

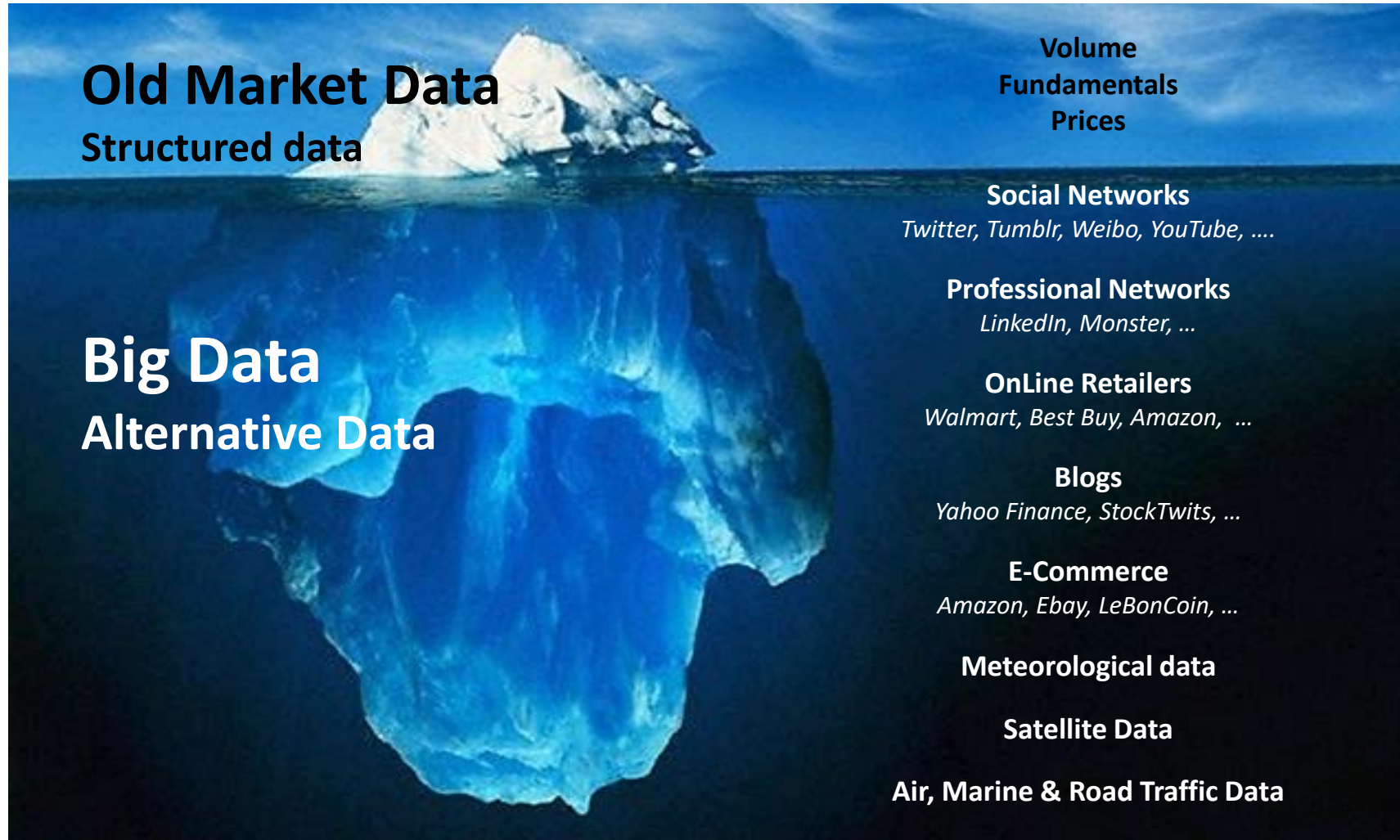
Smart Data Series for Economics Intelligence

