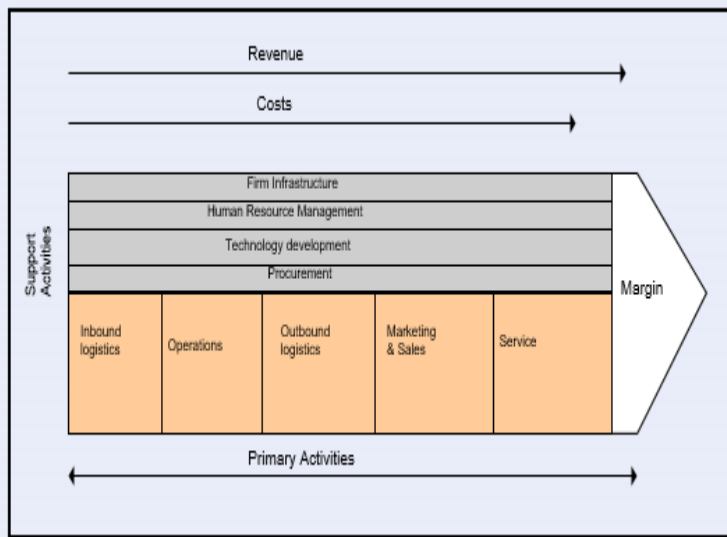


## Porter's Value Chain



- **Primary value activities**

- Inbound logistics - activities associated with receiving, storing, and disseminating inputs to the products or services
- Operations- activities associated with transforming inputs into the final products or services
- Outbound logistics - activities associated with collecting, storing, and physically distributing the products or services
- Marketing and sales - activities associated with providing a means by which customers can buy produce and the means for inducing them to buy
- Service - activities associated with providing service to enhance or maintain the value of the products or services

### Support value activities

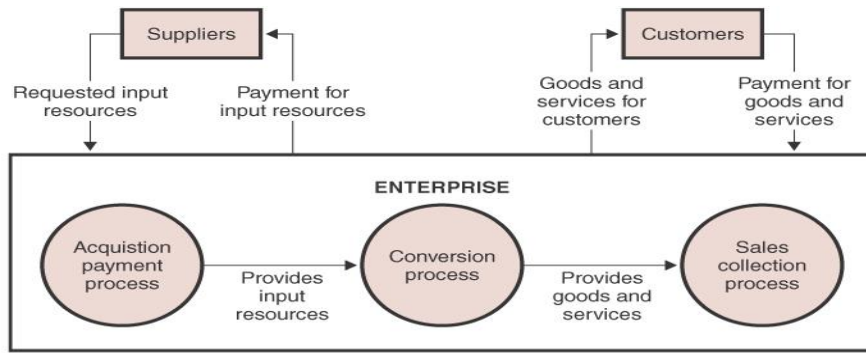
- Procurement - the function of purchasing inputs to firms value chain
- Technology Development - the know-how, procedures, or technology embedded in processes that are intended to improve the product, services, and/or process
- Human Resource Management - activities involved in recruiting, hiring, training, developing, and compensating all types of personnel
- Firm Infrastructure - activities that support the entire value chain (e.g. general management, planning, finance, accounting, legal, government affairs, quality management, etc.)

### Importance of Studying Value System and Value Chain Levels in REA

- Understanding an enterprise's activities at the value system and value chain levels in the REA ontology
  - Helps keep perspective (gives the ability to "see the forest" without getting mired in the detail of the trees)
  - Provides the structure to guide lower levels of analysis
  - Requires consideration of the enterprise's mission and strategy, which should ensure that business processes and activities are constructed in a manner consistent with the mission and strategy

## Value System and Value Chain

**EXHIBIT 3-2**  
Relating Value System and Value Chain Levels



## Value System Modeling

- Identify an enterprise's resource inflows and outflows
  - Focusing on the cash flows and then identifying the "reasons" for those cash flows is a good way to start
  - Although non-cash resource flows are rare, they are still important to consider
- Identify the external business partners to which and from which the resources flow

