

Week 2: Business Processes, Information Systems, and Information

CB2500 Information Management

Smart Banking (BI)
Smart e-Services (ISSN)

Smart IS Auditing (ISA)
Smart Global Business (GBSM)

This Could Happen To You: “And We’ve Got a Lot of Process and Systems Work to Do.”

- Falcon Security: a 5-yr old, privately owned company specialized in aerial drone surveillance and inspection services



- It is exploring 3D printing of drone parts
- Do savings from 3D printing justify changes to existing business processes?

Study Questions / Intended Learning Outcomes

Q2-1: Why does the Falcon Security team need to understand business processes?

Q2-2: How can business process modeling help organizations?

Q2-3: How can information systems improve process quality?

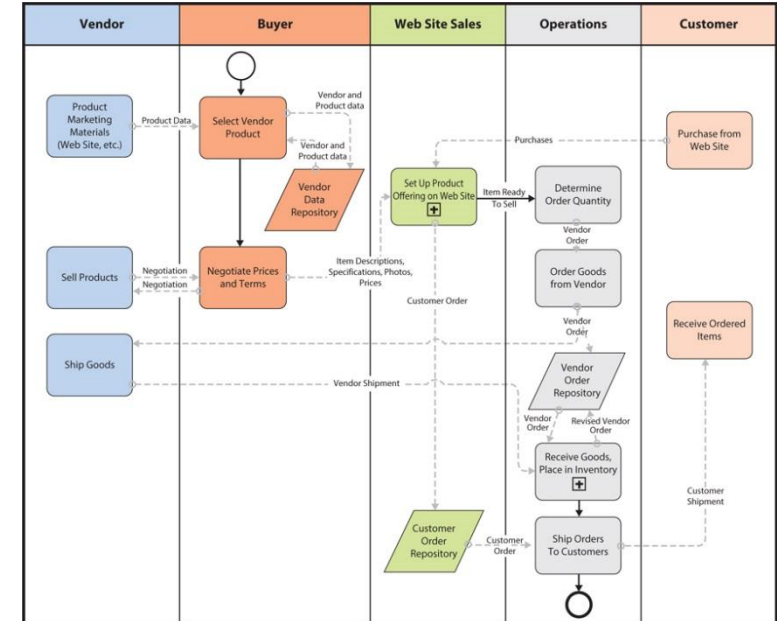
Q2-4: What is information?

Q2-5: What data characteristics are necessary for quality information?

Q2-1: Why Does the Falcon Security Team Need to Understand Business Processes?

- To develop new / redesign existing business processes and possibly information systems to support 3D printing facility.

