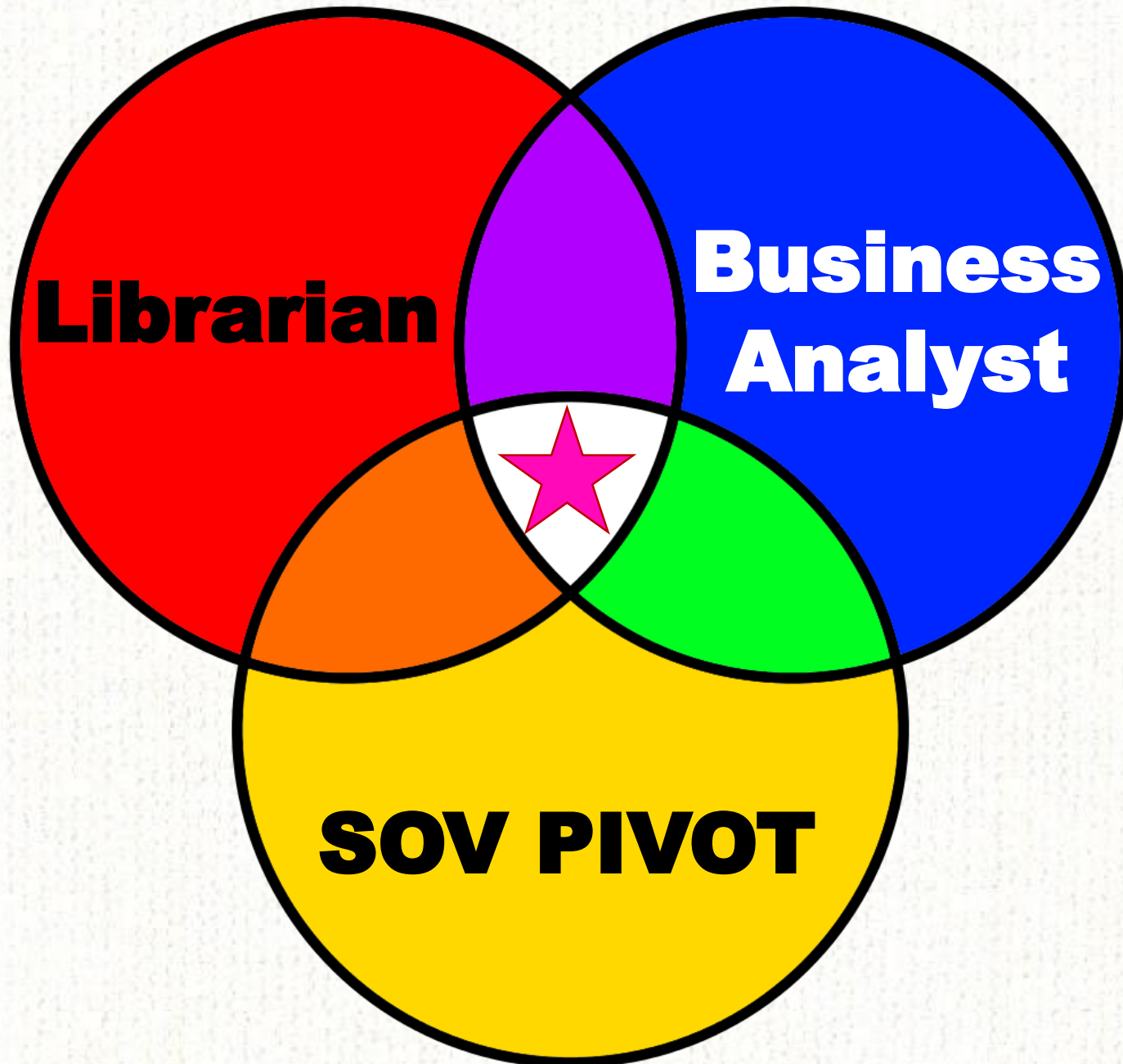


Actionable Data

**Helen Linda, IT Business Analyst
State of Vermont – Agency of Digital Services
124th Annual Vermont Library Conference
May 18, 2018**



Objectives



- Collaborative information gathering
- Getting to root causes
- Acquiring specific baseline data
- Acting on greatest impact

