Aweing the Auditors

Katherine Vigneau, CAFM

- 27 years in the Canadian Army serving in Canada, Haiti, Afghanistan and Norway
- CAFM 1999, MBA 2001, CITT 2005, MDS 2006
- Certification Board 2001-present, VP Canada 2009-2010, winner of NAFA's Excellence in Education Award
- Founder of KMVS Fleet+ Consulting offering fleet and management consulting services in Canada and around the world
- Professional Development Strategist for NAFA 2010 – 2014 Director of Professional Development since Oct 2014.

Agenda

- What's in a name?
- Why conduct an audit?
- Who should conduct an audit?
- How to conduct an audit?
- Must haves
- Must avoids
- Resources
- Functional Audits

What's in a name?

Best Practice (BP) Review

Audit

Competitiveness Assessment

Benchmark Study

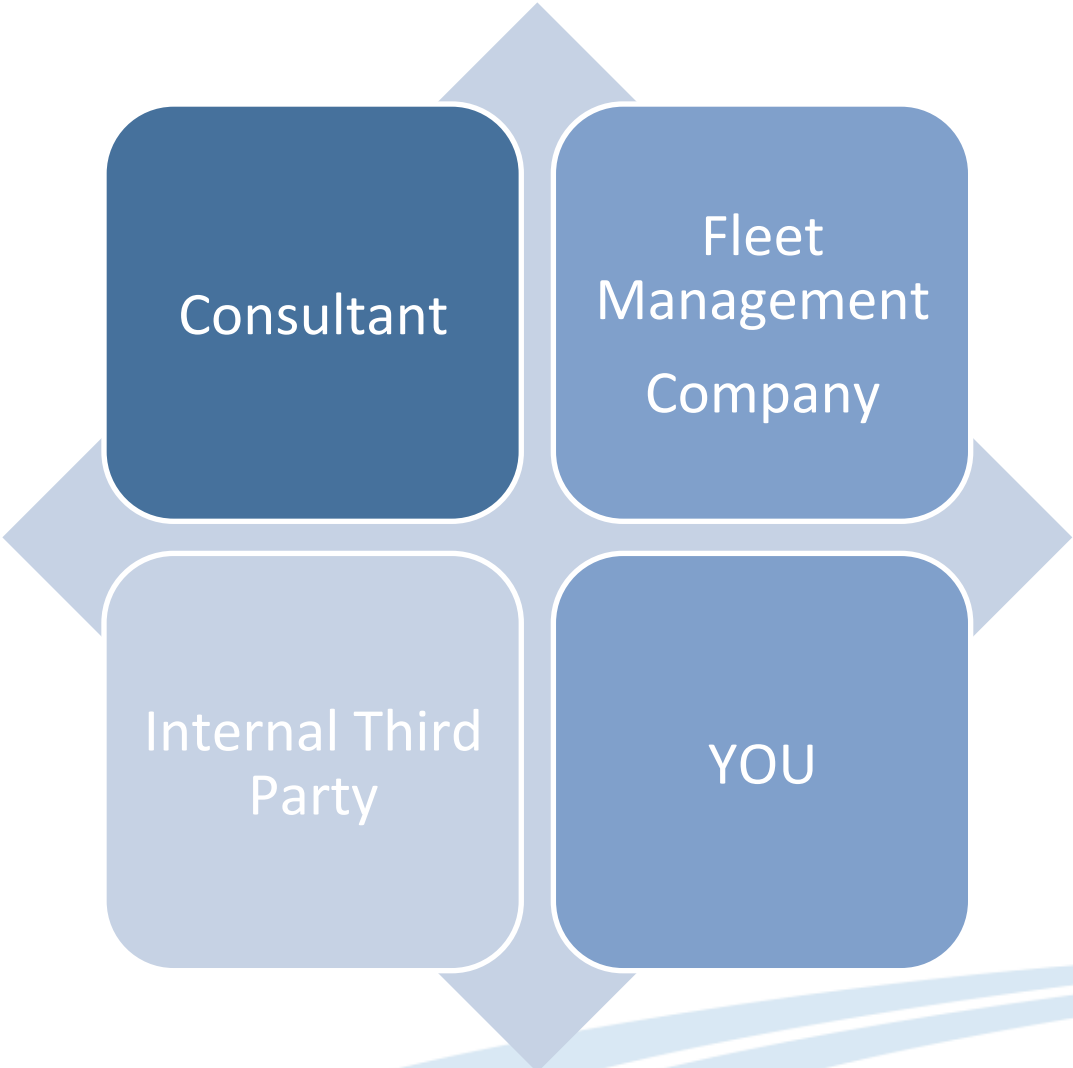
Audit

A systematic and independent examination of data, statements, records, operations and performances (financial or otherwise) of an enterprise for a stated purpose.

Why conduct an audit?

- To ensure the effective operation of an organization.
- To review compliance with regulations.
- To ensure you are prepared to meet potential challenges.
- To maintain/ enhance the organization's reputation.
- To perform a "due diligence" review for shareholders or potential investors.

Who should conduct the audit?



Who?

