

CQI Module 2: INTRODUCTION TO DATA ANALYSIS USING PLAN/DO/CHECK/ACT

On behalf of Workforce Central WDC

Presented by Lori Strumpf

Strumpf Associates: *Center for Strategic Change*



AGENDA

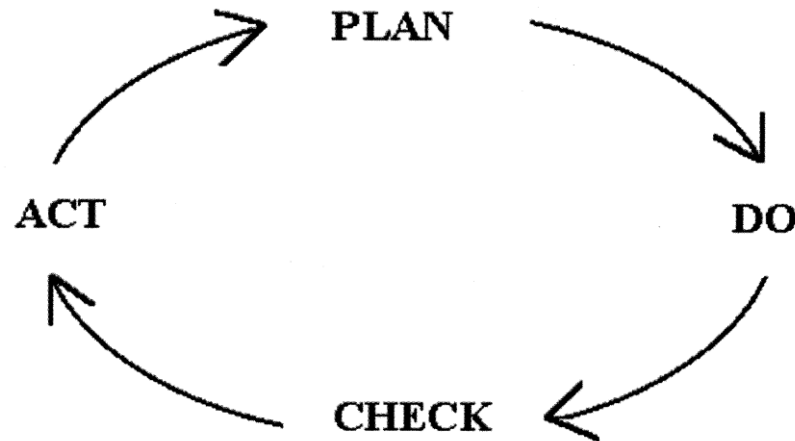
- WELCOME AND INTRODUCTIONS
- Data Collection
- Data Analysis
- Data Use
- Overview of Tools for Analysis

PHILOSOPHY OF HIGH PERFORMANCE WORK ORGANIZATIONS

- Continuous Quality Improvement
- Team Based
- Empowered Staff
- Customer Focused
- Data Driven

Continuous Quality Process Improvement

To use data in a continuous way means to begin to think in a cycle known as Plan\Do\Act\Check.



5 General Strategies for Improvement

- Strategies for improvement that exist on a continuum from using data for being reactive to proactive:
 - ❑ **RESPONDING** to an immediate problem;
 - ❑ **PREVENTING** the occurrence or recurrence of a problem;
 - ❑ **UPGRADING** machines, methods and techniques;
 - ❑ **EXPERIMENTING** to improve an operation or work process; and
 - ❑ **CREATING** a new opportunity.

It is likely that none of the strategies ever exist in a pure form. They must exist together, and often one will lead to another. Taken together, these strategies describe the level of activity that must be going on all the time in order to insure that improvement is continuous.

These are adapted from Continuous Improvement and Measurement for Total Quality; by Dennis C. Kinlaw, published by Pfeiffer and Company, 1992.

Continuous Cycle

- **PLAN** - plan a process improvement
- **DO** - carry out the change or test on a small scale, searching for data that can be used in step 1 (plan)
- **CHECK** - check the results to see what was accomplished or learned, observing and monitoring the effects of the change
- **ACT** - adopt the change or abandon if not useful, trying the cycle again with the accumulated knowledge.

Successful organizations do not just collect data, they revere it. They aren't satisfied with data until data have life and meaning for every pertinent party. They use data to create and ensure an objective, commonly held reality.... The use of data allows for organized, simplified discussions that merge to create focused priorities and productive action.

Goal of Data Analysis

- Turn data into action thru P/D/C/A

Data → Information → Knowledge/Insights → Action

TYPES OF DATA

- CUSTOMER SATISFACTION DATA
- PERFORMANCE DATA
- STRATEGIC PLAN OUTCOMES DATA

Program and Process Management

- Data Driven
 - Use the principles of Continuous Quality Improvement (CQI) for program and process management
 - Need real time data to:
 - Assess progress, benchmarks and targets
 - Make improvements on a regular basis rather than a more traditional 'mid-course' corrections approach using lag data elements
 - Why focus on building this infrastructure?
 - Key process management tool to create a common decision making structure

Creating the Data Management System: Meeting the Information and Analysis Standard (#4)

- The team needs to create a common data management system from the start
- The system needs to:
 - Produce scorecards and a dashboard
 - Produce organizational and program level information
 - Useful for both staff and leadership
- Scorecards and dashboards are tools that:
 - Turn data into information that can be analyzed
 - Provide information for future direction
 - Inform Continuous Quality Improvements (CQI)
- Both tools are needed because:
 - Scorecards open the quality of an operation
 - Dashboards provide calculated directions

Implementing A Quality Data Management System

1. Identify data elements that are useful for:
 - On-site management in day to day operations
 - Strategic management organization-wide
2. Reach agreement on using a common data collection system and single data management system within an organization and across partners, if appropriate
3. Agree to a systematic, structured and deliberate approach to generating scorecards and dashboard
4. Agree to use the Scorecards to:
 - Generated weekly and monthly
 - Evaluate the data on a weekly basis
 - Manage the program at each site/partner
 - Provide information on key indicators and improve program quality
5. Agree to use the Dashboard to:
 - Make program wide improvements
 - Evaluate the data on a quarterly basis



