Business Process Mapping (BPM)
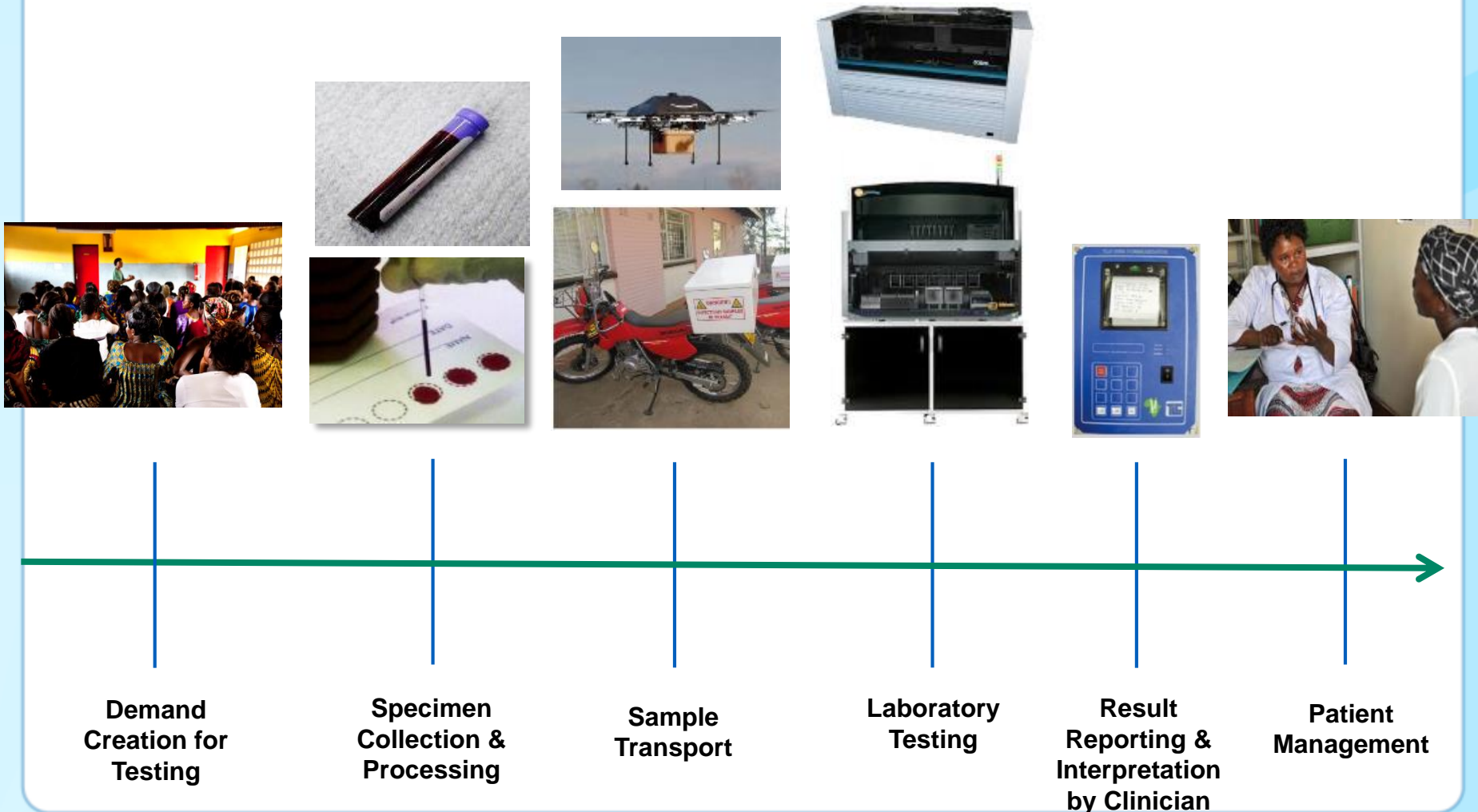
Turning project narratives into visual presentations using CRDM™

Instructor: Jimica Tchamako

May 17, 2017

Piggs Peak, Swaziland

Public Health
Informatics Institute

The Viral Load Cascade

Demand Creation for Testing · Specimen Collection & Processing · Sample Transport · Laboratory Testing · Result Reporting & Interpretation by Clinician · Patient Management

Collaborative Requirements Development Methodology

Business Process Analysis	Business Process Redesign	Requirements Definition
Think	**Rethink**	**Describe**
How do we do our work now?	*How should we do our work?*	*How should we do our work?*

Think

How do we do our work now?

