

# SHARING ON MALAYSIA EXPERIENCE : INTEGRATION OF MBSR WITH TRADE DATABASE

RIYANTI BINTI SAARI  
METHODOLOGY & RESEARCH DIVISION

29-31 OKTOBER 2018

Technical Mission of SESRIC An Business And Registers,  
Brunei Darussalam





- 👉 **STATSBDA JOURNEY**
- 👉 **STATSBDA ARCHITECTURE**
- 👉 **STATSBDA MODULES**
- 👉 **WHAT IS TEC?**
- 👉 **INTERNATIONAL RECOMMENDATION**
- 👉 **TEC OUTPUTS**
- 👉 **TEC OUTCOMES**
- 👉 **PORTAL**



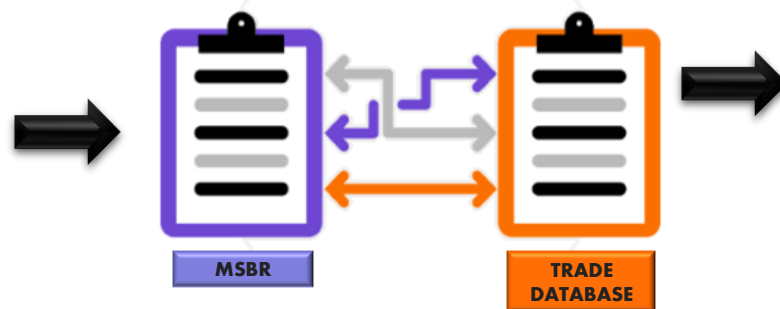
# STATSBDA JOURNEY



**Inception Meeting in Colombo, Sri Lanka**  
30 June -2 July 2014  
Organizer: ADB

**CDTA: 8594** - Statistical Business Registers  
for Improved Information on Small  
Medium-Sized and Large Enterprises.

## TRADE BY ENTERPRISE CHARACTERISTICS (TEC)



MSBR rich with businesses  
information & become richer  
when it is combined with trade  
database



## Seminar on Integrated Trade Database with MSBR: A Big Data Initiative

17 September 2015  
Sponsored by: ADB  
Consultant: Mr. Markie Muryawan  
(Chief International Merchandise,  
Trade Statistics Section, UNSD)



STATSBDA  
BIG DATA ANALYTICS

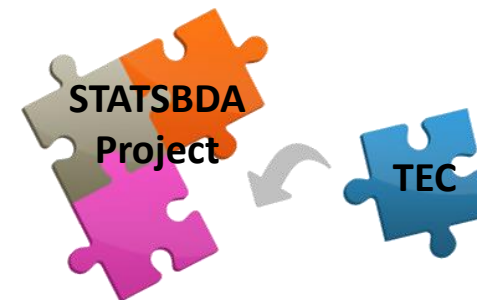
**Kick  
Start!**

**STATSBDA Kickoff**  
2 December 2016



**EXPAND**

**STATSBDA Project**  
December 2016  
Structured Data  
(TEC)  
+  
Unstructured Data

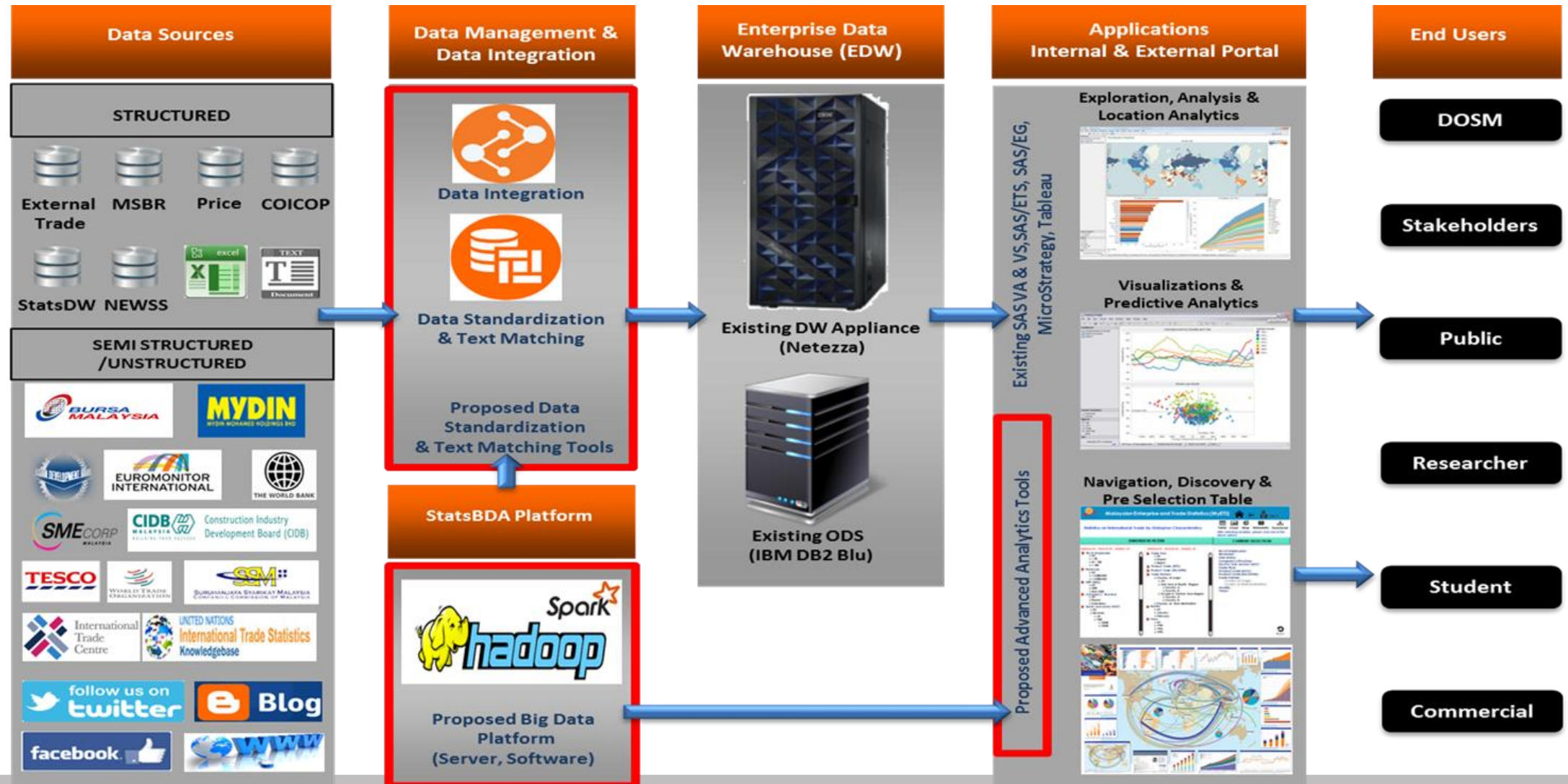


**Embedded in STATSBDA  
Project** - decide to harness  
the massive amounts of  
trade data using big data  
platform.





# STATSBDA ARCHITECTURE





# STATSBDA MODULES

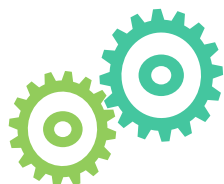


Trade by Enterprise  
Characteristic (TEC)

Price Intelligence  
(PI)



BizCode@Stats  
(Mobile App)



Real Time  
Business Status  
(RTBS)