Unscientific Method

Reaction

Assumption

Solution

Implementation



Real Life Example



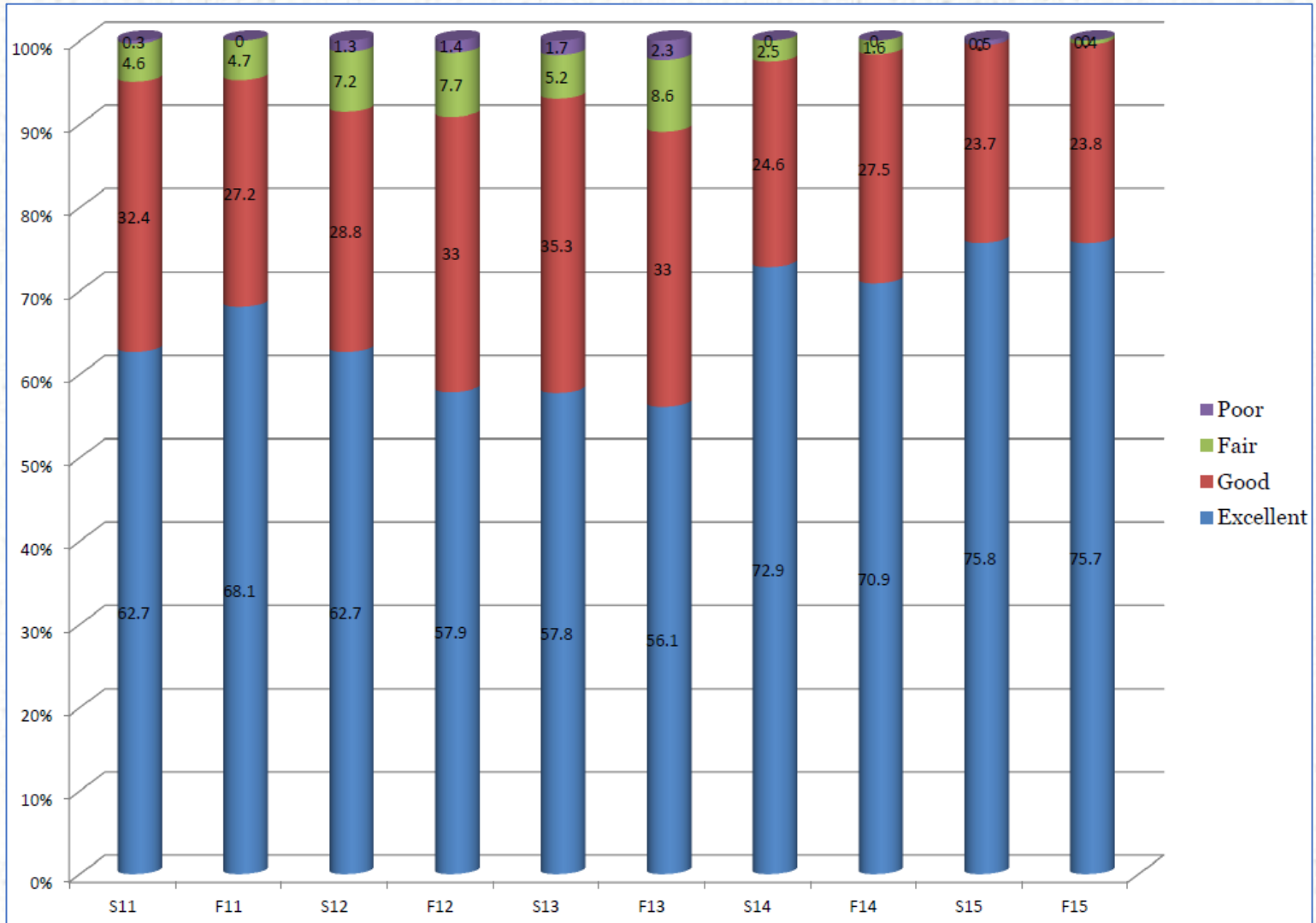
Reaction to: survey
downtrend

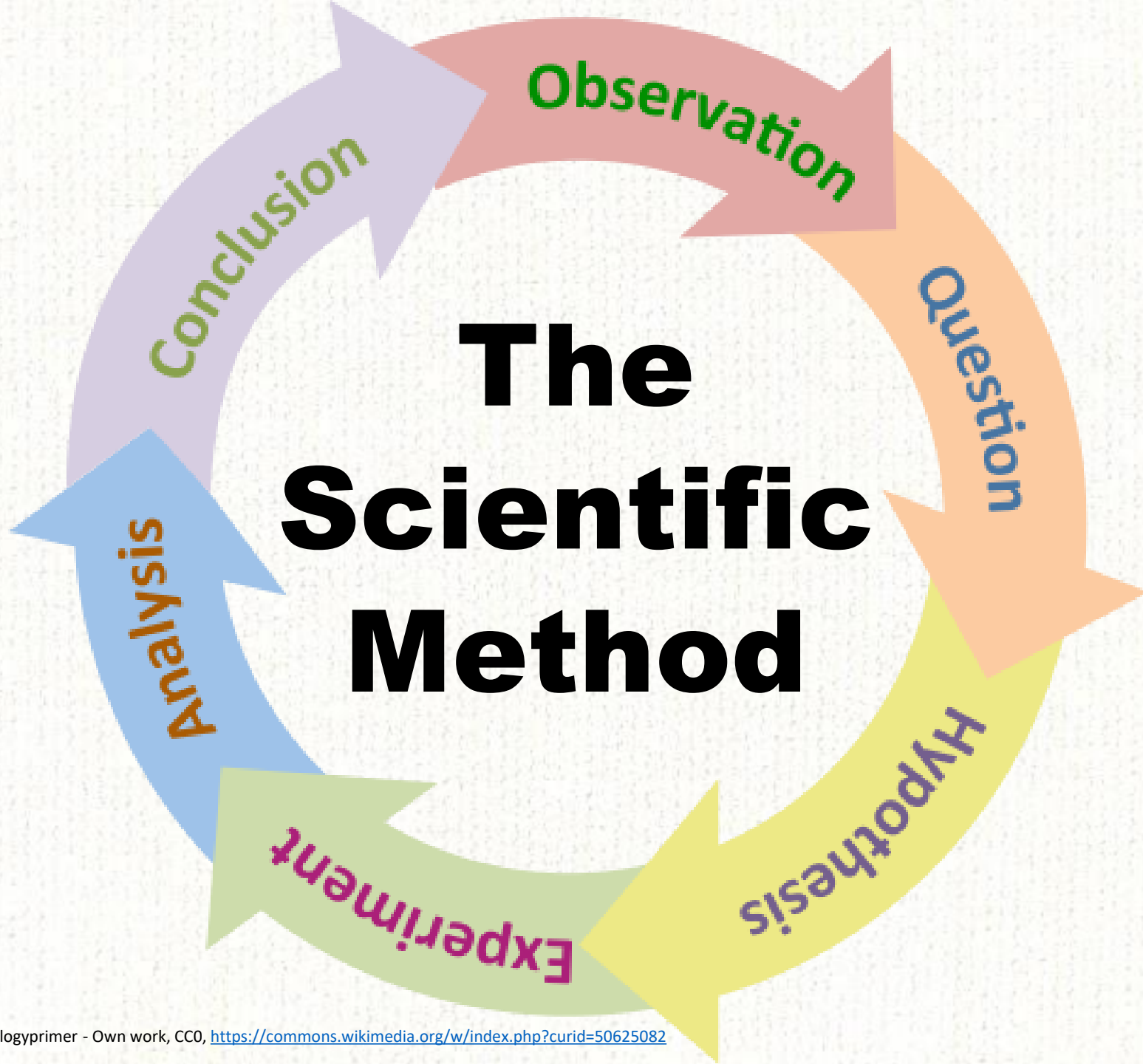
Assumption that:
need programming

Solution is: remote
reference service

Implement as:
pilot project

Evaluation Results





Do Over

Observation: collaborative matrix of interpretations

Question: root cause to develop specific question

