

Moving Away From the Penalty-Driven Culture: A Maintenance & Ground Operations Perspective

Jerry Allen-Managing Director
Baines Simmons Americas

61st International Air Safety
Seminar (IASS) 2008
Honolulu, HI

Session Structure

- Culture terminology
- Backdrop of criminalization of accidents
- Managers dilemma
- Safety Culture Survey Introduction
- Maintenance & Ramp Operations data review
- Observations
- An evolving Just Culture model
- Closing comments

Some “culture terminology”

- Just Culture
- No-Blame Culture
- Blame-Free Culture
- Blameworthy
- Non-Punitive Reporting Culture

Just Culture

A DEFINITION:

An atmosphere of trust in which people are encouraged and even rewarded for providing safety-essential information, even if it is self-incriminating, [so that hazards and risks may be more clearly understood] but in which all parties clearly understand which types of behaviours are acceptable and unacceptable... and persons reporting need not fear reprisal

Source: Flight Safety Foundation, Jan 2007

No-Blame Culture

A DEFINITION:

A culture where there is minimal accountability for actions related to aircraft safety or compliance incidents

Blame-free Culture

A DEFINITION:

An culture where no one is held accountable for their actions as related to aircraft safety or compliance incidents

Non-Punitive Reporting Culture

A DEFINITION:

A culture where no one is punitively disciplined for reporting an incident or concern related to aircraft safety or compliance incidents

Blameworthy

A DEFINITION:

The condition where an individual or organization has disregarded published rules, guidelines or procedures to the point of being deserving of blame for the outcomes resulting from their actions, attitudes or behaviours

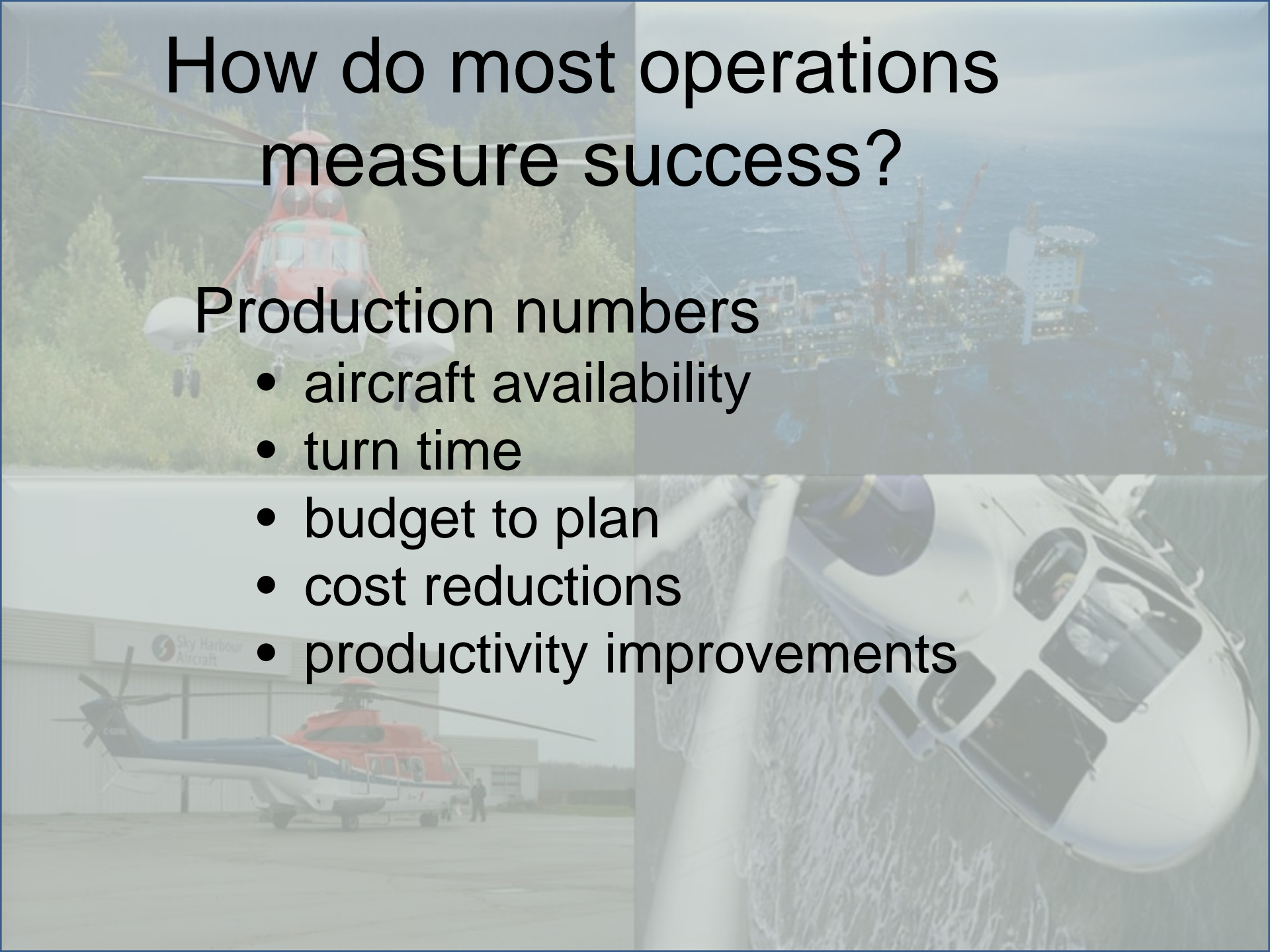
“What does it all mean?”

