Session 1: Introduction to Information, Information Systems and Information Communication Technology

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POST GRADUATE DIPLOMA IN BUSINESS AND FINANCE 2014



Information is a sequence of symbols that can be **interpreted** as a message. Information can be recorded as signs, or transmitted as signals. Information is any kind of event that affects the state of a dynamic system that can interpret the information.

Information Systems refers to systems designed to **create**, **store**, **manipulate**, **or disseminate** information. 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.

Information Communication Technology deals with the technology involved in the systems themselves, e.g. an information system contains many information technologies such as Servers, server operating systems, web-server software and code written for the software.

Data

- Raw facts
- No context
- Just numbers, texts, symbols
- Random and useless till processed

Information

- Data with context
- Processed Data
- Value Added Data
 - Summarized
 - Organized
 - Analyzed

Example

Data: 22012014

Information

- **22/01/2014**
- LKR 22,012,014
- Employee #
- Transaction #
- 22nd Store room,
 12th row, 14th
 column

Information – is it an **Asset**?

An information asset is a body of information, defined and managed as a single unit so it can be understood, shared, protected and exploited effectively. Information assets have recognizable and manageable value, risk, content and lifecycles.

(www.nationalarchives.gov.uk)

- "From being organized around the flow of things and the flow of money, the economy is being organized around the flow of information"
 Peter Drucker (1992)
- Information, so far has not received quantitative measurement.
- It consumes vast and ever increasing quantities of organizational resources in terms of data capture, storage, processing and maintenance, it typically receives no financial recognition on the balance sheet.
- Hardware and software assets are capitalized, the valuation of information has been largely ignored, even though this is a much more valuable asset from a business viewpoint.
- Information assets must be grouped based on business needs and not technological requirements.

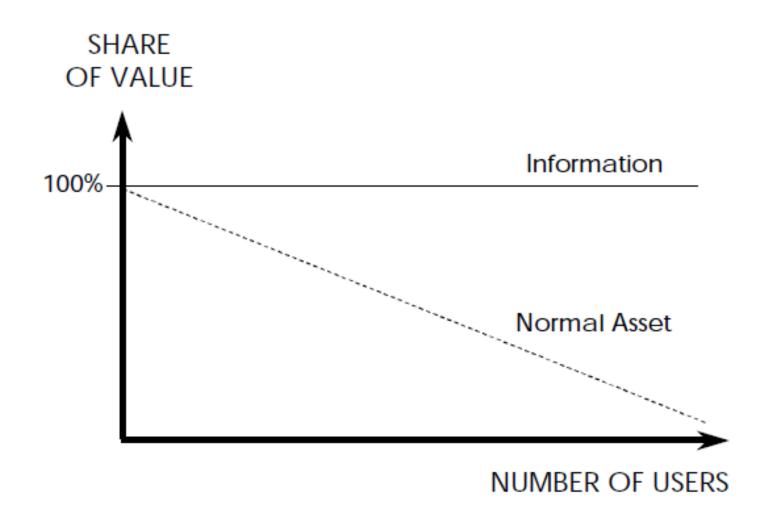
Information – Infonomics

- Information + Economics
- Quantifying, managing and leveraging information as a <u>formal</u> <u>business asset</u>. Infonomics endeavors to apply both economic and asset management principles and practices to the valuation and handling of information assets.
- Information is an asset
- Information has value realized value and potential value
- Information's value can be quantified like other intangible assets;
 market approach, cost approach, income approach
- Information should be accounted for as an asset
- Information's value should be used for budgeting IT and business initiatives
- Information's realized value should be maximized decision-making, business process automation, innovation, new product development
- Information should be managed as an asset Lifecycle of an asset

Information – is an **Asset**

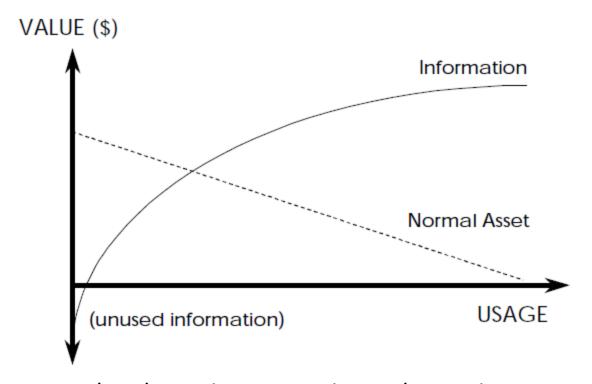
- Like any other asset information has
 - Cost acquire, store and maintenance
 - O Value how and what is it worth to the organization?
- Information has SEVEN unique characteristics that makes it a valuable economic good/ asset
 - 1. Information is (Infinitely) Shareable
 - 2. The Value of Information Increases With Use
 - 3. Information is Perishable
 - 4. The Value of Information Increases With Accuracy
 - 5. The Value of Information Increases when Combined With Other Information
 - 6. More Is Not Necessarily Better
 - 7. Information is not Depletable

