



The Digital Dashboard: Options for Small and Large Organizations

A Real-Time Leading Indicator for Safety Facilitated by a Corporate Intranet-Based Tracking Tool for ANSI-Z10 Implementation

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Outline

- **Programs vs Systems, What's the difference?**
- **OHS Systems are not New; a 30 year history.**
- **A Primer on ANSI-Z10**
- **What needs to be done before Implementation**
- **Focus on the Real-Time Intranet-Based Tracking Tool that allowed management to speed implementation at 92 locations**
- **A few points about what to expect "After Implementation"**



A Program of Mgmt Processes, either Best Practice or not, is Not a System

We All Know that Understanding of Safety Management can Vary...



Thanks to Scott Adams and Dilbert!

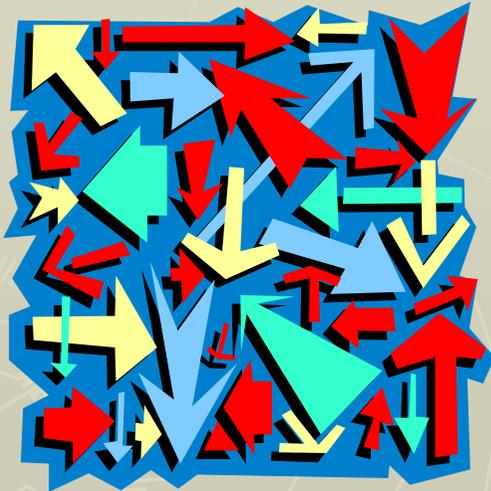
Particularly in Large Organizations, Systems Can Help Define, Communicate, Drive Consistent Implementation and Assure Continuous Conformance with Any Group of Desired Practices



WHAT IS A MANAGEMENT SYSTEM?

You don't have to have a System (many don't, with lesser results)

Programs (reactive, lacks integrated process, individual processes usually doesn't get fixed or improved until recognized as broken)



Systems (proactive, standard Process for continuously assuring and improving effectiveness of Safety Management Sub-Processes)

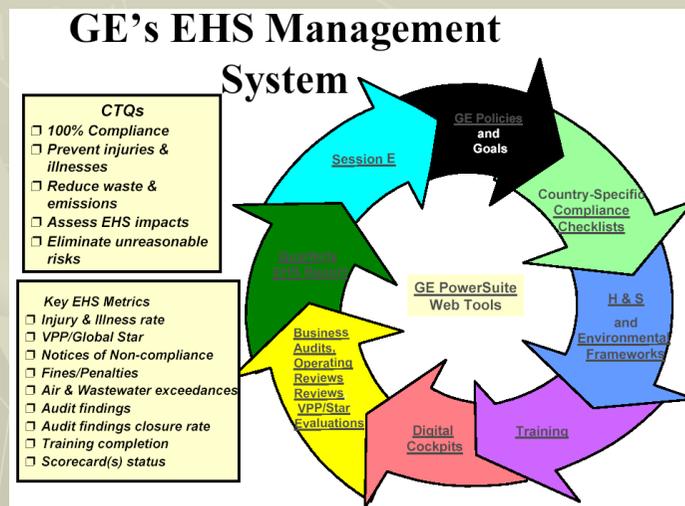
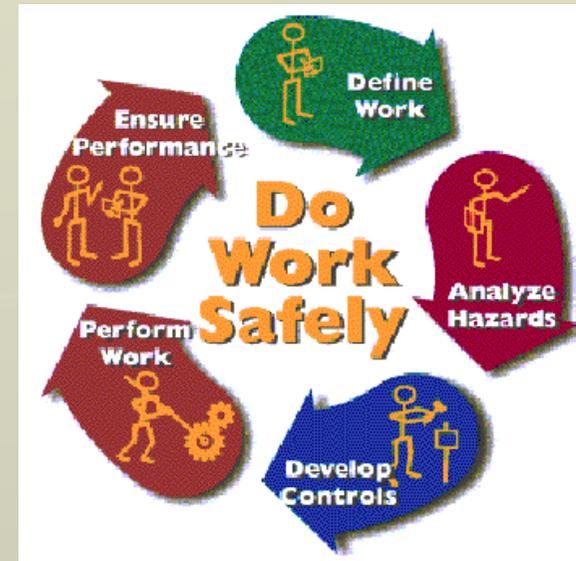


Key Role of System is to Focus on Continuous Improvement



SIMPLE OR COMPLEX, A SYSTEM MUST...

Be based on sound Policy, and establish objectives for achievement using an organizational structure with roles, responsibilities, authorities that use documented systematic processes and resources