That depends on who you ask!

How do most operations measure success?

Production numbers

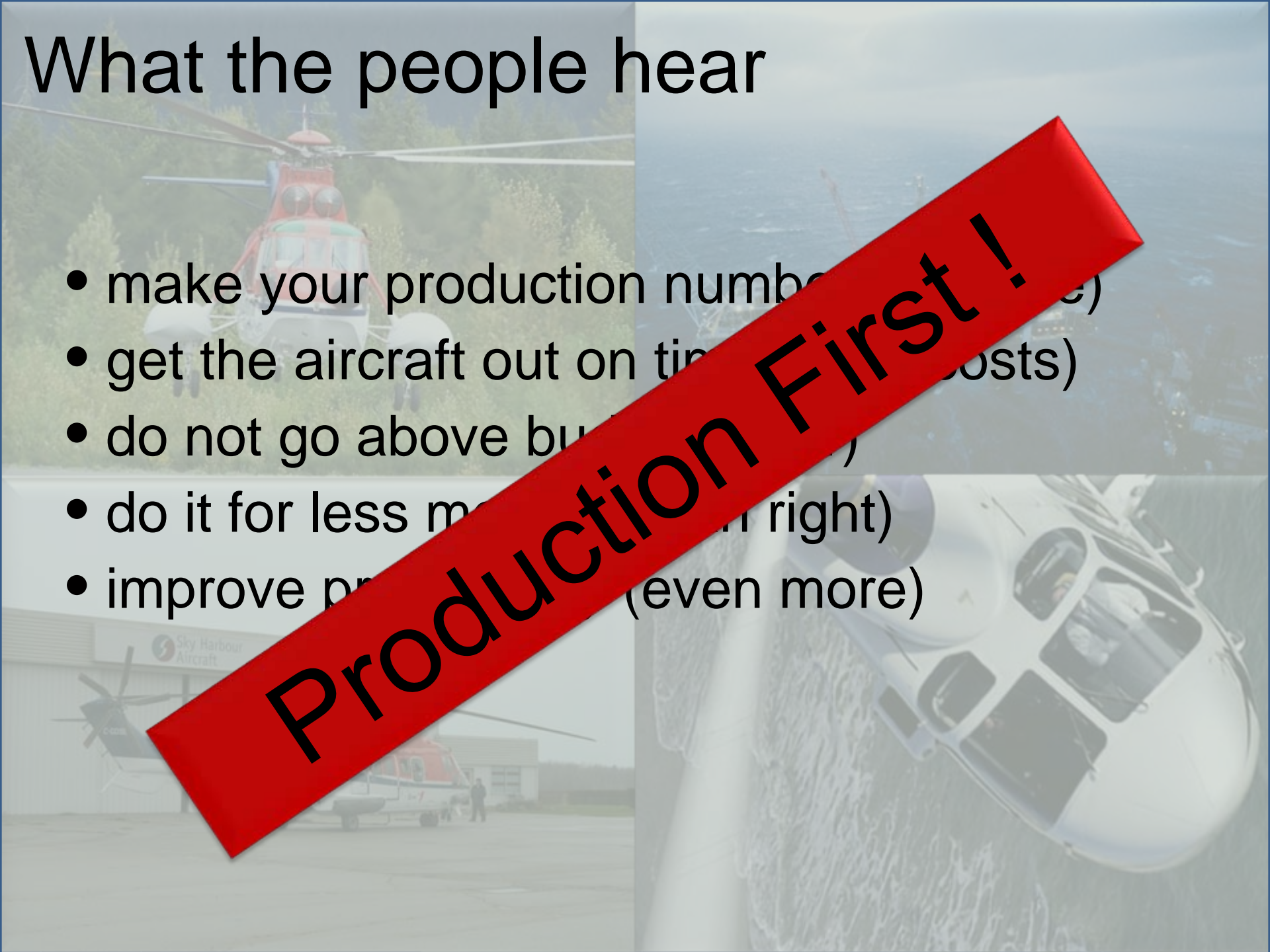
- aircraft availability
- turn time
- budget to plan
- cost reductions
- productivity improvements



