SAS® VISUAL ANALYTICS
FOR UN COMTRADE
Best Practices in Big Data Visualization

- Big Data update
- SAS Visual Analytics for UN Comtrade
- Lessons Learned
BIG DATA UPDATE

IT’S EVERYWHERE!!! AND IT’S GROWING…

- Internet – Social Media
- Internal data sources
- Smart “things”
- And more…
BIG DATA UPDATE  “INTERNET OF THINGS”

Connected Devices

Data

Insight

Action

Smart Grid

Connected PMUs

Detect voltage instabilities on transmission network

Trigger corrective actions to maintain grid reliability

Smart Home

Connected lock

Detect when I leave

Lock the door, set the alarm and adjust the HVAC

Smart Car

Bluetooth dongle reading vehicle data

Detect unsafe conditions & likely collision

Slow the vehicle, alert the driver

Smart City

Sensors embedded in road surface

Detect weather, predict traffic, sense 911 vehicles

Adjust speed limits and shift lane directions to optimize traffic flow
BIG ANALYTICS

BIG DATA

BIG OPPORTUNITIES
It starts with DATA VISUALIZATION!
What is SAS Visual Analytics for UN Comtrade?

- Instant insights on 300+ million rows of trade data
- Democratization of INSIGHTS
What is SAS Visual Analytics for UN Comtrade?

Practitioner’s Perspective:

- Data Visualization
- Big Data
- The Cloud
- High Performance Analytics
What is SAS Visual Analytics for UN Comtrade? Practitioner’s Perspective:

• **Data Visualization**
  - Static views VS Dynamic Interactions
  - Specific questions VS “Let the data tell the story”
Data Visualization: Let the Data tell the story

Top 20 Imported Commodities

- Vehicles other than railway, tramway
- Electrical, electronic equipment
- Nuclear reactors, boilers, machinery, etc.
- Mineral fuels, oils, distillation products, etc.
- Organic chemicals
- Plastics and articles thereof
- Optical, photo, technical, medical, etc.
- Rubber and articles thereof
- Iron and steel
- Miscellaneous chemical products

Frequency

Import (billions)

Partners

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<th>Partner</th>
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<td>Mexico</td>
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What is SAS Visual Analytics for UN Comtrade?
Practitioner’s Perspective:

• Big Data
  • Sampling VS Using Full Dataset
  • One dataset VS Multiple Disparate Datasets
Big Data: No more sampling
Big Data: Use entire/multiple data sets
What is SAS Visual Analytics for UN Comtrade?
Practitioner’s Perspective:

• The Cloud
  • Access Insights via browser or tablet
  • Easier to scale
  • Sometimes cheaper
What is SAS Visual Analytics for UN Comtrade? 
Practitioner’s Perspective:

- High Performance Analytics
  - Hours VS seconds
  - Integrated analytics
High Performance Analytics: Integrated Analytics
SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

SAS Visual Analytics for UN Comtrade
SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

1. Download data 50,000 rows at a time.

SAS Visual Analytics for UN Comtrade

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SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

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2. Manipulate and aggregate data – often requiring help from IT.

SAS Visual Analytics for UN Comtrade

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2. Enable any level of user to apply advanced analytics from one easy-to-use environment.
SAS® Visual Analytics for UN Comtrade

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3. Perform basic analysis of data with Excel or statistics packages.

SAS Visual Analytics for UN Comtrade

1. Get instant insights on 300+ million rows of data.
2. Enable any level of user to apply advanced analytics from one easy-to-use environment.
3. Easily perform risk analysis and mirror statistics analysis.
SAS® Visual Analytics for UN Comtrade

Traditional Analysis of UN Comtrade

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3. Perform basic analysis of data with Excel or statistics packages.
4. Create static reports.

SAS Visual Analytics for UN Comtrade

1. Get instant insights on 300+ million rows of data.
2. Enable any level of user to apply advanced analytics from one easy-to-use environment.
3. Easily perform risk analysis and mirror statistics analysis.
4. Create and easily share visually stunning and revealing reports.
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SAS Visual Analytics for UN Comtrade

- **Free Basic Version**
  - [http://comtrade.un.org](http://comtrade.un.org) (no log-in required)

- **Advanced Version (coming)**
  - Pre-release access to UN Statistical Commission
  - Subscription-based
  - Email: i-sah.hsieh@sas.com
SAS® Visual Analytics
for UN Comtrade

300+ million rows of data. One data visualization solution. Infinite possibilities.

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