

The Vital Role of Ground Crew in a Successful SMS



Presented
For
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Presented By
Gordon Dupont





PRESENTATION OBJECTIVES



1. To provide you with an understanding of what a Safety Management System (SMS) is and why it is so important to you and your organization
2. To understand what will be required in order to ensure that Ground Crew will participate
3. To answer any questions re SMS that we can



Booklet



First... Just What is a Safety Management System or SMS?

A SMS is:

A formal, **systematic**, error
reduction, accident prevention
program, that manages the
Safety risks through **ALL**
aspects of the company

That includes Ground Crew

G. Dupont

WB



~~Don't Sweat the Small Stuff~~

and

you'll avoid having to sweat
it's all small stuff
the big stuff

Richard Carlson
Ph.D
Gordon Dupont



What is the Purpose of a SMS?

- To lower the aviation accident rate to **ALARP (As Low As Reasonably Practical)**
- To formalize the organizations various Safety initiatives
- To cause an organization to develop a **Safety Culture**

Safety Culture?

Safety First

Unless it costs money

Unless it costs money

Unless it costs money

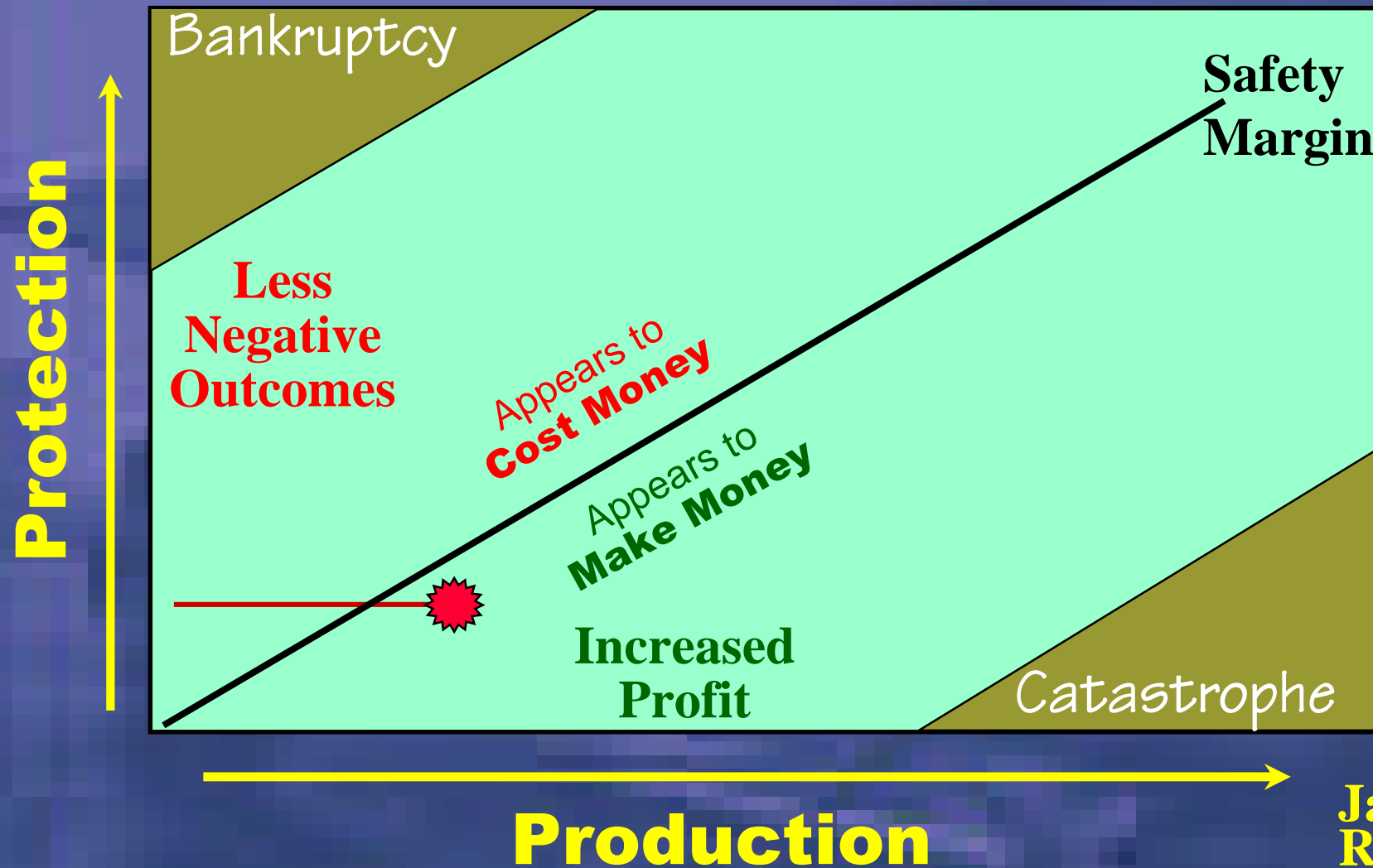
It costs money

Its so much more than a sign
that means little to anyone

The Safety Margin

- The Safety margin represents the line between Safety and Profit (Production)
- Increased profit does not have to come at the cost of Safety
- The Safety Margin is the balance between the two
- SMS serves to maintain the balance