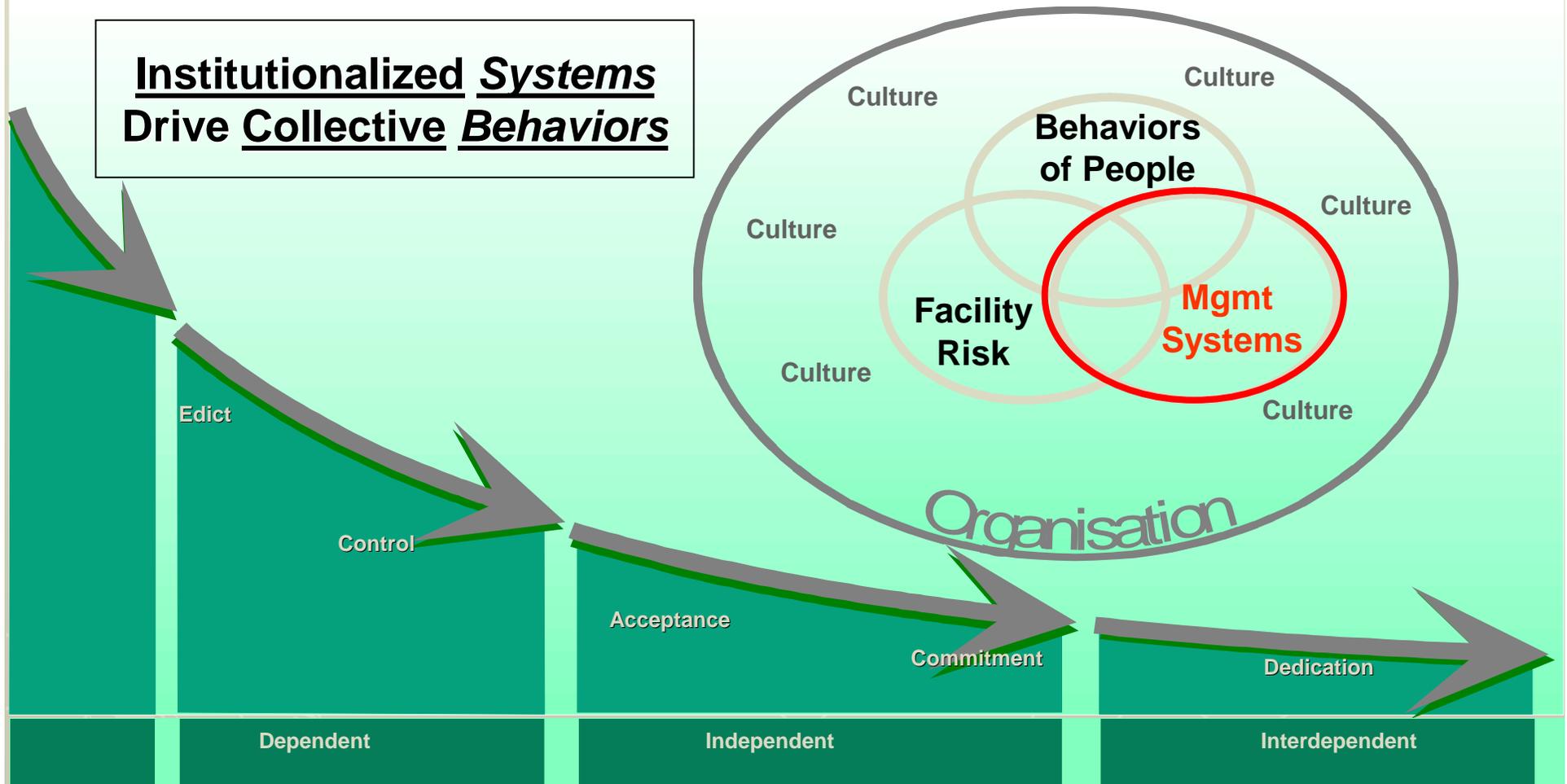


Use measurement & evaluation to assess performance of the system, Have a regular review/audit process to ensure problems are corrected & opportunities recognized and implemented when justified.



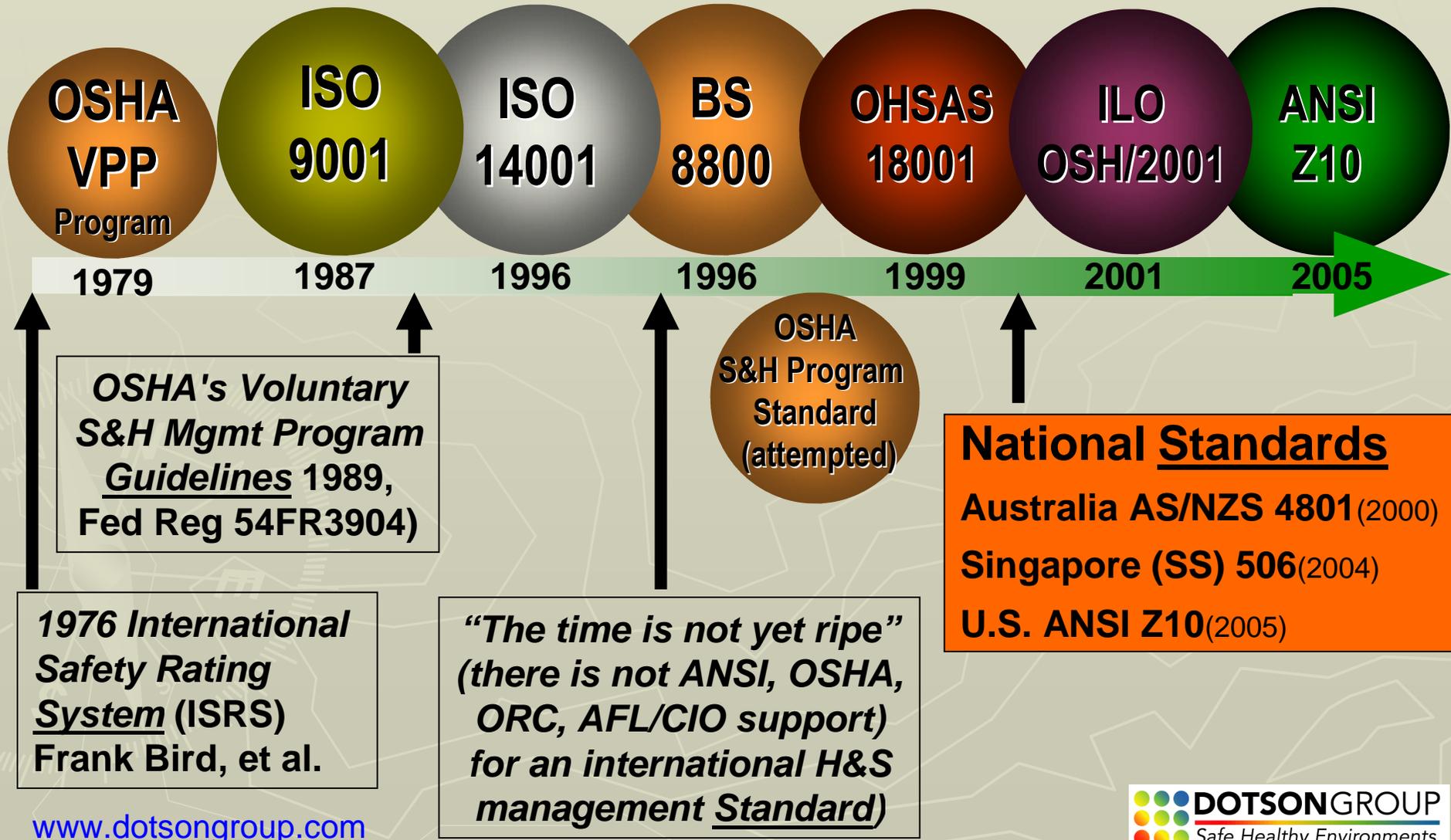
OHS Systems Are No Longer New; Have Now Been Proven over Decades

**Institutionalized Systems
Drive Collective Behaviors**





30 Years of OHS System History





OSHA's Program Management Guidelines - VPP Criteria

MANAGEMENT LEADERSHIP

Management Commitment

- Policy
- Goals, Objectives
- Planning
- Top Management Involvement
- Responsibility and Authority
- Line Accountability
- Resources
- Contract Workers
- Written S&H Management System
- Program Evaluations

Employee Involvement

- Encouragement
- Participation
- (Committees)

WORKSITE HAZARD ANALYSIS

- Baseline Assessments
- Routine Hazard Analysis
- Change Hazard Analysis
- Inspections
- Reporting System
- IH Program
- Investigations
- Trend Analysis

