

A faint, light blue silhouette of an oil rig is positioned on the left side of the slide, extending from the top to the bottom. It is partially overlaid by a large, light orange curved shape that frames the right side of the slide.

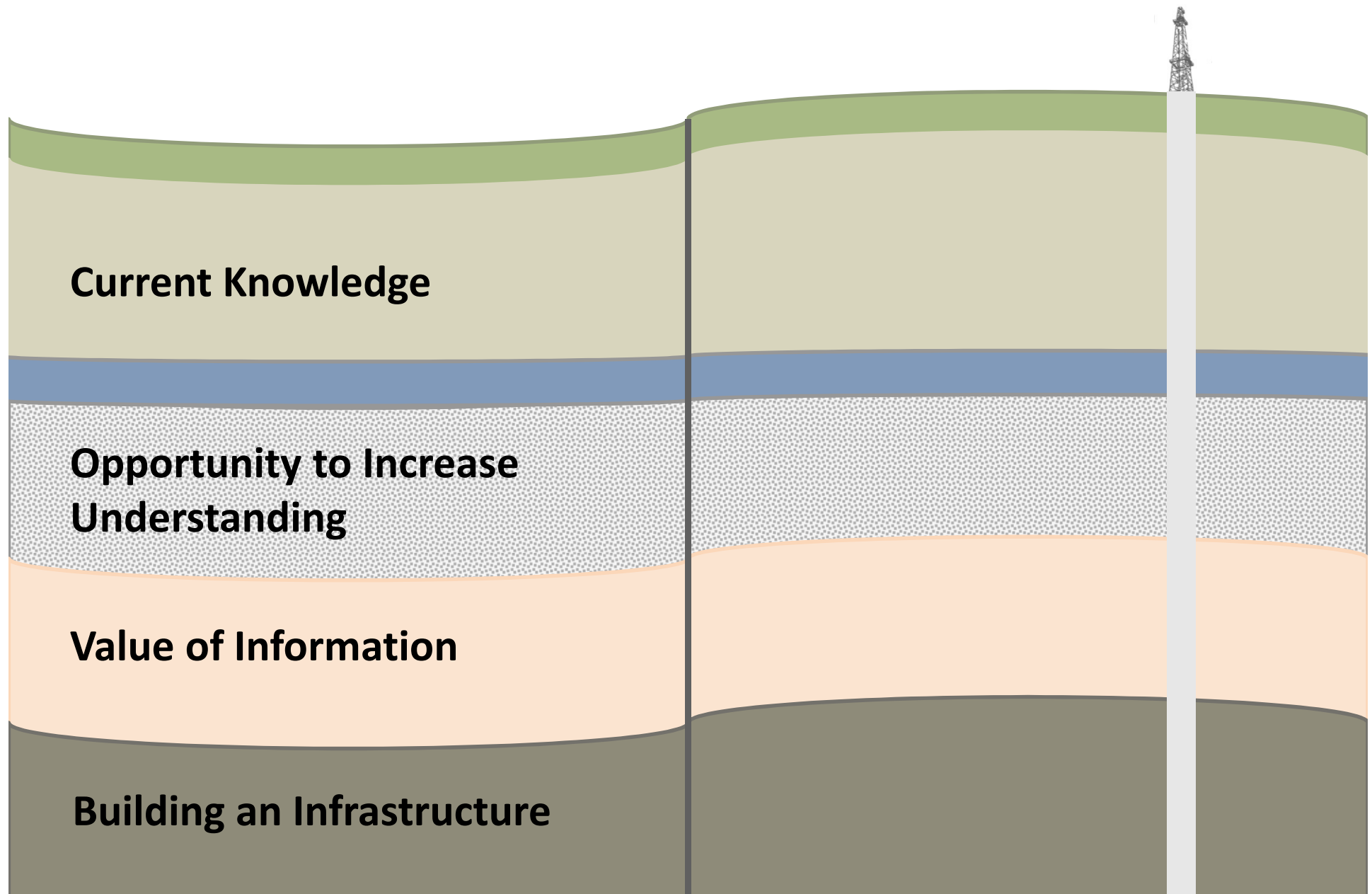
# FOG

**Enhancing our understanding of  
fatal events in the oil and gas extraction industry:  
a collaborative pilot project**

