

***Managing Safe Behavior on the  
Ramp: Delta Air Lines'  
Experience***

**Steven C. Predmore, Ph.D.**

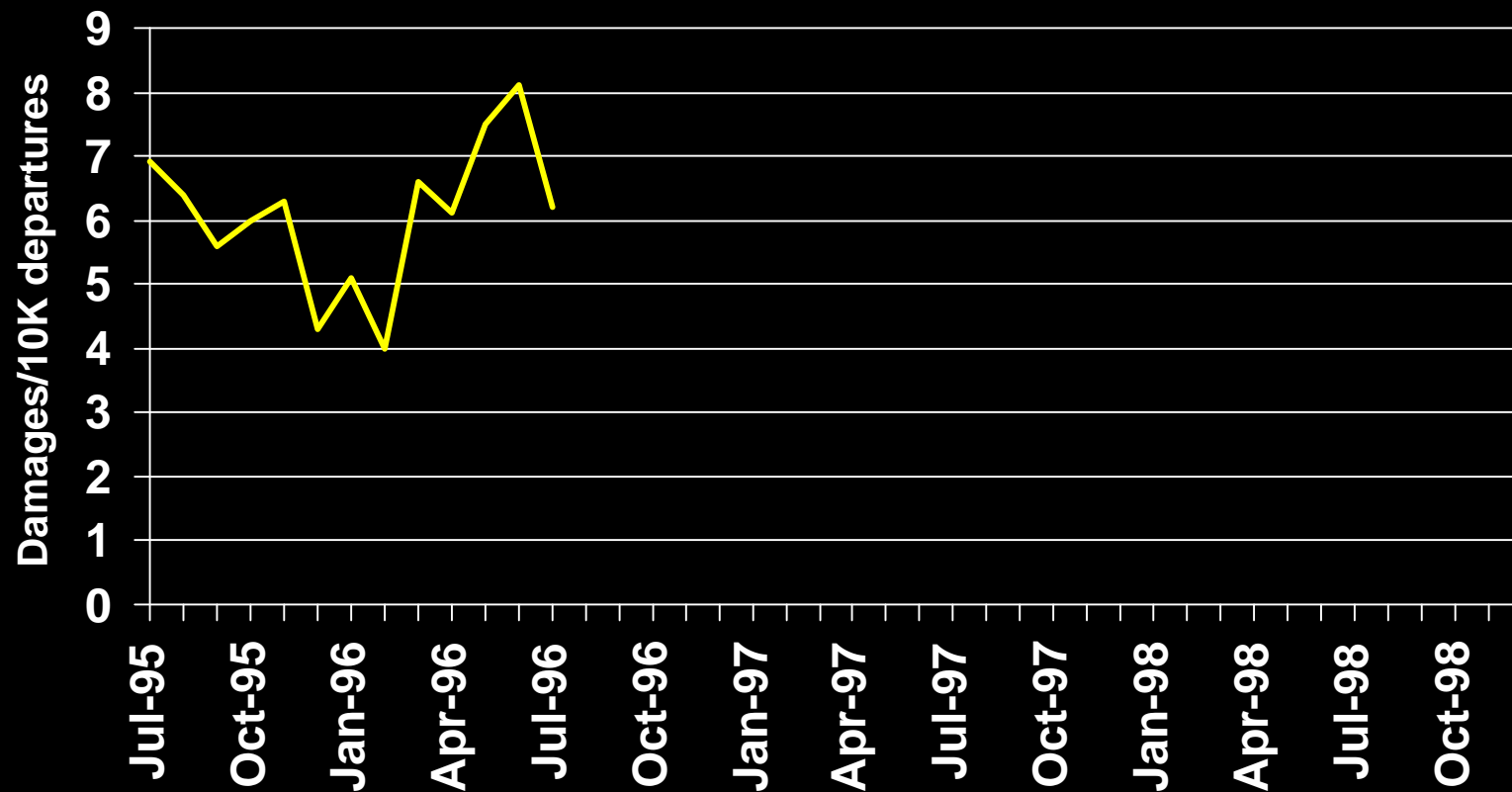
**Manager Safety Performance & Quality Assurance**

**Delta Air Lines**

# ***Delta Air Lines***

- **Over 105 MILLION passengers carried in 1998**
- **Nearly 2700 daily flights**
- **170 Stations**
- **Major Hubs: ATL, SLC, DFW, CVG, JFK**
- **Ground handling by Airport Customer Service (ACS) Division.**
- **Approximately 9000 Ramp Operations personnel.**

