



# DROPPED OBJECTS

**STILL HARMING**  
**STILL KILLING**



**DROPS**

DROPPED OBJECTS  
PREVENTION SCHEME



“Working to make our  
industry a safer place”

**DROPS**

**DROPPED OBJECTS PREVENTION SCHEME**



- To **raise awareness** of potential dropped objects
- To explore methods for the **control and prevention** of dropped objects
- To recognise your personal responsibilities for the **prevention of** dropped objects
- Eliminate injury to people and damage sustained to equipment due to dropped objects throughout Industry.
- Ultimately to deliver a '**second-nature**' dropped objects prevention strategy



# WHAT IS A DROPPED OBJECT?

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**“ Any object that falls from its previous static position under its own weight ”**



# WE ARE ALL EXPOSED TO POTENTIAL DROPPED OBJECTS

- A book falling from a shelf...
- A slate from a roof...
- A bolt falling from 100m...
- Other **REAL** examples...



# HOW BAD IS THE PROBLEM?

AT WORK :

“ Dropped Objects are among the **Top 10 causes** of Fatality and Serious Injury in the Oil and Gas Industry ”

AT HOME AND AT LEISURE :

“ The top three causes of fatal accidents are... falls from height...being struck by moving vehicles...and **being struck by falling objects** ” (RoSPA)





It's Still Happening...Real Incidents

TABLE 2. Number of fatalities in highway crashes among oil and gas extraction workers, by type of event — United States, 2003–2006\*

Type of event	No. of fatalities
Nontraffic (e.g., rollover in jobbed)	42
Collision between vehicles	40
Vehicle struck stationary object or equipment on side of road	23
Other	5
<b>Total</b>	<b>110</b>

SOURCE: US Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries (2003–2006).  
\* Data for 2006 are preliminary.

Further study and targeted interventions. Vehicles used in oil and gas extraction are exempt from certain U.S. Department of Transportation hours-of-service regulations. Truck drivers and workers in pickup trucks often travel between oil and gas wells on rural highways, which often lack paved road shoulders.

usually pavement. Workers are often back from road shoulders, working 14 days in a row, plus 1 day off. This schedule increases the risk of fatigue.

(9) there is no standard that addresses fatigue among workers in the oil and gas extraction industry. A fatal included in this study.

Many of the hazards associated with using heavy tools in the oil and gas extraction industry remain uncontrolled. For example, heavy pipe can become wedged in workers' most common on-hand-based drilling rigs and an even more with good safety practices because they control a work-related hazard in the source.

The findings in this report are subject to at least three limitations. First, fatality rates were calculated using the employment estimates that are different from the standard employment estimates used by CBOI to calculate occupational fatality rates. Comparison of the fatality rates in this report to other CBOI occupational fatality rates should be interpreted with caution. Second, the data do not provide detailed information on the worker population at risk (e.g., the proportion of new workers), which would allow more detailed analysis of risk factors. Finally, because the calculation of worker fatalities in the industry subsectors

industry, including workers extraction (including wells, drilling wells, and other activities on basis of total fatality counts).

During 2003–2006, 50.5 percent of

fatality rates among workers in the oil and gas extraction industry.

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TABLE 1. Number and rate\* of fatal injuries among oil and gas extraction workers and average number of drilling and workover rigs<sup>†</sup> by year — United States, 1999–2006<sup>‡</sup>

Year	No. of fatalities	No. of workers	Rate	No. of rigs
2006	178	495,161	31.9	5,201
2005	98	338,224	29.0	2,776
2004	98	346,863	31.9	2,417
2003	71	302,646	23.1	2,181
2002	85	308,000	27.6	1,840
2001	98	353,000	27.8	2,367
2000	98	353,000	28.5	1,974
1999	76	319,000	23.8	1,440
1998	70	329,000	21.3	1,515
1997	85	379,000	22.4	2,368
1996	82	374,000	21.9	2,172
1995	77	387,000	19.9	2,000
1994	99	371,000	26.7	2,072
1993	94	375,000	25.1	2,188

SOURCES: US Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries (2003–2006); US Department of Labor, Bureau of Labor Statistics, Current Population Survey (1999–2005); US Bureau of Economic Analysis, Bureau of Economic Analysis, Quarterly Census of Employment and Wages (1999–2005); US Bureau of Economic Analysis, Bureau of Economic Analysis, Quarterly Census of Employment and Wages (1999–2005).