November 2018

Confidential – Non contractual document

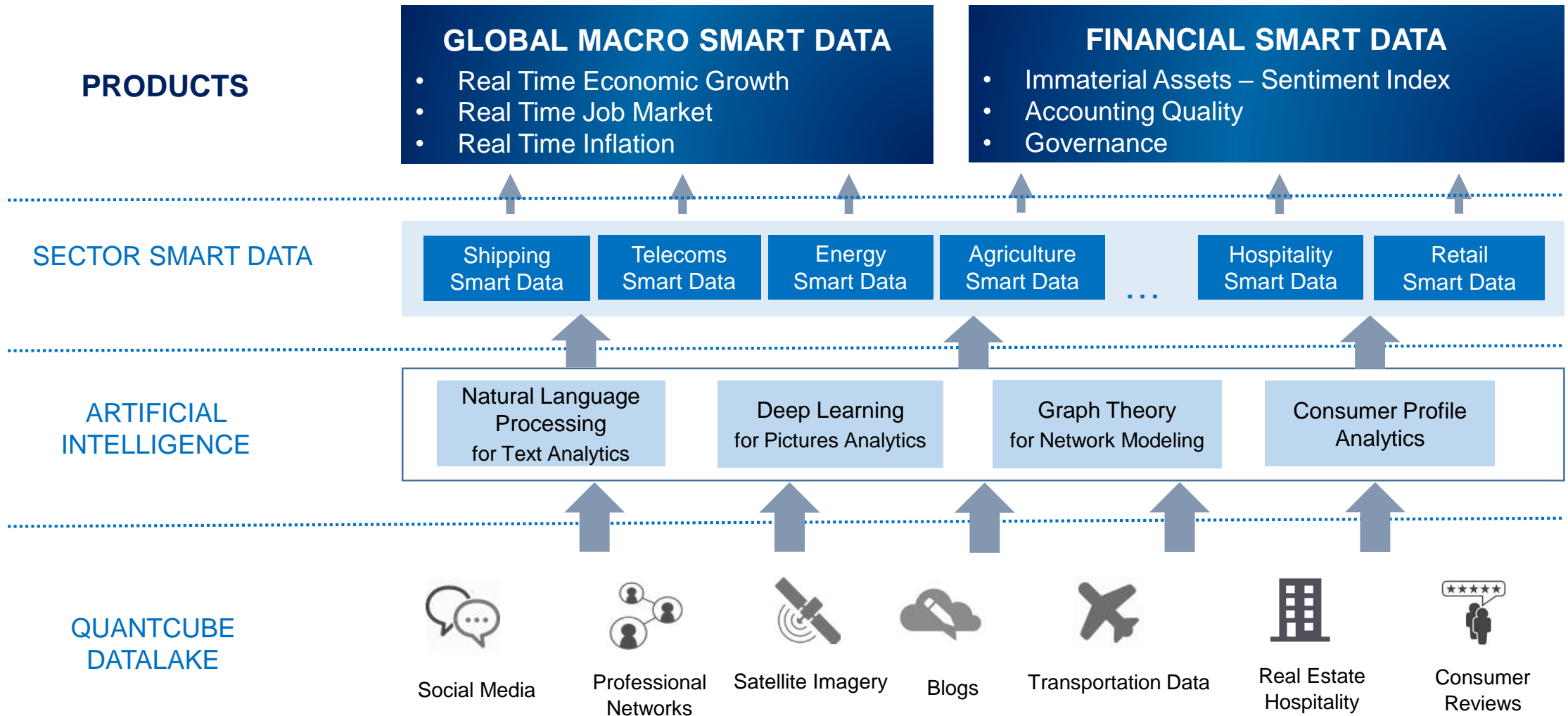
New Opportunities are in New Data Territories

Big Data : Inconceivable Level of Granularity for Predictive Analytics



Winning the Game in a Data-Driven World

Macro and Financial Predictions with Actionable Smart Data



The background of the slide is a composite image. The left half features a faded, light-colored image of an oil pumpjack against a bright, hazy sky. The right half shows a darker, more detailed silhouette of an oil pumpjack against a dramatic sunset sky with orange and yellow clouds. A horizontal blue band is positioned across the middle of the image, serving as a background for the text.

