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Creating a Culture of Process Improvement in the Human Services: An Application of Lean Philosophy

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Introductions

Purpose

- Introduce the *Learning²CTM* process improvement methodology
- Discuss its use within the context of evaluating human service programs
- Provide examples of the use of *Learning²CTM*
- Assess the benefits and challenges of its use

Setting the Scene

- Government Performance Results Act (GPRA) of 1993
- Strategic and performance planning and reporting
- Logic Models
- Limited pool of resources
- Need to identify process improvement strategies
- Indepth analysis of processes and their implementation using lean concepts and methods

Lean Philosophy and Methods

- Focuses on the continual reduction of waste within a work process to make it more efficient, as well as effective in meeting program goals/objectives
- Lead by top management with buy-in from all individuals/stakeholders involved
- Uses a standardized set of visual methods to understand and analyze the current state, visualize a future state, and create the action plan for the transformation

Preparation for Mapping a Work Process

- What is the purpose of the process?
- What represents success for this process?
- What are the performance measures?
- Who is responsible?

Value Stream Mapping (VSM)

- A visual representation of the macro tasks that are required to deliver a service or reach a goal
- Create current state VSM to identify the focus of improvement opportunities

VSM Example—Newsletter

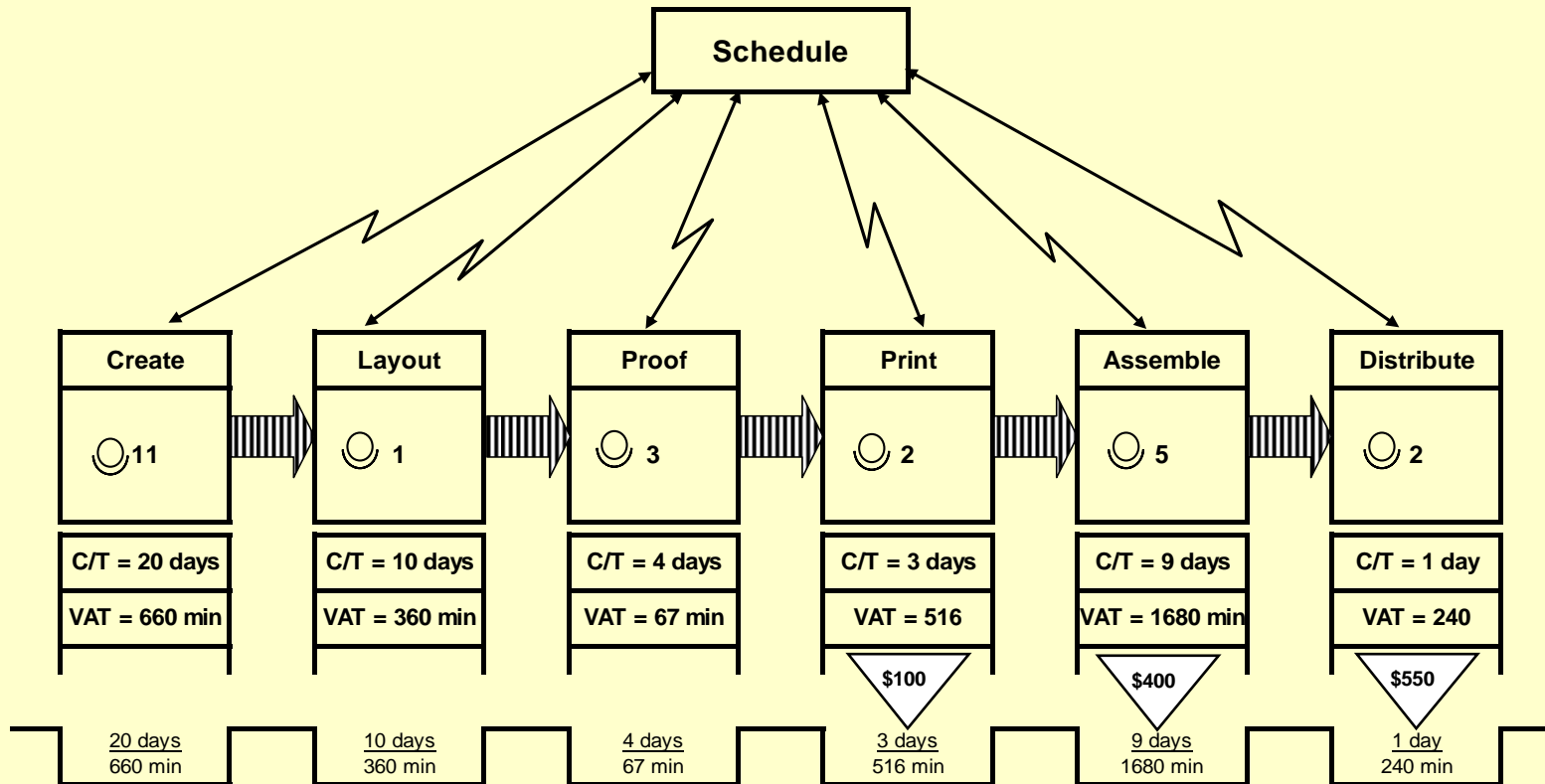
Questions:	Answers:
<p>1. What is the purpose of the process?</p>	<p>To develop and distribute a newsletter to the organization’s clients and stakeholders in order to meet their need for information regarding the program and its delivery of services.</p>
<p>2. What are the measures of success?</p>	<ul style="list-style-type: none"> ▪ The newsletter is mailed on the specified due date. ▪ The newsletter preparation process takes 10 working days to complete. ▪ The newsletter has no errors in it.
<p>3. What are the performance measures?</p>	<ul style="list-style-type: none"> ▪ Number of days before or after the specified date for mailing. ▪ Number of days (+ or --) to produce the newsletter compared to the expected number of days. ▪ Number of errors within the newsletter.
<p>4. Who is responsible?</p>	<p>The administrative assistant manages the process and coordinates the activities of the newsletter contributors, the printer, and the mailing room staff.</p>

