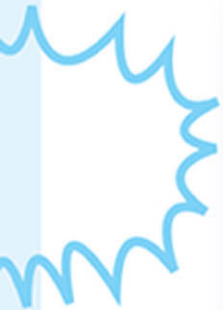
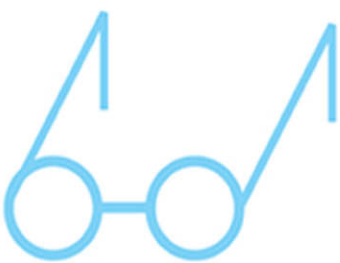
"The new bible for value stream mapping and improving organizational performance."
—Art Byrne, former CEO, The Wiremold Company, and author, *The Lean Turnaround*

VALUE STREAM MAPPING





How to Visualize Work and Align Leadership for Organizational Transformation

Karen Martin

Author of the Shingo Research Award–winning *The Outstanding Organization*

AND Mike Osterling

1

Value Stream Management

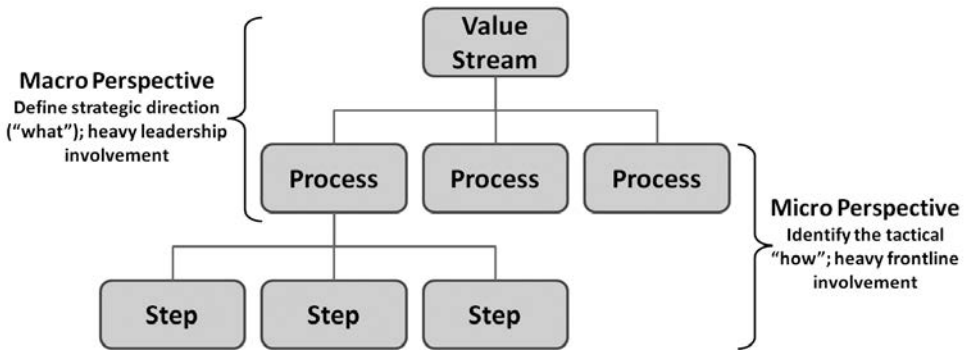


FIGURE 1.1 Granularity of work

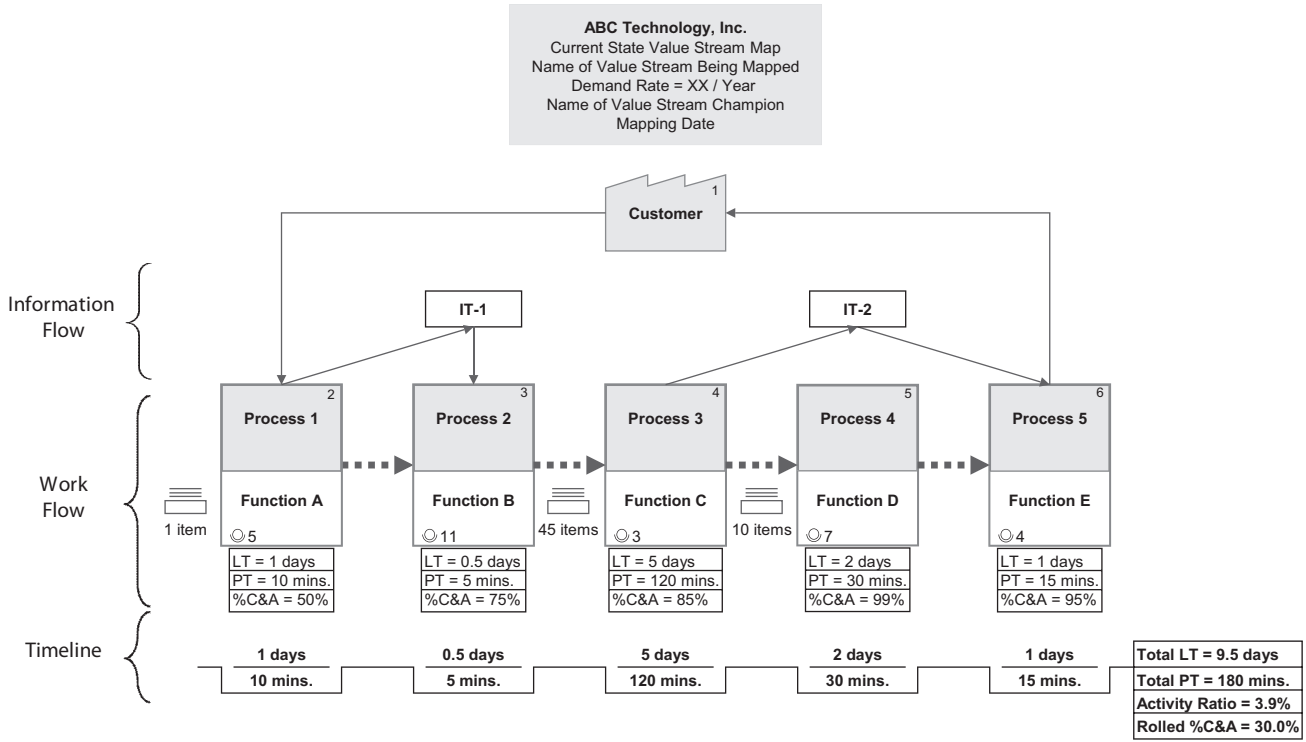


FIGURE 1.2 Basic current state value stream map

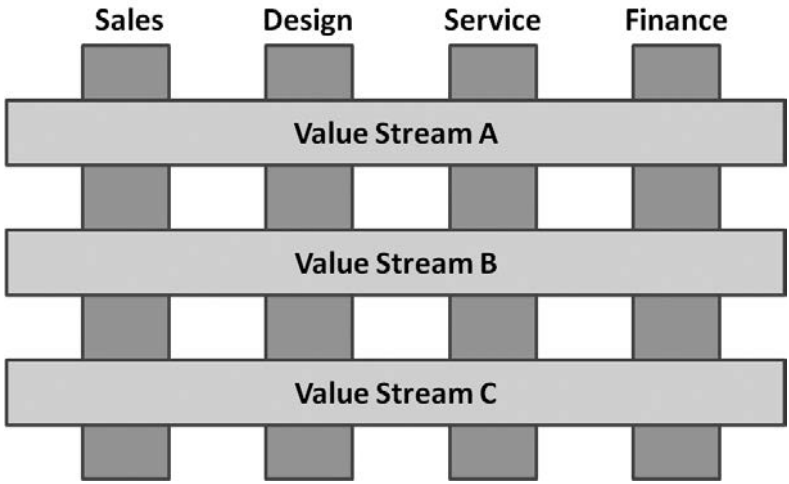


FIGURE 1.3 Vertical organization structure versus horizontal reality

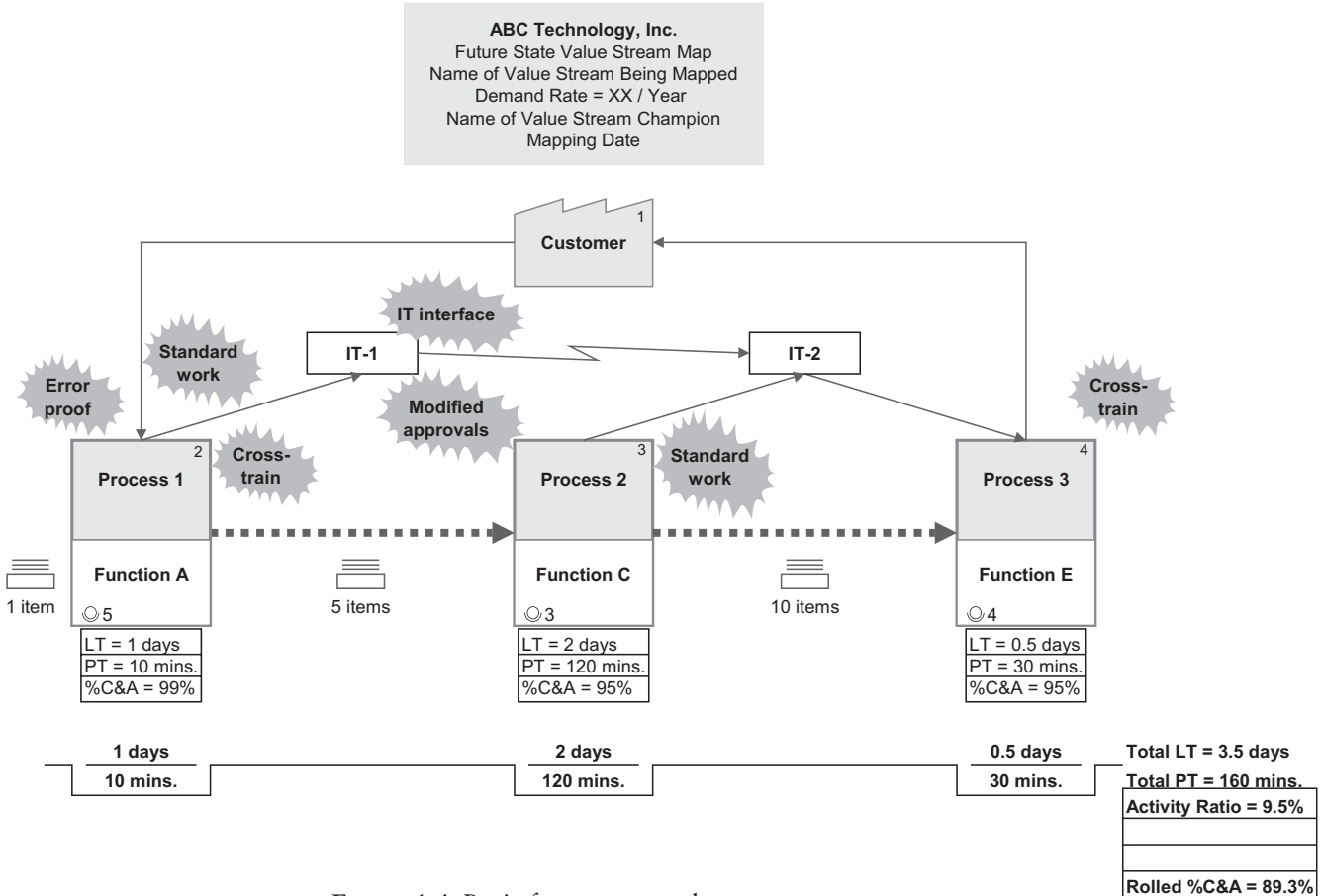


FIGURE 1.4 Basic future state value stream map

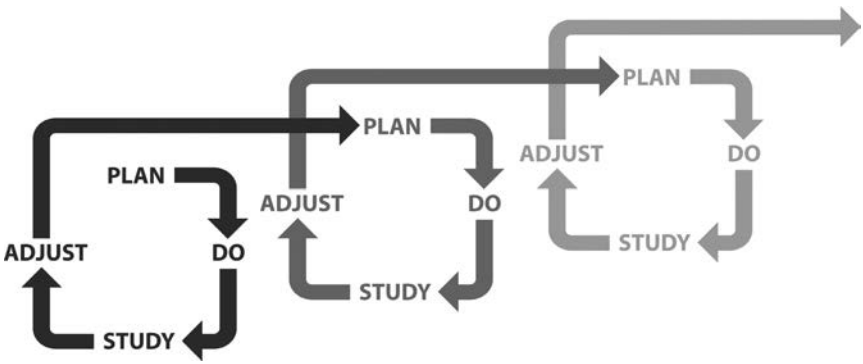


FIGURE 1.5 Cycles of continuous improvement

2

Setting the Stage and Enabling Success

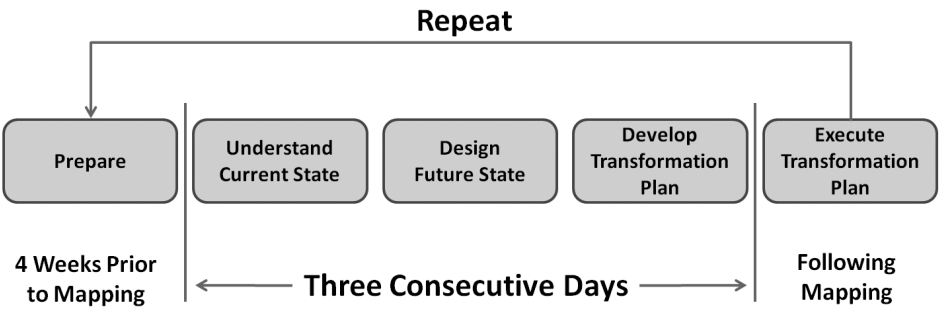


FIGURE 2.1 Value stream mapping phases and timing

Value Stream Mapping Charter

Scope

Value Stream	Value stream being improved
Specific Conditions	What circumstances are included and excluded? (e.g., type of customer, geographic location, etc.)
Demand Rate	How many times is this done per wk, qtr, mo, or yr?
Trigger	What initiates the process?
First Step	Task on first process block
Last Step	Task on last process block
Boundaries & Limitations	What is the team NOT authorized to change?
Improvement Time Frame	Typically 3-6 months

