Enabling Safety & Quality Culture through Human Error Prevention

Presented by

Maria Ryan & Christy Murphy
Crystal Lean Solutions
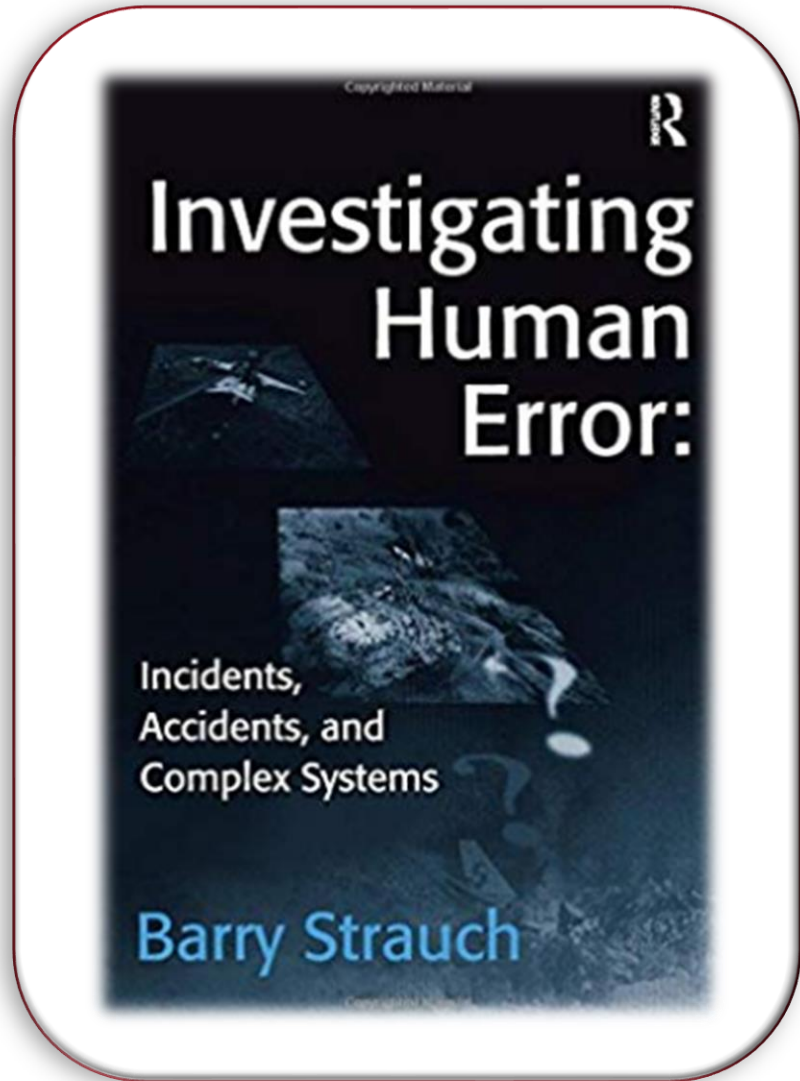
Objectives

Introduction to Human Error (HE) Prevention

Learning & Our Brains

The CODE Categories of HE

Approach & Benefits

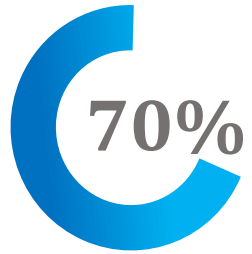# Human Error Defined

Definition

"An *action or decision that results in one or more unintended negative outcomes*

Strauch, 2004

Assumptions

- Nobody wants to make an error at work
- Everyone does best with available resources

