



Digital Systems

2.1 Intro to Process Mapping

FOX
MIS

ROADMAP

START

Week 1:

Introduction & Systems Analysis

- Course Description
- Systems Thinking

Week 2:

Introduction to Process Mapping

- Systems & Processes
- Swim Lane Diagrams

Assignment #01

Week 3:

Digital Product Management

- Max Labs 1a & 1b
- Entity Relationship Diagrams (ERD)

Assignment #02

Week 4:

Introduction to Data Modeling

- ERD Diagrams
- Learn IT Kickoff

Assignment #03

Week 5:

Exam #1 & Information Systems – Part I & II

- CRM & ERP

*Exam – check calendar

Week 9:

Exam #2 & JavaScript Unit #1 – Part I & II

- Hello World, Variables

* Exam - check calendar

Assignment #07

Week 8:

Cybersecurity & AI – Part I & II

- Protection Protocols
- Artificial Intelligence

Assignment #06

Week 7:

Platforms & Digital Business Models – Part I & II

- Platforms & Digital Models
- APIs

Assignment #05

Week 6:

Information Systems – Part III & IV

- Data Analytics
- SCM
- Max Labs 2a2b

Assignment #04

Week 10:

JavaScript Unit #2 Functions

- Operator types
- Strings

Assignment #08

Week 11:

JavaScript Unit #3 Logical Operators & Conditional Logic

- Logical Operators
- Conditional Types

Week 12:

JavaScript Unit #4 Loops

- Intro to Loops
- While and Do

Week 13:

JavaScript Unit #4 Working with Loops

- Writing the code

Week 14:

HTML & CSS Unit

- HTML basics
- CSS basics
- Course Reflection

Assignments #'s 9 & 10

FINISH



Discussion:

Why do you think it is best to understand the way a person interacts with a system before making changes?

Process Mapping

1. Step 1: Identify the **problem/task**
2. Step 2: Brainstorm activities involved.
3. Step 3: Figure out boundaries.
4. Step 4: Determine and sequence the steps.
5. Step 5: Draw basic flowchart symbols.
6. Step 6: Finalize the process flowchart.



Process Mapping

What

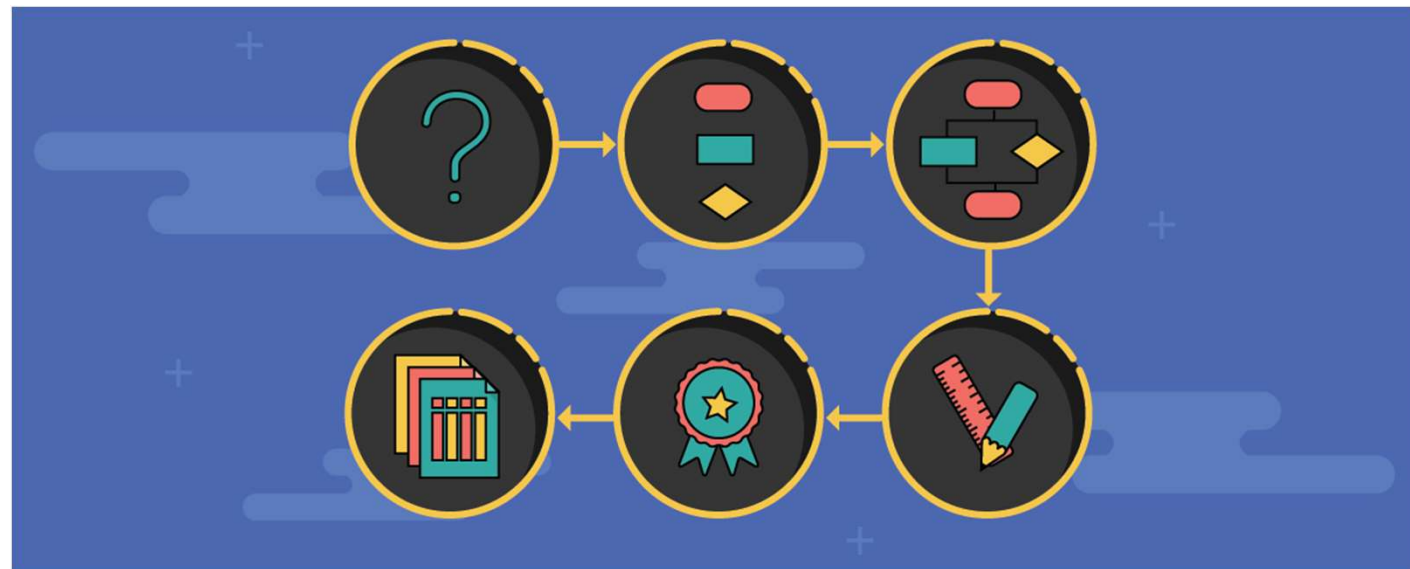
- Visual Representation

Why

- Identify Problems

How?