What the people hear

- make your production numbers (e)
- get the aircraft out on time (costs)
- do not go above budget ()
- do it for less money (right)
- improve production (even more)

Production First!



The backdrop: criminalization of accidents

“We are very concerned about increasing attempts by prosecutors to turn accidents into crime scenes and to prosecute aviation professionals based on tragic mistakes, often using information and data that are provided voluntarily to improve aviation safety. The safety of the traveling public depends on encouraging a climate of openness and cooperation following accidents. Overzealous prosecutions threaten to dry up vital sources of information and jeopardize safety.”

FSF President and CEO William Voss
February, 2008

“Ripped from the headlines”

The FAA is seeking a record \$10.2 million civil penalty from Southwest ...

MSNBC Mar 12, 2008

American fined \$7 million for safety problems...

MSNBC Aug 14, 2008

The pilots of a 737 that crashed in Indonesia in March, killing 21 people, should be prosecuted.

ABC World Interview Oct 23, 2007

“Criminal Charges Against Continental in Deadly Concorde Crash”

New York Times July 04, 2008

PARIS — A prosecutor said Thursday that Continental Airlines and two of its employees had been ordered to stand trial on involuntary manslaughter charges related to the crash of a Concorde supersonic airliner in 2000 near Paris in which 113 people died.

In addition to Continental, the prosecutor also filed involuntary manslaughter charges against two employees of the Concorde program and an employee of the French civil aviation authority.

Comair Flight 5181

U.S. Magistrate Judge James B. Todd ruled in 2008 that Comair must give lawyers access to the carrier's ASAP data.

Aviation Week June 02, 2008

U.S. District Judge [redacted], who is handling several lawsuits stemming from the August 2006 crash of Comair flight 5181 that killed 49 people, ruled Tuesday that the [redacted] reports can be admitted into evidence.

Kentucky June 02, 2008

THE PENDULUM IS SWINGING!

“Are we really learning
anything?”

That depends on who you ask!

“Are companies any different
than NAA’s?”

The “Managers Dilemma”

How do I get the true picture of risk in my organization and maintain balance and accountability?