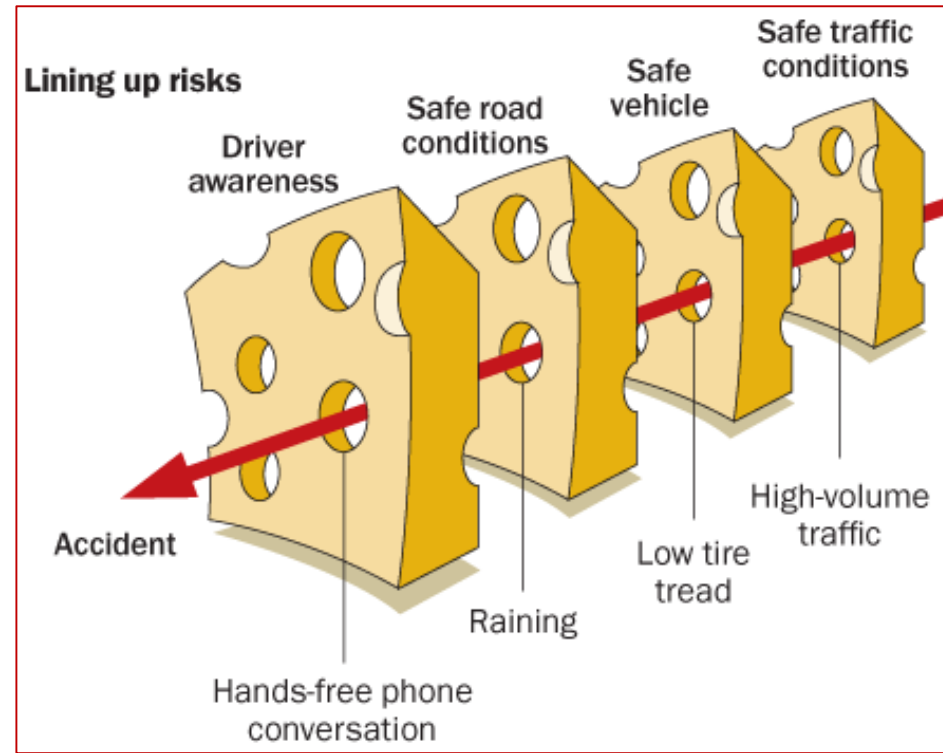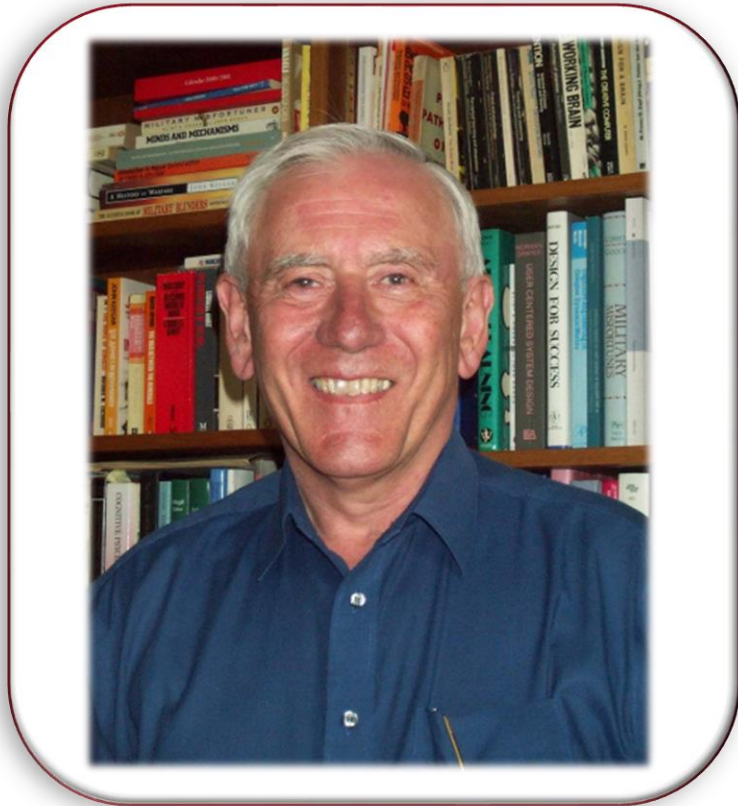# Human Error Statistics