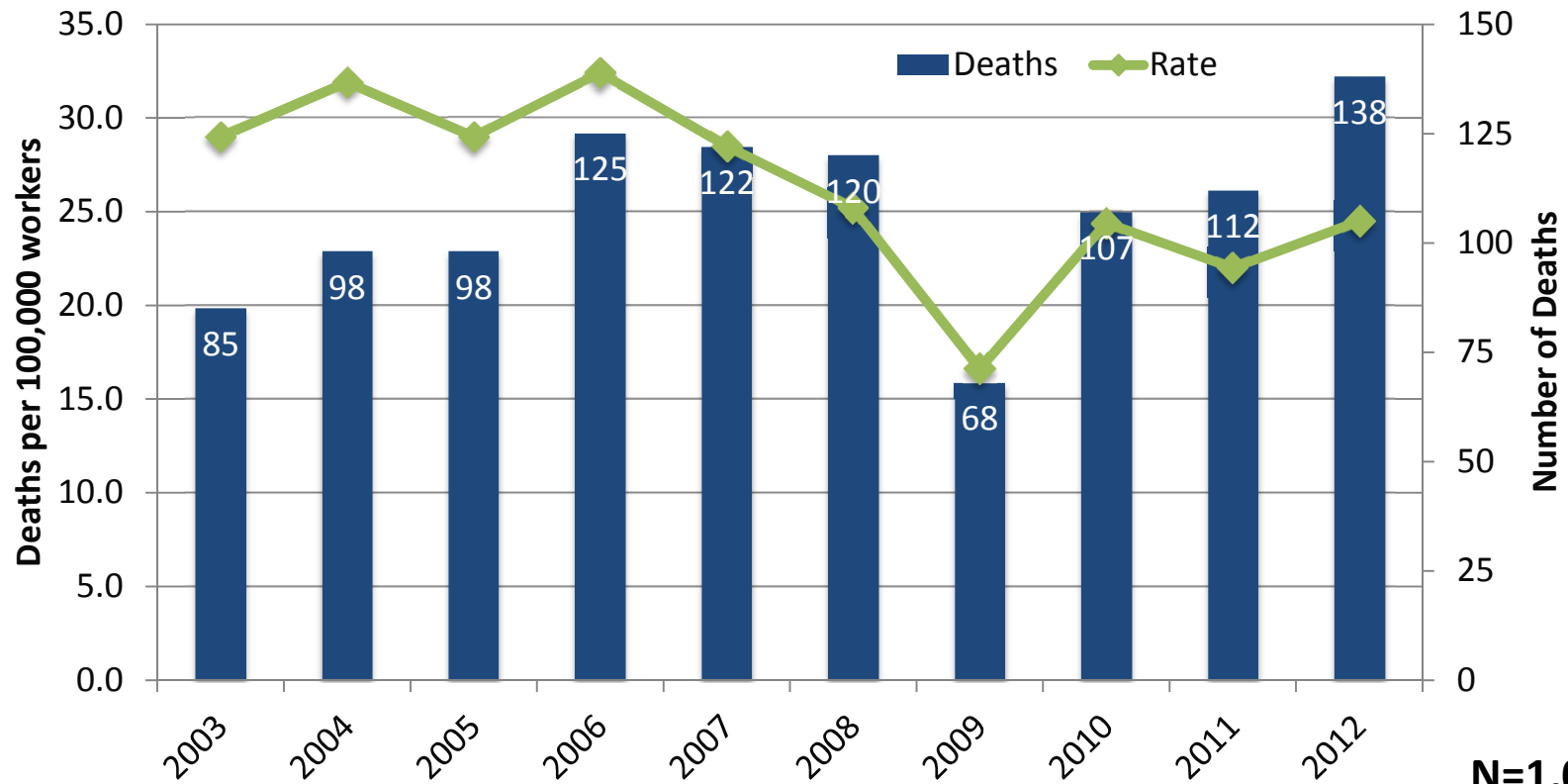
**Sophia Ridl**

**NIOSH Oil and Gas Safety and Health Program**

# Drilling Down

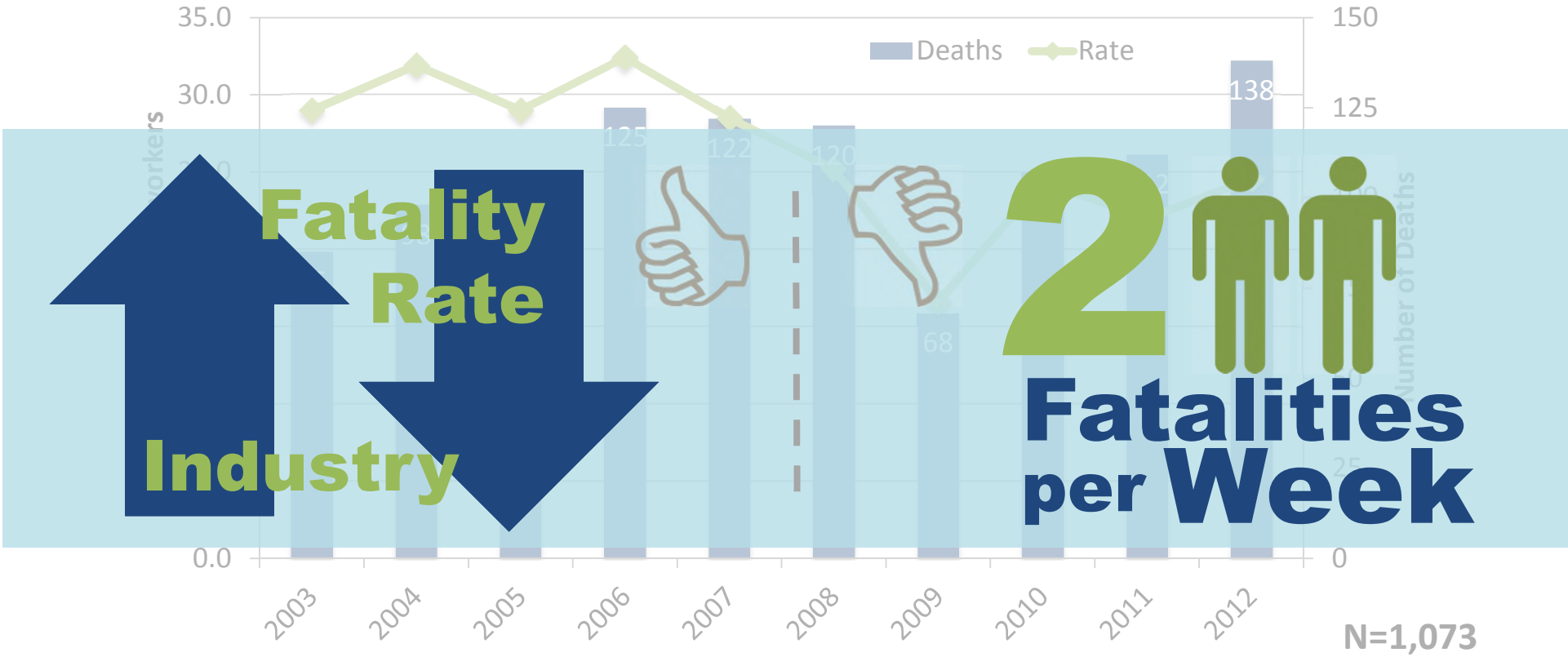


# Number and Rate of Fatalities, U.S. Oil & Gas Extraction Industry, 2003-2012



Note: Fatality counts from BLS Census of Fatal Occupational Injuries. Worker Estimates from BLS Quarterly Census of Employment and Wages (2013). Rate per 100,000 workers per year. Includes NAICS 211, 213111, 213112.

