



Analytics & Data Management *Drives* the Freight Decision Making

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SAS Institute

Innovation in Freight Data Workshop

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sas
THE POWER TO KNOW.

Data Use Cases for Freight



UN Comtrade Database

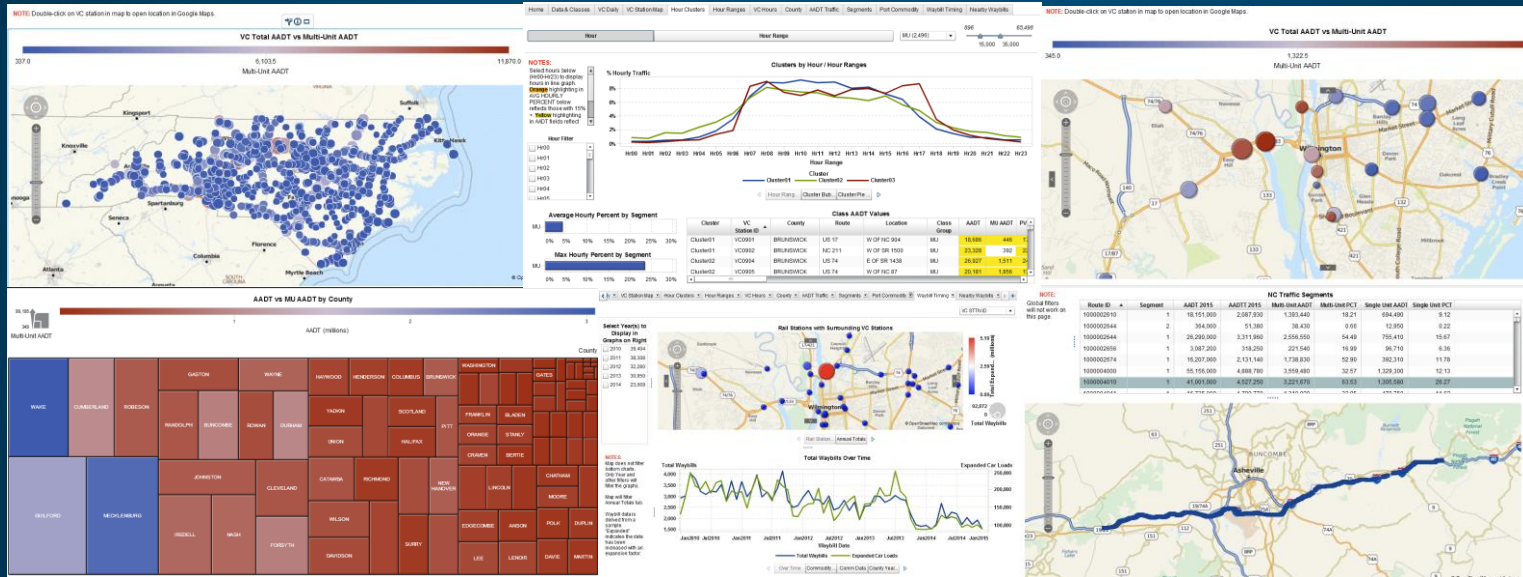
Free access to detailed global trade data. UN Comtrade is a repository of official international trade statistics and relevant analytical tables. All data is accessible through *API*.

[Get data](#) [Visualize data](#) [Legacy](#)

Edge Analytics – SAS/Intel Connected Truck



NCDOT Freight Dashboard*



*The work is in draft form and subject to NCDOT acceptance. The content does not represent NCDOT's point of view.



Challenges

Opportunities

- Increased demand on ports
- Increased number of trucks



Goals

Goals

- Assist DOT get insights into their freight data
- Provide data for freight planning models
- STIP project score-Freight
- Overall, what stories the data tells us!