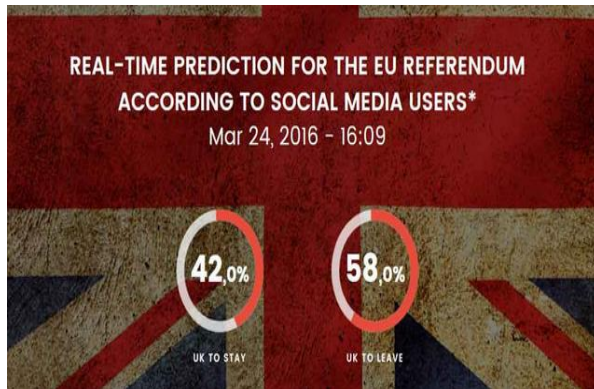
Global Macro Smart Data

Predict Political Elections for Strategic Decisions

92% Success out of 21 political elections since May 2013

Brexit Prediction

One-month before poll



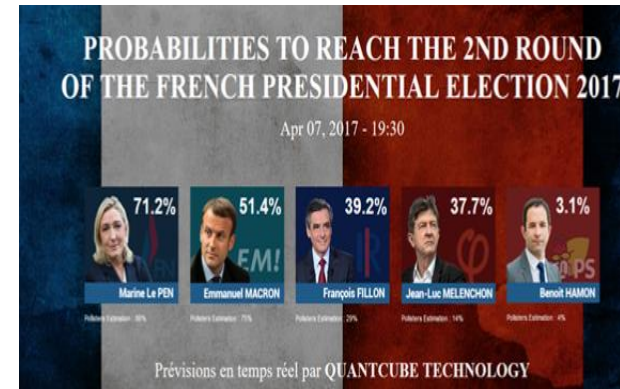
Trump Prediction

Published one week before poll

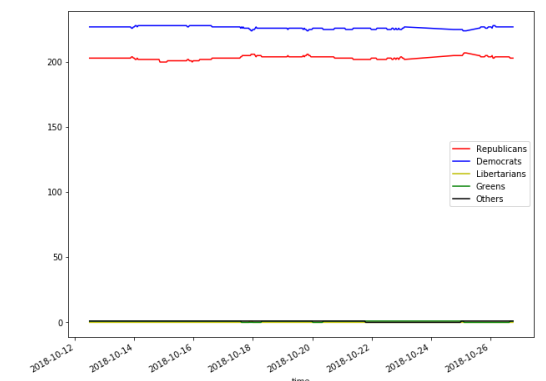
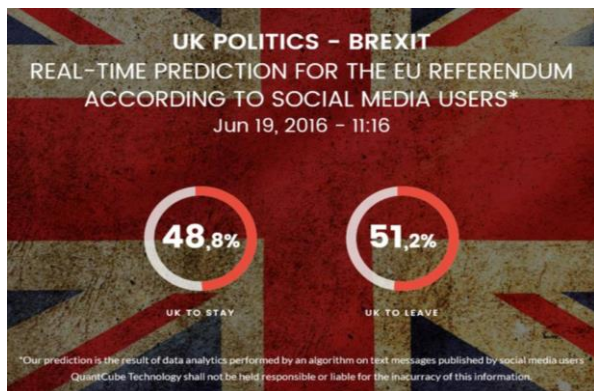
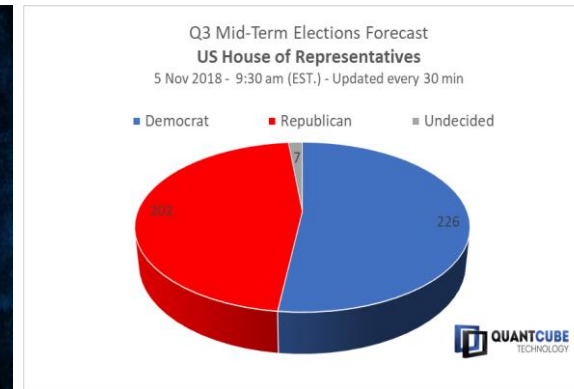