Source	Advantages	Disadvantages
Internal third party	Knows the organization Free or low cost	Not an SME Time Organizational bias
FMC	Low cost Familiar with fleet ops SME	Objectivity
Consultant	Objectivity SME You set timeline	Cost
You	Knows the organization SME	Time Objectivity

Six Steps to a Successful Self Audit

- Define objective
- Request for Information
- Review data and information provided
- Conduct interviews, focus groups, surveys
- Analysis and comparison
- Report and debrief

Define Objective

- Specific
- Achievable

"The objective of the audit is to assess the adequacy of the management control framework, related risk management strategies and practices, the information for decision making and reporting purposes, as well as the extent of compliance to relevant policies."

RFI

- Thorough
- Consider time available
- Data availability

- Fleet policies
- Organizational charts
- Job descriptions
- Decision-making authorities

Review data and information

"It went pretty well. The auditor took one look at my files and retired!"

- Anomalies
- Discard bad data
- Request clarifications as required

- Look at data provided, see what is missing
- Ensure understanding

Interviews, focus groups, etc

- Interview senior management
- Focus groups with employees
- Survey

Analysis and comparison

- Risk Analysis
- SWOT

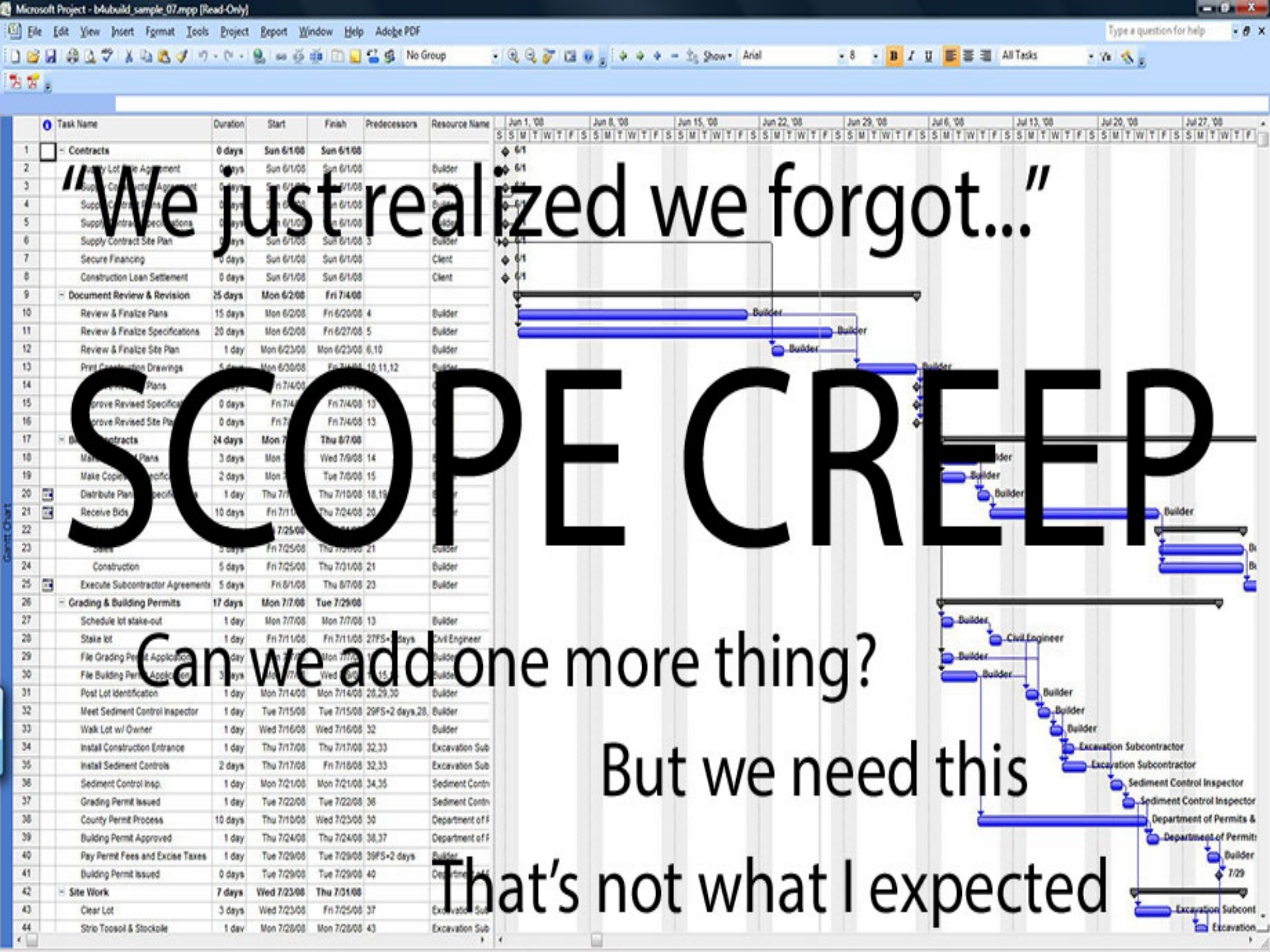
Report and debrief

Avoid

Scope creep

Fighting the audit

No value added


Microsoft Project - b4ubuild_sample_07.mpp [Read-Only]
"We just realized we forgot..."
SCOPE CREEP
Can we add one more thing?
But we need this
That's not what I expected

Must Haves

- Client Involvement
- Functional Expertise (lots of it!)
- Time

Use the Risk Management process to analyze your fleet operations.