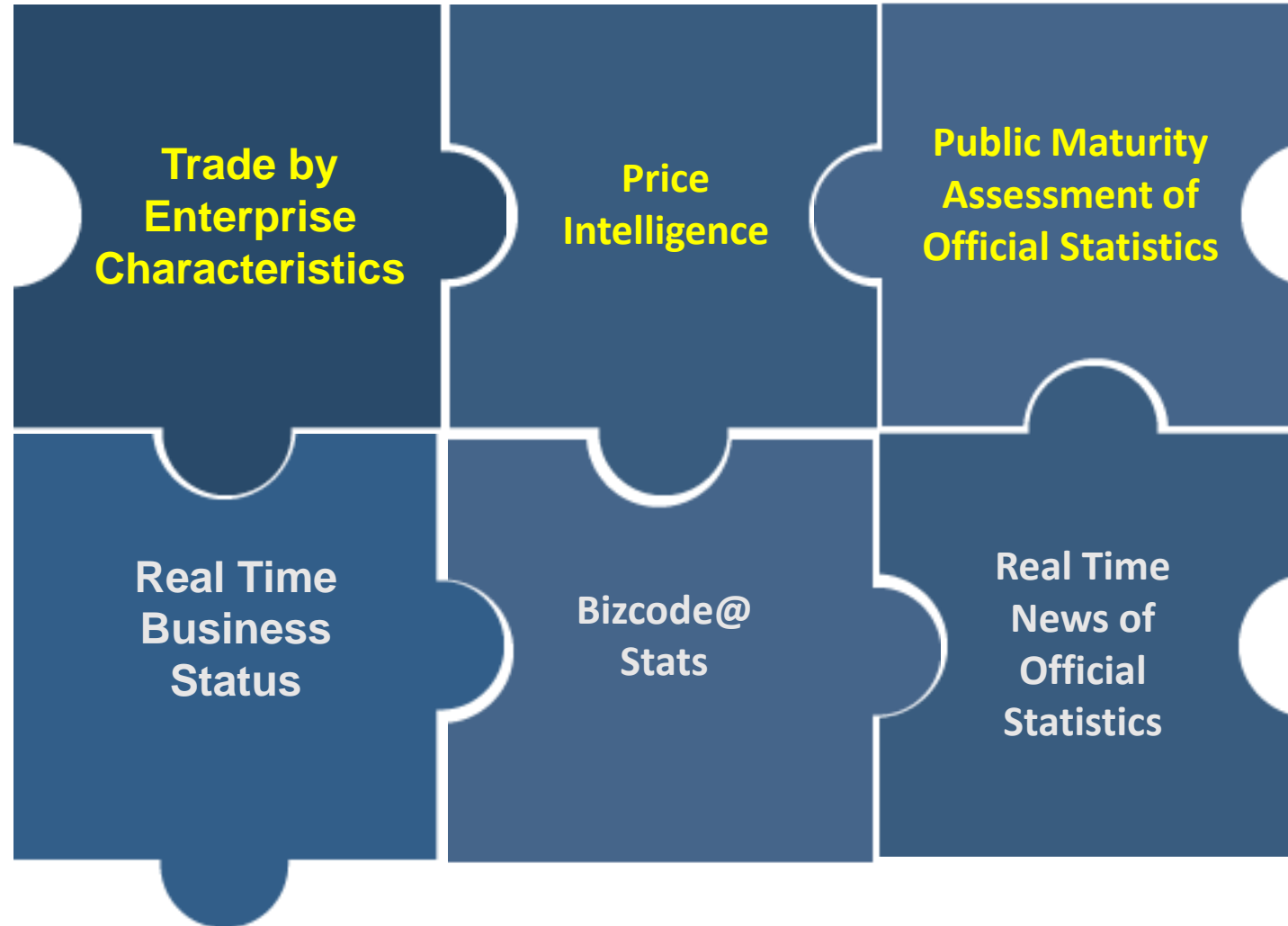
Public Maturity Assessment on Official Statistics  
(PMAOS)

Real Time News on Official Statistics  
(RTOS)





# STATSBDA MODULES





# TRADE BY ENTERPRISE CHARACTERISTICS (TEC)



## Structured Data

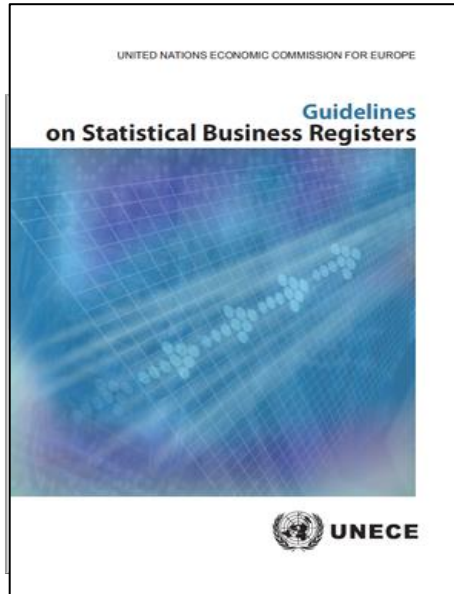


**High volume of administrative data** from JKDM is integrated with MSBR to **provide value added** to an existing international trade statistics without having to run a new survey.

**These statistics are able to identify the characteristics of companies or businesses involved global market.**







## INTEGRATION WITH EXTERNAL TRADE REGISTER

Para 2.54:

Coherent compilation of trade statistics by enterprise characteristics requires linkage of trade and business registers at micro level. If this can be achieved, the combination of the key enterprise characteristics and the trade data, such as product code and partner country, offers many opportunities for producing a more complete and diversified view of the structure of both trade and production.

## LINKING TRADE AND BUSINESS STATISTICS

Para 11.5:

Linking and integrating trade and business statistics is important for data-compilation and analytical purposes.

A major development in economics statistics in recent years has been the establishment and use of national business registers that allow not only the conduct of business surveys but also the linkage of information from different data sources, potentially leading to significant efficiency and quality gains in data collection.





**The UN Statistical Commission recommends national statistical offices to adopt an integrated approach to economic statistics in order to attain:**

**Consistency** in measuring economic activity across sectors and regions

**Global consistency** of key economic indicators

**Greater accuracy** by reconciling discrepancies among data sources

**Reduction collection and reporting burden** by using the same information for different purposes



- One effective and proven application is linking the SBR to trade statistics to compile **trade by enterprise characteristics (TEC)**, which can be compiled for **merchandise trade, trade in services, & foreign direct investment**.
- **TEC data aim to describe trade flows from the view point of enterprises:**
  - Impact of international trade on employment, growth and income (by kind of industry, size of enterprise and other characteristics)
  - Effectiveness of trade policies (e.g., export-promotion, effects on 2-way traders and foreign affiliates)