## RSWS Example from Textbook

- Step 1: Create a circle in the middle of the model to represent the enterprise (RSWS)**



- Step 2: Identify cash inflows and other resource inflows that are not part of a cash-related exchange to the enterprise (by examining the narrative and applying common business sense), and note the source of the resource inflows**

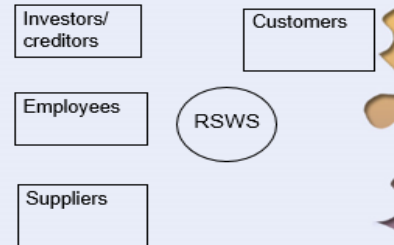
- Cash inflows**
  - From investors
    - For future cash flows
  - From creditors
    - For future cash flows
  - From customers
    - For merchandise
    - For repair services
    - For rentals of merchandise
- Barter inflows**
  - None noted

- Step 3: Identify cash outflows and any non-cash resource outflows that are not part of a cash-related exchange of the enterprise (by examining the narrative and applying common business sense) and note the destination of the resource outflows**

- Cash outflows**
  - To investors
    - For past cash flows
  - To creditors
    - For past cash flows
  - To suppliers
    - For raw materials, parts, supplies, and merchandise
    - For property, plant & equipment
    - For various services and utilities
  - To employees
    - For labor
- Barter outflows**
  - None noted

Note: no mention is made in the narrative of taxes paid to the government, but those could be assumed to exist and they could be included under outflows to suppliers for various services and utilities

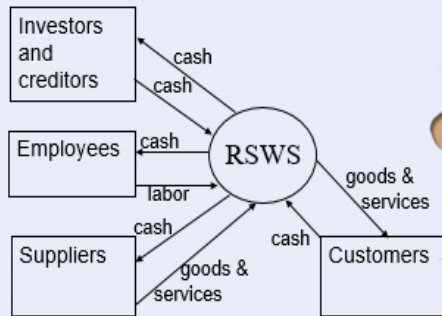
- Step 4: Determine what categories to use as the enterprise's external business partners and make a box to represent each**
  - Business partners of different types with whom common resources are exchanged may be combined (or left separate)
    - E.g. investors and creditors
  - Business partners of similar types with whom different resources are exchanged may be separated (or left combined)
    - E.g. inventory suppliers versus suppliers of services



Note that the choice to separate and combine partners is subjective, as is the placement of the partners on the model; there are multiple correct value system models

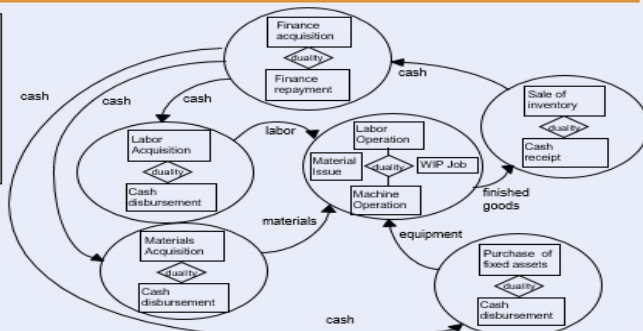
- Step 5: Fill in resource inflows and outflows on the model**

- May combine resources into categories or leave separated; again, multiple correct models are possible!