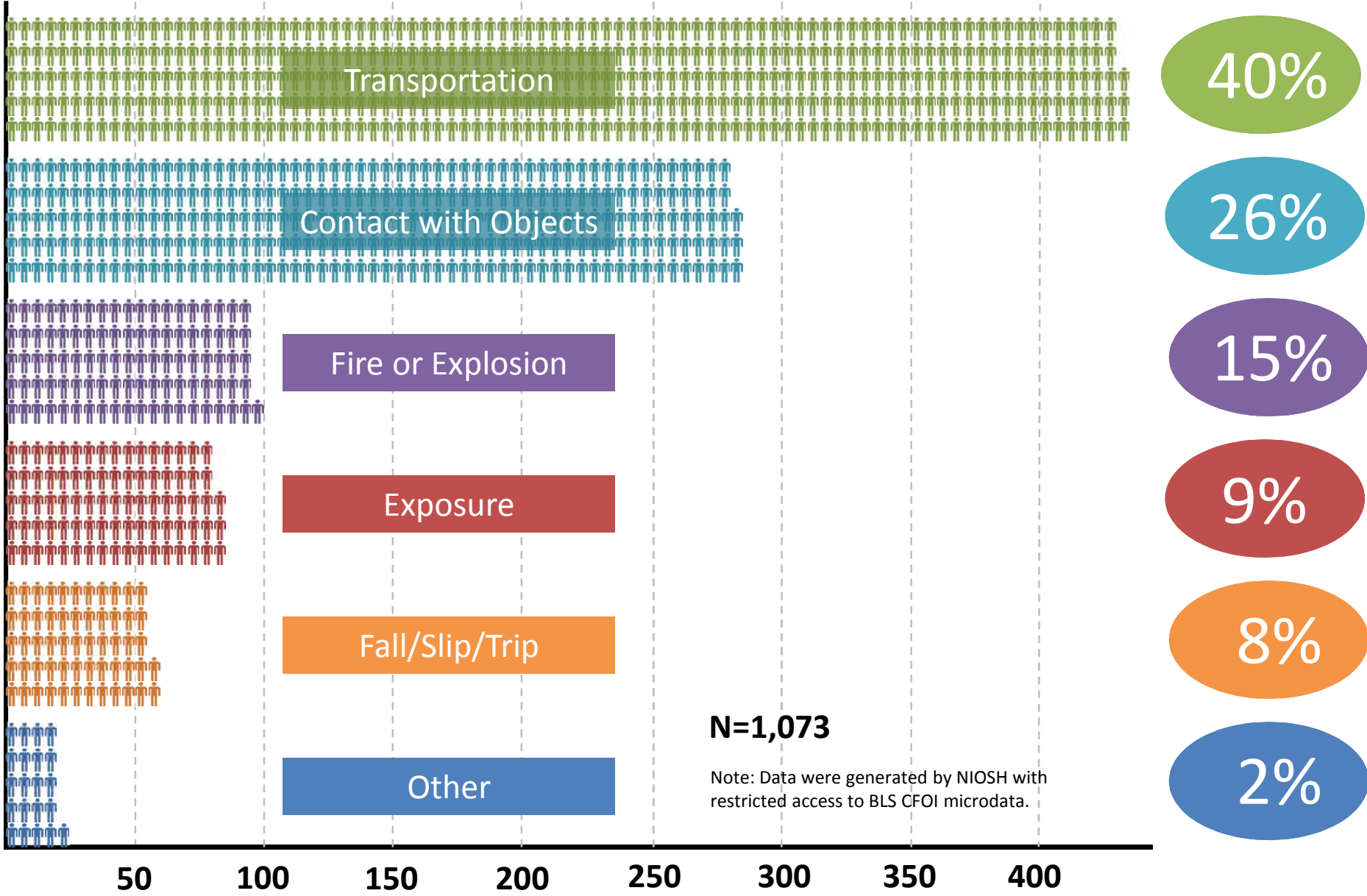
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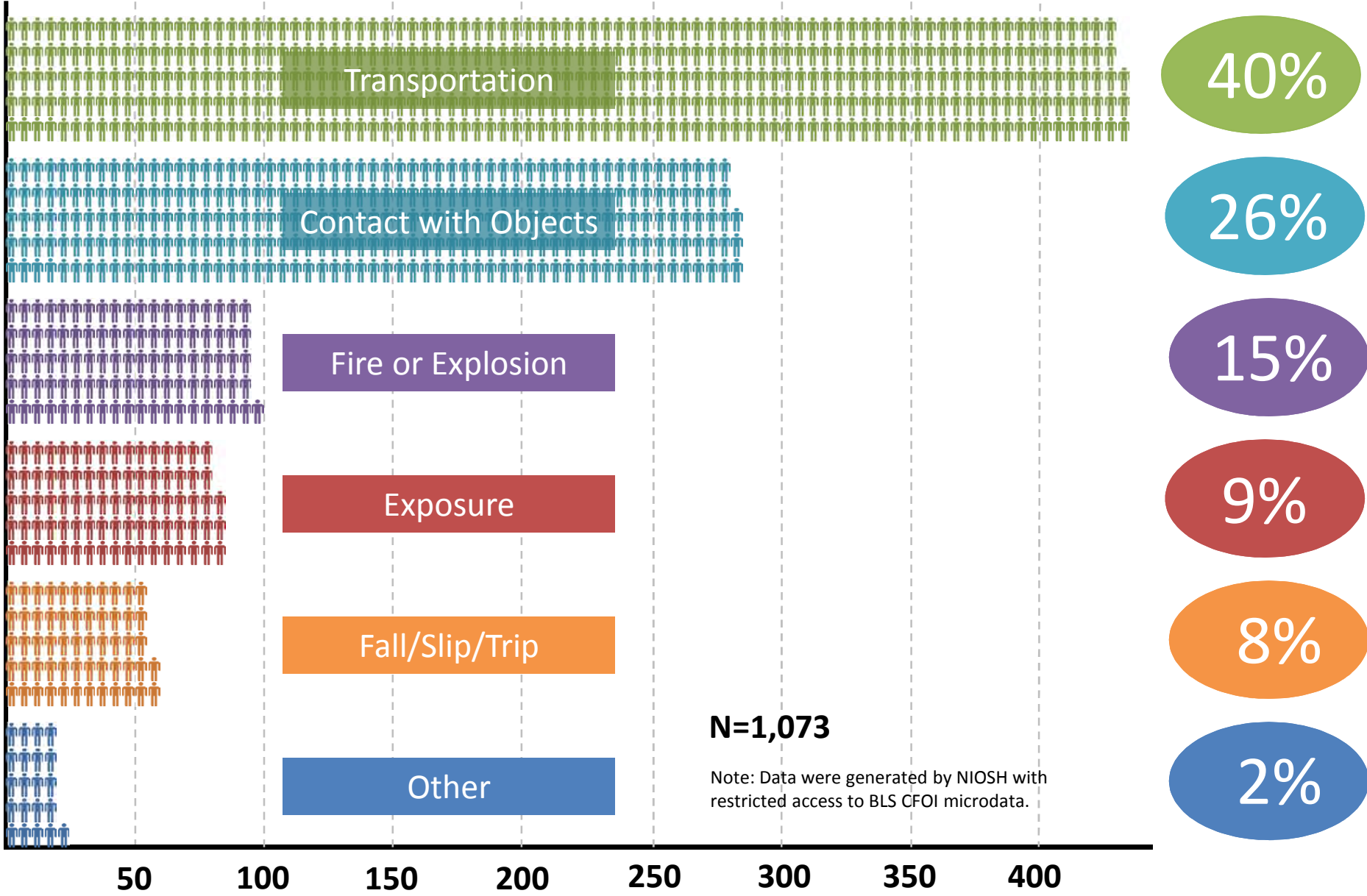
# Most Frequent Fatal Events