Accountable Parties

Executive Sponsor	Required: typically VP or C-level
Value Stream Champion	If needed—often director or manager level
Facilitator	Required: skilled, objective person leading the activity
Logistics Coordinator	Not always needed
Briefing Attendees ** required *optional	List the people that are required to attend the briefings (**) and those whose attendance is optional (*).

Logistics

Event Dates & Times	3 days typically; consecutive is best; 6 hrs per day minimum; 7 or 8 hrs is best
Base-camp Location	On-site, ample wall space, quiet/private location
Meals Provided	Always a nice touch; keeps the team from wandering
Briefing Dates & Times	Aids in consensus building and organizational learning. Typically the last hour of the day.

Current State Problems & Business Needs

1	What's driving the need for improvement?
2	
3	
4	
5	

Measurable Target Condition

1	Reduce <defined metric> from X to Y (Z% improvement).
2	Increase <defined metric> from X to Y (Z% improvement).
3	
4	
5	

Benefits to Customers

1	How will internal and / or external customers benefit as a result
2	of improvements to the VS?
3	
4	
5	

Benefits to Business

1	What other benefits will the business or internal customers realize as a
2	result of improvements to the VSM?
3	
4	

Mapping Team

	Function	Name	Contact Information
1	Leadership-heavy		
2			
3			
4			
5			
6			
7			
8			
9			
10			

On-Call Support

	Function	Name	Contact Information
1	SMEs that may not be needed full time		
2			
3			
4			

Agreement

Executive Sponsor	Value Stream Champion	Facilitator
Signature:	**Signature:**	**Signature:**
Date:	Date:	Date:

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FIGURE 2.2 Value stream mapping charter

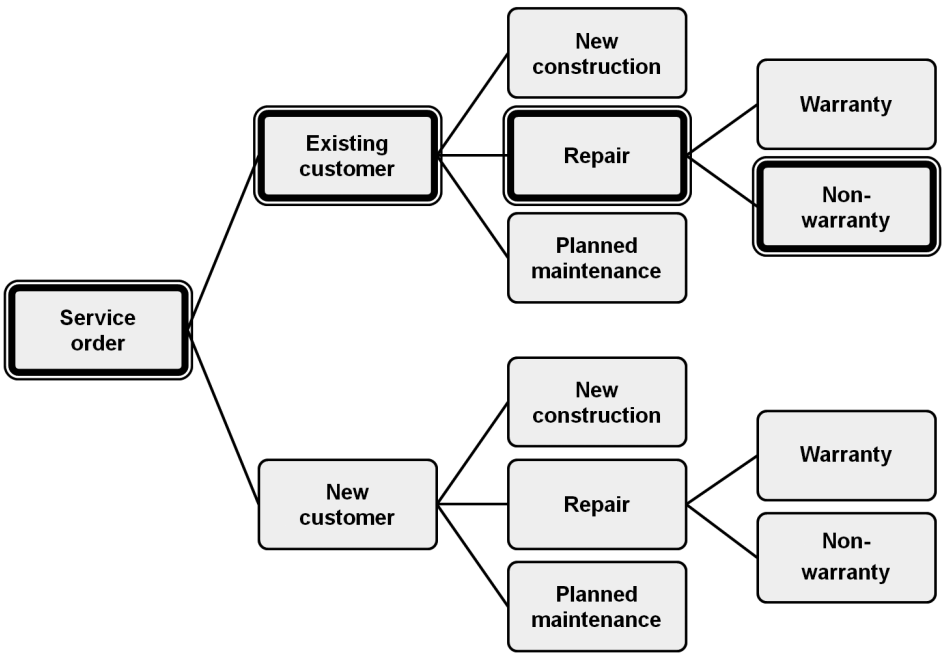

FIGURE 2.3 Proper scoping is needed to successfully map the current state.