## REA Value Chain Modeling

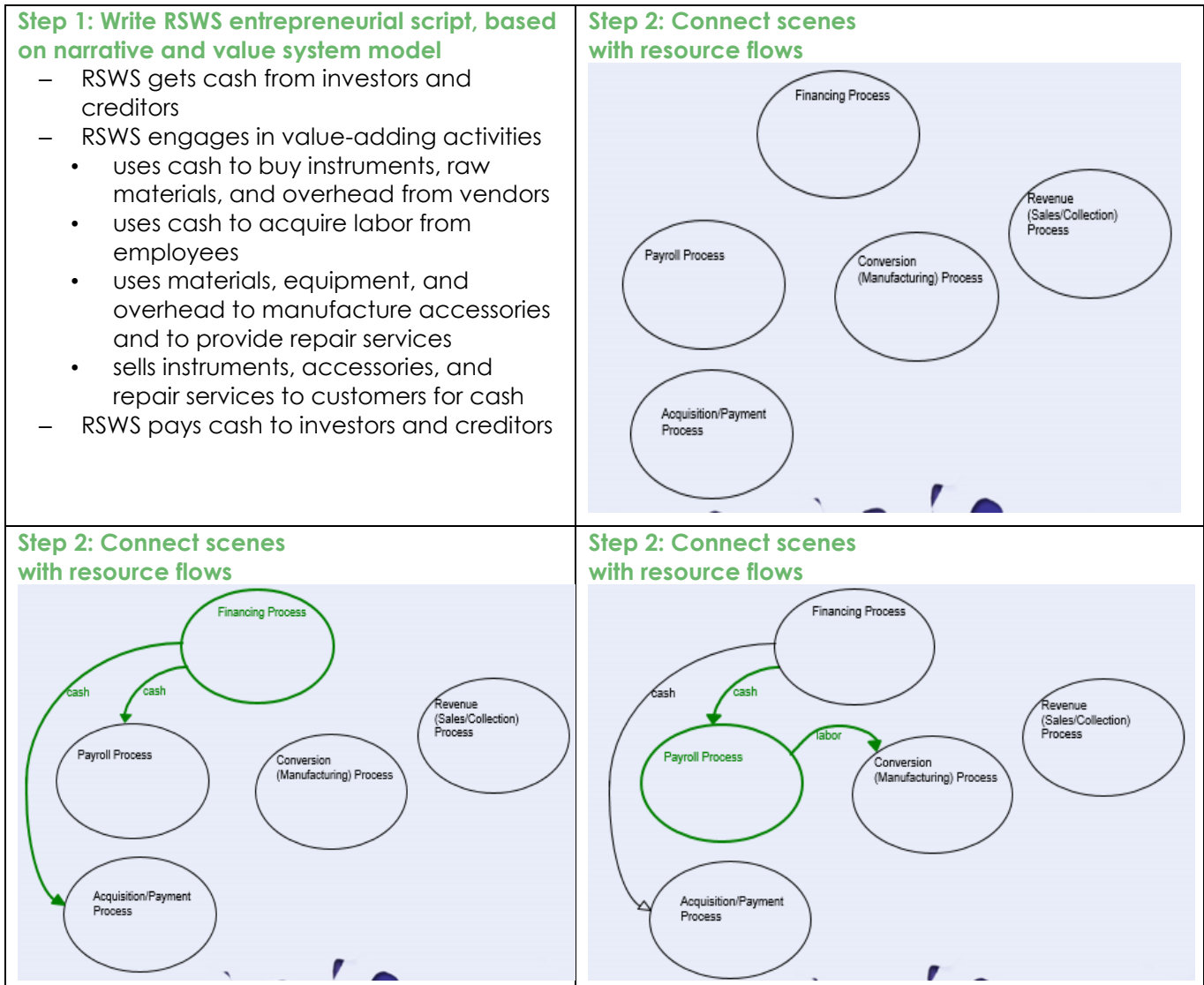
Shows the interconnection of the transaction cycles in an enterprise and the resource flows between them