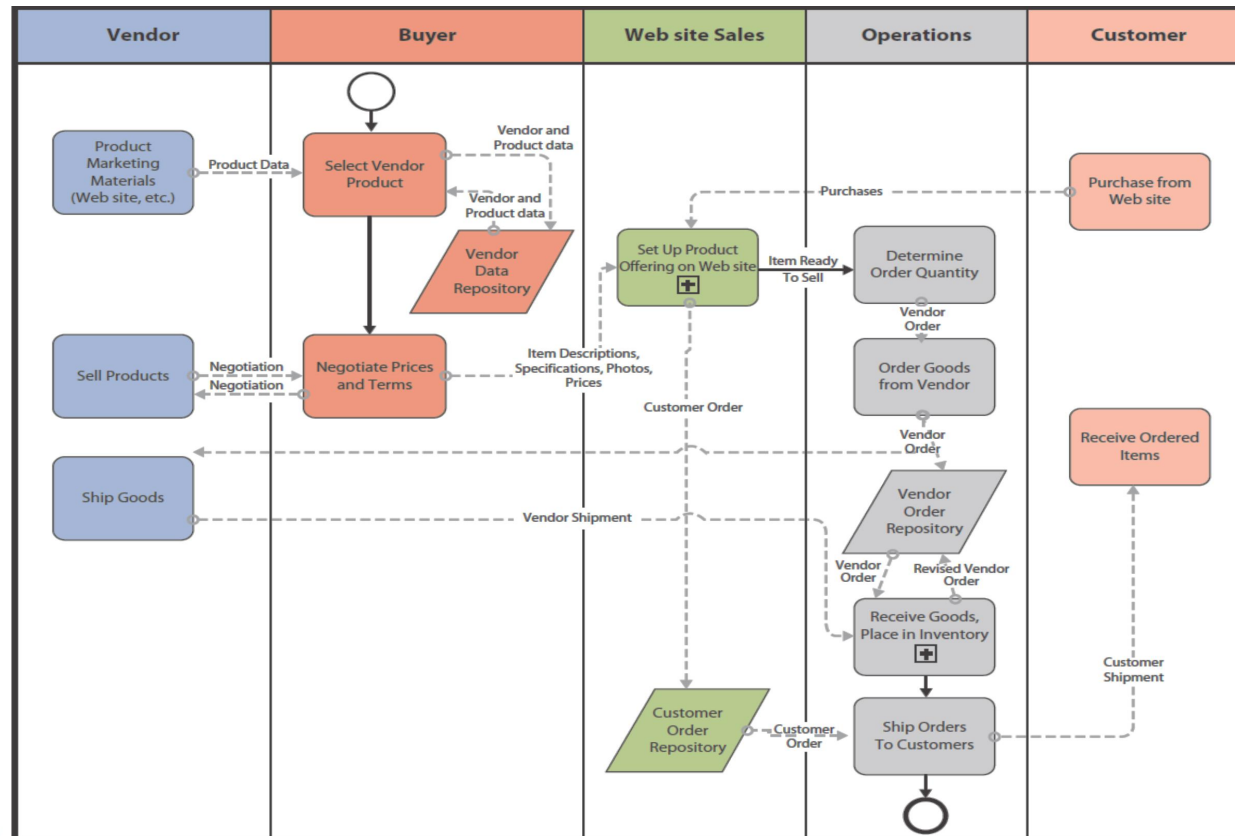
If I know what's going on, I could propose new ideas to my boss to solve problems!



What is a Business Process?

- Examples of activities to achieve business functions
 - buying & managing inventory
 - making sales to customers
 - paying bills
 - collecting revenue
 - ...
- So what's a business process?





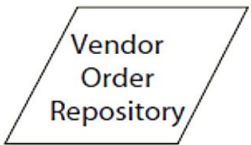
Q2-2: How Can Business Process Modeling Help Organizations ?







I need to learn how to interpret this kind of diagrams to be a good business analyst.