3

Understanding the Current State

FIGURE 3.1 Post-it note after the first value stream walk

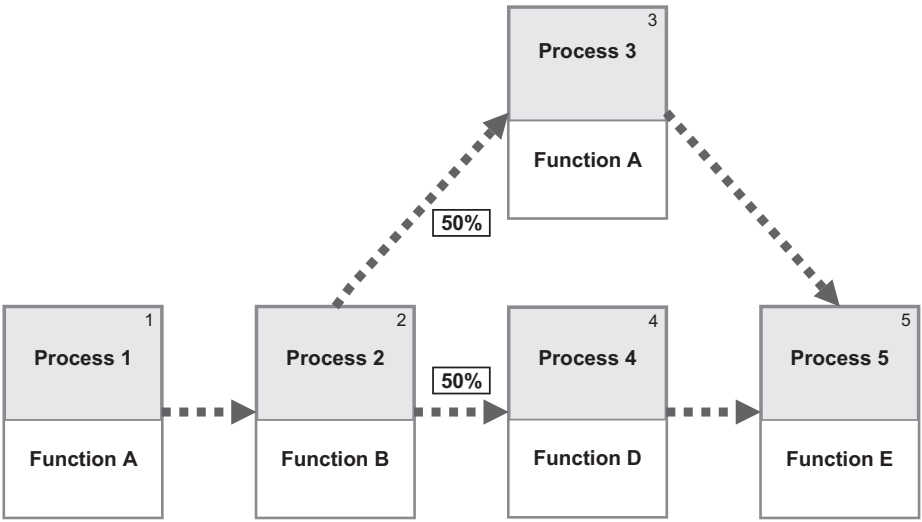

FIGURE 3.2 Acceptable branching on a value stream map

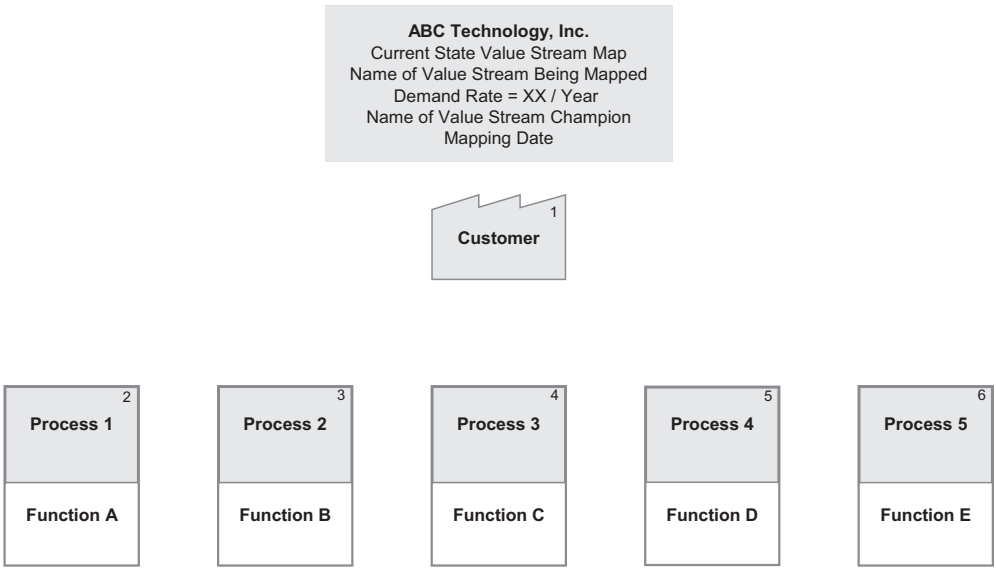

FIGURE 3.3 Value stream map progressive build: process block placement

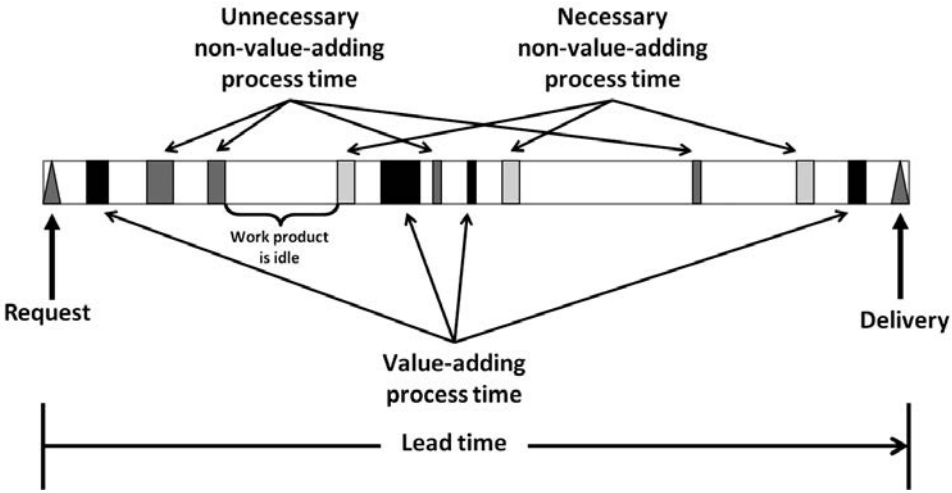

FIGURE 3.4 Process time versus lead time across the value stream

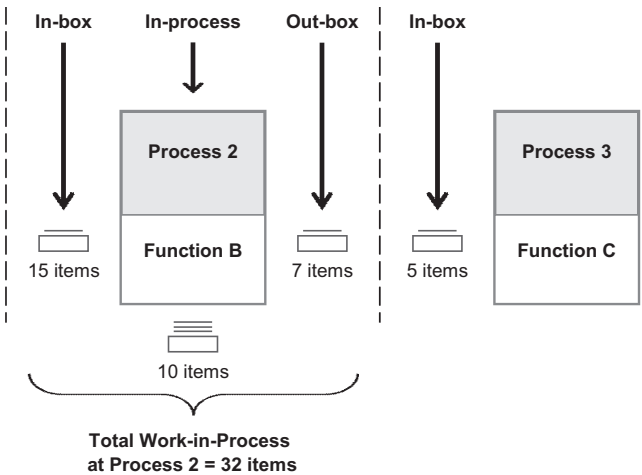

FIGURE 3.5 Three places work can accumulate

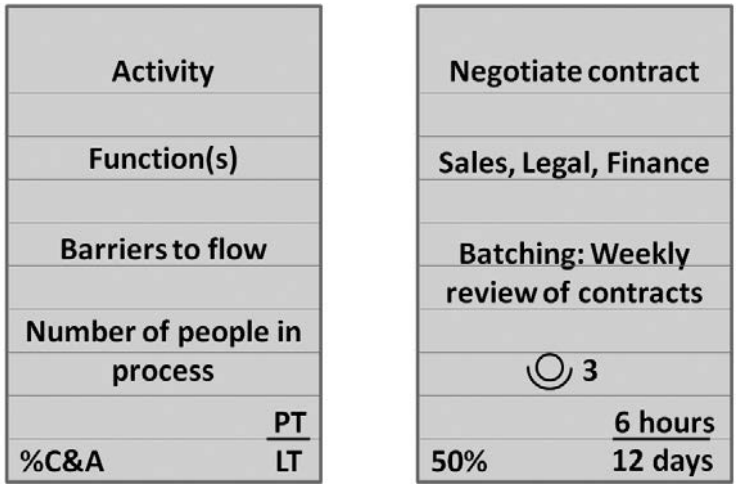

FIGURE 3.6 Post-it note after second value stream walk

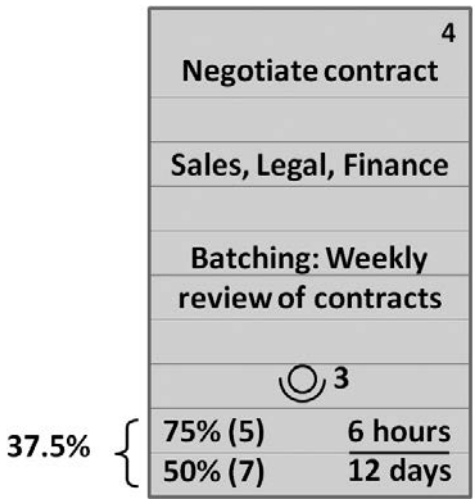

FIGURE 3.7 How to document multiple downstream customers reporting different %C&As from the same upstream supplier