Event reporting is our ‘Holy Grail’
No measure we put in place should
put pressure on to reduce or
discourage it

Andrew Rose-British Airways

The “Managers Dilemma”-Contd.

Is my risk worse than yours?

Does my company really want to know?

Do they know what the information might do to the operation?

Can we really handle it?

We Ask Senior Leaders...

Do you really know what goes on in your organization?

“Yes, at least I think I do. We have safety and quality people looking after that stuff.”

“I’m not really sure if I do or not. I know that we have a good safety program, and that we track and report incidents.”

“I’m shocked and I’m depressed.”

Source: Senior Officer upon learning the actual results of the Maintenance Operations Safety Culture Survey in his operation

A Maintenance and Ground Operations Perspective

“Management only cares about safety when something bad happens. The rest of the time all we hear about is on-time departures and cutting costs.” - anonymous Aircraft Maintenance Technician

“If they really cared about my safety, they wouldn't give us this crappy equipment to work with. Then, when something happens all they want to do is find someone to blame.”
- anonymous Ramp Agent

Safety Culture Surveys (one way to look at risk)

Benefits:

- A candid look inside your operation
 - Identify cultural “norms”
 - Identify possible at-risk behaviours
 - Surface safety-related employee perceptions/concerns
 - Identify potential hazards and other “issues” in the operation
- Establishes baseline metric for safety programs

Safety Culture Surveys

Potential Risks:

- “Over surveying” your people (multiple surveys)
- Employees become “jaded” (just another survey)
- Management does nothing with the data
- Employees feel “threatened” by questions
- Management feel “threatened” by survey results
- Poor survey responses (limited employee support)

General SCS description

“Snapshot” of the survey process :

- Consisted of 62 to 92 questions (depending on the sector)
- Conducted in focus groups
- Conducted on-site during “normal” shift hours
- Sessions took approximately 40 minutes to complete

General SCS description

Data Capture Methodology:

- Used an audience response system to gather data on site in operations
 - Participants remained anonymous in their responses
 - Helped insure candid, honest feedback

General SCS description

Survey Methodology:

Questions grouped into seven categories

- Management Communications and Support
- Organizational Communications and Support
- Organizational Policies and Procedures
- Organizational Resources
- Safety Motivation
- Fatigue Management
- Error Management

Categories are the same for both Maintenance and Ramp

General SCS description

Survey Scoring:

A numeric value ranging from one to five was assigned to each answer.

- Provides an easy way to compare responses between different workgroups or locations**
- Provides a baseline metric to compare against future safety culture survey scores**

Due to limited time or resources, there are times when I have signed off for work that was not accomplished

	Number of People	Assigned Value	Product of People x Value
Strongly Agree	9	x 1	= 9
Agree	35	x 2	= 70
Don't Know	31	x 3	= 93
Disagree	88	x 4	= 352
Strongly Disagree	88	x 5	= 440
	<hr/> 251		<hr/> 964

$$964 \div 251$$

**3.84
Score**

General SCS description

Survey Scoring Legend

- = Lowest Score
- = Second Lowest Score
- = Highest Score

	Atlanta	Boston	Cleveland	Denver	El Paso	Fargo	Great Falls	Hartford	Indianapolis	Jacksonville	Average Score
Management Communication and Support	2.97 2.83	3.04 3.21	3.25	3.71	3.22	3.67	3.14	3.09	3.21		
Organizational Communication and Support	2.73 2.61	2.60 2.85	2.95	3.28	3.09	3.12	2.59	2.91	2.71		
Organizational Policies and Procedures	2.76 2.46	3.05 2.85	3.08	3.20	3.21	3.27	2.76	3.08	2.81		
Organizational Resources	2.66 2.50	2.79 2.76	2.74	2.81	2.80	3.10	2.64	2.82	2.69		
Safety Motivation	3.25 3.04	3.32 3.32	3.27	3.66	3.19	3.65	3.23	3.24	3.36		
Fatigue Management	2.89 2.60	2.74 2.80	2.61	2.78	2.74	3.05	2.86	3.01	2.66		
Error Management	3.47 3.33	3.19 3.40	3.17	3.69	3.23	3.62	3.42	3.41	3.40		
Total Scores	2.86 2.77	2.96 3.04	3.01	3.30	3.08	3.35	2.96	3.08	2.99		
Percentage of Eligible Population Surveyed	32% 69%	24% 29%	17%	50%	34%	39%	16%	24%	24%		

Maintenance Operations Safety Culture Survey (MOSCS) Demographics

Who Was Surveyed?