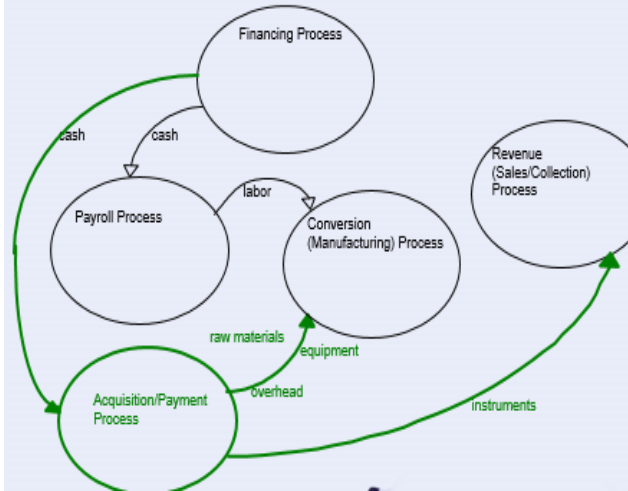
## Value Chain Level

- Duality relationships consist of paired increment economic events and decrement economic events
  - Increment economic events increase resources (stock in-flows)
  - Decrement economic events decrease resources (stock out-flows)
- “Duality relationships are the glue that binds a firm's separate economic events together into rational economic processes, while stock-flow relationships weave these processes together into an enterprise value chain.” -- Geerts & McCarthy 1997
- Each economic event in each cycle in the value chain corresponds to a resource in or out flow.
  - If there is a resource flowing into the cycle, there must be an event in the cycle that uses that resource
  - If there is a resource flowing out of the cycle, there must be an event in the cycle that provides that resource
    - Example, if there are 3 resources flowing into a cycle and only one resource flowing out, there must be 3 events (although the 3 events may be combined into less events) in the cycle that uses the three inflow resources, and there must be one event in the cycle that produces the outflow resource

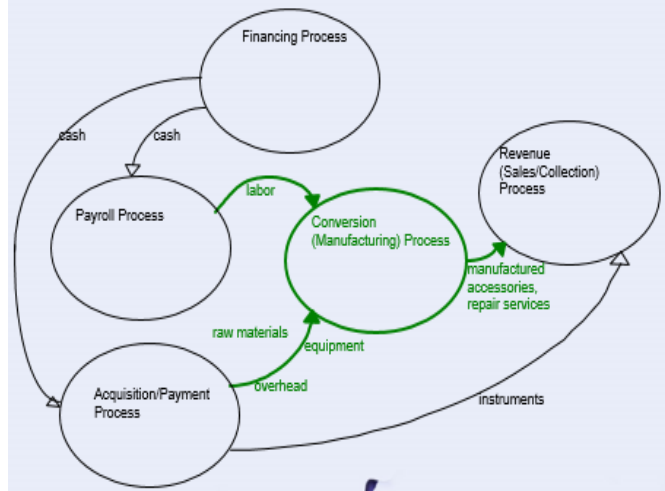
## RSWS Example (from text)



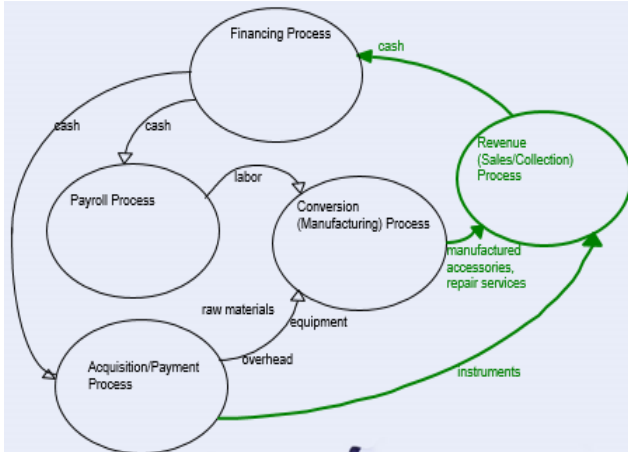
**Step 2: Connect scenes with resource flows**



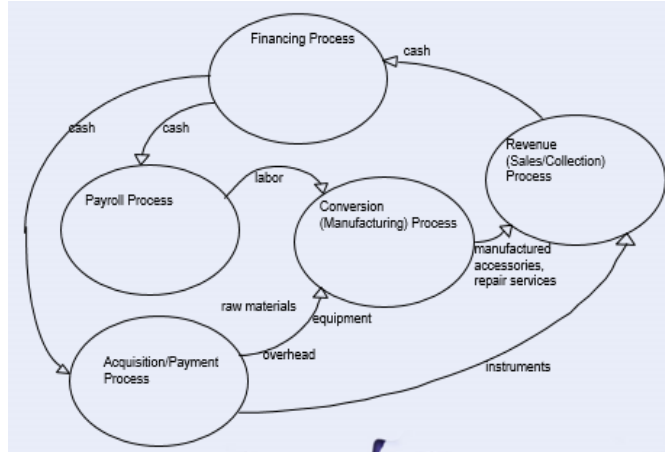
**Step 2: Connect scenes with resource flows**



