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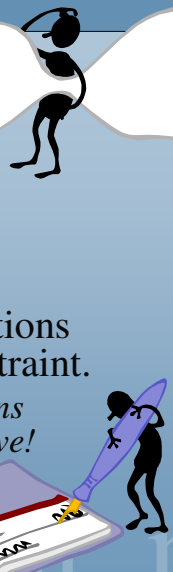
Value Stream Mapping

Finding the Constraint

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Theory of Constraints

1. Find the biggest constraint in the system.
Tip: Use a Value Stream map.
2. Focus effort on removing that constraint.
Caution: Focusing attention on areas other than the constraint will not improve the system.
3. Once it is removed, find the accommodations that made it possible to live with the constraint.
Warning: If you don't remove the accommodations that made the old system work, it will not improve!
4. Look for the new constraint.
Important! It be a moving target.



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Cycle Time

The maturity of an organization is measured by the speed at which it can reliably and repeatedly execute its core processes.

Software Process Capability:

- ✓ The reliable, repeatable cycle time from customer need until that need is satisfied.

Begins and ends with the customer

- ✗ Product Concept \leftarrow Product Starts Delivering Value
- ✗ Feature Request \leftarrow Feature in Production
- ✗ Urgent Need \leftarrow Maintenance Patch Deployed

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Value Stream Examples

Example 1

Request	Approve	Technical Assessment	Code & Test	Verify	Deploy
Value: 5 min	Value: 5 min	Value: 15 min	Value: 2 hours	Value: 15 min	Value: 5 min
Waste: 2 hours	Waste: 2 hours	Waste: 2 hours	Waste: 1 hour	Waste: 25 min	Waste: 10 min
					5 hour cycle time 33% Efficiency

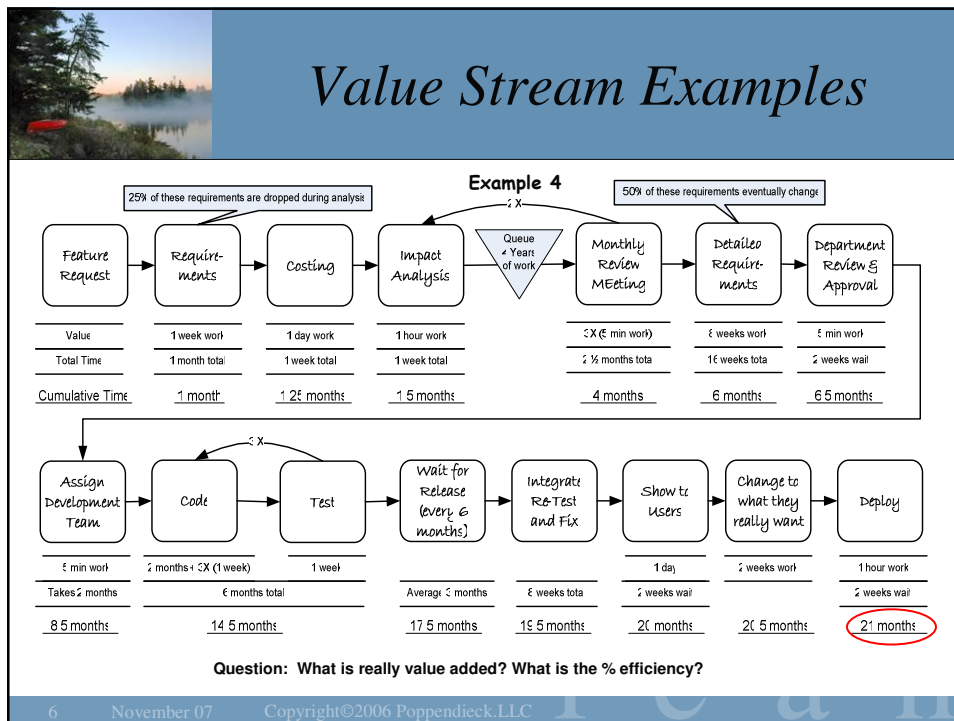
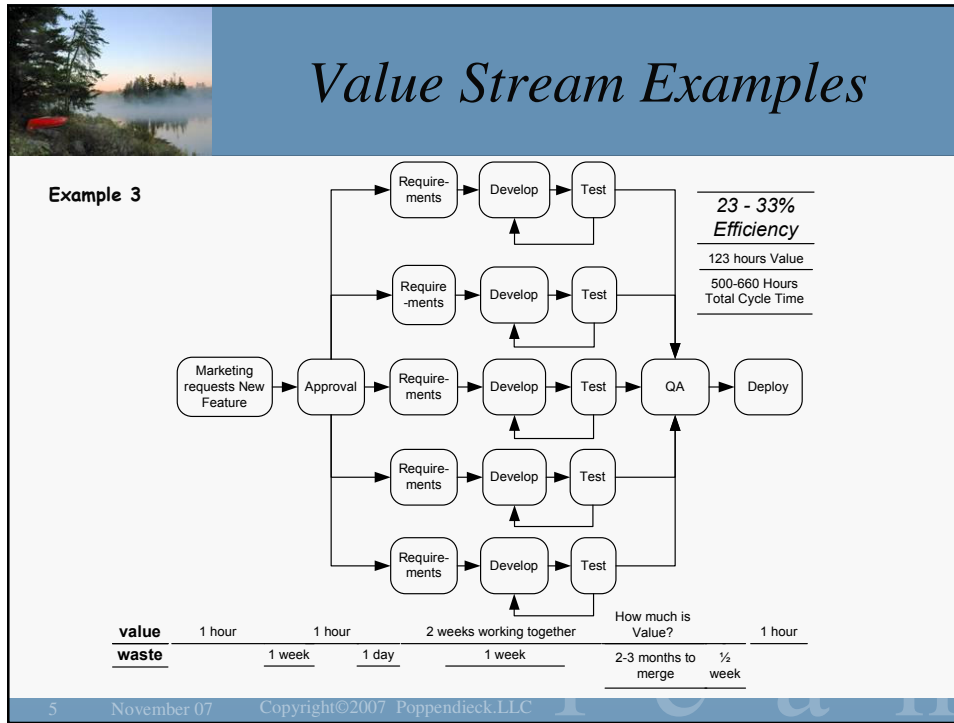
Example 2

