



4TH INTERNATIONAL CONFERENCE ON

BIG DATA

 *for Official Statistics*

8-10 NOVEMBER 2017
BOGOTA, COLOMBIA



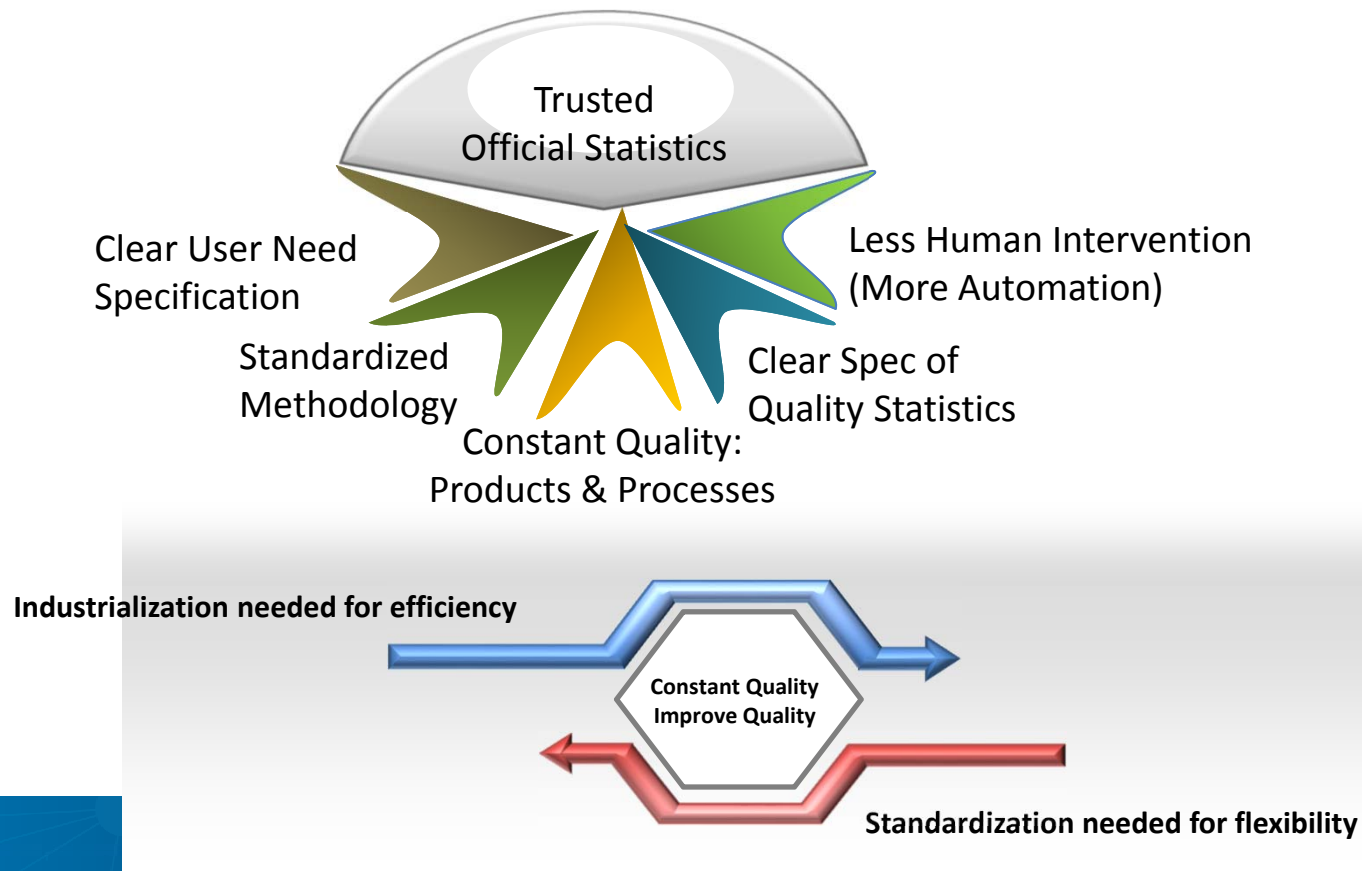
BPS Strategy for Digital Transformation

A Journey to unlock the
value of Big Data

Setia Pramana



CHALLENGES FACED



THE WORLD IS CHANGING



Big Data

90%

of the data created in the last two years alone.

Mobile

1 billion (plus)

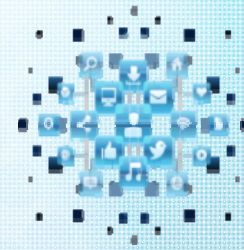
(plus) smart devices shipped in 2013 alone.



Social

81%

of customers depend on social sites for purchasing advice.



Cloud

62%

of total workloads will be in the cloud by 2016.



Internet of Things

50 billion

devices connected to the internet by 2020.