Steps to Create VSM

- Select service or goal/purpose, based on need for improvements
- Define where the value stream begins and ends
- Draw macro steps in the process and information links
- Add data: people, elapsed time, cycle time, value added time, waiting time, cost of materials/supplies (if necessary)
- Show entire timeline, with total elapsed time, cycle time, and value-added time

A Typical Value Stream Map

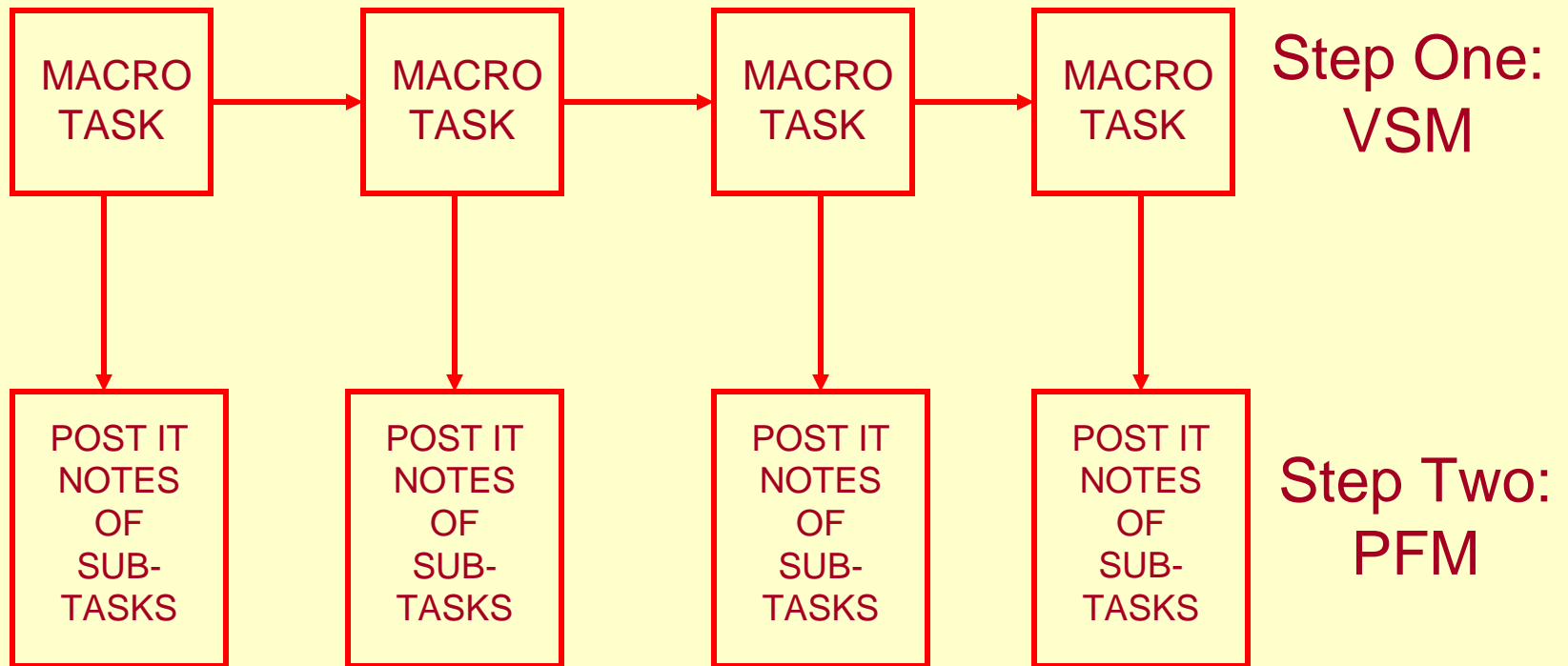
Figure 1: Value Steam Map or Newsletter Process



