

ESG

CREATING A SUSTAINABLE RISK MANAGEMENT CLIMATE

IN

SOUTH AFRICA



17 global goals set by the United Nations General Assembly in 2015 for the year 2030



ESG IS CONSCIOUS CAPITAL

GLOBAL RISKS

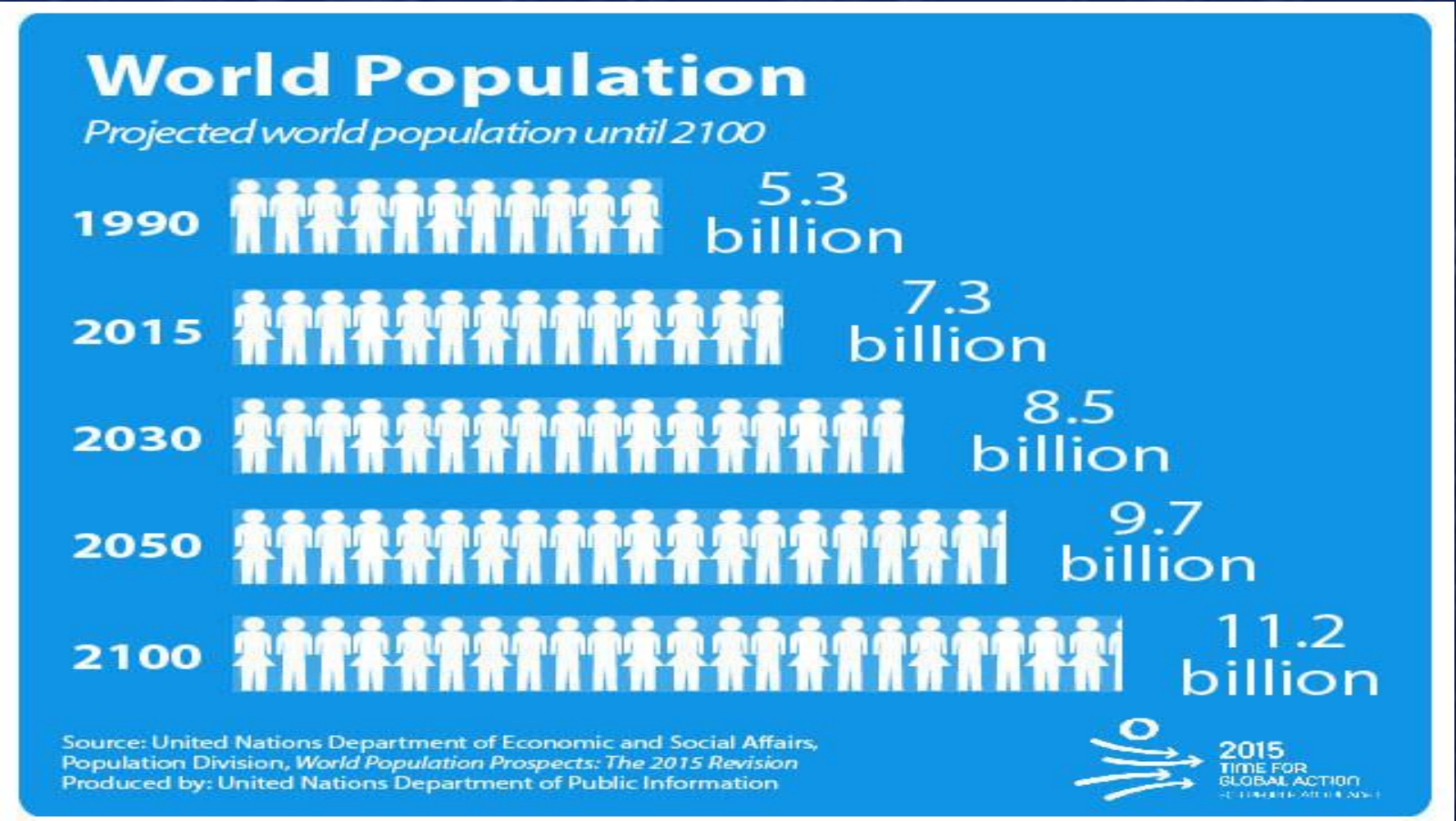
Global Risks Report

The 5 risks most likely to happen in the next 10 years

	rank
Extreme weather events	1
Natural disasters	2
Cyber attacks	3
Data fraud or theft	4
Failure of climate change mitigation & adaptation	5

Source: Executive Opinion Survey 2017, World Economic Forum

POPULATION GROWTH – IMPACT ON NEEDS AND PLANET





“Someday is now”

- Regulators and ESG
- ESG affects fixed income securities, listed equities and all lending activities
- ESG is a hygiene factor for sustainability

Environmental

- Pollution
- Climate change
- Renewable Energy
- Carbon Emissions

BP Deepwater Horizon Oil Spill
April 2010



In September 2014, a U.S. District Court judge ruled that BP was primarily responsible for the oil spill because of its gross negligence and reckless conduct. In July 2015, BP agreed to pay \$18.7 billion in fines, the largest corporate settlement in United States history

INSTANT IMPACT

Effect of Deep Water Horizon on BP share price



Source: FactSet and Martin Currie.

