

*Continuous Improvement in
Government:
Applying Lean Principles*

To Increase Revenues and Reduce Costs.

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QPIC, LLC

Harry W. Kenworthy

Harry is Principal & Manager of the Quality and Productivity Improvement Center (QPIC,LLC), a consulting organization he founded in 1984. He had the honor of working with Dr. W. Edwards Deming in 1983-85 on a series of seminars throughout the US. He has spoken at over 80 conferences on Quality and Productivity and has been published in Quality Progress and Purchasing magazines. Harry was a founder of the Connecticut Quality Council and chaired CBIA's Manufacturing Council. He was also a Malcolm Baldrige National Quality Award Examiner from 1989-1991.

Harry W. Kenworthy was Vice President, Manufacturing for Rogers Corporation, a Connecticut based, NYSE listed, global manufacturer. He was also Rogers Executive Six Sigma Champion: leading the Six Sigma effort throughout Rogers; developing the Rogers Six Sigma (R6S) training program, which incorporates the best of traditional Six Sigma (DMAIC), Lean Techniques, and a series of Specialized Problem Solving Techniques. The Rogers Six Sigma Black Belts and Master Black Belts reported to him and many were trained by him. He provided R6S training in the US, Europe and Asia.

His consulting client base has included: AT&T, Florida Power and Light (during their quest for the Deming Prize), Ford, Pfizer, John Hancock Insurance, Ensign Bickford, Van Leer Containers (Holland), Honeywell, Pfizer, Domtar Packaging, the City of Hartford, and Nedlloyd Shipping, to name a few. He earned a BS in Materials Engineering from RPI and an MBA in Finance from Syracuse University. He's listed in Who's Who in America.

Threat vs. Opportunity Matrix

	Threat <i>(If we are not successful)</i>	Opportunity <i>(If we are successful)</i>
Short Term	<ul style="list-style-type: none"> •Lost \$ Revenues •Lack of Public Confidence in the City •Continued inefficiencies – internal and to taxpayers •Current Economic Crisis deepens 	<ul style="list-style-type: none"> •To save \$\$ money •Improved Processes •Better morale and use of employee time •Working on the right stuff •Improved Cust. Service •Fewer Audit Issues
Long Term	<ul style="list-style-type: none"> •Financial crisis due to legacy costs •Tax base erosion •Credit rating downgraded •Layoffs and further service erosion 	<ul style="list-style-type: none"> •Stronger financial position and future – solidify tax base •Attrition to reduce costs via reducing wasteful activities •_____ a more desirable place to live •Model of Gov’t excellence

Continuous Improvement (CI) Draft Elevator Speech

The City of _____ is facing serious fiscal challenges for the future. In order to help address these issues, we are initiating a Continuous Improvement (CI) Process throughout the City to increase service to all of our constituents, reduce wasteful activities, improve our financial stability and enhance _____ as a place to live.

We will be working with all departments to identify key department processes to be able to select CI projects to generate positive results. We need your help to recommend CI opportunities; participate on project teams, as needed; and provide your support and cooperation. CI will be successful based on the support of all City employees – we can't do it without you.

CI will help to provide better job satisfaction, work on the right things that truly matter to our constituents, and increase pride in being a key member of the _____ community.

CI will help us all enhance _____ for it's employees, residents, and future.

Department Continuous Improvement (CI) Contract (Draft)

Each department will have a very active CI effort consisting of the following:

1. The Director is accountable for the dept. CI effort and will Champion a minimum of 1 CI project/year.
2. A key department person who reports to the director will identify the key dept. processes and prioritize CI project opportunities.
3. CI metrics will be tied into Leadership's key metrics and be reviewed at Citystat meetings.
4. CI is a "top 5" on-going initiative and will be reflected in department performance assessments.
5. CI updates will be communicated a minimum of once/month to all employees.

Signed _____

Department CI “to do list”

1. Director to select key CI “point person” who reports to dept. Director – must be “one of the best” people.
2. Determine what are the dept. key processes, how they are measured, and how they tie to Citystat.
3. Based on #2, how are those processes doing?
4. Use a prioritization matrix to rank dept. CI project opportunities from #3.
5. Identify great CI project leader candidates.
6. Work with CI office in setting up projects & project team(s).
7. CI must be seen as a very positive career experience.