# Ground Damages/10K Departures

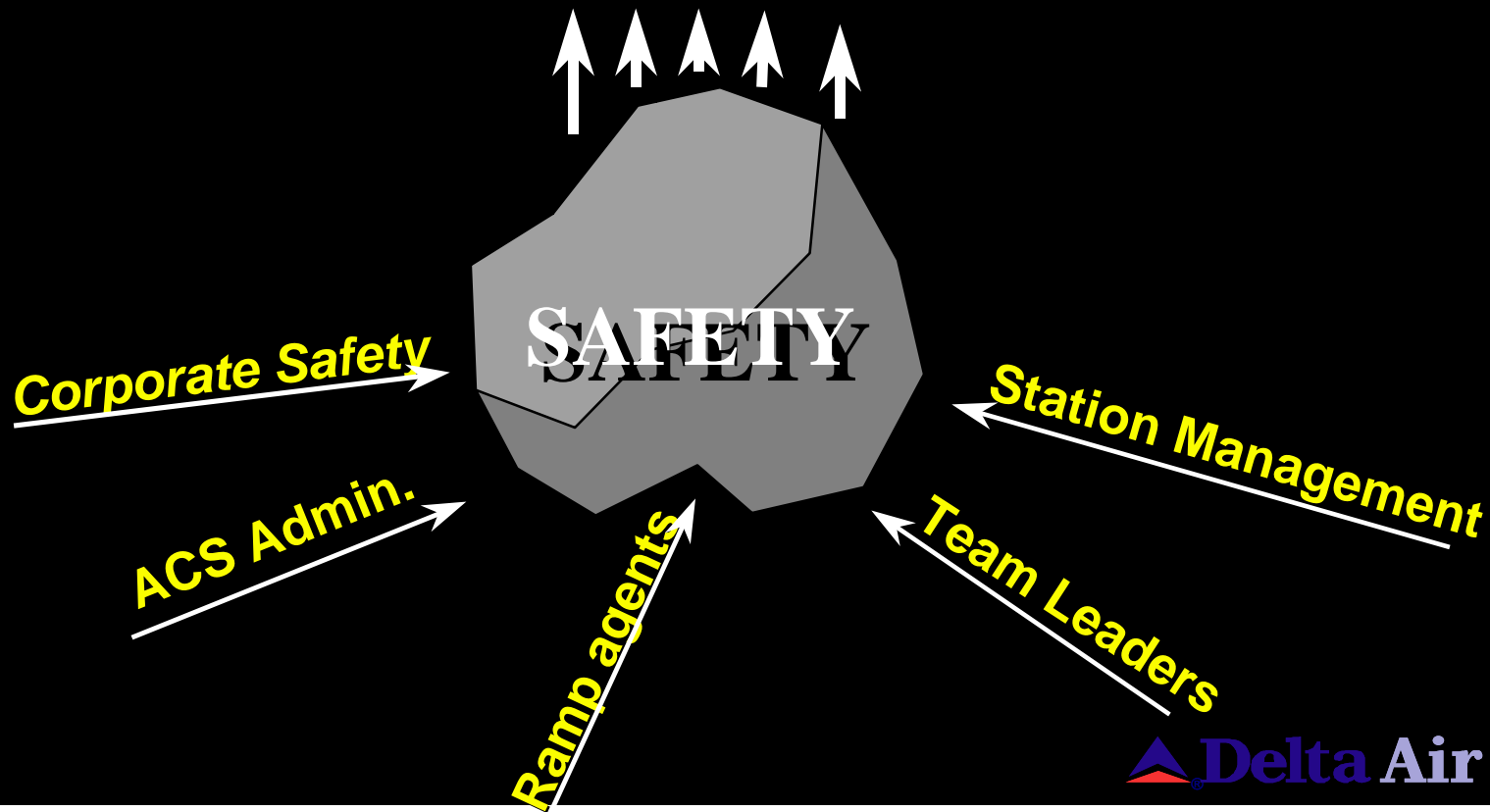


# *The goal*

*A damage and injury free,  
reliable operation.*

*Jesus is coming...everyone look busy!*

Goal



 Delta Air Lines