Total Elapsed Time = 47 days = 376 hours = 22,560 min

VAT = 7.3 days = 58.7 hours = 3,523 min

Mapping the Process





Purpose of Process Flow Map (PFM)

- To create a visual representation of the tasks **actually completed** within each macro step of a work process
- To analyze subtasks: value-added (**VA**), non-value added (**NVA—i.e., areas of waste**) and required non-value added time(**RNVA**)
- To identify undesirable effects (**UDEs**) and use **Root Cause Analysis** (the 5 Why's) to identify solutions
- To create a future state PFM
- To develop a plan to get from the current state to the future state



Seven Forms of Waste*

- Waste from overproduction
- Waste from waiting
- Waste from unnecessary transporting
- Waste from extra processing
- Waste from extra inventory
- Waste from unnecessary motion
- Waste from product defect

*See handout

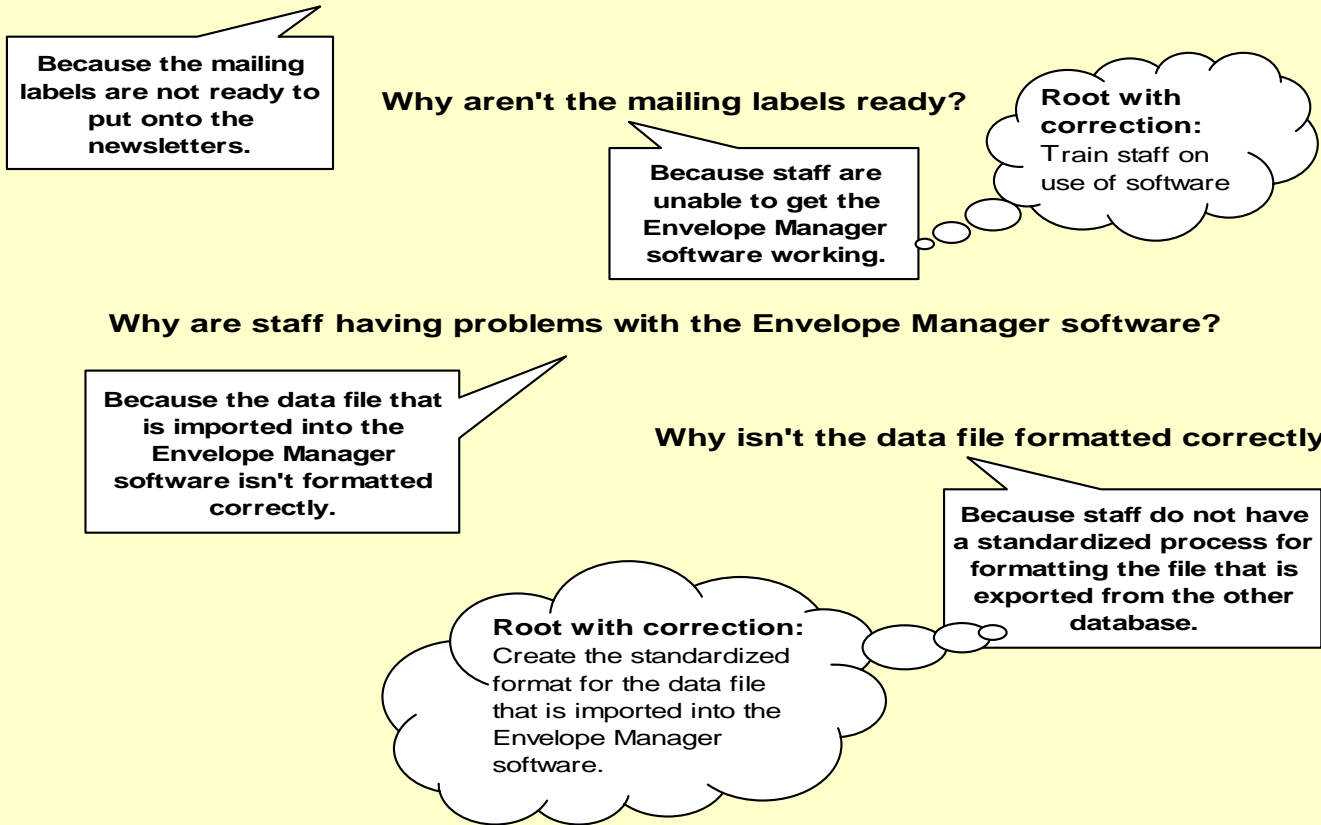
Undesirable Effects (UDEs)

- **Undesirable Effects (UDEs)**--the consequences of work flow processes that produce undesirable results, for example:
 - **Information deficits** (number of times information is missing or incomplete)
 - **Processing time** (measure in minutes, hours, days)
 - **Rework time** (measure in minutes, hours, days)
 - **Process variation** (the number of times there are no standardized work flow processes in place such that everyone does the process differently or when there are exceptions to a work flow process that create the need to “work around” the process)
 - **Quality of product/service** (the number of defects/errors within a product/service)

Root Cause Analysis

Root Cause Analysis: Newsletter Example

Issue: It takes too long to assemble the newsletter. Why?