## U.S. Oil & Gas Extraction Industry, 2003-2012



# Most Frequent Fatal Events

## U.S. Oil & Gas Extraction Industry, 2003-2012



*Different risks for different basins?*

*Is distraction or fatigue a factor?*

## Struck by what?

*Do they work where they live?*

**Are some vehicles more dangerous?**

*what are the most common ignition sources?*

*What are the most dangerous operations?*

# Fatalities in Oil and Gas (FOG) database



35

## Variables per Incident

- ✓ Operation
- ✓ Basin
- ✓ Fatigue Related
- ✓ Weather Related
- ✓ Offshore Incidents

FOG collects the details that are missing from other data sources



21

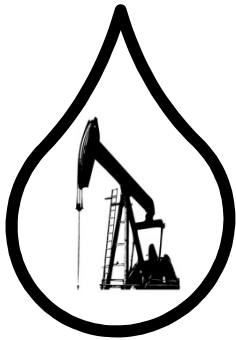
## Variables per Worker

- ✓ Race
- ✓ Occupation
- ✓ Years in Oilfield
- ✓ Contractor
- ✓ Task

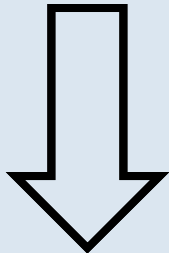