## Trade Database

- ~1m records
- ~11 files with different column names
- ~80 columns

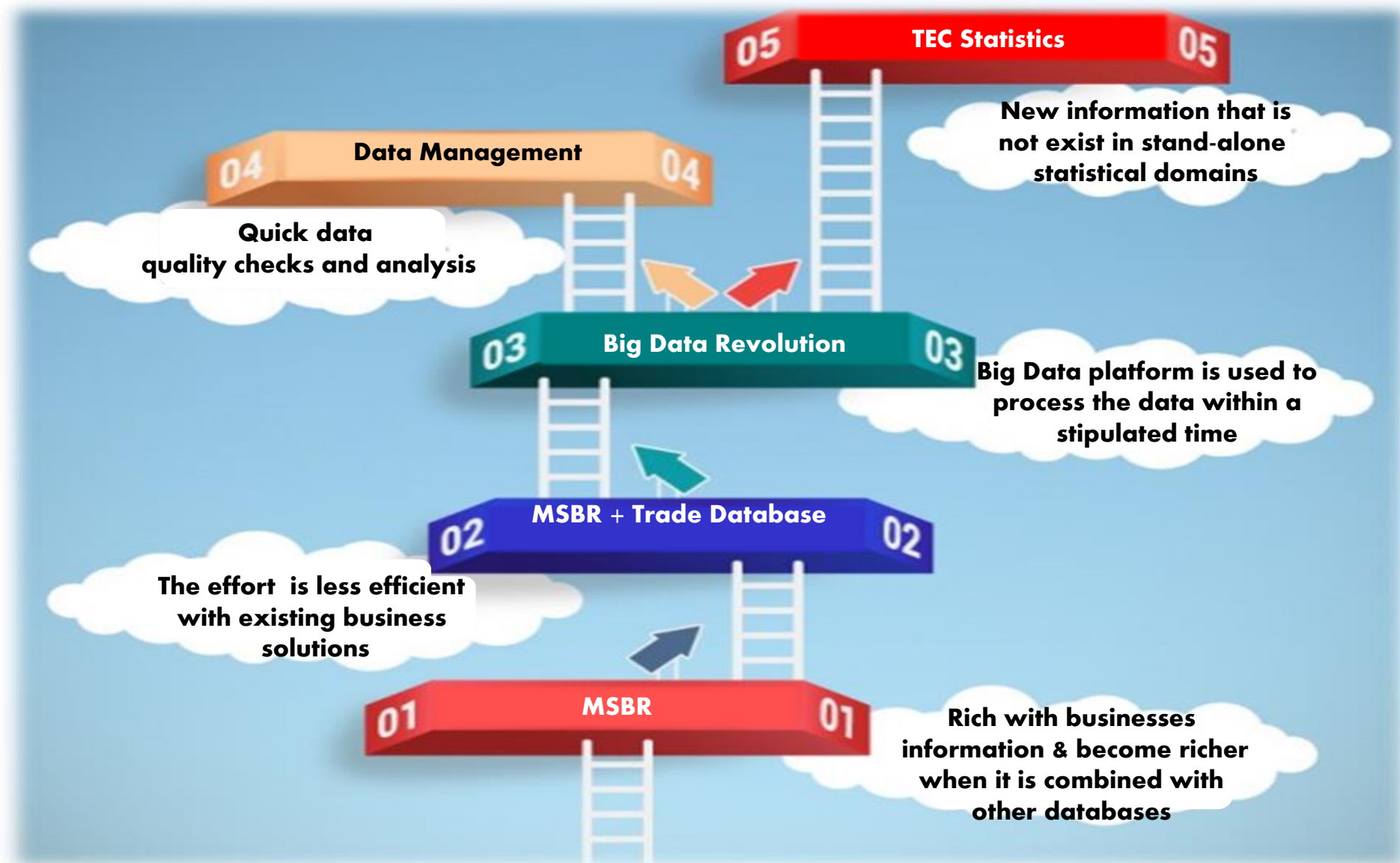


## MSBR

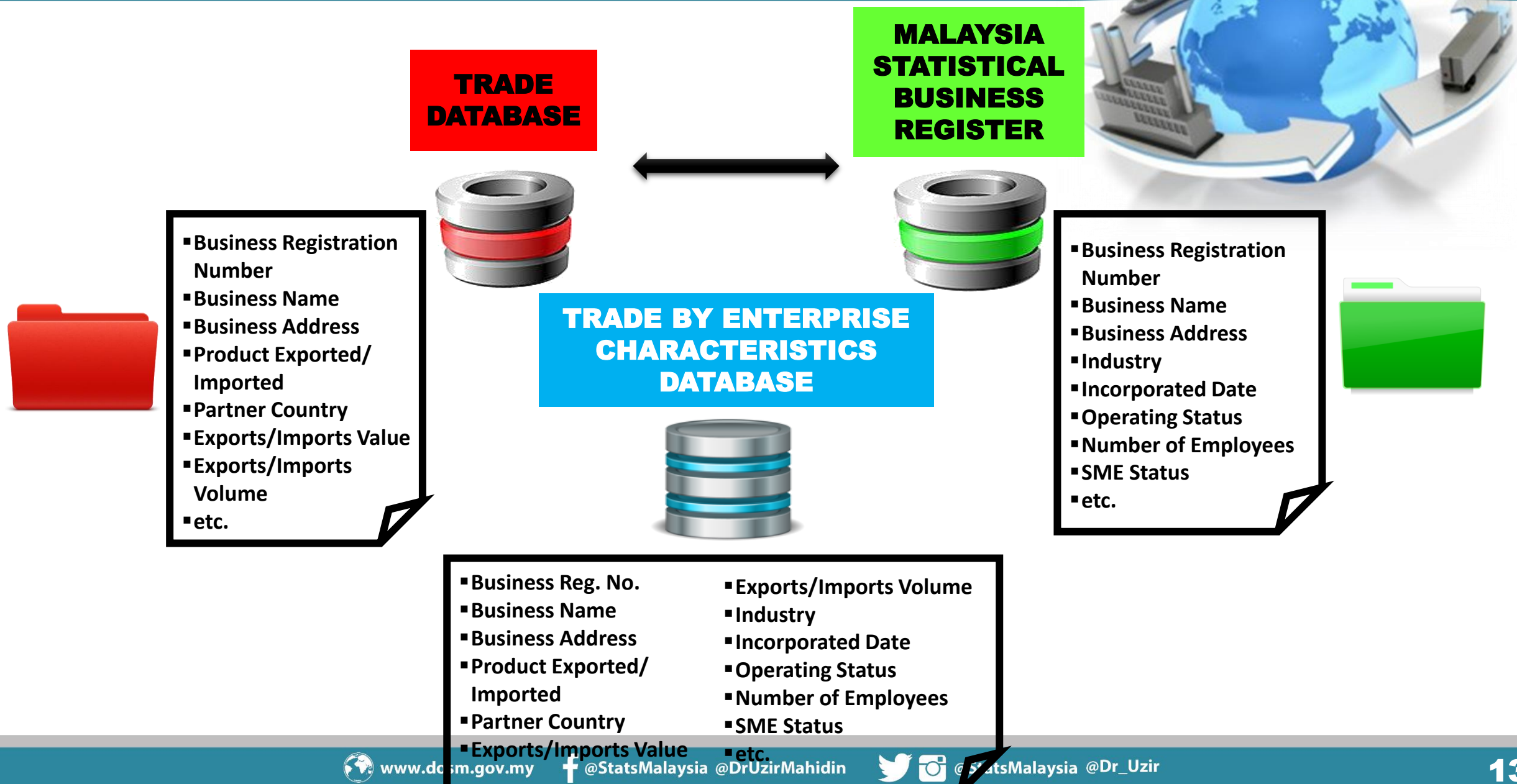
- ~3m records
- ~2 files
- ~200 columns

## MONTHLY DATA







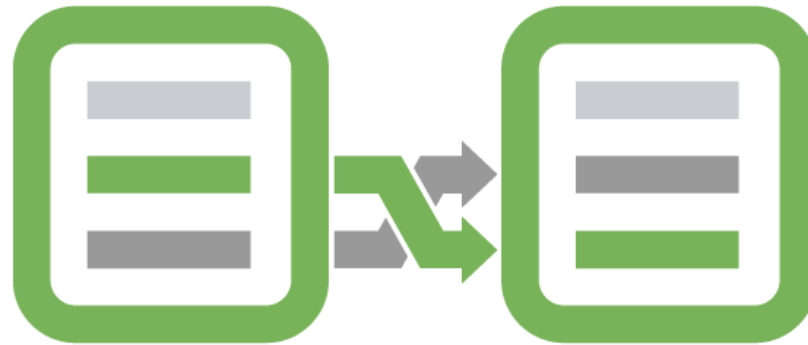




**In an ideal scenario.....**

Trade Database

MSBR

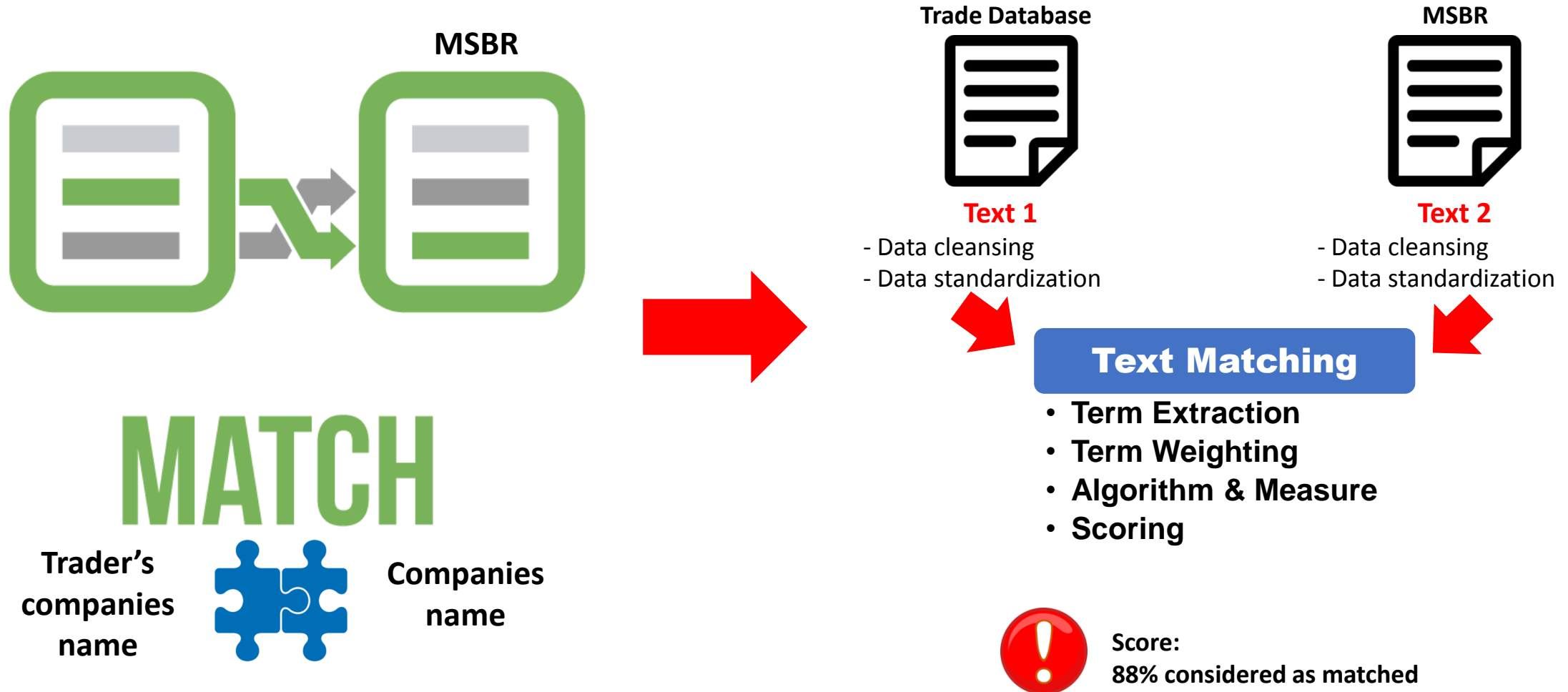


