

# Virtual Training and Safety Simulation

Are you doing everything possible to achieve **ZERO** incidents?



# Oil Field Injury / Fatality Statistics

## 2002 to 2007 Statistics

- **598** Oil Field Deaths
- **1,049** N. A. Rigs; April 09 (*WTRG Economics*)
- **290k** to **428k** Roughneck labor increase
- **7** x the average industry Death Rate!
- **29.5** deaths per **100,000** workers

*US Bureau of Labor Statistics*



# Oil Field Injury / Fatality Statistics

## Rates and Costs

- **1,500** non fatal work injuries (est.)
- **75,000** lost work days (est.)
- **\$190,000** total cost per injury (direct & indirect)
- **90%** of accidents caused by Human error
- **78%** injuries caused by unsafe acts

*NIOSH 2007 Incident Rates*



# Oil Field Injury / Fatality Statistics

## Causes and Factors

- Dramatic Increase in Drilling
- Influx of Inexperienced New Workers
- Communications
- High Pressure Environment
- Workplace Safety Lapses
- Fatigue

*CBS News; Snyder Texas, September 11, 2008*



# Oil Field Injury / Fatality Statistics

## OSHA Penalties and Fines

- **\$1,500 to \$7,500** per violation
- **\$70,000** repeat violations within 3 years.
- **\$5,000** willful violation
- **\$500,000 +** violation with a single fatality

*SeaBright Insurance Co. SSU 2008 - 11*



# Oil Field Injury / Fatality Statistics

## Case Example

- Texas City Refinery, May 23 , 2005
- 15 Deaths
- 170 Injuries
- \$50,000,000 in fines
- \$1,600,000,000 in Compensation

*The BP U.S. Refiners Independent Safety Review Panel  
("Baker Report") – January 2007*



# Oil Field Injury / Fatality Statistics

2009 to ...

**What are your Statistics?**

**What are your Causes?**

**What are your Costs?**



# Focus on Technology

- **What can Virtual Processing do for you?**
  - **Safety**
  - **Communication / Collaboration**
  - **Training**



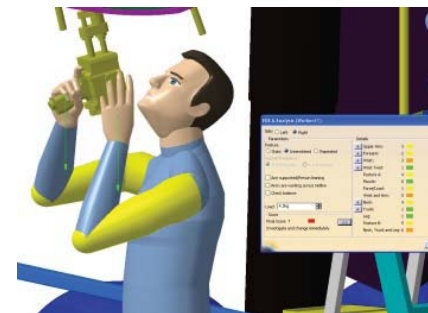
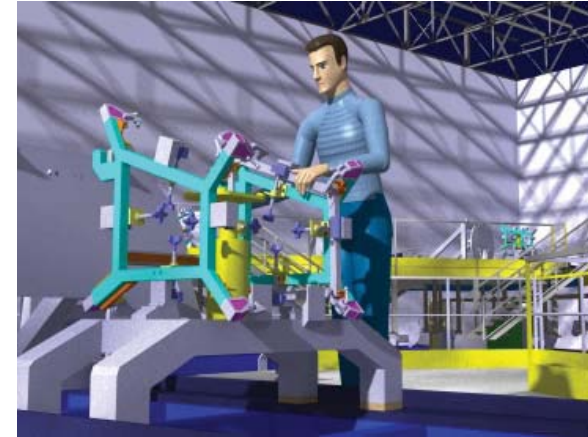
# Focus on Technology

- **What can Virtual Processing do for you?**
  - **Planning**
  - **Sales and Marketing**



# Live Demo Features

- **Fatigue**
- **LOS**
- **Comfort / RYG (Coloring)**
- **Anthropometry / Population / Globalization**
- **Maintenance Application**



# Return On Investment

## Asset Management

- People
- Work Instructions
- Workflow, Processes

## Costs

- Penalties
- Medical Treatment
- Training
- Transportation
- Lost Production



# About EOS SOLUTIONS

- A Premier Dassault Systemes Business Partner
- Focused in the Oil & Gas Industry
- Resources Dedicated to Safety with *Virtual Ergonomics & Human Factors*
- Expertise in *Virtual Workflow Planning & Asset Management Maintenance*
- Solutions to Reduce Cost and Improve Production



# Questions