- Define goals and objective
- Model context of work
- Describe tasks and workflow
- Identify common task sets

Rethink

How should we do our work?

- Examine tasks and workflow
- Identify inefficiencies
- Identify efficiencies with repeatable processes
- Refine business processes and business rules
- Remodel context of work
- Restructure tasks and workflow

Describe

How should we do our work?

- Define specific tasks to be performed for optimized business processes
- Describe the implementation of business rules
- Describe in words and graphics how an information system must be structure
- Determine scope of next phase of activities

Important Concepts

Q: What is a business process(BP)?

A: A set of activities and tasks that logically group together to accomplish a goal or produce something of value for the benefit of the organization, stakeholder, or customer

Important Concepts

Q. What is business process analysis/mapping?

A. The effort to understand an organization and its purpose while identifying the activities, participants and information flows that enable the organization to do its work. The output of the business process analysis phase is a model of the business processes consisting of a set of diagrams and textual descriptions to be used for design or redesign of business processes.

Step 1: Generate data about business processes

- Possible starting questions:
  - What do we do and what does that look like?
  - Who is involved in this process? How do they relate to each other?
  - What activity takes place based on this transaction?

Step 2: Document the work

- All work documented in both narrative and graphic form.

- Graphical Tools:
  – Context Diagrams
  – Task Flow Diagrams
- Text Tool:
  – Business Process Matrix

Step 3: Validate the work

- Validate through observation.
- Review and approve amongst ALL appropriate stakeholders (collaboration is key).

How do you know you've done well?

- All stakeholders: Consensus that critical business processes, tasks, and relationships are identified.

- Enough information to proceed to Business Process Redesign.

- STOP when the incremental effort exceeds the incremental gain.

Important Concepts

Q. What is a business process redesign?

A. Business process redesign seeks to restructure tasks and workflow to be more effective and more efficient.

Business Process Redesign Steps

1. **Choose.** Choose a process to redesign.

2. **Measure.** Identify measures of process quality and efficiency, then gather data related to measures to establish a baseline.

3. **Examine.** Identify the purpose of all tasks in the process, in order to identify the value chain and possible process improvements. **Brainstorm ways to improve the process (Collaboration).**

4. **Redesign.** Create potential new task flows. Involve stakeholders in designing and approving new task flows.

5. **Test.** Develop a plan for testing new task flows. Implement new task flows and gather data on quality and effectiveness.

Repeat the process as necessary to reach target measures.

Choosing a Process to Redesign

- Is it inconsistent? (Does it produce unpredictable results?)

- Is it antiquated?

- Is it inefficient or redundant?

- Is it feasible and likely that redesign will succeed and have a positive impact?

- (Think >> Winnable Battles)

Benefits of Collaborating

- Common vocabulary and definitions
- Opportunity to learn from others' approaches and improve processes
- Documentation of processes correctly (including all key stakeholders, involved parties)
- Evidence to gain financial support

Business Process Analysis Tools

Visual representations of a business process provide a picture of:

- who participates in the process,

- what types of information are exchanged between the participants, and

- how the work is accomplished

Business Process Mapping Tools

- Graphical Tools:
  - Context Diagrams/Mind Maps
  - Task Flow Diagrams
- Text Tool:
  - Business Process Matrix

Business Process Mapping Tools

- **Graphical Tools (Software)**
  1. Visio
  2. Lucid Charts
  3. Word
  4. PowerPoint
  5. MindMeister
  6. Draw.io

- **Text Tool (Software):**
  1. Word
  2. Excel

Other (Non Software – for drafting documents)

