Data Collection for Outcome and Impact Measurement
Effective Data Collection

Supports measurement of indicators such as performance, impact and satisfaction

- **Performance Indicators** measure the performance of a program or activity

- **Satisfaction Indicators** measure the satisfaction people feel with the program or activities

- **Impact Indicators** measure the impact of the activity had on people, community, etc.

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Impact Chain

Explains the flow of measuring outcomes in a step by step manner
Goals

- Vision Statement
- Mission Statement
- Strategic Plan
- Organisational Plan
- Scope Statement
Choose an activity of the organisation that will be measured for outcome and impact

Operations Door Repair
Output

- Number of people in Operations Department
- Number of projects completed
- Overall satisfaction rating
- Number of work orders
- Amount of resources for projects
• Increased self esteem
• Increased community pride
• Increased skill sets
• Increased work ethic
• Development of values
• Respect for legitimate authority
• Development of effective authority styles
• Increased sense of achievement
Impact

• Outcome minus an estimate of what would have happened anyway.

• Hammer a Nail into a Doorframe
  
  – Pre Survey: 10 out of 12 said they knew how to hammer a nail into a doorframe and 2 didn’t

  After teaching and a maintenance job

  – Post Survey: 12 out of 12 people said they knew how to hammer a nail into a doorframe

  – Impact: 2 people learned how to hammer a nail into a doorframe
Measurement Tools
Root Cause Analysis

A systematic process designed for use in investigating and categorising the root causes of events.

Event: • Door fell off the wall

Why?: • Doorframe was loose

Why?: • Door is used a lot and Team Facility Walks were not done properly

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Cause and Effect Diagram

Also know as the Fishbone or Ishakawa Diagram

• Helps identify, sort and display
• Identifies basic root causes of a problem

Benefits:
  – Helps determine the root causes
  – Encourages group participation and utilises group knowledge of the process
  – Uses an orderly, easy to read format
  – Identifies areas where data should be collected for additional study
Low Consumer Satisfaction

- Maintenance isn’t done regularly
- Poor materials
- Low budget

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Brainstorming

• Brings out ideas
• Ideas are generated and judgement on value is deferred
• Used to generate a large number of ideas

Advantages:
  – Encourages creativity
  – Rapidly produces a large number of ideas
  – Equalises involvement by all team members
  – Fosters a sense of ownership in the final decision
Decision Making Tools

• Multi-voting:
  – Group decision making technique
  – Used to reduce a long list by structured series of votes

• Nominal Group Technique
  – Used to identify and rank issues
    • Every member gives their view of a solution
    • Duplicate solutions are eliminated
    • Members rank the solutions: 1\textsuperscript{st}, 2\textsuperscript{nd}, 3\textsuperscript{rd}, 4\textsuperscript{th}, etc.
Affinity Diagram

• Used to group ideas generated by brainstorming
• A tool that gathers large amounts of ideas, issues, opinions
• Organises opinions into groupings based on their natural relationship
• Good to use to get people to work on a creative level
• Process is useful to:
  – Sift through large volumes of data
  – Encourage new patterns of thinking
• General rule: if less than 15 items of information, the affinity process is not needed

Physical Safety
• Doors fall off the walls
• Someone might get hit
• Damages the floor
• Damages the doors

Psychological Safety
• People feel unsafe when opening a door
• PTSD symptoms reoccur

Health Safety
• Epidemics
• Lets in the cold
• Infestation (fleas, mites, cats)
• Unhygienic practices in kitchen
Solution

Improve the Team Facility Walk Process
Flow Charting

• Depicts the nature and flow of steps in a process

• Useful in early stages of a project to help the team understand how the process currently works

• Can be compared to how the process is intended to work

• Benefits:
  – Pictorial representation of a process
  – Potential training tool
  – Can clearly show where problem areas and processes for improvement are
Run Chart

- Most basic tool to show how a process performs over time
- Data points are plotted in temporal order on a line graph
- Most affectively used to access and achieve process stability by graphically depicting signals of variation

Number of Doors that Fall off the Wall
Bar Charting

• A chart that uses horizontal or vertical lines to show comparisons among categories

• Most helpful in:
  – Monitoring process performance over time to detect signals of change
  – Depicting how a process performed over time, including variation
Pareto Chart

- Named after the Pareto Principle which indicates that 80% of the trouble comes from 20% of the problems
- A series of bars on a graph, arranged in descending order of frequency
- Useful throughout the performance improvement process—helping to identify which problems need further study, which causes to address first and which are the biggest problems
- Benefits:
  - Focuses on most important factors and helps to build consensus
  - Allows for allocation of limited resources

Number of Door Repairs

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<thead>
<tr>
<th>Part</th>
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<tr>
<td>Door Frame</td>
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</tr>
<tr>
<td>Door Knob</td>
<td>5</td>
</tr>
<tr>
<td>Door Window</td>
<td>4</td>
</tr>
<tr>
<td>Door Kick Plate</td>
<td>3</td>
</tr>
<tr>
<td>Door</td>
<td>1</td>
</tr>
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</table>

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Control Chart

• Also known as Shewhart Chart
• Use of upper and lower control limits helps identify significant change in performance

• Control charts are used to:
  – Monitor process variation over time
  – Help to differentiate between special and common cause variation
  – Assess the effectiveness of change on a process
  – Illustrate how a process performed during a specific period
Benchmarking

• A benchmark is a point of reference by which something can be measured, compared or judged

• An industry standard against which a program indicator is monitored and found to be above, below or comparable to the benchmark
Falling Doors

Door fell off the wall

Root Cause Analysis
Cause and Effect Diagram
Brainstormed Solutions: Multi Voting, Nominal Group Technique and Affinity Diagram

Improved Team Facility Walks Process
Explained with Flow Chart
Monitored with Run Charts, Bar Charts, Pareto Charts, Control Charts and Benchmarking

Two people learned how to hammer a nail into a doorframe
Doors stopped falling off the wall
References