RISK (SAFETY) AUDIT

Exposures

- Property
- Liability
- Human Resource and Key Personnel
- Business Income

Risk Management Process

1. Determine the goal of the study
2. Identify all organizational risks and exposures
3. Quantify or measure the risk in terms of potential likelihood and magnitude (frequency and severity)
4. Examine alternative strategies for managing the risk and/or paying for the losses that are not avoided
5. Choose and prioritize the most appropriate elimination and/or control strategies
6. Plan and implement the fix to control or otherwise manage the risk and associated liabilities
7. Communicate the results of the risk management process throughout the organization
8. Monitor the program for effectiveness and modify as necessary

Step One - Determine Goal

- Specific
- One objective
- End result?

Step Two - Risk Identification

- Select and brief key staff
- Select appropriate techniques
- Circulate supporting documents
- Conduct interviews, workshops, etc.
- Create risk statements
- Document risk identification
- Return to originator for comments

Step Two - Search for risks

- Look for pointers such as
  - Uncertainty
  - Constraints
  - Assumptions
- To identify pointers use
  - Brainstorming
  - Questionnaire
  - Checklist

Step Two – Document

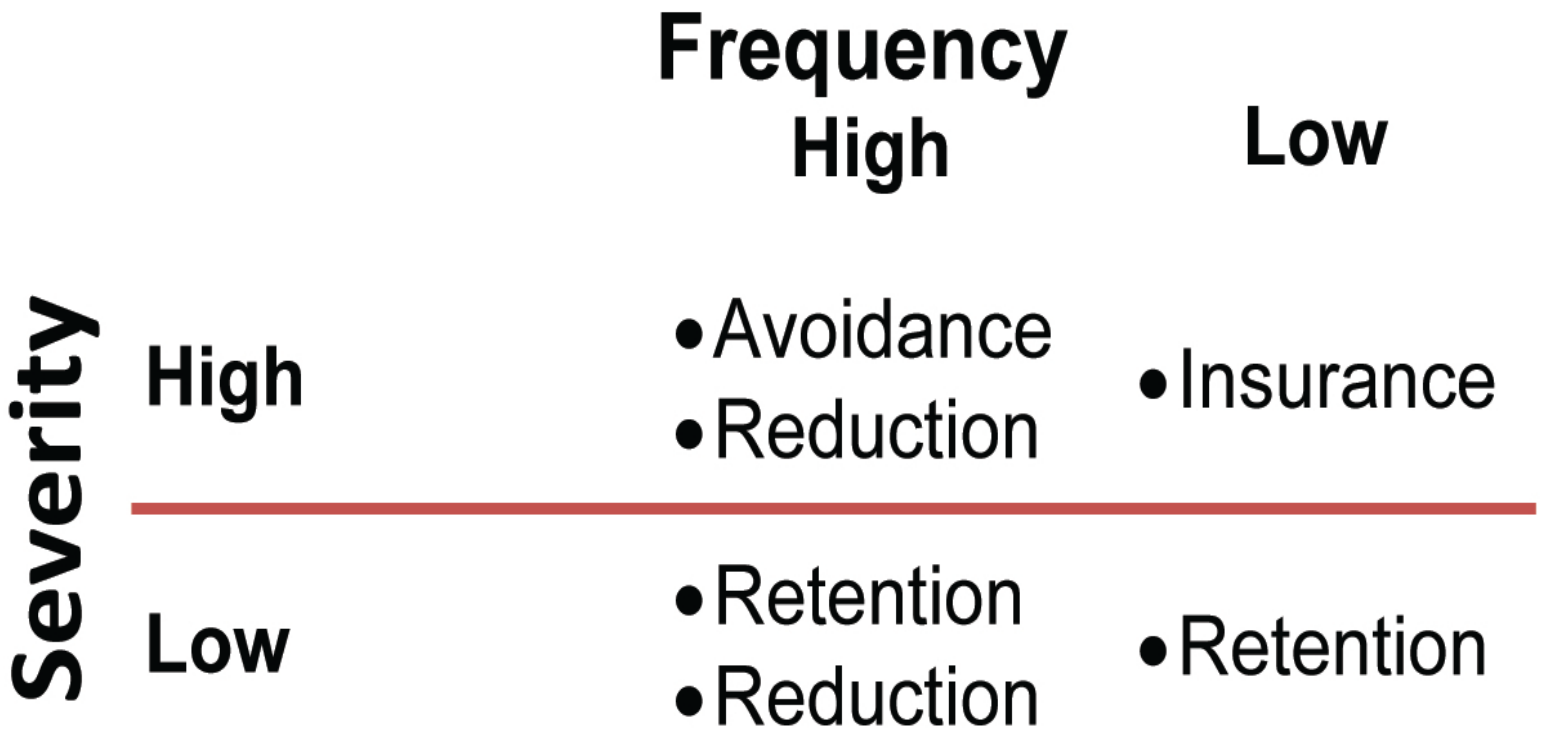
Title	• Backing crashes – Child fatalities
Risk Statement	• If the current policy is retained, an organization of our size has one fatal rollover every twelve years.
Background	• From 1990 -2003 there were 9 child deaths out of 42 children involved in backing crashes.