70%

Of all Airline Accidents

44,000 ➤ **96,000**

People Die in US Hospitals Annually

€60M

Annual Cost, in a company of 100,000

Origins of Human Error Prevention

Lining up risks

Driver awareness — Safe road conditions — Safe vehicle — Safe traffic conditions

Accident

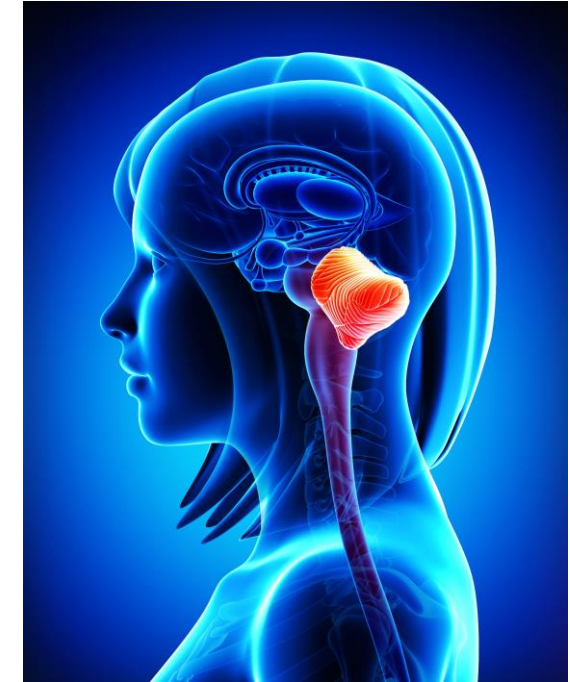Hands-free phone conversation — Raining — Low tire tread — High-volume traffic

"Workplaces and organizations are easier to manage than the minds of individual workers. You cannot change the human condition, but you can change the conditions under which people work."

Dr. James Reason

Learning . . . Our Brains Mechanism

RAS – Reticular Activating System

Cerebellum "Little Brain"

Hemispheres

Left Hemisphere: Logic & Reason

Right Hemisphere: Creativity & Imagination

Error Types

Human Error

Slip
(Completed Incorrect Action)

Lapse
(Forget to Complete Action)

Unconscious Action when plan is correct

Mistake
(Plan incorrect leading to failure)

Conscious Action when Plan is Incorrect

Capability Error

Execution Error

Omission Error

Decision Error

The CODE

Error: Lack of **Knowledge** or **Skill**

Error: Did not include Information, an **Input**, or an **Action**

Capability

Omission

HEP

Decision

Execution

Error: Made an Incorrect Decision Leading to **Unintended** Outcome

Competent Person Performs Task **Incorrectly**

Capability Human Error – Scenario Planning

January 15th 2009: US Airways Flight Airbus A320 land in Hudson River
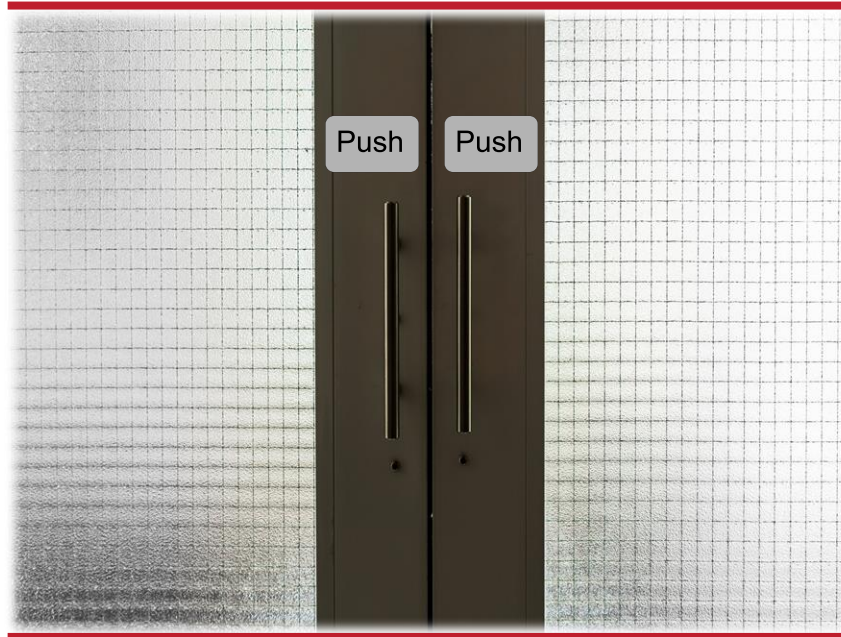**All 155 Passengers survive**