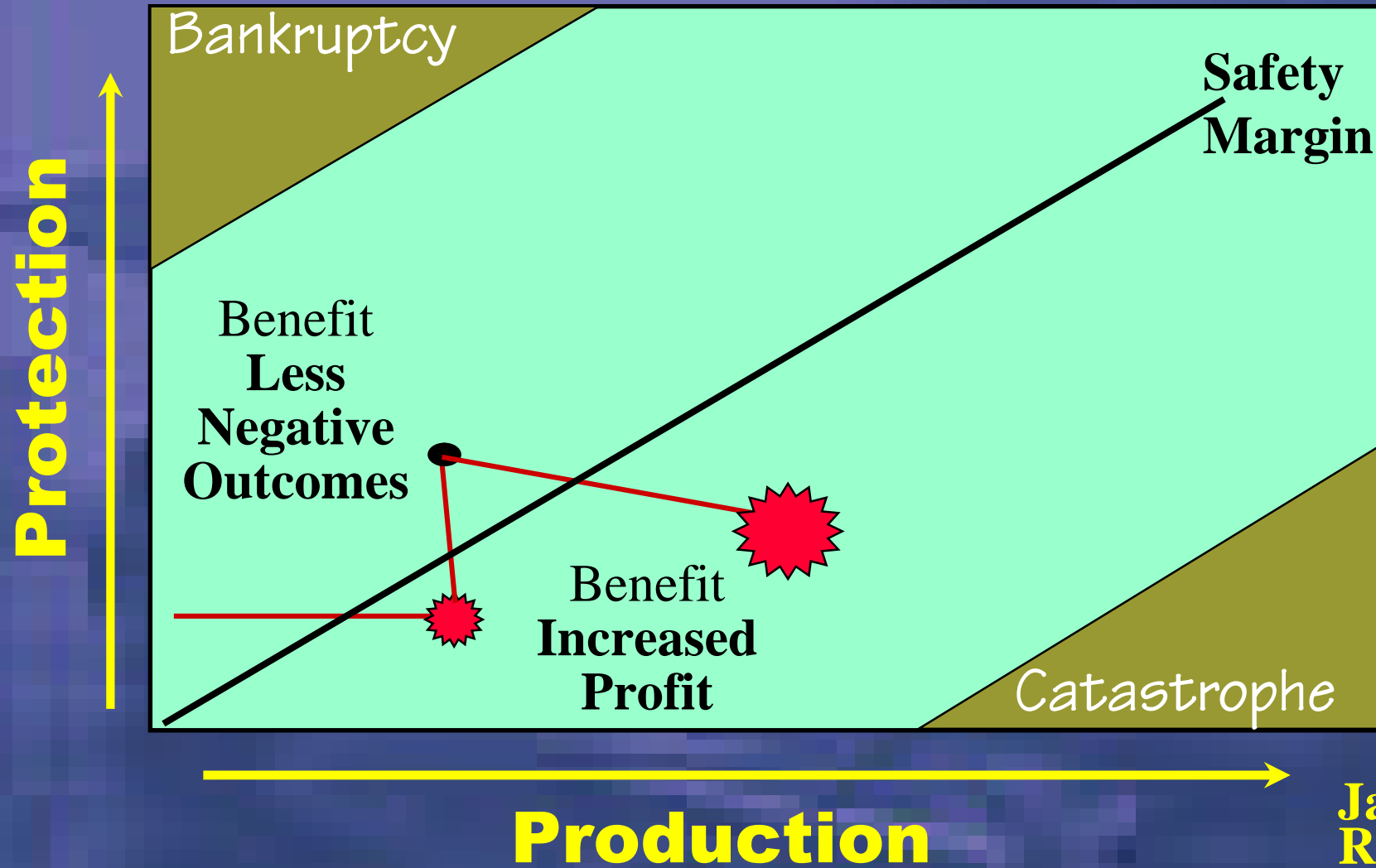
The Safety Margin



James Reason



The Safety Margin



James Reason

WB 12



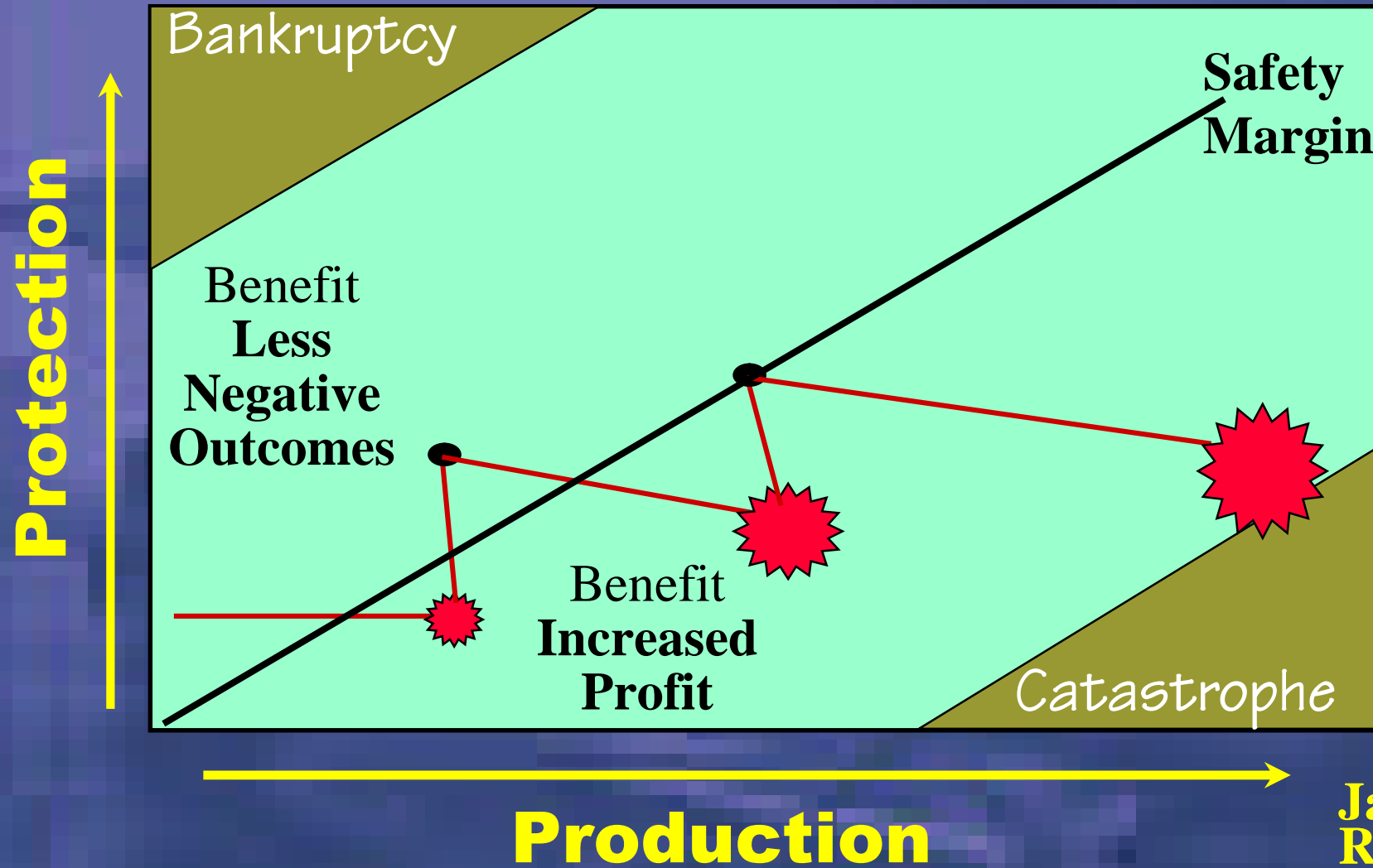
Direct & Indirect Costs

\$1,000,000.00



Not in WB

The Safety Margin



James Reason

WB 12



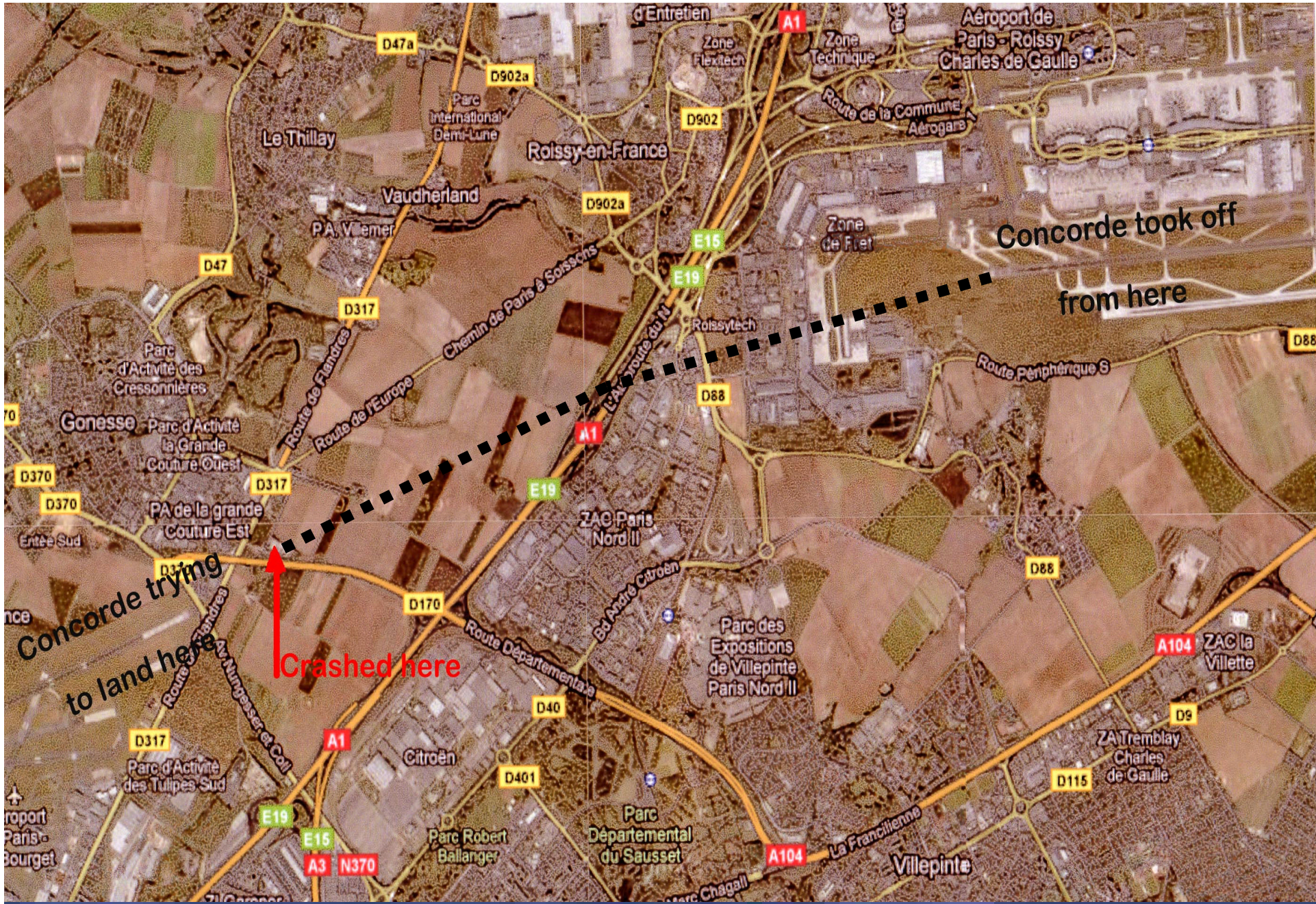
When the Safety Margin is Ignored

July 25, 2000 Air France Concorde

113 Fatalities



WB 13



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Imagine that final minute in the cockpit

- # 2 engine shut down with aircraft at max gross weight +
- #1 engine severely over-tempering and loosing power
- Landing gear won't retract
- Fire alarm, GPWS and other alarms all sounding
- Copilot calling ever decreasing airspeed.

BUT

You can see the Le Bourget runway only 3 km ahead

Safety is only 35 seconds away

Why?

“Mon Dieu. Qui s’est?”

113 Fatalities



Maintenance played a role in this tragedy

Wear strip off DC10 # 3 engine thrust reverser cowl door



- **Replaced twice in last two months**
- **Not installed per manufacturer's specs**
- **Not inspected per schedule**

Why?

113 Fatalities



WB 13

Could it have been prevented?