HAZARD PREVENTION & CONTROL

- Certified Professional Resources
- Hazard Elimination and Control Methods
 - Engineering
 - Admin
 - PPE
- Rules, Procedures & Recognition
- Process Safety Management
- Occupational Health Care
- Preventive Maintenance
- Hazard Correction Tracking
- Emergency Preparedness

SAFETY & HEALTH TRAINING

- Managers
- Supervisors
- Employees
 - Emergencies
 - PPE

System



ANSI-Z10 has Mgmt Leadership but not quite Employee Participation of VPP

ANSI-Z10 has Eng/Admin/PPE hierarchy, Audits, Incident Analysis/Response, Mgmt Accountability beyond VPP



OHSAS 18002/**ANSI-Z10** ELEMENTS

Mgmt Leadership OHS Policy

- **Management Leadership**
- Policy Statement
- **Employee Participation**

Planning

- Hazard identification, risk assessment, and risk control
- Legal and other requirements
- Objectives
- OHS Management Programs
 - **Plans and resources**

Implementation & Operation

- Structure and responsibility
 - **Hierarchy of controls**
 - **Procurement**
 - **Contractors**
- Training, awareness and competence
- Consultation and communication
- Documentation
- Document and data control
- Operational Control
 - Design Review/Change Management
- Emergency preparedness and response

Checking & Corrective Action

- Performing measurement and monitoring
- Accidents (**incidents**), non-conformance
 - Corrective and preventive actions
- Records and records management (-)
- Audits
- **Planning Feedback**

Management Review

- Process
- **Outcomes and Follow-ups**

(-) ANSI weaknesses

ANSI-Z10 ADDITIONS



The System as a Strategic Safety Issue

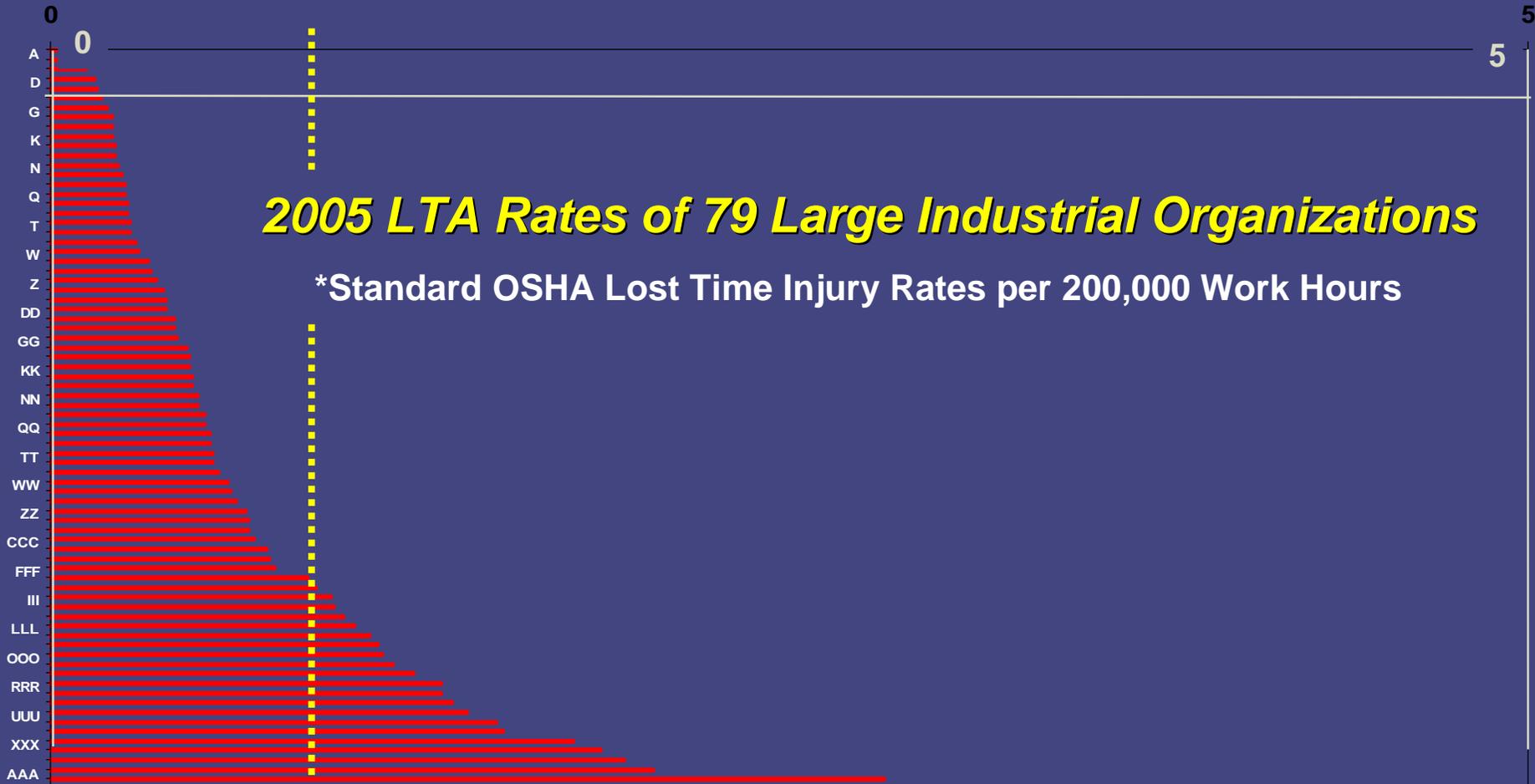
Policy - Based on solid safety management theory (culture, systems, behavior, risk).

System - Mgmt Processes Well Defined, Communicated, and Measured. Roles and Responsibilities Well Defined, Communicated, and Assured. Continuous Improvement is Built Into Processes. Modeled on ILO, OHSAS, BS 8800, OSHA VPP, ANSI Z10, other models. Audits include Self-Assessments, Internal, External (all conformance to Guidelines). Metrics - External Benchmarking of Results (Injury Rates) and Internal Benchmarking of Leading Indicators, as in “% Improvement in System Conformance”

Culture - Top Down Support and Leadership from CEO, Sr. Ops Mgmt and Plant Mgrs. Open “Bottom Up Feedback” Communication about Safety from Employees to Sr Mgmt. Employee and Management Pride. Safety as Good Stewardship of Funds and the Right Thing to Do.



Historical Lagging Indicators (Injuries, Occ Disease) are Good Measures of High Rates but Poor Measures of Future Improvement of Current State Safety Practices.



