MIS5102: Process Improvement and Innovation

Understanding Process
What is a business process?
What is the role of information technology?

**Systems Thinking**
- Considering the system as a collection of integrated processes
- Synthesize and optimize

**Process Thinking**
- Considering the system as a collection of independent processes
- Decompose and optimize
<table>
<thead>
<tr>
<th>Capability</th>
<th>Organizational Impact/Benefit</th>
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<tbody>
<tr>
<td>Transactional</td>
<td>IT can transform unstructured processes into routinized transactions</td>
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<tr>
<td>Geographical</td>
<td>IT can transfer information with rapidity and ease across large distances, making processes independent of geography</td>
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<tr>
<td>Automational</td>
<td>IT can replace or reduce human labor in a process</td>
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<td>Analytical</td>
<td>IT can bring complex analytical methods to bear on a process</td>
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<td>Informational</td>
<td>IT can bring vast amounts of detailed information into a process</td>
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<td>Sequential</td>
<td>IT can enable changes in the sequence of tasks in a process, often allowing multiple tasks to be worked on simultaneously</td>
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<td>Knowledge Management</td>
<td>IT allows the capture and dissemination of knowledge and expertise to improve the process</td>
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<tr>
<td>Tracking</td>
<td>IT allows the detailed tracking of task status, inputs, and outputs</td>
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<td>Disintermediation</td>
<td>IT can be used to connect two parties within a process that would otherwise communicate through an intermediary (internal or external)</td>
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When do changes in process affect the larger system?

How does this affect how we view the process?
Connecting Systems Thinking to Business Processes

What processes are inputs?

Grocery Store Checkout

What processes are outputs?

How does the adoption of self-serve checkout change the system dynamics?
Swim Lane Diagrams

What’s the difference between this and a regular process flow diagram?

When do (and don’t) you need this type of diagram?

Customer Journey Mapping

Process from the customer’s point of view

How could this be (or how is it) used in your business?

How do new technologies enable journey mapping? (see Goldman, 2016)
Journey Mapping: Expense Reporting

**Step 1: Collect receipts**
- During trip, save receipts.
- Request email receipts.
- Check credit card statement.

**Step 2: Scan receipts and upload**
- Take picture of receipts.
- Scan receipts using a scanner.

**Step 3: Enter expenses**
- Enter each expense.
- Associate uploaded receipt with expense.
- Itemize hotel expenses by day.

**Step 4: Submit report for approval**
- Enter account information.
- Double-check totals.
- Click "submit."

**Issues/Questions**
- Is there a minimum amount under which a receipt isn't needed?
- What do I do if I don't have one?
- How do you work with multi-sided receipts?
- How do I claim the per diem for meals?
- How do I resolve itemizations with rounding errors?
- What do I do if part of the trip is personal travel?
- Any missing or inconsistent information prevents submission.

**Barriers**
- Some vendors (i.e., taxis) don't provide receipts.
- May forget to get one.
- Receipts get lost.
- Receipts may not scan properly.
- May not have necessary equipment.
- Expense system has trouble with computations to three decimal places.

What are best practices for understanding a business process?