1. 58th case of a tire burst on take off
2. 13th time it had done structural damage
3. 7th time it had punctured the wing
 - a) Max previous leak was 4 liters per minute
 - b) This leak 25 liters per sec.
4. Tire had done 37 landings. Normally changed at 25 landings
5. 2,650 lbs too much fuel
6. 13,277 lbs over gross (3%)
7. C of G just aft of the maximum aft limit

If You Sweat the Small **Hazards**

You Will Avoid Having to Sweat
the **Accidents**

This is what SMS is all about

The Small Stuff has the potential
to become the **Big Stuff**

Gordon Dupont

An accident is the logical conclusion to many incidents (the small stuff)

The Heinrich Ratio.

Fatal
Accident

The Big Stuff
1

Accidents

10

Reportable
Incidents

100-1000+

Incidents

600

The Small Stuff

WCB Stats

89-98

1

Fatal Injury

29

Injuries

1,500

Near-Misses

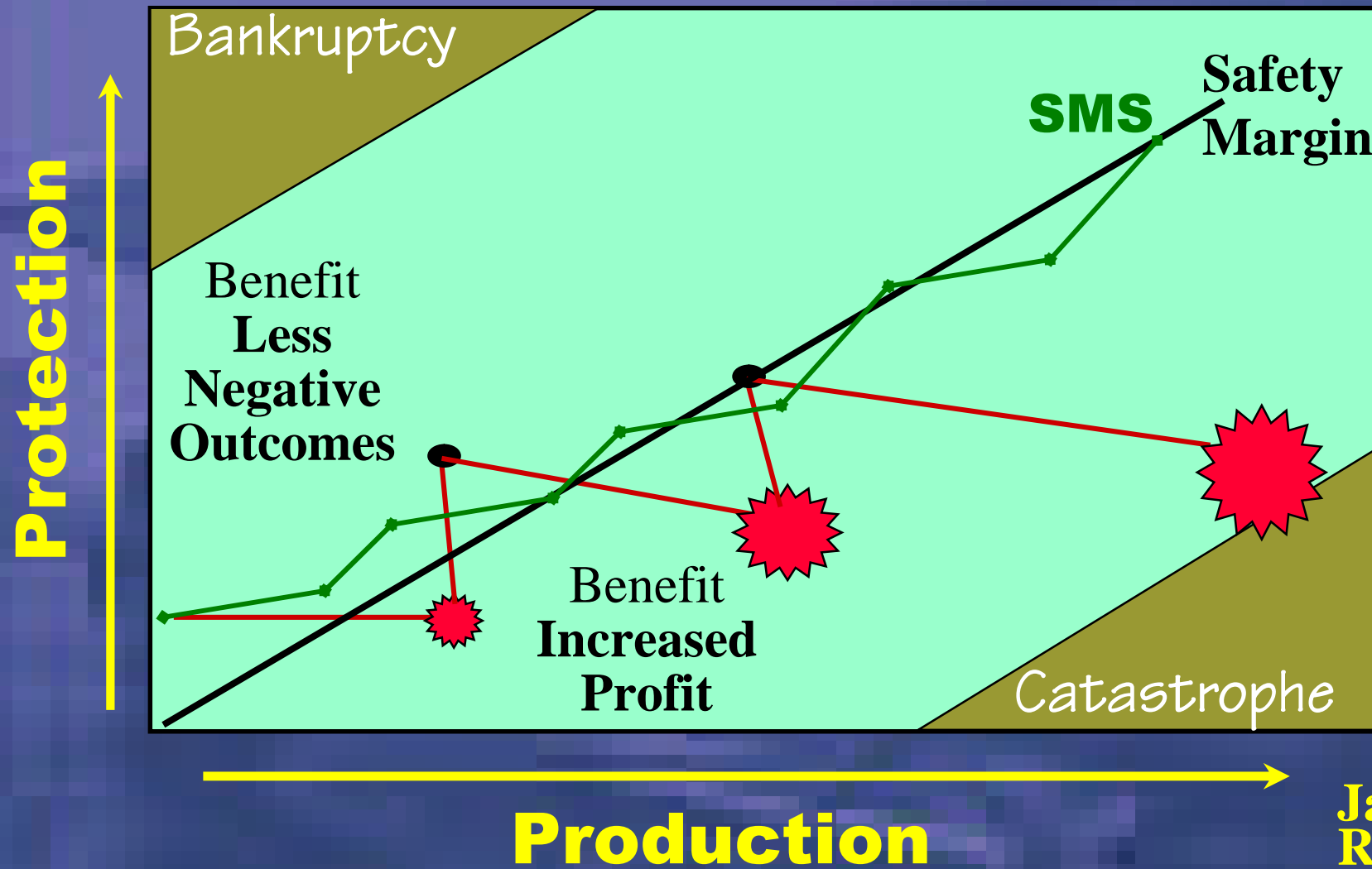
20,000

Unsafe Actions

WB 15



The Safety Margin



James Reason

WB 12



Five Stages to a Safety Culture

1. The Acknowledgement Stage – **Ok, many we do have a bit of a problem**
2. The Rule Stage – **Follow all these rules and we'll have no problem**
3. The Observation Stage – **Everyone watch everyone to make sure all the rules are followed**
4. The Consolation Stage – **Ok, everyone, how do we cut down on our errors?**
5. The Safety Culture Stage – **Everyone believes that Safety is an integral part of everything we all do *and acts accordingly***

**The Good news is You
already have some form of
Safety Culture**

Or you wouldn't be here

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Why is a Safety Culture so important now?