API Economy

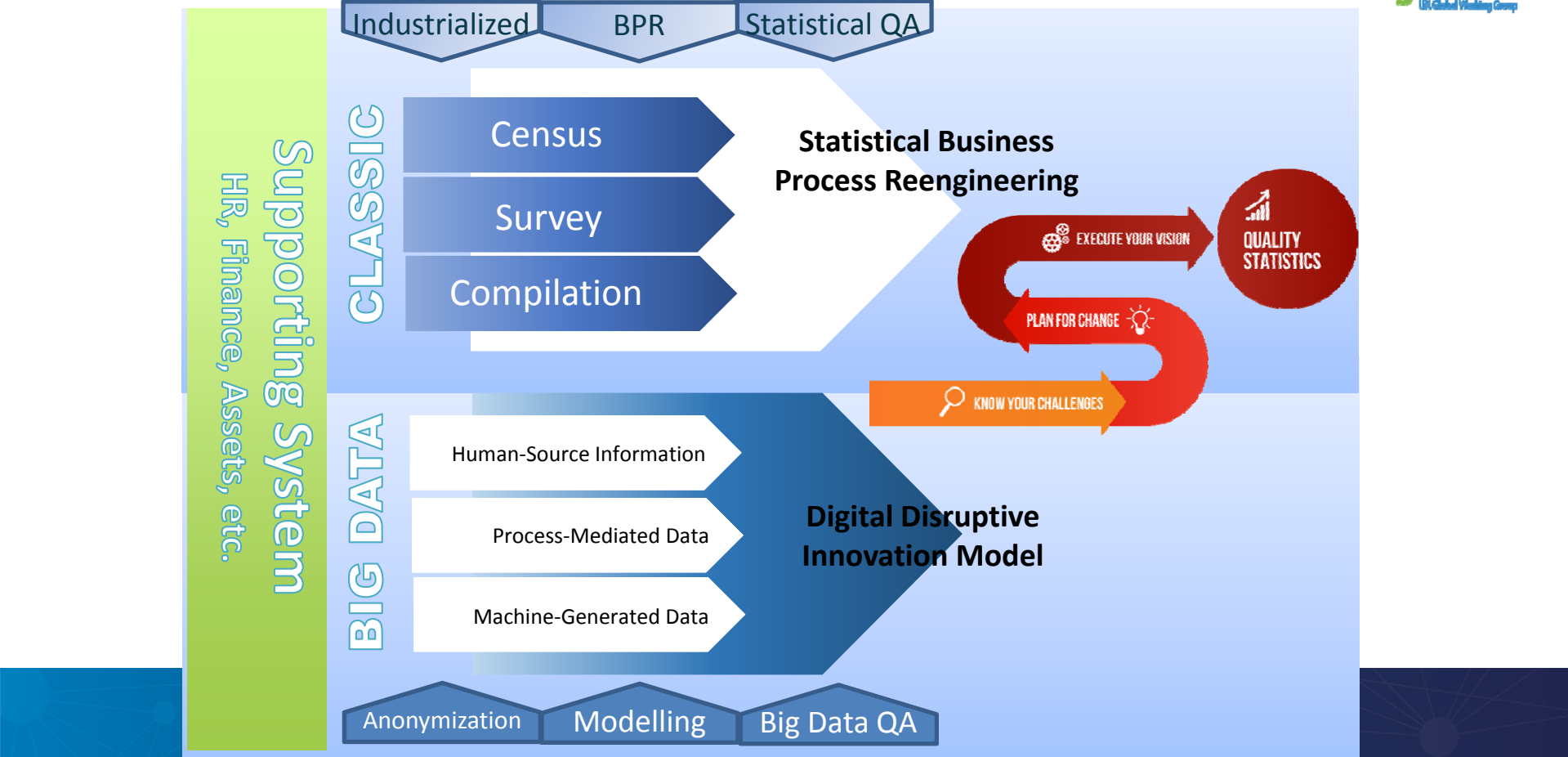
Global m-commerce sales were

85 billion

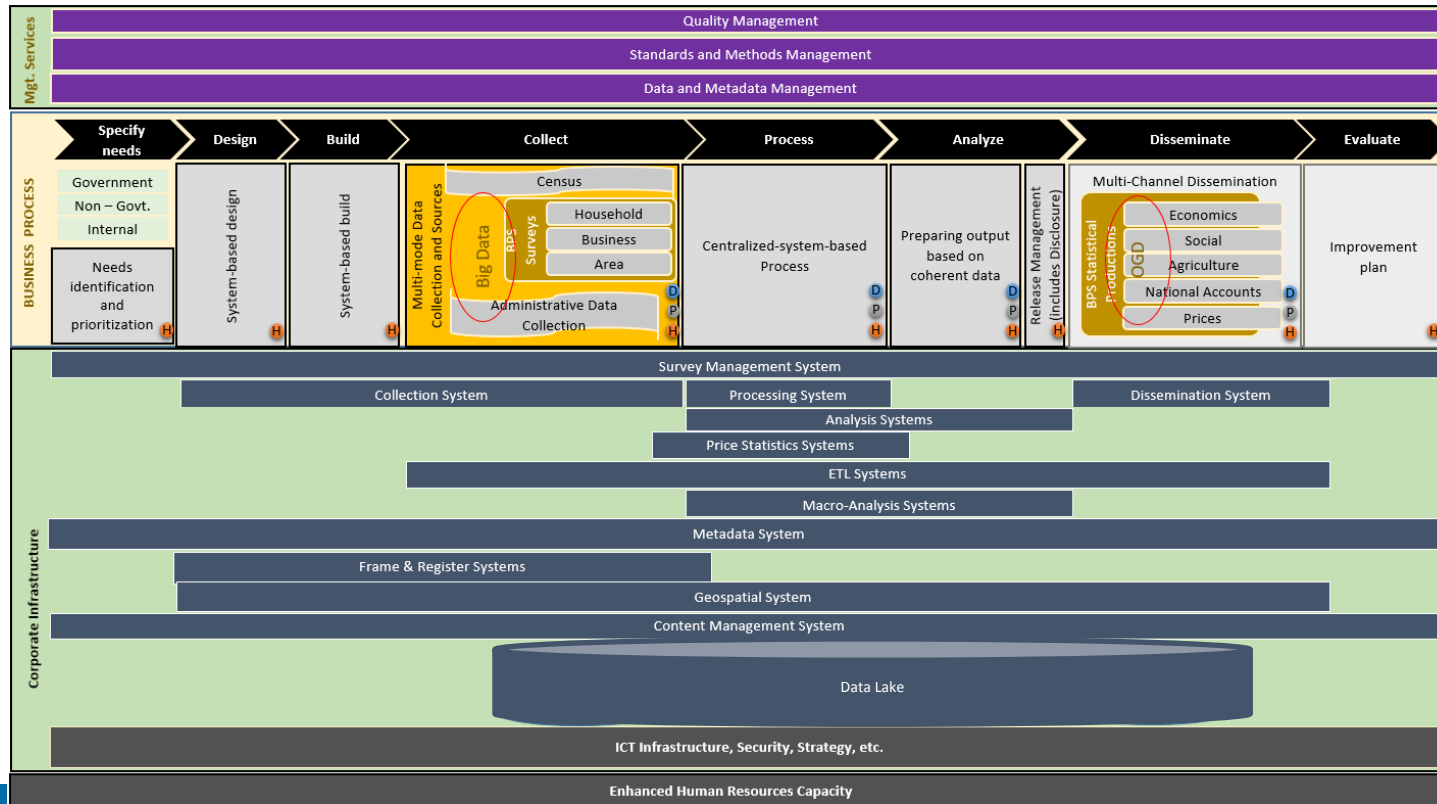
in 2013 and forecast to rise to \$120 billion by 2015 and an estimated \$1 trillion by 2017