Omission Error – Distraction

Decision Error – Bystander Effect

Definition: Individuals are less likely to offer help to a victim when other people are present

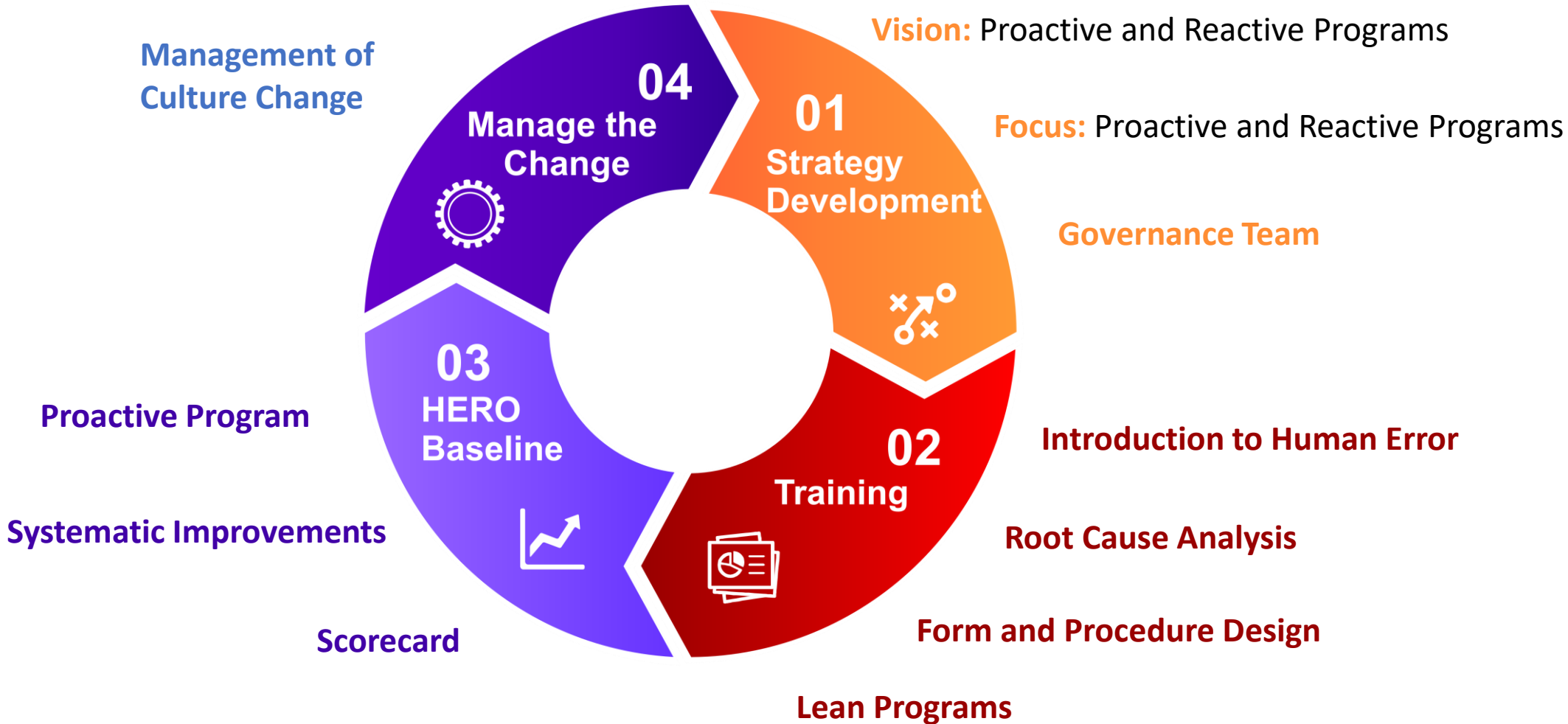John M. Darley and Bibb Latané in 1968

Execution Error – Intuitive Design

Issue: Not intuitive to use

Action: Design so user does not have to think about how to use process

"The Design of Everyday Things" Don Norman

Proactive Human Error Prevention Strategy

Management of Culture Change

Proactive Program

Systematic Improvements

Scorecard

04 Manage the Change

03 HERO Baseline

01 Strategy Development

02 Training

Vision: Proactive and Reactive Programs