The probability of being killed in an aircraft accident varies from

1 in 260,000

To

1 in 11,000,000

A difference of 42 times better **Why?**

A Safety Culture makes the difference

Human Error

Is responsible for 80%+ of aviation accidents

Is inevitable Its still gonna happen

Is predictable An SMS will enable this to happen

Is measurable Easy when you keep track of errors

Is understandable Just train in Human Factors

Is manageable Now that can help
prevent accidents

But how do we get this vital information?

The Six Elements of a Safety Culture

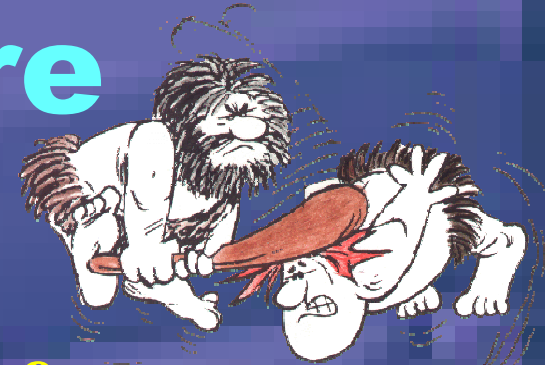
JUST culture

WB

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A Just Culture



Screw up and
you're history

- A Just Culture is the foundation of any Safety Culture
- Where “Honest & At-Risk” mistakes do not result in discipline
- Where an Administrative policy spells out “Reckless Behaviour”
- Where persons can admit to an error without fear of punishment

The Big Picture – A Safety Management System



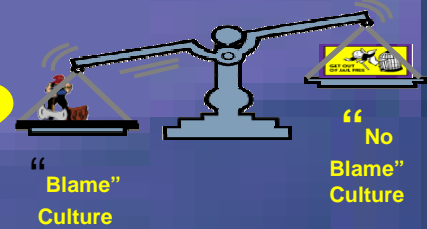
A Dupont Model
1995

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What is an Administrative Policy?

- It is a policy that informs the employees that all errors will be treated as learning outcomes including rare cases of reckless behaviour
- This policy will embody the “**just culture**” that it is based on
- This policy will replace any discipline policy the company may have
- This policy will ensure that all employees know “where the line is in the sand” regarding discipline

What is a Just Culture?



- A Just Culture is where everyone feels that the “guilty party” was treated fairly and justly after they made a human error
- It is not a “Blame” culture and
- It is not a “Blame Free” culture
- It is a must if SMS is to succeed

SAFETY culture

TRUSTING culture (G. Dupont)

JUST culture



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Trusting Culture

- **REQUIRES TRUST**

- After or with the **JUST culture** must come the **HIGH TRUST** culture

- **TRUST** is hard to earn and easy to lose

- It will take time

- Mistakes may be made as, for some it will require a paradigm shift

- It must be there in order to advance toward a true **Safety Culture**

“What do you mean - You accidentally put a student in the aircraft?”



SAFETY culture

REPORTING culture

TRUSTING culture (G. Dupont)

JUST culture



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Reporting Culture



provides the means to capture the lessons to be learned arising from human errors, near misses or free lessons

You can't fix what you don't know

A Reporting Culture will Fail If the participants:

1. Don't trust the system –

Do the managers “walk the talk?”

**2. Believe they will be unfairly
disciplined as a consequence –**

Will I be held to ridicule or worse?

