

# ***Planning a Project***

## ***Creating Success but Missing the Goal***

# *Agenda*

- Speak the Language of your Audience
- Be the Expert You Are Expected to Be
- Formalizing a Recommendation for Maximum Business Impact
- An Example of a “Whoops” with a Big Upside

# Communicate Don't Speak

- Problems are Opportunities to Demonstrate your Strengths
- You're the selected expert!
- What is the person wanting to hear/understand?
- What do you need to say?
- How can you present a Technical Topic so your audience can understand and judge?



# When I Ask the Time . . .

- Don't Explain How to Build a Watch!
- Example of Geek Speak . . .

*We have this cool technology where we can give our WPC info based on a pareto analysis of equipment related CMI so that we can address the top decile or quintile of key failure information to lower our SAIDI number. It works by mobile surveys using RF real-time analysis using the Doppler effect, FFTs, signature analysis, and statistical reviews among many algorithms to pinpoint failing overhead equipment. We provide .shp files from our GIS via secure FTP protocol.*

*After the surveys are completed a field engineer uses an ultrasonic gun to locate the failing component and we receive a GPS coordinate along with a picture of the failing component. We use our fractionalized T1 to an OC3 running at 155 Mbps to reach the cloud to access the information via a private web portal. We can also receive the reports via secure FTP, Excel, .csv, and other formats for import into our OMS and or GIS for future use. Did I tell you they use the .shp files from our GIS to program GPS units?*

*Whadda ya think? Oh yea and its patented! Whadda ya think?*



# Know Your Audience

- Put yourself in the executives position
  - You don't understand their drivers
  - They don't understand your motivations
- How did the car get wrecked?
  - It was dark
  - It was raining
  - The guy came out of nowhere
- Instead, How about - - -
  - I was going to fast for the conditions
  - I really learned a lesson



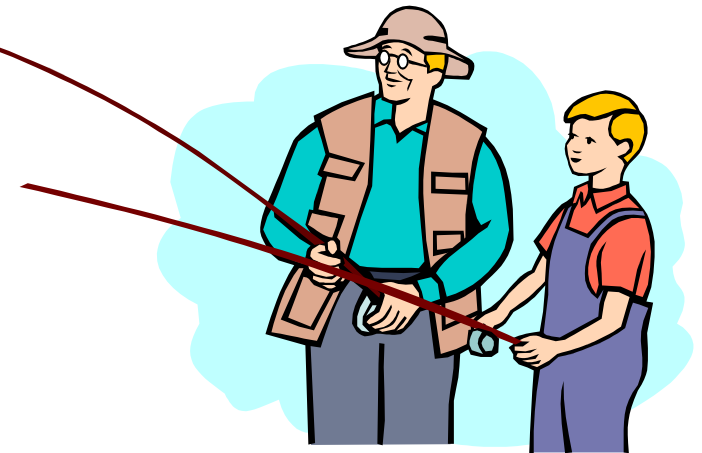
# Be Ready to Adjust to a New Vision

- Experience brings new perspective
- New perspectives are an invitation for you to join the team – Work WITH not FOR your manager
- When a “idea” comes along --
  - Acknowledge
  - Review
  - Evaluate
  - Present your ideas
- AVOID ---
  - “We tried that”, “Won’t fit the model”, “Can’t work”
- Don’t ruin your opportunity to be THE go-to expert



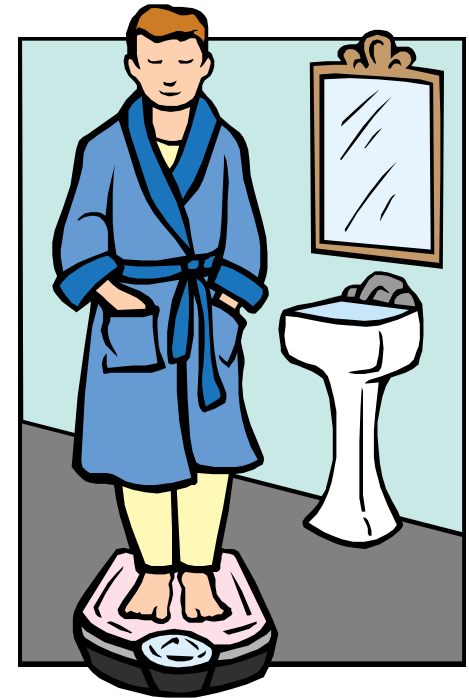
# You are the Expert – Explain Don't Teach

- We assume we must be perfect when the educated guess is all that is wanted
- You have reasons why and why not
  - Never use excuses
    - “our guys will never go for that!”
  - Always organize your thoughts
  - Remember the goal
    - Achieve the goal
    - Use what you know