Aviation Maintenance Organizations:

- Workforce of approximately 4010 AMT's
- Approximately 1300 AMT's surveyed
- Worked for 7 different companies
- Surveys conducted at 21 different locations
- Included both unionized and non-union organizations

Data Sample of Maintenance
Operations Safety Culture Survey
(MOSCS)

Due to limited time or resources, there are times when I have signed off for work that was not accomplished

Strongly Agree	3%
Agree	14%
Don't Know	10%
Disagree	41%
Strongly Disagree	32%

17% of the AMT's admit to signing off for work that was not accomplished; 10% may not be willing to admit it

There have been times when my immediate supervisor has instructed me to sign off on work that has not been accomplished

Strongly Agree	7%
Agree	21%
Don't Know	7%
Disagree	41%
Strongly Disagree	24%

28% of the AMT's state that their manager has instructed them to sign off for work that was not accomplished; 7% may not be willing to admit it

I experience some pressure to do things differently than to the procedures

Strongly Agree	8%
Agree	47%
Don't Know	10%
Disagree	33%
Strongly Disagree	2%

55% of the AMT's say that they experience pressure to do things differently than to the procedures.

I pride myself on getting an aircraft back to service on time, even if I occasionally compromise on small details

Strongly Agree	7%
Agree	37%
Don't Know	9%
Disagree	40%
Strongly Disagree	7%

44% of the AMT's take pride in getting the aircraft back to service, even if it means compromising on small details.

During the last month I have made an error in my work due to tiredness

Strongly Agree	5%
Agree	24%
Don't Know	12%
Disagree	45%
Strongly Disagree	14%

29% of the AMT's admit to making an error due to tiredness in the past month.

And that's just the errors that were caught!

Management investigate incidents to understand weakness in safety procedures, not to discipline the person

Strongly Agree	3%
Agree	37%
Don't Know	23%
Disagree	26%
Strongly Disagree	11%

37% of the AMT's believe that management investigate incidents to find someone to blame; another 23% aren't sure

We often have to rush jobs due to unrealistic deadlines

Strongly Agree	46%
Agree	39%
Don't Know	6%
Disagree	7%
Strongly Disagree	1%

85% of the AMT's often have to rush jobs due to unrealistic deadlines.

Maintenance Summary

What did we Learn?

- The results were very similar across all companies and locations
- The categories that consistently scored the lowest were:
 - Organizational Resources
 - Fatigue Management
 - Organizational Communication and Support
 - Organizational Policies and Procedures

Maintenance Summary

Observations

- Risk is “mutually facilitated” by front-line and management personnel
- The “can-do” mentality is alive and well
- Deficient communication and unclear policies and procedures could be adding significant risk to the organizations surveyed
- The trust factor (re ‘Just Culture’) needs work
- Fatigue management is a growing concern

Ramp Operations Safety Culture Survey (ROSCS)

Who Was Surveyed?

