ACCG355 Week 1: Every Business Is A Digital Business

- Business model: how a business makes money.
- Companies develop digital business models to deliver an incredible customer experience, turn a profit, increase market share, and to engage their employees.
- Strong relationship between the quality of a firm's customer experience and brand loyalty, which increases revenue.
- Cloud computing is like leasing.
- Internet of Things is about how digital objects connect to each other and the internet.
- Big data is defined as high volume mostly text data (studied in data science)
- Business process is a series of steps which an organisation follows to get work done. Inputs>activities>deliverables. Components: people, technology, information.
- Business processes can be formal (written) or informal.
- Competitiveness depends on IT agility and responsiveness. Includes flexibility. Requires forecasting trends. These three are fully dependent on an organisation's IT infrastructure and architecture.
- Corporate profitability components: industry structure and competitive advantage.
- Strategic planning: SWOT analysis. (strengths and weaknesses (internal), opportunities and threats(external))
- Strategic planning: long term business planning, competitive advantages, etc.
- Porter's 5 Forces model,
    - Threat of substitutes: pharmaceutical company – high-end brands vs. generic brands for medicine.
    - Threat of new entrants: new fast food places. Barriers to entry exist and make it hard for small companies to break into the market.
    - Bargaining power of buyers: customer's choice.
    - Supplier power: bargaining power of suppliers.
    - Rivalry: competition is formed by the other 4 forces.
- Strategies for competitive advantage: differentiation, niche, growth, time, innovation, entry barriers, customer or supplier lock-in, etc. Primary activities: (inbound logistics, operations, outbound logistics, marketing and sales, and services), support activities: (infrastructure, accounting, finance and management, HR, research and development, and procurement or purchasing).
- Enterprise technology trends are shifting focus to being more socially engaged; more business apps = fewer documents of desktops.
- NFC on smartphones now allows passengers to validate boarding passes, and streamline the journey through the airport in Amsterdam. (SITA).

ACCG355 Week 2: Data Governance and IT Architecture Support Long-Term Performance

- Companies attempt to
    - Maximise profits:
        - Product differentiation: by providing top-quality products
        - Low-price strategies: reducing the price of products to cater for customers who look for products at competitive prices
    - Minimise losses:
        - Controlling cost: if companies operate at low-cost levels, they would be able to absorb any price decline or market downturn
        - Maintaining market share: companies want to increase sales to fully cover their fixed and overhead costs and breakeven. Market share can be maintained if companies keep sufficient sales volume.
- "The lower the cost, the larger the profit margin"
- These are based on organisational strengths.
- E.g. apple iPhones, they charge a lot but its quality.

- Data is linked to company process – intricity, a specialised selection of experts including over 100 management professionals.
- Dirty Data: poor quality customer data, data that is of such poor quality that they cant be trusted or relied upon for decisions.
- Case study: Intel Security
- Information management harnesses scattered data stored in separate systems – overall goal of information management is to eliminate the struggle through the design and implementation of data governance and a well-planned enterprise architecture.
- Information management (umbrella term) is the use of IT tools and methods to collect, process, consolidate, store and secure data from sources that are often fragmented and inconsistent. Critical to data security and compliance with continually evolving regulatory requirements e.g. Sarbanes – Oxley act, etc.
- KPIs are measures (current ratio, accounts payable turnover, net profit margin, etc.) demonstrating the effectiveness of a business process at achieving organisational goals. For example: number of contracts signed in a company.
- Information deficiencies are a problem through:
    - Data silos: Standalone data stores not accessible by other information systems that need data. Unable to share data hence can't consistently be updated. Exist from a lack of IT architecture, only support single functions and no not support cross-functional needs.
    - Loss of bypassed data:
    - Poorly designed interfaces
    - Non-standardised data formats
    - Can't hit moving targets
- IM: Global, mobile workforce (around 62% of the workforce work outside the office at some point. The number is increasing). Mobility-driven Consumerisation (growing number of cloud collaboration services). Principle of "any" (growing need to connect anybody anytime anywhere on any device).
- Benefits of Information Management:
    - Improves decision quality
    - Improves the accuracy and reliability of management predictions
    - Reduces risk of non-compliance
    - Reduces time and cost
- Enterprise Architecture (being organised). The way IT systems and processes are structured. It is the alignment between IT and business strategy that is maintained through EA.
- Solves 2 critical challenges:
    - Where are we going as a company?
        - Shared vision dictates change
    - How do we get there?
        - Strategic focus – IT systems complexity, poor business alignment
- Business and IT benefits of EA:
    - Cuts IT costs, increases productivity with information, insight and ideas
    - Determines competitiveness, flexibility and IT economics
    - Aligns IT capabilities with business strategy to grow, innovate and respond to market demands
    - Reduces risk of buying or building systems and enterprise apps
- EA components:
    - Business architecture
    - Application architecture
    - Data architecture
    - Technical architecture
- Data governance – the way we manage data – enterprise wide, affects the whole company
- 3 industries that depend on data governance to comply with regulations:

    - Food industry
    - Financial services industry
    - Health-care industry
- MDM – master data and management – useful because it creates high quality trustworthy data: a comprehensive method of enabling an enterprise to link all of its critical data to a single master file. Requires strong data governance to manage availability and reliability, validity.
- Politics – people conflict, afraid of change, fear of commitment, etc.
- Raw data has no context – has not been processed.
- Information is the 2nd step – when you process that data in a meaningful way.
- Knowledge is the application of the information. Like a mind-map, subjective.
- Organisational data are processed by Transaction Processing Systems (TPS)
    - Internal transactions – originate or occur within the organisation (payroll, purchases, etc)
    - External transactions – originate outside the organisation (customers, suppliers, etc)
- Important to capture all companies transactions to improve sales, customer satisfaction and reduce other types of data errors with financial impacts
- Batch processing: collects all transactions for a time period then process the data and updates the data store, e.g. collection at 5pm and no other point of the day
- OLTP – online real time processing – each transaction as it occurs – real time
- Batch processing costs less than OLTP but may be inaccurate from update delays
- MIS – management info systems – reporting to managers for tracking operations, monitoring and control
    - Periodic – reports created or run according to a pre-set schedule
    - Exception – generated only when something is outside designated parameters
    - Ad hoc/on demand – unplanned, generated as needed
- Decision support system (DSS) – interactive applications that support decision making
- Transaction issues – huge database transactions cause volatility – which makes them difficult to use them for complex decision making and problem solving tasks
    - Because of this data is loaded to a data warehouse where ETL (extract, transform, load) is better formatted for analysis
- Types of IT infrastructures:
    - On-premise data centres
    - Cloud computing
    - Virtualisation
- Data centres – large numbers of network servers used or the storage, processing, management, distribution and archiving of data, systems, web traffic, services & enterprise applications, e.g. US National Security Agency, Apple, etc.
- Business is reliant upon data – when a data centre goes down, so does business, e.g. whatsapp – competition added 2 million new registered users within 24 hours of whatsapp outage – record!
- Uber – successful car-hailing service
- At the end of the day, need to combat data chaos:
    - Unified data center: cisco's single solution integrating computing, storage, networking, virtualisation and management into a single unified platform
- The Cloud – general term for infrastructure that uses the internet and private networks to access, share and deliver computing resources; scalable delivery as a service to end-users over a network… like leasing
- SLA – service level agreement – negotiated agreement between a company and service provider that can be a legally binding contract or an informal contract
- Types of cloud:
    - Private cloud – single tenant environments with stronger security and control (retained) for regulated industries and critical data