Process Improvement Project Selection Matrix

Requested Projects	Strategic Importance /Impact on Dept Objectives	Financial Impact	Source of Customer Dissatisfaction	Visibility of Positive Results	Time to Implement	Resources Needed	Probability of Creating New Problems	Sum Across of the Ratings
	5 Major 4 Significant 3 High 2 Moderate 1 Low 0 Very Little	5 Major 4 Significant 3 High 2 Moderate 1 Low 0 Very little	5 Major 4 Significant 3 High 2 Moderate 1 Low 0 Very little	5 Very Clear 4 Clear 3 Some Indic 2 Few Indic 1 Hard to See 0 Intangible	5 Almost Immed. 4 < One Month 3 1-2 Months 2 3-4 Months 1 5-6 Months 0 > 6 Months	5 Almost Nil 4 Few 3 Modest 2 Moderate 1 Considerable 0 Major	5 Very Low 4 Low Risk 3 Some Poss. 2 Mod. Poss. 1 Probable 0 Almost Certain	

Process Improvement Priority List

DEPT	PROBLEM STATEMENT	ALIGNED TO WHAT DEPARTMENT OBJECTIVE and CITY GOAL?	PROJECT BENEFITS	FINANCIAL IMPACT	PROJECT TEAM
Finance/AP	Accounts payable				
MHIS	Help Desk				
HR	Police Recruitment				
Finance/Tax					
Collector	Parking Tickets				
Mayor's Office	Special Events				

Lean Concepts

- Build on our skills to get faster results – more output from the same people
- Focus on continuously improving our processes – Internal & External
- Increase speed by eliminating waste and reducing errors
- Is constraint free
- We are targeting the frequency (more) of doing things, not the person

The Classic Wastes

- 1. Handling/Unnecessary Motion*
- 2. Inferior Methods*
- 3. Inspecting*
- 4. Transporting/Moving*
- 5. Counting*
- 6. Delaying/Waiting*
- 7. Storing*
- 8. All Rework Loops*
- 9. Multiple Signatures*
- 10. Waste of underutilized people*

Kaizen

Kai

To break apart

To modify

To change

Zen

Think

Make good

Make better

Kaizen

» **Change for better**

» **Improvement**

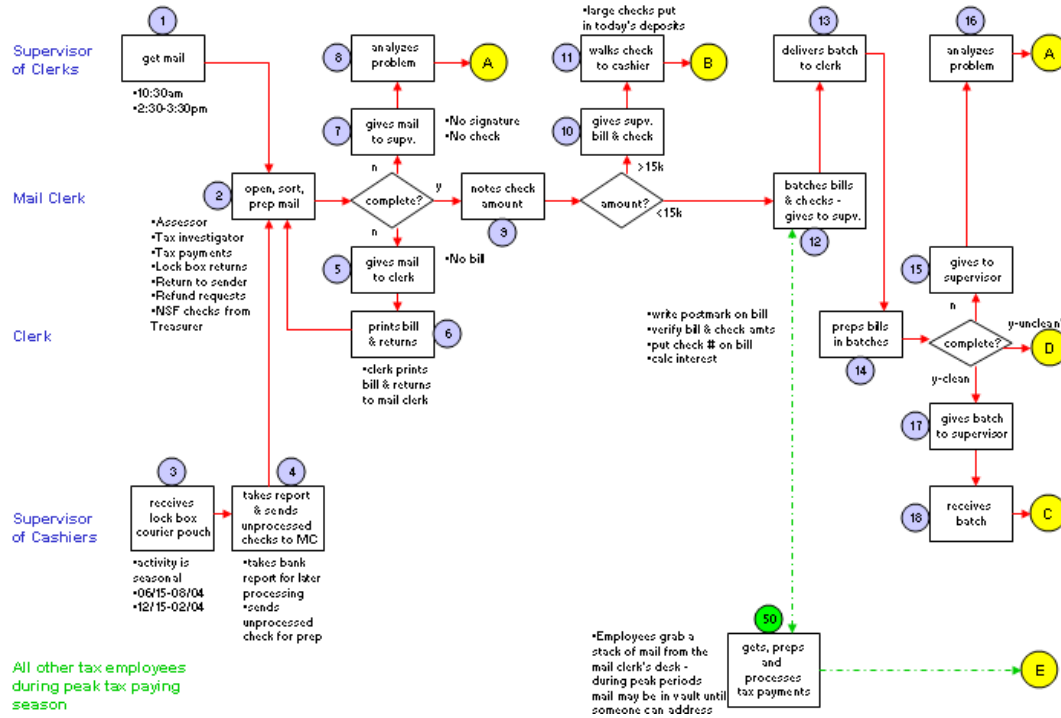
» **Continuous Improvement**

Pre-event Kaizen Preparation

- Develop/Use Value Stream Maps (Current and Future State) to prioritize best Kaizen opportunities. Also all data that will be helpful in assessing the current situation.
- Select the dedicated Kaizen team – cross functional and multi levels (includes employees in the actual Kaizen affected area).
- Ensure adequate support resources are committed to support the event beforehand.
- Ensure good communications beforehand and during the Kaizen event.
- Prepare the area and schedule the event.

Detailed Process Flow Map

Tax Payment by Mail Processing



The sub-team documented the complete Tax Payment process.