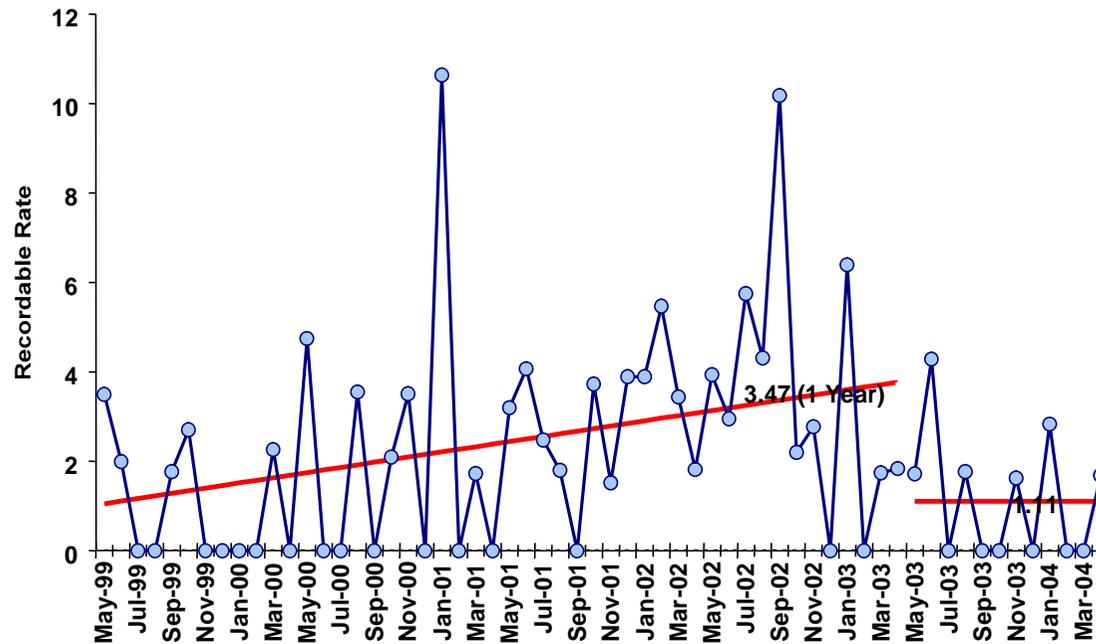
IH Exposure benchmarked to TLVs but still not routinely to other companies



WITH HUMANS, CHOOSE METRICS WISELY

Be careful what you measure. You might get it.

Lost Time Rates vs Recordables and Lesser Events

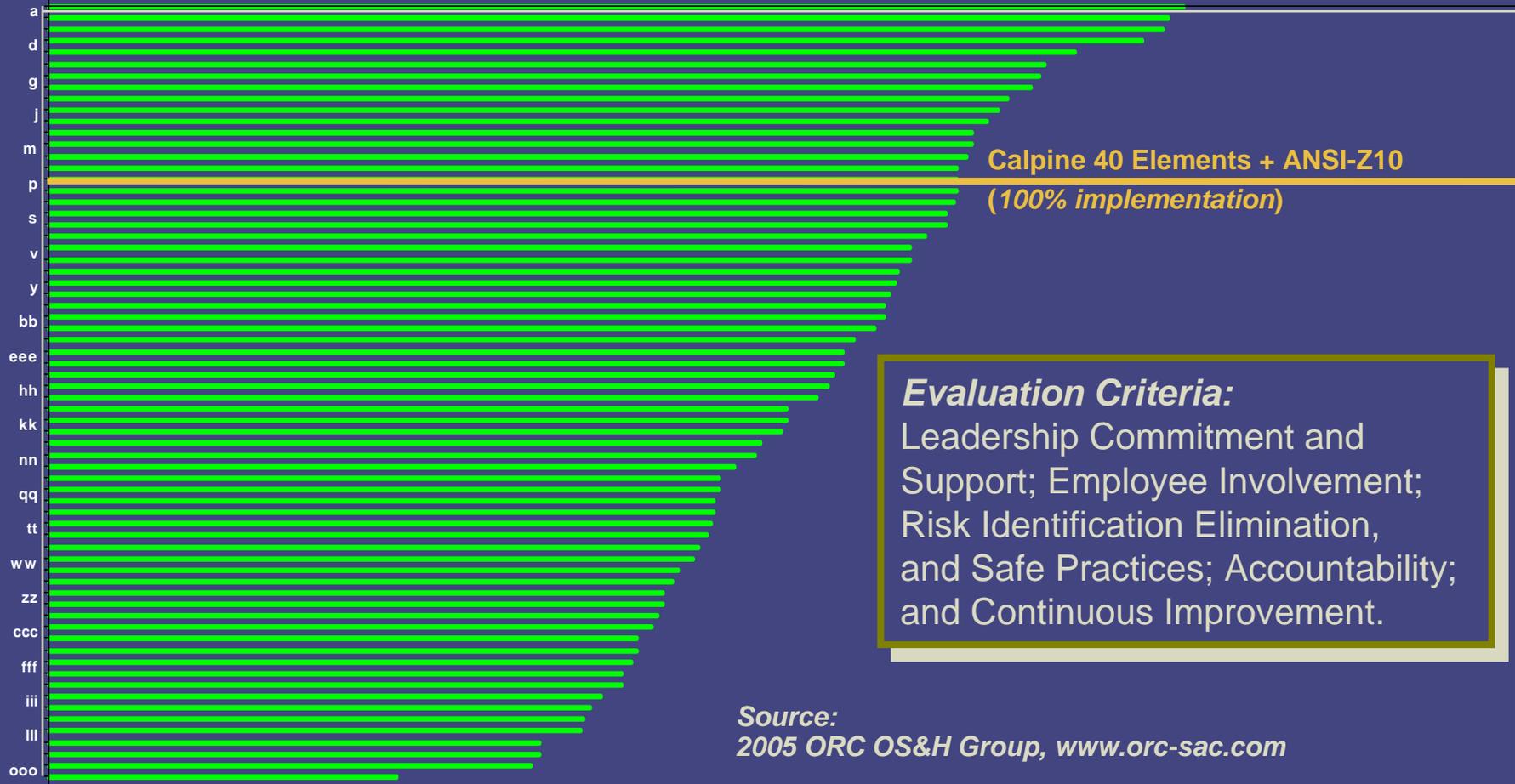




2005: ORC Begins Annual OHS System Benchmarking as “Leading Indicator”