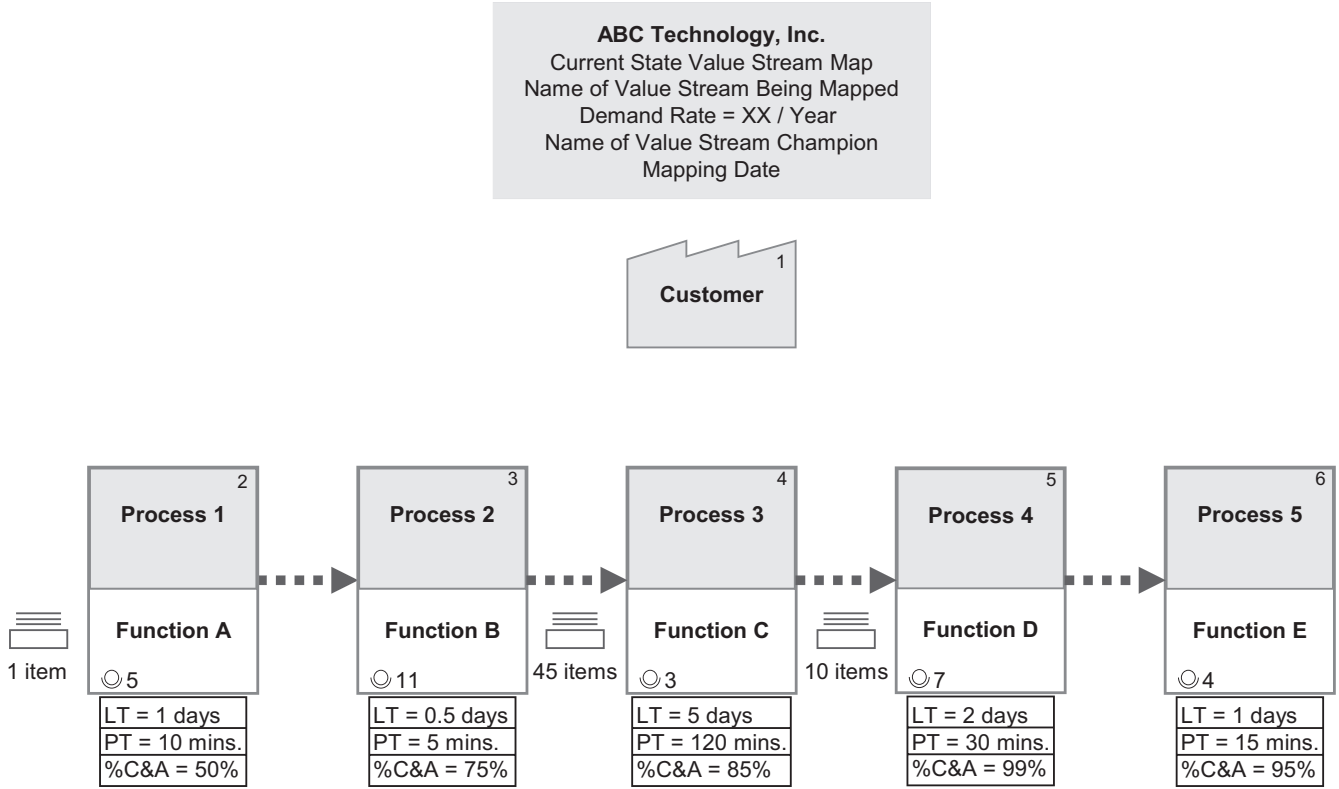

FIGURE 3.8 Value stream map progressive build: process details

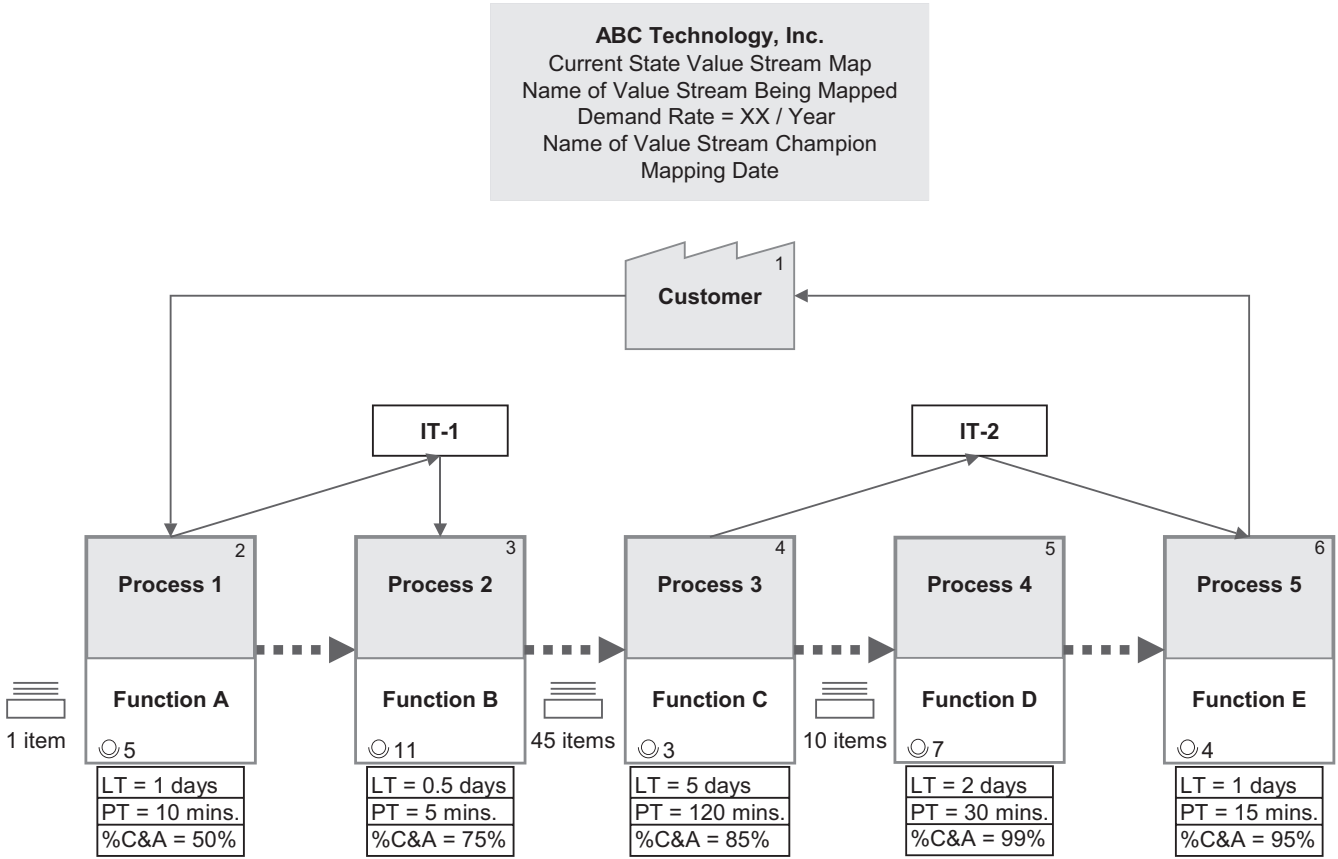

FIGURE 3.9 Value stream map progressive build: information flow

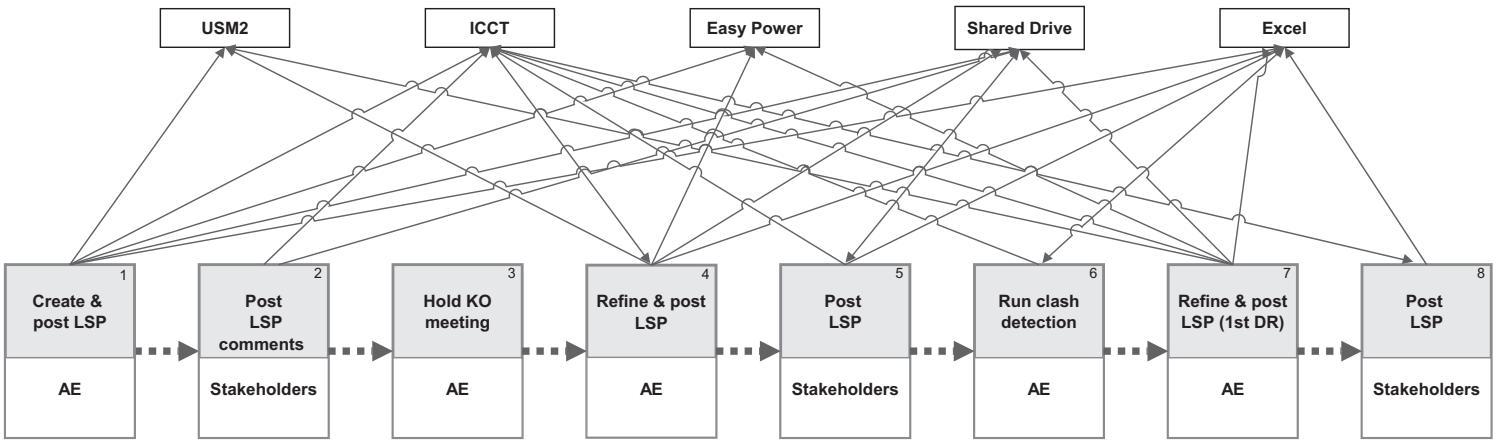

FIGURE 3.10 Complicated information flow

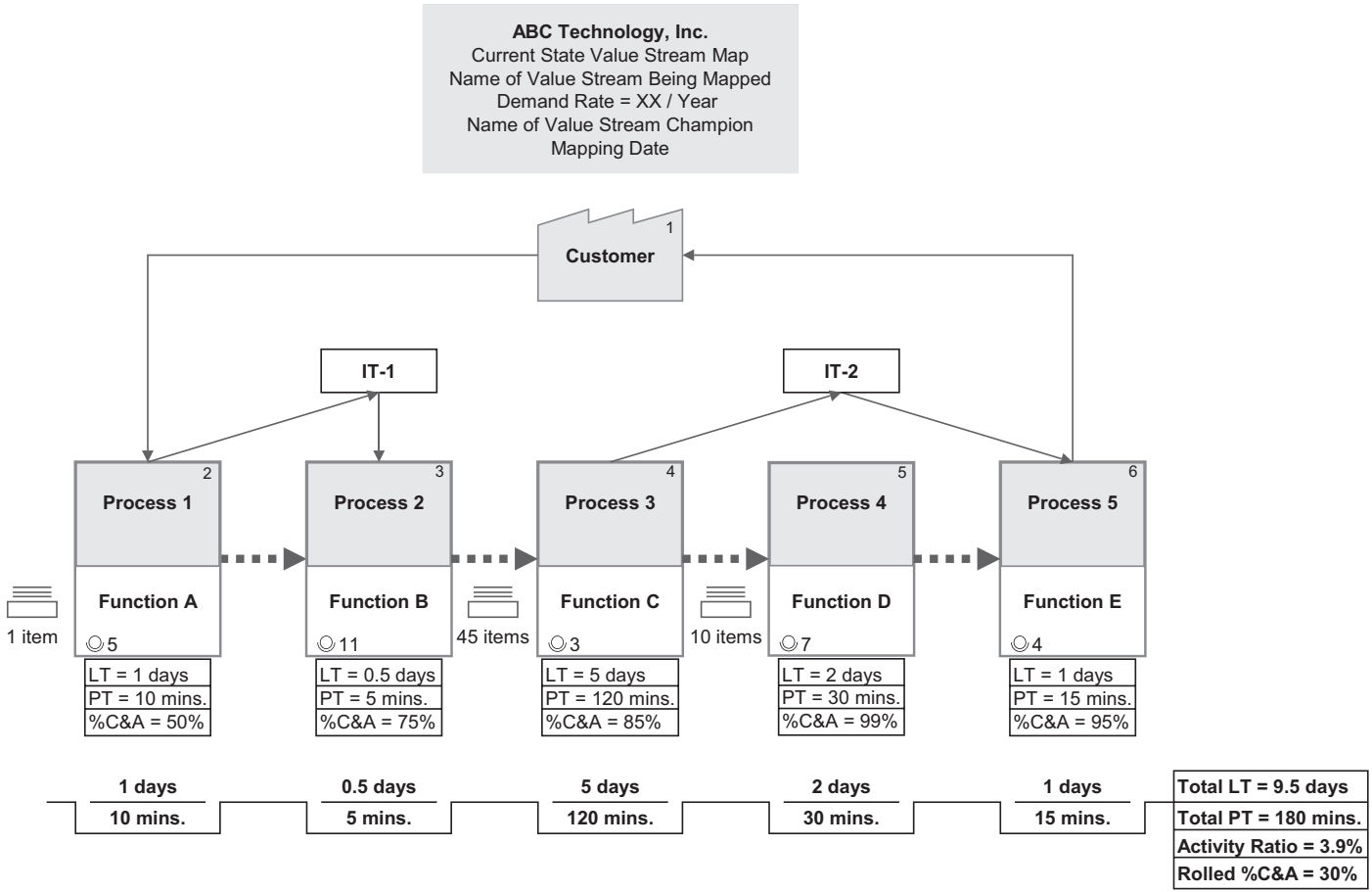

FIGURE 3.11 Value stream map progressive build: summary timeline

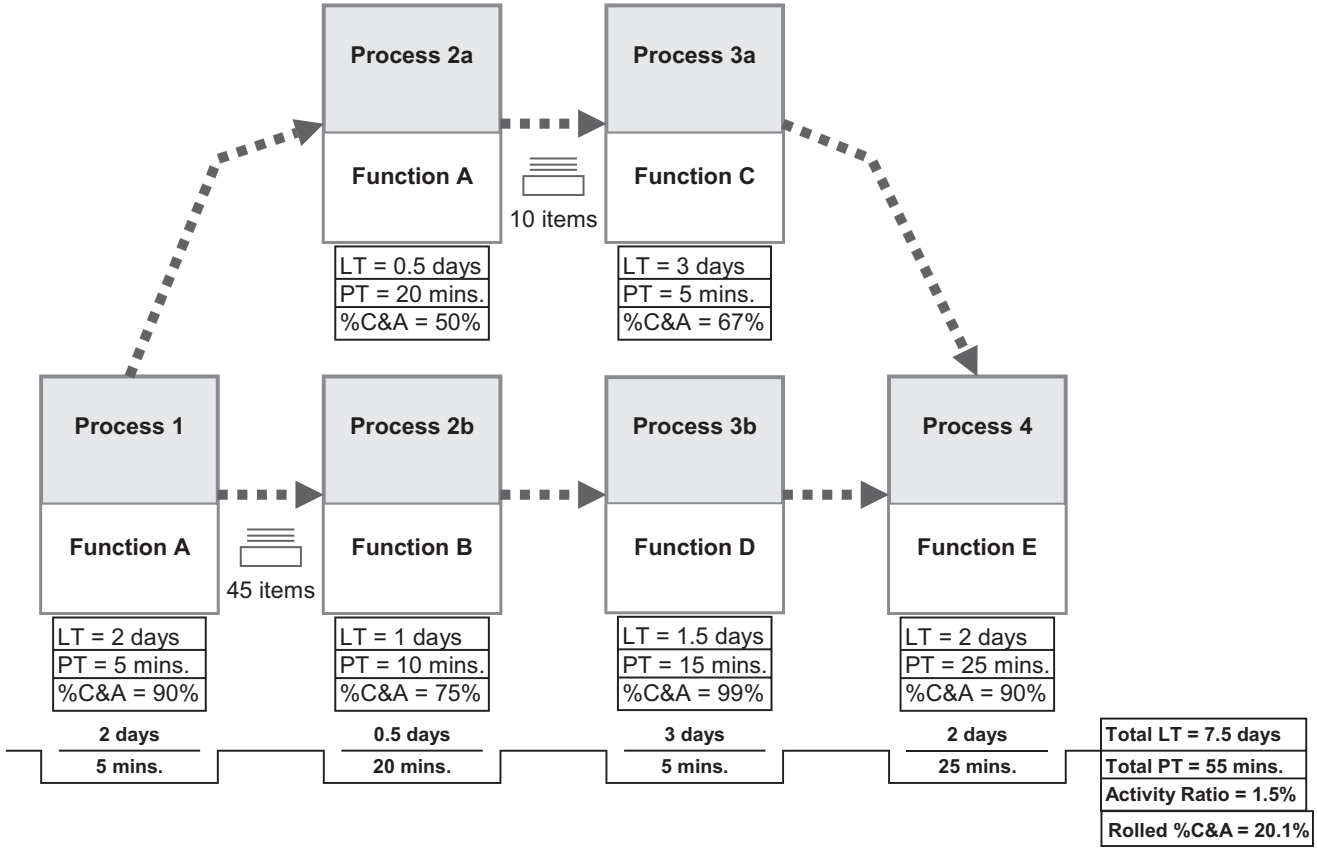

FIGURE 3.12 Parallel process block treatment on the timeline

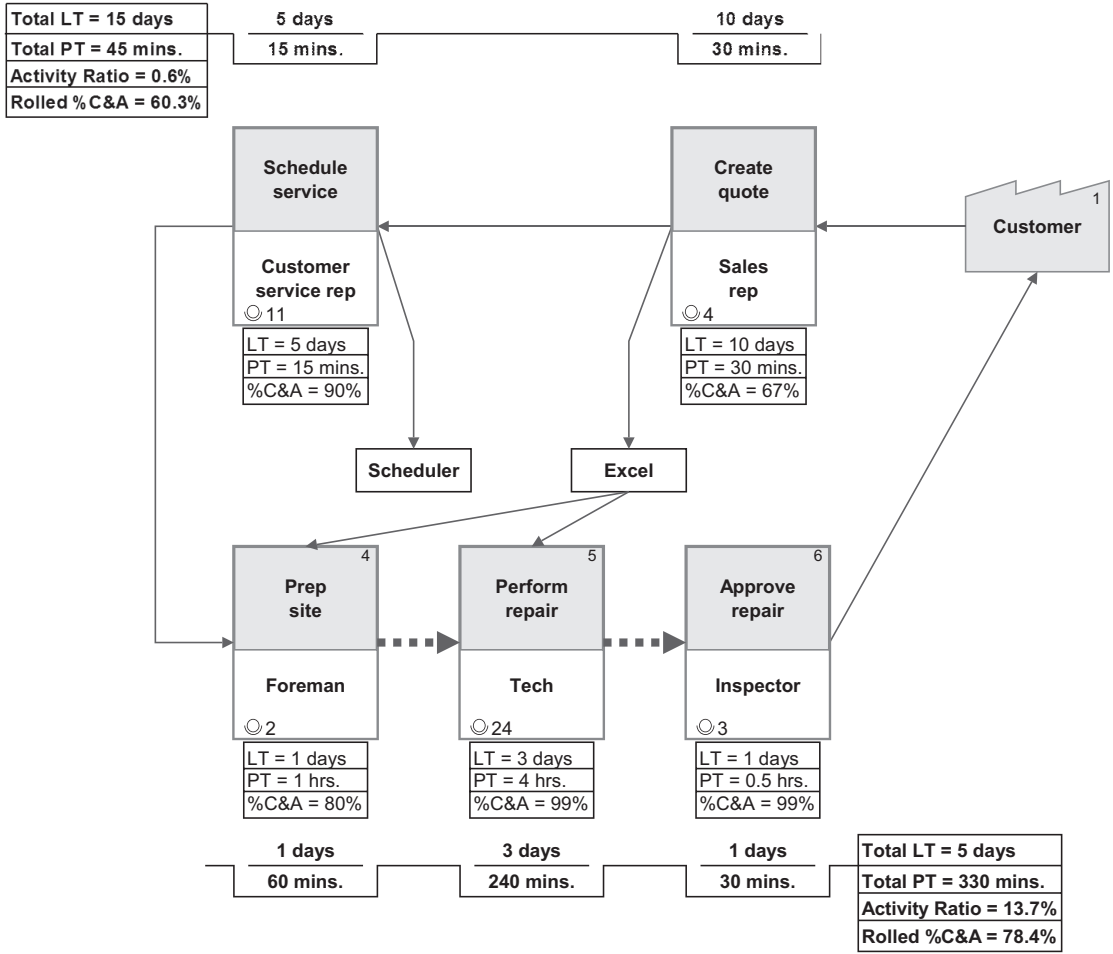

FIGURE 3.13 Multiple timelines

4

Designing the Future State

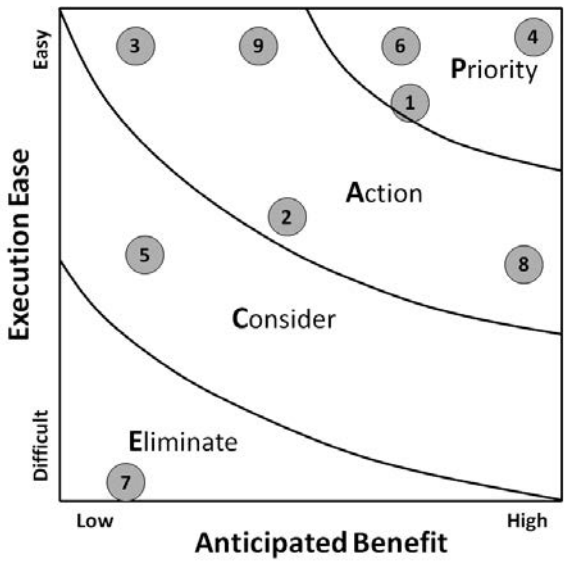

FIGURE 4.1 PACE chart for setting priorities

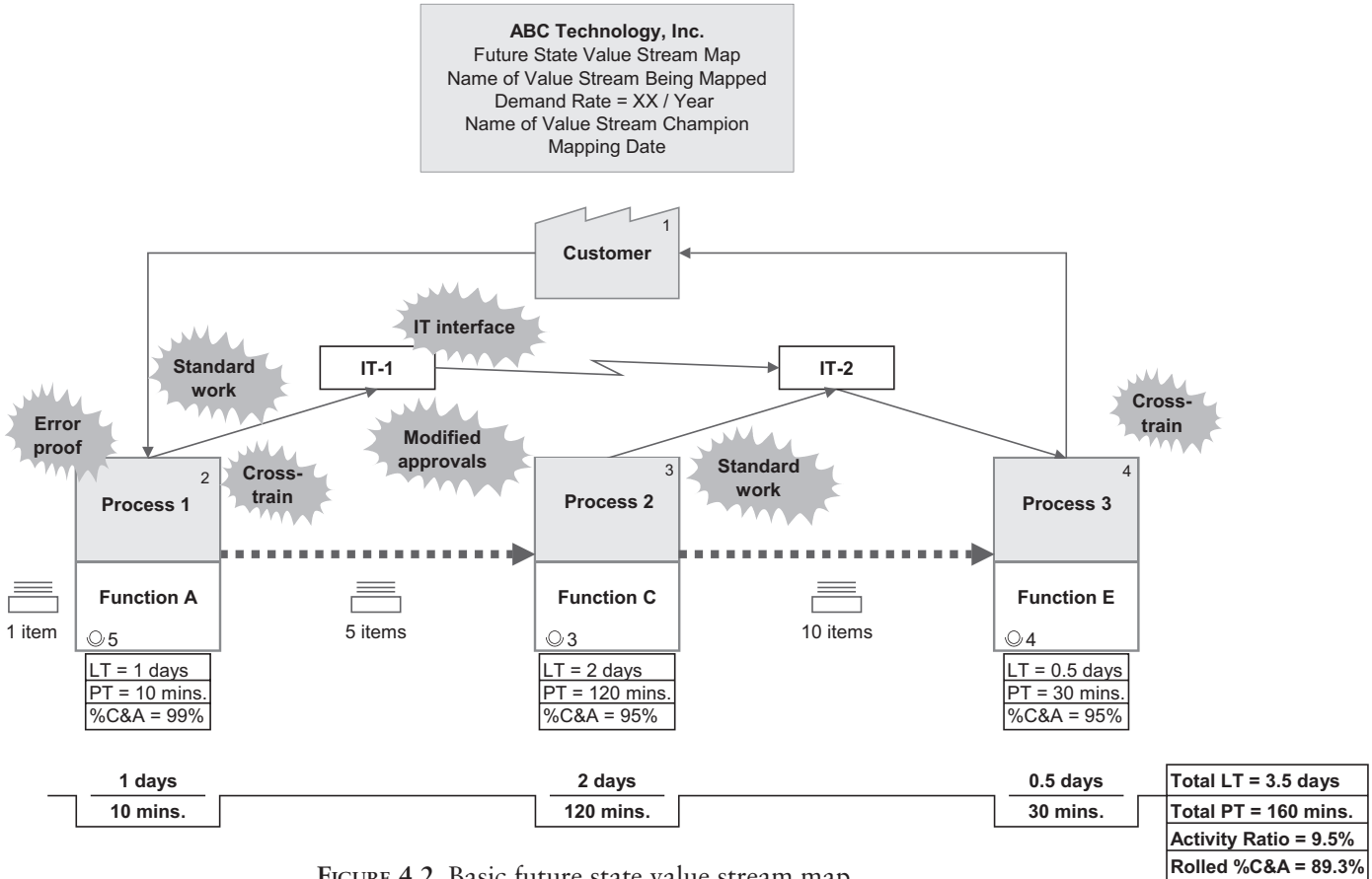

FIGURE 4.2 Basic future state value stream map

5

Developing the Transformation Plan

Value Stream Transformation Plan

Value Stream	Outpatient Imaging
Executive Sponsor	Allen Ward
Value Stream Champion	Paul Scanner
Value Stream Mapping Facilitator	Dave Parks
Date Created	10/18/12

Scheduled Review Dates

1-Nov-12
21-Nov-12
13-Dec-12
10-Jan-13

FS VSM Block #	Measurable Target	Proposed Countermeasure	Exec. Method*	Owner	Planned Timeline for Execution (1 2 3 4 5 6 7 8 9 10 11 12)	Status