Step Three - Risk Measurement

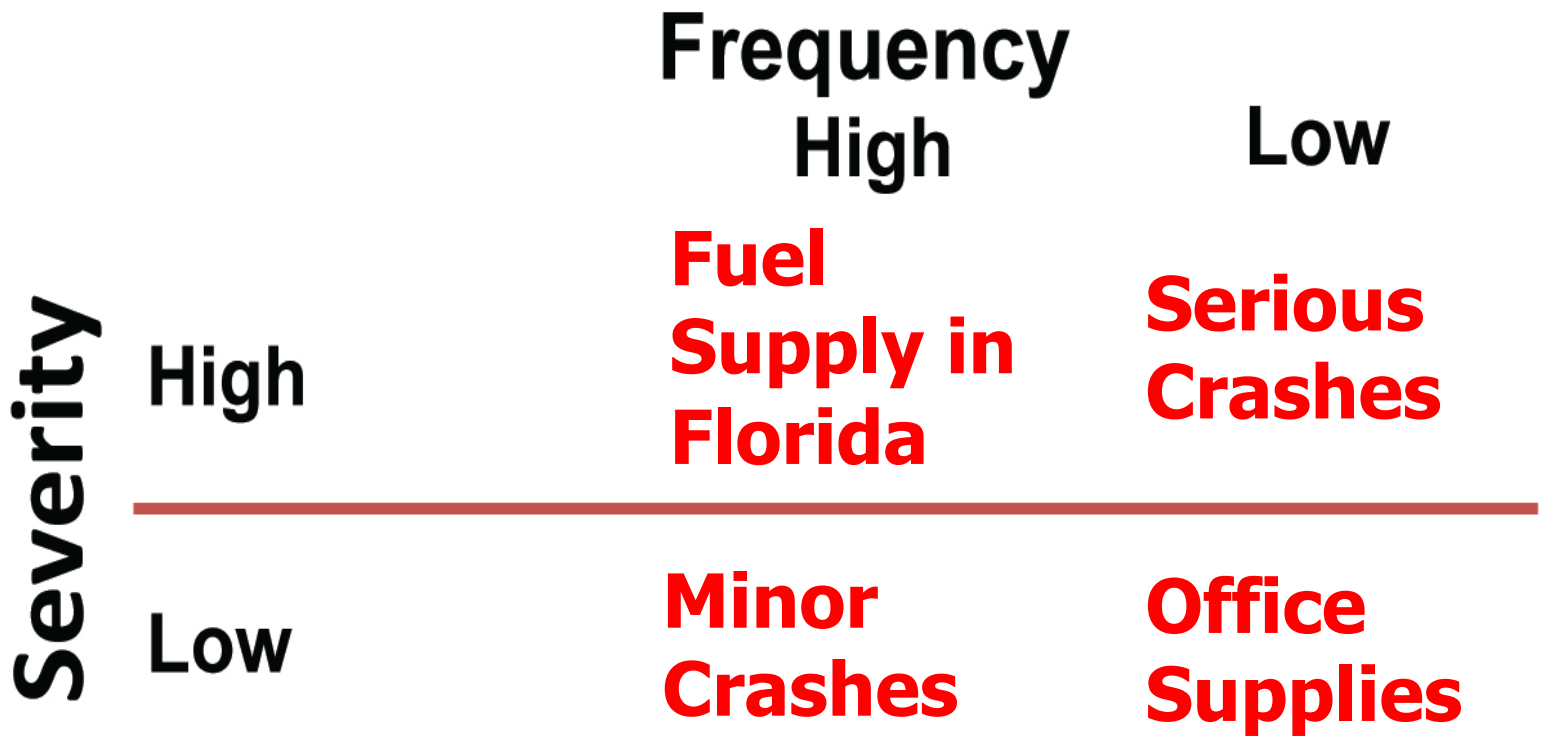
- Objectives of measurement
  - Allows prioritization
  - Removes duplication
  - Supports risk selection for action
  - Simplifies reporting