System Elements; 68 Large Safe Organizations

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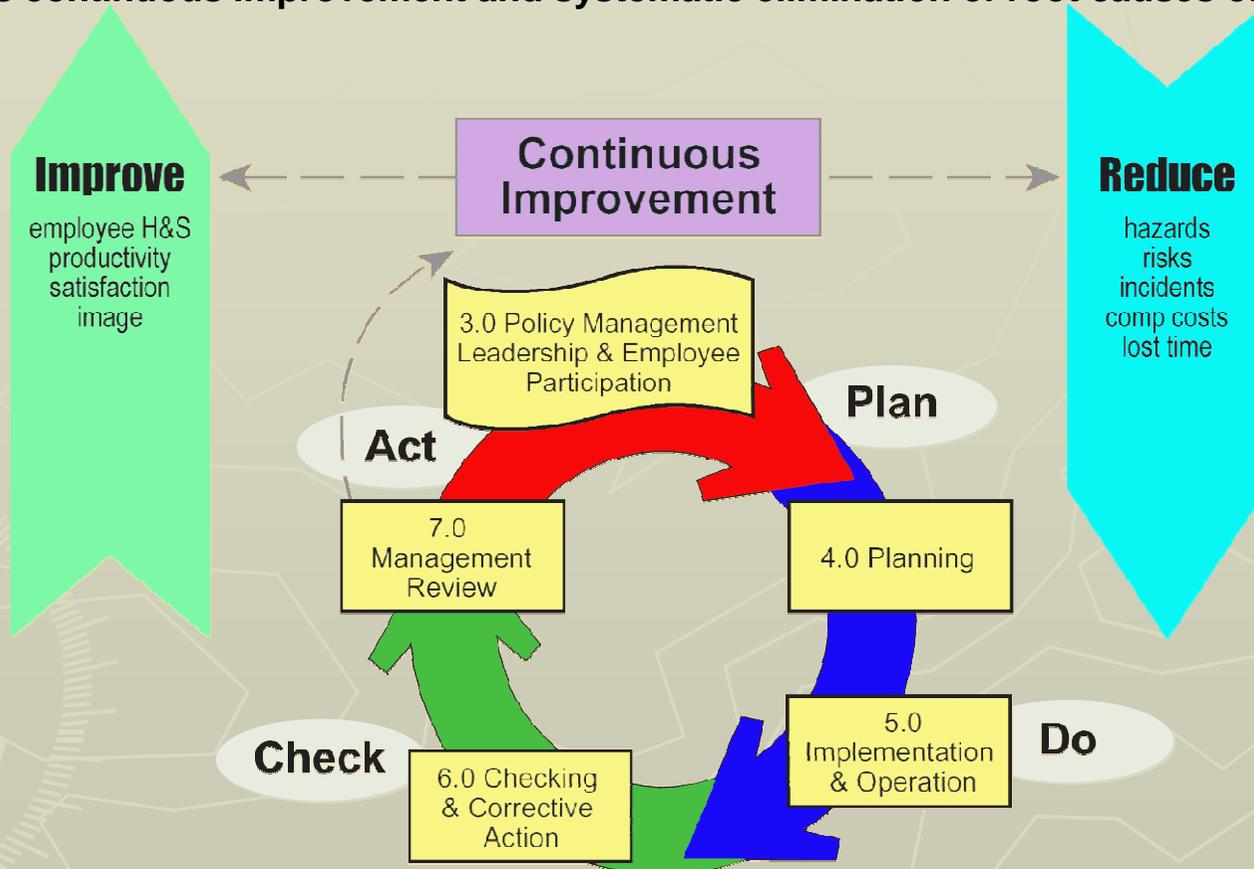


“Leading indicators are the performance drivers that communicate how outcome measures are to be achieved.” Robert S. Kaplan and David P. Norton, *The Balanced Scorecard*



The 2006 ANSI-Z10 Occupational Health and Safety Management System (THE New US Model)

Emphasizes continuous improvement and systematic elimination of root causes of deficiencies.



ANSI-Z10 is essentially an ISO 14000 Environmental Mgmt System without heavy paper documentation, with a Hazard Recognition and Control function, and some of the Employee Involvement aspects of OSHA VPP “Star”.



ANSI-Z10 – The new American Model for Occ Health and Safety Management Systems

Mgmt Leadership & Employee Participation

3.1 Management Leadership

3.1.1 Occupational Health and Safety Management System

3.1.2 Policy

3.1.3 Responsibility and Authority

3.2 Employee Participation

Planning

4.1 Initial and Ongoing Reviews

4.1.1 Initial Review

4.1.2 Ongoing Review

4.2 Assessment and Prioritization

4.3 Objectives

4.4 Implementation Plans and Allocation of Resources



ANSI-Z10 – The new American Model for Occ Health and Safety Management Systems

Implementation of the OH&S System

5.1 OHSMS Operational Elements

5.1.1 Hierarchy of Controls

5.1.2 Design Review and Management of Change

5.1.3 Procurement

5.1.4 Contractors 17

5.1.5 Emergency Preparedness 18

5.2 Education, Training, and Awareness 18

5.3 Communication 19

5.4 Document and Record Control Process 20



ANSI-Z10 – The new American Model for Occ Health and Safety Management Systems

Evaluation and Corrective Action

- 6.1 Monitoring and Measurement
- 6.2 Incident Investigation
- 6.3 Audits
- 6.4 Corrective and Preventive Actions
- 6.5 Feedback to the Planning Process

Management Review

- 7.1 Management Review Process
- 7.2 Management Review Outcomes and Follow Up



Key Steps of Systems Success

1. **Clearly Define Your Global Mgmt Program, Processes**
 - a) **Examples: Phelps Dodge 48 S&H Mgmt Guidelines, BHP 98 S&H Management Guidelines, Calpine 40 S&H Guidelines**
 - b) **Define Your System separately and in addition to Processes**
2. **Quantitatively Measure Conformance**
 - a) **Develop Clear and Objective Audit Criteria**
 - b) **Quantify “Percent Implementation” of that Criteria**
3. **Enable Consistent Broad-Based Action**
 - a) **Assure all Audit Activity includes Criteria**
 - b) **External Audits, Internal Audits, Corp Goals**
 - c) **A New “Must Have”: Transparent Real-Time Tracking Tool**
4. **Feedback Loop for Results**
 - a) **Include All Mgmt/Legal/Staff on Real-Time Results**
 - b) **Never Forget the Power of Self-Audit & Reporting**