STRATEGY FOR MODERNIZATION OF NSO



STATISTICAL BUSINESS FRAMEWORK & ARCHITECTURE





BADAN PUSAT STATISTIK

Pelopop
Data Statistik
Terpercaya
Untuk Semua

Approach I

COMPUTER ASSISTED INTERVIEWING

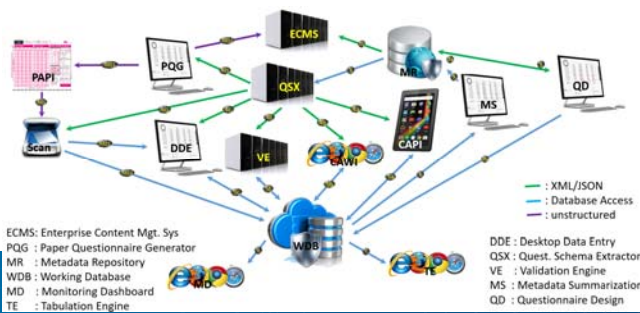
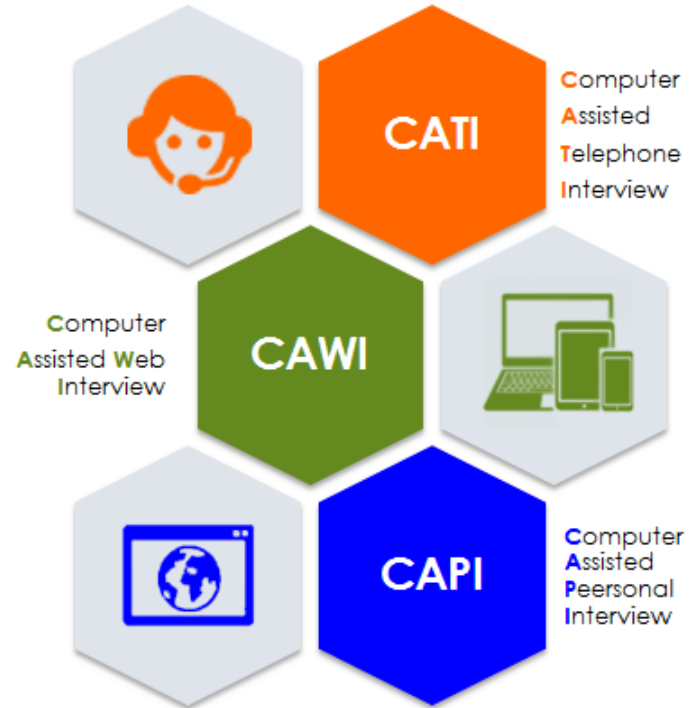