Aircraft Ground Handling Organizations (including Airlines, Corporate and Private Charter Operations)

- Total workforce of ~ 2300 Personnel
- Approximately 400 people surveyed
- Worked for 2 different companies
- Surveys conducted at 3 different locations
- Both companies unionized

Data Sample of Ramp
Operations Safety Culture Survey
(ROSCS)

We have a good system for reporting problems with operational procedures and documentation

Strongly Agree	3%
Agree	12%
Don't Know	9%
Disagree	40%
Strongly Disagree	36%

76% of the Ramp personnel surveyed feel that system they use for reporting problems with procedures and documentation is inadequate

We usually manage to complete a job despite the non-availability of the specified equipment or staff

Strongly Agree	32%
Agree	50%
Don't Know	5%
Disagree	9%
Strongly Disagree	4%

82% of the Ramp personnel surveyed admit to completing jobs without the specified equipment or staffing

There are times when my immediate supervisor instructs me to dispatch aircraft that have not been properly serviced

Strongly Agree	12%
Agree	32%
Don't Know	32%
Disagree	19%
Strongly Disagree	5%

44% of the Ramp personnel surveyed say that their supervisor instructs them to dispatch aircraft that have not been properly serviced; 32% are not sure

If I damaged an aircraft which I didn't think would impact on aircraft safety I would speak up and advise my supervisor

Strongly Agree	44%
Agree	32%
Don't Know	11%
Disagree	5%
Strongly Disagree	8%

13% of the Ramp personnel surveyed admit that they would not tell their supervisor if they damaged an aircraft; 11% are not sure

If I witnessed aircraft damage which I didn't think would impact on aircraft safety I would speak up and advise my supervisor

Strongly Agree	39%
Agree	39%
Don't Know	13%
Disagree	6%
Strongly Disagree	3%

9% of the Ramp personnel surveyed say that would not tell their supervisor if they saw someone else damage an aircraft; 13% are not sure

If I made an error which I didn't think would impact on aircraft safety I would speak up and advise my supervisor

Strongly Agree	33%
Agree	44%
Don't Know	8%
Disagree	8%
Strongly Disagree	7%

15% of the Ramp personnel surveyed admit that they would not tell their supervisor if they made an error in servicing an aircraft; 8% are not sure

I sometimes find it necessary to work more than one job in order to make enough money to pay my bills

Strongly Agree	60%
Agree	27%
Don't Know	4%
Disagree	8%
Strongly Disagree	1%

87% of the Ramp personnel surveyed find it necessary to work more than one job to pay their bills

Management encourage us to report our errors

Strongly Agree	12%
Agree	34%
Don't Know	15%
Disagree	29%
Strongly Disagree	10%

39% of the Ramp personnel surveyed do not feel that their manager wants to know about errors made in the operation

If I report an error, I am confident I would be treated in a fair manner

Strongly Agree	4%
Agree	10%
Don't Know	8%
Disagree	34%
Strongly Disagree	44%

78% of the Ramp personnel surveyed do not feel that they would be treated fairly if they reported an error

Ramp Summary

What did we Learn?

- The results were very similar across all companies and locations
- The categories that consistently scored the lowest were:
 - Organizational Resources
 - Fatigue Management
 - Organizational Communication and Support
 - Organizational Policies and Procedures