- *White Boards*

- *Sticky Notes*

- *Paper*

Business Process Matrix

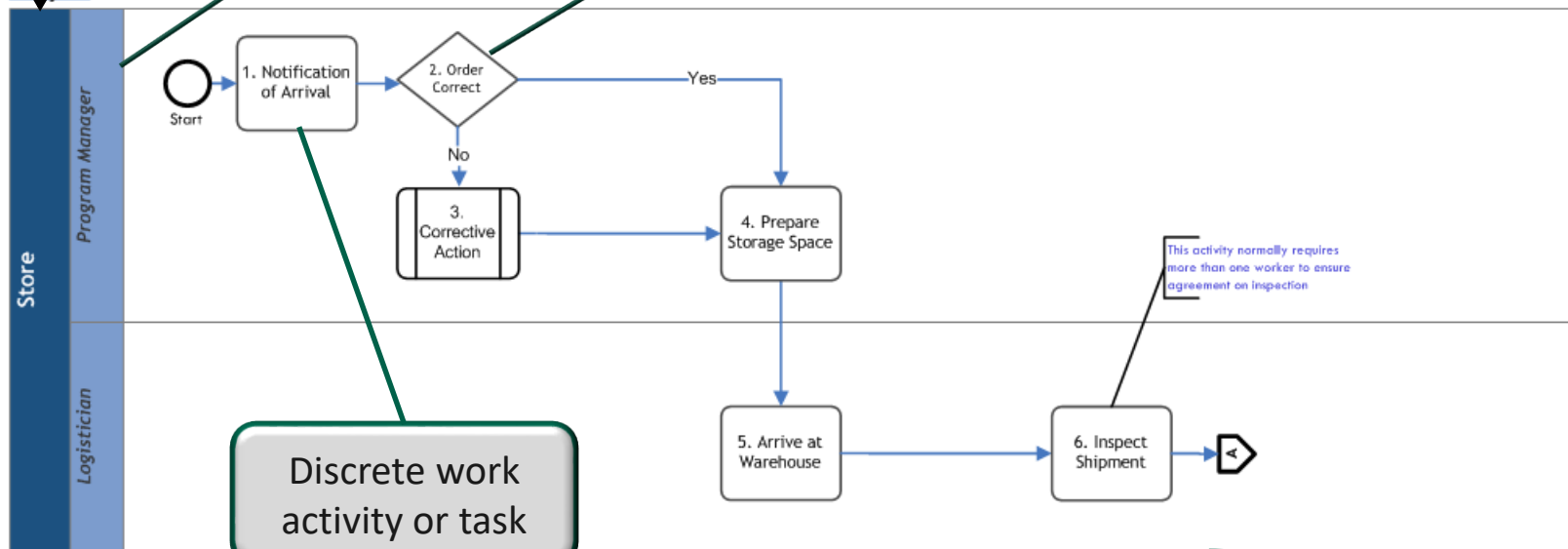| Objective	Business Rules	Trigger	Task Set	Inputs	Outputs	Outcomes
A concrete statement describing what the business process seeks to achieve. A well-worded objective will be SMART: Specific, Measurable, Attainable/Achievable, Realistic, and Timebound.	A set of criteria that defines or constrains some aspect of the business process.	Event, action, or state that initiates the first course of action in a business process.	The set of required activities or steps that are carried out in a business process.	Information received by the business process from sources outside of the process.	Information transferred out of a business process.	The result of performing a business process, which indicates the objective has or has not been met.

Where the work takes place

Person who does the work

Decision point in the work flow

PHII.org

Discrete work activity or task

Capture rules, comments and feedback

Receiving Business Process

1 of 2

Logistics Management Information System (LMIS)

Store

Program Manager

Logistician

Start

1. Notification of Arrival

2. Order Correct

Yes

No

3. Corrective Action

4. Prepare Storage Space

This activity normally requires more than one worker to ensure agreement on inspection

5. Arrive at Warehouse

6. Inspect Shipment

Activity Details / Narrative

General Process Notes
Objective: Receive verified quantity and quality of goods into store and determine need for remedial action when necessary.

- Portions of this business process may be outsourced.
- If the goods are arriving at the warehouse from the port (shipped from outside the country) they should have been through a separate process of port clearance/customs.
- Goods arriving at the warehouse will be handled in different manners according to the requirements of cold chain, security, etc.
- This business process should describe the receiving process at all levels of the system.
- The activities in this business process may be performed by different individuals or functional roles based on the level at which the process is occurring (national, regional, district, etc.)