**MATCH**

**Business Registration Number (BRN)**

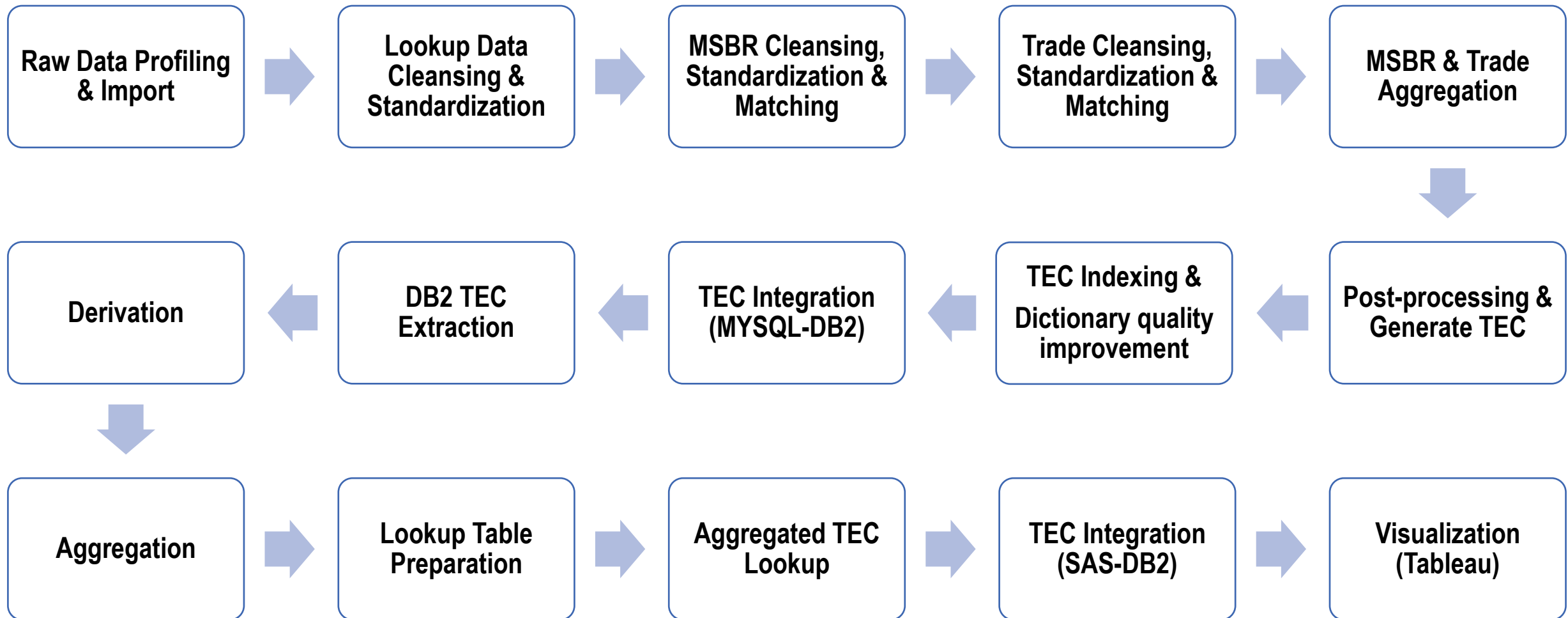


## Due to poor quality of BRN information....



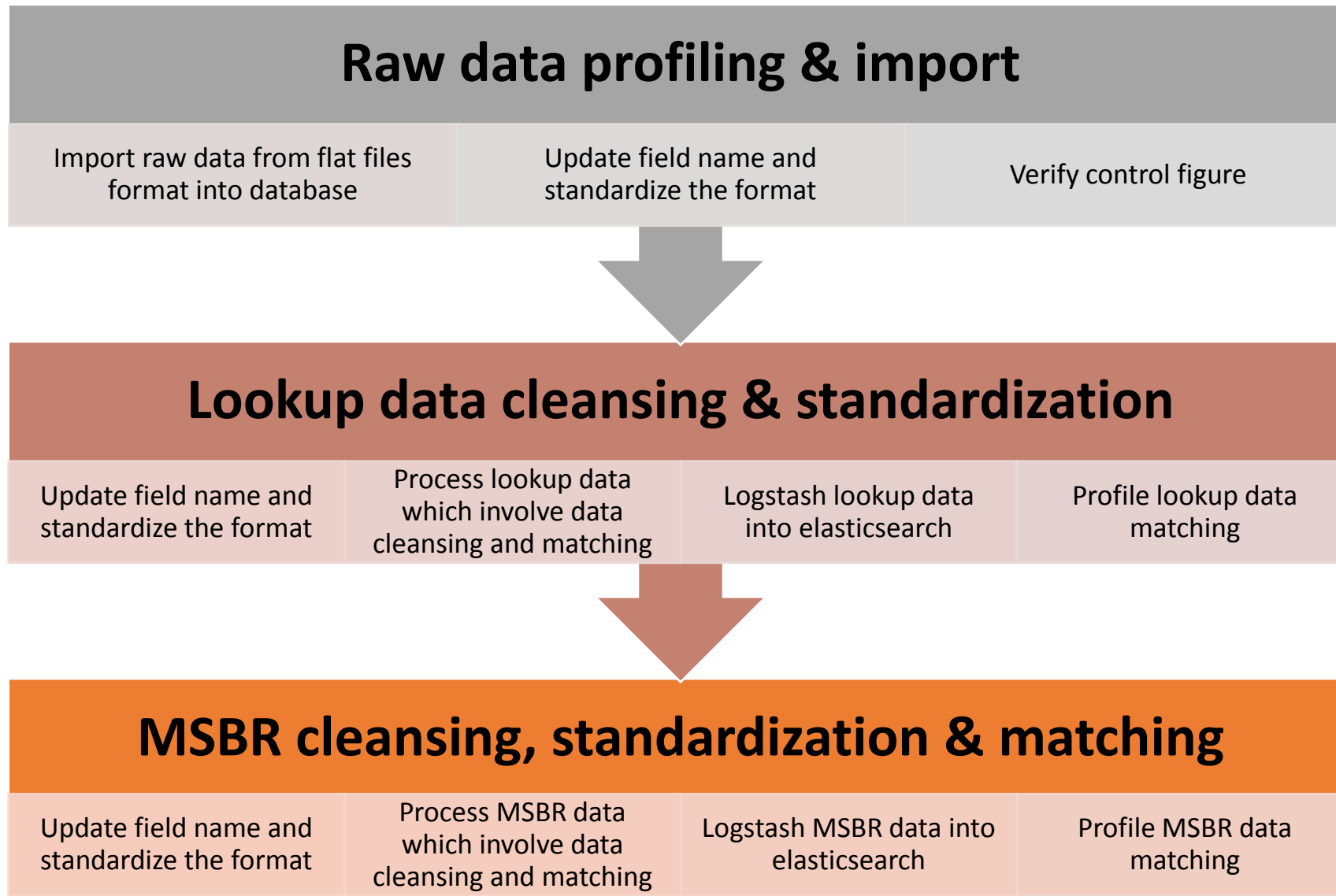


# TEC PROCESS FLOW



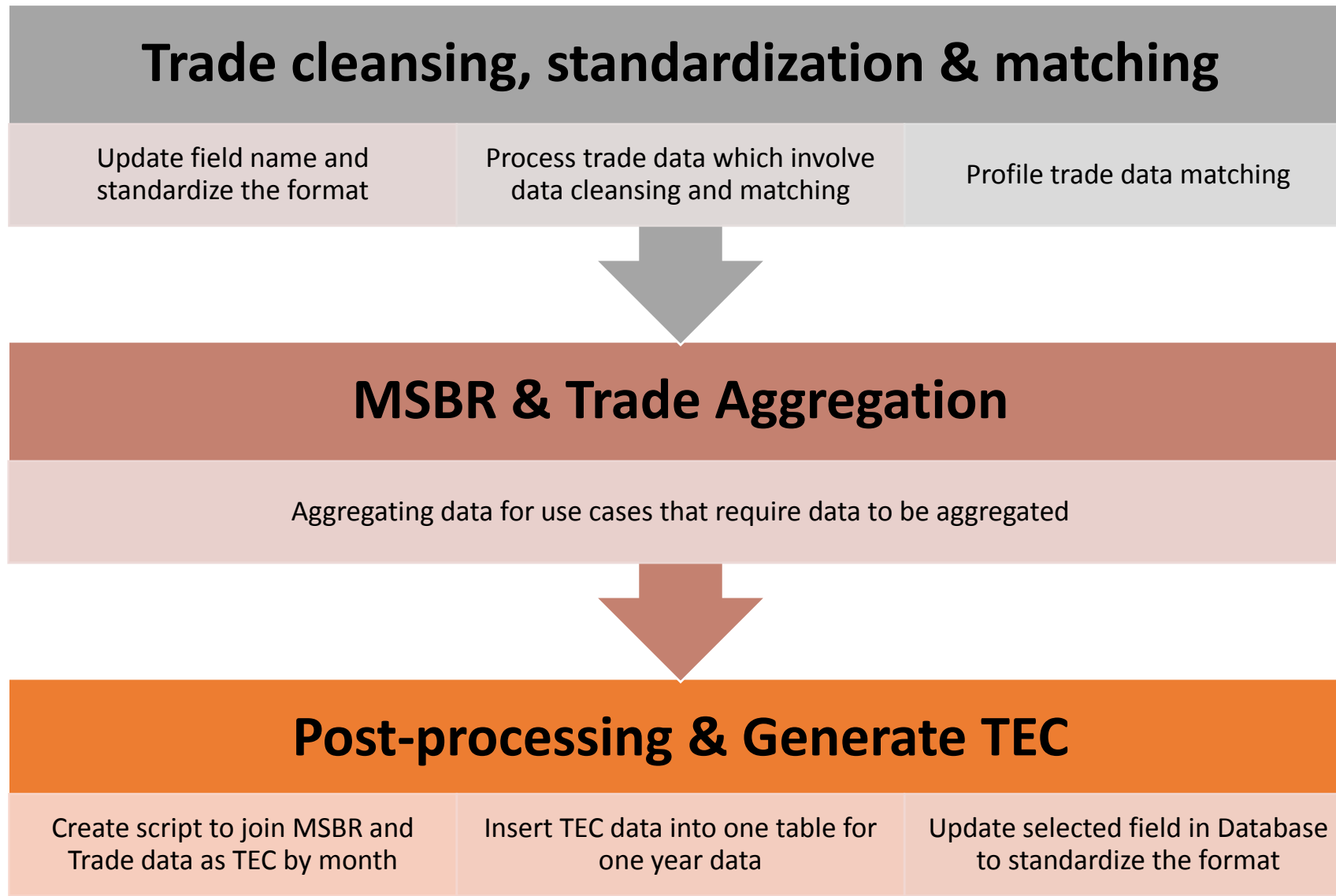


# TEC Process Flow (Details)



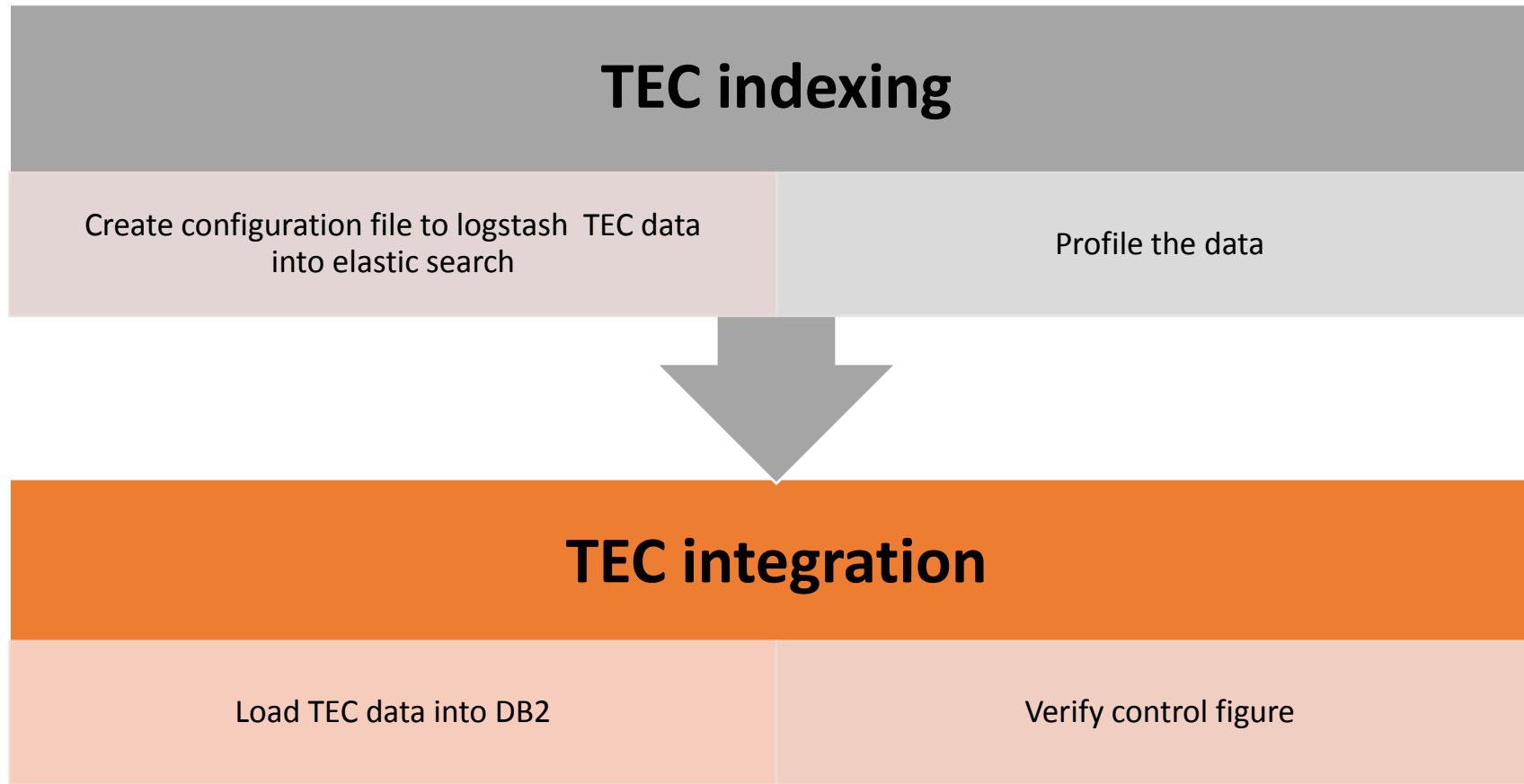