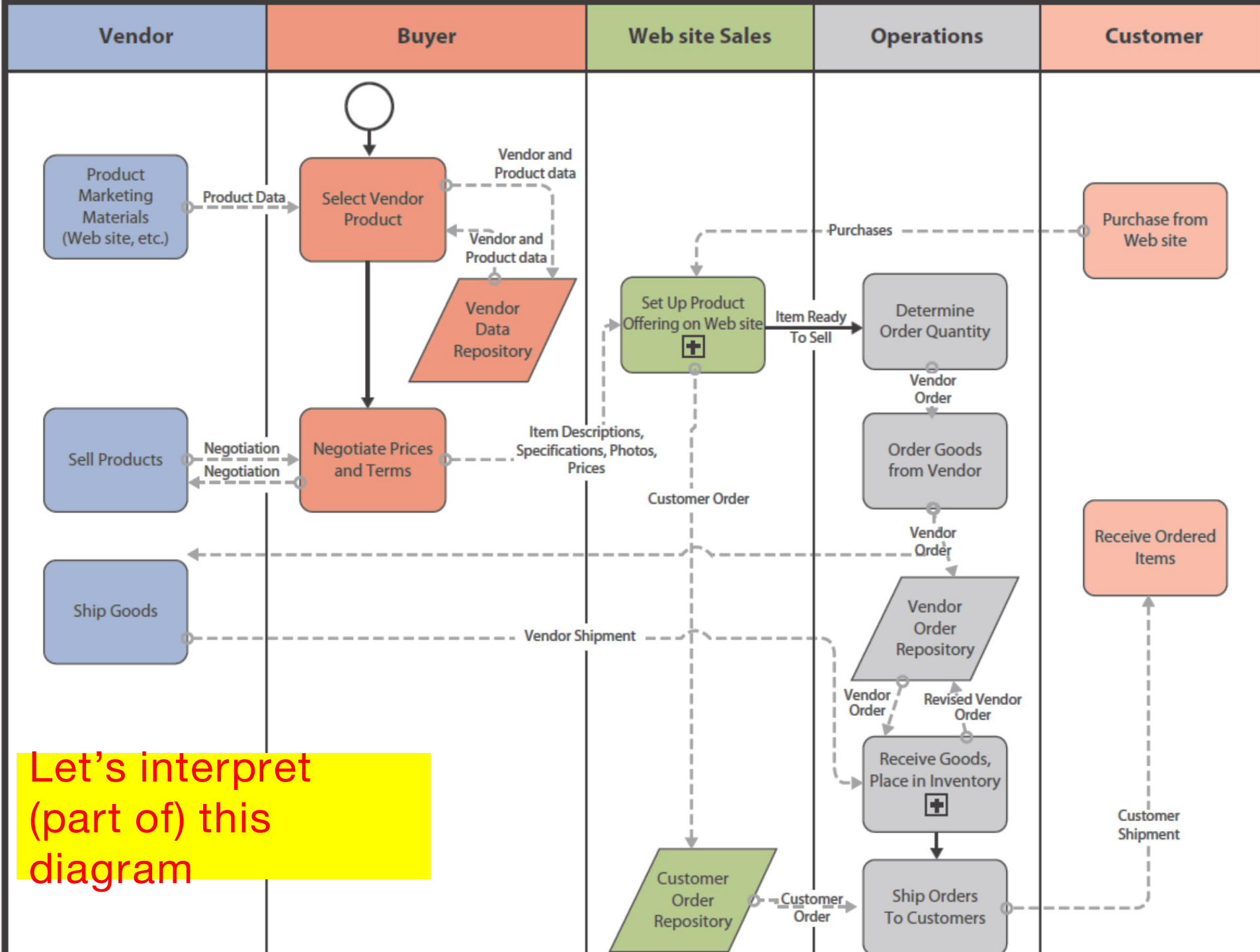
A systematic way used by business analysts to represent business processes.

Process Symbols (BPMN Standard)

	Start
	End
	Activity
	Subprocess
	Data repository

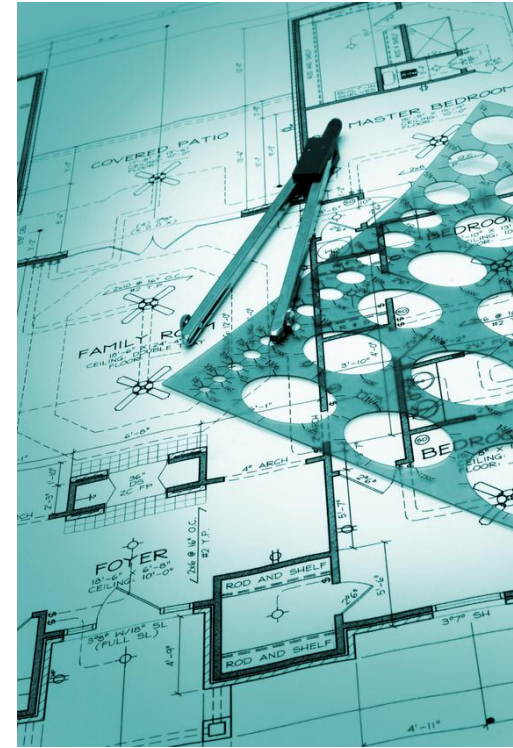
	Decision
	Data flow
	Control flow
	Annotation

Exam requirement: you need to be able to read simple business process diagrams. (you will NOT be asked to draw)



Exercise Time:

Visiting Doctor in CityU Clinic



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UReply Q1:

What are the roles of information systems in business processes?