1. Notification of Arrival
- Program managers or logisticians are notified of a shipment's pending arrival. This notification should happen prior to the physical arrival.
- The notification could be in several forms: telephone, fax, email, etc.
- The delivery may be scheduled or may not.
- Verify what is being received compared to what was requested.

2. Order Correct
- Is what is being received what was requested and/or expected?
- This activity provides the first verification of quantity of goods ordered versus goods shipped.
- An order can be accepted even if the order is not correct. This is generally a decision made by Program Manager.
- In many cases, the shipment is already in transit and will arrive at the warehouse.

3. Corrective Action
- The shipment can be flagged for rejection and stored for disposition upon arrival at the warehouse.
- The order can be accepted as is.
- The shipper is notified of the incorrect shipment and additional corrective action can be taken.

4. Prepare Storage Space
- Identify and estimate adequate space needed for storage of the expected shipment.
- Verification of appropriate storage, i.e. cold chain, security.

4. Prepare Storage Space, cont.
- This activity allows the store maximum time to find appropriate space for the shipment.
- This activity can become a trigger to the Storage business process.

5. Arrive at Warehouse
- The goods should arrive with documentation from shipper. These documents are typically found within one of the boxes received.
- Goods can either be quarantined or stored in cold storage at this point in the process prior to inspection.
- Containers are checked against shipping documents for any apparent damage and or missing shipping cases.

6. Inspect Shipment
- Quality Check - The shipment is inspected based on predefined criteria including: goods specifications, correct quantities received, usable or damaged goods.
- Administrative Check - Is what was ordered what was received.

LMIS Task Flow Version 1.0 DRAFT

Context Diagrams

- Who: Entities
- What: Transactions (exchanges)
- Why: The outcome of the process, which indicates the objective has been met.