# Fatalities in Oil and Gas (FOG) database

## The tool to understand Oil and Gas Extraction worker fatalities



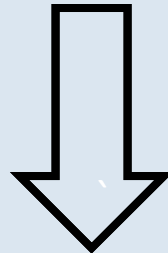
Industry Specific



Meaningful Data



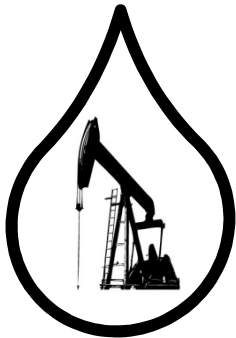
Real Time



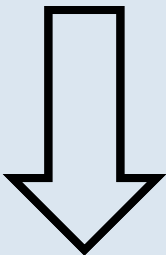
Accurate Information

# Fatalities in Oil and Gas (FOG) database

## The tool to understand Oil and Gas Extraction worker fatalities



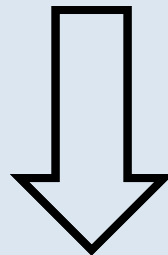
Industry Specific



Meaningful Data



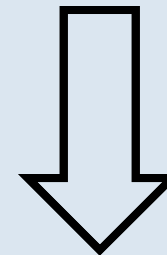
Real Time



Accurate Information



Customizable



Change with Industry

# Fatalities in Oil and Gas (FOG) in Action

Step 1



**Request for Information**

Step 2



**Data Extraction**

# Fatalities in Oil and Gas (FOG) in Action

Step 1



**Request for Information**

Step 2



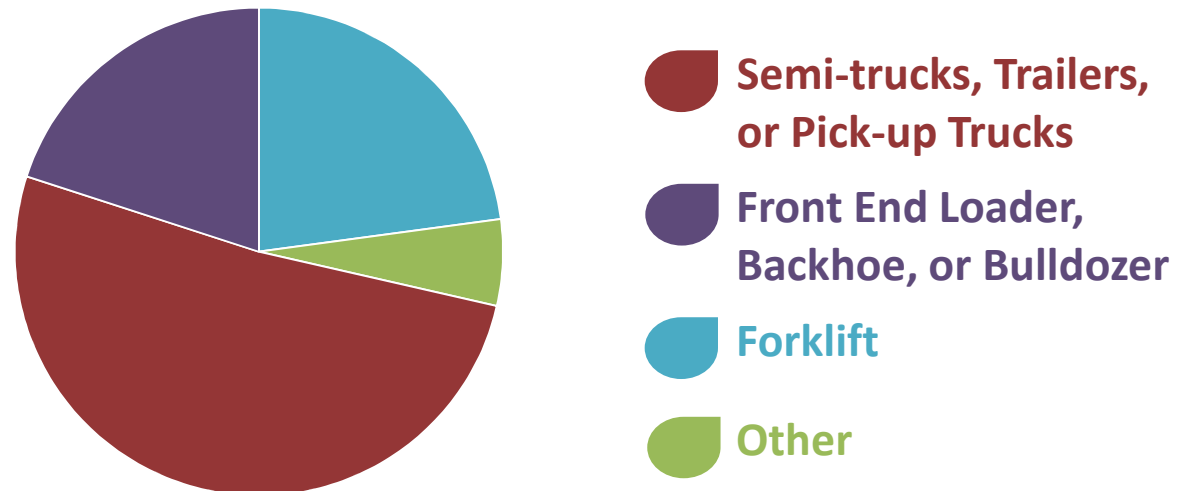