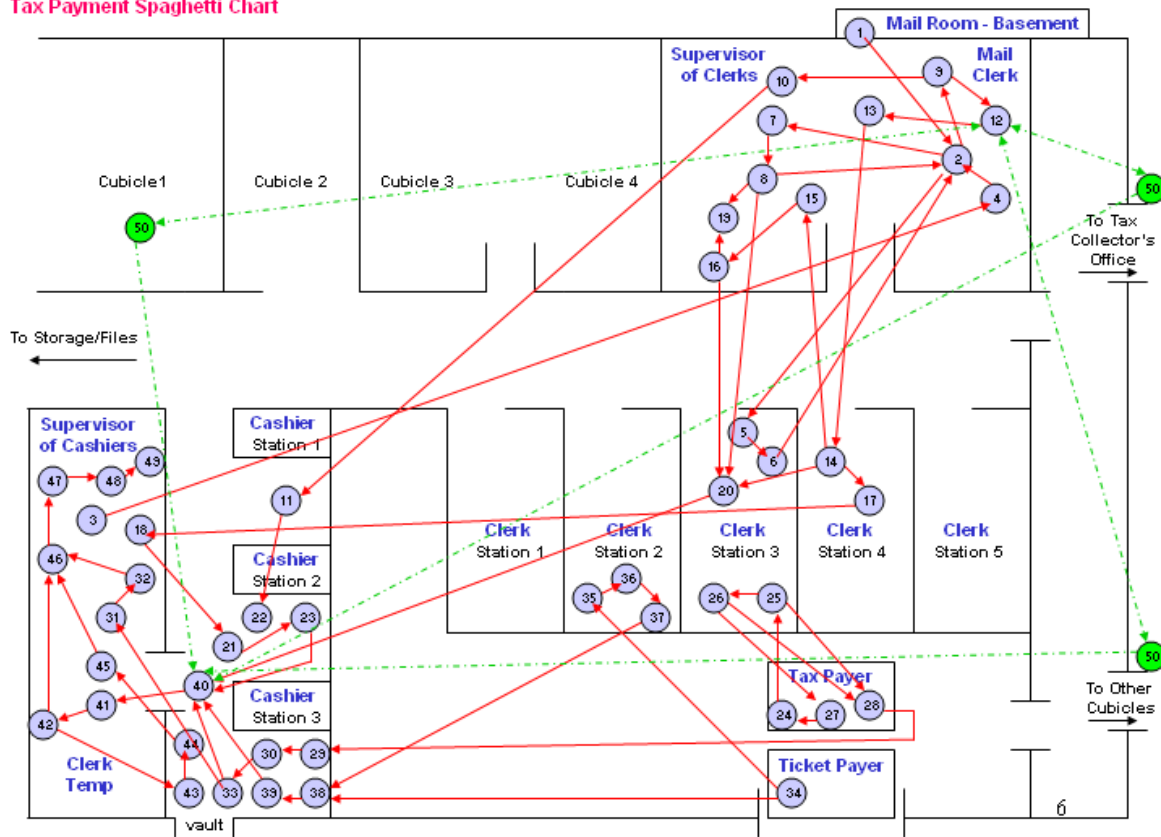
All steps were looked at to determine Value Added (VA) & Non-Value Added (NVA) activities.

The team identified many NVA activities. Some reasons:

- Unnecessary operations and steps get added to a process
- Training as a method to transmit knowledge is never perfect
- Conversational knowledge dominates over written procedures, etc.