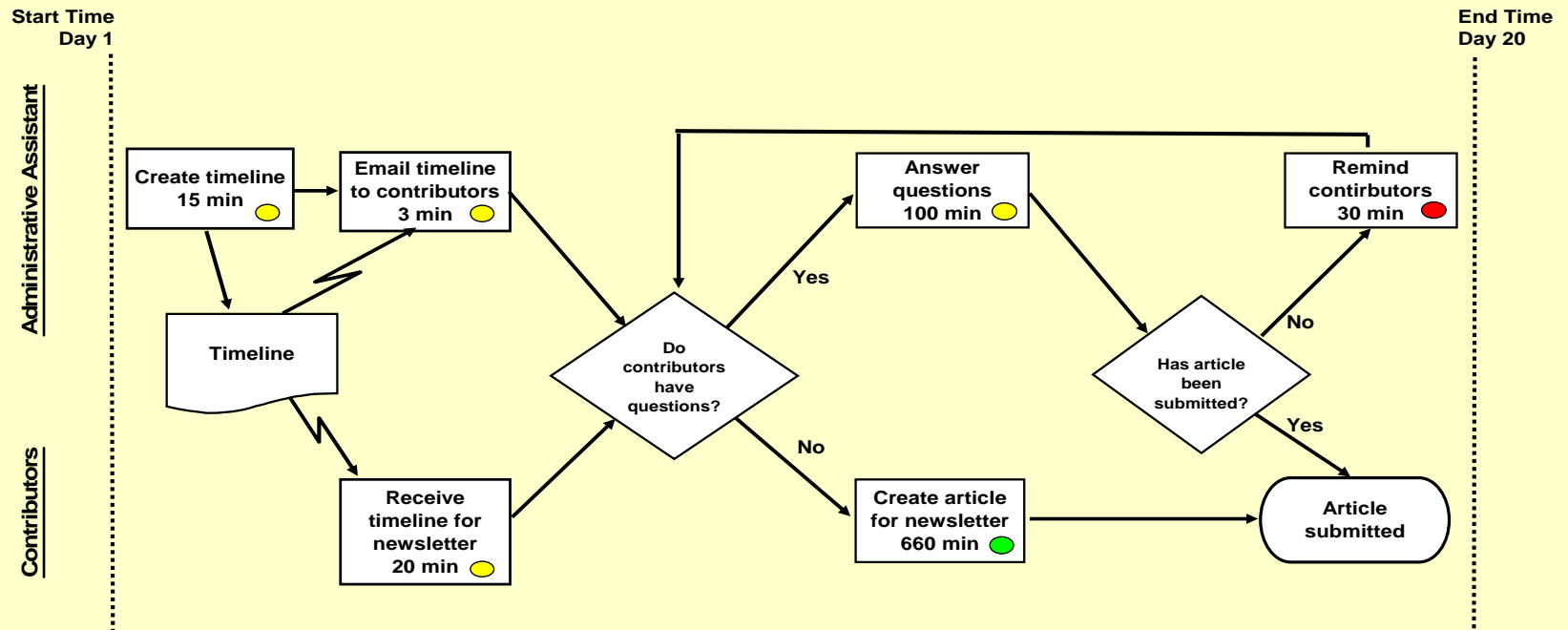


A Typical Process Flow Map



PFM for "Create" Step of Newsletter

PFM for Newsletter--CREATE Macro Step



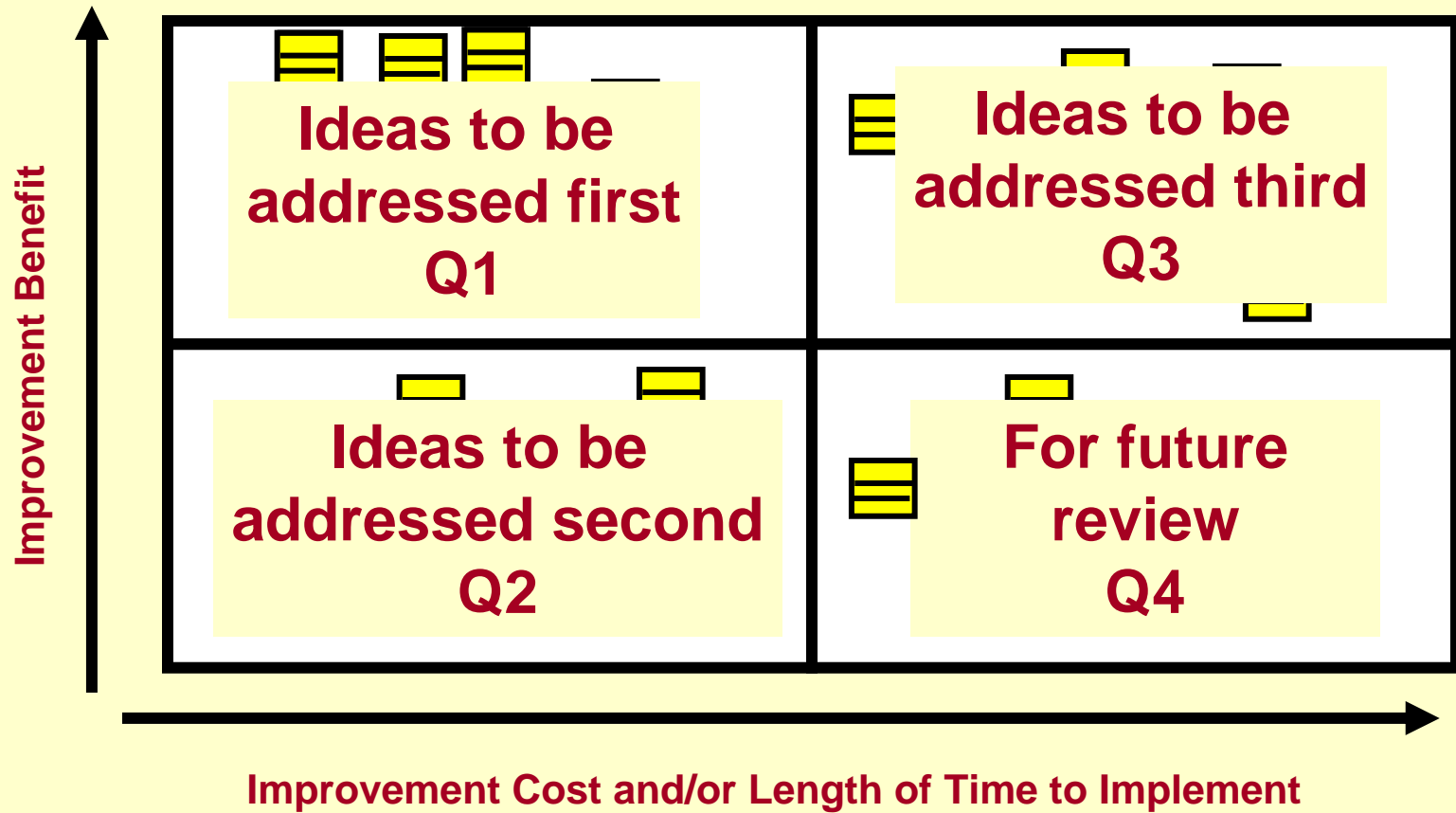
- VA
- NVA
- RNVA

Task	Minutes for Each Task			Total
	VA	RNVA	NVA	
Create timeline		15		15
Email timeline to contributors		3		3
Receive timeline for newsletter		20		20
Answer questions		100		100
Remind contributors			30	30
Create article for newsletter	660			660
Totals	660	138	30	828
Waiting			19 days	