THE UNITED NATIONS GLOBAL WORKING GROUP ON BIG DATA

MULTIMODE DATA COLLECTION PLATFORM

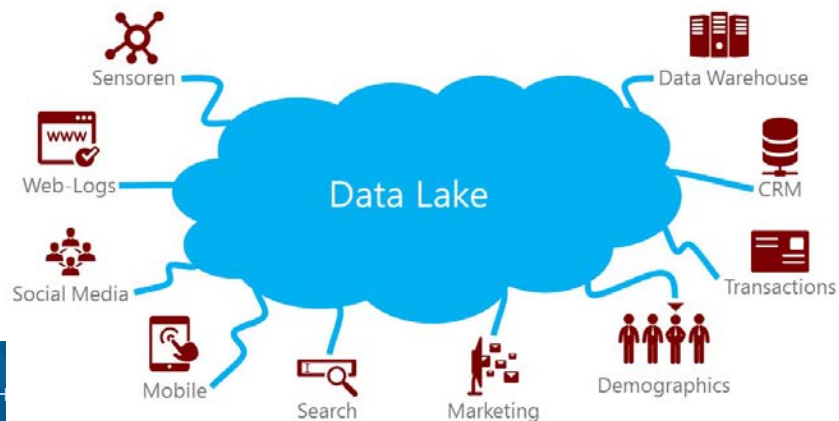


Paperless Data Collection

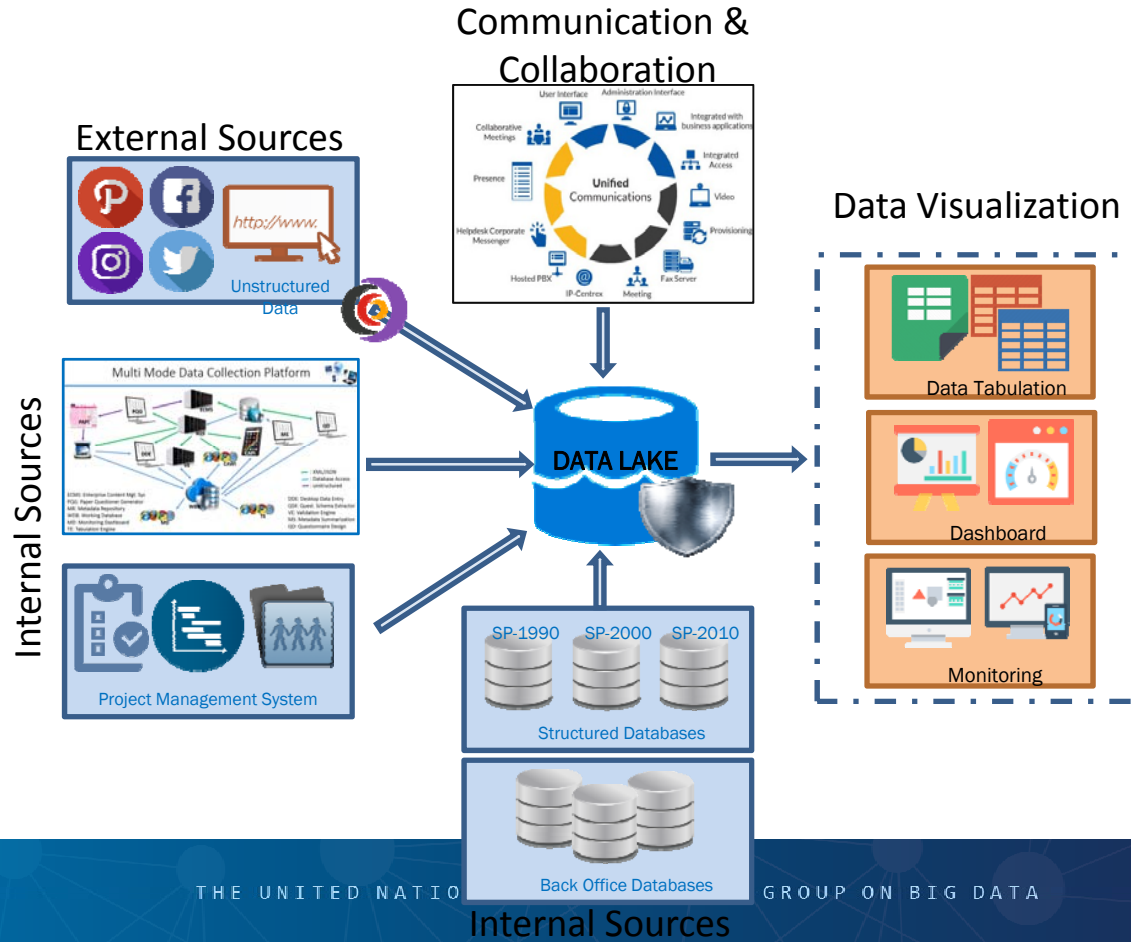




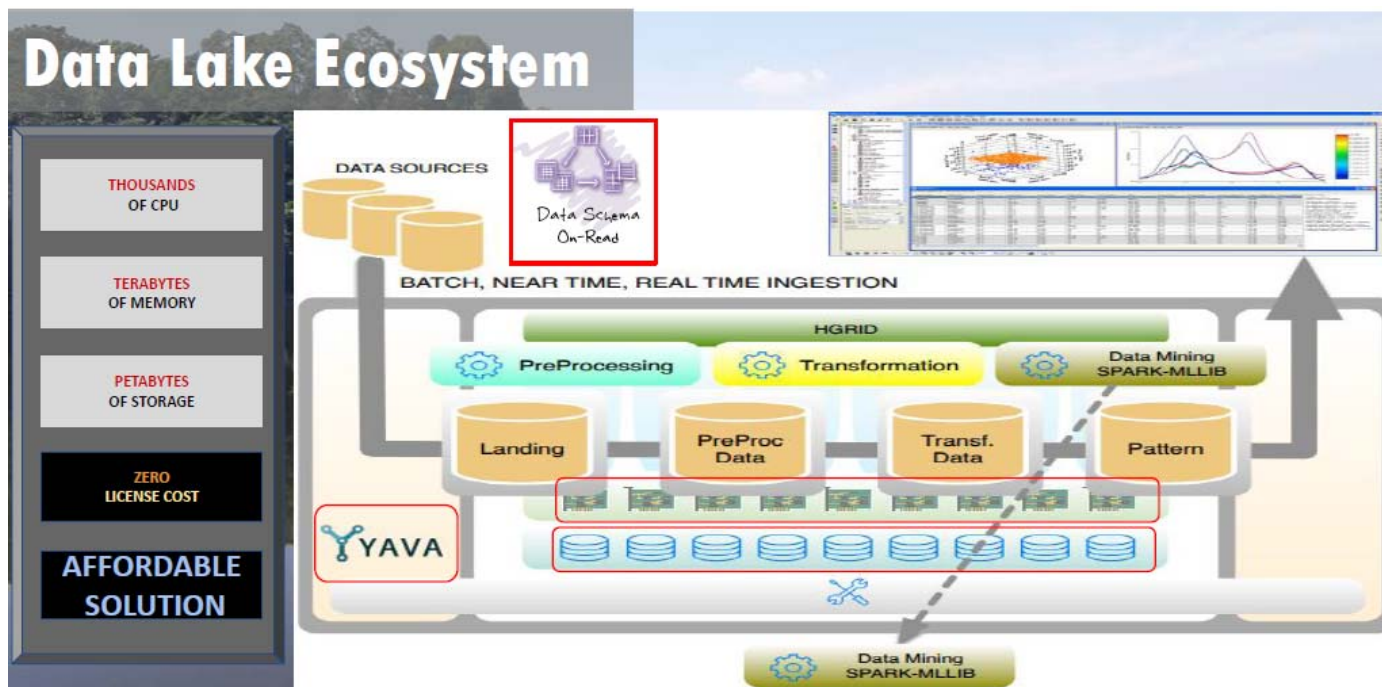
Approach II : BIG DATA ENTERPRISE DATA LAKE