Le Pen / Macron prediction

Published two weeks before poll



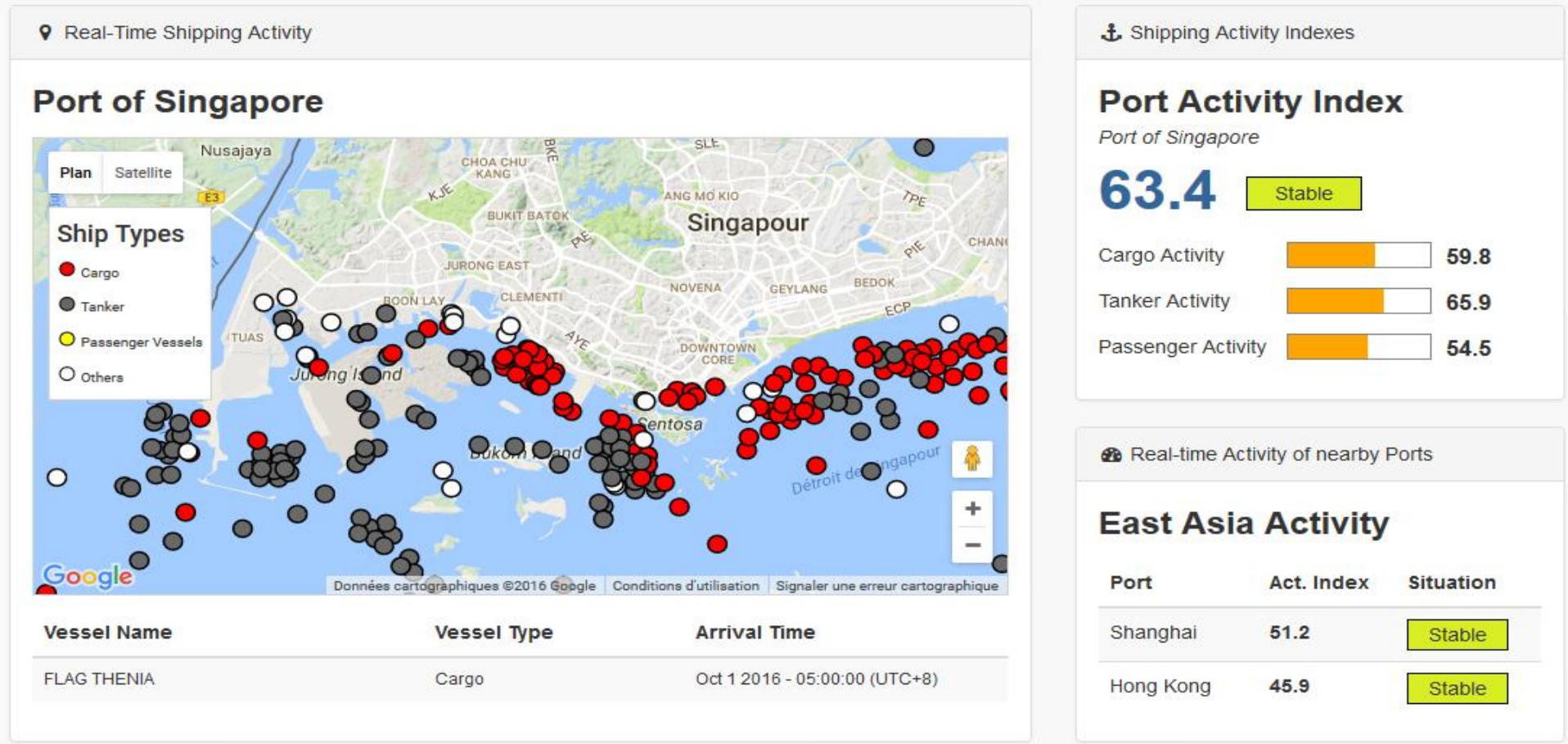
MidTerm Elections



Shipping Smart Data: Predict Regional Economic Growth from Commodity Flows

Example of the Port of Singapore

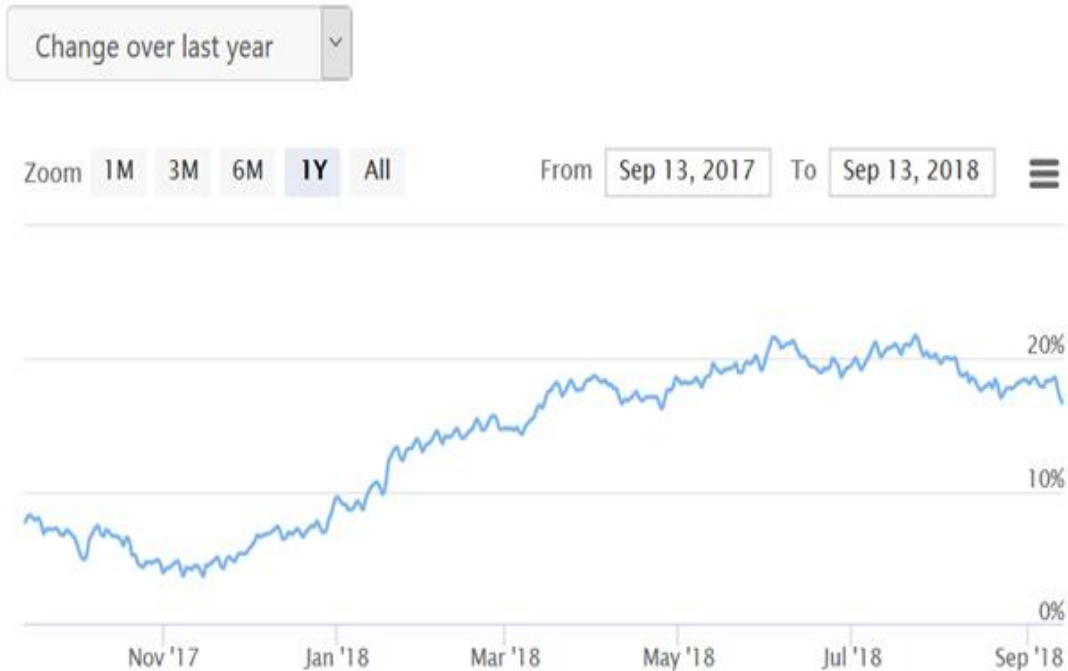
Anticipate the import & export activity by tracking more than 70 000 ships