# Set Measurable Goals

- You cannot manage what you do not measure
  - You know that
  - So does your boss!
- Always have a measurement declared
- Always set a schedule to report
- Always report on time
- If you miss the Goal. . . . .
  - Learn and adjust
  - Change the Goal
  - Don't hope it gets better



# It is much better to Avoid than Fix

- Break the Goal into manageable steps
- Measure success one step at a time
- Report on each step and adjust as necessary
- Don't try to land-on-the-moon as Step #1
- Plan – Measure – Adjust - Win



# Don't Hide Behind Technology



- A question is just that
- A question from an Executive is a collaboration
- Don't dismiss ideas – Integrate them


# Not All News Will be Good News

- Never lead a charge with Bad News
- Explain the:
  - Goal
  - Result
  - Outcome and most importantly
  - The New Approach



# There are many Goals that can be achieved

Technology  
&  
Process  
Enablement



# CMI Impact Assessment: Fix the Worst Performing Circuits WITH Good ROI

- Midwest U.S. IOU Example

ABC UTILITY	
<b>Territory</b>	<b>Scope</b>
# CIRCUITS	47
OH Distribution Miles	1,039
<b>Cost</b>	
<b>TOTAL COST (incl repairs)</b>	<b>\$ 376,771</b>
Repair Costs	\$ 64,961
<b>EXACTER Only</b>	<b>\$ 311,811</b>
<b>Cost Benefit Analysis</b>	
<b>CMI/ Year</b>	<b>15,323,237</b>
Impact Rate	10%
CMI Savings/Year	1,532,324
<b>SAIDI CONTRIBUTION</b>	<b>2.29</b>
<b>Value @ 1.5MSAIDIMIN</b>	<b>\$3,437,049</b>
<b>ROI</b>	<b>912%</b>
<b>Value @ 2.5MSAIDIMIN</b>	<b>\$5,728,416</b>
<b>ROI</b>	<b>1520%</b>
<b>Value @ 3.5MSAIDIMIN</b>	<b>\$8,019,782</b>
<b>ROI</b>	<b>2129%</b>

Incl. Repair Costs at \$500/Location  
*(actual utility costs are used)*

CMI for targeted circuits

Contribution Minutes  
*System population of 670K*

In the case of equipment failures, developing the Benefit/Cost metric has been problematic, but advances have been made based on the need to press ahead. Several utilities have developed a "rule of thumb" to address the Benefit (losses not experienced) issue. While this measure can differ from utility to utility based on system configuration and age, an approximate customer Benefit value of \$1.5M<sup>7</sup> per SAIDI minute of reduced outage is commonly being used.

<sup>7</sup> Doug Staszsky, Director – Product Management, Automation Systems Division, S&C Electric Company

<sup>8</sup> Such technology exists and can identify equipment components in a failing mode with 98% accuracy and at a

# Impact Analysis

## Based on Initial Deployment Goals

Initial Pilot Deployment	
Territory	Scope
# CIRCUITS	18
OH Distribution Miles	308
Cost	
Repair Costs	\$ 11,002
EXACTER Only	\$ 77,013
<b>TOTAL COST (incl repairs)</b>	<b>\$ 88,014</b>
Cost Benefit Analysis	
CMI/ Year	413,743
Impact Rate	30%
CMI Savings/Year	124,123