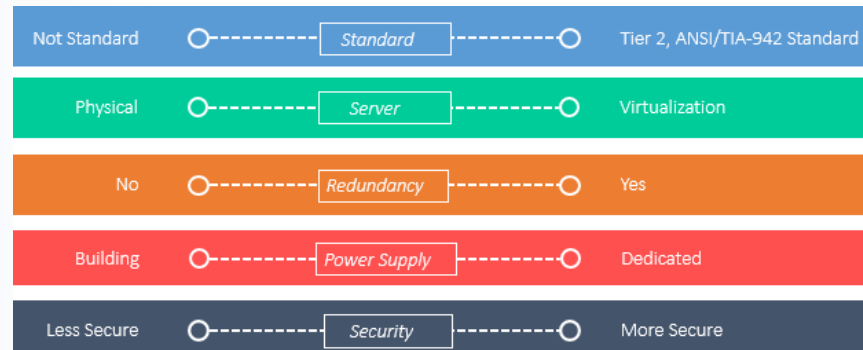
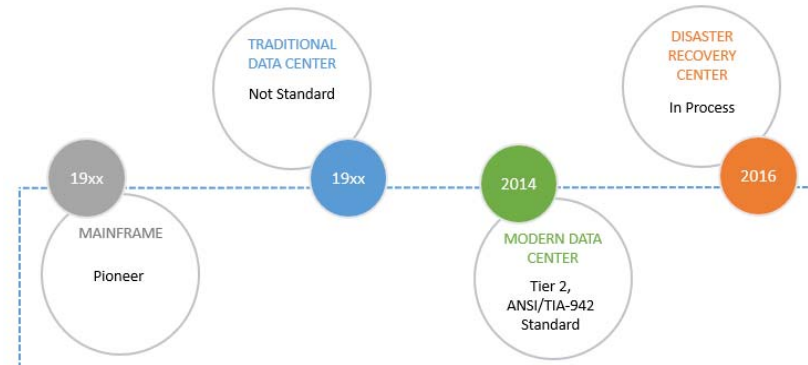
ENTERPRISE DATA LAKE FOR BIG DATA ANALYTICS



DATA LAKE ECOSYSTEM FOR BIG DATA ANALYTICS



DATA CENTER – DISASTER RECOVERY CENTER



Traditional vs Modern DC



BADAN PUSAT STATISTIK

Pelopop
Data Statistik
Terpercaya
Untuk Semua

Approach III : DATA DRIVEN DECISION MAKING **COMMAND CENTER**



THE UNITED NATIONS GLOBAL WORKING GROUP ON BIG DATA

NASA



Russian Military

NATIONAL STATISTICS COMMAND CENTER



Top 10 News Issues

- ✓ Harga Cabai Merah Meroket, Pemerintah...
- ✓ Jelang puasa dan Lebaran, Harga Bahan...
- ✓ "Extra Flight" Mudik Lebaran, Konsumsi BBM...
- ✓ Pelaksanaan Redenominasi Rupiah Perlu Per...
- ✓ Daging Sapi Dijual Rp 75.000, Warga Bogor...
- ✓ Harga Bawang dan Cabai Rendah, Mentan Klaim...
- ✓ Polisi Waspada Kenaikan Harga Daging Sapi...
- ✓ Harga Kebutuhan Pokok Naik 30%, Jelang...
- ✓ Pemerintah Jaga Inflasi Selama Ramadhan...

Search Top Issues

Harga Cabai Merah Meroket, Pemerintah Salahkan Cuaca

Sumber: <http://www.kompasiana.com/vafai/za/harga-cabai-meroket-pemerintah-salahkan...>

Perubahan Harga Eceran Cabai Merah Menurut Provinsi Per Feb 2017 (Dalam Persentase)

| Provinsi | Perubahan (%) |
|----------|---------------|
| DKI | 39,16 |
| JK | 32,36 |
| DI | 41,24 |
| BT | 12,78 |
| RI | 10,17 |
| MT | 0,87 |
| ST | 0,45 |
| MT | 0,19 |
| DI | 0,87 |
| DI | 14,23 |
| DI | 1,8 |
| DI | 52,67 |
| DI | 130,13 |
| DI | 14,93 |
| DI | 30,13 |
| DI | 30,01 |
| DI | 30 |
| DI | 18,7 |
| DI | 12,3 |
| DI | 1,35 |
| DI | 0,14 |
| DI | 0,14 |
| DI | 1,15 |

Muhammad Zainul Majdi
Gubernur Nusa Tenggara Barat

Forecasting Harga Cabai Merah

Kontribusi Cabai Merah Terhadap Inflasi

0,66

Kontribusi Terhadap Inflasi cukup tinggi, status: **WASPADA**

Statistik Harga

Harga Eceran Rp. 20.897,-
HPB Rp. 21.723,-
Produsen Rp. 22.627,-

Pemintaan Cabai Merah 0,057 Ons/Minggu/Kapita
Supply/Demand Cabai Merah Demand 3,5 ton Supply 5,8 ton

Pola Distribusi Cabai

Profil Wilayah

Provinsi Nusa Tenggara Barat

Kondisi Geografis:
Luas Wilayah = 20.153,15 ha
Ketinggian paling tinggi, yaitu 148 m dari permukaan laut
Daerah terendah dengan 13 m dari permukaan laut

Jumlah Penduduk NTB = 4.835.577
Penduduk Laki-laki = 2.345.811
Perempuan = 2.489.766

APPD: 240 jiwa / km2
DAU: Rp 859.353.026.000,-

Harga Barang Substitusi

| Jenis Barang | Harga |
|--------------------|--------------|
| Cabai Merah Gering | Rp. 52.851,- |
| Sosis Sembel (kg) | Rp. 25.000,- |
| Cabai Merah Gering | Rp. 40.573,- |

Related News

- Di Cirebon Harga Cabai Mulai "Pecah"
- Polisi Waspada Kenaikan Harga Daging Sapi, Cabai, Bawang Putih
- Harga Bawang dan Cabai di Petani Rendah, Mentan Klaim Harga di Pasar Stabil