- Draw the “as-is”

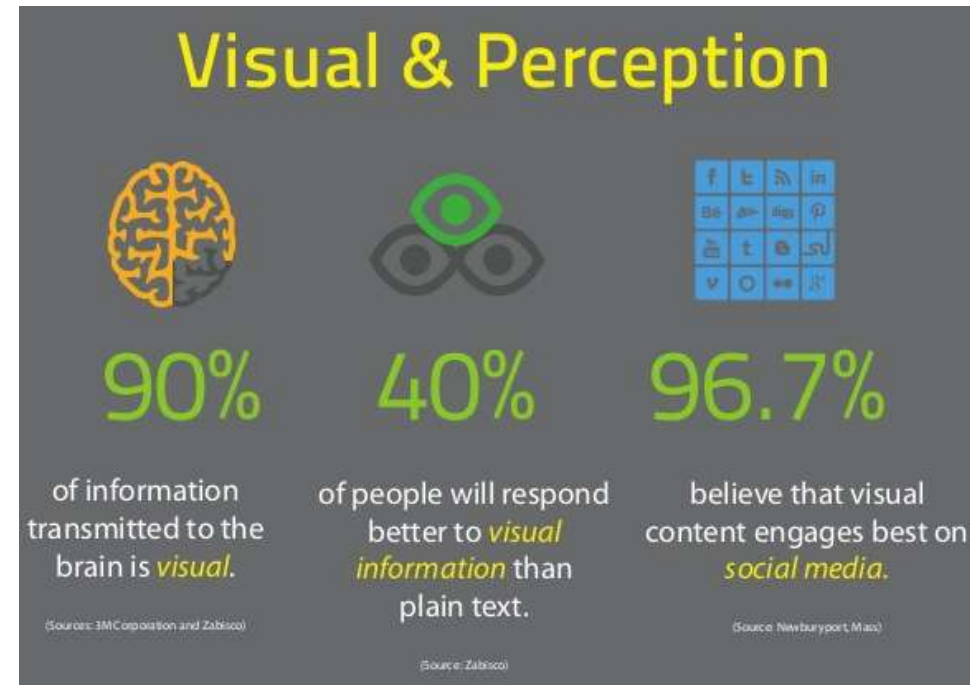


Source: <https://creately.com/blog/diagrams/process-mapping-guide/>

What's a Picture Worth?

How about a diagram???

- How fast does the brain process images?
- 70% of your sensory receptors are in your eyes
- 50% of your brain is active in visual processing



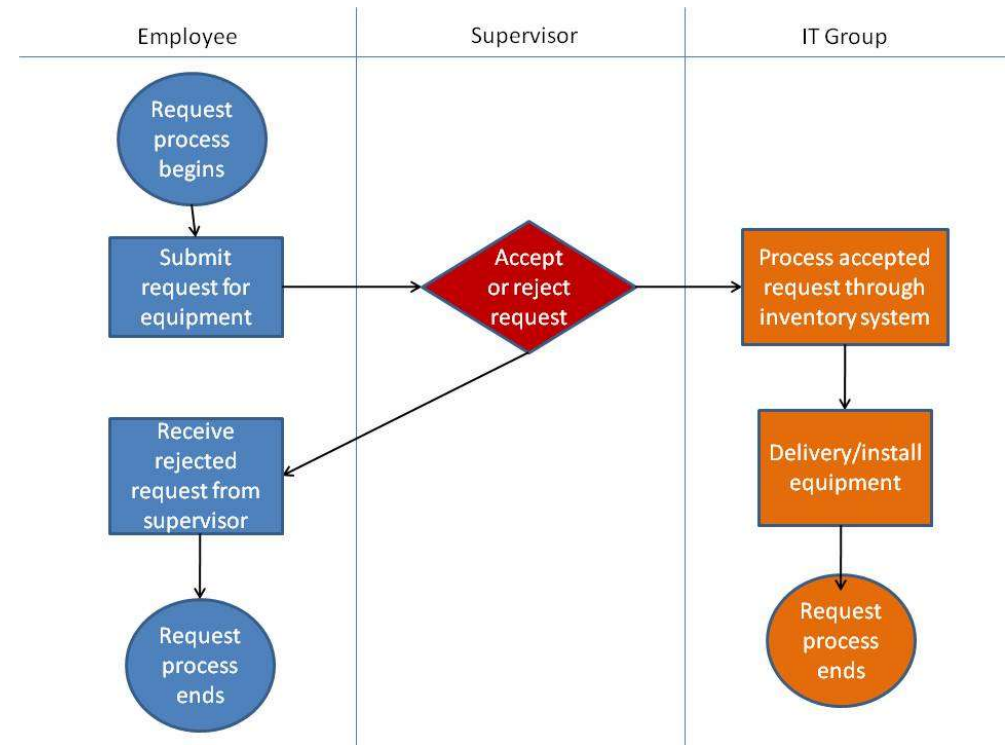
Source: <https://tax.thomsonreuters.com/blog/the-importance-of-visual-content-marketing-infographic/>