Entity   **Transactions**   Entity
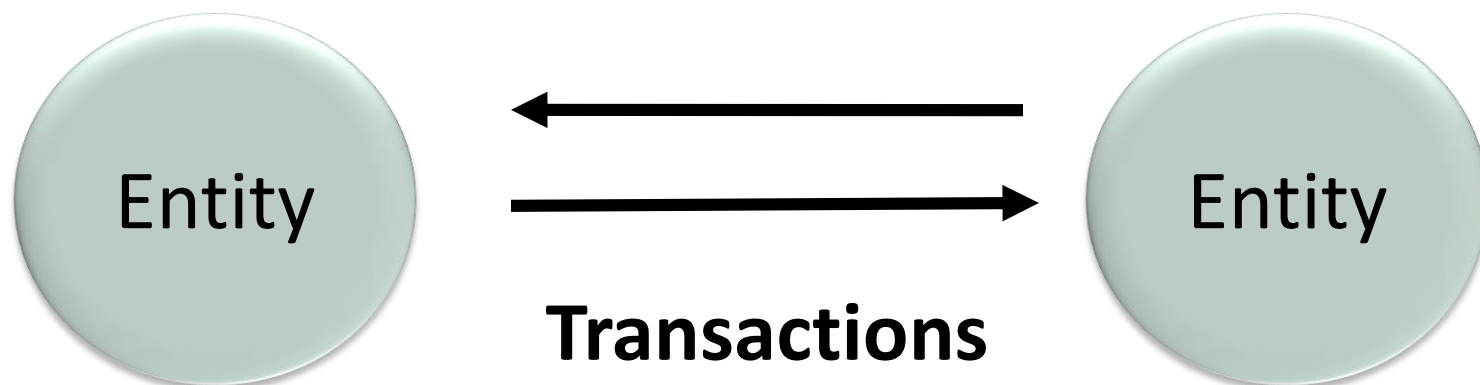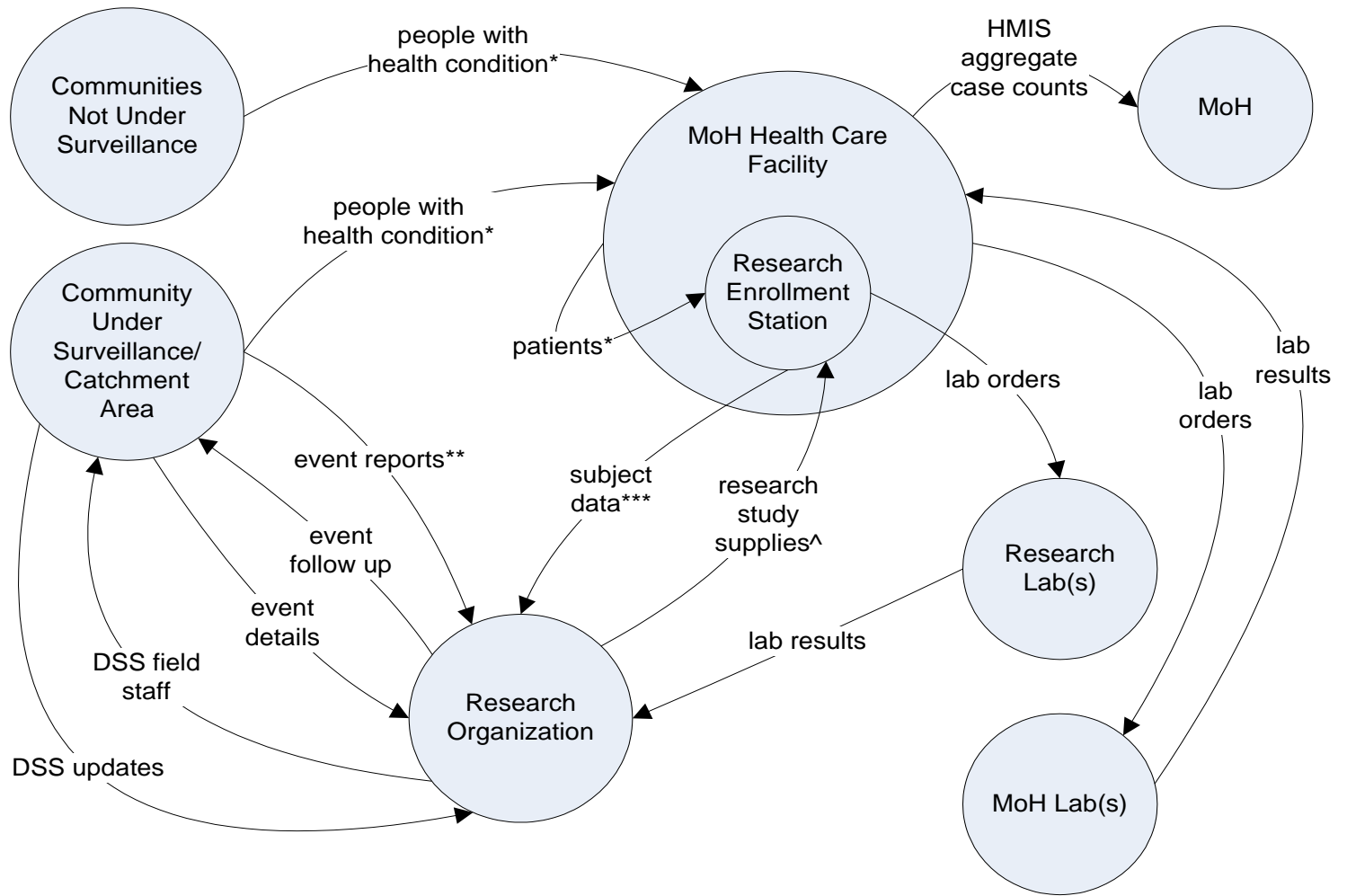
Site Context Diagram
Entities may or may not be co-located geographically.