CONVERTS RISK STATEMENT INTO DECISION-MAKING INFORMATION

Risk Management Grid



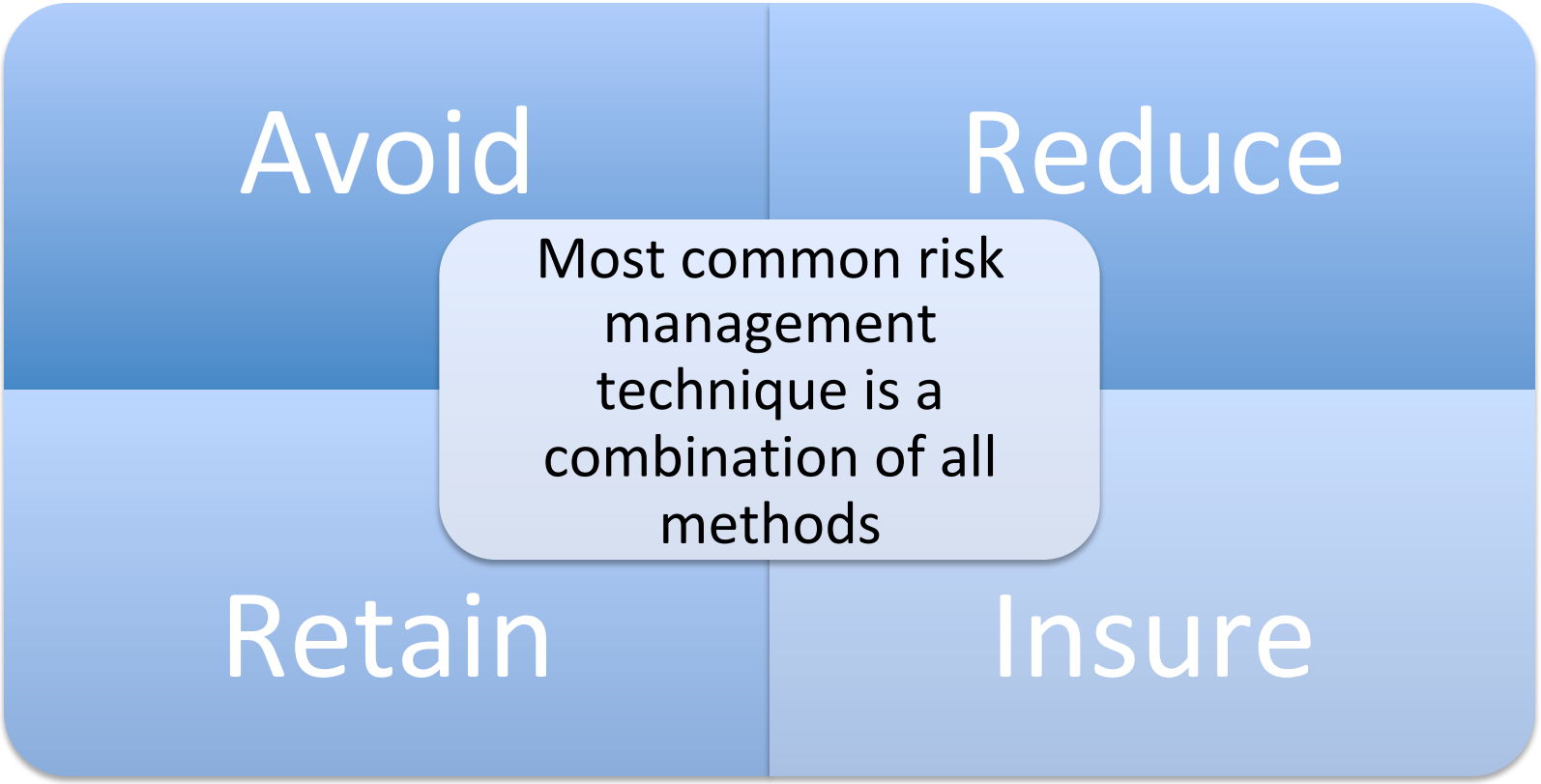
Risk Management Grid



Steps Four and Five

Examine and Choose

Risk Management



NAFA®
Fleet Management Association

Avoid

Retain

NAFA®
Fleet Management Association

Transfer or Share

Reduce

NAFA®
Fleet Management Association

Step Six – Plan and Implement

Step 7 – Communicate Results

- Risk management often goes unnoticed. In particular, it is difficult to broadcast the success of loss prevention programs as the initial investment is easy to see but it may be difficult or impossible to show the results. It is critical that every attempt is made to measure and demonstrate the utility of risk management.

Step 8 – Monitor and Modify

- An additional reason for monitoring and modifying is that the process does not occur in a vacuum. It is a continual process where improvements should be implemented regularly.

Use Vehicle Equivalency Units to determine optimal maintenance staffing.

MAINTENANCE STAFFING AUDIT

Information Required

- Fleet inventory (by class code)
- Work orders with hours and costs (3 years)
- Mechanic schedules, shifts, vacation

Technician Staffing

VEU

Vehicle Equivalency Analysis

- Method to breakdown a diverse fleet
- Allows for “Apples to Apples” comparisons
- Assumes 1.5 Repair Bays per Light-Duty Technician
- Assumes 2 Repair Bays per Heavy-Duty Technician
- Similar technique – Maintenance Repair Unit (MRU)