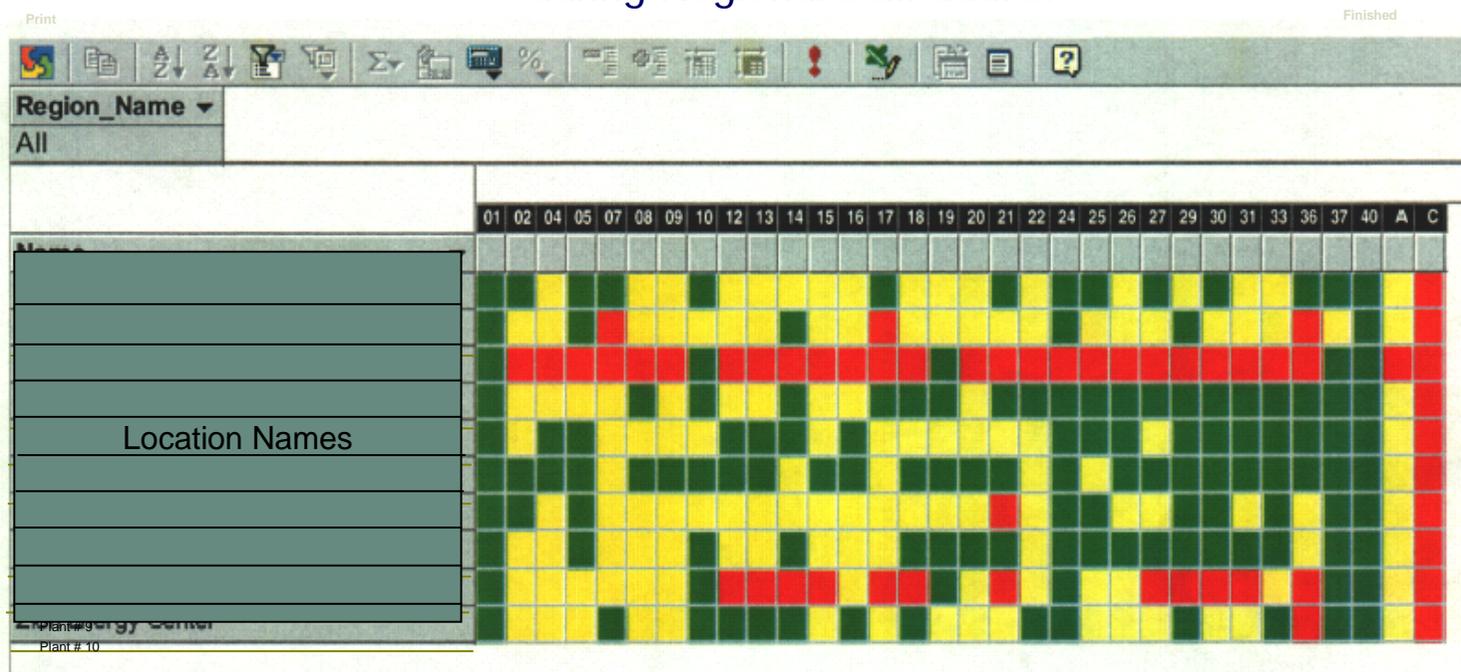


Intranet Real-Time OHS Tracking Tool

Measuring Current System Implementation Status of 40 Safety and Health Corporate Guidelines

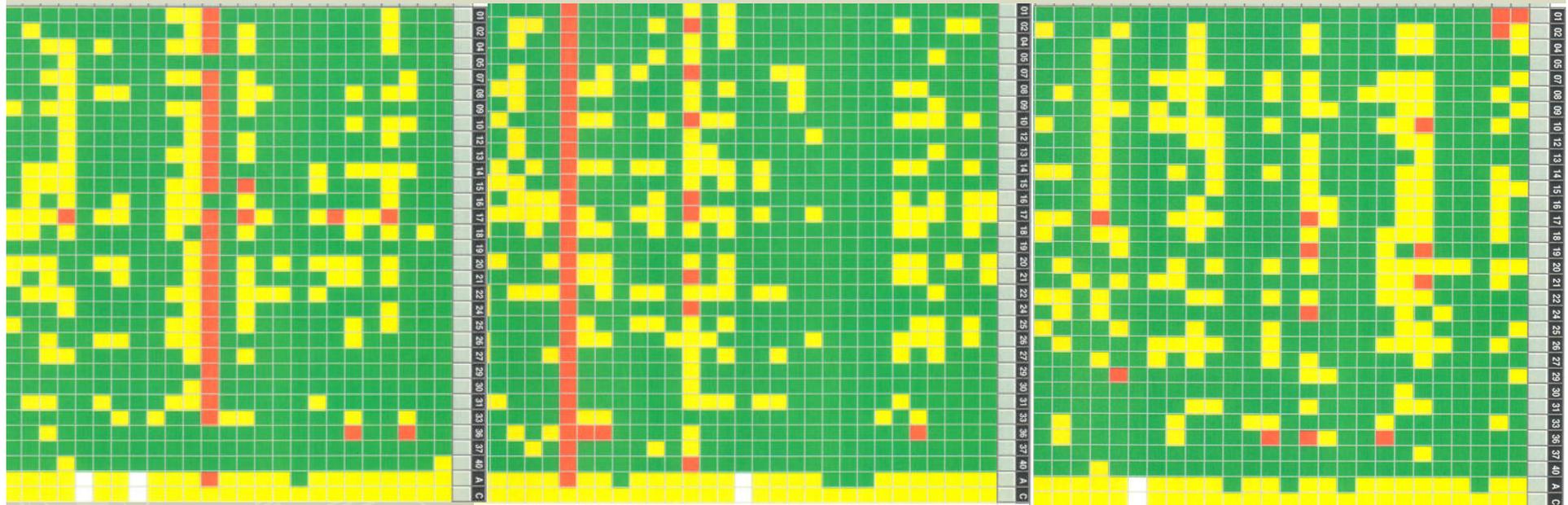
Calpine Safety Assessment System

% Elements Implemented = "Leading KPI" of Safety Risk Management Process as Reported by plants during self-assessments and confirmed during Regional staff audits.





Corp & BU Mgmt “Sea of Green” Charts



- Red indicates Process is <70% Complete
- Yellow indicates Process is >69% but less than 99% Complete
- At 100% Implementation, Chart will be solid Green
- Next to bottom row is Plant Average
- Bottom Row is Business Unit Avg or Total Corporate Avg
- Rolling Cursor over squares gives numerical score