Source: <http://esheninger.blogspot.com/2018/08/a-picture-is-worth-thousand-words.html>

Swim Lane Diagrams

Advantages

- Identifies who does what & in what order
 - Logical & Chronological
 - Indicates hand-offs
- Versatile
 - Applied to other diagrams
 - Training tool



Swim Lane Diagrams - symbols



- A circle signifies the starting and ending of an event in the process



- A rectangle represents an activity in the process.



- A diamond represents a decision that must be made.



- Arrows indicate the flow of the process.



- A cylinder represents stored data.

Swim Lane Diagrams – Order to Cash (O2C)

The process starts when the customer contacts Sales to place an order. The person in Sales creates the sales order. As part of doing this, the person in sales first checks to see if the customer has enough available credit to cover the order. They do this by looking up the customer's credit on a report that is generated by Accounting and sent to Sales every Monday morning. If the customer doesn't have enough available credit then the person in sales notifies the customer who can then either update or cancel their order. Next the person in sales checks to see if the items being ordered are in stock. They do this by checking a report on inventory that the Warehouse created at the end of each day. If the items being ordered are not in stock then the person in Sales notifies the customer who can then update or cancel their order. If the report indicates the items are in stock then the order goes to the Warehouse where the workers there will pick the order. Since Sales is looking at a report that is only updated at the end of each day, there is a chance that they accepted an order for an item that is not really in stock. If that is the case the Warehouse notifies Sales who then notifies the customer who can update or cancel their order...

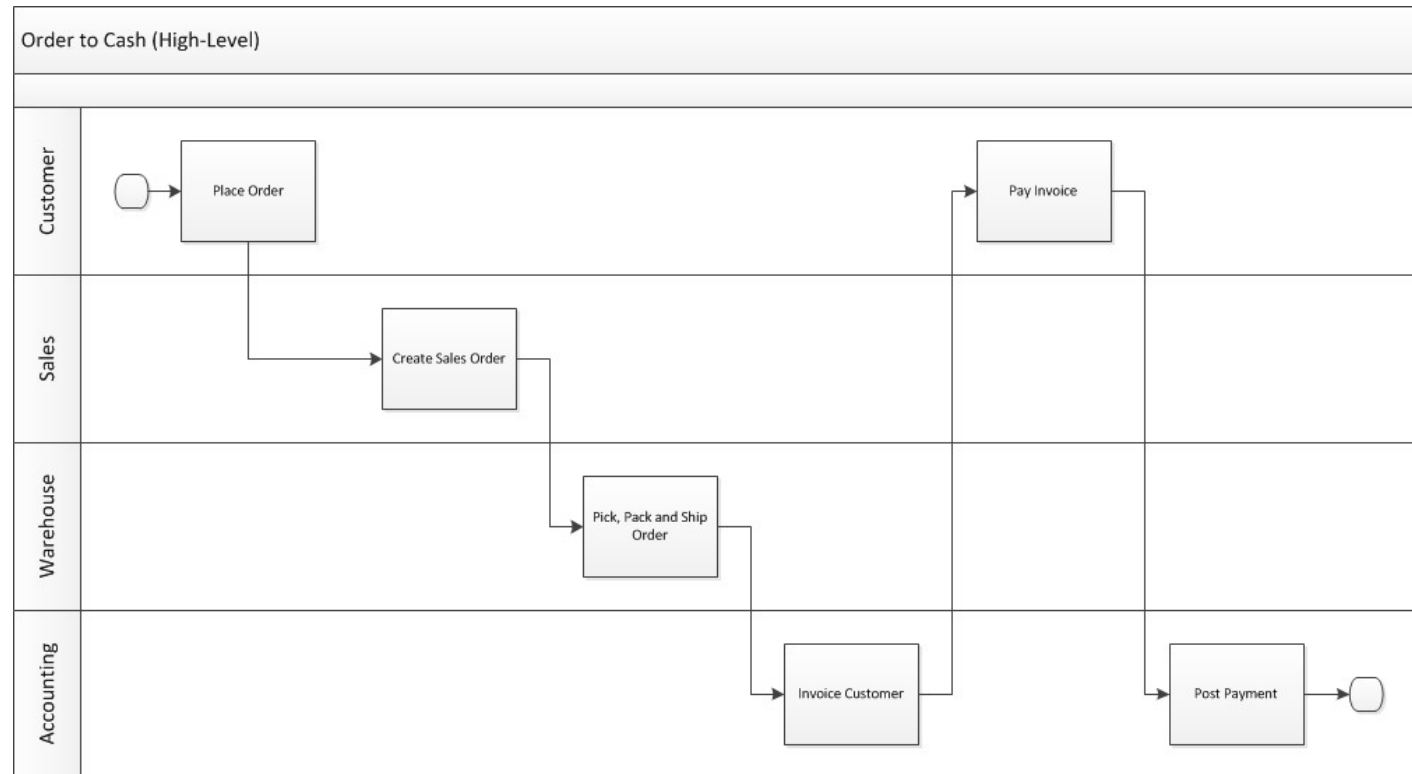
Swim Lane Diagrams – Order to Cash (O2C)

