



BUILDING A GROWTH-FRIENDLY TAX ENVIRONMENT

The 2nd Conference of Belt and Road Initiative Tax Administration Cooperation Forum

——Digitalization of Tax Administration

7-9 September 2021



BUILDING A GROWTH-FRIENDLY TAX ENVIRONMENT

Implementation of Data Analytics In Directorate General of Taxes

Nufransa Wira Sakti
Assistant to the Minister for Tax Supervision
Ministry of Finance
Indonesia



CONTENTS

01 / Data Analytics

02 / Compliance Risk Management
Transfer Pricing

03 / Smartweb

04 / Ability to Pay



Part 01

Data Analytics

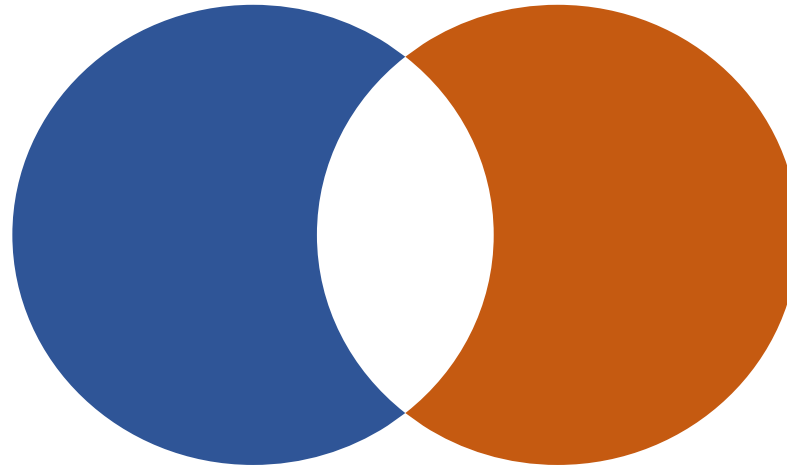


Big Data Analytics

Big Data

Capacity to capture, gathering, store, accessing, and analyze high volume, high velocity, high variety data structured and unstructured.

Data Warehouse, ETL Workbench, Webscraping, Graph Database



Analytics (Data Science)