# *A Fundamental Change*

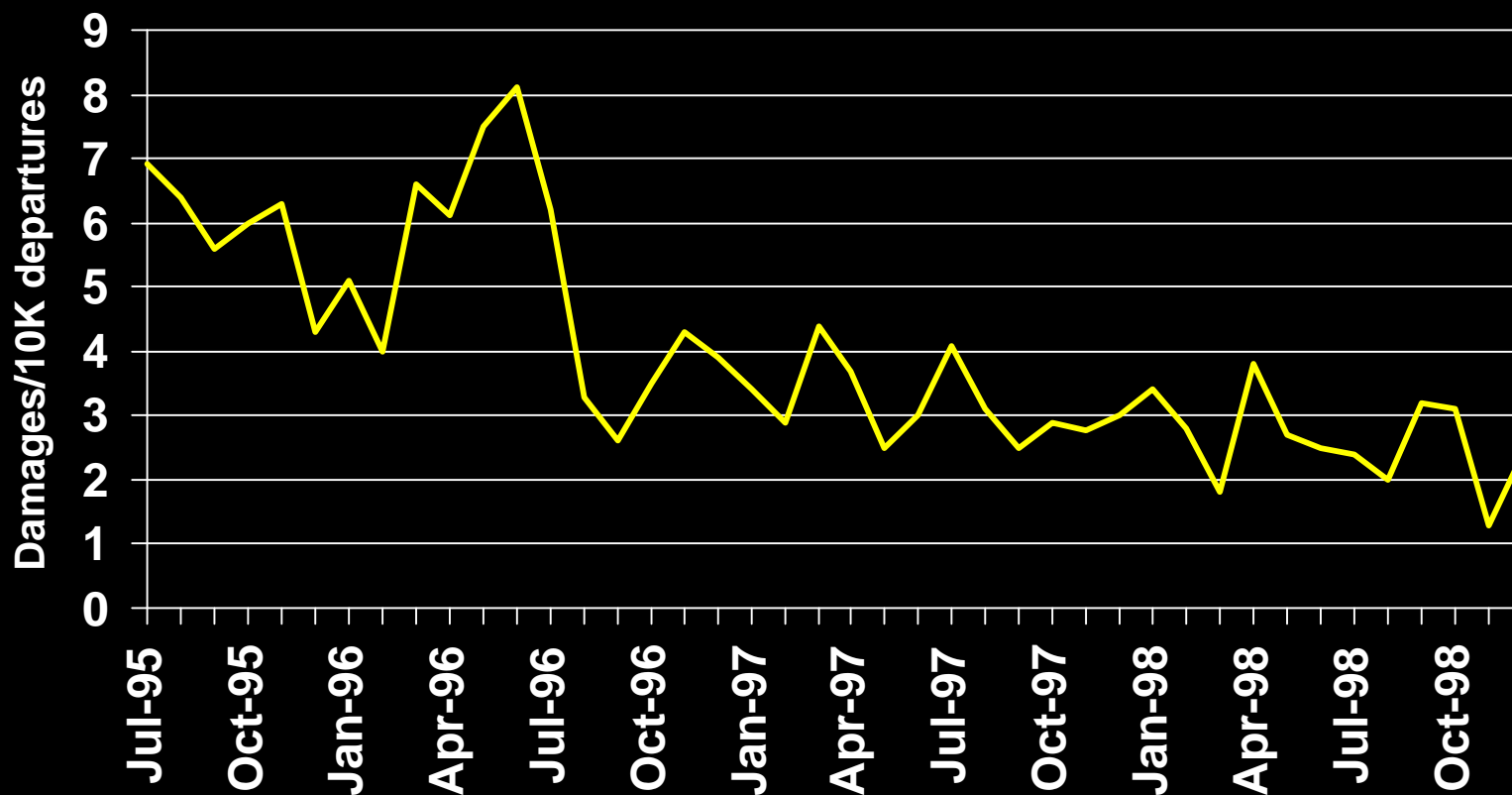
**Goal**



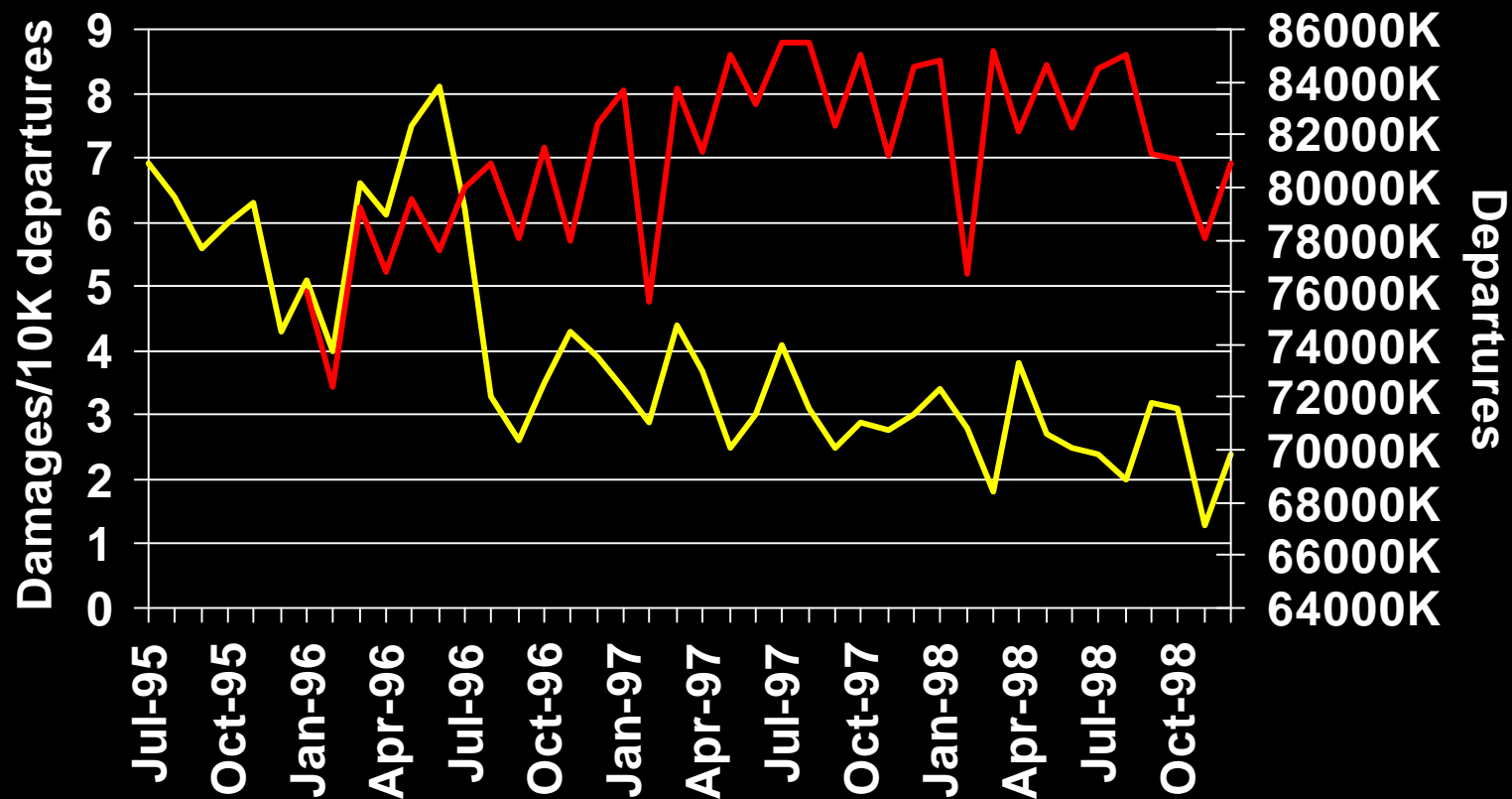
**Corporate Safety**  
**ACS Admin**  
**Ramp Agents**  
**Team Leaders**  
**Station Management**