...Once the people in the warehouse pick the order, the people in Accounting have to make sure that the customer actually has enough credit to cover the order. Since the people in Sales use a credit report that is generated on Monday morning, there is a chance that the information on the credit report is old. If the customer doesn't have enough available credit then Accounting notifies Sales who then notifies the customer who can then choose to update or cancel their order. If the customer has enough available credit then their available credit is reduced by the total cost of the order and the warehouse is notified and they pack and ship the order. As soon as the order is shipped the people in the warehouse notify accounting and accounting generates and sends the invoice to the customer. When the customer pays the invoice the people in Accounting increase the customer's available credit by the amount of the payment, they post the payment and we're done.

Swim Lane Diagrams – Order to Cash (O2C)

Who does What & When

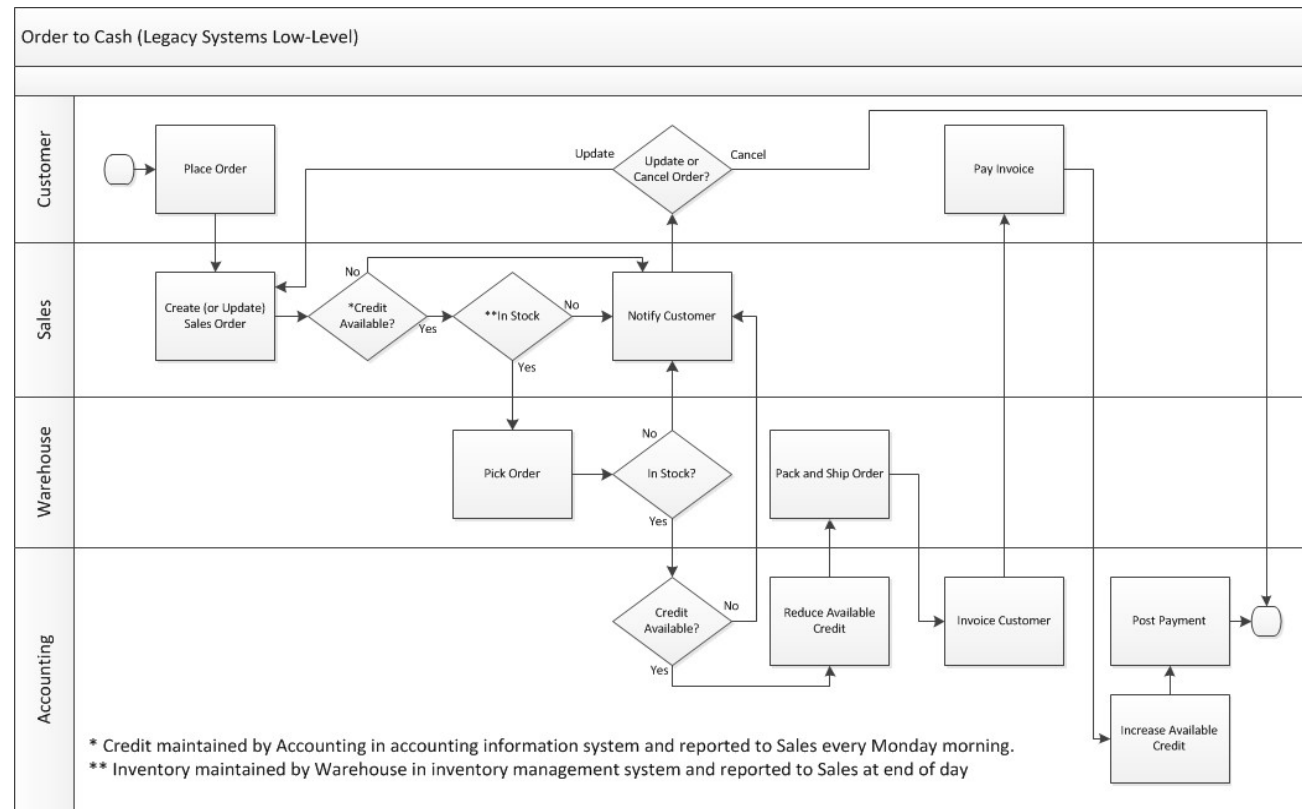
- Overview example



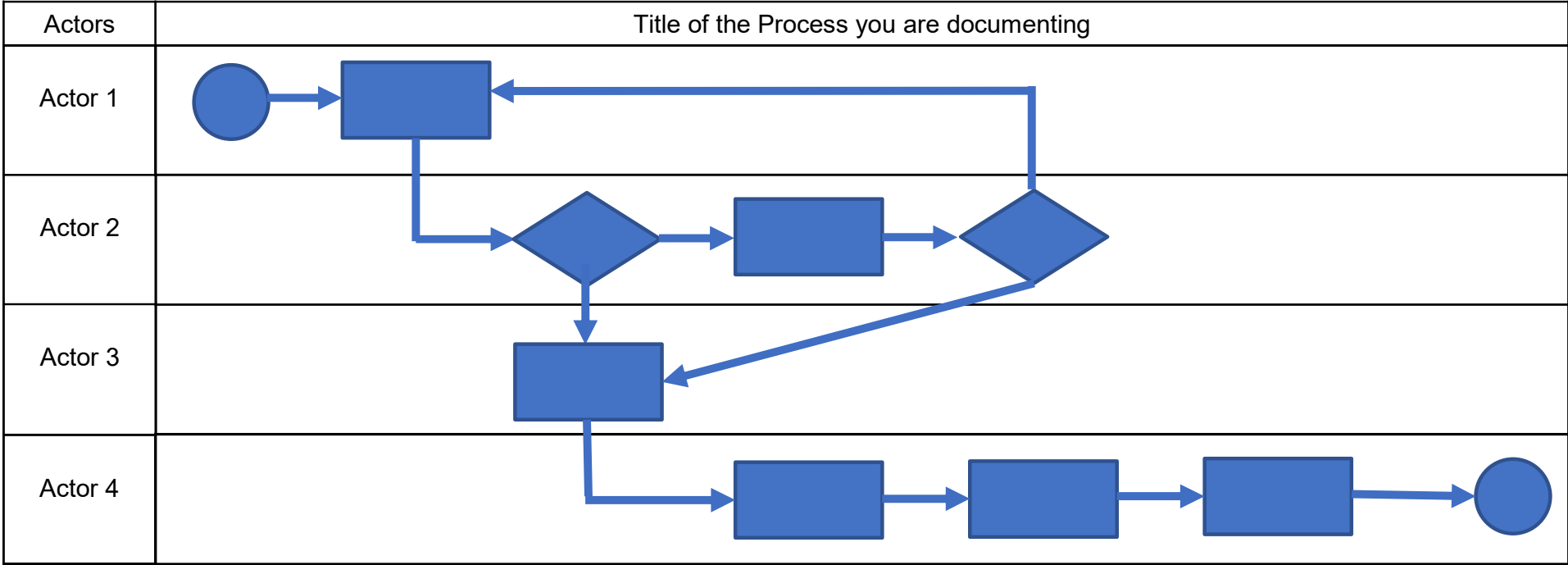
Swim Lane Diagrams – Order to Cash (O2C)

Who does What & When

- Complexity added
- Legacy system



Swim Lane Diagrams – Create your own



More to Come

Prepare with Readings & Videos before our next class!!!