**Data Extraction**

Step 3



**Results**

**On-Site Fatalities Involving Industrial Vehicles  
2005- June 2013**



# Initial News Reports



● 44 years old

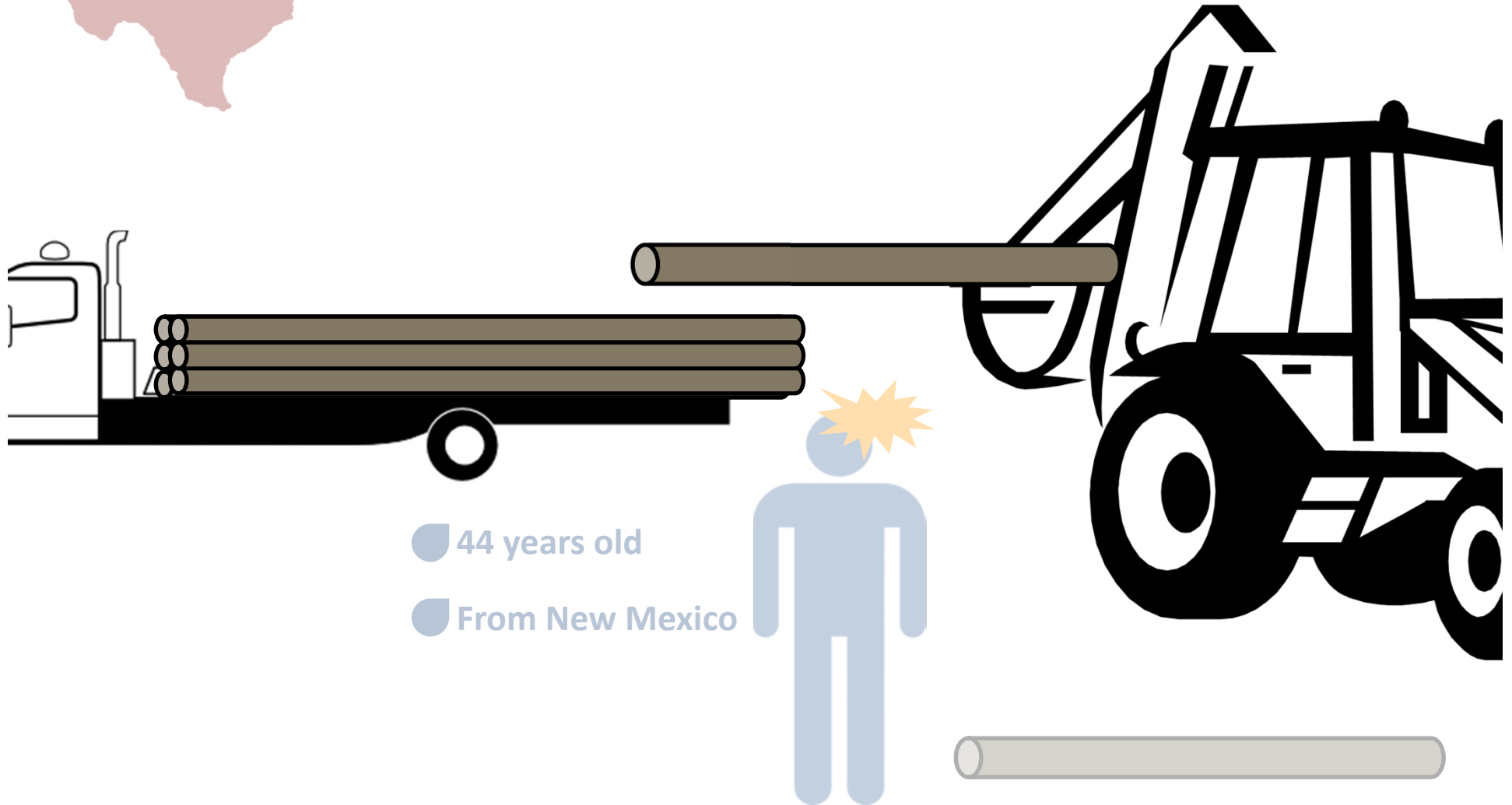
● From New Mexico



# Preliminary OSHA Report



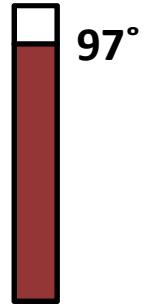
15 employees



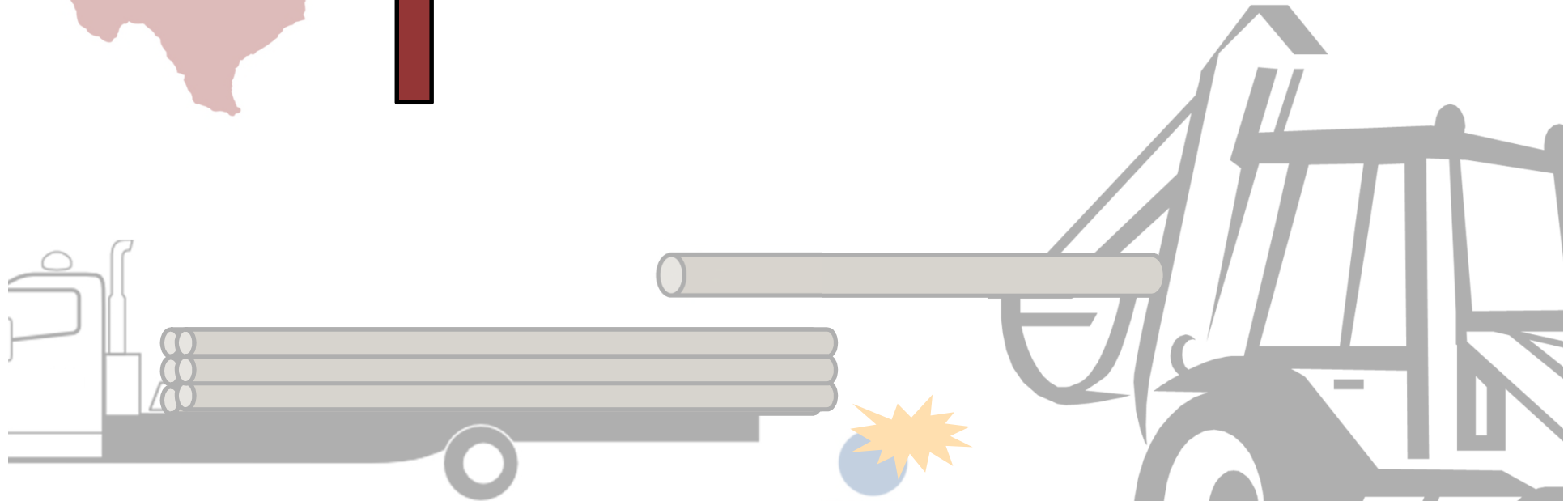
44 years old

From New Mexico

# First Responders and Coroner



15 employees



Heart Condition

44 years old

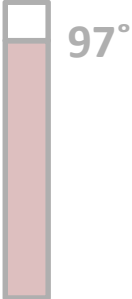
Hispanic

From New Mexico

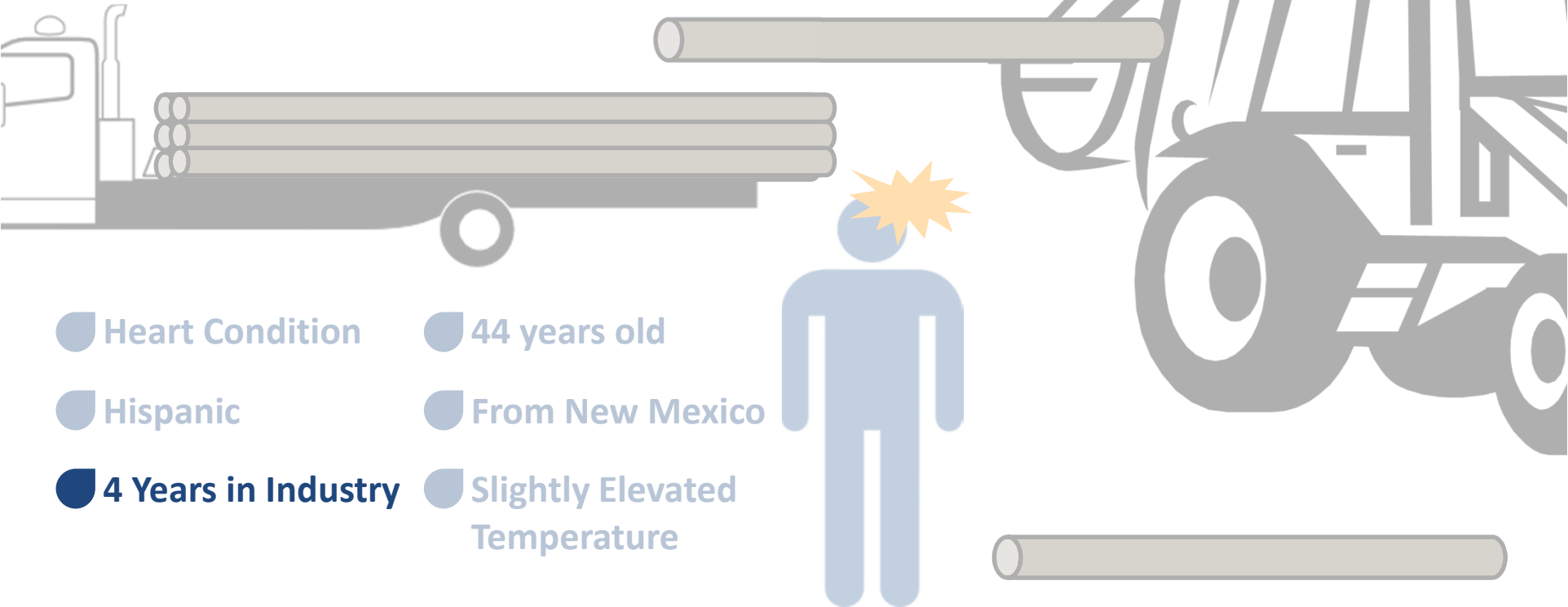
Slightly Elevated Temperature



# Full OSHA Report



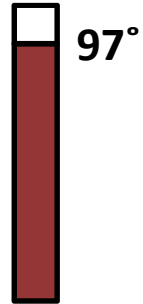
- 15 Employees
- Behind Schedule



- Heart Condition
- 44 years old
- Hispanic
- From New Mexico
- 4 Years in Industry
- Slightly Elevated Temperature