WHAT

Data Sets

- Phase 1
 - Vehicle Count data (class)
 - Count station locations
 - Waybill data
 - Weigh-in-motion data
 - Location of shipyard, inland ports, etc.
 - Port data
 - Other external data sources

Edge Analytics for Connected Truck

Proactive Maintenance: Predict The Probability of a Part Failure with 90% Accuracy



STREAMING DATA
**HIGH
PERFORMANCE
ANALYTICS**

SAS® Event Stream Processing

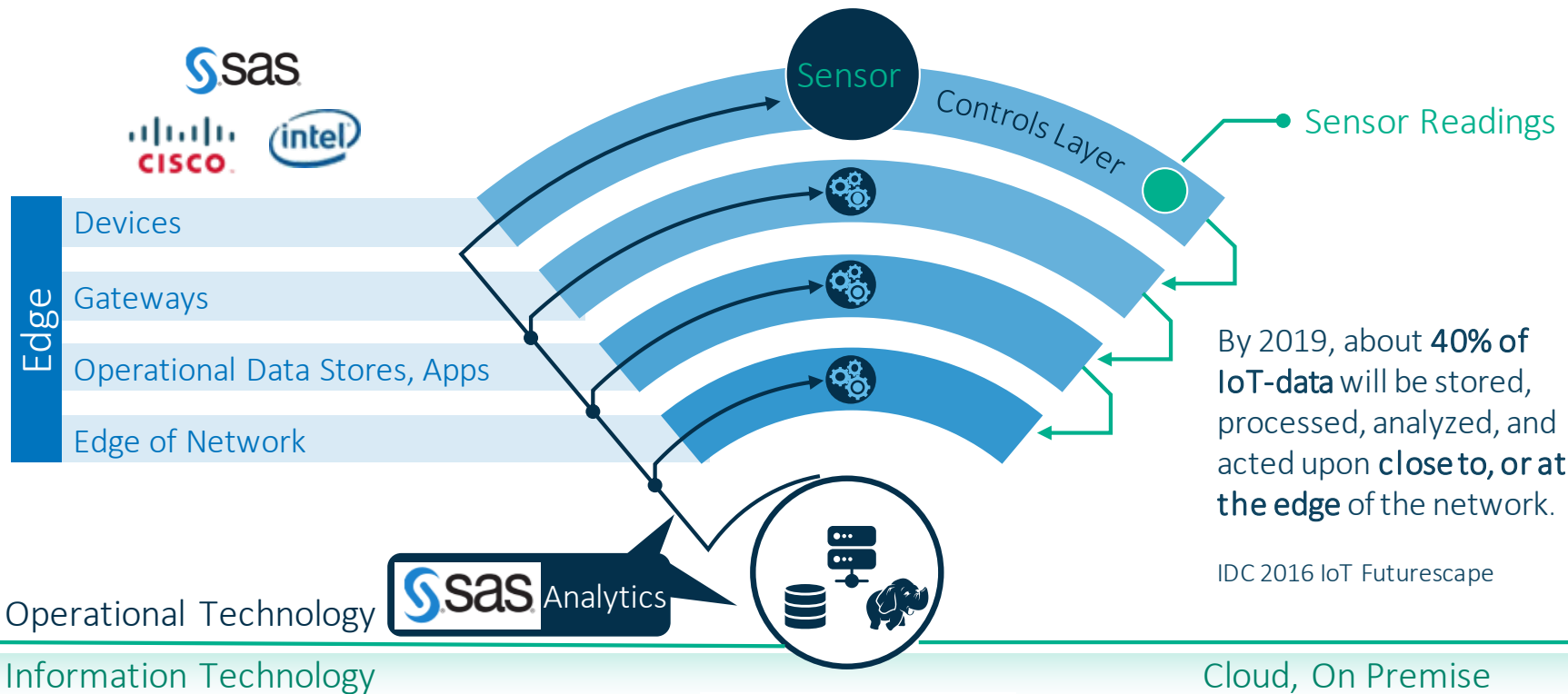


**HIGH
PERFORMANCE
ANALYTICS**

SAS® Asset
Performance
Analytics

Edge Analytics

Latency, Bandwidth, Cost, Storage



Connected Truck

Proactive Maintenance: Prediction



SAS Data Management

- ✓ Fleet of 40,000
- ✓ 60+ sensor data
- ✓ Multiple .csv files
- ✓ DQ, DI, MDM

SAS Asset Performance Analytics

- ✓ Failure conditions
- ✓ Normal Conditions
- ✓ Decision Tree
- ✓ Prediction Model