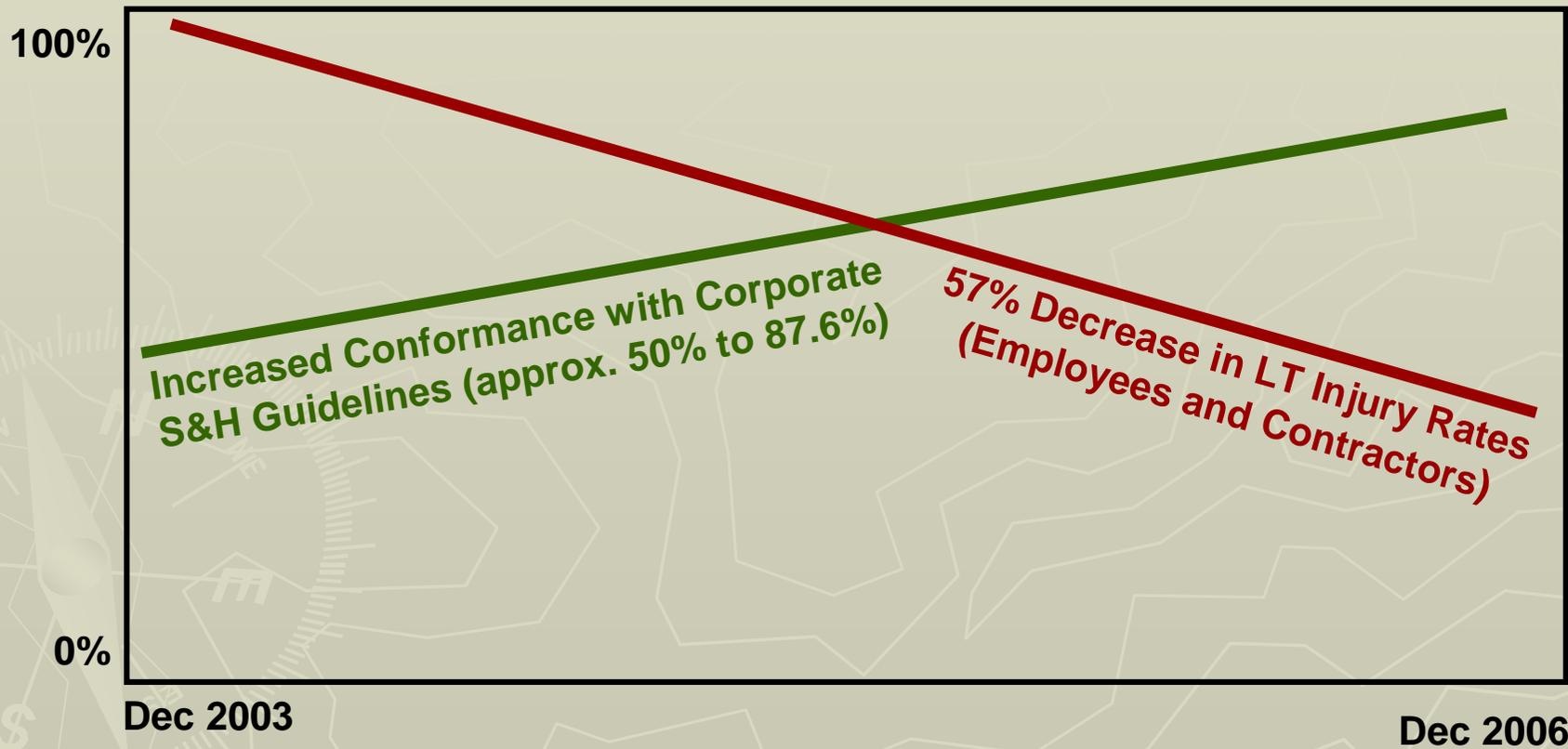


Real Time System Implementation Tracking Tool...A few more Details....

1. Software was developed by contract programmer, \$50K budget, EHS staff defined Input and Output.
2. Input Self Assessment Question Set is Very Specific, i.e.; OSHA + Industry + Company + Site criteria
3. Output Scorecards for Sr Mgmt, Ops Mgmt, Staff i.e.; Red-Yellow-Green “Sea of Green” Charts
4. Documented practices for rollout. Minimal Training.
5. Expect key new cultural force from “real-time” expectation driven by (weekly) operations management meetings (negative focus on who is still red, positive focus on who is now green).
6. Immediate availability trumped more functionality available from commercial vendors, ProcessMAP, etc.