Capacity to extract valuable knowledge/ pattern / insight / model from data

Python, Machine Learning, Data Visualisation, Business Intelligence

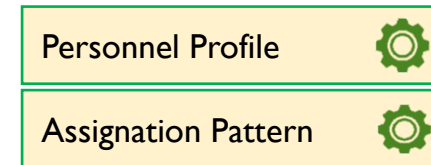
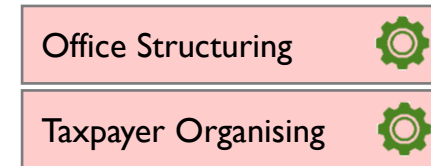
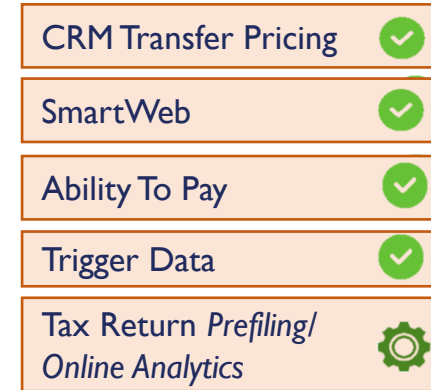
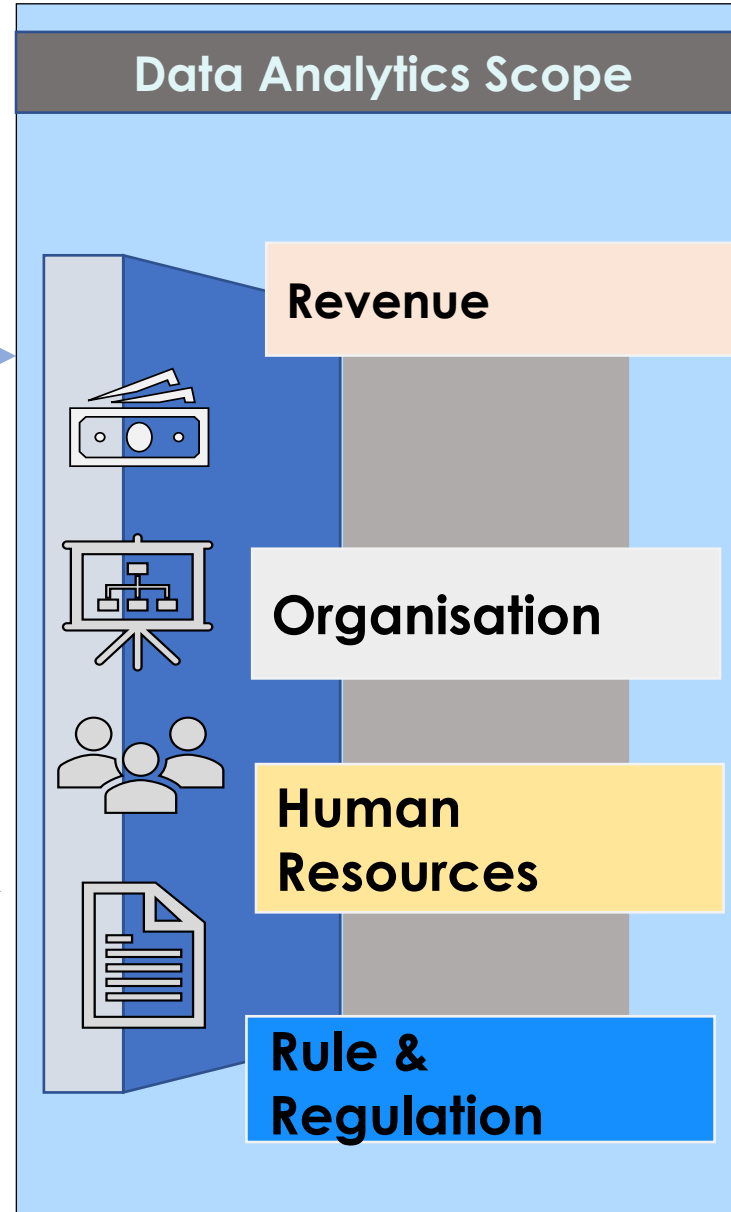
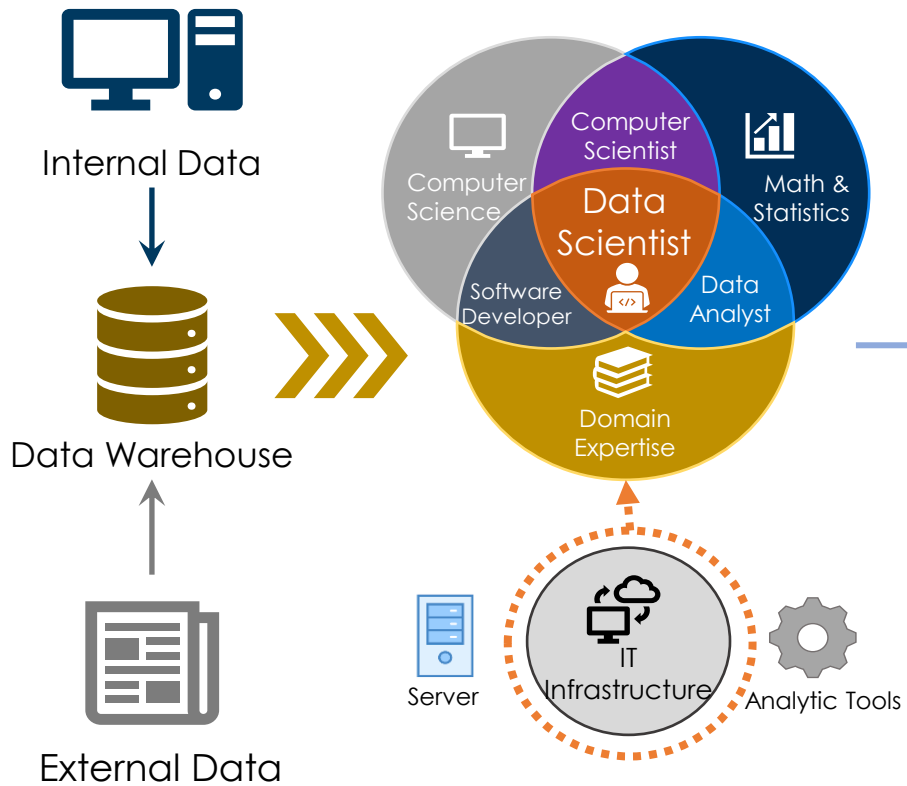
Factors	Big Data	Analytics (Data Science)
Concepts	Handling large data	Analyzing data
Responsibility	Process huge volumes of data and generate insights	Understand pattern within data and make decisions
Industry	Telecommunication, e-commerce	Sales, advertisements

$$\text{Big Data Analytics} = \text{Big Data} + \text{Data Science}$$



BUILDING A GROWTH-FRIENDLY TAX ENVIRONMENT

Data Analytics Workflow



toward data-driven organization



Development on Revenue Data Analytics

Analytics Process

Context Establishment

Risk Variables Identification

Exploratory Data Analysis

Modelling

User Interface Design & MockUp

Deployment

Monitoring

Evaluation

Metodology dan Technique

Data Matching

Natural Language
Processing (NLP)