# TEC Process Flow (Details) cont'd



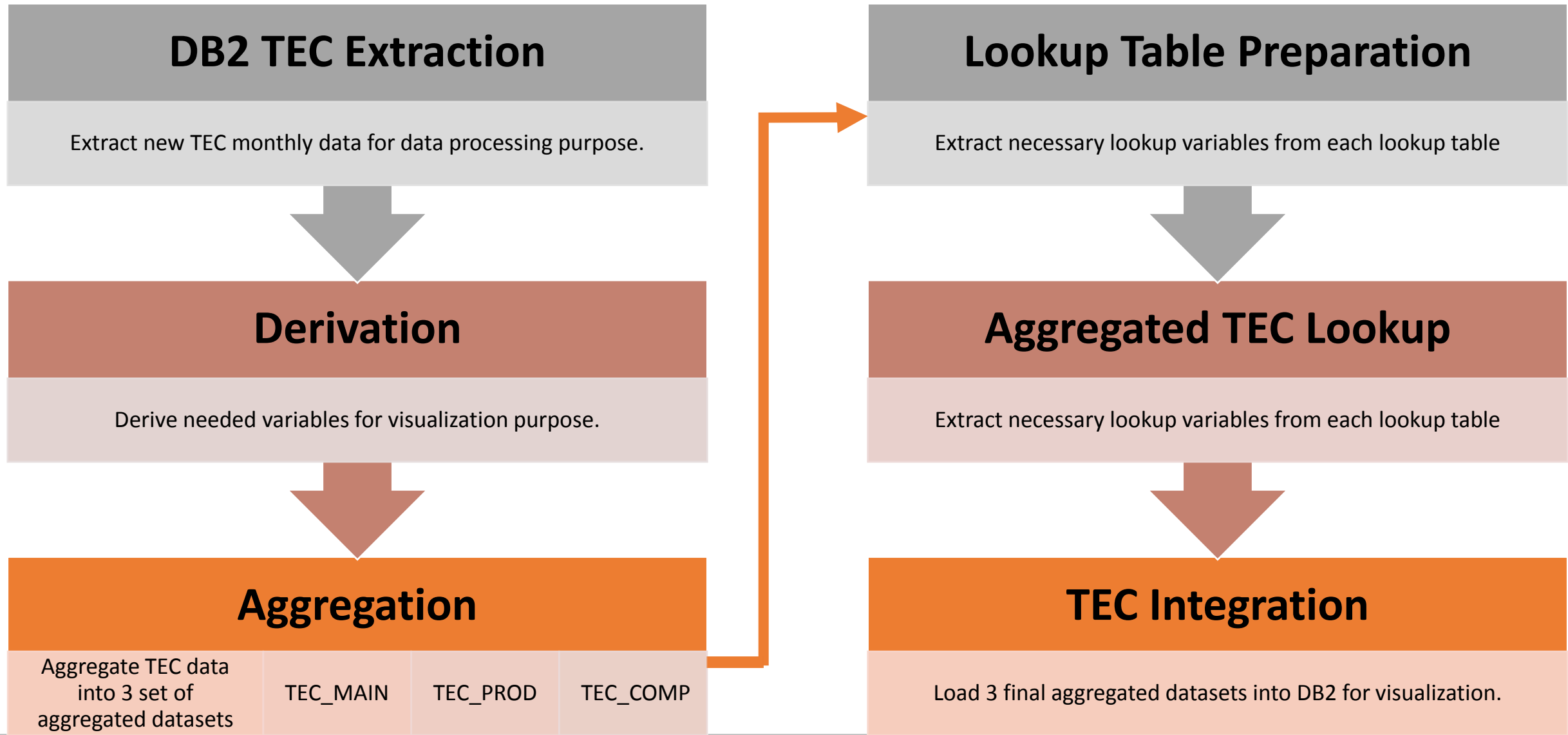


# TEC Process Flow (Details) cont'd





# TEC Process Flow (Details) cont'd





- **Descriptive**

- Combination of Trade and Company Info (Trade Enterprise Characteristic)
- Able to deep dive to more granular level
- Benefit for organization to enhance productivity: Internal & Explicit stakeholders, Public