 **Delta Air Lines**

# System Performance

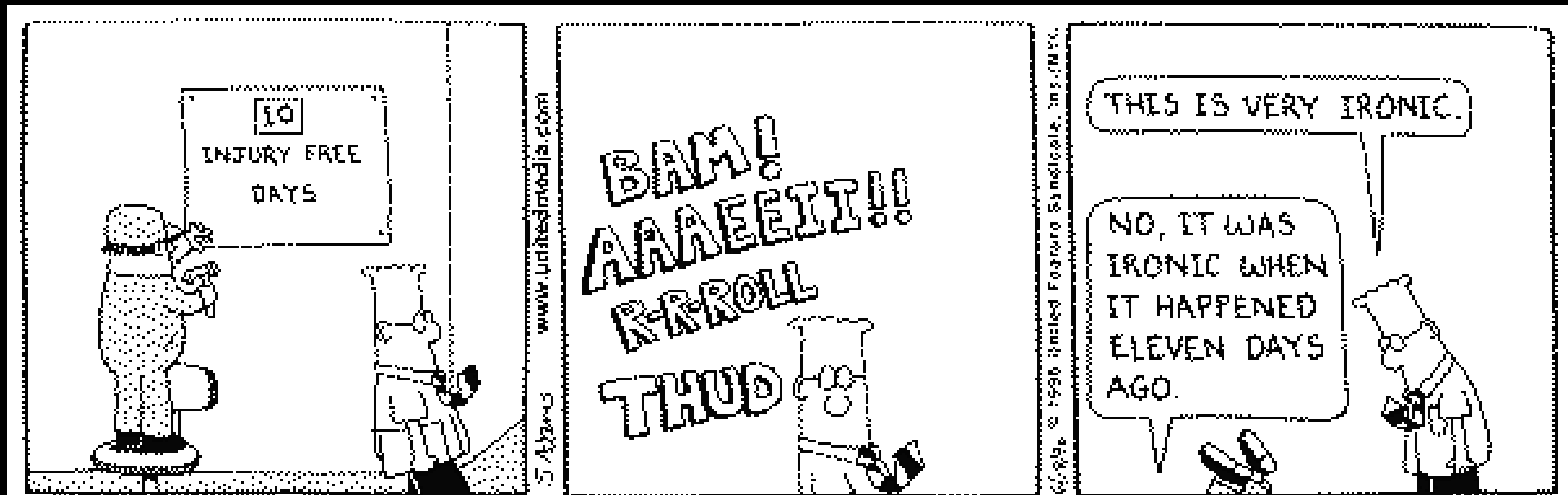


# Ground Damages/10K Departures





# The Challenge...



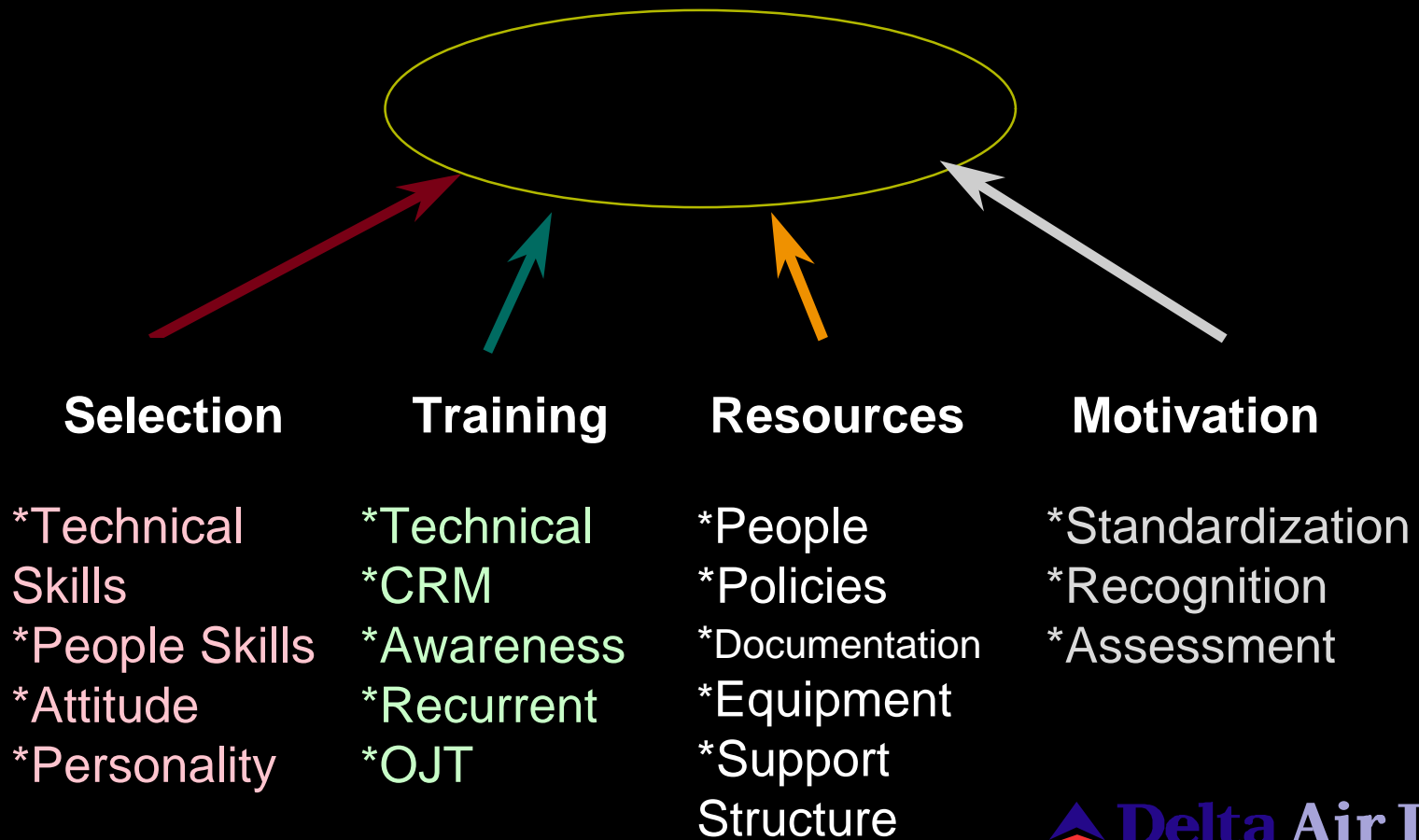
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# *Traditional solution...give 'em training*