2	Improve quality of referral to 85%	Implement standard work for referral process	KE	Sean Michaels		100%
3,4	Reduce lead time between scheduling and preregistration step to 45 minutes	Cross-train and co-locate work teams	Proj	Dianne Marie		75%
4	Only one check in per patient	Collect copays in Imaging	KE	Ryan Austin		50%
4	Reduce wait time in waiting area by 50%	Balance work / level demand	KE	Dianne Marie		50%
6	Eliminate 6 hour lead time associated with transcription step	Implement voice recognition technology	Proj	Dave Gerald		50%
7	Eliminate redundant data entry	Auto populate between PACS and Meditech	Proj	Dave Gerald		25%
5	Visually managed inventory; no outages or expired items	5S CT supplies area; implement kanban	KE	Michael O'Shea		100%
6	Reduce imaging LT to one hour	Value-stream specific radiologists	Proj	Martha Allen		25%
8	Reduce report delivery LT to 30 minutes	Increase % of physicians receiving electronic delivery	Proj	Martha Allen		0%
7	Reduce LT at image review to 1 day	Visual metrics and indicators	JDI	Dave Gerald		100%

Agreement

Executive Sponsor	Value Stream Champion	Value Stream Mapping Facilitator
Signature:	Signature:	Signature:
Date:	Date:	Date:

*** Execution Method = JDI (Just-do-it), KE (Kaizen Event), or Proj (Project)**

6

Achieving and Sustaining Transformation

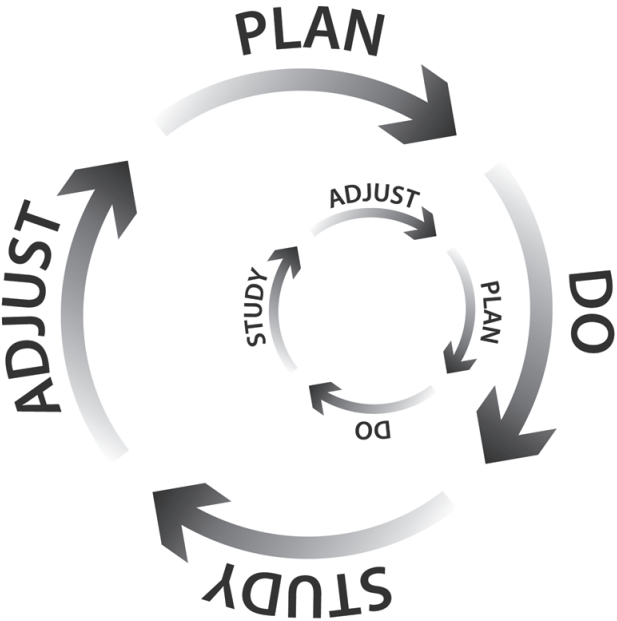

Figure 6.1 Nested PDSA cycles

Appendix A
Value Stream Mapping Icons

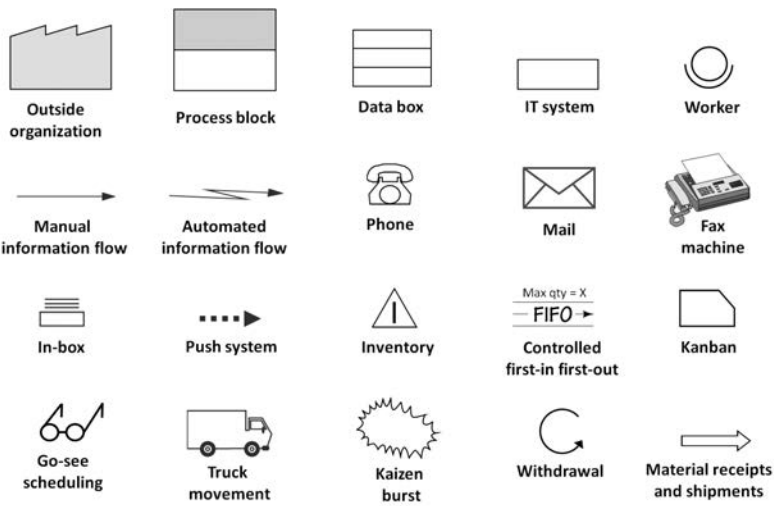

Figure A.1 Common value stream mapping icons

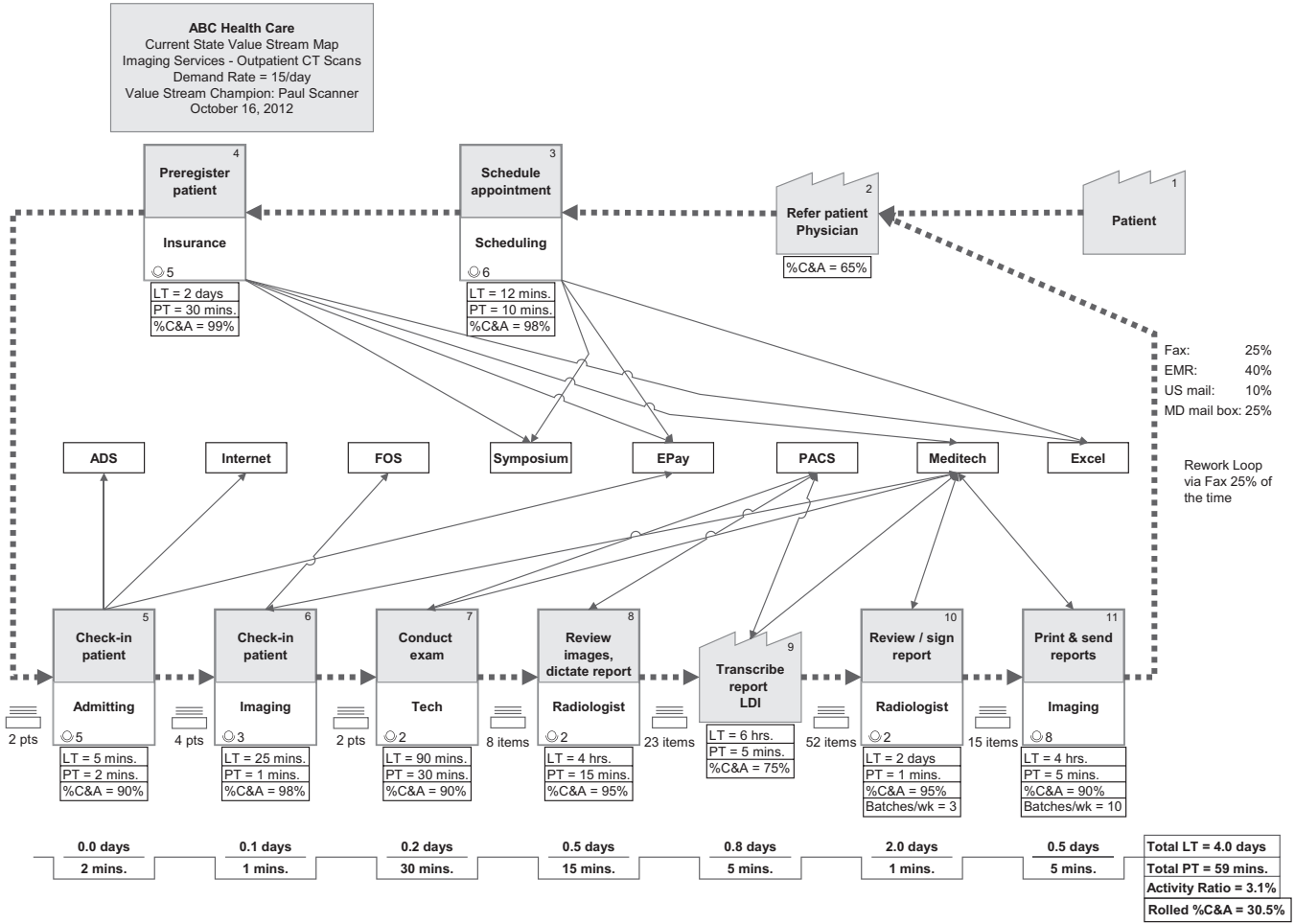

FIGURE B.1 Current state value stream map for outpatient imaging

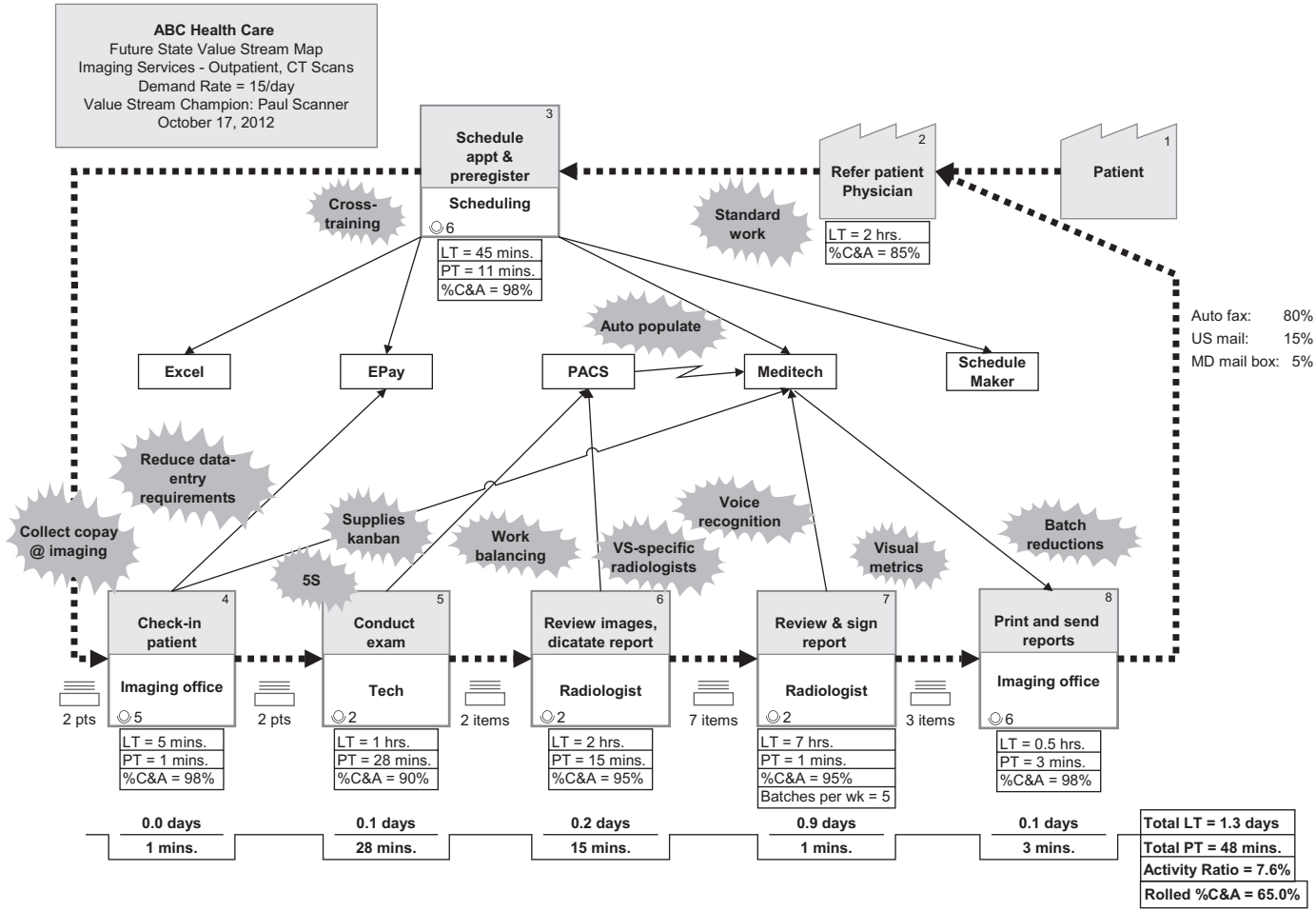

FIGURE B.2 Future state value stream map for outpatient imaging