\* Rate per 100,000 workers.  
† Workover rigs restore or increase production of an existing well, whereas drilling rigs drill new wells.  
‡ Data for 2004 are preliminary.  
§ Industry definition used by the U.S. Department of Labor changed in 2004.

Source: US Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries (2003–2006); US Department of Labor, Bureau of Labor Statistics, Current Population Survey (1999–2005); US Bureau of Economic Analysis, Bureau of Economic Analysis, Quarterly Census of Employment and Wages (1999–2005); US Bureau of Economic Analysis, Bureau of Economic Analysis, Quarterly Census of Employment and Wages (1999–2005).

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TABLE 2. Number of fatal injuries among oil and gas extraction workers, by type of injury event — United States, 2003–2006\*

Injury event	No. of fatal sources
Highway crash	110
Struck by object	88
Explosion	26
Falls from level	27
Fire	18
Caught or compressed in moving machinery or tools	20
Electric current	18
Aircraft crash	40
Other	438
<b>Total</b>	<b>686</b>

SOURCE: US Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries (2003–2006).  
\* Data for 2006 are preliminary.

The 110 fatal highway motor-vehicle incidents in this industry were divided among noncollision (42 [38%]), collision between vehicles (40 [36%]), and other events (28 [26%]) (Table 3). Three out of four highway fatalities (82 [74%]) involved light trucks (e.g., pickups and delivery trucks) (35 [39%]) or semi-trailer trailers (27 [25%]). A total of 39 (35%) workers in highway fatalities were not wearing seatbelts, another 13 (12%) workers were seated upon impact and likely were not wearing seatbelts.

A total of 88 (82%) workers died after being struck by a tool and equipment (most of which were dropped from a height), and another 26 (24%) were caught or compressed in moving machinery or tools. Approximately one fourth of all fatalities (116 [29%]) in this industry occurred among employees of companies with fewer than 10 workers, and approximately one fourth of all workers who were injured or killed for their employer for less than 1 year (116 [29%]).

Editorial Note: Since 1993, when CBOI data became available, both the number and rate of occupational fatalities among oil and gas extraction workers have varied with increases and decreases in drilling activity (6,7). This correlation might be a result of several factors, including an increase in the proportion of inexperienced workers, longer working hours, and the use of all available rigs (including older equipment with fewer safeguards). Current petroleum prices suggest that increased oil and gas extraction activity will continue. Therefore, industry changes are made to increase worker safety; the high fatality rates described in this report are likely to continue.

Although highway crashes are the most common fatal event in US industries overall (8), certain aspects of highway crashes in oil and gas extraction create the need for

# NIOSH 2003 – 2006 Fatalities among US Oil and Gas Workers

## Fatalities Among Oil and Gas Extraction Workers — United States, 2003–2006

Oil and gas extraction (i.e., recovering oil and natural gas from the ground) is a growing industry in the United States, employing approximately 500,000 workers in 2006. (1) In recent years, activity in this industry has increased substantially, from an average of 800 actively drilling rigs in the United States during the 1990s to approximately 1,500



It's Still Happening...Real Incidents



# workers, by type of injury event — United States, 2003–2006\*

Injury event	No. of fatal injuries
Highway crash	110
Struck by object	88
Explosion	36
Fall to lower level	30
Fire	27
Caught or compressed in moving machinery or tools	26
Electric shock	26

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A total of 88 (22%) workers died after being struck by tools and equipment (most of which were dropped from a height), and another 26 (6%) were caught or compressed