Our Product: Global Macro Smart Data

Correlation greater than 85% between real-time estimation and official numbers for G7 & China countries

US Economic Growth in Real-Time

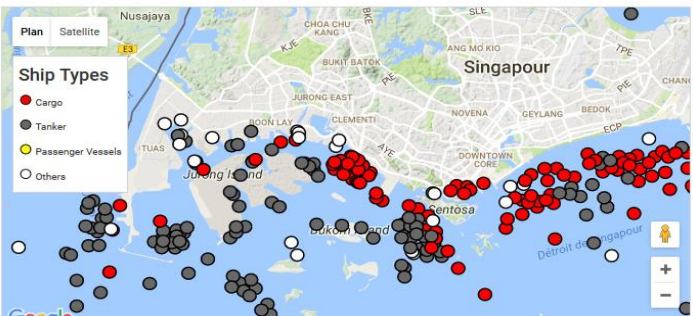


China Economic Growth in Real-Time

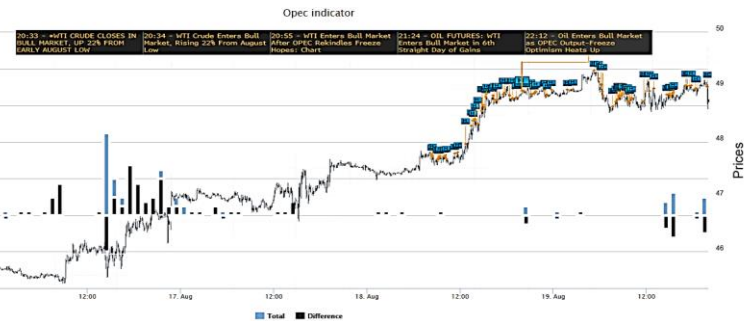


Predict Energy Trends

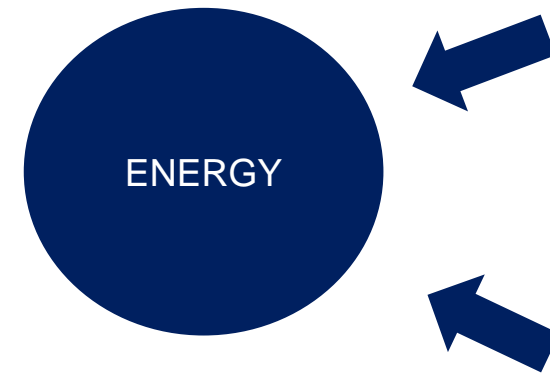
Supply and Demand Proxy Factors



Demand : Commodity Flows



Supply: OPEC Meetings



Sector	Job Offers Index	Current situation
Consumer Discretionary	76.71	Strong
Consumer Staples	60.92	Stable
Energy	17.47	Weak
Financials	68.53	Strong
Health Care	63.33	Stable
Industrials	91.19	Strong
Materials	42.39	Stable
Technology	64.43	Stable
Utilities	43.00	Stable