Total running time = 20 days
 Total VA time = 660 minutes or 1.38 days



Benefit vs. Cost-Timeline Matrix



Create a Future State

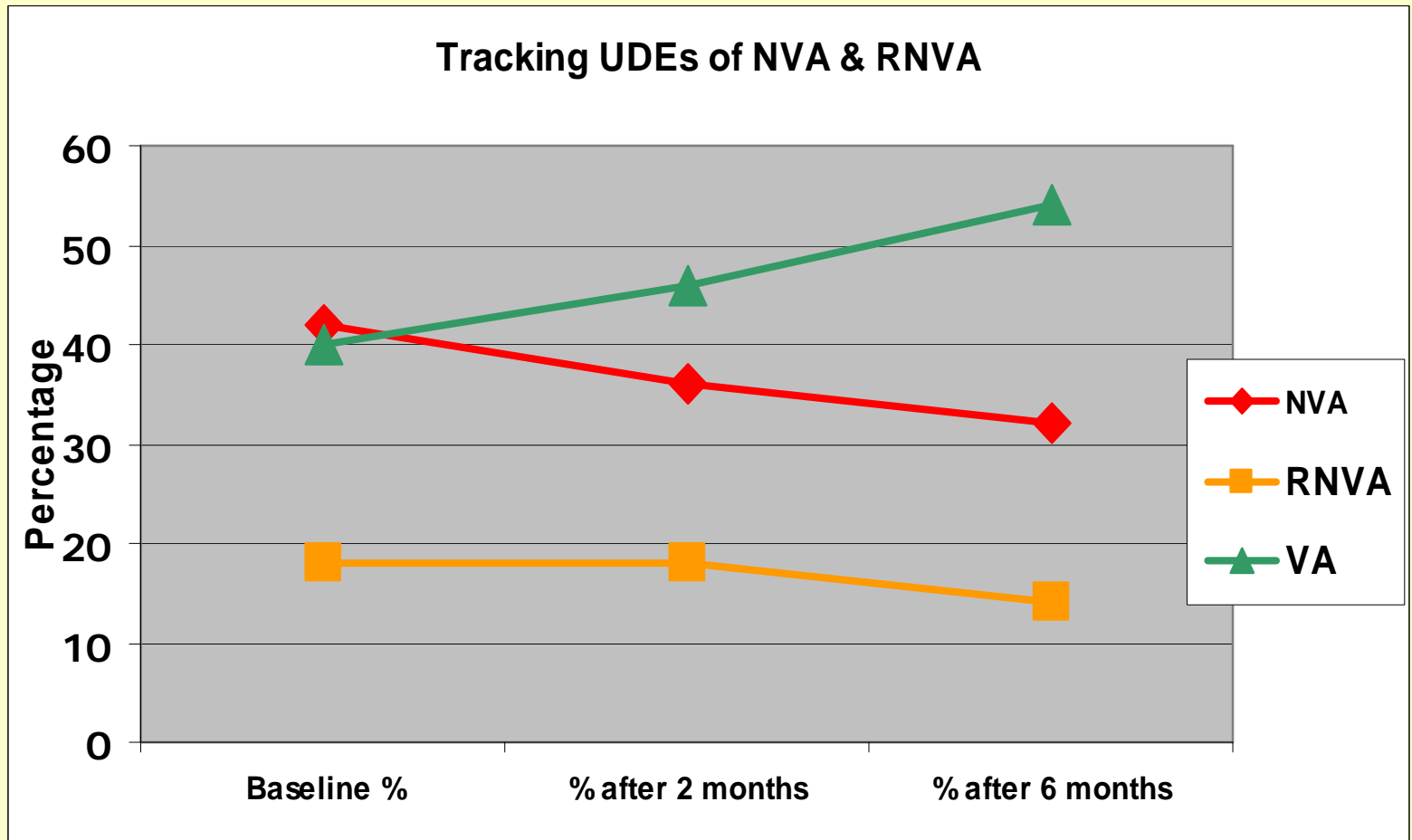
- Design a future state that minimizes our UDEs and drives out the root causes of waste
- Consider:
 - Reduce the total processing time
 - Eliminate the non-value added work
 - Minimize the amount of time spent on required non-value added work
 - Reduce the amount of rework that is done