Information is (Infinitely) Shareable



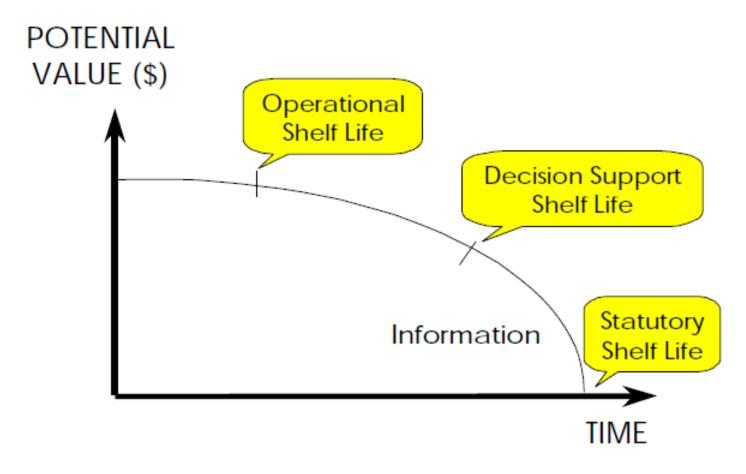
Cumulative Value vs. Apportioned Value

The Value of Information Increases With Use



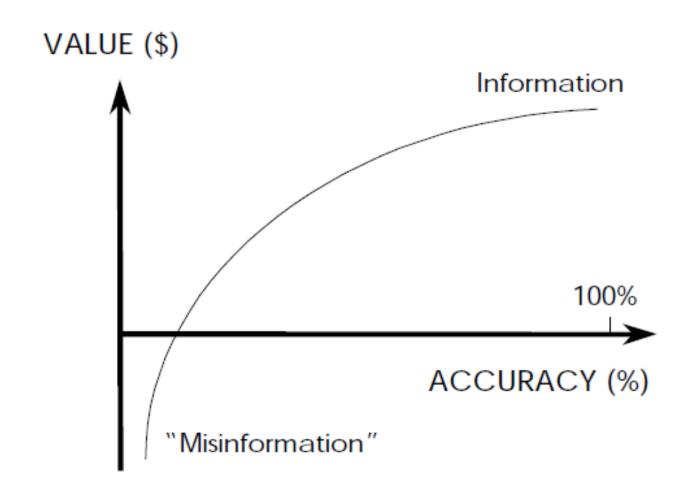
- Normal resource value depreciates over time decreasing returns to use
- Information increasing returns to use
- Information is valuable only when it's <u>used</u>.
- The prerequisites for using information effectively are:
 - knowing it exists
 - knowing where it is located
 - having access to it
 - knowing how to use it

Information is Perishable

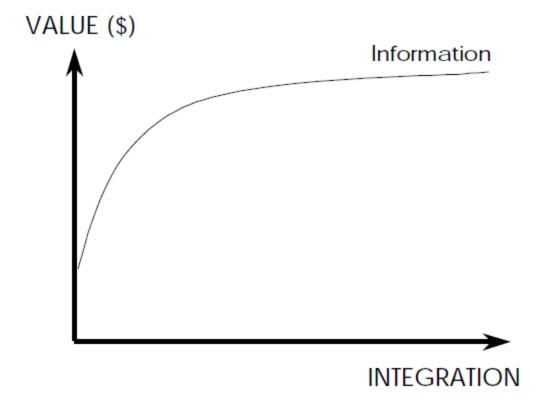


- Example: Airline Ticket information
 - Operational 1 year (or the duration it's active) from issuance
 - Decision Support ticket sales for 5 years
 - Statutory 10 years from issuance

The Value of Information Increases With Accuracy

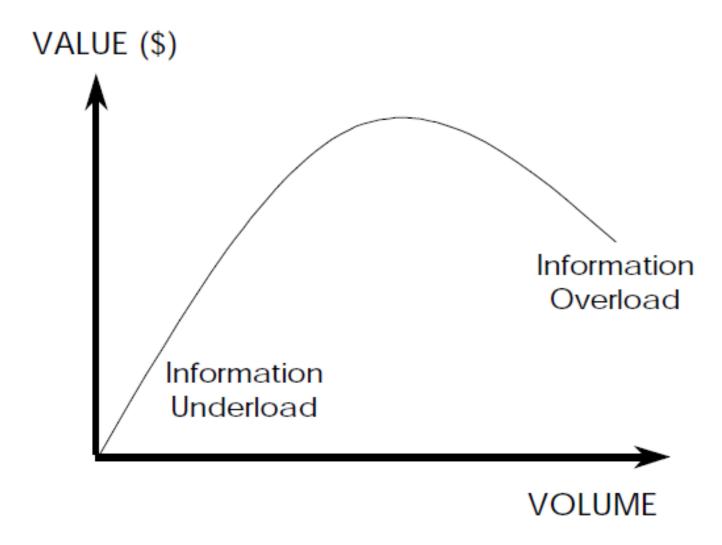


The Value of Information Increases when Combined With Other Information



- Customer information and Sales information is valuable separately, but when combined it can be analyzed for buying patterns, customer characteristics and will lead to creation of customer profiles.
- Example Non-integration: Customer changes the postal address of the Savings account, but the Credit Card statement goes to the old address, because the databases of the two (2) departments are not integrated. 11

More Is Not Necessarily Better



Information Relevance

Information is not Depletable



- Most resources: More you use, less you have
- Information is self-generating more you use, more you have.
- Information is not a scarce resource new or derived information is often created as a result of summarizing, analyzing or combining different information sources together. The original information remains and the derived/ new information is added to the existing asset base.

Infonomics - Benefits

- Improving the collection, management, governance and usage of information throughout the organization
- Instituting an organizational culture that values information to the fullest extent
- Quantifiably justifying and validating the ROI of information-related business or IT initiatives
- Determining how much to spend on information security for each class of information asset
- Being able to claim (or assessing) a premium corporate valuation during mergers and acquisitions negotiations
- Assessing contract risks due to their lack of or inclusion of indemnification against the loss, damage or misuse of electronic data
- The future potential for securing loans using information assets as collateral
- Improving the organization's ability to trade its information assets for goods or services
- Improving relations with customers, employees, suppliers and partners by sharing more and improved information with them
- Improving the organization's ability to package and market information assets as a saleable product
- Encouraging internal ownership and stewardship of information assets

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