- **Forecasting**

- Gain ability to forecast
- Maximize the potential of the products or services produced or offered by Malaysia
- Have an expectation for next period of trade value
- Alert users when trend is out of expectation and DOSM enable to find the reasons at early stage



## **Descriptive**

- Overall
- Product Code
- Major Trading Partners
- State
- FTA & Non-FTA Trading Partners Tag
- Two-Ways Trader Statistics
- Border State Statistics
- High-Tech Product Statistics
- Broad Economic Category Statistics
- Halal Products Export
- Top Exporter / Importer by Product
- Product by Importer Exporter
- Business Status
- Trade Statistics by Sector
- Trade Statistics by Section (MSIC)
- Economic Region Statistics
- Revenue & Employment Size Band Statistics
- Manufacturing Statistics
- Enterprise Age Statistics
- High Demand Product Statistics

## **Forecasting**

- Forecast Total Import/Export Value by Sector for Overall and Among SME
- Forecast Import/Export Value for Each State
- Forecast Number of SME Importers/Exporters by Sector
- Forecast Total Import/Export Value by Top 10 Trading Partners
- Forecast Retained Import Value for Each Broad Economic End Use Category
- Forecast Import/Export Value for Each State
- Forecast Total Import/Export Value of FTA Partner Country
- Sustainability of Top 5
- Forecast the Percentage Contribution in Export Value of Overall SME and Import & Export Value of Overall MNC Respectively at Monthly Level
- Forecast the Overall Import & Export Trade Value at Monthly Level





Merchandise Trade by State



Merchandise Trade by Sector

## MSIC Section



Merchandise Trade by MSIC  
Section



Merchandise Trade by Type of  
Trader



Merchandise Trade by Revenue

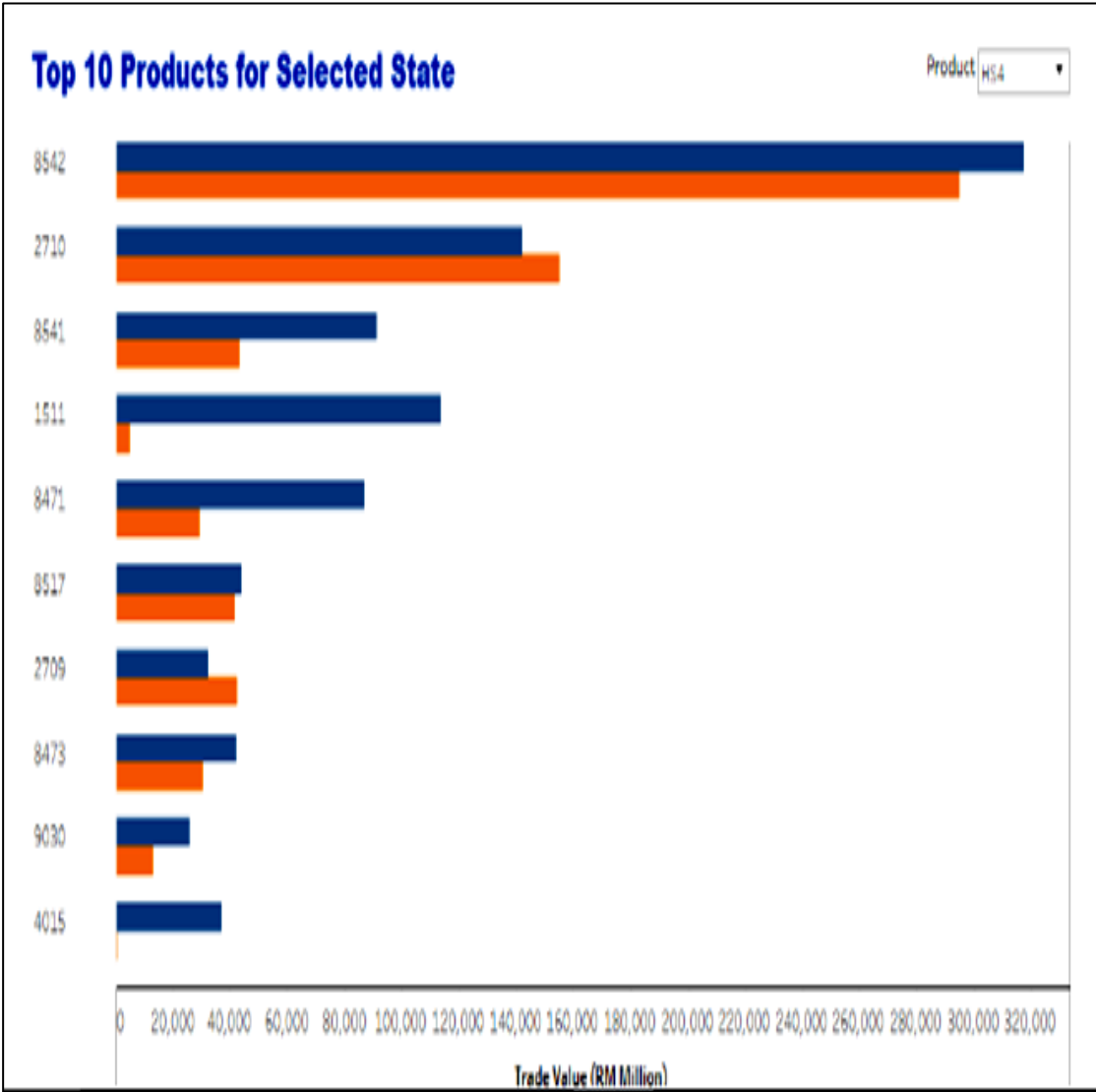
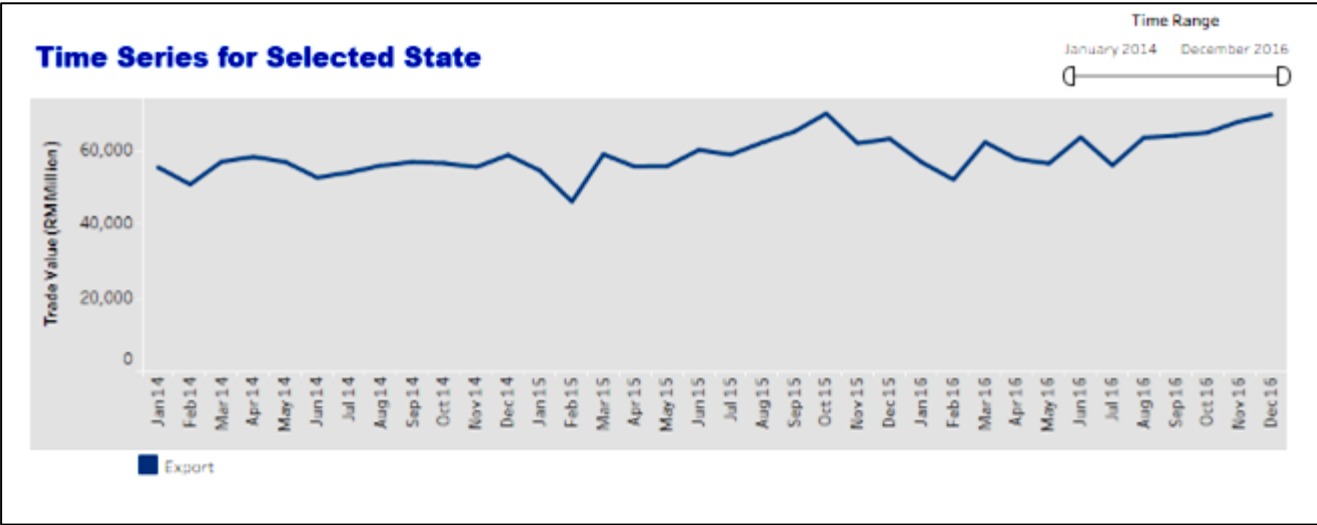
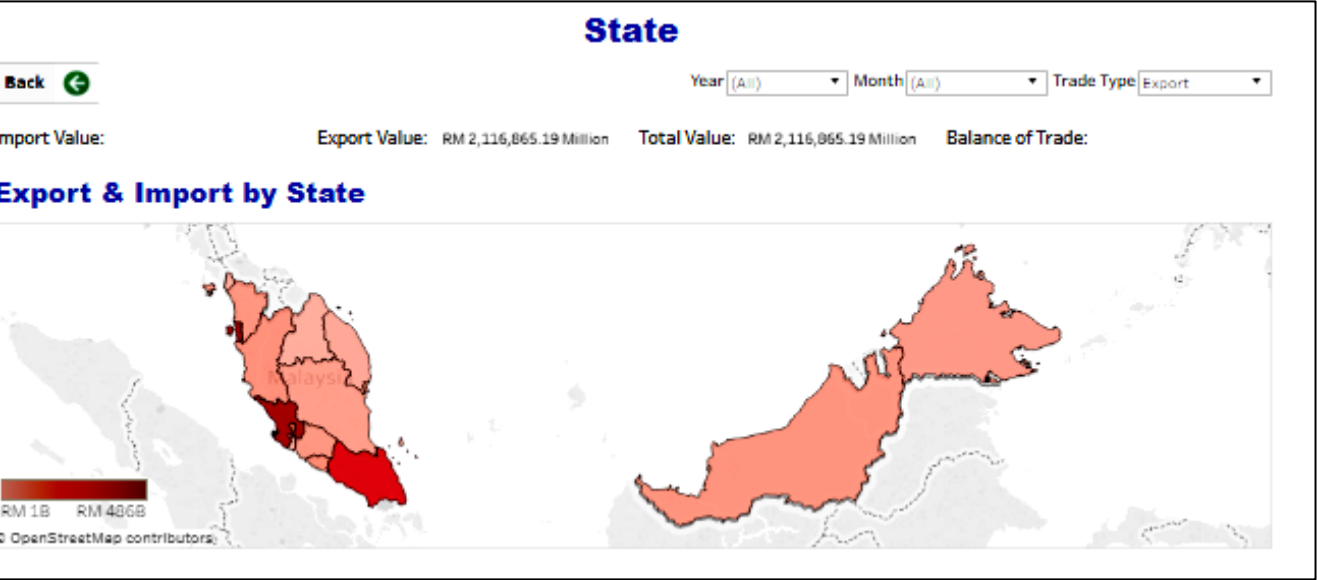