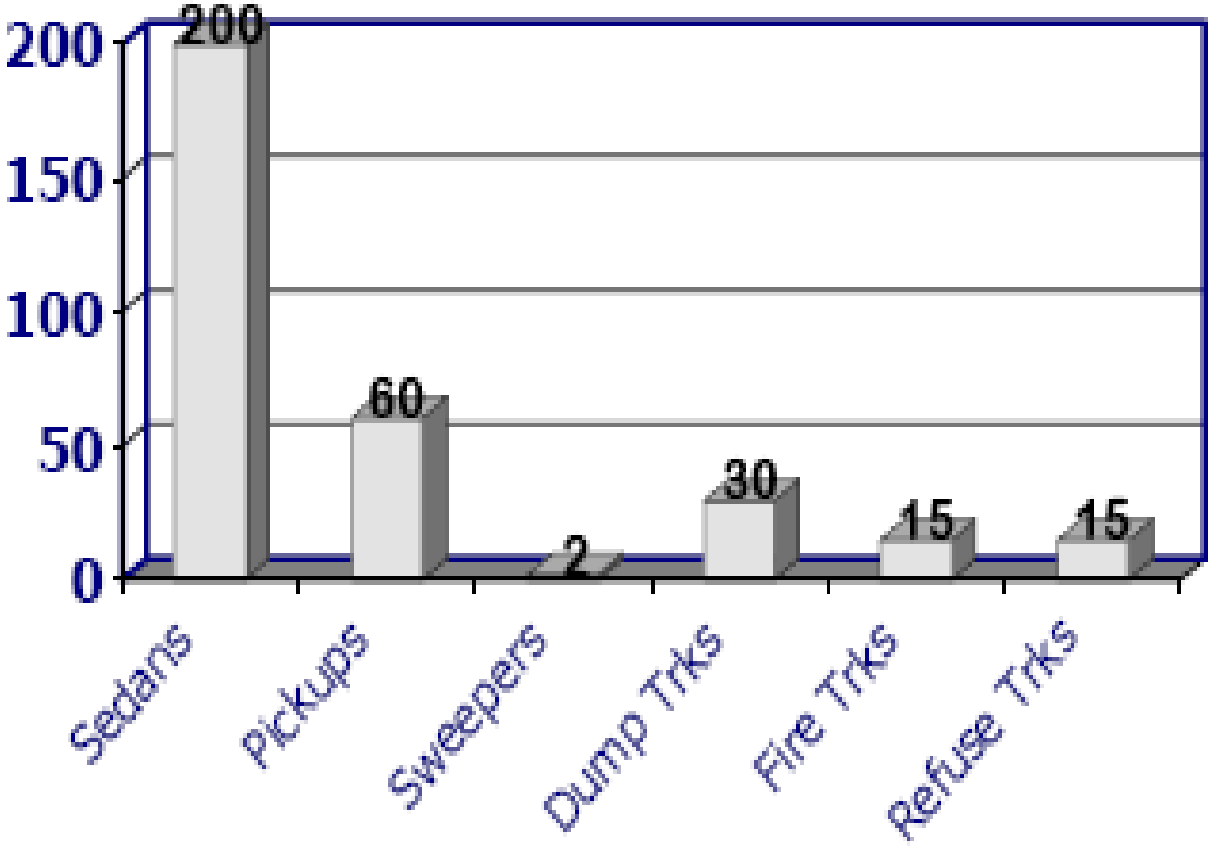
NAFA®
Fleet Management Association

VEUs

Maintenance Staffing - Steps

1. Place vehicles in classifications and count them.
2. Count maintenance hours expended by vehicle classification for a given period of time.
3. Normalize the fleet by setting a base vehicle classification and ranking all others relative to it based on maintenance hours expended.
4. Calculate vehicle equivalents using total vehicles in a class and the maintenance repair factor determined earlier.
5. Estimate necessary staffing levels.

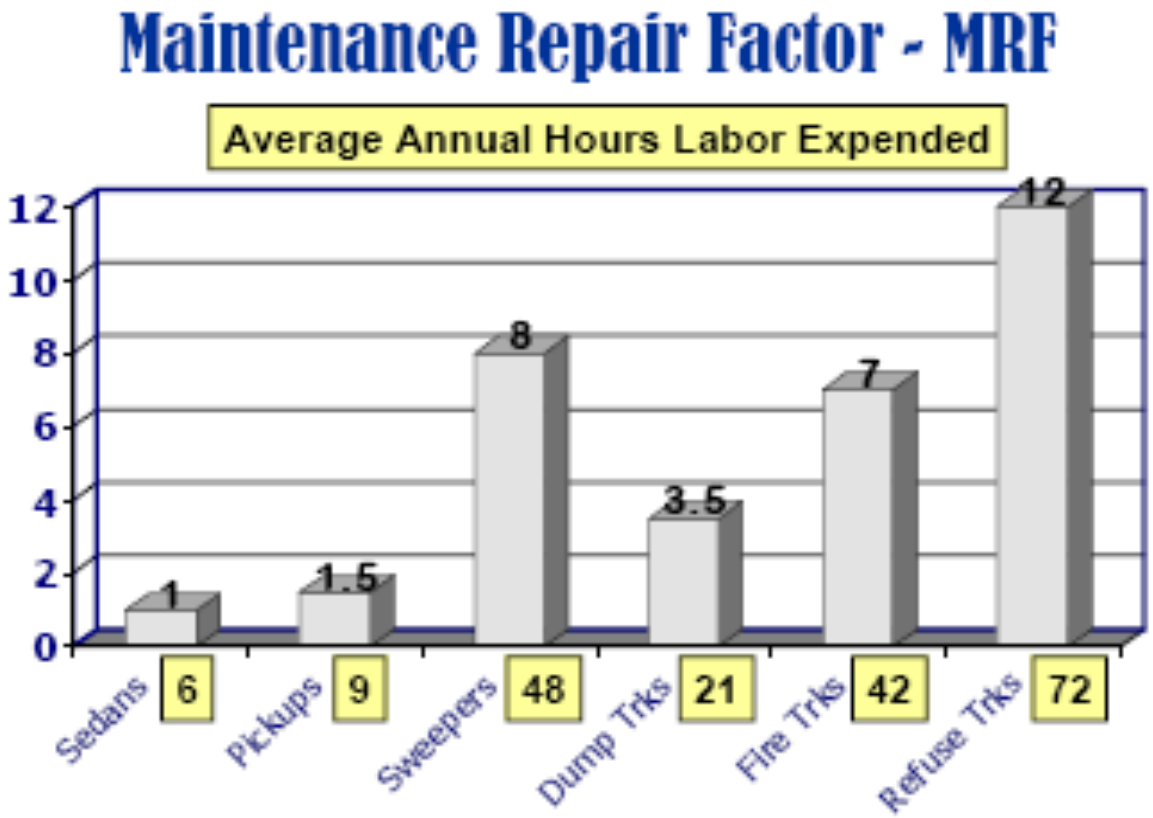
Step 1 – Put vehicles in classifications and count them