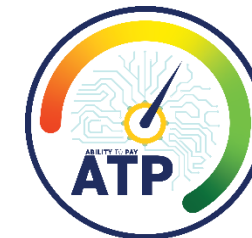
Classification
(LightGBM, etc)

Clustering
(K-means & K-modes)

Social Network Analysis
(SNA)

Graph Data Science

Product



Interface





Part 02

Compliance Risk Management Transfer Pricing

Compliance Risk Management Transfer Pricing



Dashboard:



Use to tackle BEPS issues (esp. in accordance with BEPS Action Plan 8, 9, 10)

Provide managerial overview:

- Nation-wide
- Regional Office
- Tax Office

about number of Taxpayer in **High**, **Medium**, and **Low** Transfer Pricing Risk

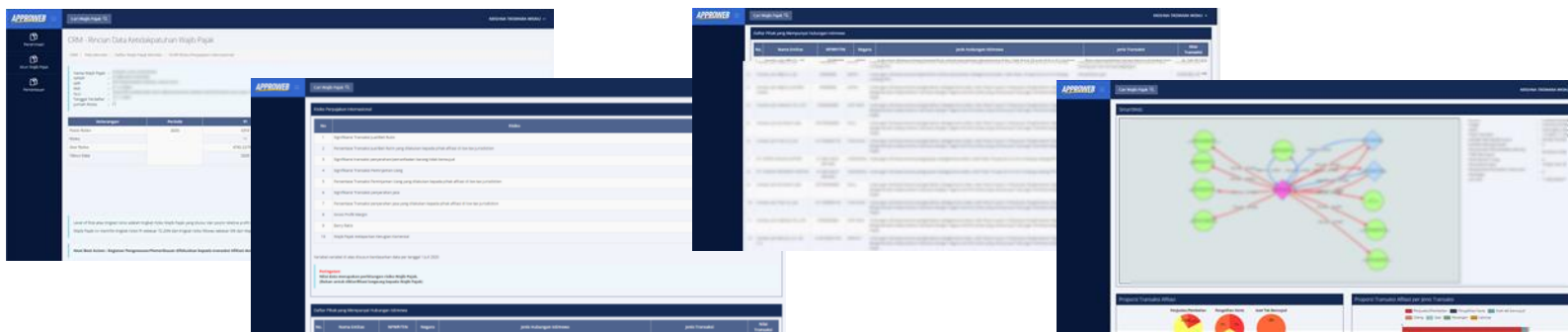
Risk Map:



Fit each taxpayer with affiliated transaction into 9 group with different level of risk.

It also can be viewed in tabular format.

Detailed Risk Profile:



Provide current and historical level of risk, next best action recommendation, variables of non-compliance and case guidance, list of affiliated transaction, and transaction schema (Smartweb)



Output:
Prioritisation over which taxpayer to be analysed further regarding Transfer Pricing based on the risk