Appendix C
Purchasing Value Stream

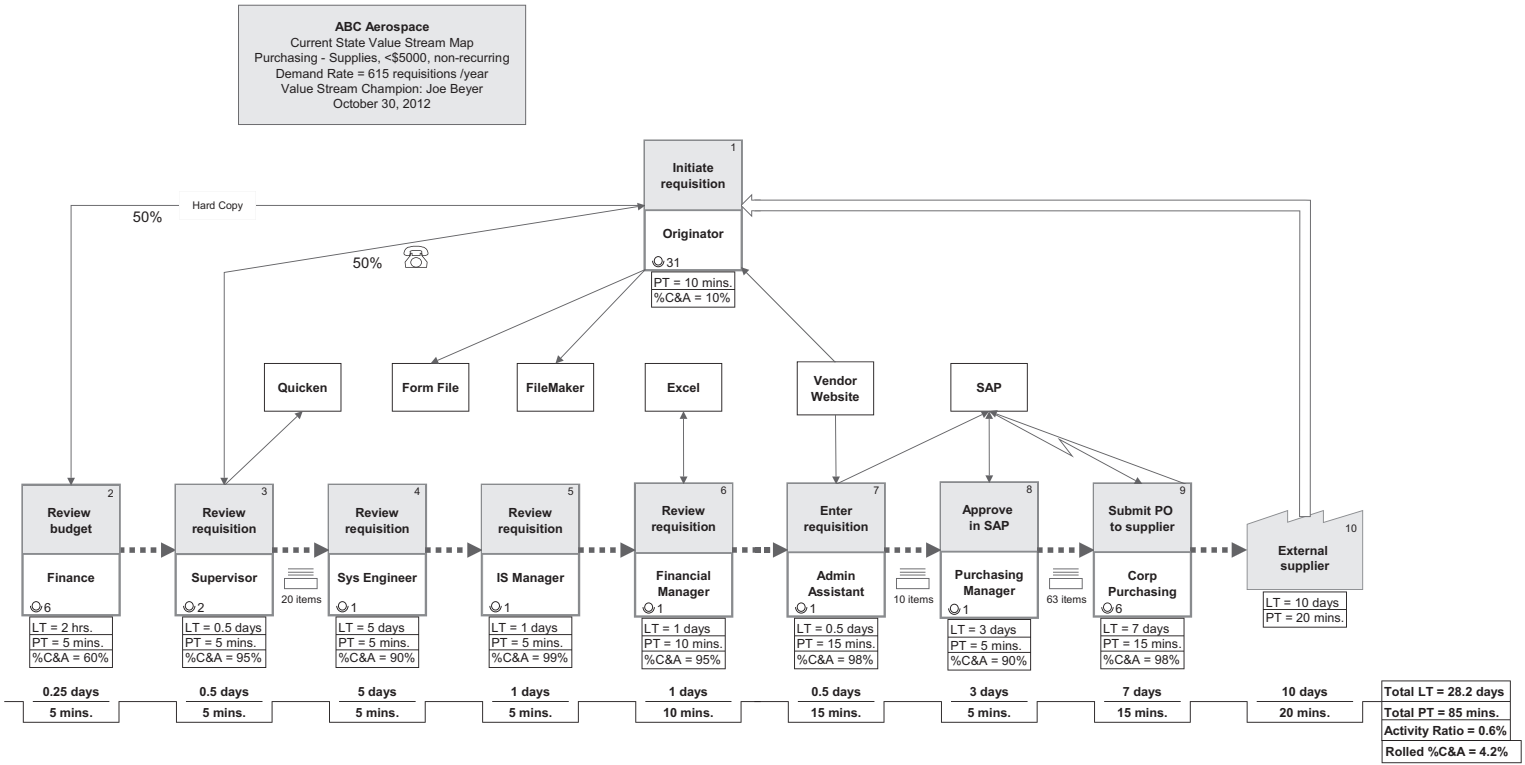

FIGURE C.1 Current state value stream map for supplies purchasing

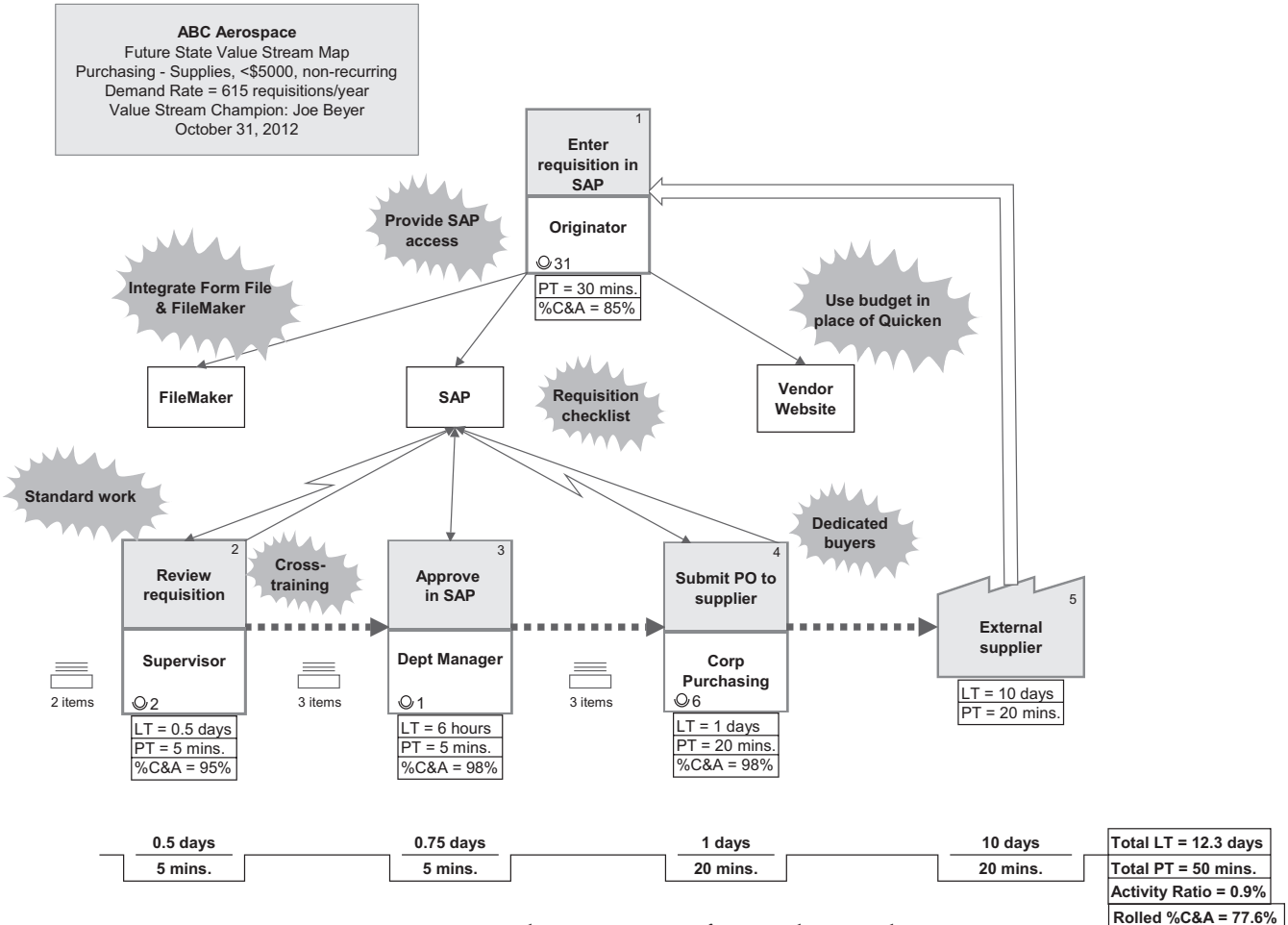

FIGURE C.2 Future state value stream map for supplies purchasing

Appendix D
Repair Services Value Stream

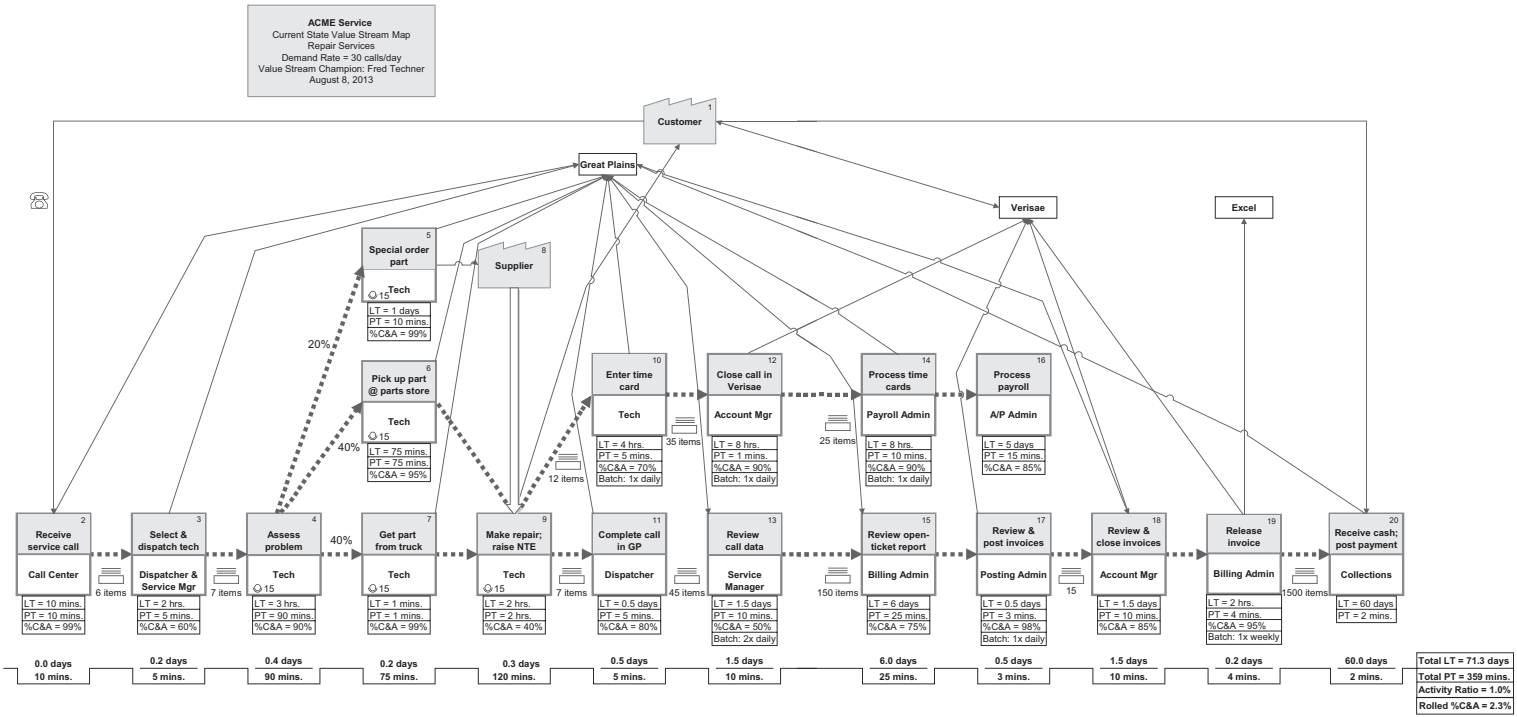

FIGURE D.1 Current state value stream map for repair services

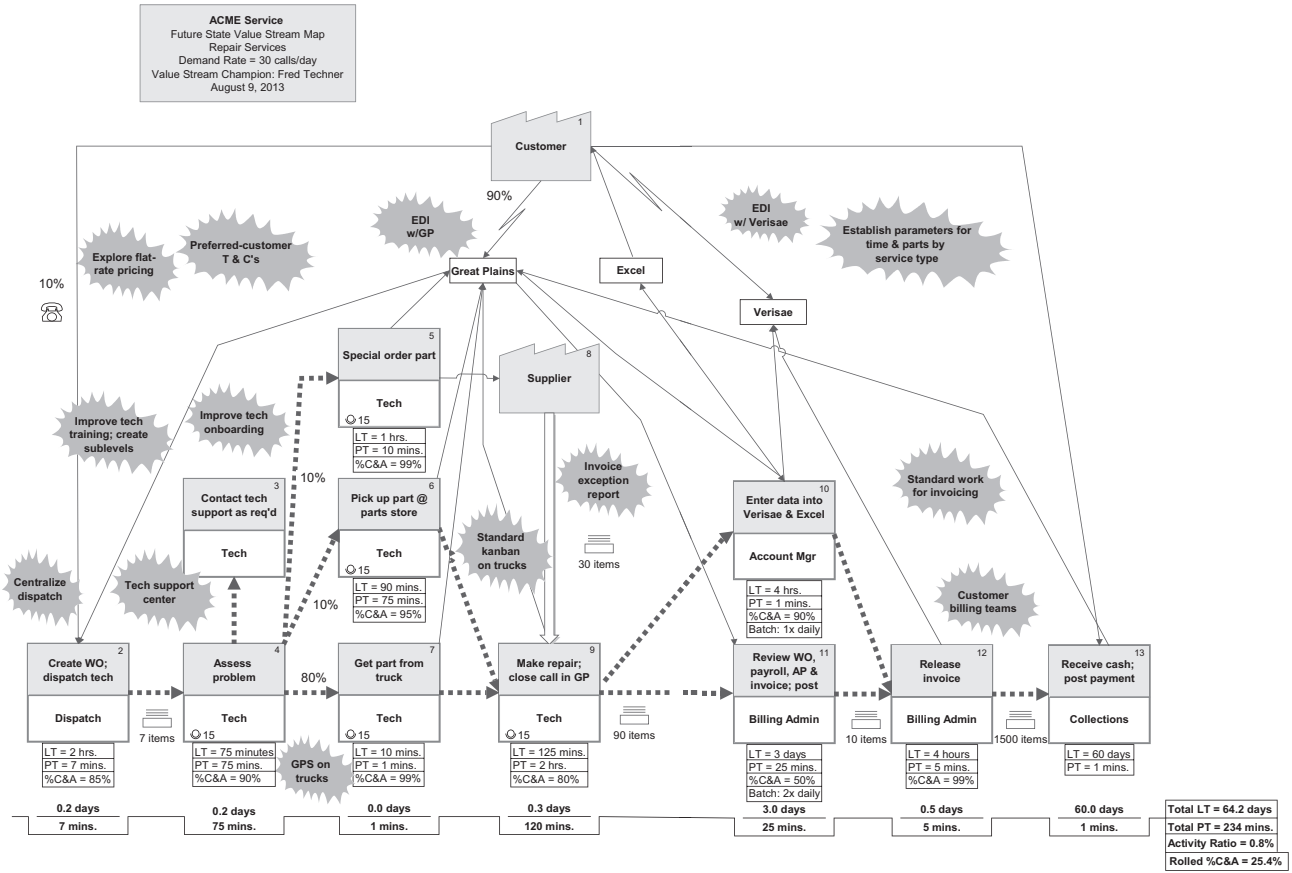

FIGURE D.2 Future state value stream map for repair services

Appendix E
Shelving Systems Value Stream