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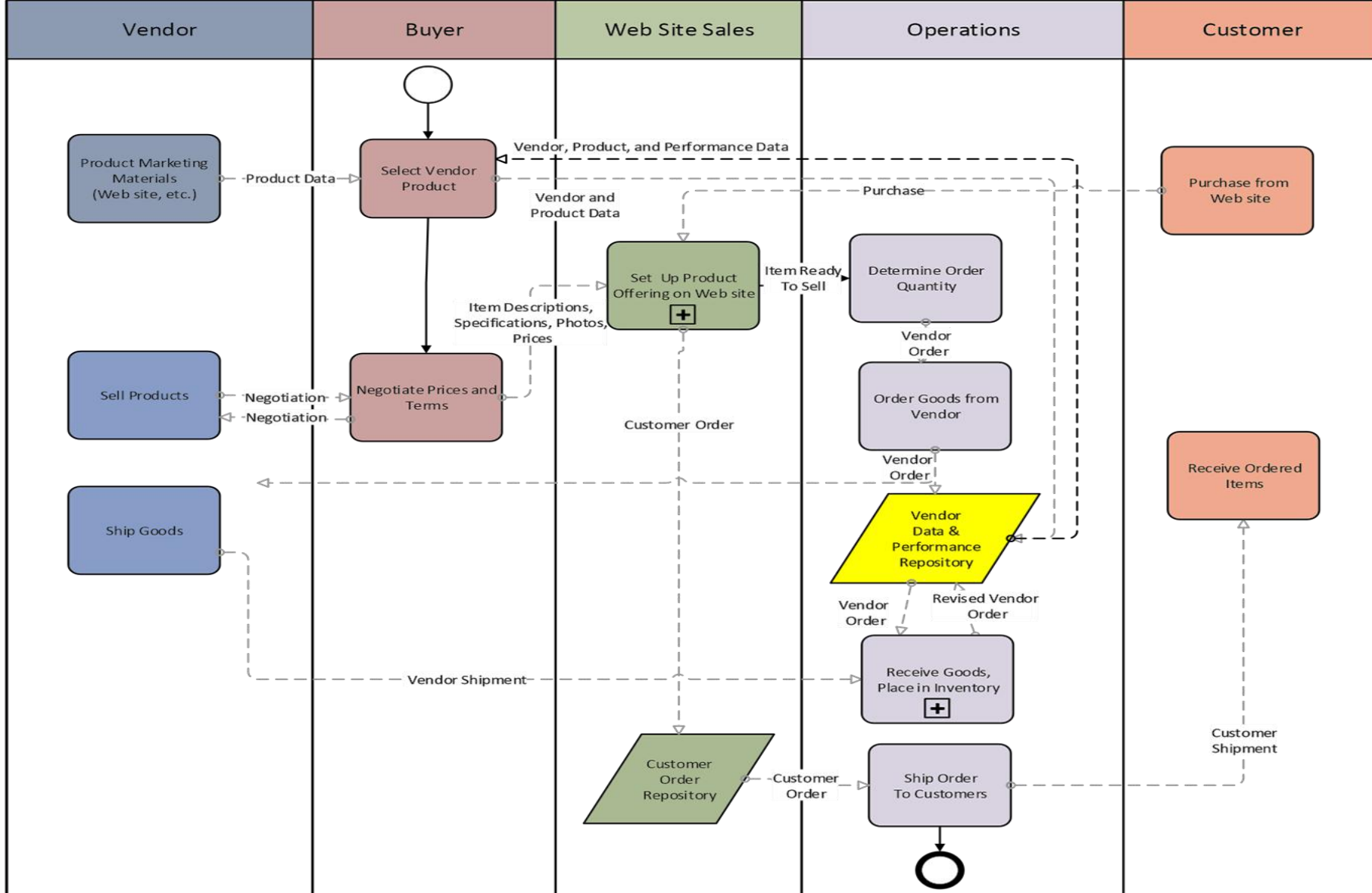
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Q2-3: How Can Information Systems Improve Process Quality?