Hypothesis: develop and acquire baseline data that answers that question



Toolkit

Finding all the information

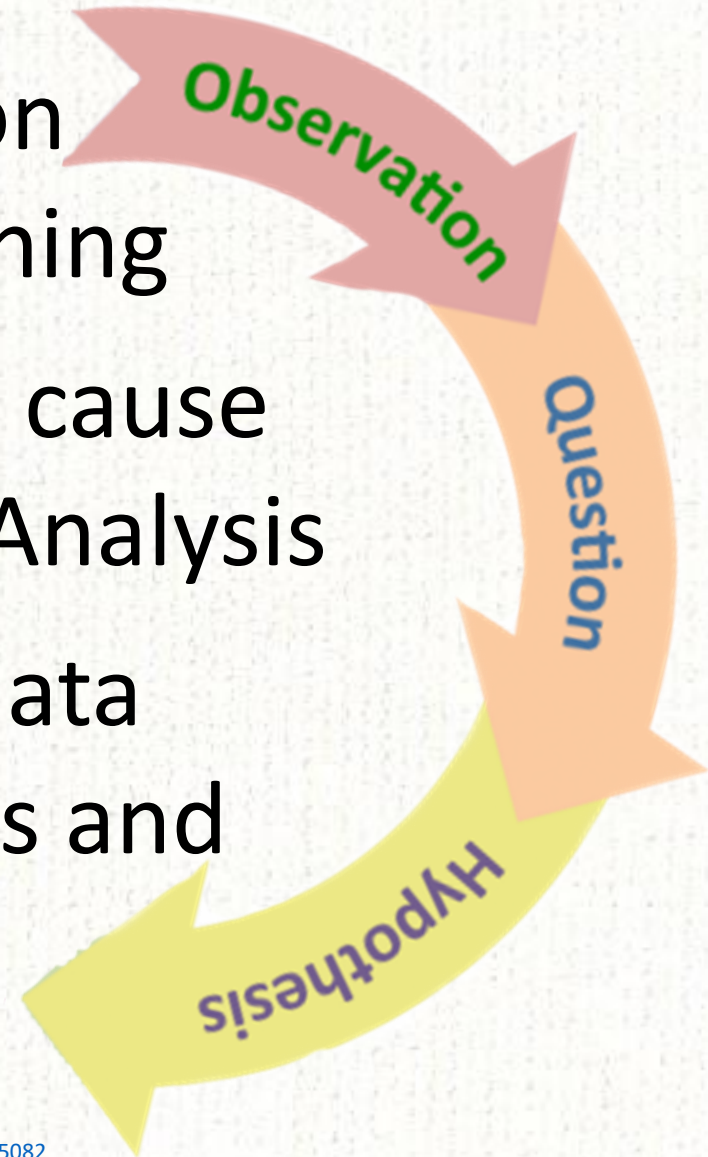
- Interviewing and Listening

Drilling down to the root cause

- 5 Whys and Fishbone Analysis

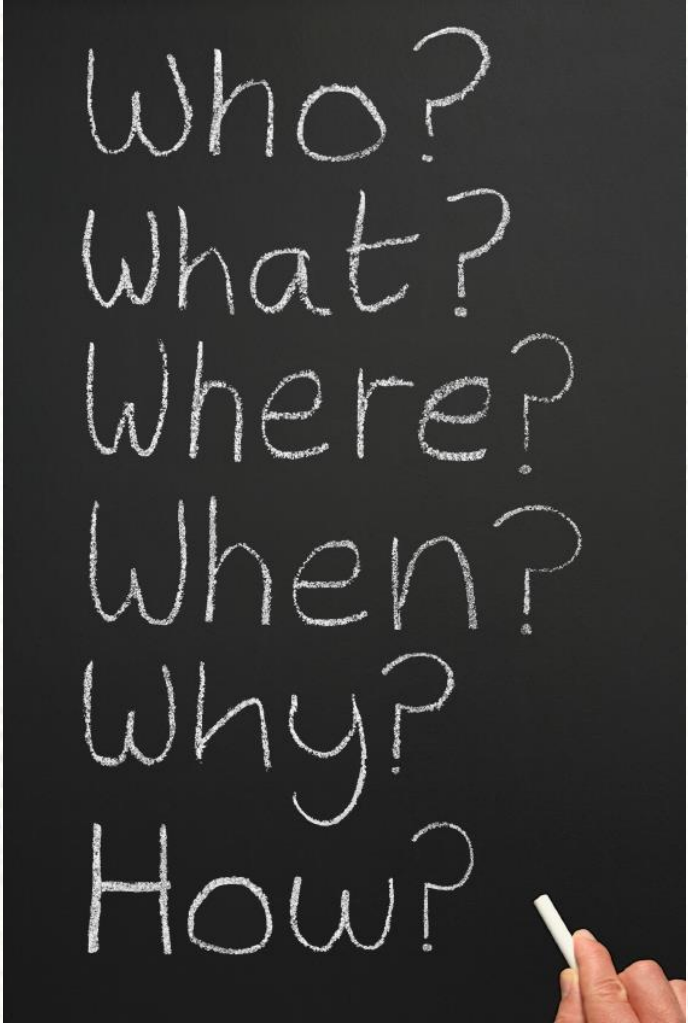
Developing meaningful data

- Performance Measures and Pareto Analysis



Observation