Related Current Policy

- PP Nomor 191 tahun 2014 Tentang Pemasokan, pendistribusian dan harga jual eceran bahan pokok
- Pemendagri Nomor 64/M-DAG/PER/2016 Tentang Pendapatn harga acuan pembelian di pasar dan harga acuan penjualan di konsumen

Proposed Policy

- Langkah antisipasi kenaikan harga cabai menjelang ramadhan
- Perestapan operasi pasar untuk mengendalikan harga cabai
- Pony up an upargras harga baru dengan penerbitan nilai baru

Search contact

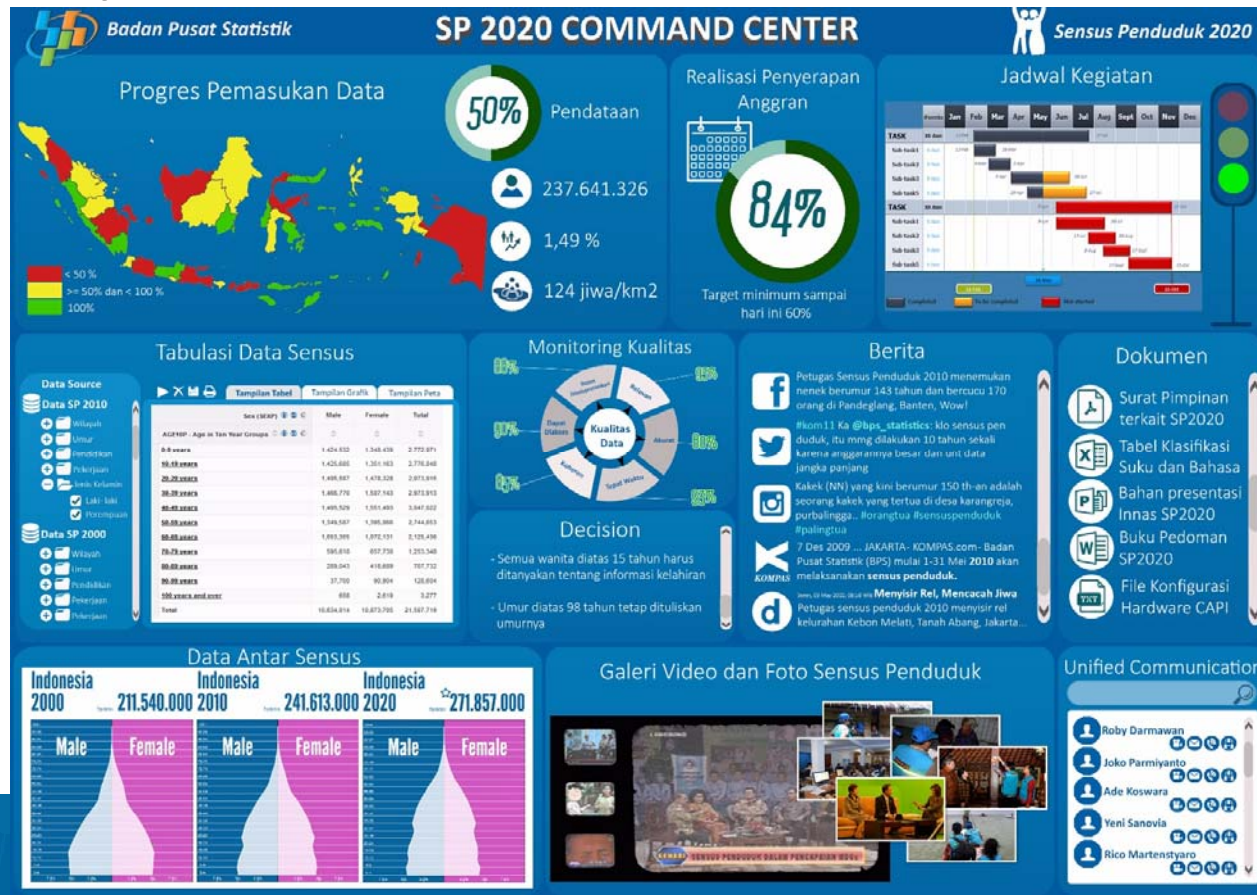
6.968 Perusahaan

168 Perusahaan pada sektor pertanian

Mayoritas penduduk Nusa Tenggara Barat beragama Islam (96%)

Hak Cipta © 2017 Badan Pusat Statistik

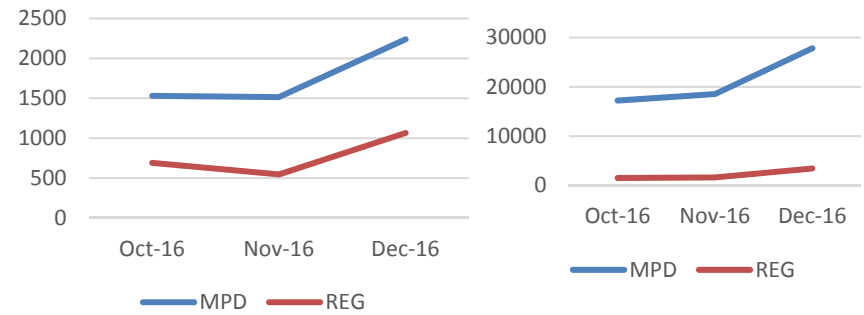
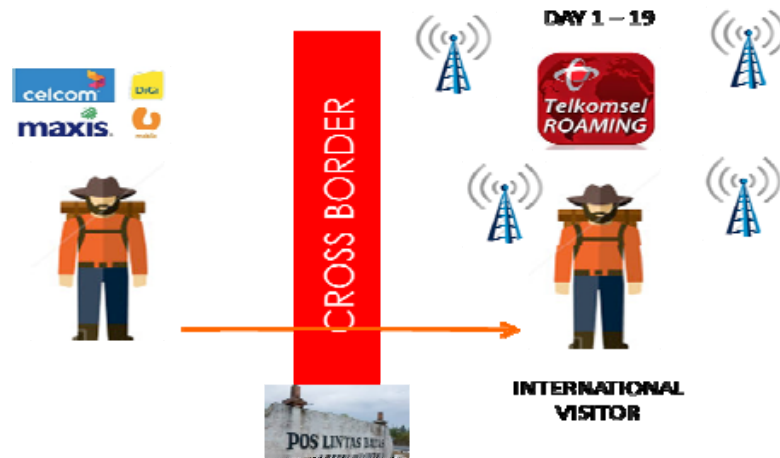
SURVEY/CENSUS COMMAND CENTER