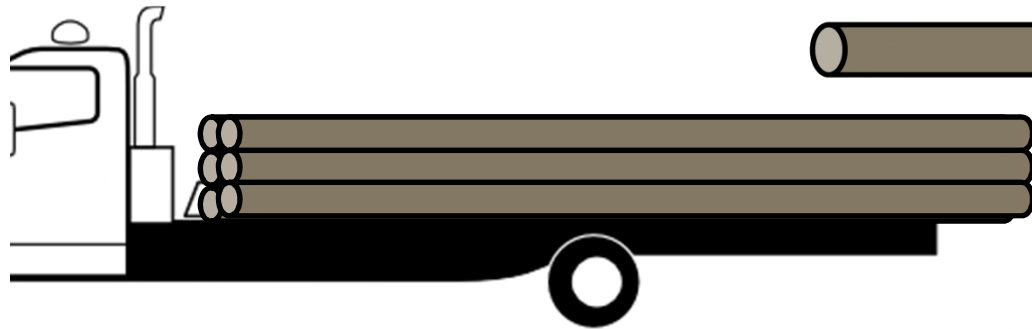


# The Complete Picture



15 Employees

Behind Schedule



Heart Condition

44 years old

Hispanic

From New Mexico

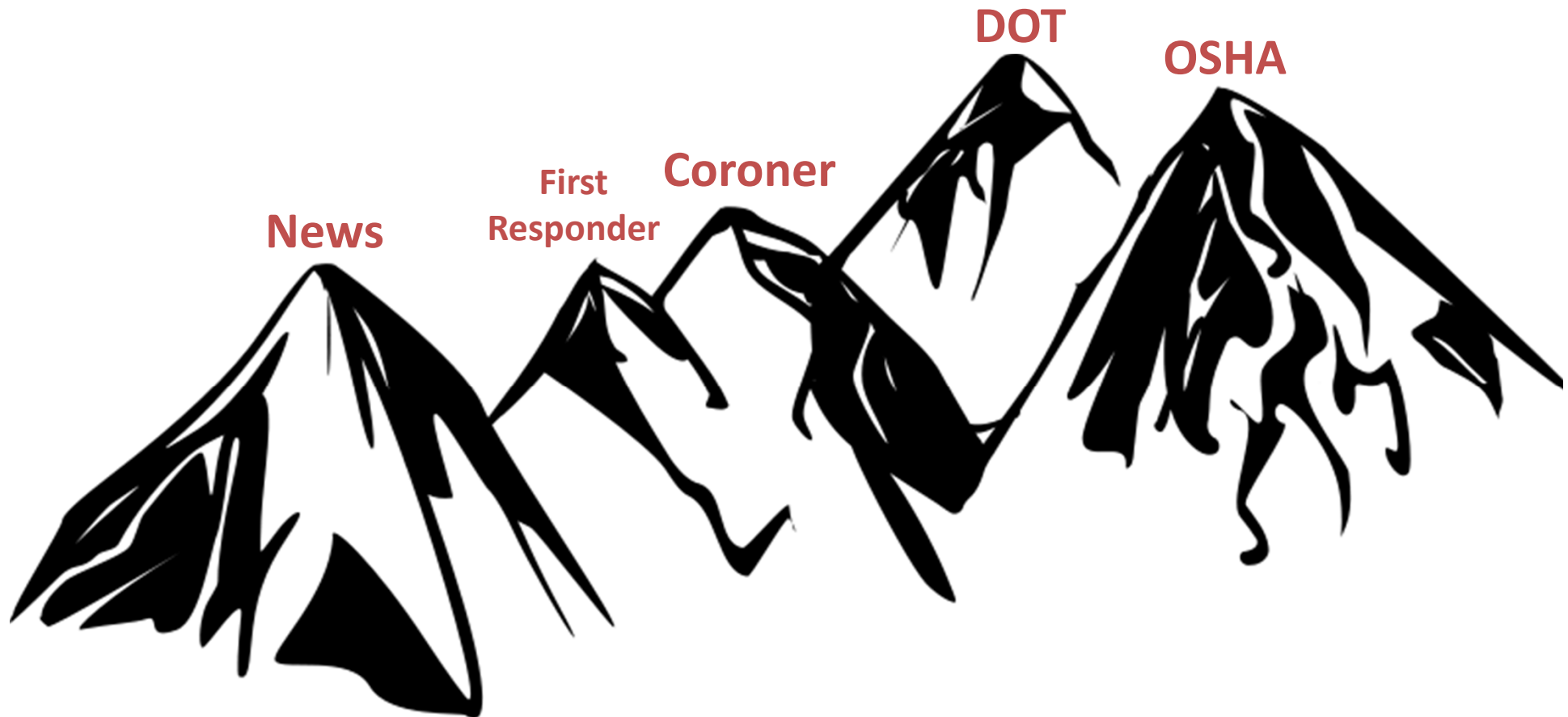
4 Years in Industry

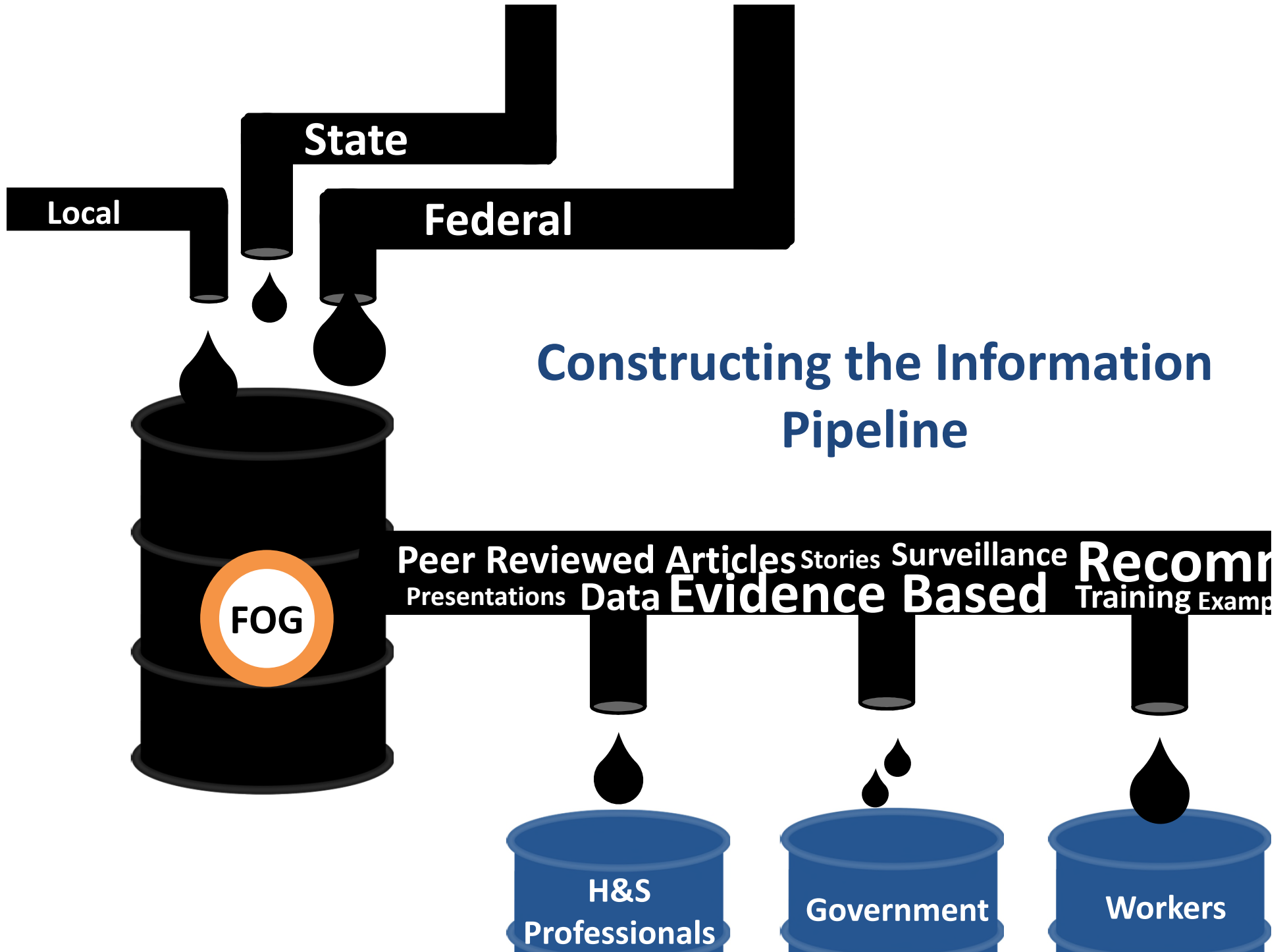
Slightly Elevated Temperature

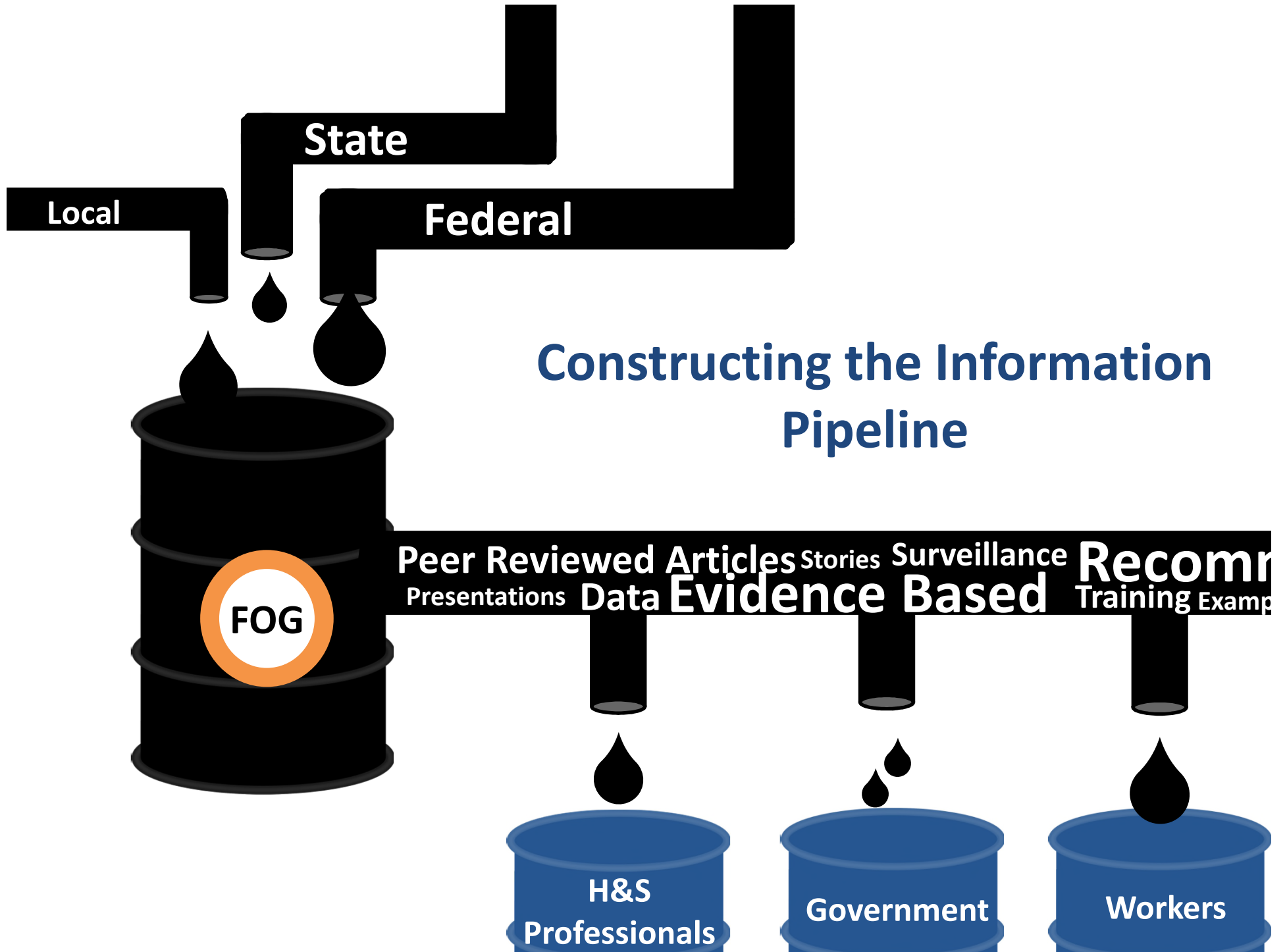


# The Challenge

**We will need to rely on  
many data sources**







## Picture Sources

[http://www.clipartlogo.com/image/oil-well-vectors\\_311786.html](http://www.clipartlogo.com/image/oil-well-vectors_311786.html)

<http://www.clker.com/clipart-man-silhouette-orange-2.html>

<http://www.clipartbest.com/clipart-niXBML5iB>

<http://www.clker.com/clipart-43156.html>

<http://www.clker.com/clipart-248748.html>

<http://www.clipartfree.net/clipart/9715-stopwatch-silhouette-clipart.html>

<http://www.clipartof.com/gallery/clipart/texas.html>

[http://www.clipartpanda.com/clipart\\_images/clipart-mountains-4111947](http://www.clipartpanda.com/clipart_images/clipart-mountains-4111947)

[http://www.clipartpanda.com/clipart\\_images/clipart-oil-barrel-9477131](http://www.clipartpanda.com/clipart_images/clipart-oil-barrel-9477131)

<http://office.microsoft.com/enus/images/results.aspx?qu=bulldozer&queryid=478d2a72%2D5543%2D4743%2Da17a%2D1e55db108e64#ai:MC900188305|>