**3. Feel that their concerns are unlikely
to be acted upon –**

Nothing happens after I report a problem (Hazard)

For a Reporting Culture to Work

- The Just and Trust culture must be functioning
- A system must be in place to allow “easy reporting”
- Everyone must be trained on the importance and how to use
- Some system of feedback must be in place
- And – Something must be done with the reports

SAFETY culture

LEARNING culture

REPORTING culture

TRUSTING culture (G. Dupont)

JUST culture

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WB 101



A Learning Culture

Enables us to take the reports with their “Free lessons” and through Risk Management lower the hazards that threaten the Safety of the organization

Enables us to analyze what we weren’t even aware of before

We are able to fix the problem (Hazard) before it causes an accident

Takes us from the Reactive level to the Proactive level

A Learning Culture



- Where human factors training is provided to all on an ongoing basis
- Where incident data is kept and analyzed to find trends and develop Safety nets
- Where major changes are carried out when the present system is not sufficiently Safe
- Where feedback is provided as a means of learning from all incidents

SAFETY culture

INFORMED culture

LEARNING culture

REPORTING culture

TRUSTING culture (G. Dupont)

JUST culture

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An Informed Culture

1. Knows the hazards and risks associated with its business and maintains a level of intelligent wariness
2. Sets realistic goals and works towards their achievement
3. Keeps all its employees informed of it's successes and need to improve
4. Takes us from a “Reactive Culture” past the “Proactive Culture” to the “Predictive Culture” (The “What if” culture if you like)

SAFETY culture

FLEXIBLE culture

INFORMED culture

LEARNING culture

REPORTING culture

TRUSTING culture (G. Dupont)

JUST culture

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WB 101



A Flexible Culture



- Where necessary changes are made in order to improve Safety
- Where the organization is constantly looking for better ways to work Safer
- Where the status quo is not considered an option in the quest to lower errors

A Flexible Culture

1. Exists with a “Chronic Unease” that in spite of all efforts, human error will still occur.
2. With that realization, a Flexible Culture has in place a “recovery plan” (Emergency Response Plan)
3. Can now demonstrate that it has the 3 “C”s of a “Safety Culture”

A Safety Culture must have the 3 “C’s”

Commitment

Management’s True motivation and allocation of resources

Competence

Knowledge to know how to achieve the organization’s Safety goals

Cognizance

Awareness that it is a never ending battle

Mintzberg



James Reason
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Safety Culture

It is a Culture where:

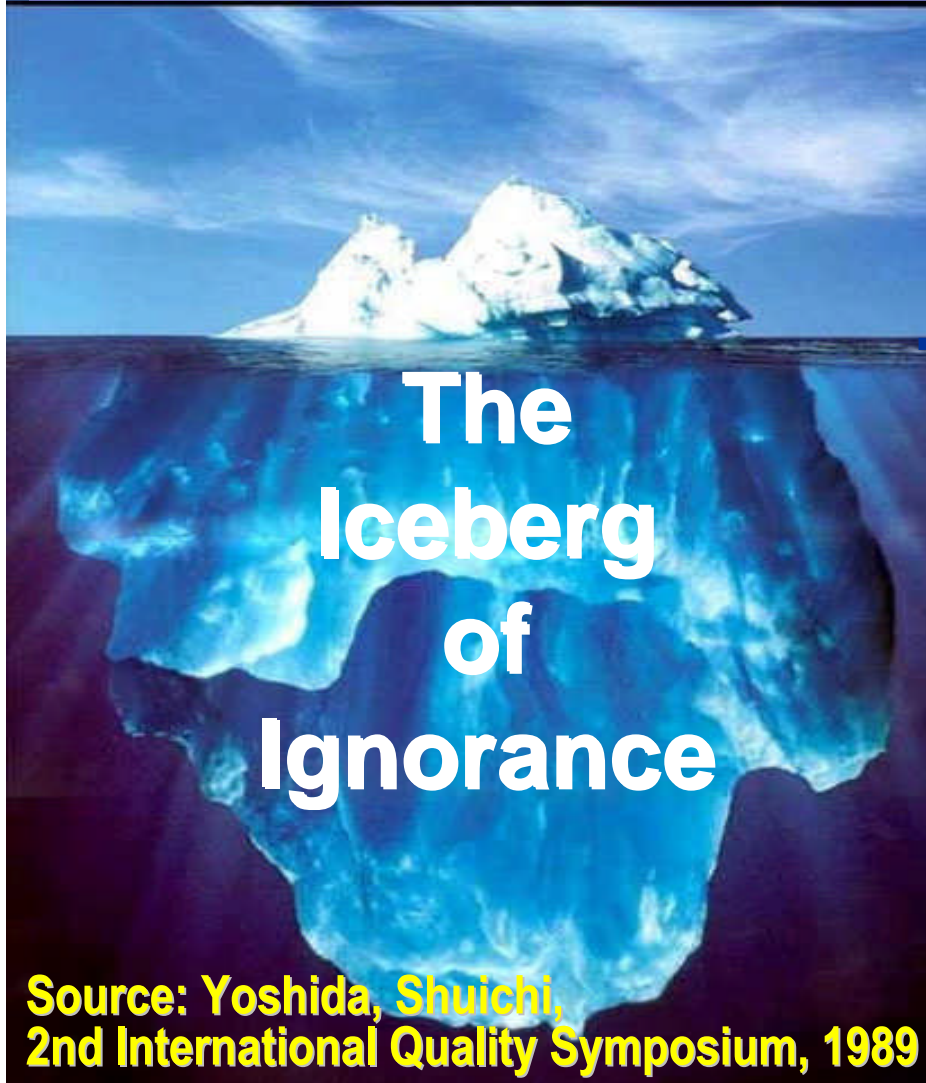
- ✓ all believe that Safety does not have to come at the cost of productivity or profit
- ✓ Safety is treated seriously by the management
- ✓ Safety is an integral part of the way the company operates
- ✓ all company employees are trained and encouraged to think and work Safely at all times
- ✓ Safety goals are set and all work toward their achievement
- ✓ a system is in place to report Safety concerns
- ✓ the company has a framework to accomplish all of the above –A Safety Management System