How Data Can be Used to Drive Decision Making and Improvements

- To provide at-a-glance views of Key Performance Indicators (KPIs) thru:
 - Weekly activity reports generated for each staff to review
 - Monthly assessment score reports
 - Monthly tracking of performance outcomes
 - Quarterly Dashboard Review

Dashboard Sample

(Designed by Strumpf Associates)

Traffic Light Key



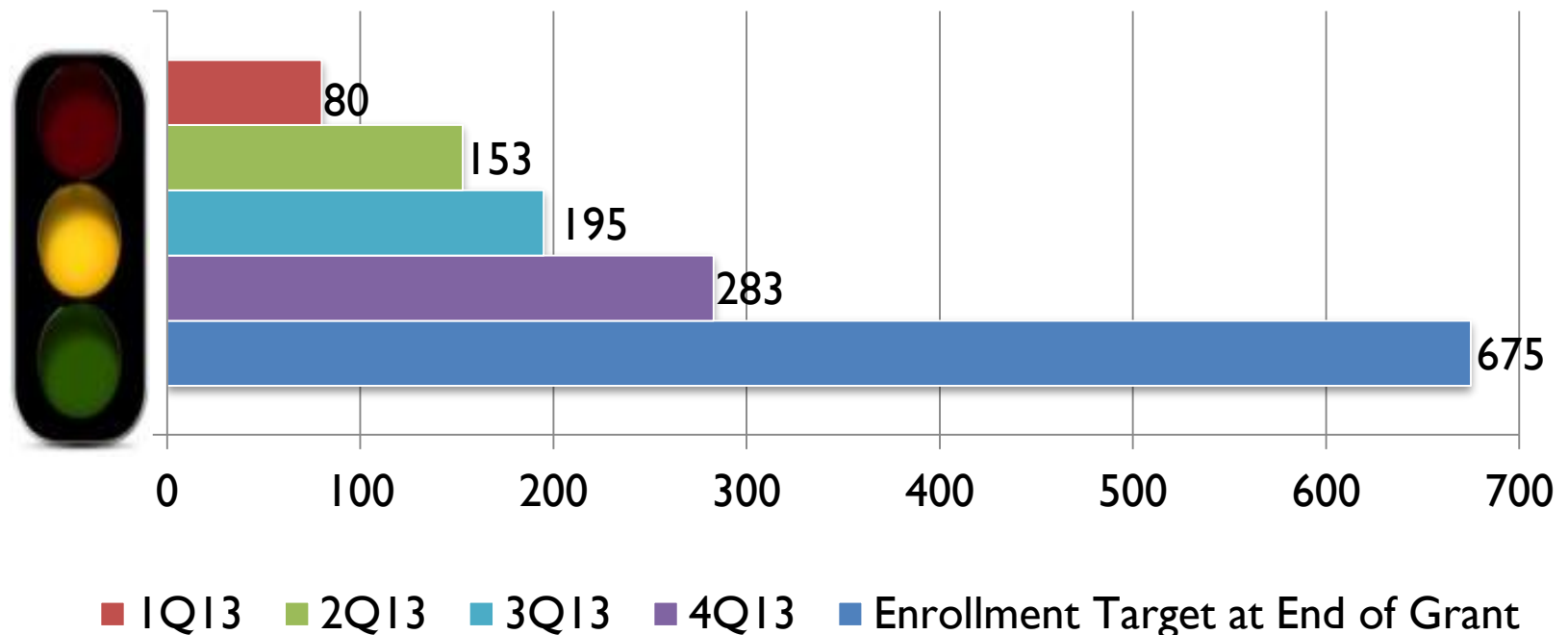
On or Above
Target

Needs Corrective
Action to Meet
Goal

In Danger of Not
Meeting Goals

Dashboard Sample From a Specific Program (@LIKE)

- This is 1 of 11 Key Performance Indicators @LIKE tracks
- Dashboard: @LIKE Enrollment
 - Figures are cumulative
 - Bars represent number of individuals



Analytics

- Dashboards are designed to show 'at a glance' summaries
- Main users might include:
 - Project Director
 - Coordinator
 - Site Leaders
 - CQI Team
- Used to identify
 - Key trends
 - Comparisons
 - Exceptions/Outliers