- Dimensions of process quality
 - **Effectiveness** - enables an organization to accomplish its **strategy**.
 - **Efficiency** - **ratio** of benefits to **costs**.
- Having two separate repositories is more likely to create process inefficiencies.
- Single repository is less costly, will generate fewer errors, and is just as effective.

Q2-3: How Can Information Systems Improve Process Quality?

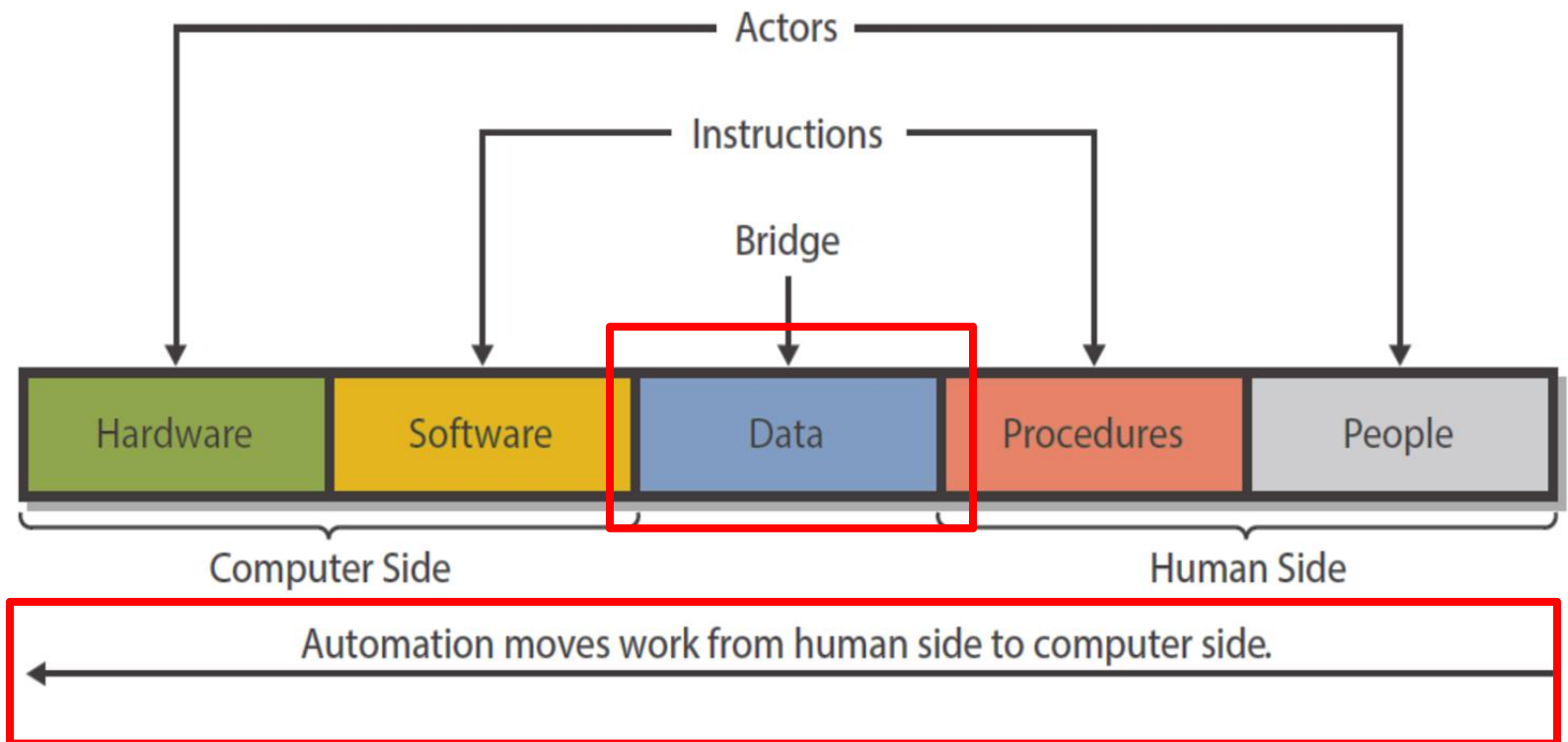
- Examples:
 - Having two separate repositories is more likely to create process inefficiencies.
 - Single repository is less costly, will generate fewer errors, and is just as effective.