Initiation of Big Data Use for Official Statistics



The Use of Mobile Positioning Data in Tourism Statistics



Measurement Configuration via Method of Roaming in Cross Border Area

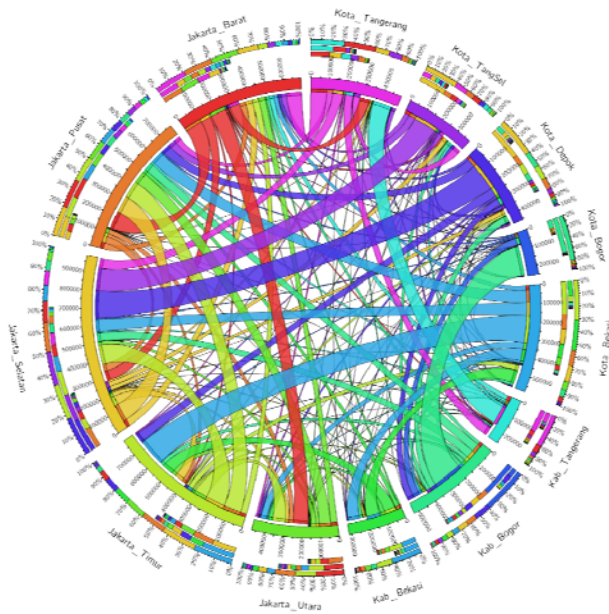
Telkom Indonesia and Ministry of Tourism Republic of Indonesia



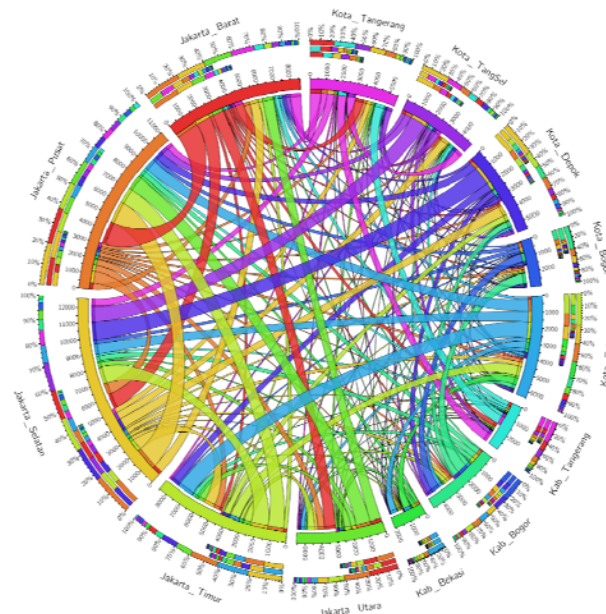
Big Data for Predicting Commuting Patterns

- Collaboration with Global Pulse Jakarta
- using multiple sources of data, e.g. social media (Twitter) to better understand inter-city commuting patterns
- Official Data: Greater Jakarta Commuter Survey 2014
- Twitters (February 2014)
 - Origin: Location of most tweets
 - Destination: 2nd most tweets location

Preliminary Results



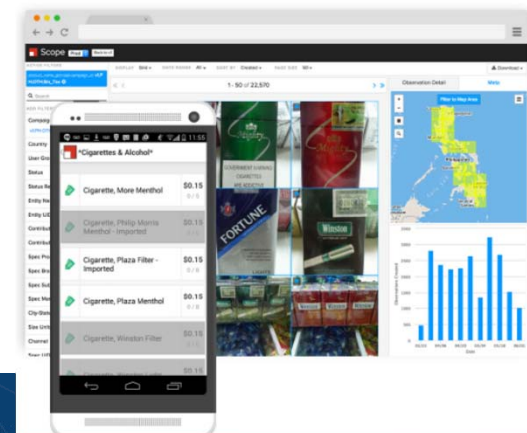
Commuter Survey



Twitter

Big Data to Nowcast Food Prices

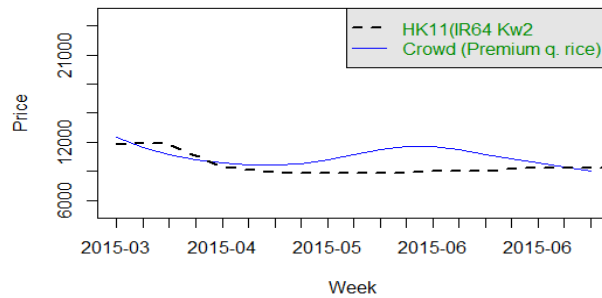
- Collaboration with Pulse Lab UN Jakarta
- Nowcast food prices using crowdsourcing (premise UN Food security project)
- Locus: City Mataram, NTB
- Time: March– July 2015