Analytics: Balanced Scorecard

- Strumpf Associates uses a management system based on the four dimensions of the balanced scorecard devised by Kaplan and Norton:
 - Financial
 - Customer
 - Internal business processes
 - Innovation and learning
- Local government performance measurement pays much less attention to the determinants, or means of achieving long-term, sustained organizational improvement in internal business processes, and innovation and learning
- There are few measurement processes in place to manage performance in these areas
- Strategic performance management demands an approach that recognizes the importance of a focus on both results and the means of achieving these results

Key Elements to Scorecards and Dashboards

- Successful Scorecards and Dashboards are:
 - Simple and easy
 - Communicate information visually
 - Minimize distractions and noise
 - Support strategy and operations with meaning and useful data
 - Apply human visual perception to visual presentation of information

CUSTOMER SATISFACTION

- JUST IN TIME METHODS
- RANDOM, LARGE SCALE SURVEYS
- QUALITATIVE
 - FOCUS GROUPS
 - Mystery Shopper

How much time do you spend on services that are important to your customers?

- Please list your major services on the grid below. List services only once.

	Do Well	Don't Do Well
Important to Customers	A	B
Not important To Customers	C	D

LANGUAGE OF DATA ANALYSIS

- **VALID**

- Data is only useful if it actually measures what it claims to be measuring and, in this respect, the concept of validity refers to the extent to which the data we collect gives a true measurement / description of the question at hand, primarily through 'indicators'.

- **RELIABLE**

- In simple terms, data can be considered broadly reliable if the same results (or broadly similar) can be gained by different researchers or at different times asking the same questions to the same (or broadly similar) people.

- **QUALITATIVE**

- This form of data results from an attempt to specify the quality of the relationship between two or more things. This usually involves the attempt to say something about the way people experience the environment and their relationships. It is also concerned with the attempt to understand the interpretations and meanings people give to things

- **QUANTITATIVE**

- This form of data results from an attempt, as the name suggests, to quantify the relationship between two or more things. In this respect, an attempt is made to represent the relationship statistically / numerically.


More....

- REPRESENTATIVE
- RANDOM
- SUBJECTIVE/OBJECTIVE



TOOLS FOR DATA ANALYSIS

- ROOT CAUSE ANALYSIS
 - FISHBONE
 - FLOW CHARTS
- GENERATE IDEAS
 - PROBLEM SOLVING GRIDS
 - AFFINITY DIAGRAMS
- ANALYSIS
 - FORCE FIELD ANALYSIS

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- HISTOGRAMS
 - CONTROL/RUN CHARTS
 - PAREATO CHARTS

 - **Be skeptical:** Try to analyze data from at least two angles. For example, plot the same data multiple times using different chart types. Data has the power to mislead, so make sure it's telling the story accurately.

Use of an Affinity Diagram as a Brainstorming Tool

- **Why use it?** To allow a team to creatively generate a large number of ideas and then organize and summarize natural groupings among them to understand the essence of a problem and solutions
- **What does it do?**
 - Encourages creativity by everyone
 - Breaks down longstanding communication barriers
 - Encourages non-traditional connections among ideas



How to Create an Affinity Diagram

- Each team member writes their ideas on a post-it note
- Post all of them on the wall
- Without talking, all team members begin to group similar ideas together
- Create categories for the similar ideas



Discussion

- How are you currently using dashboards or scorecards to inform opportunities for improvement (OFIs)?
- What systems are you using to make sure you have up-to-date data to work from?
- What indicators are you finding most useful to track?

About Your Trainer

Lori Strumpf

Lori Strumpf Lori Strumpf has over thirty years in the field of organizational development and change management in human services and workforce development organizations. Lori has been in business as **Strumpf Associates: Center for Strategic Change** for the last 28 years. She is a nationally known expert in organizational management, training and design for education, training, and human resource development systems. Prior to starting her business, Lori was the Assistant Director for the National Association of Private Industry Councils. She was a founding member of the National Youth Employment Coalition. She has been a Senior Associate at Brandeis University, Center for Human Resources, Heller School for Public Policy. Prior to moving to Washington, D.C. to work on the Vice President's Task Force for Youth Employment, Lori was the Assistant Director to a project for court diverted delinquent youth. She also worked at Florida State Prison, counseling prisoners.

Strumpf Associates is a small cadre of training and consulting experts, headquartered in Washington, DC. The Principals in Strumpf Associates have decades of experience helping organizations manage change, build systems, build leadership teams, and improve program quality and customer satisfaction. The Center provides organizational change management consulting and executive coaching to schools, workforce organizations, and welfare organizations.

Over the last several years, Lori has helped design and implement over 100 one-stop career development centers. Currently, she works on behalf of the business community in partnership with local elected officials in 8 communities around the country to assist in developing a strategic approach to workforce development. This includes developing the governance structure of the local Workforce Development Board.

Lori has a Masters and Specialist Degree in Educational Counseling from the University of Florida.