**Total Est. Project Cost**  
\$500/Scheduled Repair/Location

# repairs = 1 find per 14 miles surveyed  
EXACTER cost @ \$250/mile

**CMI Reduction Opportunity**

Target: 18 Circuits = 617K  
EXACTER Locations: 8 Circuits = 414K

**Contribution Minutes**  
*Assuming population of approx 468K*

**SAIDI CONTRIBUTION** **0.27**

Value @ \$1.5M/SAIDIMIN	\$ 398,100
ROI	452%

**ROI SUMMARY**  
Based on actual project results

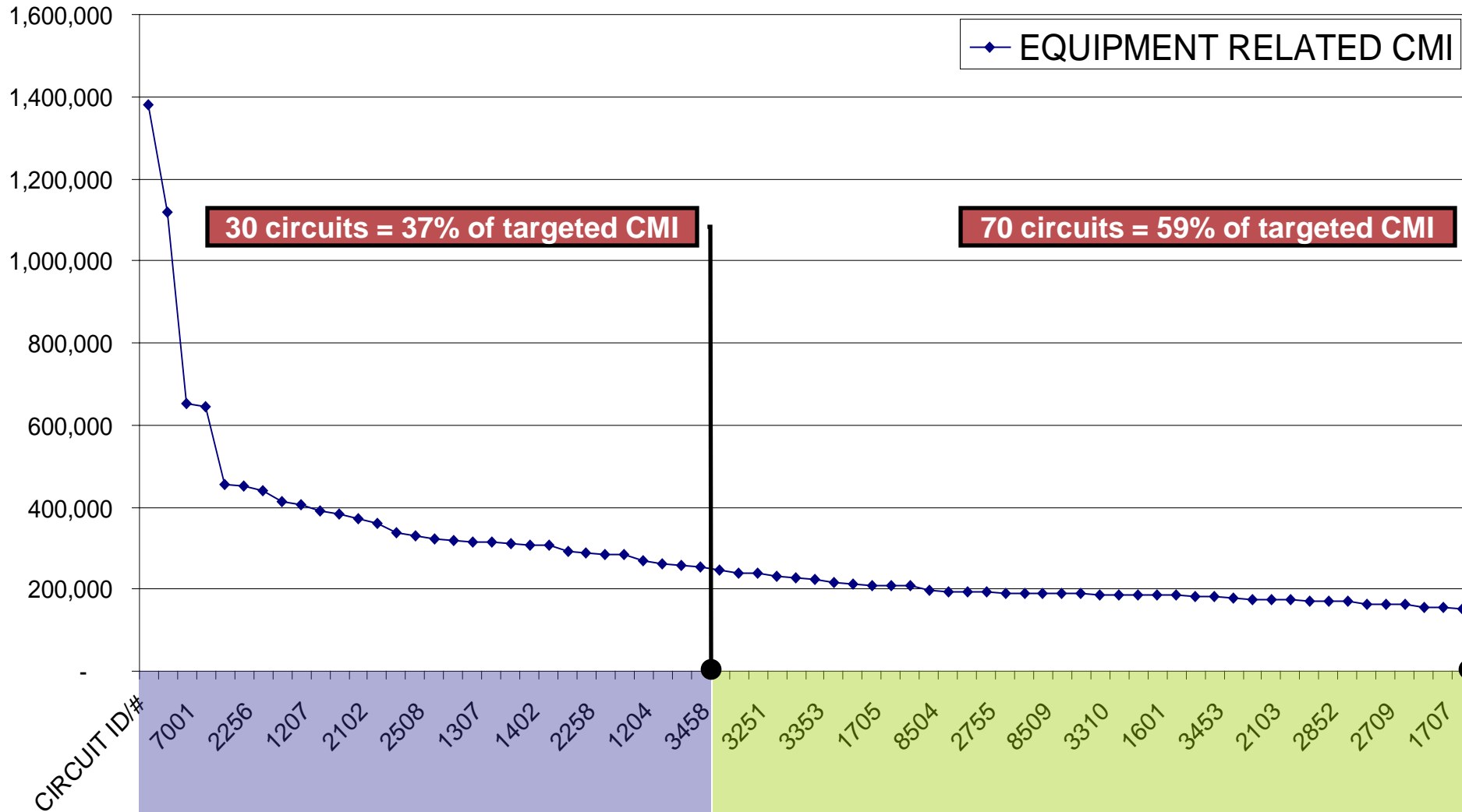
**Project Goal Missed but Positive ROI!**

# CHANGE: System-wide CMI Impact Assessment Methodology NOT: WPC

- System-wide analysis of **equipment-related** CMI (Customer Minutes of Interruption)
- Include 415 overhead distribution circuits across 3,682 pole miles in the Assessment
- Complete a Pareto Analysis of Top 70 CMI circuits evaluated
- *Objective: To achieve an optimum investment to SAIDI impact through selective system hardening and predictive, conditions-based maintenance*