Spaghetti Mapping

Tax Payment Spaghetti Chart



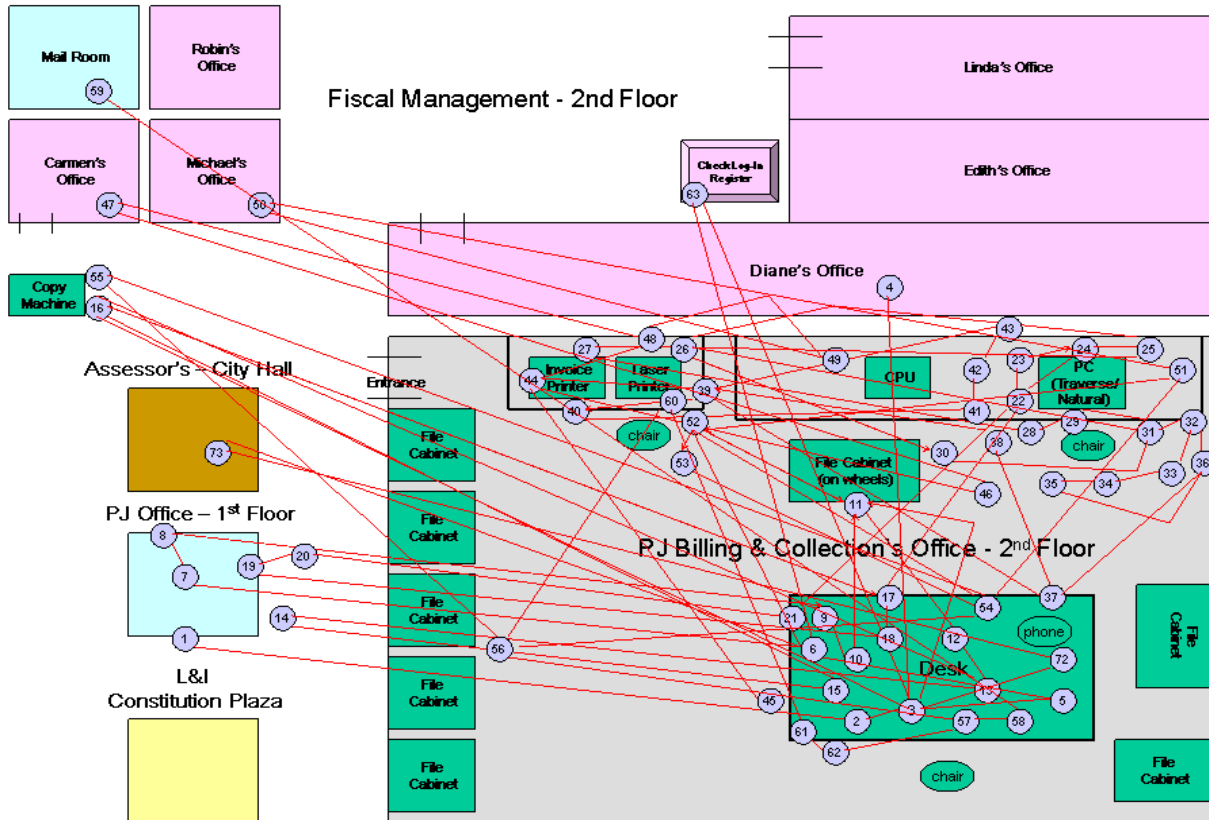
A Spaghetti Map is a “bird’s eye view” of the Process.

In this case, the team was “the check” from the time it was received in City Hall until the time it was deposited into the Bank.

The Spaghetti Map is a valuable tool to better understand actual work layout and flow. The ideal flow would have all of the process steps located right next to each other to reduce time.

Spaghetti Mapping

Spaghetti Chart – Police Department



A Spaghetti Map is a “bird’s eye view” of the Process.

In this case, the team was “The PJ Slip” from the time it left the PJ Office until the time it was entered into payroll.

The Spaghetti Map is a valuable tool to better understand actual work layout and flow. The ideal flow would have all of the process steps located right next to each other to reduce time.

Principles for Kaizen Improvements

- 1. Think about how the new ideas will work, not how they won't work.**
- 2. Don't seek perfection – 80% right, 100% implemented.**
- 3. Fix mistakes the moment they are found.**
- 4. Make improvements with minimal investment.**
- 5. Continue to ask “Why?”.**
- 6. Don't except excuses.**
- 7. “Just do it” – make it happen.**

Why is Money Saved?

- Target best \$\$ opportunities
- Less transaction times = more transactions
- Reduced cycle times = faster throughput, info, decision making, etc.
- Less errors = less rework and checking, accurate information
- Easier processes = greater employee satisfaction

Discussion Areas

- Fire Dept – consolidation possible?
- Police Dept – history from prior Chiefs – value added?
- \$50 check with 5 signatures – needed?
- Cost of people with benefits as a % of budget?
- Purchasing Leverage – what's possible?
- Office and desk proximity to entire process?

The Elements of ACE

Having a champion who sponsors the change



Changing Systems and Structures:

Making sure that the management practices are used to complement and reinforce change

Leading Change, John Kotter, Harvard

Helping Organizations Become Globally Competitive

Stakeholder Analysis

ACE – Achieving Change Effectiveness

STAKEHOLDER ANALYSIS							
Stakeholder	Strongly Against -2	Moderately Against -1	Neutral 0	Moderately Supportive +1	Strongly Supportive +2	Type of Resistance	Plan to Address
1		X			O	Skepticism; preconceived solutions	Communication throughout process; educate/train
2					XO		
3			X		O	Skepticism; change	Involve in solution; educate/train; clarify roles & responsibilities - accountabilities; give credit for the change
4			X		O	Skepticism; change	Involve in solution; educate/train; clarify roles & responsibilities - accountabilities; give credit for the change
5	X				O	Skepticism; change	Involve in solution; give credit for the change
6				X	O	Potential resource impact	Involve in any technology solutions
7					XO		
8					XO		

Key: X = Current Support Level
O = Level Stakeholder Needs to be

**“If you always do what
you’ve always done,
you’ll always get what
you’ve always got...”**

“If we already know the answer, we never ask the question...”