Improving business processes is one of the key roles of business analysts.

Buyers and Operations share a single, **integrated repository** of vendor data

Using Information Systems to Improve Process Quality



Analysts determine how much automation to do and the corresponding investment, e.g. HW/SW/networking/training, manpower, etc

Pop-up Quiz

Which of the following is not a component of information systems?

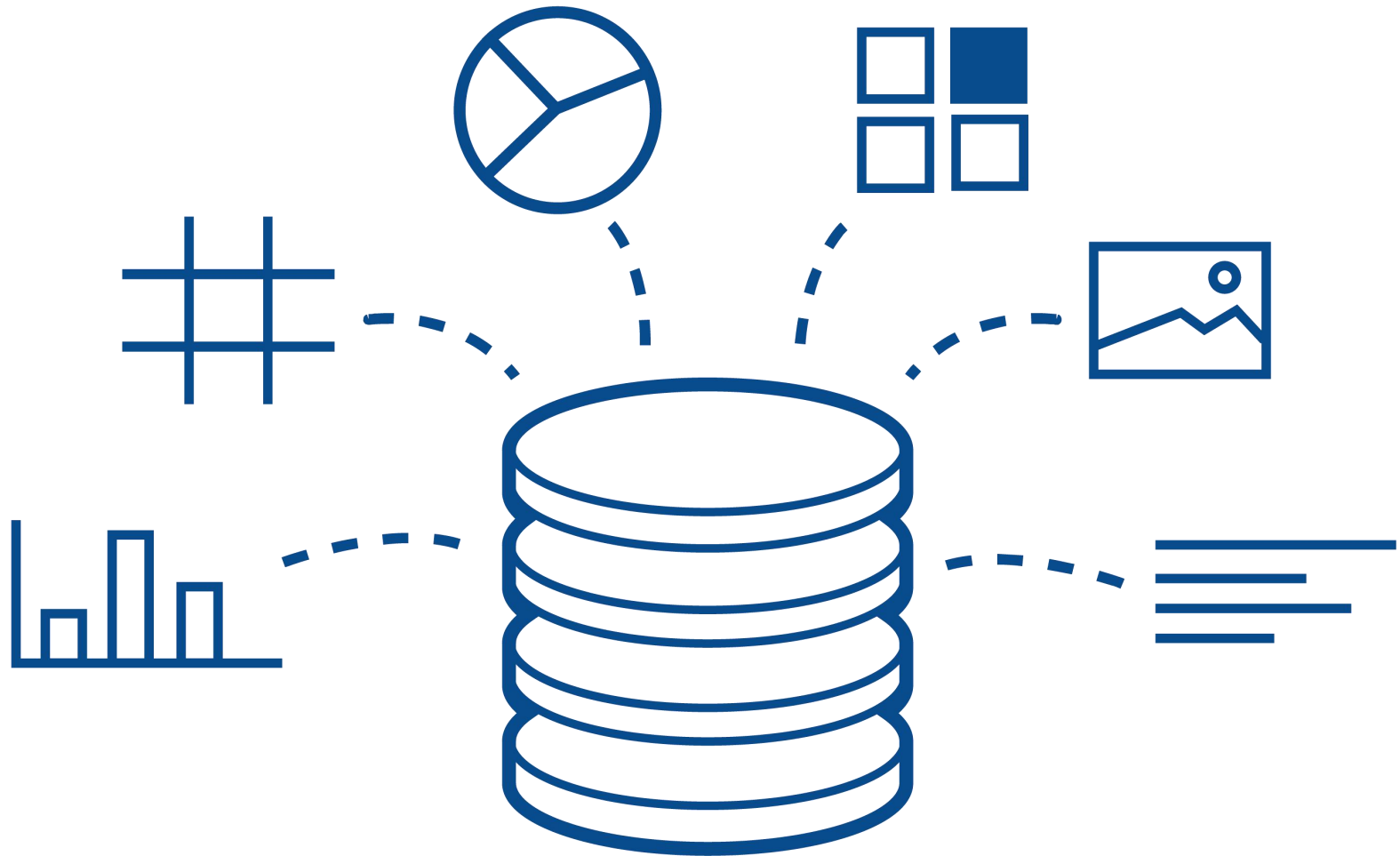
- (A) Hardware
- (B) People
- (C) Knowledge
- (D) Software