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Who Knows About the Hazards?



4% Hazards known to top management

9% Hazards known to middle management

74% Hazards known to supervisors

100% Hazards known to the persons who work around the hazard

HEADLINE

**Woman Awarded \$2.9 million
US Dollars From McDonalds
for Spilling Hot Coffee on
Herself**

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THE SMALL STUFF CAN GET VERY EXPENSIVE

In the famous McDonald's case, a 79-year-old woman, a passenger in her nephew's car, was served **180°F to 190°F coffee (82°C to 89°C)** in a thin cup in a drive-thru. She put the cup between her legs to stabilize it -- trying to be careful -- and removed the lid to add cream and sugar. The coffee sloshed out upon removing the lid, quickly giving her third-degree burns across her groin, inner thighs, and buttocks. She spent eight days in a hospital, had to go through skin grafts, and was disabled for more than two years -- all for a 49-cent cup of coffee in a flimsy cup that McDonald's served way, way too hot for a drive-in window.

And the company knew, too. The company had received "**at least 700**" scalding coffee reports in the previous ten years, some involving children (*"Go get Daddy a refill" shouldn't be a dangerous statement*). It settled some of these claims for up to \$500,000. In this case, the woman's medical bills totaled over \$11,000. McDonald's offered her \$800 to go away. A court-appointed mediator recommended that McDonald's settle for \$225,000, but the company refused, went to trial -- and was hit with \$200,000 in compensatory damages (reduced to \$160,000 as the jury attributed 20% of the fault to the woman for having the coffee in her lap), and \$2.7 million in punitive damages, based on the fact that at that time, McDonald's earned \$1.35 million per day in coffee revenues. The damage award was two days' worth of McDonald's corporate coffee income. Even that was later reduced to \$480,000, but before the appeals could be decided, the woman and McDonald's settled privately with undisclosed and confidential terms.

Total Award: \$2.9 million plus a lot of lawyer fees and bad publicity.

Over 700 small stuffs tried to tell them.

Don't let something like this happen to your company

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What to Do

- A Reporting culture has to be developed
- Everyone must feel free to report “the small stuff”
- Everyone must feel that it is their duty to report “the small stuff”
- Thus a simple reporting “Hazard” form is required
- A Hazard is “anything that can cause us grief”

The Hazard Form

1. Must be readily available
2. Must be simple and short
3. Should be able to be confidential
4. Should be on **coloured** paper
5. Should ask for solutions
6. Should document outcome and ensure feedback

Sample
Form 5

HAZARD REPORT FORM

Please complete this important form to the best of your ability and drop off at ???????

Feel free to use drawings and the back of this form.

Date: _____ Name (Optional but desirable) _____

Location of Problem: _____

What is the Hazard? (A Hazard is anything that can cause us grief)

What do you think is a practical means of eliminating or mitigating the hazard?

Thank you for taking the time to make our company Safer.

Risk Analysis carried out. _____ **Date** _____ **Investigator** _____

Cost analysis carried out _____ **Date** _____ **Carried out by** _____

Corrective Action (CA) taken No ___ Yes ___ (If yes indicate the CA)

Feedback provided _____ **Date** _____ **Carried out by** _____



The Four “P”s of SMS

- Philosophy – Management recognizes the threat to Safety and commits the organization to SMS
- Policy – Sets out how it will be achieved put the processes in place to make it work
- Procedures – Gives clear direction of what management wants all staff to do
- Practices – What really happens on the job. Ensures that procedures work and Safety is taken seriously

Transport Canada - 2001