Step 2 – Count annual maintenance hours expended per vehicle class

Vehicle Class	Annual maintenance hours
Sedan	6
Pickup	9
Sweeper	48
Dump	21
Fire Truck	42
Refuse Truck	72

Step 3 – Normalize the fleet by setting a base classification and calculating MRFs for other classes

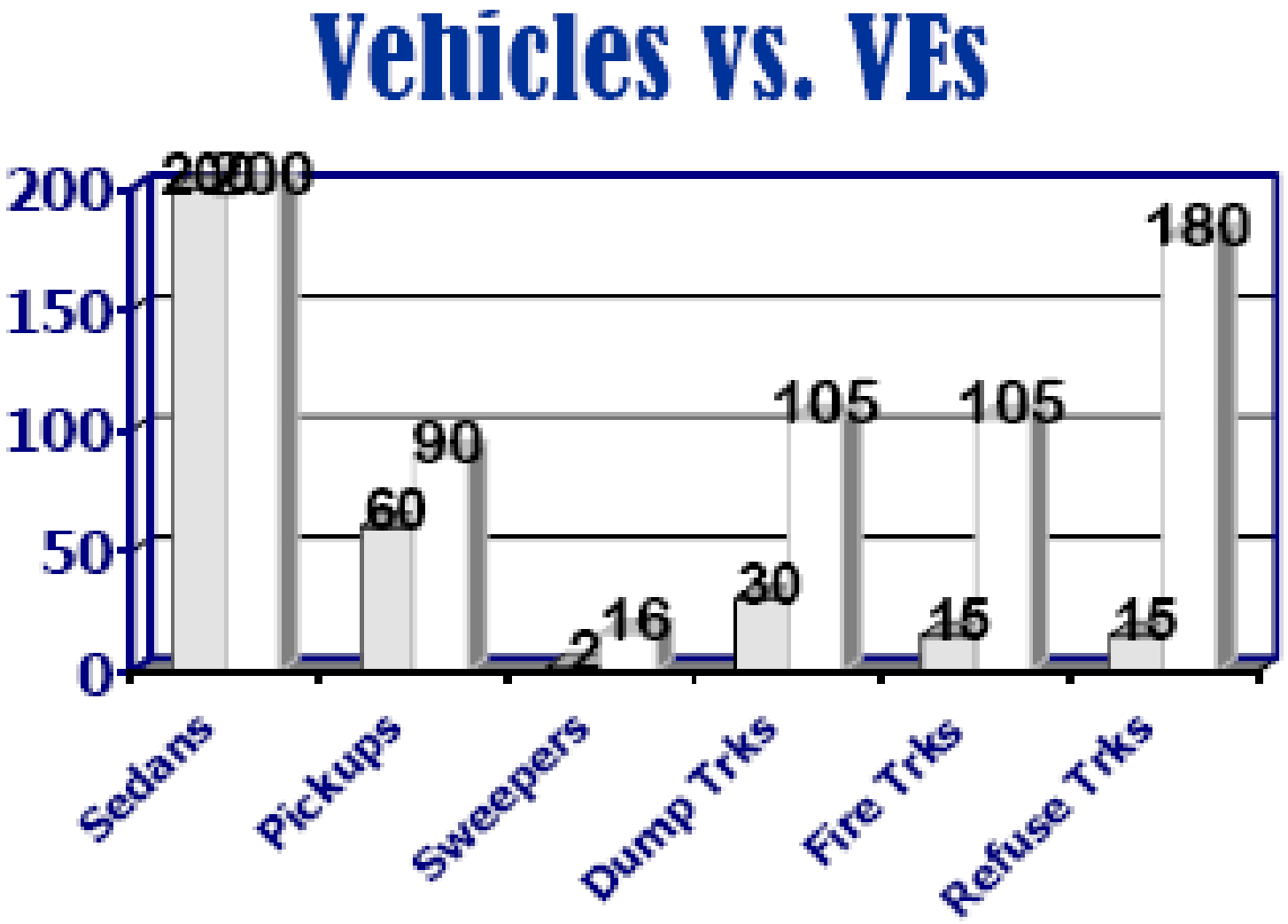


Example:
If we use sedans as the base class, all other classes will be reported as a factor of the annual hours spent to maintain a sedan.
1 sedan requires 6 hrs/yr.
1 pickup requires 9 hours per year.
MRF = 9/6 = 1.5