Focus: Proactive and Reactive Programs

Governance Team

Introduction to Human Error

Root Cause Analysis

Form and Procedure Design

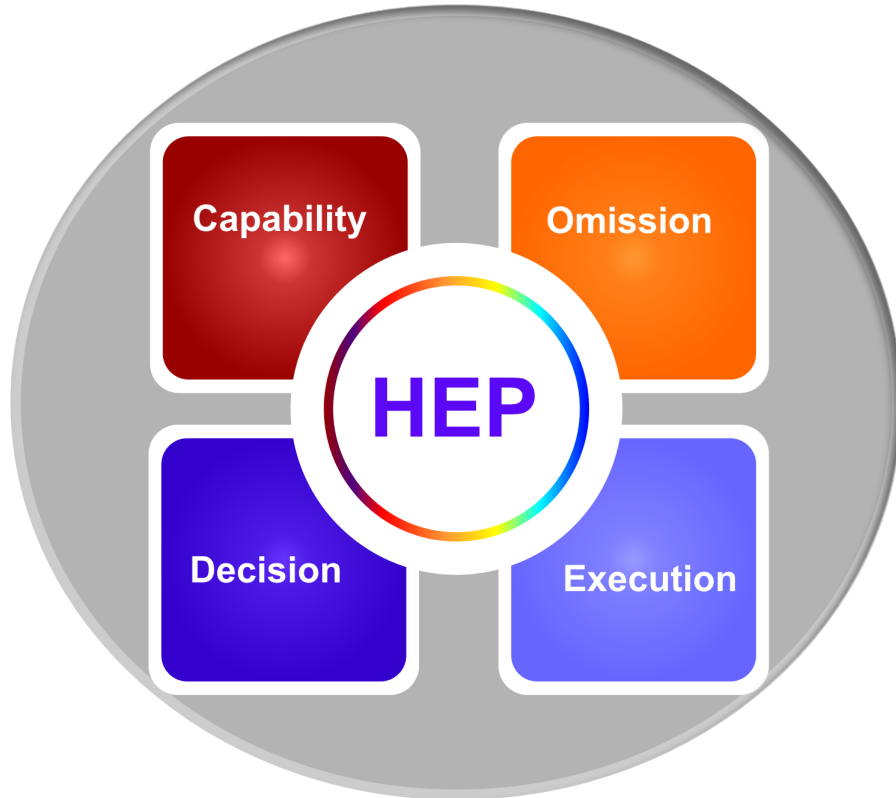**Lean Programs**

Key Outcomes

✓ Zero Reoccurrence of Errors

✓ Minimise Risk of Errors

✓ Enable Growth safely

Creating a Culture of Problem Preventers

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Summary

- Systematic Approach to Build and Sustain a Culture of Human Error Prevention

- Enhances Safety Culture

- Enhances Quality Culture

Thank You For Your Time
What Questions Do You have?
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