- **Keywords:** 5 W's (+H), Consultative Interview, Reference Interview
- **Use:** Open Questions
- **Avoid:** Leading Questions



Who?
What?
Where?
When?
Why?
How?

Observation

- **Keywords:** Active Listening, Informational Listening
- **Use:** Repeating back
- **Avoid:** Judgement



Question

DEFINE THE PROBLEM:

For example: Got caught speeding.

Why?

Late for work.

Why?

Woke up late.

Why?

Alarm clock didn't work.

Why?

Batteries were flat.

Why?

Forgot to replace batteries

- **Keywords:**
5 Whys,
Root Cause Analysis
- **Use:** Simple Problems
- **Avoid:** No known solution

5 Whys

Define the Problem: Must be answerable

Type of Whys: Logical/sensible questions

How many: Can be more/less than 5

Branching: Maybe fishbone instead

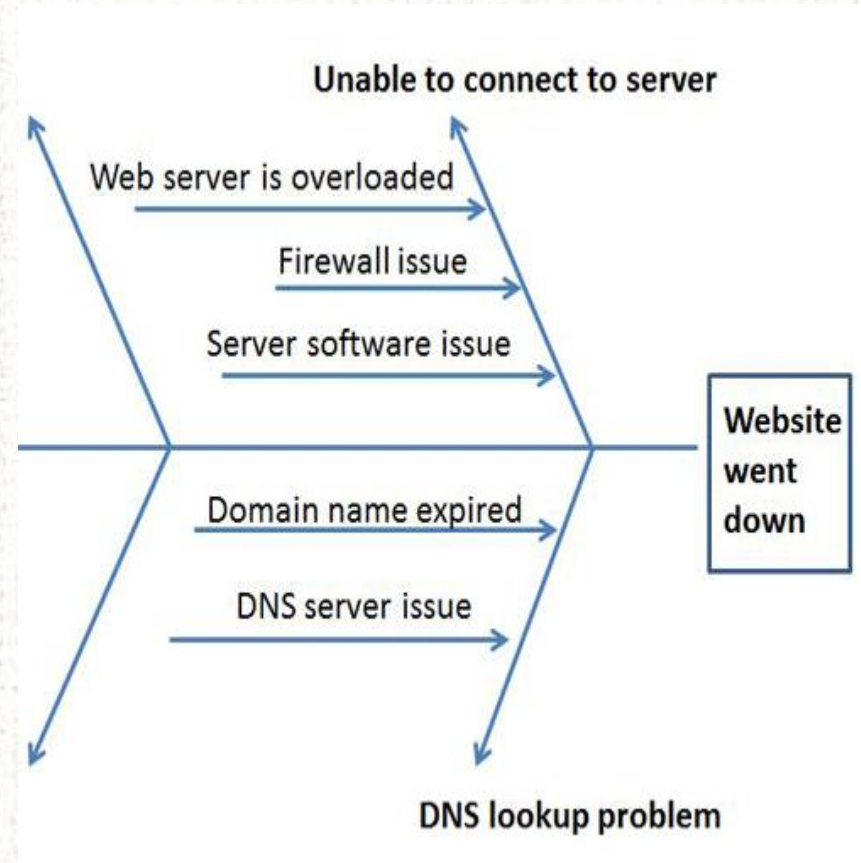
Test Logic: Why down, because back

Span of Control: What's in yours?

