



# Supply Knights

Making Supply Chain Resilient

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# The Problem







# Big Companies



## Risks

Delays, Monetary  
Loss



## Strategy

Backup plans to  
ensure full shelves




## Issues

Riots, Energy Crisis,  
Natural or Political  
Disasters



## Dependencies

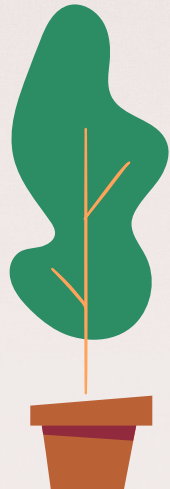
On Other Countries





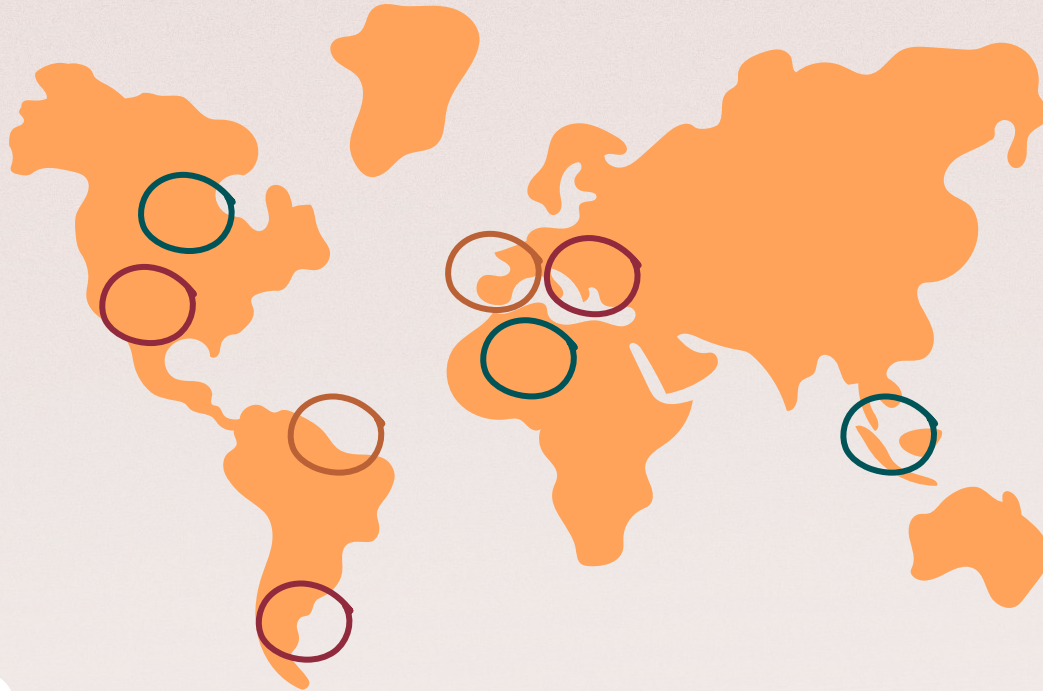
# Our Solution: SupplyKnight

- Web interface visualizing disturbances across the globe
- Using news article data along with sentiment analysis






# Timely Warnings



 **Natural  
Disasters**

Floods, Tsunamis

 **Energy  
Shortage**

 **Political**  
New governments, new  
export, import laws

## Risk Areas



| imo_nr  | departure_city | arrival_city | est_dept_date | est_arrival_date | actual_arrival_d... | delay_in_days |
|---------|----------------|--------------|---------------|------------------|---------------------|---------------|
| 12      | Xi An          | Hamburg      | 05.11.2021    | 01.12.2021       | 05.12.2021          | 4             |
| 12      | Yiwu           | Duisburg     | 14.01.2022    | 06.02.2022       | 07.03.2022          | 29            |
| 9321524 | Yantian        | Hamburg      | 01.09.2021    | 12.10.2021       | 13.10.2021          | 1             |
| 9868352 | Yantian        | Hamburg      | 15.03.2021    | 12.04.2021       | 01.05.2021          | 19            |
|         |                |              |               |                  |                     |               |

## Risk Areas



### Alert: Dresden

<https://www.n-tv.de/regionales/sachsen/Dieselskandal-OLG-verurteilt-VW-erneut-zu-Schadenersatz-article21703035.html>