SAS ESP

- ✓ On-board Analytics
- ✓ Loaded with prediction model
- ✓ Running on streams of 60+ sensor data

Outcome

- ✓ 90% Confidence level in predicting part failure within 30 days

Analysis of Telematics Data: Identifying contributing factors to failure

United Nations Comtrade

<http://comtrade.un.org>



UN Comtrade Database

Free access to detailed global trade data. UN Comtrade is a repository of official trade statistics and relevant analytical tables. It contains annual trade statistics starting from 1962 and monthly trade statistics since 2010

Get trade data »

Visualize data ▾

Legacy annual »

Comtrade Labs

WITS Trade Data Visualizations

SAS Visual Analytics for UN Comtrade

ANALYTICAL TABLES

NEWS

Tweets

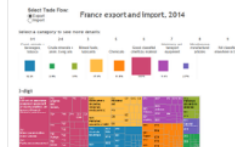
Follow



UN Trade Statistics
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6h

Explore #France's exports and imports in 2014 in this interactive dashboard
ow.ly/S6R6 pic.twitter.com/Wzj857lRo



Expand



UN Trade Statistics
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26 Feb

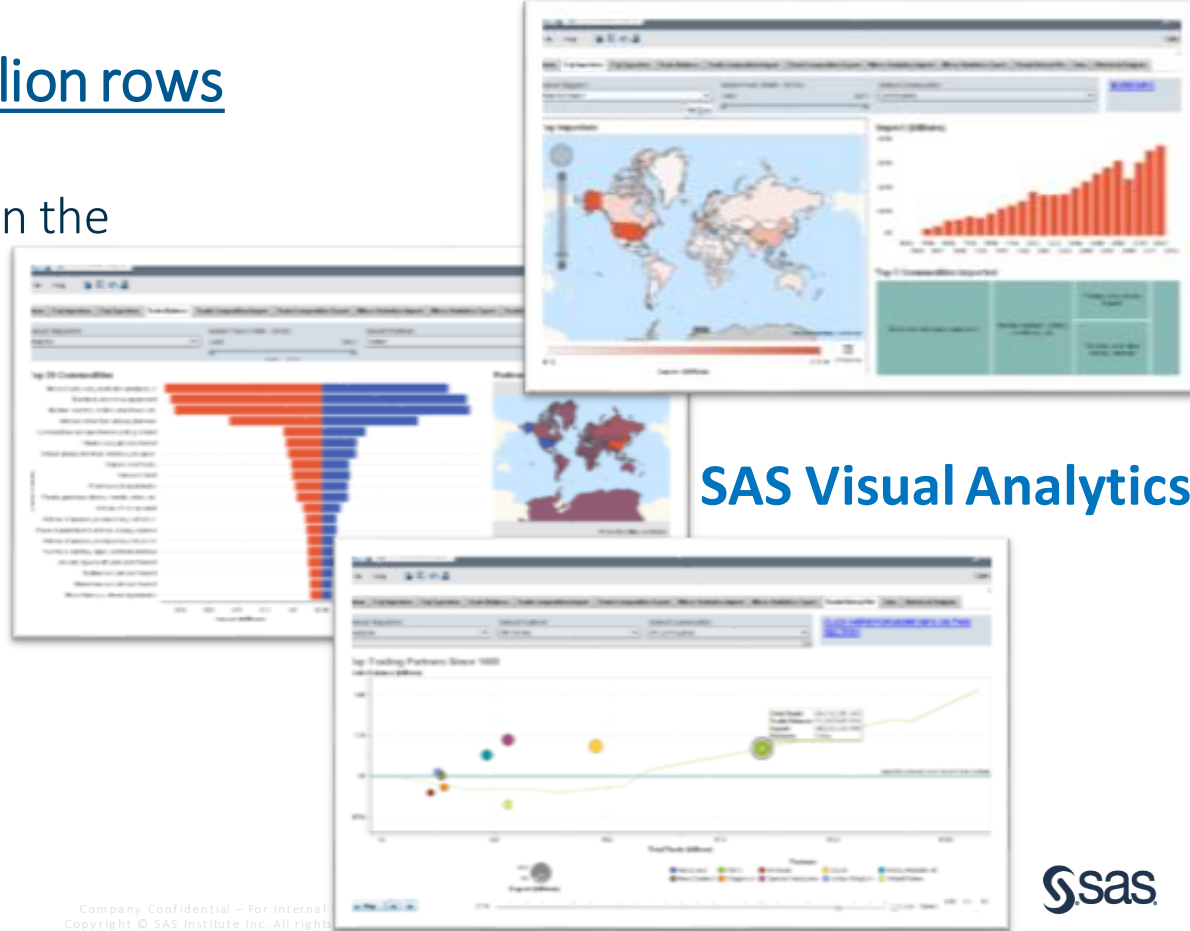


United Nations Comtrade

- Instant insight into 335 million rows of United Nations trade data
- Everything bought and sold in the world since 1988

Benefits to:

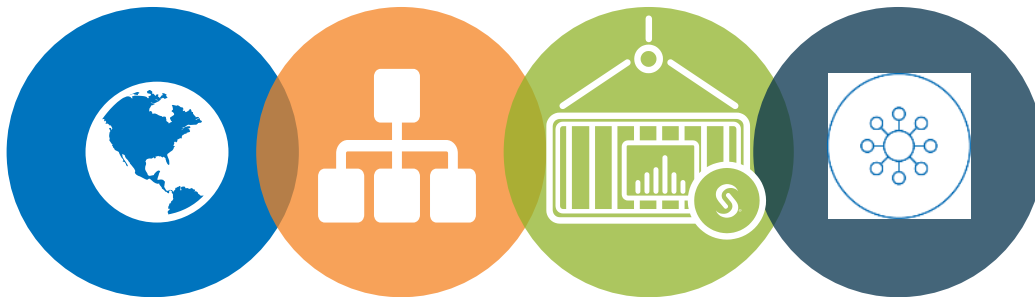
- Professors & Students
- Economists
- Disaster Responders
- Statistics offices
- Supply Chain experts
- Sales & Marketing departments



SAS Visual Analytics

UN Comtrade Dataset

Traditional vs SAS Visual Analytics



01 Instant Insight

- ✓ Access all 335 millions rows
- ✓ Instead of downloading 50k rows at a time