Outcome:
Improving tax compliance

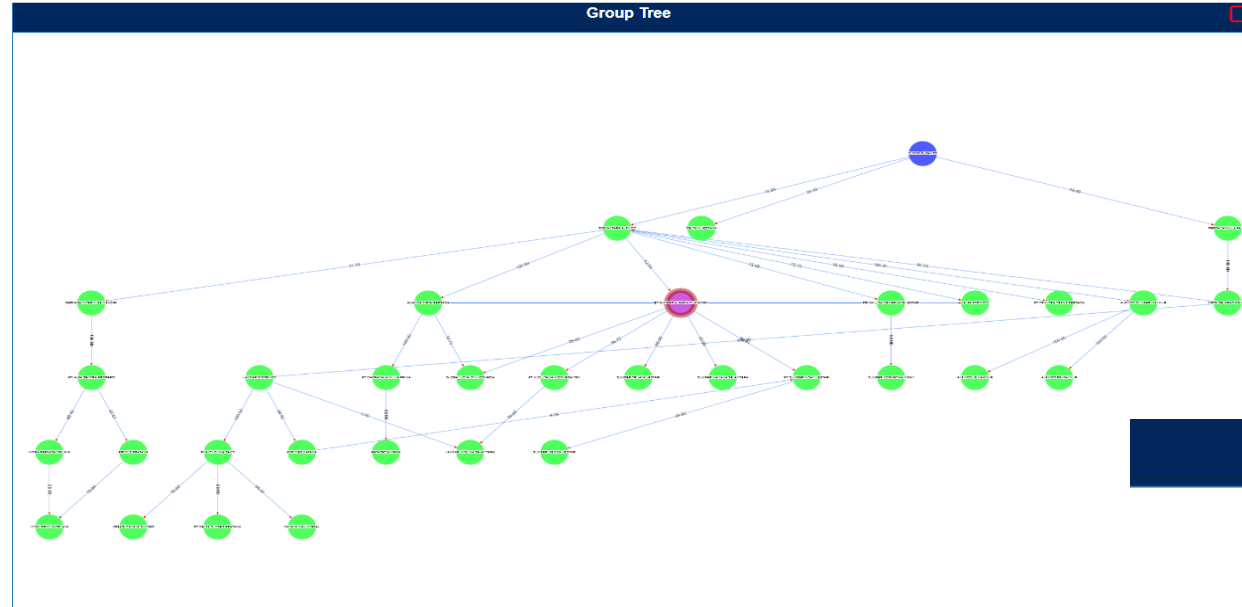
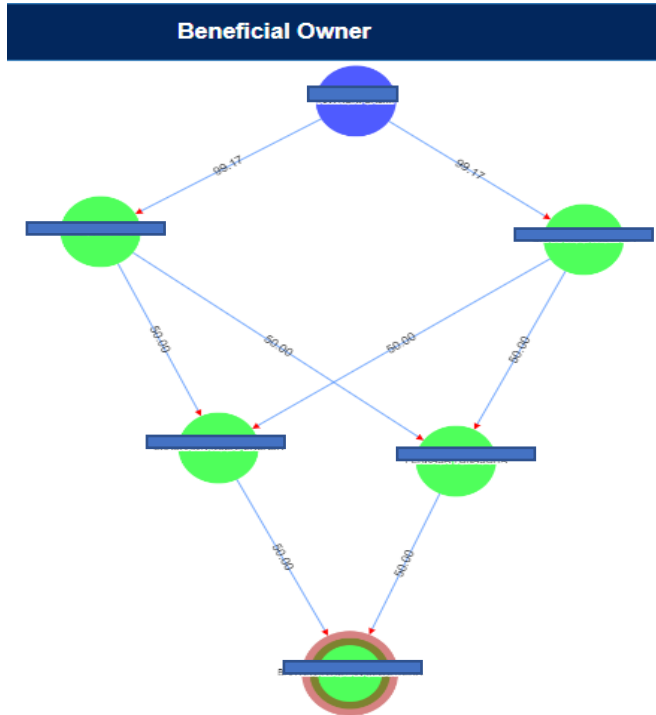


Part 03

Smartweb



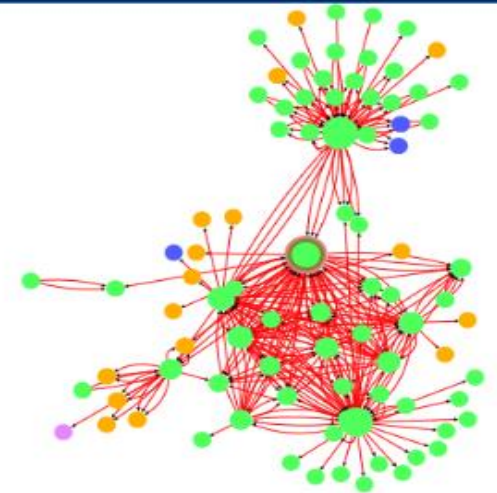
The **graph database analytics** – which will be used to represent complex networks – to handle terabytes of data relating to entities (nodes) and their relationships (edges).



Group Tree Mapping & Visualization

Affiliation Transaction
with n-layer

Jaringan Bisnis



Identification Beneficial Owner until UBO

Smartweb can handle predicting and identification BO until UBO, mapping the group and visualise their relationships.



Part 04

Ability Two Pay



BUILDING A GROWTH-FRIENDLY TAX ENVIRONMENT

Ability To Pay (ATP)

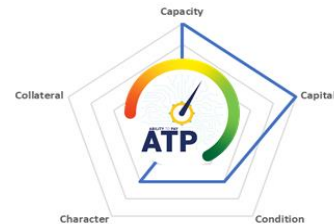


- ATP is an indicator that provides a predictive of taxpayers' ability to pay based on historical data
- ATP uses scoring based on 5C analysis (Capacity, Capital, Character, Condition and Collateral) to provide an overview of taxpayers' ability to pay which is divided into 5 levels, namely very low, low, moderate, high, and very high.