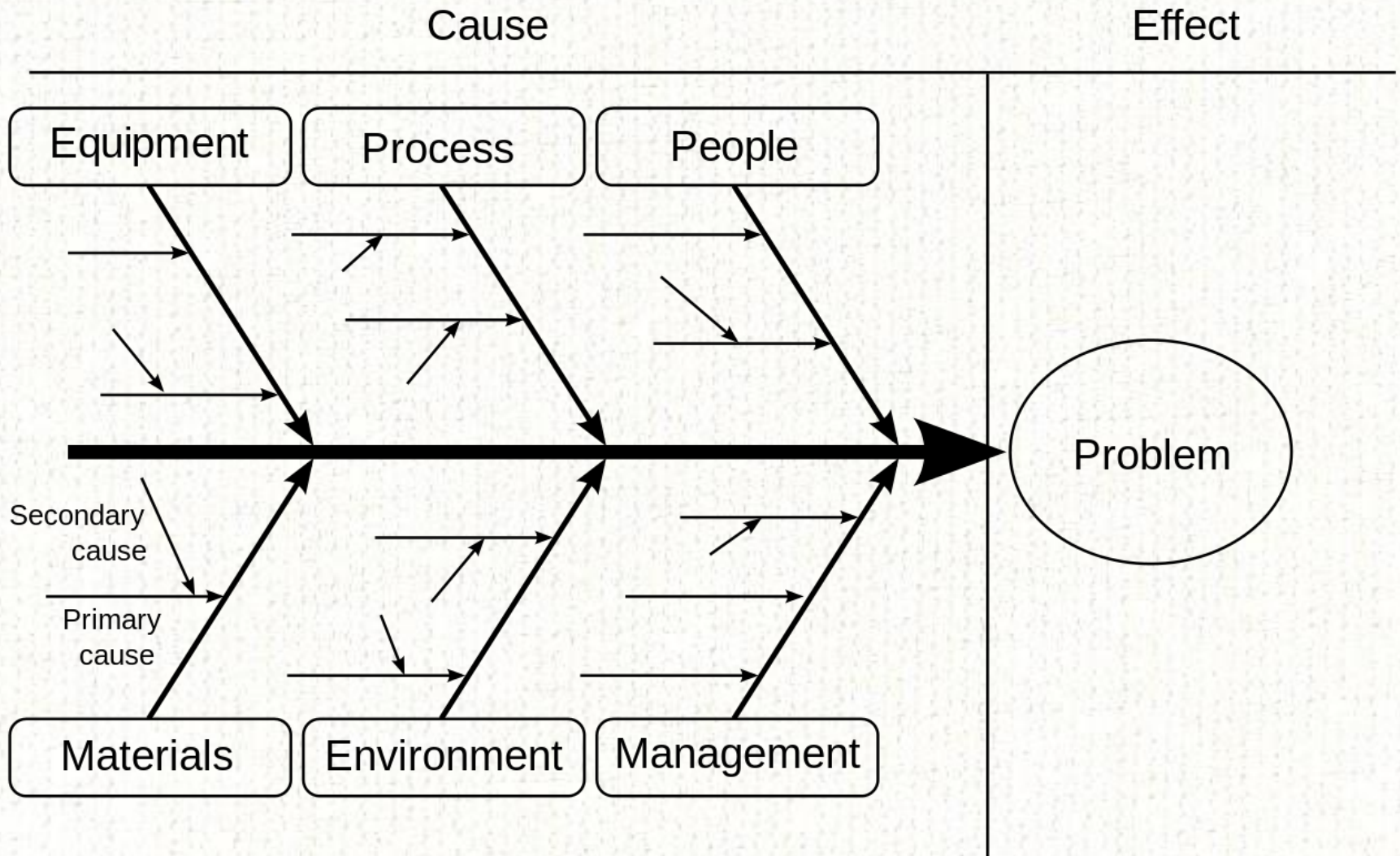
Conclusion: Treating diseases not symptoms

Question

- **Keywords:** Fishbone Analysis/ Ishikawa, Concept Mapping
- **Use:** Multi-stream problems
- **Avoid:** Too deep