Q2-4: What Is Information?

1. Knowledge derived from data, where data is defined as recorded facts or figures
2. Data presented in a meaningful context
3. Processed data, or data processed by summing, ordering, averaging, grouping, comparing, or other similar operations

Data – fact; information – gives you meaning

Q2-4: What Is Information?



Q2-5: What Data Characteristics Are Necessary for Quality Information?

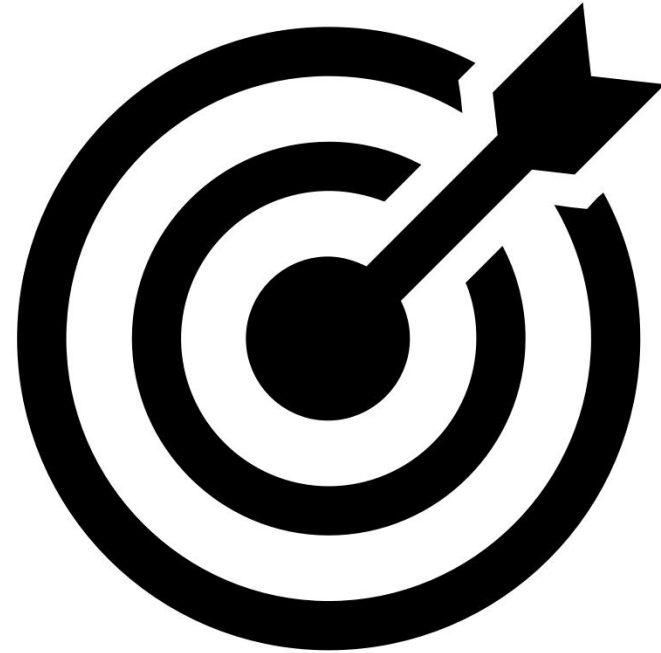


Q2-5: What Data Characteristics Are Necessary for Quality Information?

- Accurate
- Timely
- Relevant
 - To context
 - To subject
- Just barely sufficient
- Worth its cost