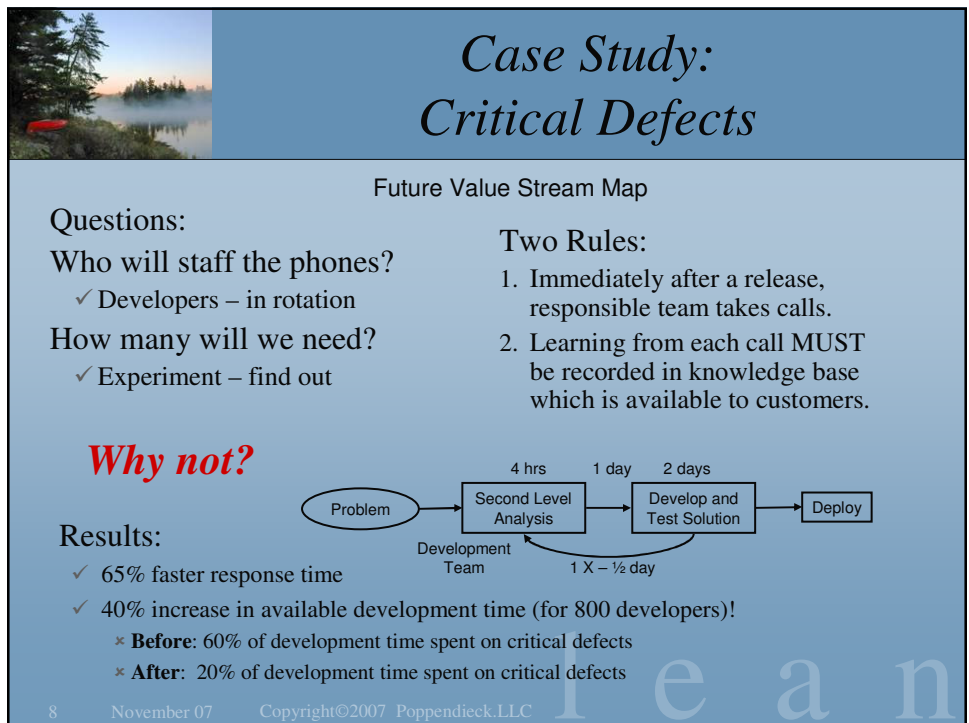
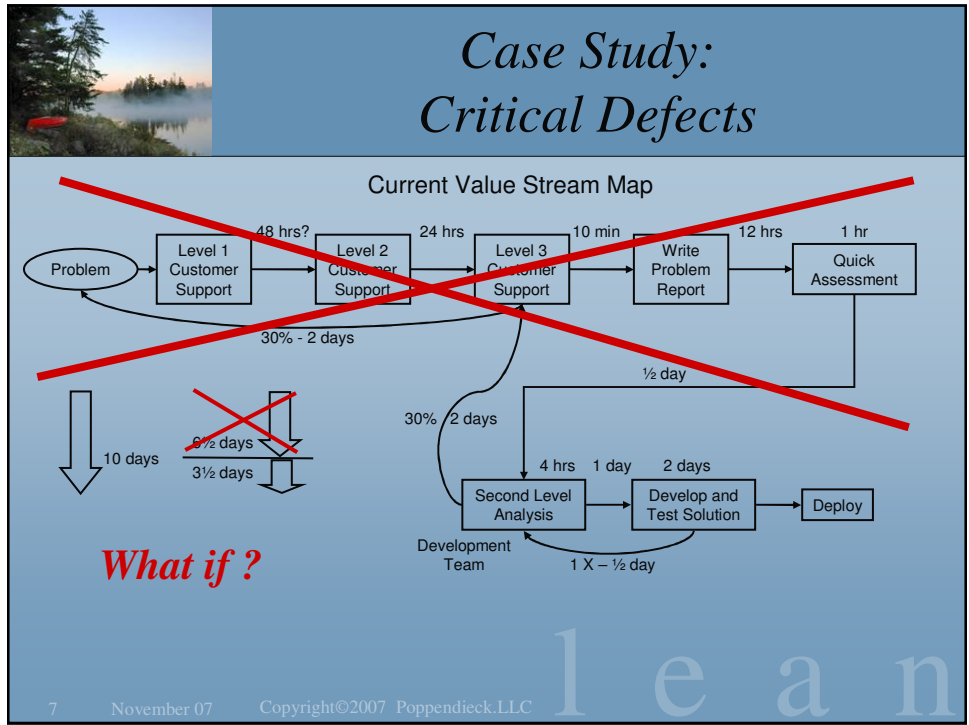
Request	Approve & Prioritize	Technical Assessment	Code & Test	Verify & Fix	Deploy
Value: 20 min total	Value: 5 min	Value: 15 min	Value: 2 hours	Value: 4 hours total	Value: 5 min
Waste: 1.5 min	Waste: 1/2 week	Waste: 2 weeks	Waste: 2 weeks	Waste: 1 week	Waste: 1/2 week
					5 weeks + 1 day 1% Efficiency

Extr 15 minutes to fill out request form


Only 15 minutes of 4 hours should be needed to verify

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Exercise: Current Value Stream Map



Select a process for creating a Value Stream Map. Decide when the clock starts (eg. customer has a need) and when it stops (need is filled).

Add up time of each step plus time between steps = Total Cycle Time
 Add up Value Added Time in each step
 Calculate Process Cycle Efficiency*

$$\frac{\text{Value Added Time}}{\text{Total Cycle Time}}$$

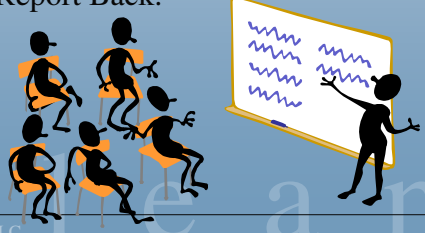
* George & Wilson, *Conquering Complexity in Your Business*

Current Value Stream Map
 List / diagram the key steps
 List the average time of each step

- ✓ Does the step add value full time?
- ✓ Is the step ever repeated?

List the average time between steps

Report Back.



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Thank You!

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