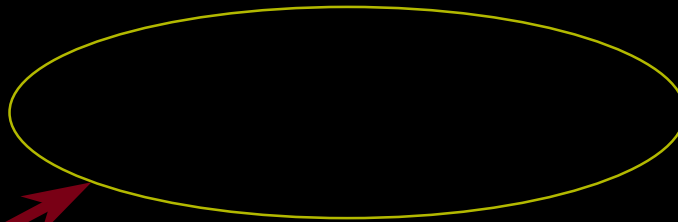


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# *Human Factors Model*



# *Human Factors*



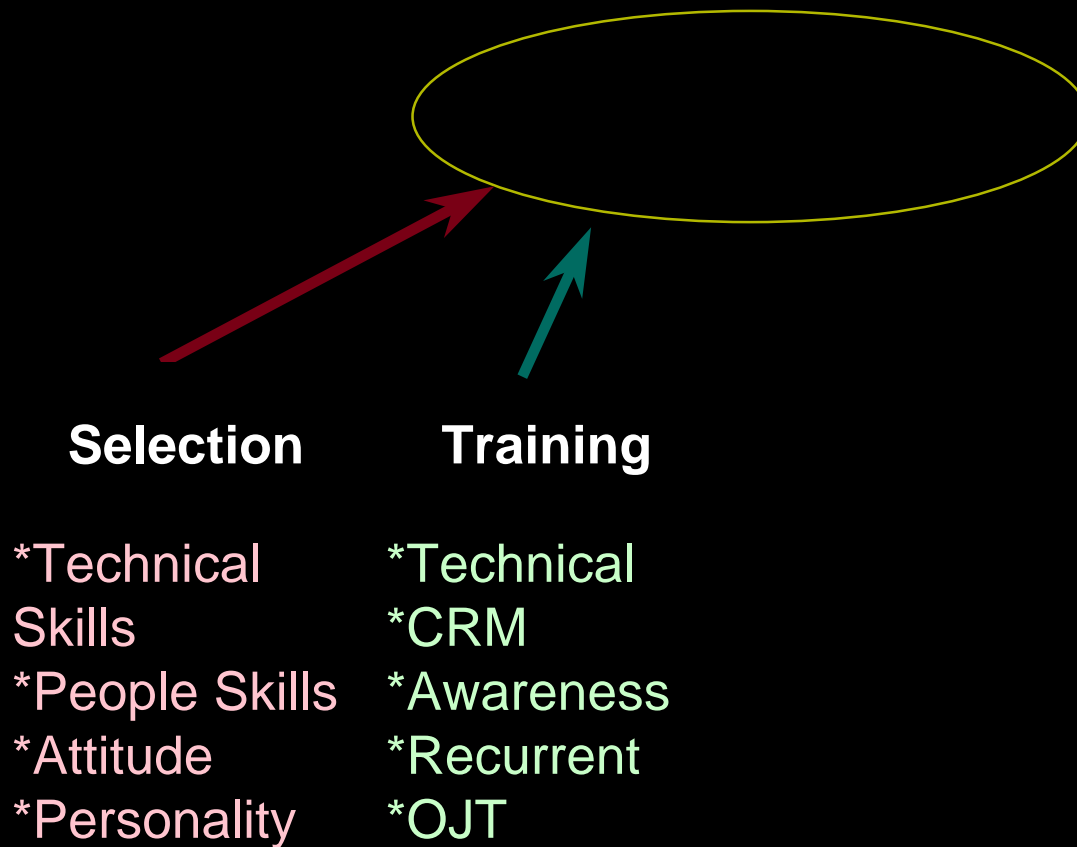
## **Selection**

- \*Technical Skills
- \*People Skills
- \*Attitude
- \*Personality

## *Selection Issues*

- Workforce is largely market-driven
- Wide range of background and experience
- Key may be selection of front-line supervision
- Hold contract workforce accountable to safety performance
- Underwing Safety Partnership

# *Human Factors*



# *Team Resource Management (TRM)*

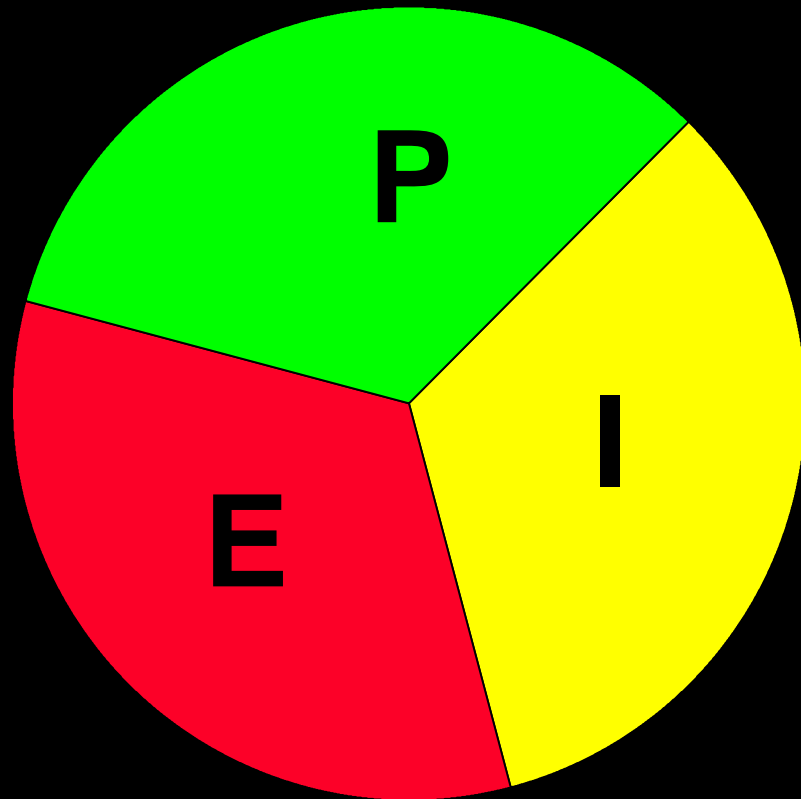
- Modeled after CRM
- Operationally-focused
- Classroom & OJT