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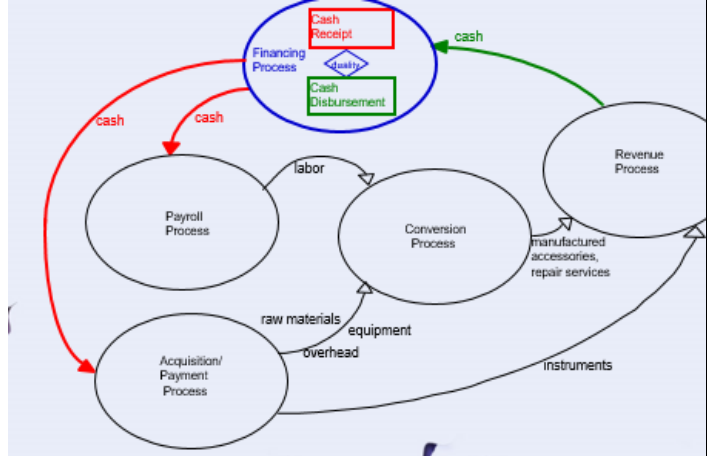
**Step 2: Connect scenes with resource flows**



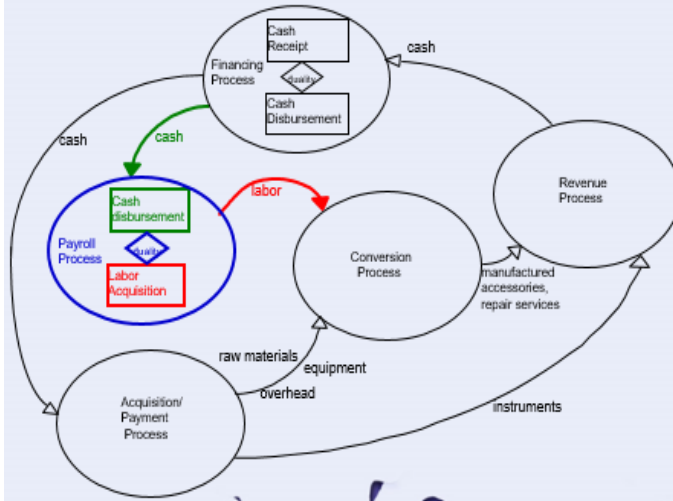
**Step 3: Specify economic exchange events for each scene**

- Each resource inflow must be matched to an economic decrement event
  - There must be an event within the process to “use it up”
- Each resource outflow must be matched to an economic increment event
  - There must be an event within the process to obtain or produce it

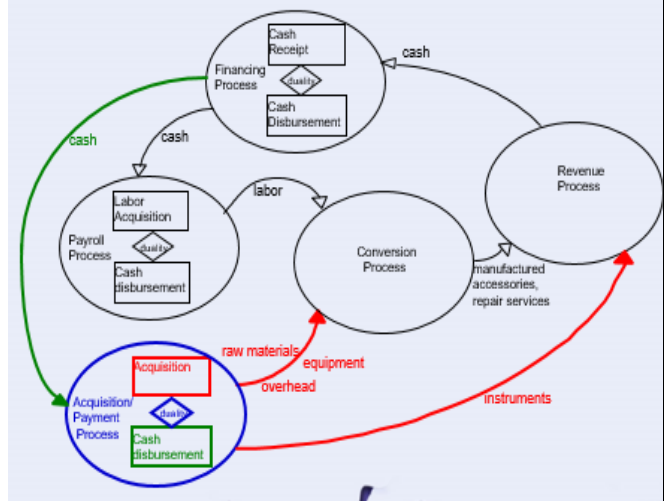
**Step 3: Specify economic exchange events for each scene**