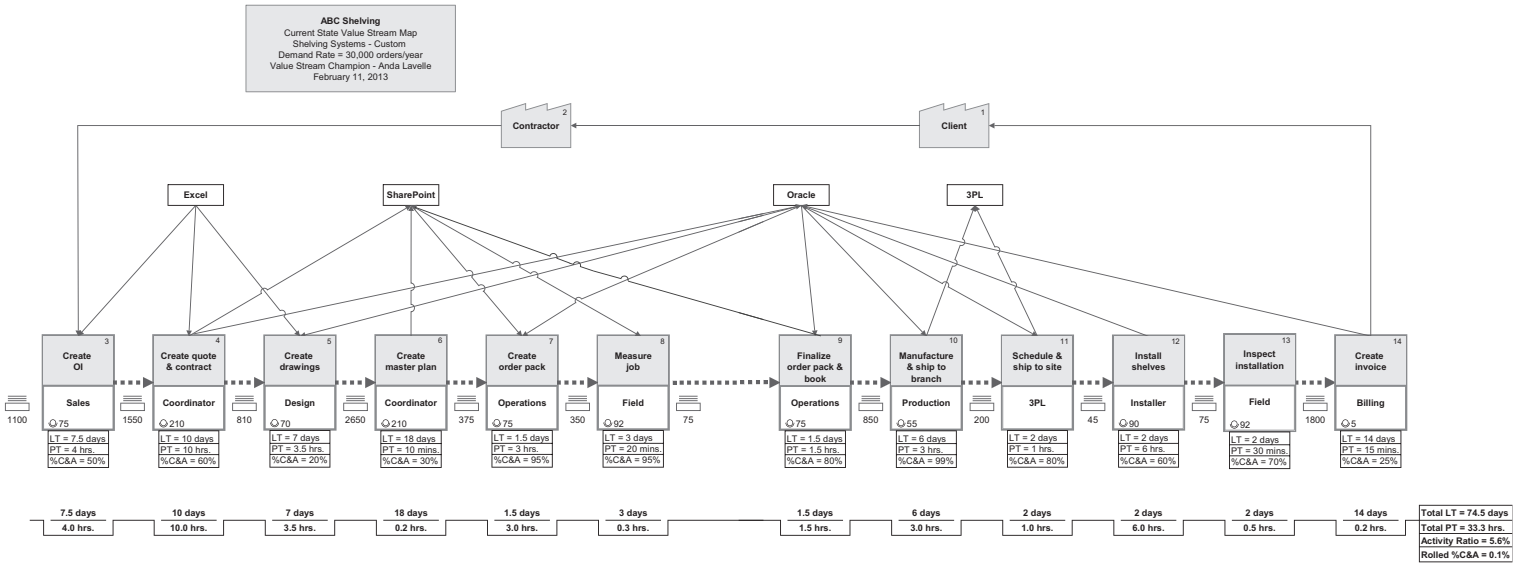

FIGURE E.1 Current state value stream map for custom shelving systems

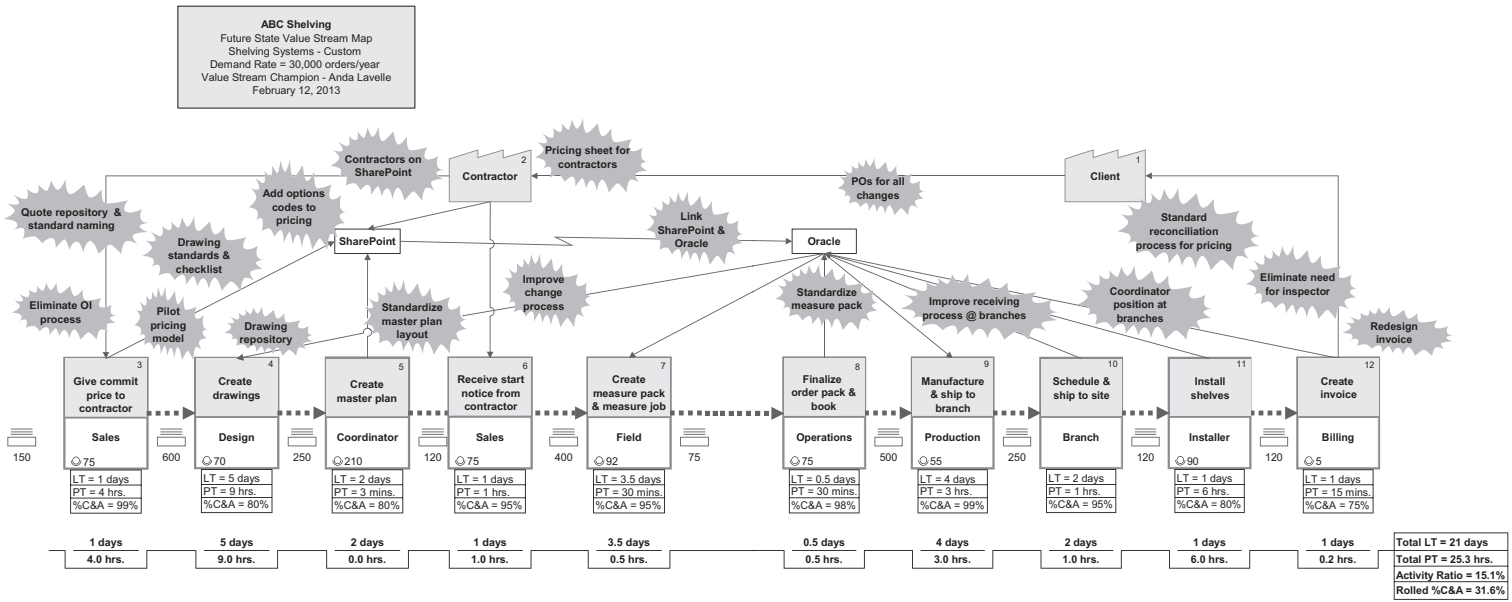

FIGURE E.2 Future state value stream map for custom shelving systems

Appendix F
Software Development Change Request Value Stream

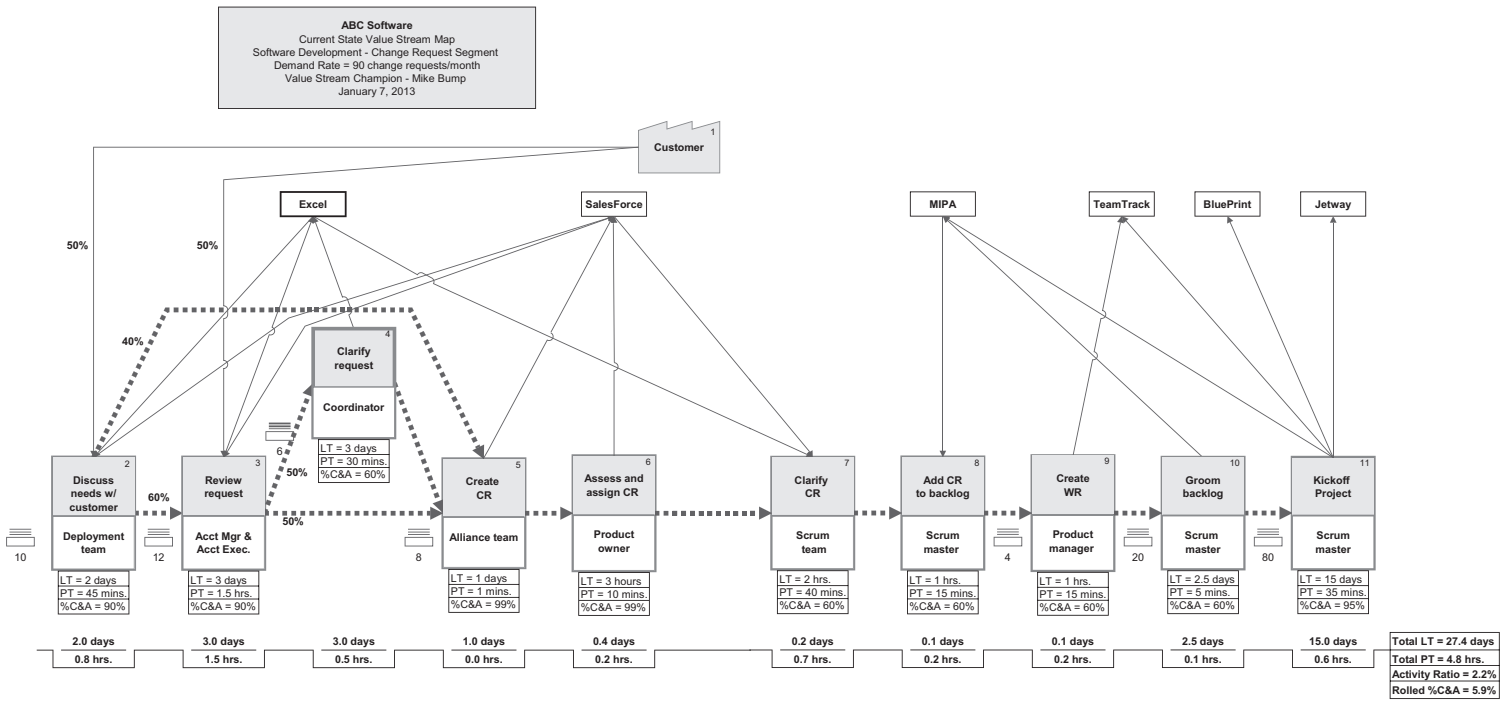

FIGURE F.1 Current state value stream map for software development change request

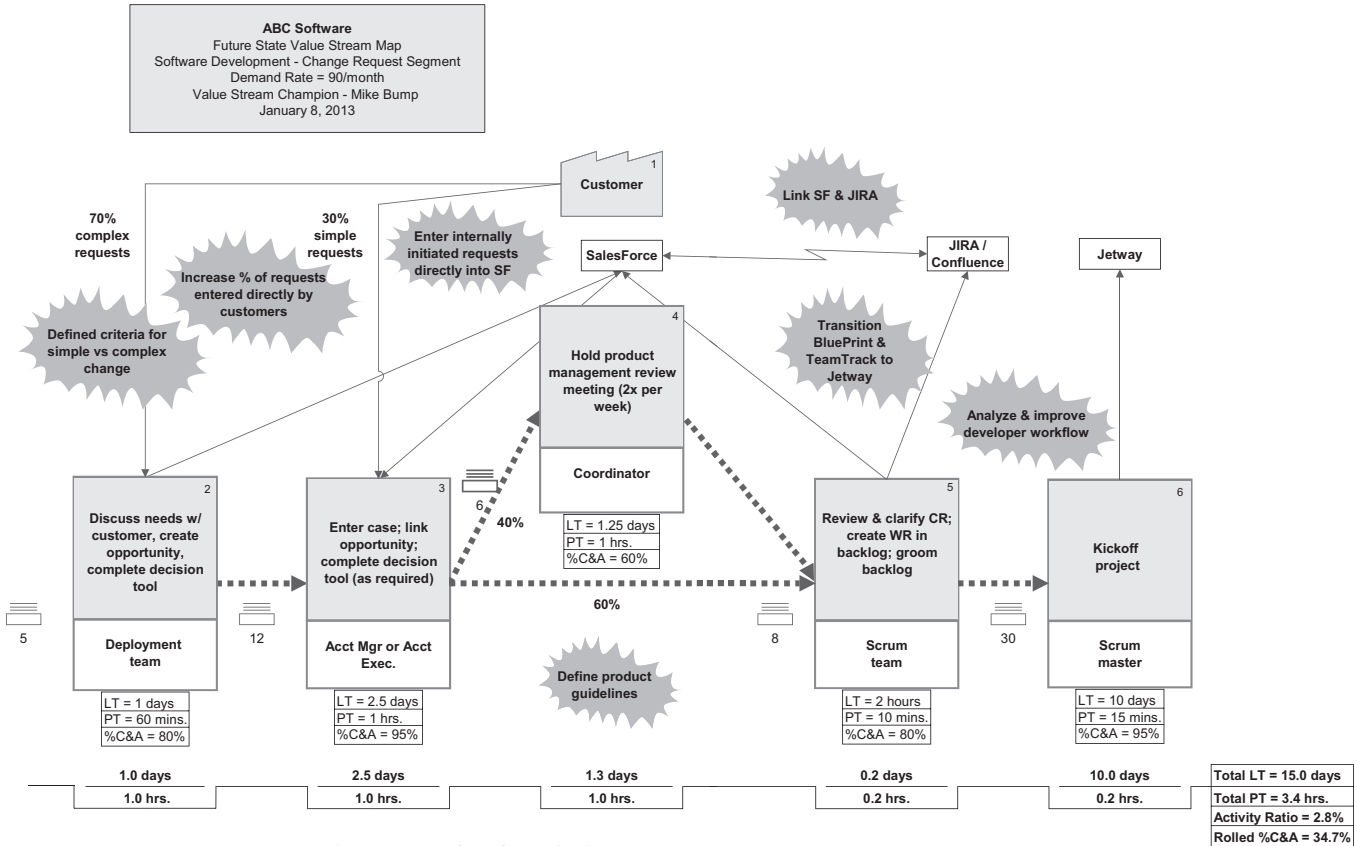

FIGURE F.2 Future state value stream map for software development change request