# *TRM concepts*

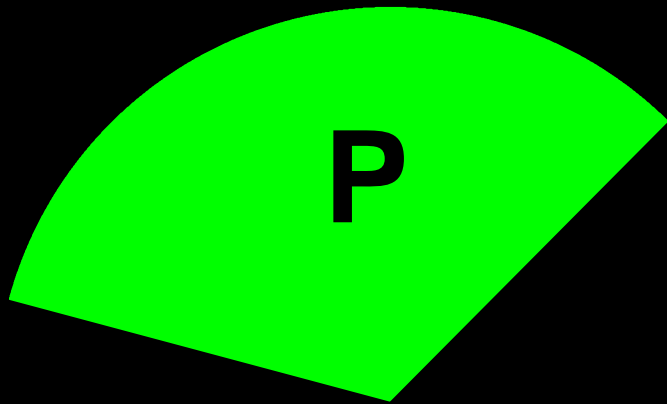




# *TRM PIE Chart*



# *TRM PIE Chart*



## Paperwork:

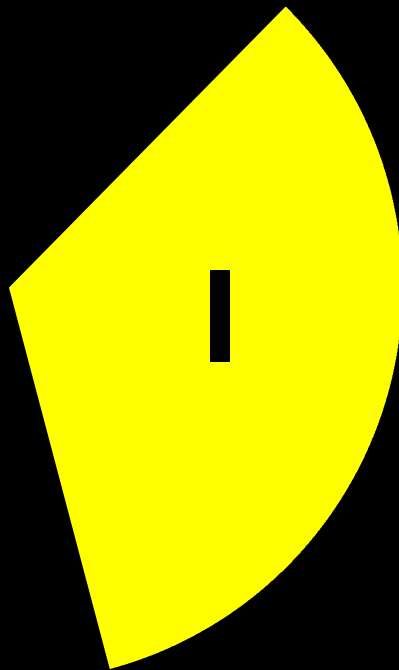
Policies

Procedures

Regulations

Documentation

# *TRM PIE Chart*



## Individuals:

Skills/Abilities

Training

Personality

Stress

Attitude

Supervision

# *TRM PIE Chart*

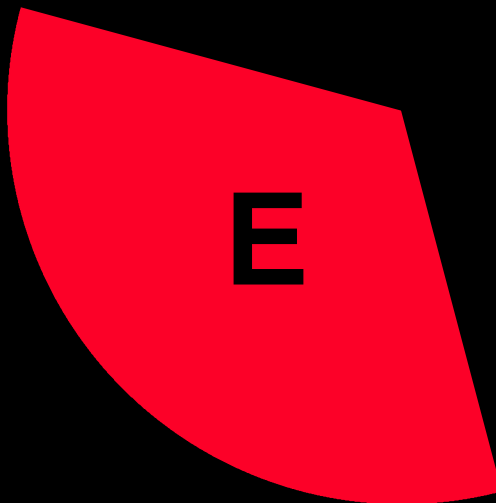
## Environment:

Equipment

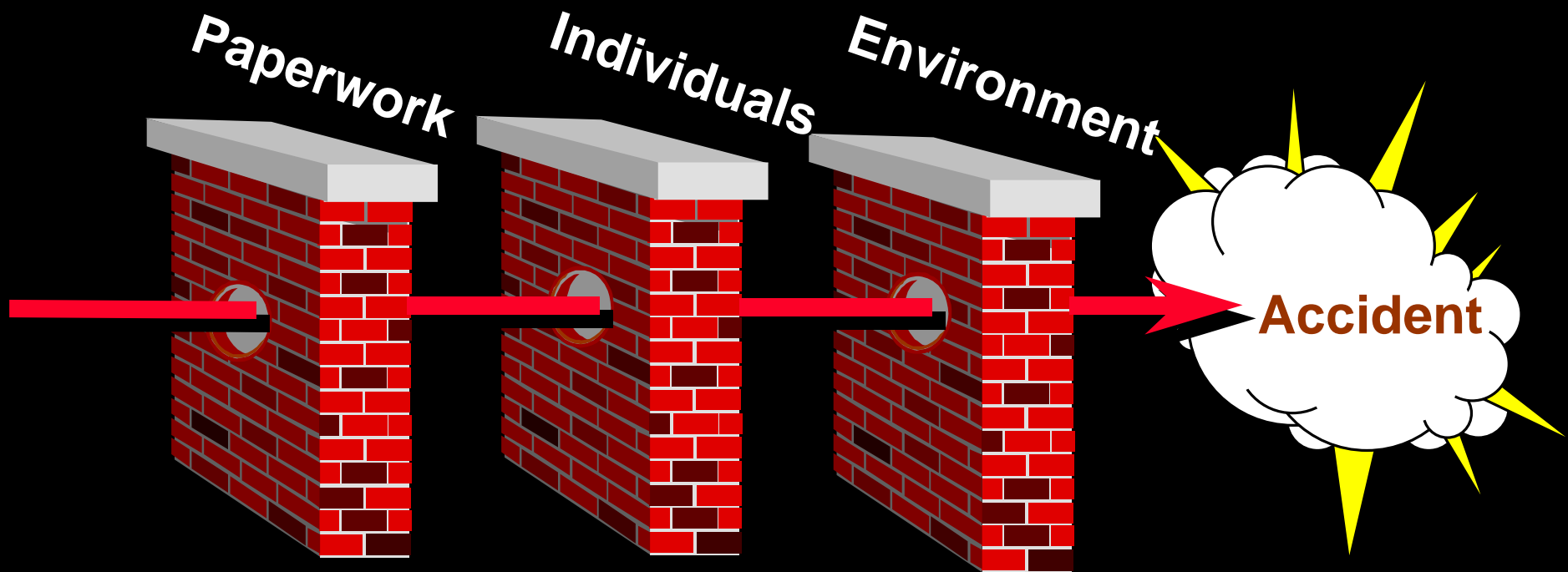
Workload

Weather

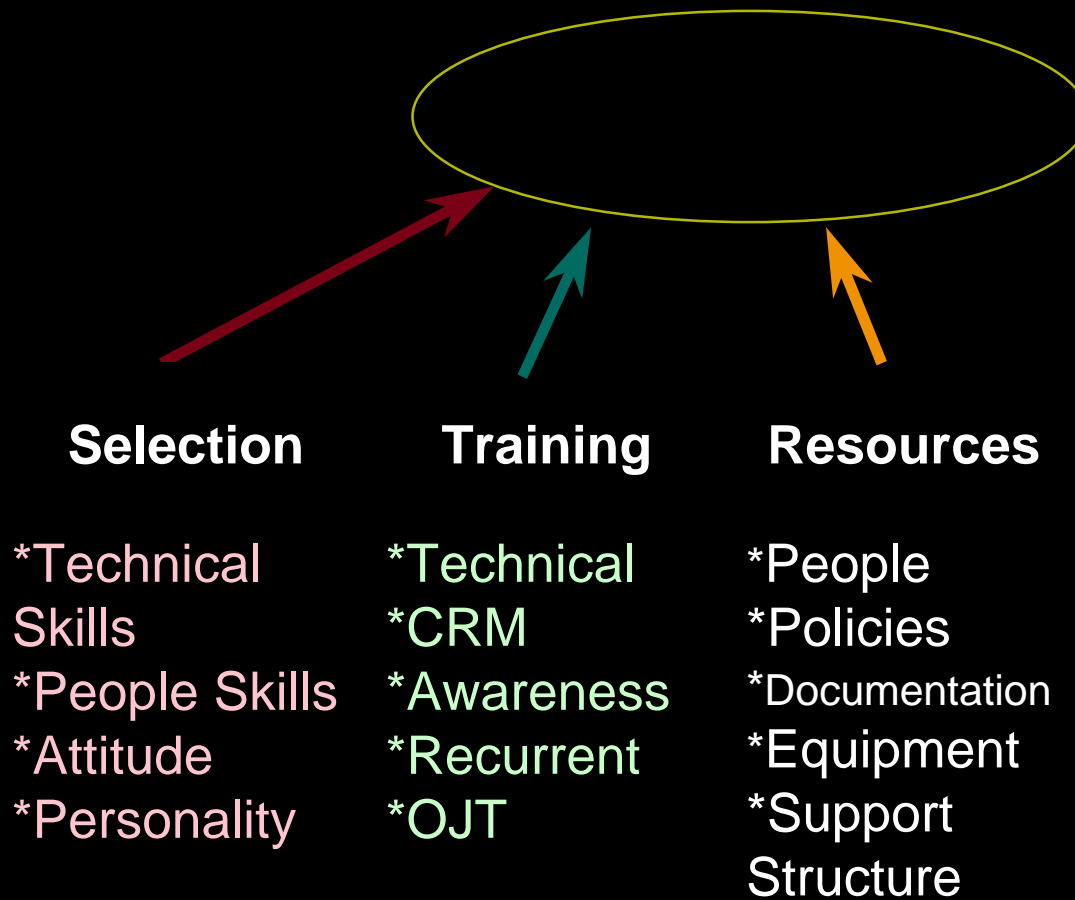
Visibility



# *TRM Case Study Application*



# *Human Factors*



# *Operational Resources*

- Ground Operations Manual (GOM)
- Capital investment in GSE
- Pre-arrival and pre-departure checklists

# ***Ground Operations Manual***

- Provides standardized procedures for airport ground operations
- Establishes behavioral expectations for technical and non-technical performance
- Human Factors principles incorporated from the beginning



# Communication

Definition: The exchange of thoughts, messages or information by speech, signals or writing. The activity, both verbal and non-verbal, that is used to transfer information between members of the team.

Speak up for anything you see that is unsafe, irregular or not in accordance with procedure. Stop the operation if necessary. Any deviations from briefings or procedures should be communicated immediately.