Threat Level: 5



## REGIONALNACHRICHTEN

### Sachsen

### Dieselskandal: OLG verurteilt VW erneut zu Schadenersatz

08.04.2020, 17:09 Uhr



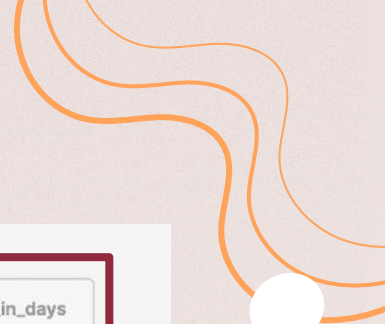
(Foto: Uli Deck/dpa/Symbolbild)




Dresden (dpa/sn) - Im Abgasskandal von VW hat das Oberlandesgericht Dresden (OLG) den Konzern in einem weiteren Fall zu anteiligem Schadenersatz verurteilt. Wie das

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|         |                |              |               |                  |                     |               |

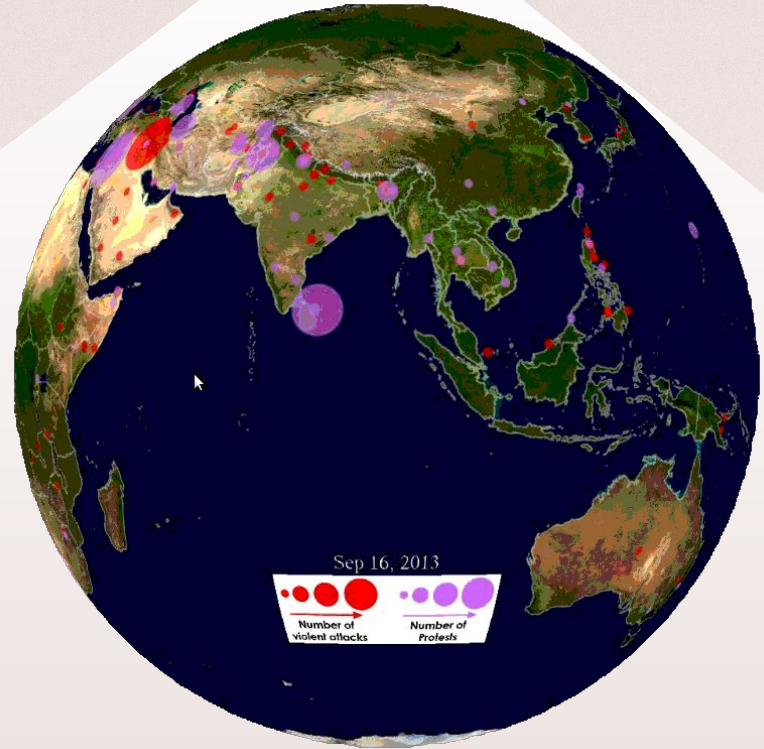


# Demo

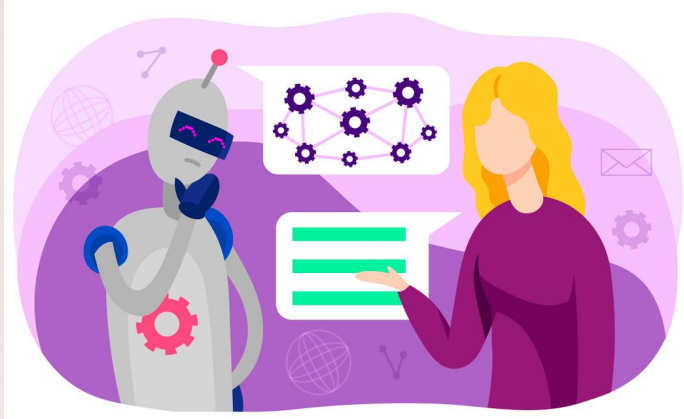


# GDELT

- Global Entity Graph
- Monitors print, media, and broadcast events in 100+ languages
- 300+ event categories. Eg: protests, natural disasters etc
- Google BigQuery, SQL
- Combined with Geonames data for location name and geography mapping



# Google NLP API



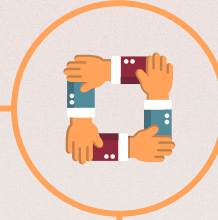
- Natural Language Processing API
- Sentiment Analysis
- Scans text and returns a sentiment score, magnitude
- Sentiment score is between -1 (negative) and +1 (positive)
- We display the negative news points on dashboard
- Threshold can be modified



# Technologies

## Google Geocoding API

To obtain point coordinates



## Retool, JavaScript

Front-end

## Google Directions API

To obtain map route between two points



## BigQuery

To analyze and filter data for GDELT and Migros shipping datasets





# Any Questions?

