Caterpillar Safety Journey
Enterprise Safety Results

Recordable Injury Frequency

- Safety SIP: 6.22 in 2003 (37%)
- Vision Zero: 5.01 in 2004 (44%)
- Ergo SIP & CPS: 3.94 in 2005 (54%)
- Cultural Transformation: Target 1.17 in 2006 (42%)

Yearly Safety Counts:
- 2003: 6.22
- 2004: 5.01
- 2005: 3.94
- 2006: 3.07
- 2007: 2.20
- 2008: 1.66
- 2009: 1.17
- 2010: 1.18
- 2011: 1.03
- 2012: 1.02
- 2013: 0.78
- 2014: 0.71
- 2015: 0.59
- 2020 Target: 0.6

Vision Zero
Lost Time Case Frequency Rate

LTCFR: Workplace injuries resulting in one day, or more, of time lost from work normalized to a rate of 200,000 exposure hours.
Team Goal

“Provide the officers of the company the Leadership Process through which they drive safety excellence in their organizations by implementing robust safety management processes throughout those organizations.”
Reasons for Our Initial Success

- Executive office commitment
- Targets and accountability
- Embedding safety into strategy and values
Enterprise Safety Results

Recordable Injury Frequency

- Safety SIP 37%
- Vision Zero 44%
- Ergo SIP & CPS 54%
- Cultural Transformation 42%

-Yearly Injury Frequency:
- 2003: 6.22
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Rolled Out 2006

Process provided the framework to drive consistent safety processes across the enterprise. The Vision Zero program standardized several safety initiatives, including leadership accountability, employee learning, safety communications, safety evaluation and continuous improvement, leadership safety walks, and employee recognition processes.
Vision Zero - 2006

Focus on Culture

- **Five critical elements**
  - Management Leadership, Involvement and Accountability
  - Employee Engagement and Learning
  - Safety Process Evaluation and Continuous Improvement
  - Communication and Recognition
  - Integration of Safety into Business Processes

- **Nine best practices**
  - Rationale
  - Action items
  - Tools and templates
  - Process metrics
Vision Zero - Priorities

First Things First
1. Accountability
2. Daily Business Activities (Safety Walks)
3. Safety Learning
4. Incident Notification and Review
5. Integration with Business Processes
6. Communications

Set the tone and drive change

Save for Later
1. Annual Review and Improvement
2. Recognition
3. Best Practices

Sustain the gains
Enterprise Safety Results

Recordable Injury Frequency

- Safety SIP 37%
- Vision Zero 44%
- Ergo SIP & CPS 54%
- Cultural Transformation 42%

Target

Year: 2003 to 2020
2007 Highlights

- Safety again selected for SIP project.
- Ergonomic Excellence.
- CPS
- NPI
Team accomplishments

- Created Ergonomic/Safety FMEA Assessment Tool
- Introduced Guidance Documents to Planning & Operations
- Integrated Training & Ergonomic Requirements into NPI Process
- Integration with CPS
## Risk Assessment Tool

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### Risk Rating
- **Risk rating high = 64 or greater**
- **Risk rating medium = 25 to 63**
- **Risk rating low = 24 or less**

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### Work Element
List work elements of the job as defined in the standard work for this job.

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Caterpillar Production System

 Rolled Out 2006
 The Caterpillar Production System is the common Order to Delivery process implemented enterprise-wide to achieve our Safety, Quality and Velocity goals.

 Three Systems
 • Operating
 • Cultural
 • Management

 15 Guiding Principles

 Eight Wastes
**Systems**

The Cultural System is focused on making change possible and improving the way we work.

**Put Safety First:** Build a Safety First culture by placing the highest priority on eliminating safety-related waste.

**Take the Customer’s View:** Make decisions based on the customer’s view and the long-term Caterpillar strategy, even at the expense of near-term goals.

**Go, See, Act:** See it first-hand to ensure thorough understanding.

**Stop to Fix:** Cease production when a problem occurs to correct it in process; this means we build-in station as planned.

**Develop People:** Identify, attract and develop people and teams to build Caterpillar’s long-term capability.

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**Wastes**

- **Unused Creativity/Capability:** Lost opportunities due to poor safety and an underutilized workforce.
- **Defects:** Production or rework of out-of-specification parts.
- **Inventory:** Excess raw material, work-in-process or finished goods.
- **Over Production:** Excess supply beyond the requirements of the next process.
- **Waiting:** Lost time due to poor product flow — shortages, bottlenecks, down machines.
- **Excess Motion:** Wasted movement made while working.
- **Transportation:** Excess movement of work-in-process.
- **Over Processing:** Work that adds no value to the customer or business.
Enterprise Safety Results

Recordable Injury Frequency

- Safety SIP 37%
- Vision Zero 44%
- Ergo SIP & CPS 54%
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Target

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<td>2020 Target</td>
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What’s Next?

Recordable Injury Frequency

2009: 1.17
2010: 1.18
2011: 1.03
2012: 1.02
2013: 0.78
2014: 0.71
2020: 0.6

41% Gap
Cultural Transformation Project

- Issues with RIF
- Program maturity – ready for the next step
  - Conditions
  - Behaviors
  - Culture (True culture can be hidden)
- New Initiative – Safety cultural transformation
  - Assessment
  - Solutions
Using RIF to Measure Safety

- Facility #1 – 100 employees
  - A heavy object falls from a platform and narrowly misses an employee.
  - An employee lifts a 40 kg load but does not injure his back.
  - An employee working from the top of a stepladder falls but is not injured.

  RIF is world class = zero

- Facility #2 – 100 employees
  - An employee walking between buildings at a facility is stung by a bee.
  - An employee walking on a smooth, dry floor trips and breaks a bone.
  - An employee sneezes at work and injures his back.

  RIF is 3 times the enterprise target = 3.0

Is RIF really the right safety metric to measure facility performance?
Caterpillar’s Next Safety Initiative

Develop Leadership Competency (START)

Cultural Assessment (Diagnostic)

Engagement & Solution Development (Treatment)
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The *EHS Assurance Manual: A Practical Global Framework*, identifies the fundamental EHS issues that all Caterpillar facilities must address. There are 29 Essential Elements. Each Essential Element begins with an overview, followed by the Minimum EHS Requirements critical to that Element. The 29 Essential Elements apply to all Caterpillar facilities worldwide.
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2015 Self-assessment Documents

Czech

Dutch

English

French

German

Indonesian Bahasa

Italian

Japanese

Korean

Mandarin

Portuguese
EHS Assurance Manual Website

Essential Element 01 Legal Compliance  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 02 Evaluating Aspects and Risks  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 03 Training  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 04 Planning for Operations Changes  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 05 Contractor EHS Requirements  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 06 Emergency Response Planning & Life Safety  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 07 Metrics and Measurements  
Updated Feb 26, 2015 by Erin Miller  

Essential Element 08 Compliance and Conformance Assessments and Management Reviews  
Updated Dec 22, 2014 by Beatrice Cingotti  

Essential Element 09 Contracts and inspections by Governmental Officials  
Updated Feb 26, 2015 by Erin Miller
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QUESTIONS?