Ramp Summary

Observations

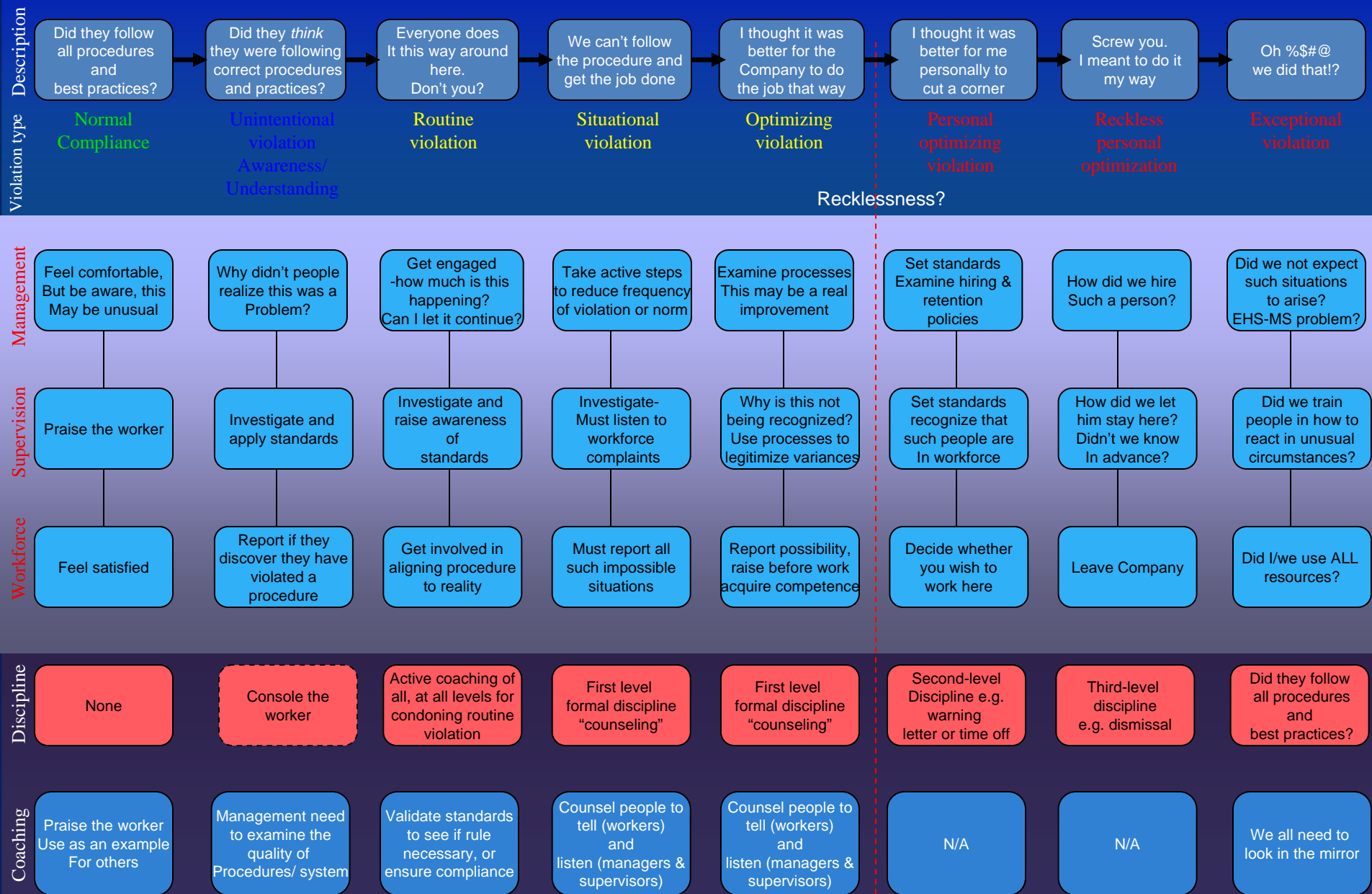
- The sector is “resource challenged” across the board e.g. time, people, equipment, etc.
- Risk is “mutually facilitated” by front-line and management personnel
- The “trust factor” especially for error/event reporting may be even lower than in the maintenance sector
- Fatigue management is a growing concern ref. the percentage of people engaged in outside-industry employment

An Evolving Just Culture Model

Should we replace our current approach with a different “Just Culture” model?

- Current models focus mostly on the person at the “sharp end” and do not take into account the role of the manager/supervisor in creating or condoning the environment which led to the action
- Current models focus on individual guilt unless proven otherwise and do not directly address mutual facilitation of risk
- Doesn't get us to the (truly) shared accountability environment where SMS can flourish

Just Culture – an evolving model



Recklessness?

Closing Comment

As we move into the brave new world of Safety Management Systems (SMS), the actions that an organization takes for or against its' people after an event occurs will continue to be the single biggest determiner of its' SMS success.

We must continue to move toward an environment of shared accountability, regardless of the backdrop of criminalization of accidents and incidents if we are to realize the safety gains envisioned through SMS