on the Ghana Stock Exchange

**Trade From The Web**

**Trade Online Now**

### Open an Account in 3 Simple Steps

1. Fill out an online form
2. Print out completed form
3. Sign and mail form to CAL Brokers Ltd.

**Latest News**

- AGA holds town hall meeting
- Insurance Industry under Threat From Premium Undercutting
- Guinness lists Rights Issue shares
- Recapitalisation Will Not Lead To Takeovers - BoG
- GOIL Holds Goity Day

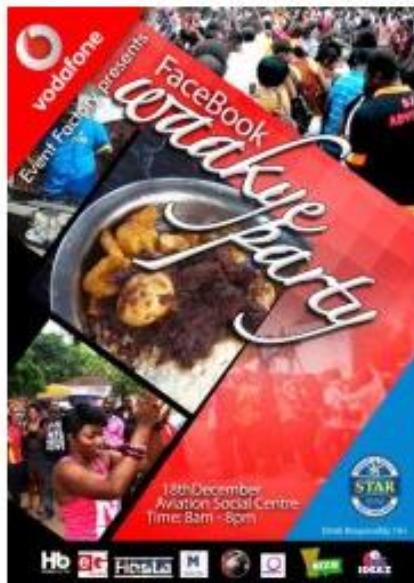
**Quick Links**

Ghana Stock Exchange



### **Customer and Supplier Intimacy:**

- **Customers who are served well become repeat customers who purchase more.**
- **Close relationships with suppliers result in lower costs.**
  - **Cliq from Espresso and Fidelity Bank use facebook to extend customer service**



Wall

Info

Friend Activity

Photos

2,788

like this

3

talking about this

Create a Page

Add to My Page's Favorites

Get Updates via RSS

Unlike

Report Page

Share

# Auntie Muni (Best Waakye Joint in Ghana)

Public Figure · Labone, Accra

Wall Auntie Muni (Best Waakye... · Everyone (Most Recent))

Share: Post Photo Link Video

Write something...



**Auntie Muni (Best Waakye Joint in Ghana)** shared Kobbi Blaq's album: THE WAAKYE EXPERIENCE YOU MISSED.



**THE WAAKYE EXPERIENCE YOU MISSED**

By: Kobbi Blaq  
Photos: 120

Like · Comment · Share · December 20, 2011 at 3:40pm ·



**Auntie Muni (Best Waakye Joint in Ghana)**

GET READY GHANA FOR YOUR MOST ANTICIPATED OUTDOOR EVENT VODAFONE AND STAR BEER PRESENTS TO YOU THE FACEBOOK WAAKYE PARTY JOIN US ON SUNDAY 18TH DEC 2011 AT THE AVIATION SOCIAL CENTRE COME MEET, GREET AND WITNESS THE OFFICIAL LAUNCH OF THE NEW VODAFONE FACEBOOK PHONE. MARK YOUR CALENDERS SYNC YOUR WATCHES PING!!! BROADCAST TWEET UPDATE...JUST DO ALL YOU GOTTA DO.....! IT'S THE 18TH OF DEC AT THE AVIATION SOCIAL CENTRE

Like · Comment · Share · December 9, 2011 at 11:32am ·

9 people like this.

View all 5 comments

**Cobby Richboy Maestro** don't venture

## The Information Systems Function in Business

- **Information systems department:**
  - Formal organizational unit responsible for information technology services
  - Includes programmers, systems analysts, project leaders, information systems managers
  - Often headed by chief information officer (CIO)
- **End-users:**
  - Representatives of other departments, for whom applications are developed

## Information Technology Investment

Considering the context of a developing country like Ghana, is the internet a strategic choice for every firm or otherwise, **should every firm do business online?**



## Class Website

- **[www.vivaafrika.info](http://www.vivaafrika.info)**



**Use the class website WEEKLY, ask/comment on the articles on MIS and JOIN the FACEBOOK**

**Please Add your name and the course code**



**This work is protected by United States copyright laws and is provided solely for the use of instructors in teaching their courses and assessing student learning. Dissemination or sale of any part of this work (including on the World Wide Web) will destroy the integrity of the work and is not permitted. The work and materials from it should never be made available to students except by instructors using the accompanying text in their classes. All recipients of this work are expected to abide by these restrictions and to honor the intended pedagogical purposes and the needs of other instructors who rely on these materials.**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. Printed in the United States of America.

Copyright © 2010 Pearson Education, Inc.  
Publishing as Prentice Hall