02 Data Manipulation & Aggregation

- ✓ Empower any user level
- ✓ Instead of often getting help from IT

03 Data Analysis

- ✓ Perform advanced analysis
- ✓ Instead of doing basic analysis often in excel

04 Outcome

- ✓ Create interactive and stunning visual reports
- ✓ Instead of creating static reports

FREE Basic Version (no log-in required)

<http://comtrade.un.org>



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Visualize data ▾

Legacy annual »

Comtrade Labs

WITS Trade Data Visualizations

SAS Visual Analytics for UN Comtrade

The Atlas of Economic Complexity

Partner Concentration of Trade, 2013

Resources Futures

Global Economic Dynamics

The Observatory of Economic Complexity

ANALYTICAL TABLES

Country Profile

LAST UPDATE: MAY 2014

Overview (in tables, charts and analytical text) of trade in goods and services of most countries world.

Commodity Profile

LAST UPDATE: DECEMBER 2014

NEXT UPDATE: DECEMBER 2015

Overview (in tables, charts and analytical text) of the latest trends
<http://www.sas.com/software/visual-analytics/demos/united-nations-demo.html>

Quarterly table of external trade conversion factors

PUBLISHED IN MARCH, JUNE, SEPTEMBER, DECEMBER

External trade conversion factors in US dollars per national
currency

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NEWS

Tweets

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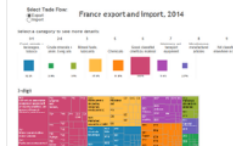


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Explore #France's exports and imports in 2014 in this interactive dashboard
ow.ly/1S6R6 pic.twitter.com/Wzj8o57RO