*Includes ill people, pregnant women, DOAs and stillbirths, neonatal deaths at facility
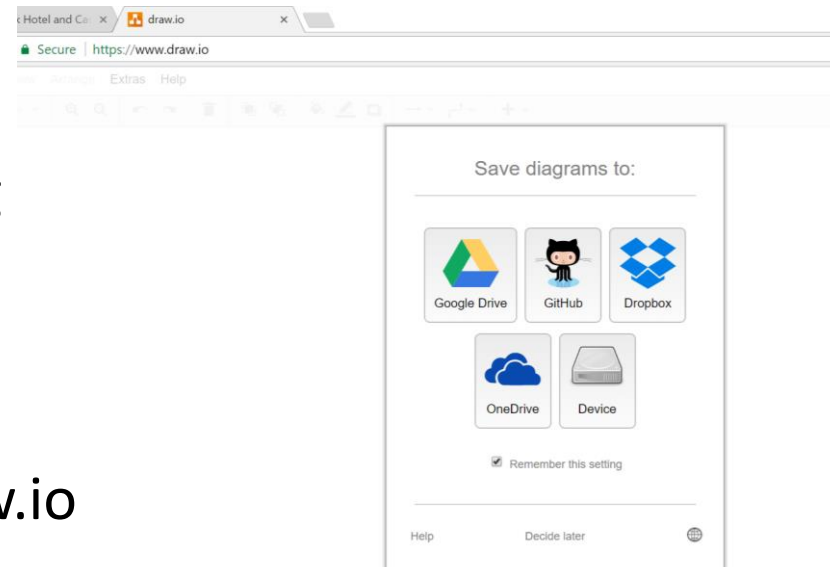**Events reported by community-based informants include pregnancies, births, deaths
*** Includes demographics, consent, etc.
^Includes case report forms (CRFs), specimen kits, bar code labels, IT for electronic data capture.
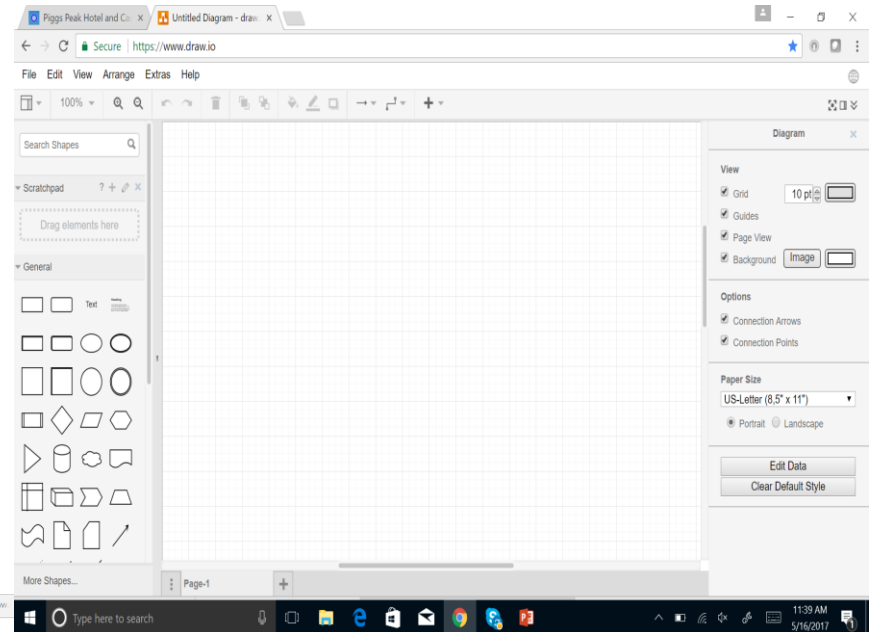
Creating Process Map