# CMI Data Summary

## TOP 70 CMI Circuits: Equipment-Related Events



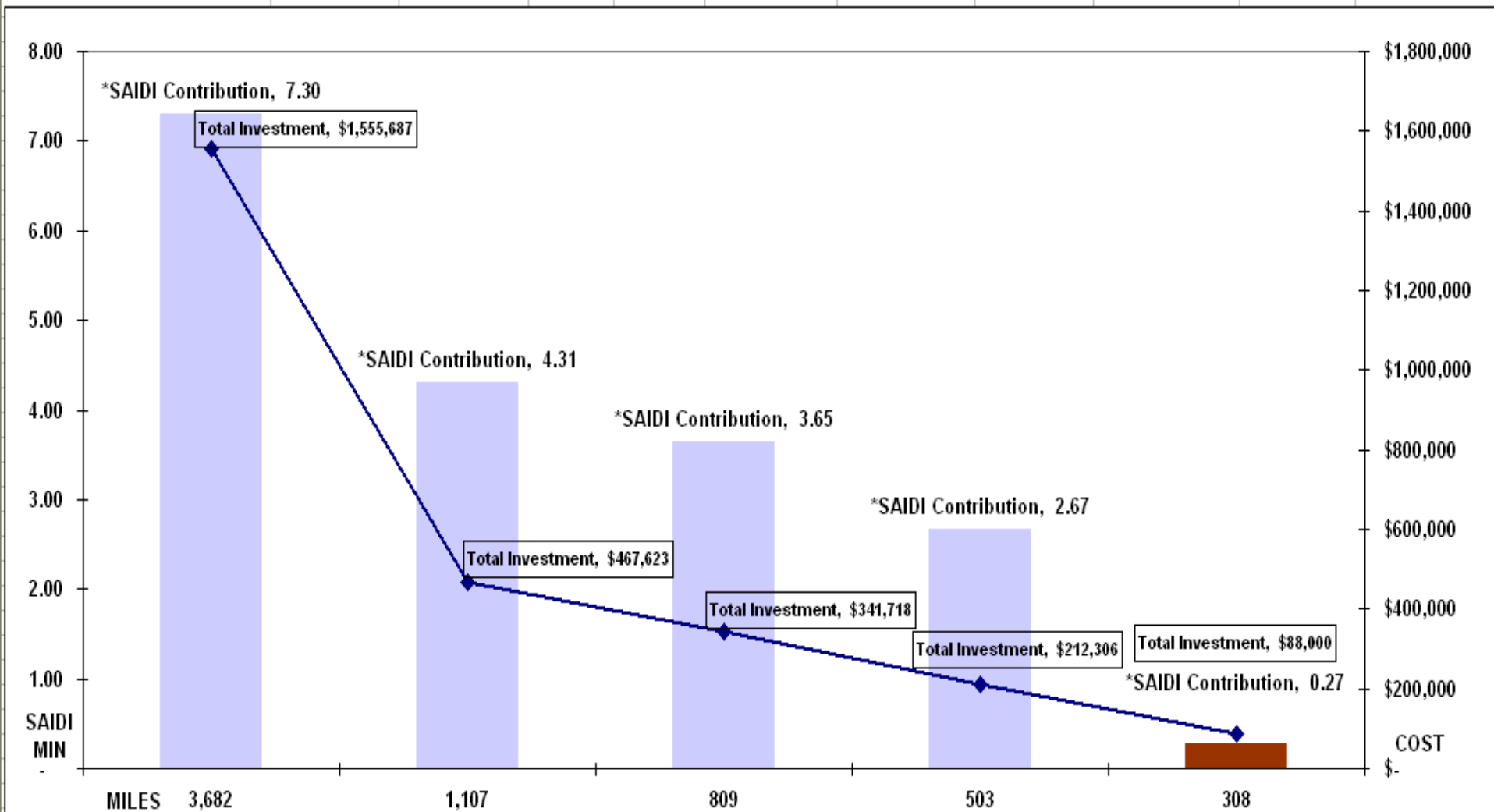
Strategic Scenarios	Addressable CMI	Addressable CMI %	Circuit Miles	# Circuits	*SAIDI Contribution	Survey Expense	**Repair Expense	Total Investment	***ROI%	Cost per SAIDI MIN
100% Miles - 100% CMI	34,158,875	100%	3,682	415	7.30	\$ 1,325,556	\$ 230,131	\$ 1,555,687	604%	\$ 212,995
30% Miles - 59% CMI	20,141,972	59%	1,107	70	4.31	\$ 398,448	\$ 69,175	\$ 467,623	1281%	\$ 108,579
22% Miles - 50% CMI	17,062,892	50%	809	52	3.65	\$ 291,168	\$ 50,550	\$ 341,718	1501%	\$ 93,663
13% Miles - 37% CMI	12,506,897	37%	503	30	2.67	\$ 180,900	\$ 31,406	\$ 212,306	1789%	\$ 79,390
Initial Pilot Deployment****	413,743	2%	308	18	0.27	\$ 77,000	\$ 11,000	\$ 88,000	452%	\$ 325,926

\*uses conservative 10% impact rate for CMI reduction opportunity

\*\*number of repair targets derived from national statistics of 1 location reported for every 8 pole miles surveyed at a cost of \$500 for a scheduled repair

\*\*\*ROI assumes value of 1 SAIDI Minute at \$1.5M based on industry studies

\*\*\*\*Initial Deployment results showed 1 location reported for every 14 poles miles surveyed - target circuits based on 2008 WPG data



# Define Costs in Terms of the Outcome Desired

- Solidify program objective
- Determine investment measurement for comparison

<u>MEASUREMENT</u>	<u>COST FOR 4.3 SAIDI MINUTES</u>
\$/Customer	\$1.00/Customer ( <i>\$3 to \$4 typical</i> )
\$/CMI	\$0.23/CMI Minute ( <i>\$1.50 typical</i> )
\$/SAIDI	\$100K/SAIDI MIN ( <i>\$1.5M typical</i> )

*\*BASED ON SYSTEM-WIDE CMI IMPACT ASSESSMENT*

- Deployment recommendation
  - 3 year program @ 1000 miles per year
- Defined criteria for success

# Questions?



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