Expand



UN Trade Statistics

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All set for the 46th Session of the Statist
Commission ow.ly/1HX9n [Rattar](https://twitter.com/Rattar)

Tweet to @UNTradeStats

News Archive

DATA SERVICES

» Public API

» Premium Web Services

» Comtrade @ UN Data

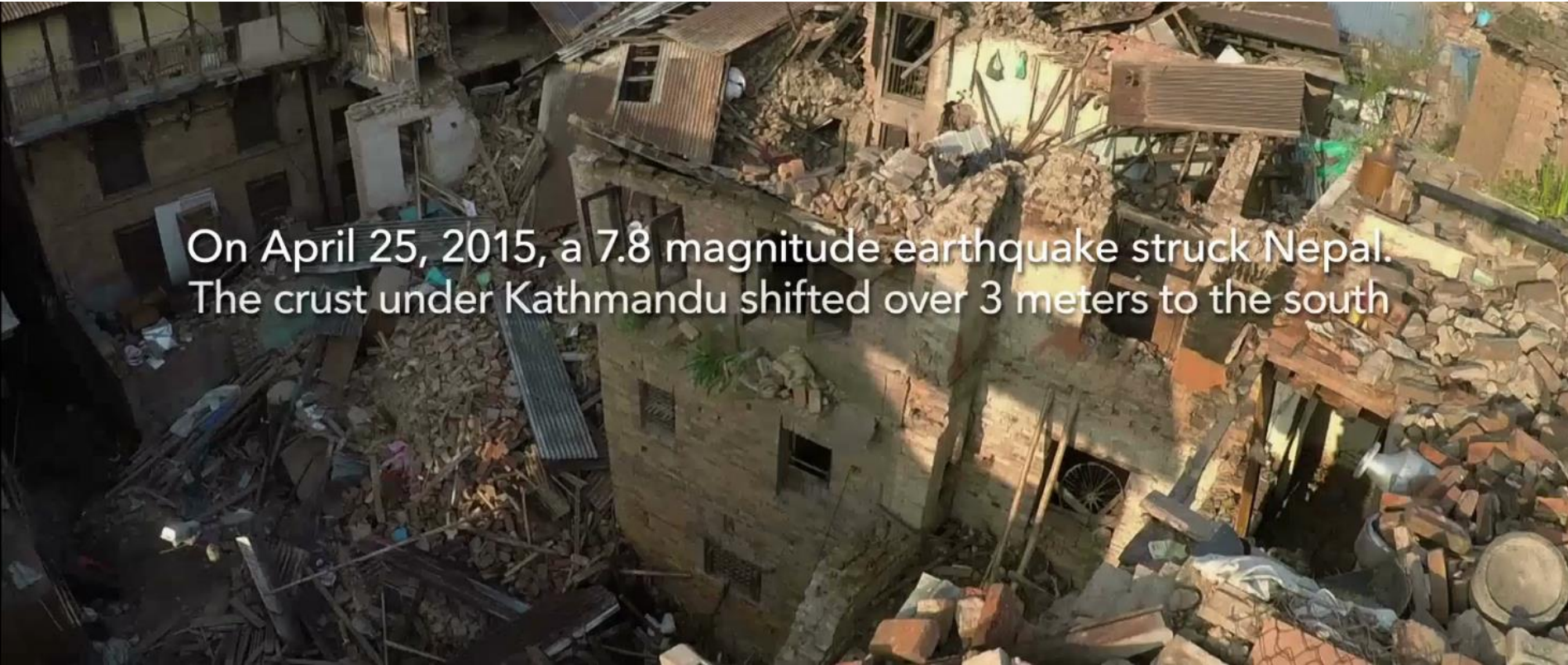


Data For Good – Humanitarian Efforts

Nepal Earthquake- April 2015

Supply of Construction Material

On April 25, 2015, a 7.8 magnitude earthquake struck Nepal. The crust under Kathmandu shifted over 3 meters to the south



Humanitarian Efforts

Nepal Earthquake- April 2015

https://www.youtube.com/watch?v=PD_OKuqhkm4





Thank You!