Step 4 – Calculate vehicle equivalents by multiplying the total vehicles in a class by the MRF

Classification	Numbers in class	Annual Maint. Hrs	MRF	VEU (# vehicles in class x MRF)
Sedan	200	6	6/6 = 1	200 x 1 = 200
Pickup	60	9	9/6 = 1.5	60 x 1.5 = 90
Sweeper	2	48	48/6 = 8	2 x 8 = 16
Dump	30	21	21/6 = 3.5	30 x 3.5 =105
Fire Truck	15	42	42/6 = 7	15 x 7 = 105
Refuse Truck	15	72	72/6 = 12	15 x 12 = 180
			Total VEU	696

Maintenance Staffing



Step 5 – Determine necessary staffing levels

Technician Availability

Paid Hours	2,080
Vacations	(120)
Holidays	(80)
Sick	(80)
Breaks	(95)
Training & meetings	(40)
Awaiting parts	(200)
Other	(50)
Potential Hours	1,415

Maintenance Staffing

Fleet Summary

- 322 Vehicles
- 696 Vehicle Equivalents (VE)

Manpower Summary

- 6 Hours Expended Per (VE)
- 4,176 Man Hours Needed
- 3 Technicians

Facility Summary

- 5 Bays (1 x 1.5 Light Tech & 2 x 2 Heavy Tech

Considerations

- What is the level of outsourcing?
- What are the service level expectations?
- How old is the fleet?
- How many miles does the fleet travel?
- Is the operating environment harsh or benign?
- How productive are mechanics?
- How efficient are mechanics?

Calculate the VEUs of the fleet described

EXAMPLE

Fleet profile

Class	Number of vehicles	Annual maint. hours
Sedan	400	3,200
Police cruiser	50	1,000
Ambulance	30	720
Gators	40	160
HD SUVs	100	2,400

What are the total VEUs and recommended staffing levels for this fleet?

Step 1 – Put vehicle in classifications and count them
Step 2 – Count annual maintenance hours by vehicle class

Class	Number of vehicles	Annual maint hours
Sedan	400	3,200
Police cruiser	50	1,000
Ambulance	30	720
Gators	40	160
HD SUVs	100	2,400

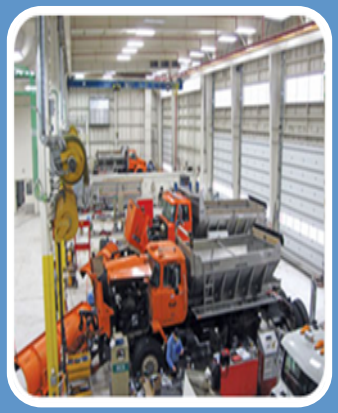
Step 3 - Normalize the fleet by setting a base classification and calculating MRFs for other classes

Class	Number of vehicles	Annual maint hours	Maint hours per vehicle	MRF
Sedan	400	3,200	8	1
Police cruiser	50	1,000	20	2.5
Ambulance	30	720	24	3
Gators	40	160	4	.5
HD SUVs	100	3,200	32	4

Step 4 – Calculate vehicle equivalents by multiplying the total vehicles in a class by the MRF

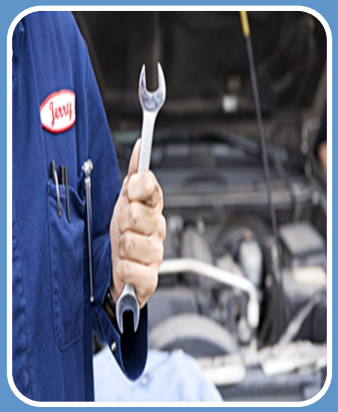
Class	Number of vehicles	MRF	VEU
Sedan	400	1	400
Police cruiser	50	2.5	125
Ambulance	30	3	90
Gators	40	.5	20
HD SUVs	100	4	400
		Total VEU	1,035

Step 5 – Estimate staffing required



Fleet Summary

- 620 Vehicles
- 1035 Vehicle Equivalents (VE)



Manpower Summary

- 8 Hours Expended Per (VE)
- 8,280 Man Hours Needed
- 8,280/1415 = 5.8 technicians
- Hire 5 and outsource

Take Aways

- Need for a process tailored to a specific functional area
- Fuel, maintenance, risk, acquisition, remarketing, etc all require expert knowledge
- Comprehensive fleet audits are complex but a good way to identify areas for further study

Questions? kvigneau@nafa.org

NAFA®
Fleet Management Association

www.nafa.org