in moving machinery or tools. Approximately one

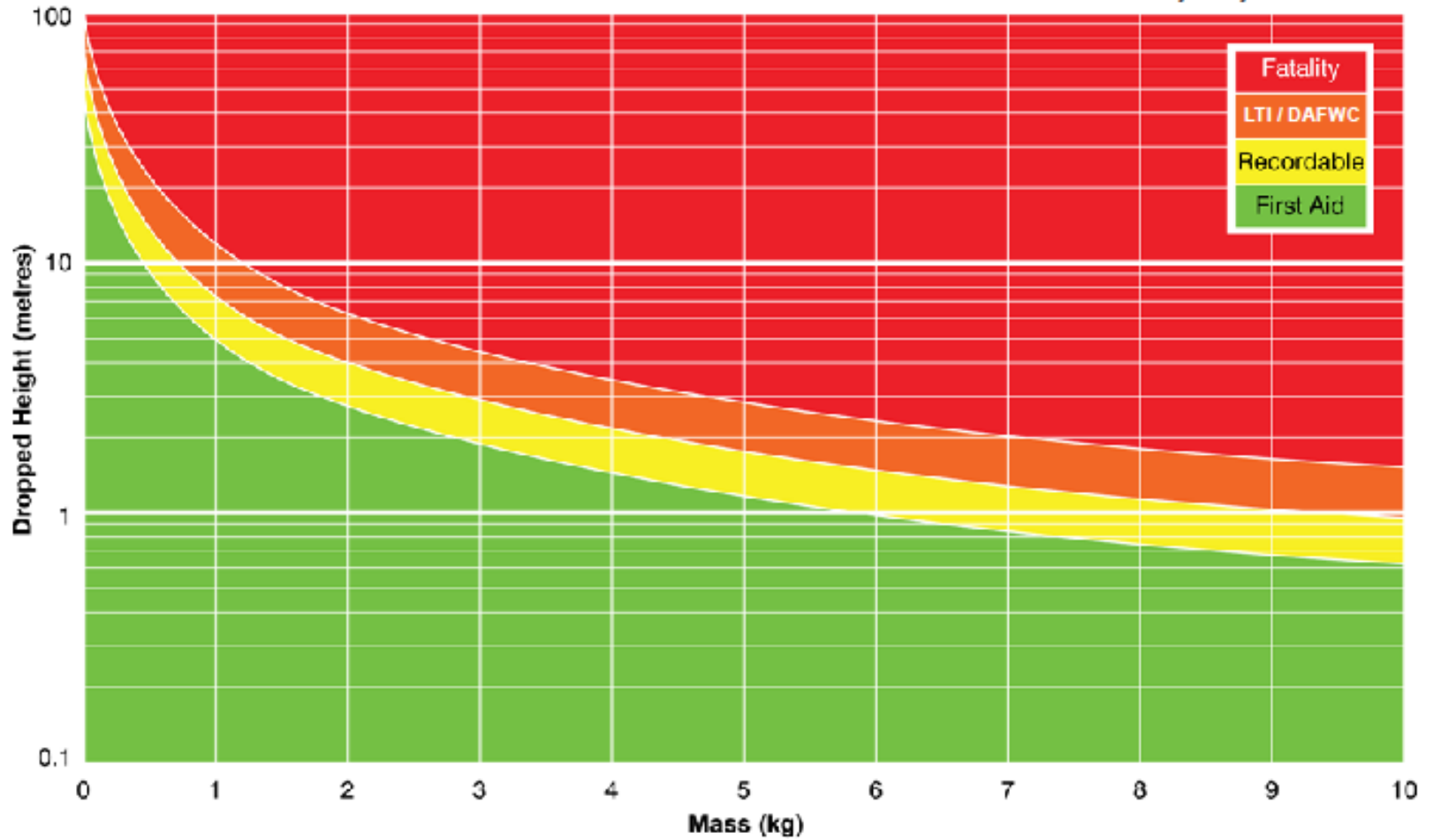
## Fatalities Among Oil and Gas Extraction Workers — United States, 2003–2006

Oil and gas extraction (i.e., removing oil and natural gas from the ground) is a growing industry in the United States, employing approximately 330,000 workers in 2006. (1) In recent years, activity in the industry has increased substantially, from an average of 800 active drilling rigs in the United States during the 1990s to approximately 1,300

It's Still Happening...Real Incidents



LTI = Lost Time Incident / DAFWC = Days Away From Work Case



Even small objects can kill!!!



Do you think this will kill if dropped from 10m?



Imagine a dropped bolt

“So what are we doing about it?”