Method

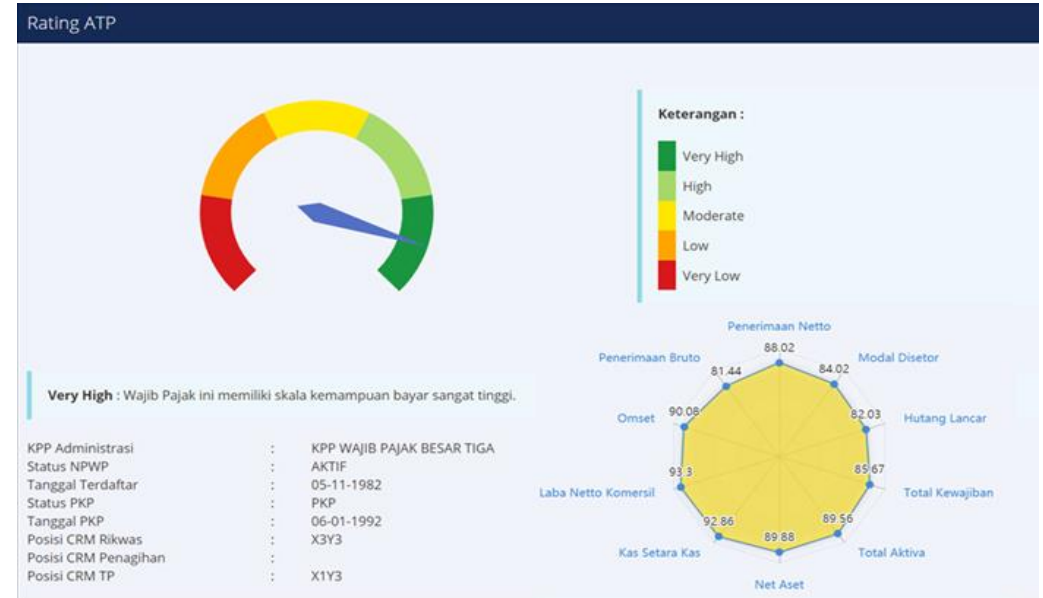


	Capacity	Gross Payment, Net Payment, Turnover, Net Commercial Income, Cash
	Capital	Equity, Current Liabilities, Liabilities, Total Assets, Net Asset
	Character	OJK Financial Information, VAT status, Tax Return Status, Business Lifetime, Bank's Credit Collectability
	Condition	Smartweb Data
	Collateral	*) Collateral Assets

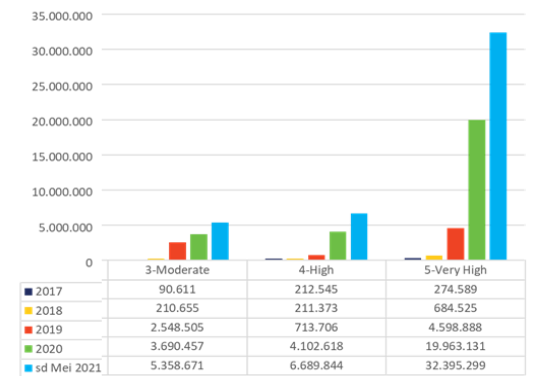
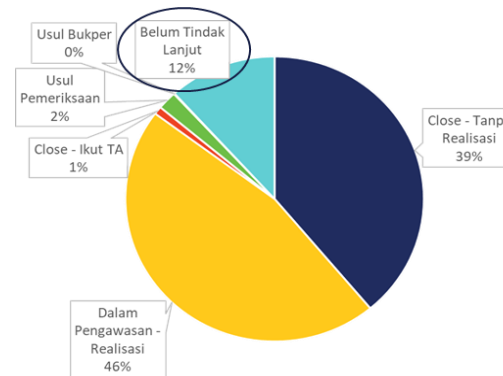


*) Will be applied in the next ATP development

User Interface Features



Tax Supervisory Usage



There are **129.105** taxpayer supervisory analysis that have not been followed up with **Moderate-Very High ATP Level** and total **initial potential** more than **Rp81 billion** that should be prioritised



BUILDING A GROWTH-FRIENDLY TAX ENVIRONMENT

THANKS