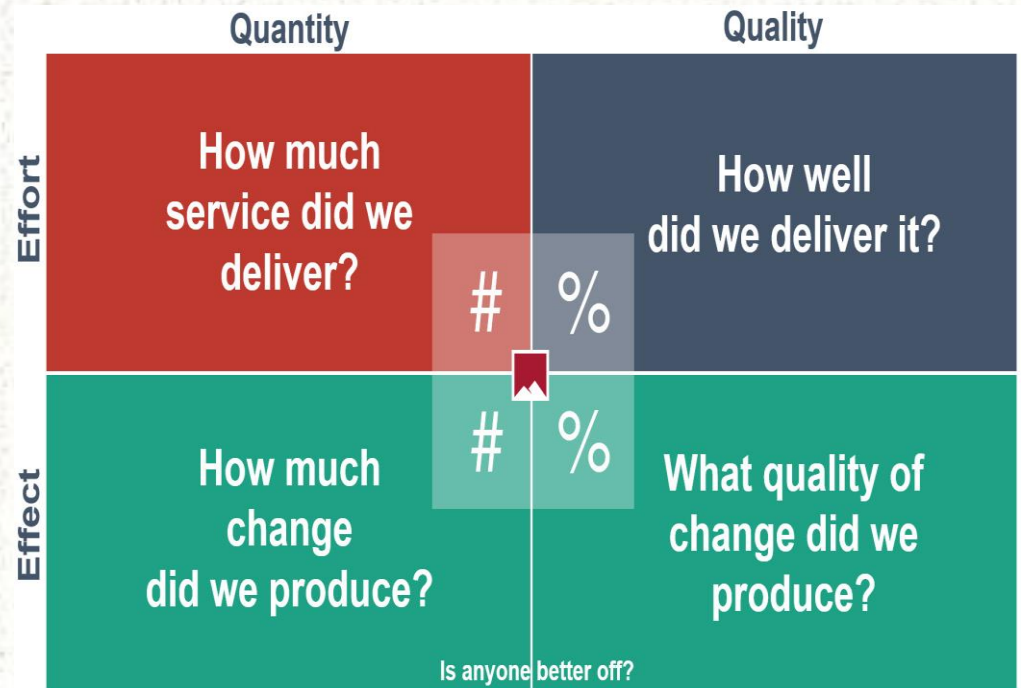


Fishbone/Concept Map



Hypothesis

- **Keywords:** Results-Based Accountability, Performance Measures
- **Use:** Creativity and community
- **Avoid:** Forcing existing data fit

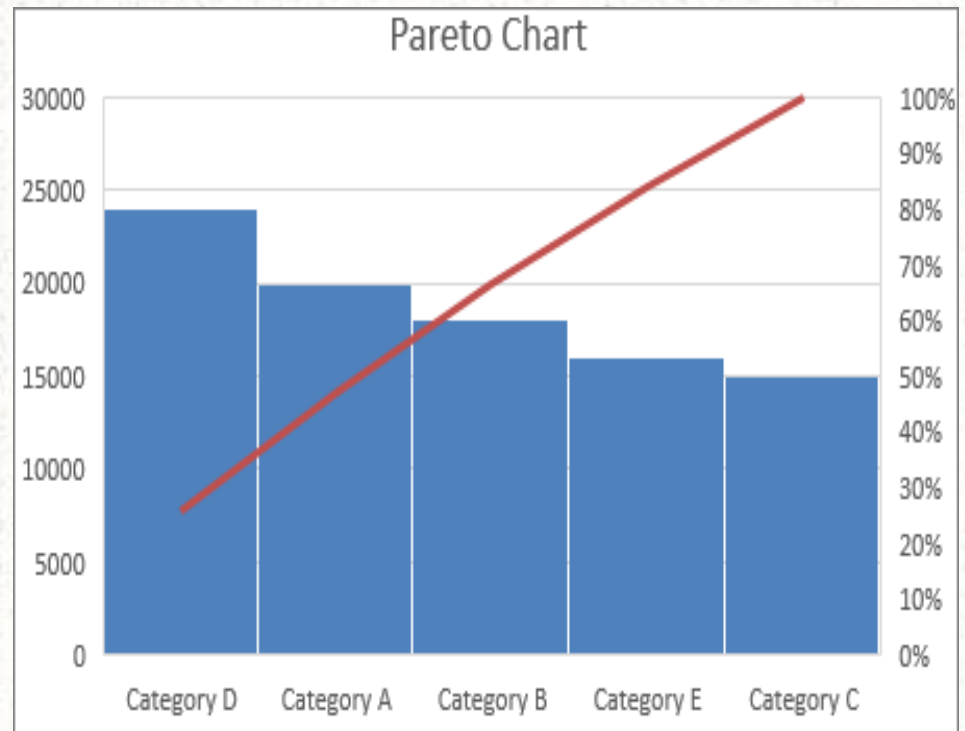


Performance Measures

Candidate Indicators	Communication Power	Proxy Power	Data Power
Measure 1	High	Low	High
Measure 2	Low	Medium	Medium
Measure 3	Medium	High	Low
Measure 4	High	High	High
Measure 5	High	Low	Medium
Measure 6	Medium	Low	High
Measure 7	Low	Medium	High