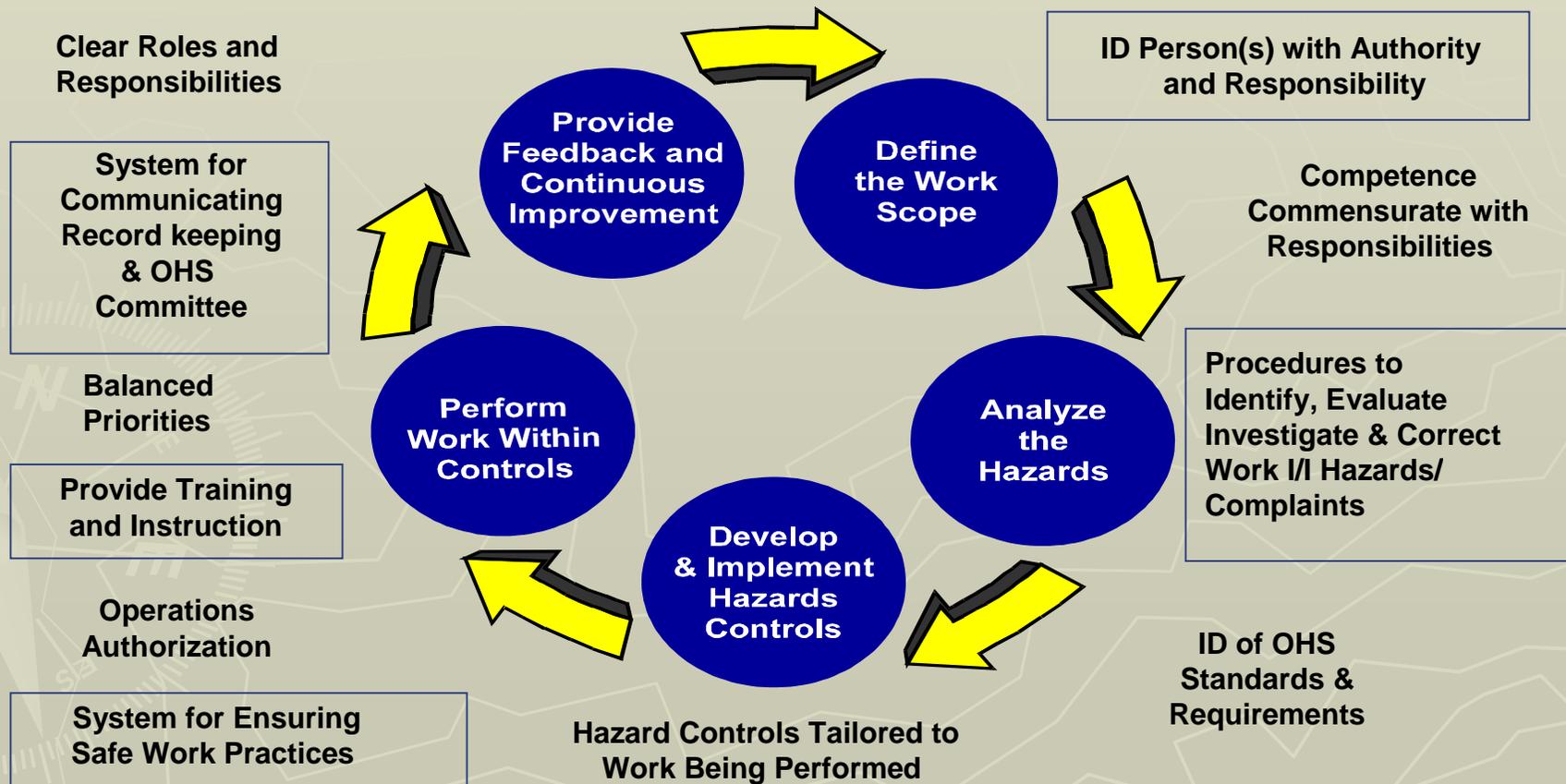
Results





THE FUTURE: Systems Drive Manager/Employee Responsibility for Most OHS Tasks, With Professional Staff Support of Process

Systems that *work* are designed by professionals, driven by business managers, and implemented daily by employees.





Management Leadership And Employee Participation Requirements Of ANSI-Z10

Management shall

- Establish a documented Policy as the foundation;
- Monitor performance;
- Provide appropriate resources (financial, human and, organizational)
- Define roles, assign responsibilities, establish accountability, delegate authority;
- Integrate into other business systems;
- Ensure effective employee participation in Planning, Implementation, Evaluation, Corrective Action;
- Provide timely access to information; and
- Identify and remove obstacles to participation.

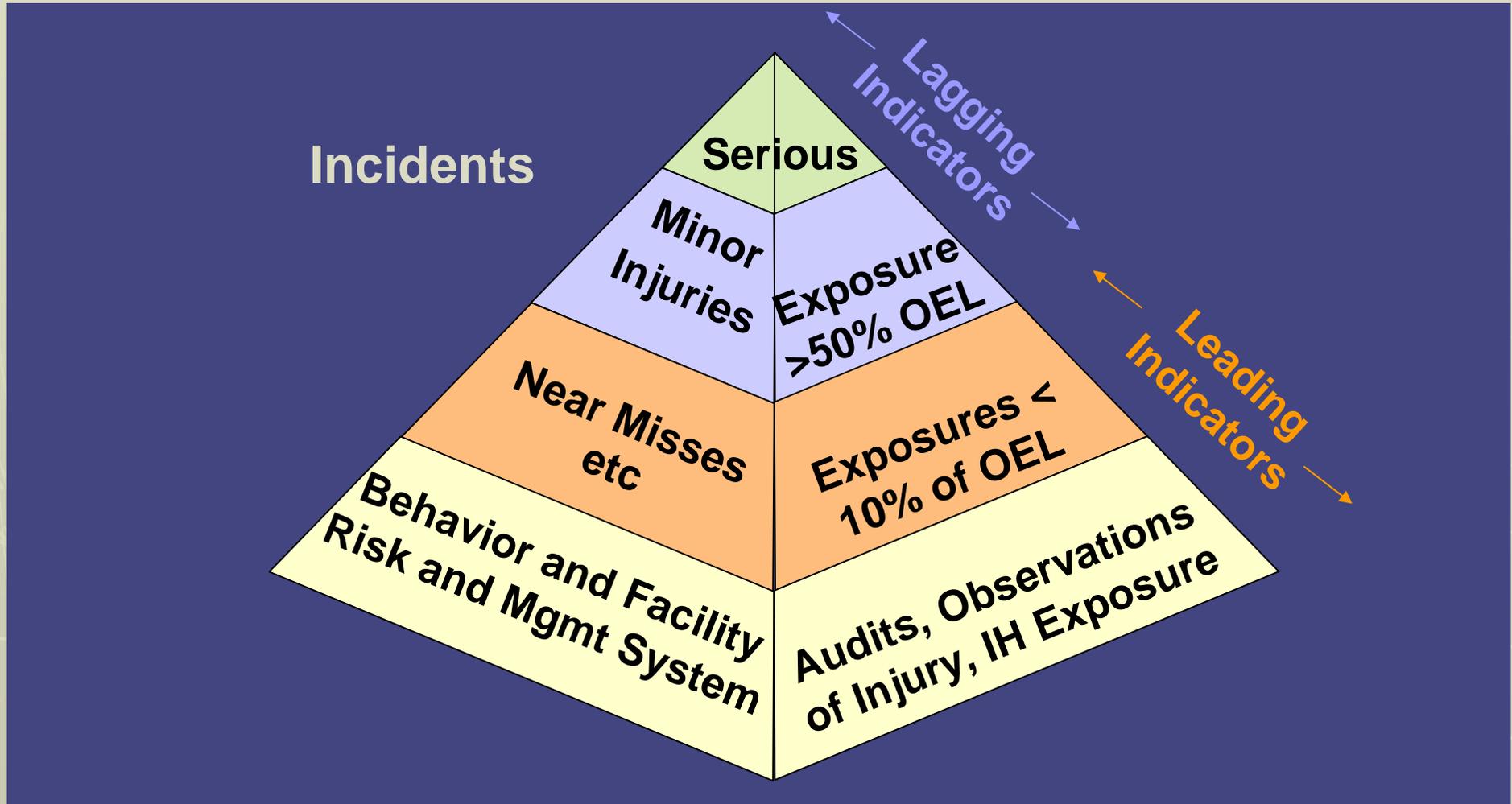
Employees shall

- Assume responsibility for aspects over which they have control.
- Adhere to the rules and requirements.



MEASURING Leading AND Lagging Indicators

Gets lots of non-EHS staff involved in management





In Addition to ANSI Z10, the Key Drivers of EHS Activities in America are Changing....

New Drivers of EHS =

- **Health Care Costs:** Merging of “at work” and “after work” health. Health Protection = Health Promotion.
- **Globalization:** US no longer setting THE Policy. International consensus is setting the policy.
- ISO Standard on “**Social Responsibility**”

John Howard

2005 3rd Triennial AIHA Management System Symposium



OHS Programs Come and Go, Systems Help OHS Evolve or at least Not Regress



Thanks to Scott Adams and Dilbert!

SOMETHING LEGAL TO REMEMBER: As a National Standard, ANSI-Z10 2005 defines the "Current State-of-the-Art" level of injury and illness controls that a "Reasonably Prudent" organization should have in place in a reasonable time after its publication in 2005...



Questions and Comments?

Thanks!

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