## **Some keys to proper communications are:**

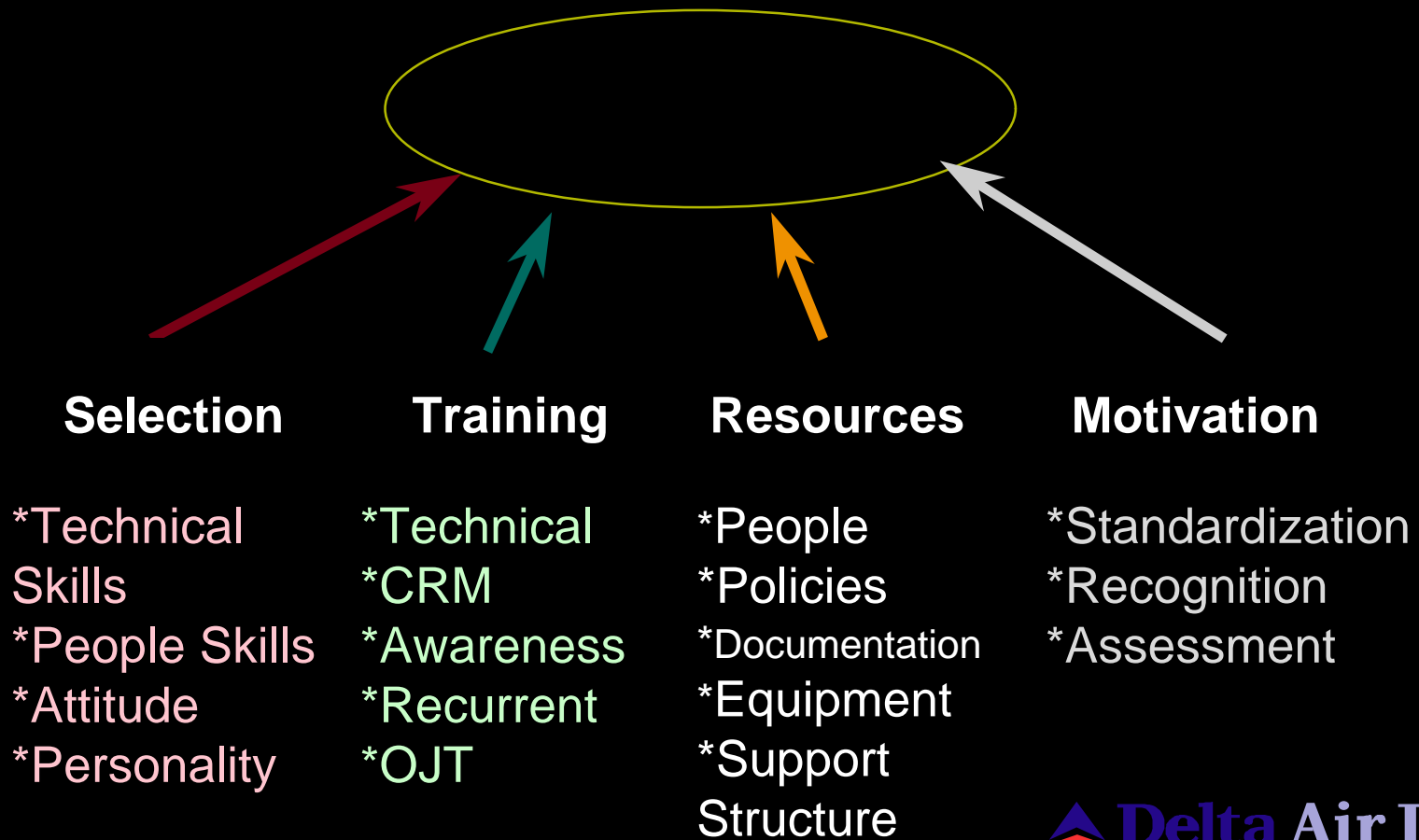
### Team Leader

- Establish and reinforce communications with all team members
- Conduct briefings on operational requirements and expectations
- Ensure that all team members understand their roles
- Communicate changes in a timely manner

### All Team Members

- Listen actively and ask questions when unsure
- Use standard terminology and signals
- Give and accept constructive feedback
- Know what is expected of you

# *Human Factors*



# *Motivation Strategies*

- Set goals and track performance
- Employee recognition
- Investigations focused on corrective action
- Provide incentive to report errors

# *Behavioral Measurement*

- Establish a baseline measurement of identified at-risk behaviors
- Determine which behaviors you are going to measure
- Establish a process whereby employees at all levels conduct daily observations

**Delta Air Lines**  
**Safety CIT Observation Sheet**  
**ATL - Department 120**

Concourse \_\_\_\_\_  
Gate \_\_\_\_\_

**Performance Marker**

	Yes	No
1. Arrival FOD Sweep	<input type="checkbox"/>	<input type="checkbox"/>
2. Handrails Up (widebody & 757)	<input type="checkbox"/>	<input type="checkbox"/>
3. Speeding In Gate Area (exceeding walking speed)	<input type="checkbox"/>	<input type="checkbox"/>
4. Tongues Up On All Conveyances	<input type="checkbox"/>	<input type="checkbox"/>
5. Departure FOD Sweep	<input type="checkbox"/>	<input type="checkbox"/>



# Continuous Safety Improvement Process (CSIP)

## Huddle Compliance



# ***Critical Success Factors***

- ✓ **Demonstrated support from Operations Management**
- ✓ **Management sponsorship and participation. Get them out from behind their desk.**
- ✓ **Buy-in from front line supervisors**
- ✓ **Use of process daily.**
- ✓ **Open reporting of safety data.**
- ✓ **Budget for achievement of habit strength.**

# *Lessons Learned*

- Must have LEADERSHIP and support from the top
- Attack from all fronts--not just training
- Focus your efforts--means you have to measure
- Standardization is key
- Address the behaviors that underly the outcomes

## *Next Steps*

- Develop frontline employee reporting system
- Provide tools for implementing the self-report policy
- Review and revise our information-gathering and performance-tracking tools
- Strengthen Internal Evaluation process



*Questions?*