Hypothesis

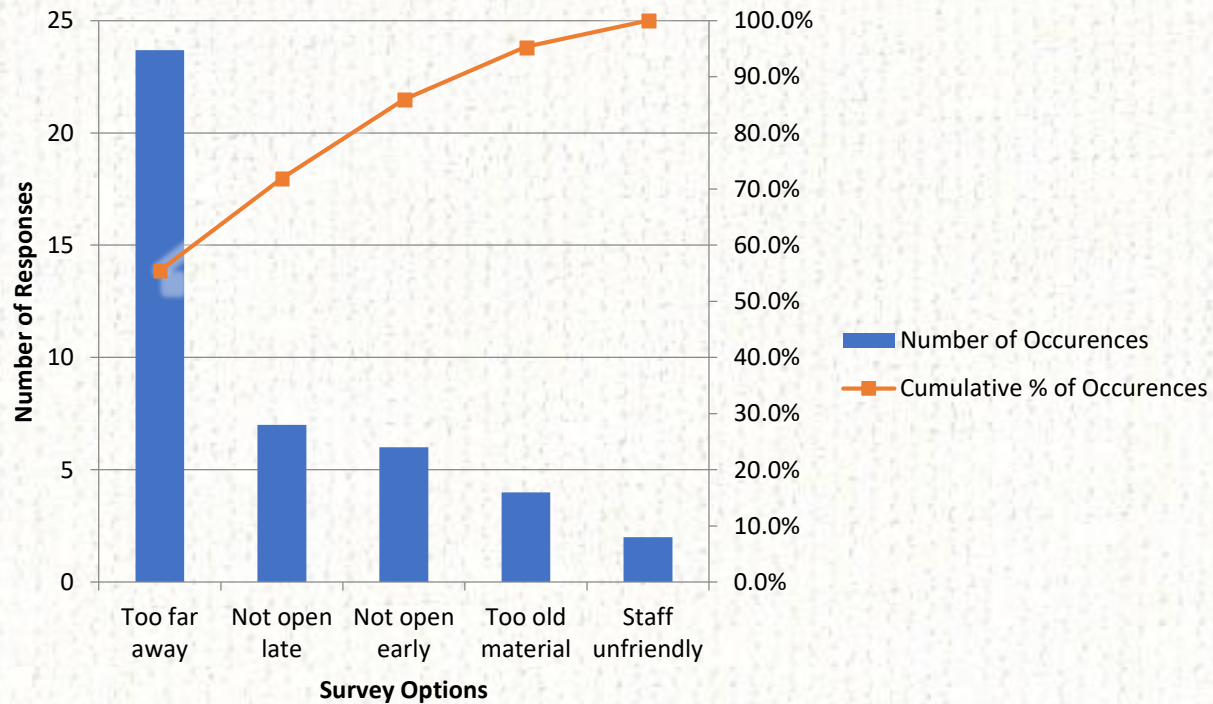
- **Keywords:**
Pareto
Analysis/Chart
- **Use:** Greatest
Impact
- **Avoid:** Trivial
Many



Pareto Analysis

	A	B	C	F
1	Survey Options	Number of Occurrences	Cumulative % of Occurrences	Cumulative % of Time
2	Too far away	24	55.5%	12.5%
3	Not open late	7	71.9%	59.4%
4	Not open early	6	85.9%	65.6%
5	Too old material	4	95.3%	84.4%
6	Staff unfriendly	2	100.0%	100.0%
7	Total	43		

Analysis of Survey Responses





- Action, not reaction
- Collaboration, not cowboy
- Root causes, not superficial questions
 - Craft data to answer questions
- Choose impact over the trivial many