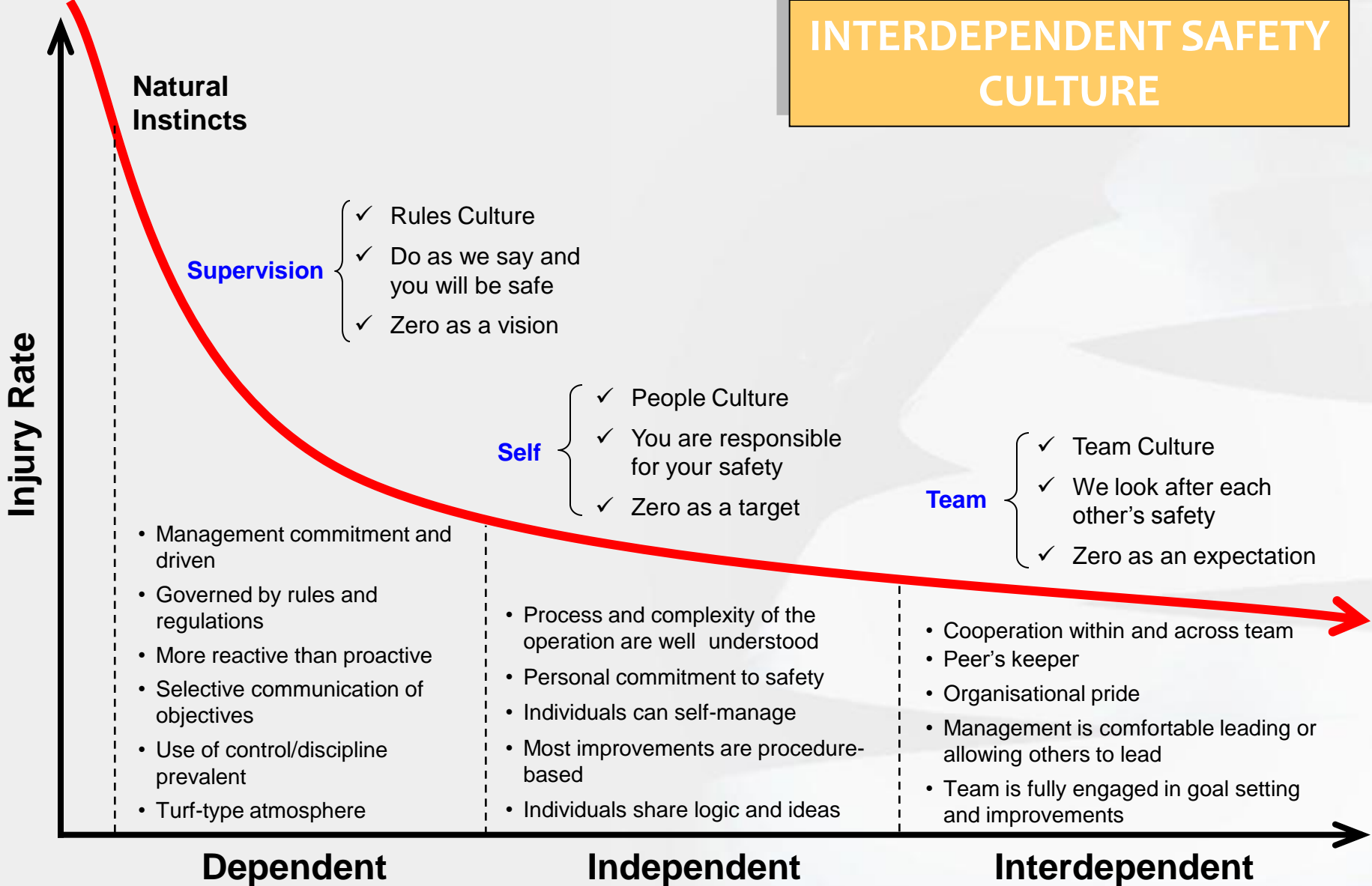


# Workgroup Members

- Over 70 companies all sharing commitment and enthusiasm for dropped object prevention.
- Basic remit to consider and review all avenues available for improving the industry's dropped object prevention performance.
- Distil and identify key learnings and deliver these to industry effectively as awareness, best practice, recommendations, lessons, tools and techniques.