Supply: Job Openings



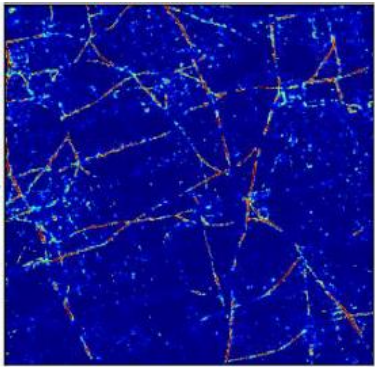
Supply: Inventory



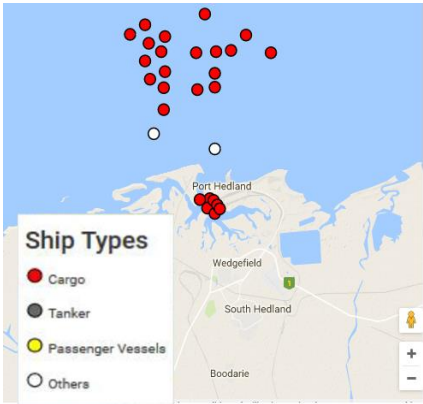
New Supply

Manufacturing Sector

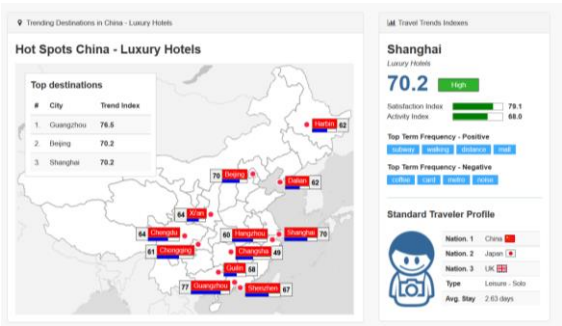
Tracking Manufacturing Business Cycle



New Infrastructure



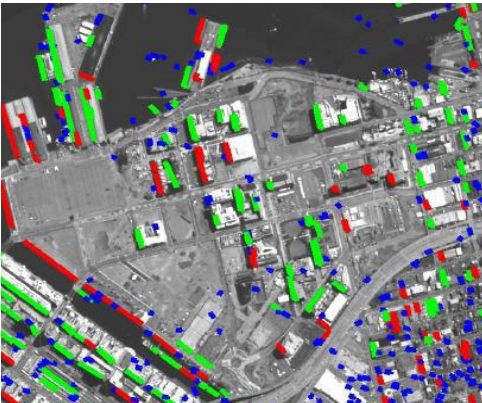
Imports of Iron Ore
& Energy



Occupancy Rate of Hospitality
Sector

Sector	Job Offers Index	Current situation
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Job Openings in
Manufacturing Industry