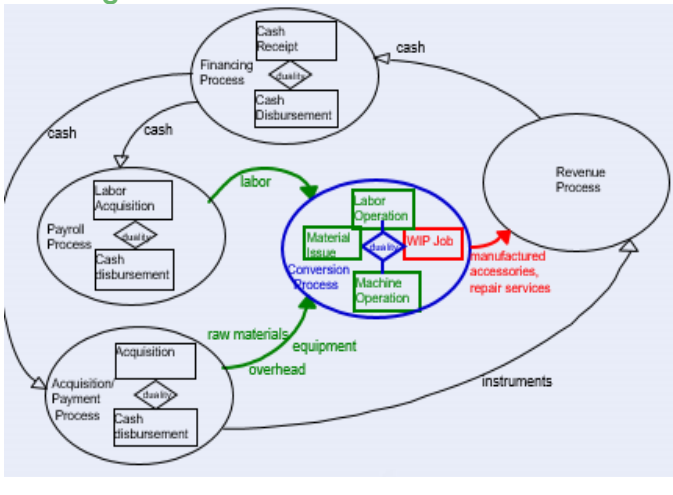
**Step 3: Specify economic exchange events for each scene**



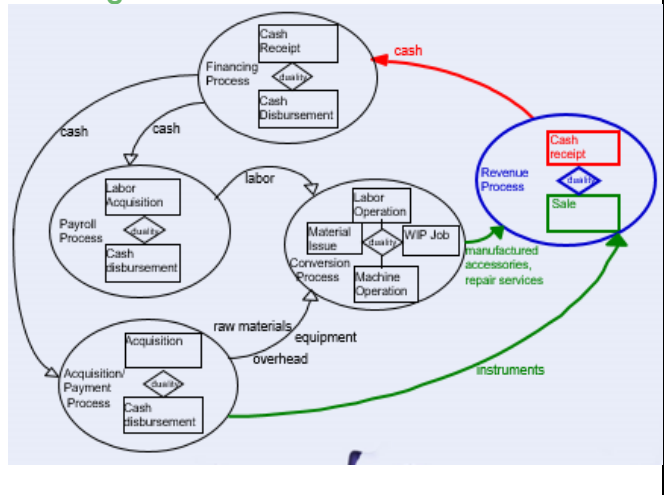
**Step 3: Specify economic exchange events for each scene**



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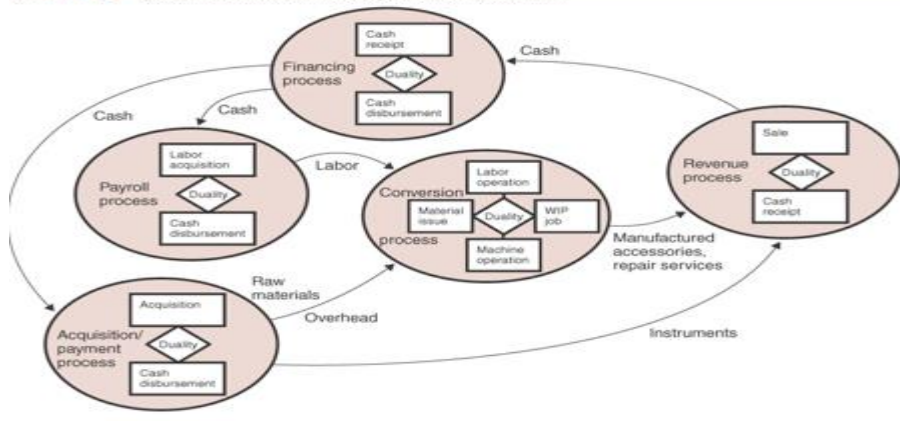


**Step 3: Specify economic exchange events for each scene**



**RSWS Completed Detailed Value Chain**

**EXHIBIT 3-5 Robert Scott Woodwinds Shop Detailed Value Chain**



## SUMMARY

- Modeling enterprise systems at the value system and value chain levels provides a valuable overview of the strategy and stockflows of the enterprise
- Keep in mind that resource flows at the value system and value chain levels need not be physical; they indicate a shift in responsibility or ownership from one agent or transaction cycle to another agent or transaction cycle