# INTERDEPENDENT SAFETY CULTURE



Bradley Curve - copyright DuPont deNemours

## “Interdependent Safety Culture”





- Assign specific focus groups to work each key issue to its conclusion as an effective deliverable product.
- Meet regularly to review progress, share best practice and lessons learned, prioritise focus areas and present new technologies / services.
- **DROPS Work Group** members all participate, contribute and help drive the direction and deliverables of the Campaign. Each brings their own organisation's influence and concerns to **DROPS**.



- **DROPS** has produced a broad array of tools, products and deliverables, including inspection programmes, awareness videos and presentations, safety checklists, guidelines, procedures and best practices.
- Marketing concept is a workpack system, where **DROPS workpack** contains all **DROPS** products to date with option to subscribe to future updates.
- Workpack format ideal for individual assets, eg platforms, rigs, terminals, bases and now hundreds in use around the world.



- **www.dropsworkpack.com** is the main vehicle for presenting and marketing our products and giving access to free downloads, alerts, contacts, news and general **DROPS** information.
- Developing more products and deliverables is an ongoing process – effectively the output of the **DROPS Work Group** .
- Sale of Campaign Packs and Work Group Membership subscriptions provide the revenue for ongoing product development on a self-sustaining basis.



A Great Idea!

At the last DROPS forum, a presentation was delivered showing a unique solution to the problem of potential dropped objects falling from container pockets - an issue highlighted in our last Newsletter!

The solution is a mechanised and environmentally friendly ultra high pressure cleaning tool capable of removing all debris and heavy rust deposits from the container pockets and base frames in a safe and effective manner. The solution is currently being reviewed by the DROPS Best Practice Sub-committee. Kind thanks to Denholm Industrial Services.

Join the DROPS Campaign!

Have you considered joining the growing band of DROPS Workgroup Members? At present, we have 42+ participating companies and we meet every eight weeks in Aberdeen. As a member organisation, you are invited to all Forum meetings, issued with a free campaign pack and you are instrumental in driving the direction and deliverables of the Campaign. At the Forum meetings, we exchange best practice, present new tools and techniques and discuss performance in an open and collaborative environment. For further details on DROPS membership, contact [campaignteam@dropsworkpack.com](mailto:campaignteam@dropsworkpack.com).

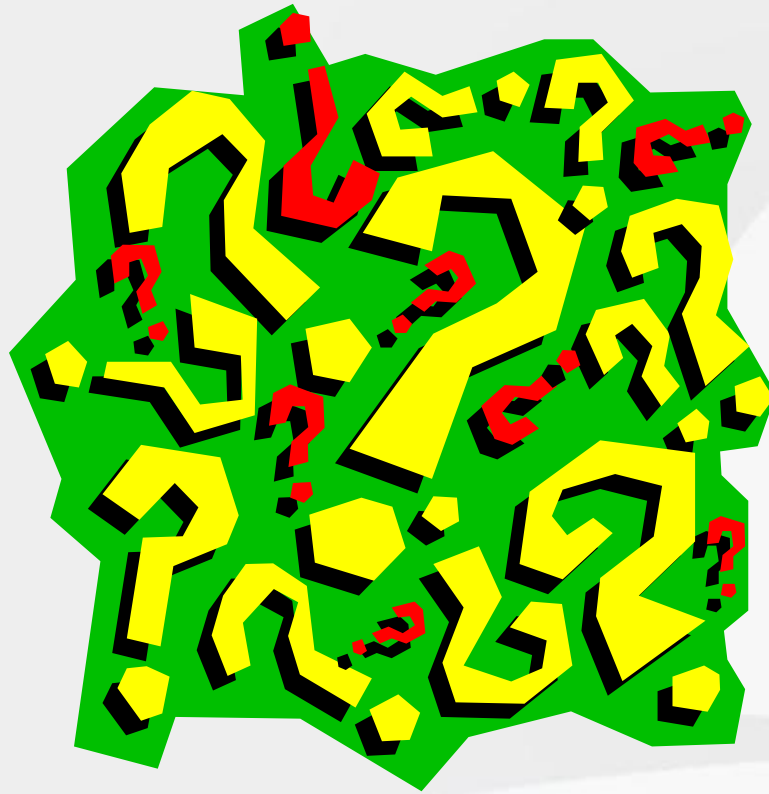
Any Ideas?

If you have any ideas, comments or suggestions that you wish to share with the DROPS Team, send us the details or drop us an email:

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Deliverables



Questions