Change Detection:
New Factories

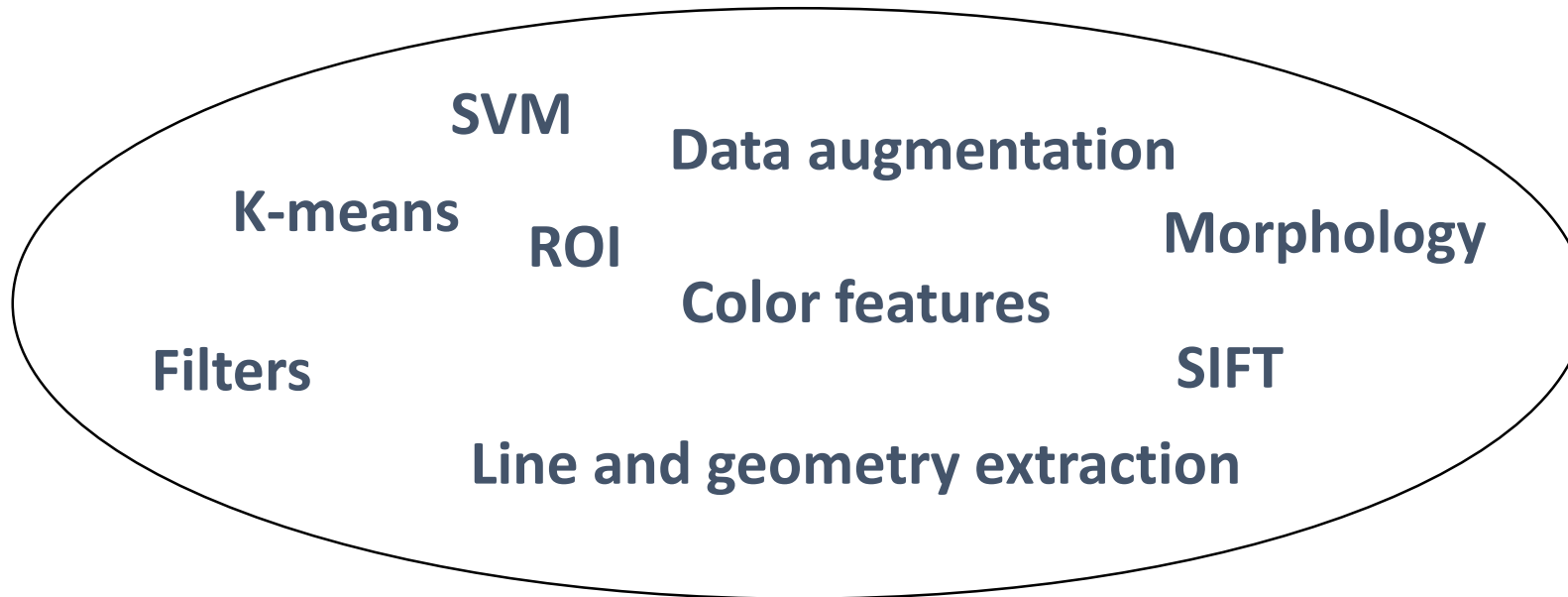
Satellite Data Analytics



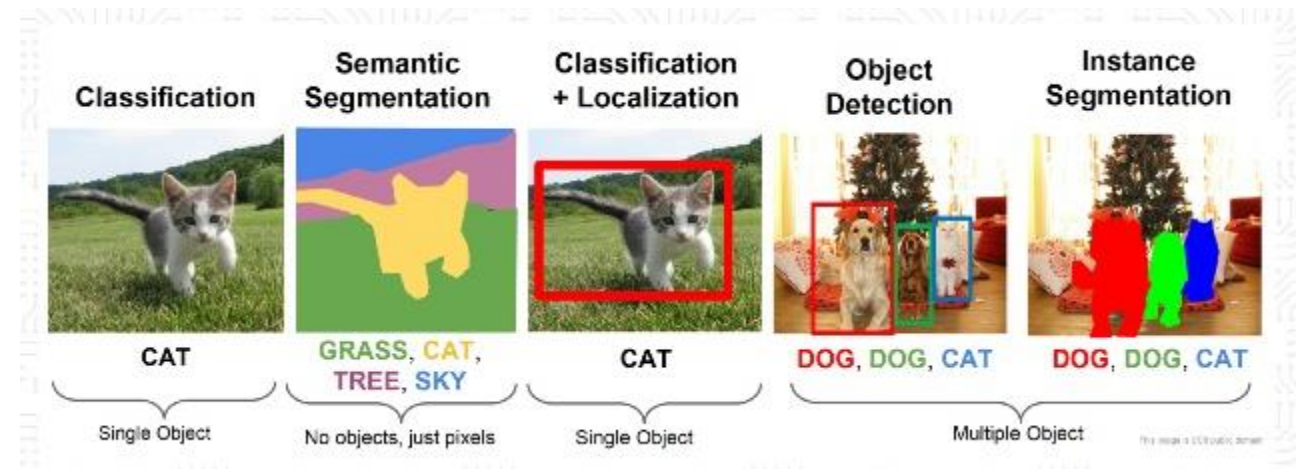
Computer vision – Introduction

Traditional vs Deep learning methods

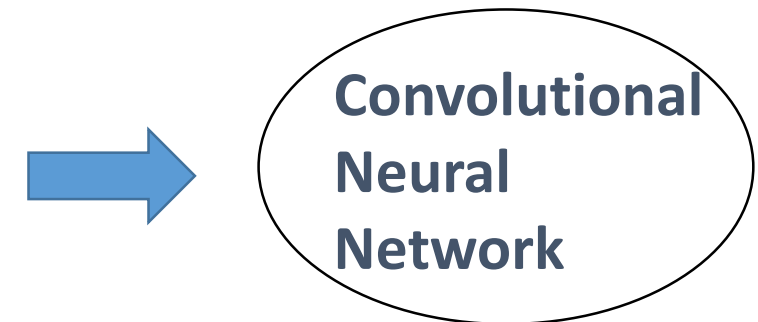
Traditional Methods



Has to be adapted manually to every schema of classification and type of images



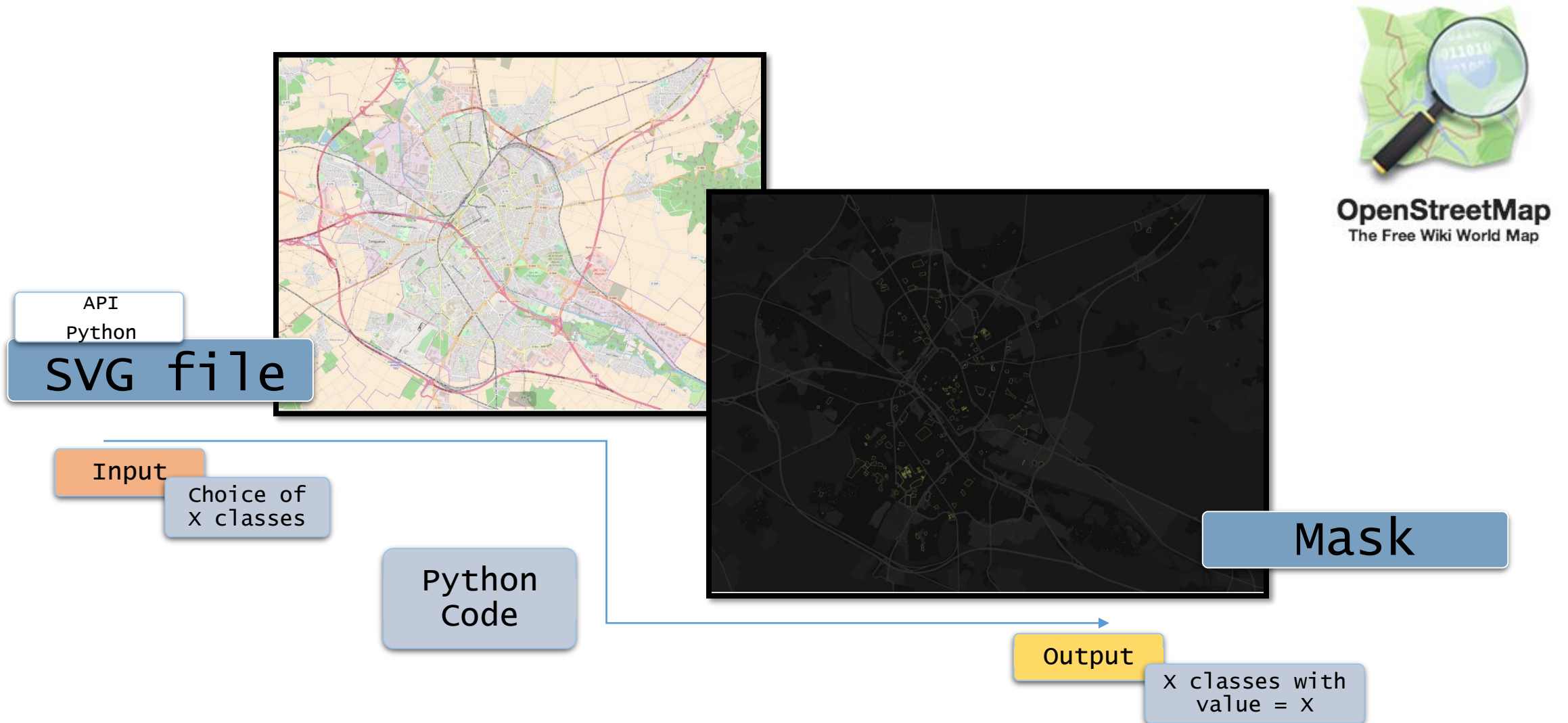
Deep Learning Methods



Need a labeled dataset

Application 1 : Urban Space Series

Preprocessing : Training dataset



Application 1 : Urban Space Series

Prediction : results example

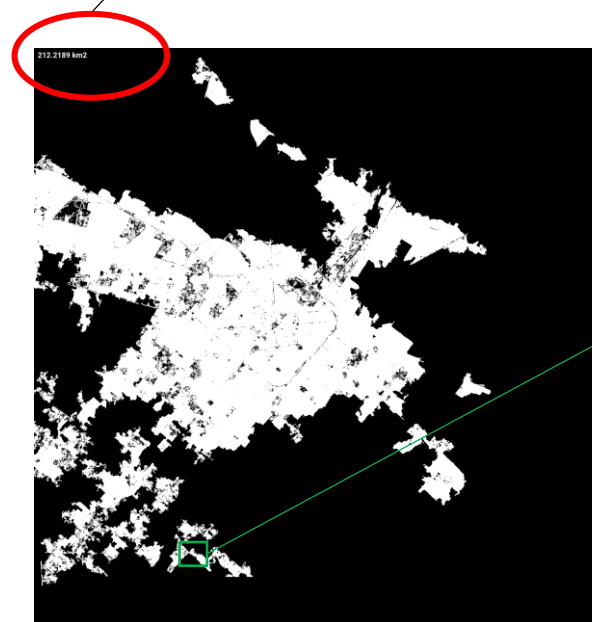
Urban evolution between 2015 and 2018 :

194,1876 km²



Prediction Shape 2015

212,2189 km²



Prediction Shape 2018

Application 2 : Classification of constructions by functionality

Output : Systematic Classification of Constructions by Functionality (62 classes)

Neural networks are better than human eyes for most classes!



Hospital



Shopping mall



Police station



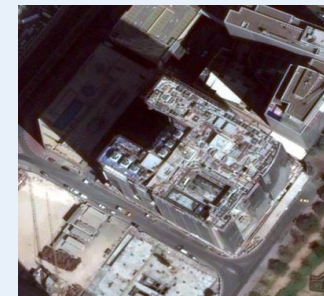
Airport



Military facility

Any city can be fully mapped!

Example of construction site over time



Collaboration with Labs



Leveraging Technology and R&D with Strategic Partners

Numerous Collaborations to be at the Forefront in Artificial Intelligence

Technology



SAP® Startup Focus

Artificial Intelligence Labs



Innovation Clusters