Data Characteristics for Quality Information

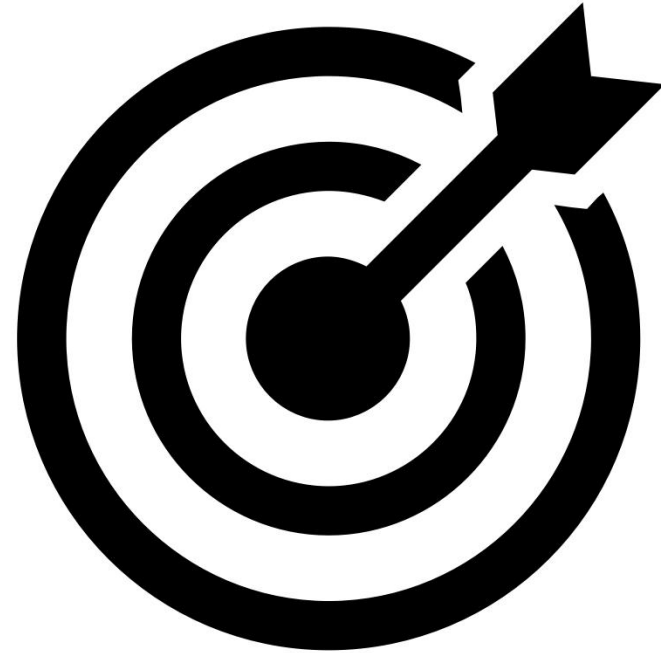
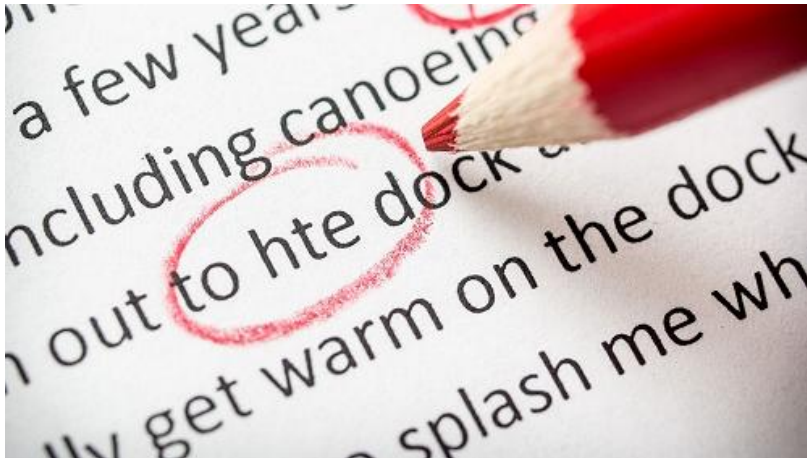
- Accurate
 - Accurate, correct, complete



Any example of source of inaccurate data?

Data Characteristics for Quality Information

- Accurate
 - Accurate, correct, complete



Any example of source of inaccurate data?

Data Characteristics for Quality Information

- Timely
 - Available in time for its intended use

Any example can illustrate the importance of timeliness of data?

Data Characteristics for Quality Information

- Timely
 - Available in time for its intended use



Data Characteristics for Quality Information

- Relevant
 - Relevant both to the context and to the subject

Whether data are relevant depends on the person who is going to use them and the goal in using them.

Data Characteristics for Quality Information

- Relevant
 - Relevant both to the context and to the subject



Data Characteristics for Quality Information

- Just Barely Sufficient
 - Sufficient for the purpose



The higher you rise into management, the more data you will be given, and the more data you will need to ignore.

→ so, good use of IS could help you save much time in getting useful information

Data Characteristics for Quality Information

- Worth Its Cost
 - There are costs for
 - Developing IS
 - Operating IS
 - Maintaining IS
 - ...



The “investment” of new data/IS has to be justified.
e.g...

Why is this lecture valuable to you?

- BPMN is an important tool for communications between company stakeholders and development team
- BPMN diagram can help you understand complicated business processes
- You need to identify good sources of data to derive useful information for decision making!

Project Briefing

Group Project (12% report + 3% presentation)

- If you have problems to form a group, tell your tutor **ASAP**
- Topic: How do IM and IS improve business performance?
- Challenges? Opportunities?
- What IM solutions (e.g., social networks, BI, mobile app.) do you propose to a firm?
- Text Topic Analysis of Social Media comments & posts (Modules 1 – 3 in HKMOOC)
- Presentation Weeks 12 & 13
- Interim Group Reports 1-3 Due: Sun Weeks 4, 7, 9, respectively
- Group Report Due: Sun Week 13

Proposed Group Report

- Executive Summary (compulsory) 1 page
- Background (company, and general market environment)
- Social Analytics and BI (Text Topic Analysis)
- Business Analysis, Problem & Opportunities
- Proposed IM/IS Solutions
- Conclusion
- References (optional)
- Appendices (optional)
- Page Limit: 15 max excluding references and appendices

Week 2 Recap

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References and Disclaimer

- Ch. 2
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