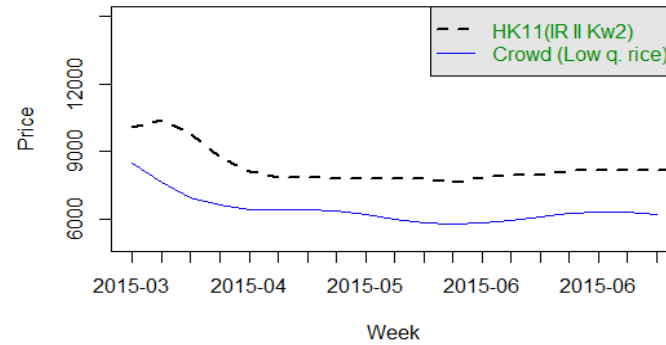


- Rice

Price Comparison

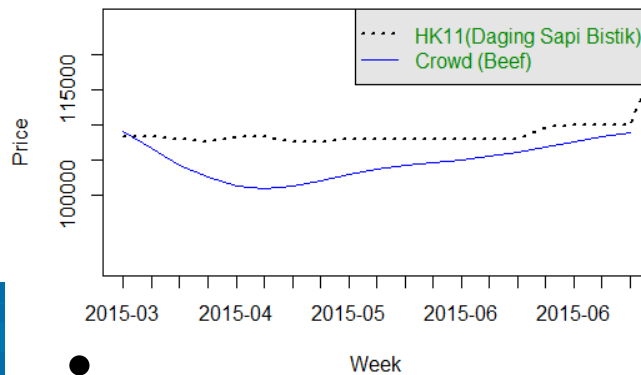


Price Comparison



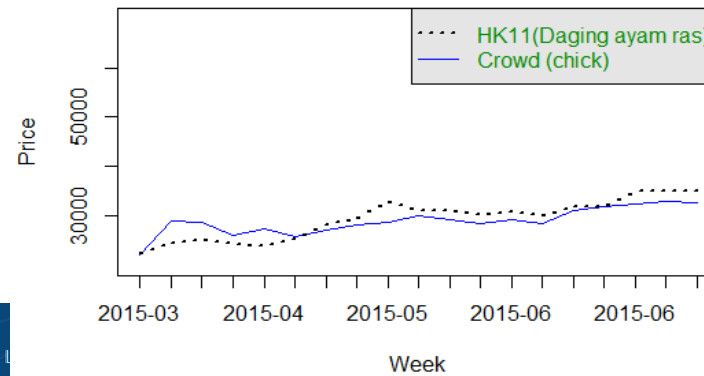
- Beef

Price Comparison



- Chicken

Price Comparison

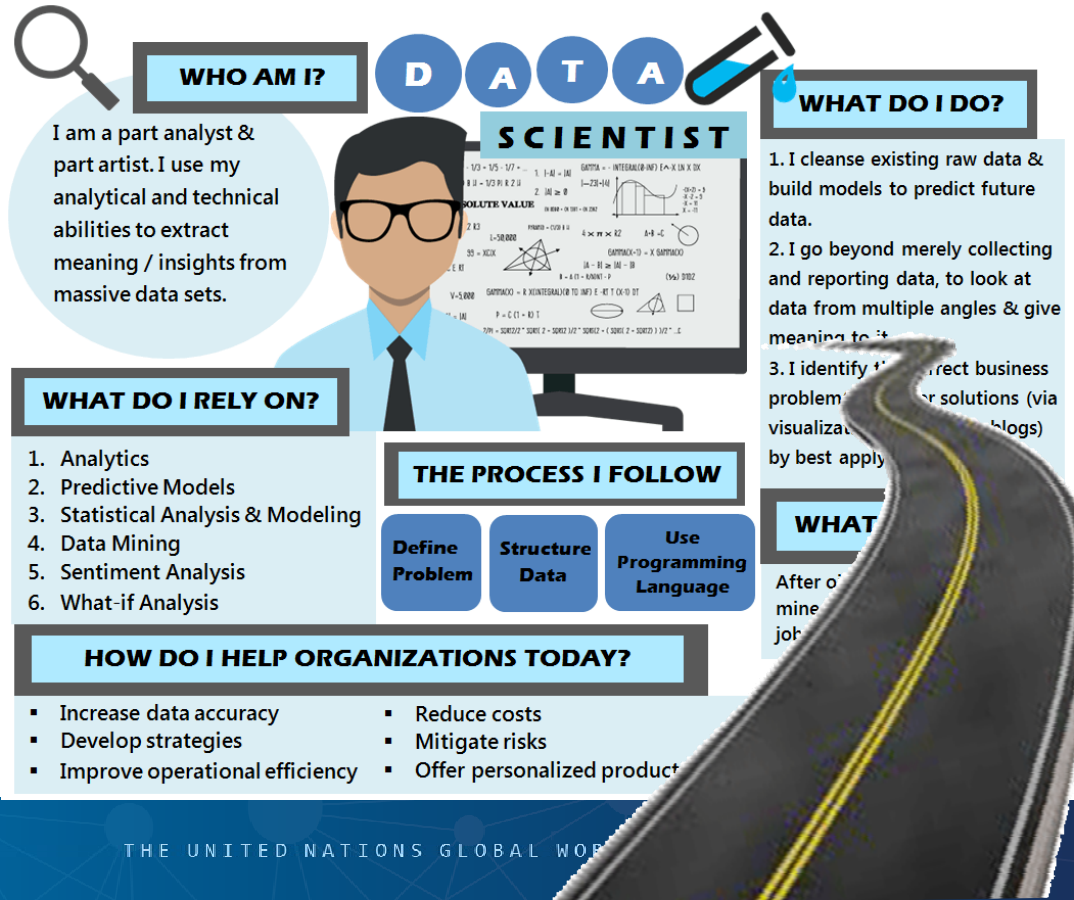




Other On Going Research

- BigData for Small Area Estimation
- Transjakarta Data for commuting pattern and traffic control
- Twitter for monitoring Migration, Happiness index.
- Bigdata for prediction Socioeconomics and Unemployment

DATA SCIENTIST ROADMAP



**BPS Statistics
Indonesia**



Other Stakeholders

Institute of Statistics

- Center for excellent in Big Data for official Statistics
- Provide Data Scientist
- BigData Minilab for development





Gracias
Thank you
Terima kasih

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#UNBIGDATA2017