Create Action Plan and Implement Transformation

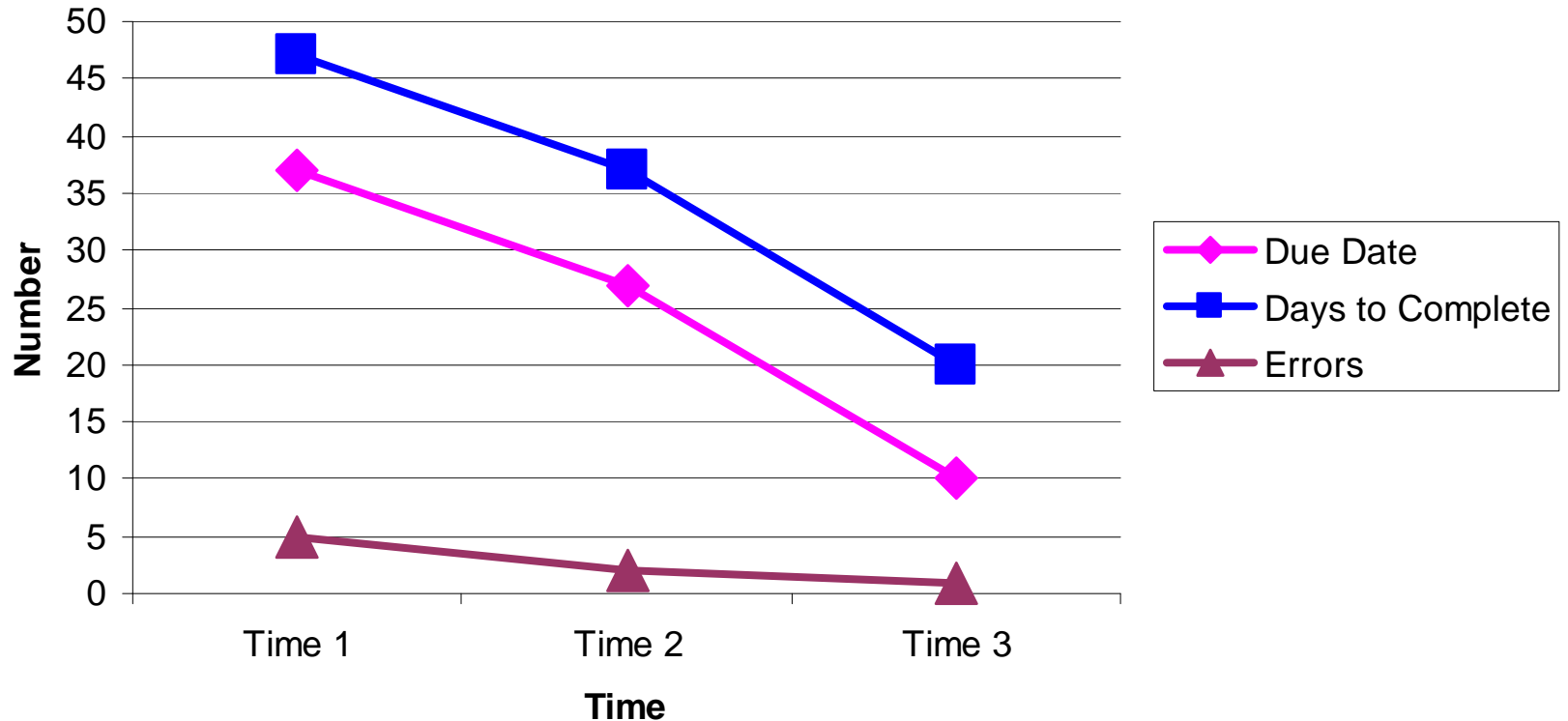
- Design an action plan, based on prioritization of the issues and ideas
- Implement the action plan—
as a team effort of specific individuals
- Continue to look at the metrics over time to sustain continuous improvements

Reporting Results Over Time



Reporting of Results Over Time

Figure 7: Tracking Performance Measures Over Time



Features of *Learning²C™*

- Builds on A Program's Logic Model
- Maintains Focus on Program Outcomes
- Promotes Organizational Learning
- Uses a Team Approach
- Increases visibility of processes
- Is Easy to Learn





Benefits of *Learning²CTM*

- Enhances current program evaluation methodology by doing a deeper analysis of work processes to identify improvements that will add value to a program's accomplishment of outcomes.
- Empowers staff and other stakeholders to make changes and builds their internal capacity to do so.
- Frees up significant amount of resources that are trapped in a cycle of wasted work efforts, allowing these resources to be put toward work that has value for the organization's clients.
- Enables team members to understand work processes other than their own and creates an environment where they are able to ask critical questions about the how and why of current processes.
- Creates visual work instructions to sustain standardized work processes.

Challenges of *Learning²C™*

- Assumption that streamlining work processes will automatically “eliminate jobs”
- Getting staff and stakeholders to honestly communicate the “real processes” without fear of retribution
- Difficulty in having teams provide the level of detail needed in process flow mapping
- Determining from whose perspective a task is value-added or not
- Having the organizational leadership fully support and commit to changes

Challenges of *Learning²CTM*

- Being open and willing to conduct work in a “different” way
- Accessing needed resources for change efforts
- Identifying the team and getting them to commit to the time it takes to do the process flow mapping and development of realistic action plans
- Taking the “action” as detailed in the plans (and not just “talking” about it)
- Finding useful and easy to implement performance measures
- Sustaining the momentum of change over time

Closing

- The *Learning²CTM* methodology offers evaluators a useful tool to add to their toolkit when doing process and outcome evaluations
- Enables evaluators to help program staff build their internal capacity to analyze their processes and measure performance over time
- Enables evaluators to help program staff identify opportunities for improvements that will produce meaningful results

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