- Different online processing mapping solutions are available
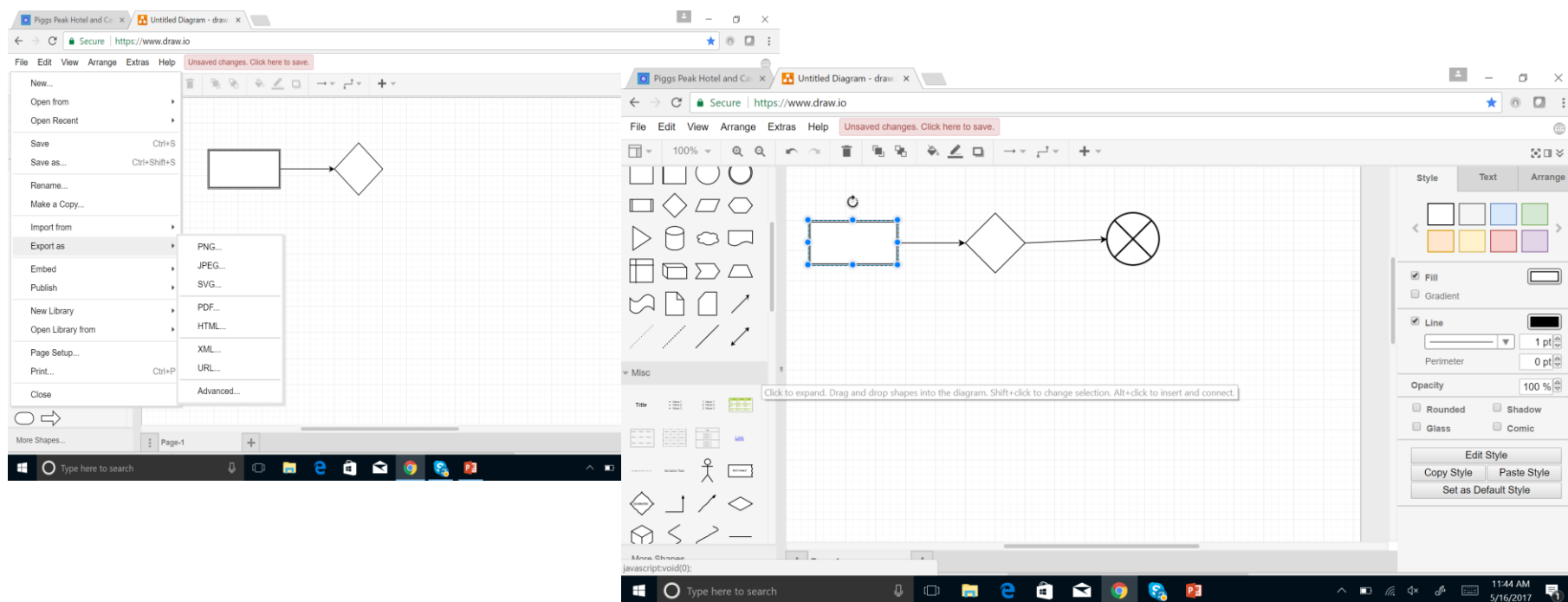
- Enclosed example is from www.draw.io

Using www.draw.io

Similar interface

Support basic functionalities
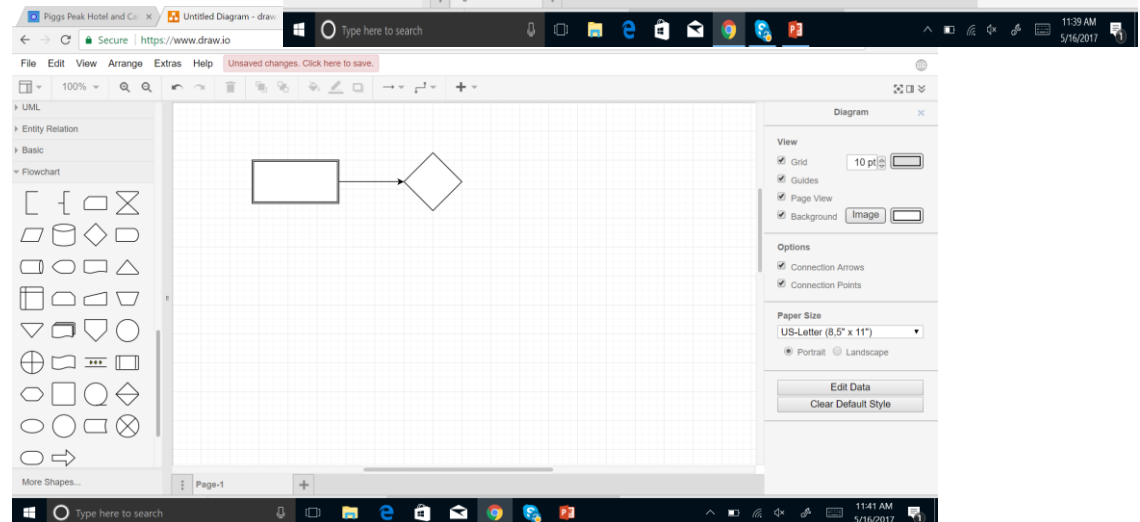
Ability to export to other formats

Explore www.draw.io

Business Process Mapping Tools Support:

– Strategic thinking about what you do, by keeping the goal of that work in mind

– Success in planning and implementation of work by defining the goals and activities and identifying the key people involved

– Effective communication about the work you do and the relationships and interdependencies between people and tasks