Merchandise Trade by  
Employment Size



Merchandise Trade by Enterprise  
Age





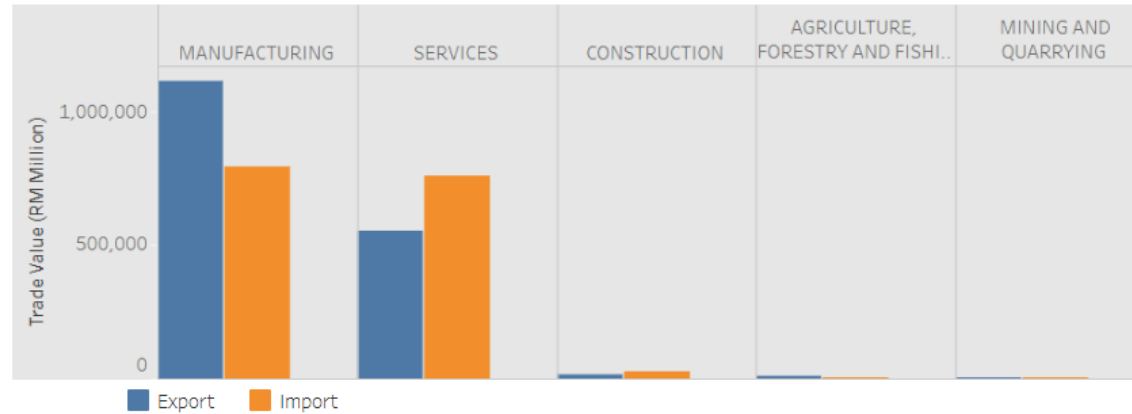


## Trade Statistic by Sector

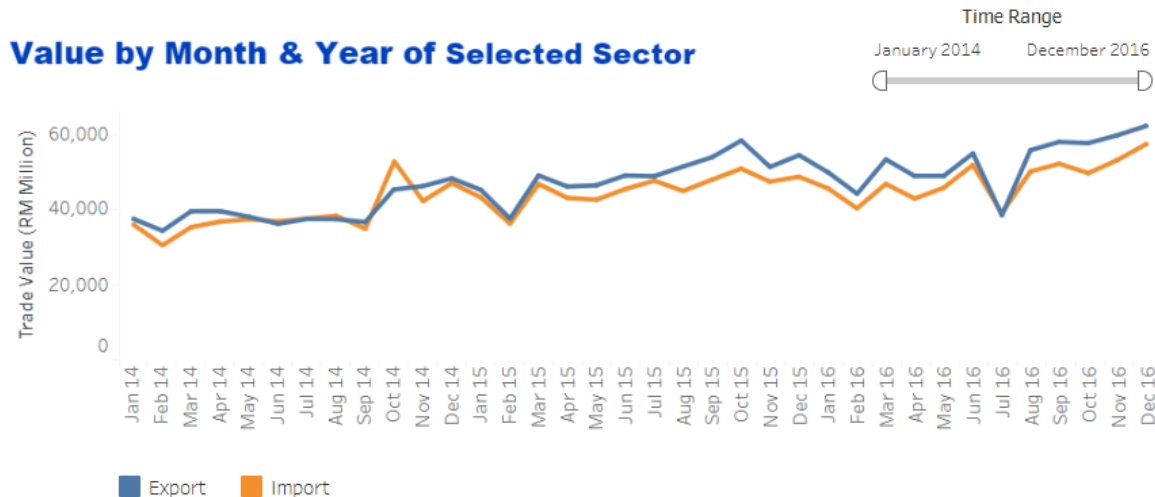
Back 

Year  Month  Trade Type

### Export & Import Value by MSIC Sector

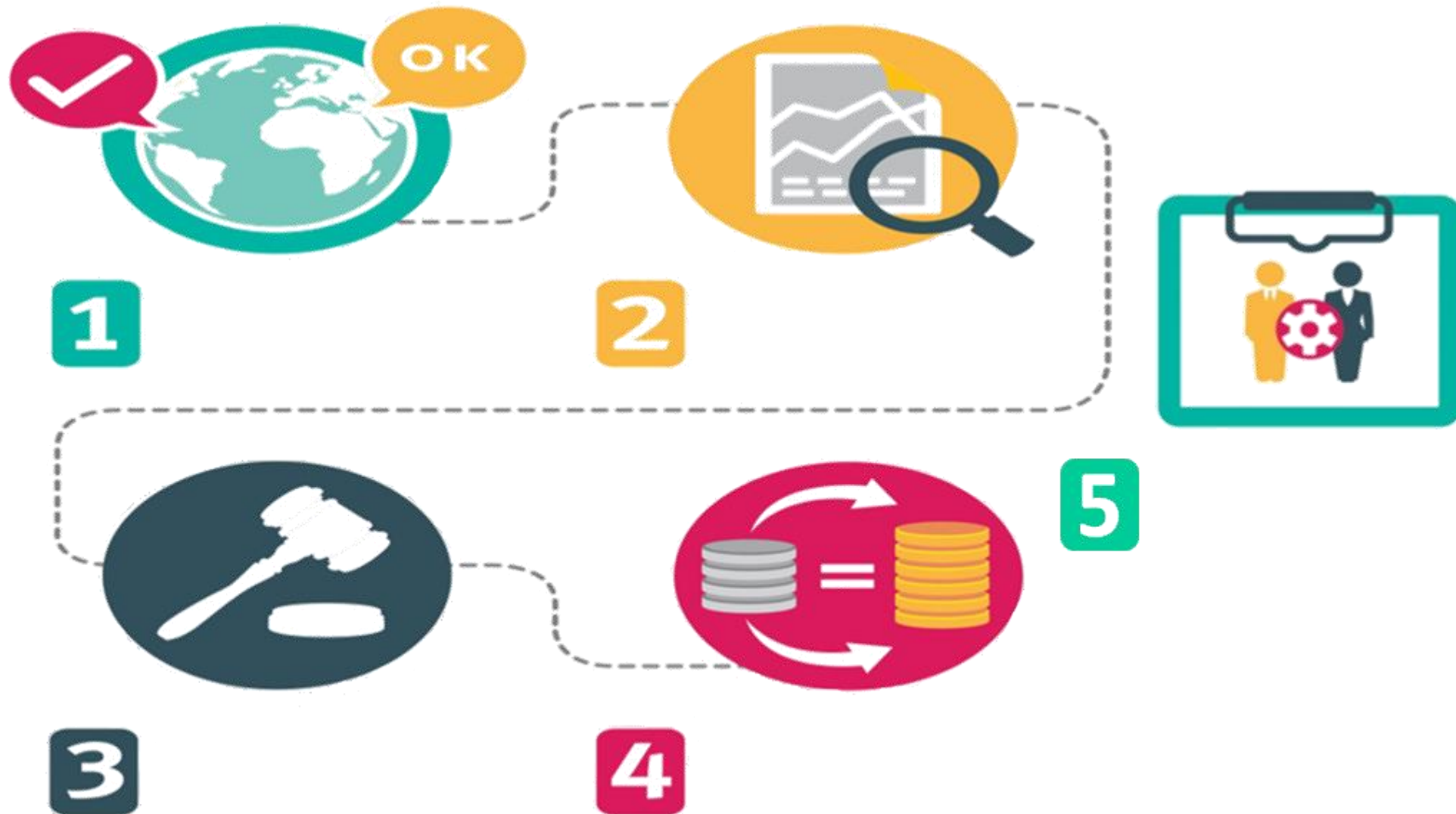


### Value by Month & Year of Selected Sector





# OUTCOME







HOME MODULES NEWSLETTER DATA SCIENCE LAB GALLERY CONTACT US

Internal User

17:53:41  
14 May 2018



## WELCOME TO STATSBDA PORTAL

Powerful Data. Valuable Result. Informative Decision

The Department of Statistics Malaysia (DOSM) is now moving towards Big Data Analytics (BDA) in producing more reliable and timeliness official statistics. Thus, DOSM has initiated the implementation of BDA with the project of STATSBDA which is in line with DOSM's Transformation Plan 2015-2020. The objectives of the implementation of STATSBDA are:



[www.dosm.gov.my](http://www.dosm.gov.my)

[statsbda.dosm.gov.my](http://statsbda.dosm.gov.my)



[www.facebook.com/dosm](https://www.facebook.com/dosm)



[@StatsMalaysia](https://twitter.com/StatsMalaysia)



[www.instagram.com/dosm](https://www.instagram.com/dosm)



<https://www.whatsapp.com/channel/0029va20000000000000000000>

[Dr\\_Uzir@dosm.gov.my](mailto:Dr_Uzir@dosm.gov.my)





## TRADE BY ENTERPRISE CHARACTERISTIC (TEC)

Setting the foundation for the harmonization of economic statistics, the Malaysia Statistical Business Register (MSBR) has been designed, developed and enhanced by Department of Statistics Malaysia (DOSM). MSBR is a fundamental property in maintaining the comprehensive list of businesses and companies operating in Malaysia. It is used as the source of frames for all business surveys. MSBR plays an essential role in the construction and maintenance of an integrated economic information system. The growing demand for better and more detailed business statistics has put focus on MSBR and its role in the production of business statistics.

The function of MSBR is further expanded by integrating it with trade database to be able the trade information connects to the traders' characteristics. By integrating these two databases, DOSM can be in the better position to provide statistical indicators on trade by enterprise characteristics. Micro-data linking of MSBR and trade is to gain more data insights without initiating new survey. Ultimately, it enriches the international trade statistics by providing closer views of traders who are actively engaged in importing and exporting. This project is conducted to complement conventional trade statistics for an in-depth trade statistics of which the traditional trade statistics are unable to portray its business characteristic, economic activity, revenue size, enterprise age etc.

Explore







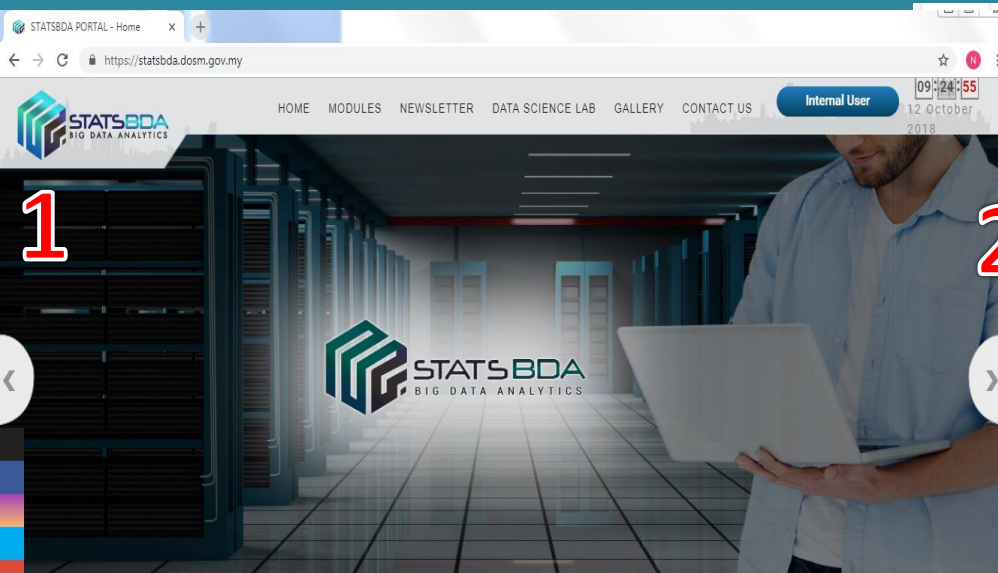
**Strategic partnership with SSM through online system integration between DOSM and SSM which is known as SSM Middleware. It is a web service where DOSM needs to send requests based on specified format to get latest businesses' / companies' information.**





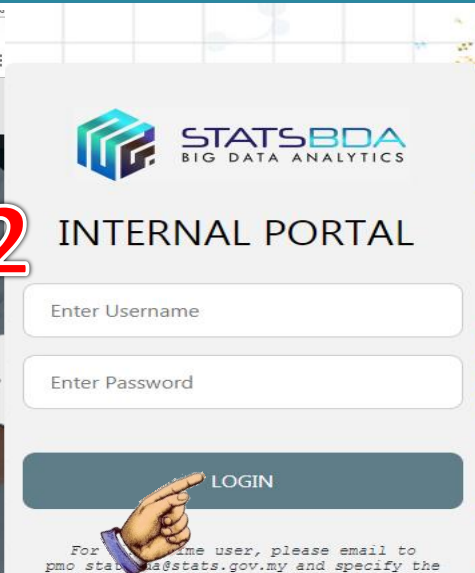


1



WELCOME TO STATS BDA PORTAL  
Powerful Data. Valuable Result. Informative Decision

2



INTERNAL PORTAL


Enter Username

Enter Password

LOGIN

For first time user, please email to pmo\_statsbda@stats.gov.my and specify the required module/modules

3

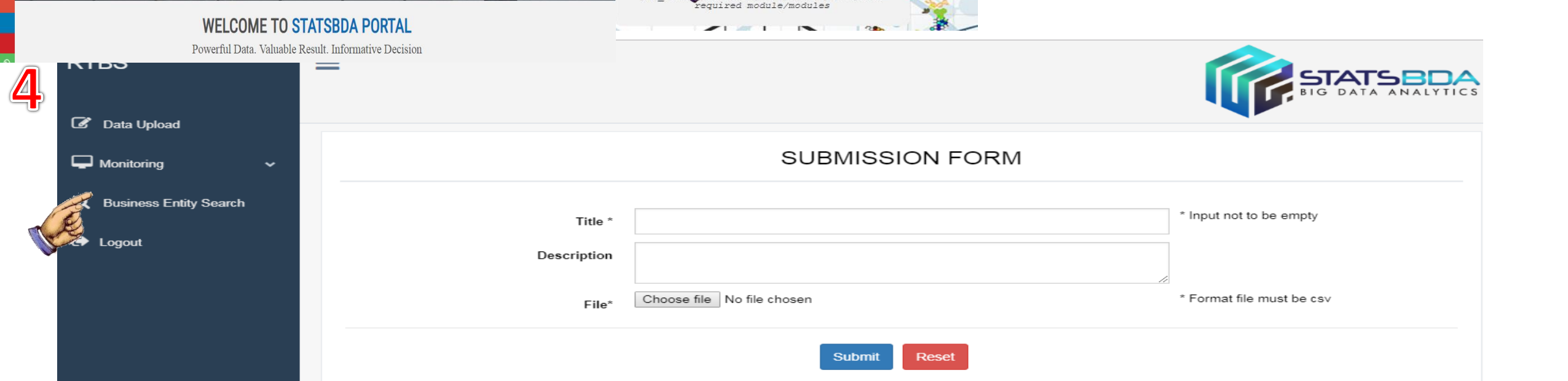


Welcome, Nurzeaty Zulkifli !

Logout

RTBS

4



RTBS

StatsBDA  
BIG DATA ANALYTICS

SUBMISSION FORM

Title \*  \* Input not to be empty

Description

File\*  No file chosen \* Format file must be csv

Data Upload

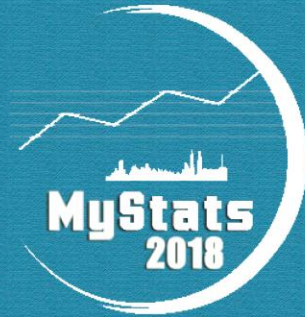
Monitoring

Business Entity Search

Logout



# TERIMA KASIH & THANK YOU



#StatsMalaysia | #MyStatsDay | #isiwsc2019 | #MyCensus2020