South Africa Environment Impact



Climate change, food and farming: 2030s

Adaptation will be key

CROPS



Switching to varieties tolerant to heat, drought or salinity



Optimising irrigation



Managing soil nutrients and erosion

LIVESTOCK



Matching animal numbers to changes in pastures



More farms that mix crops and livestock



Controlling the spread of pests, weeds and diseases

FISHERIES



Switching to more abundant species



Restoring degraded habitats and breeding sites like mangroves



Strengthening infrastructure such as ports and landing sites

SOURCE: Porter et al. 2014



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security

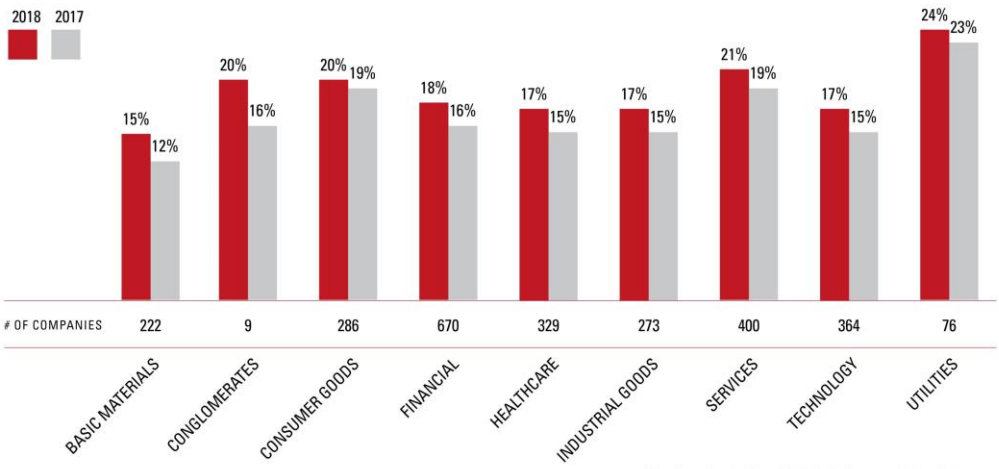


SOCIAL

- Workplace health, safety and working conditions
- Involvement of employees in management
- Freedom of association in union / society activities
- Xenophobia ,Terrorism
- Income inequality



2018-2017 PERCENTAGE OF BOARD SEATS HELD BY WOMEN BY INDUSTRY SECTOR



Note: Based on the *Russell 3000 Index* for years 2018 and 2017
Yahoo Finance Industry Sectors provided by Equilar.



GOVERNANCE

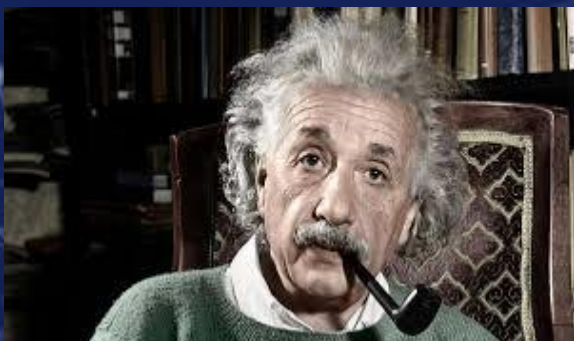
- Board size, structure, composition and committees
- Experience and qualifications
- Meeting with stakeholders
- Disclosure and Integrated reporting
- Combined Assurance





ESG Report Provider	Background	Rating Scale	Methodology	Usage and Reputation
<u>Bloomberg ESG Data</u>	<i>Integrated into Bloomberg Equities and Intelligence Services</i>	Out of 100	Looks at 120 ESG indicators	In 2016, Bloomberg had over 12,200 ESG Customers
<u>FTSE Russell</u>	The ESG Ratings are comprised of an overall Rating that breaks down into underlying Pillar and Theme Exposures and Scores.	Level (1-4)	Looks at 12 ESG key indicators	The ESG Ratings support alignment with the UN Sustainable Development Goals (SDGs)
<u>MSCI ESG</u>	Provides ratings for over 6,000 companies and 350,000 equity and fixed income securities.	AAA to CCC	Looks at 37 Key ESG Issues	Institutional investors, including Legal and General Investment Management,, Northern Trust Asset Management
<u>Thomson Reuters ESG Research Data</u>	Thomson Reuters acquired Asset4 in 2009	Percentile rank scores (available on both percentages and letter grades from D- to A+)	Covers 400 different ESG metrics, electing 178 of the most relevant data points	ESG Scores are available on Thomson Reuters Eikon platform

ESG Ratings Around The World



Does ESG increase returns?

Evolution of US\$1 invested in the stockmarket in value-weighted portfolios



Source: Eccles R.G, Ioannou I., and Serafeim G. Management Science, Volume 60, Issue 11 (2011)

RI ESG RATING

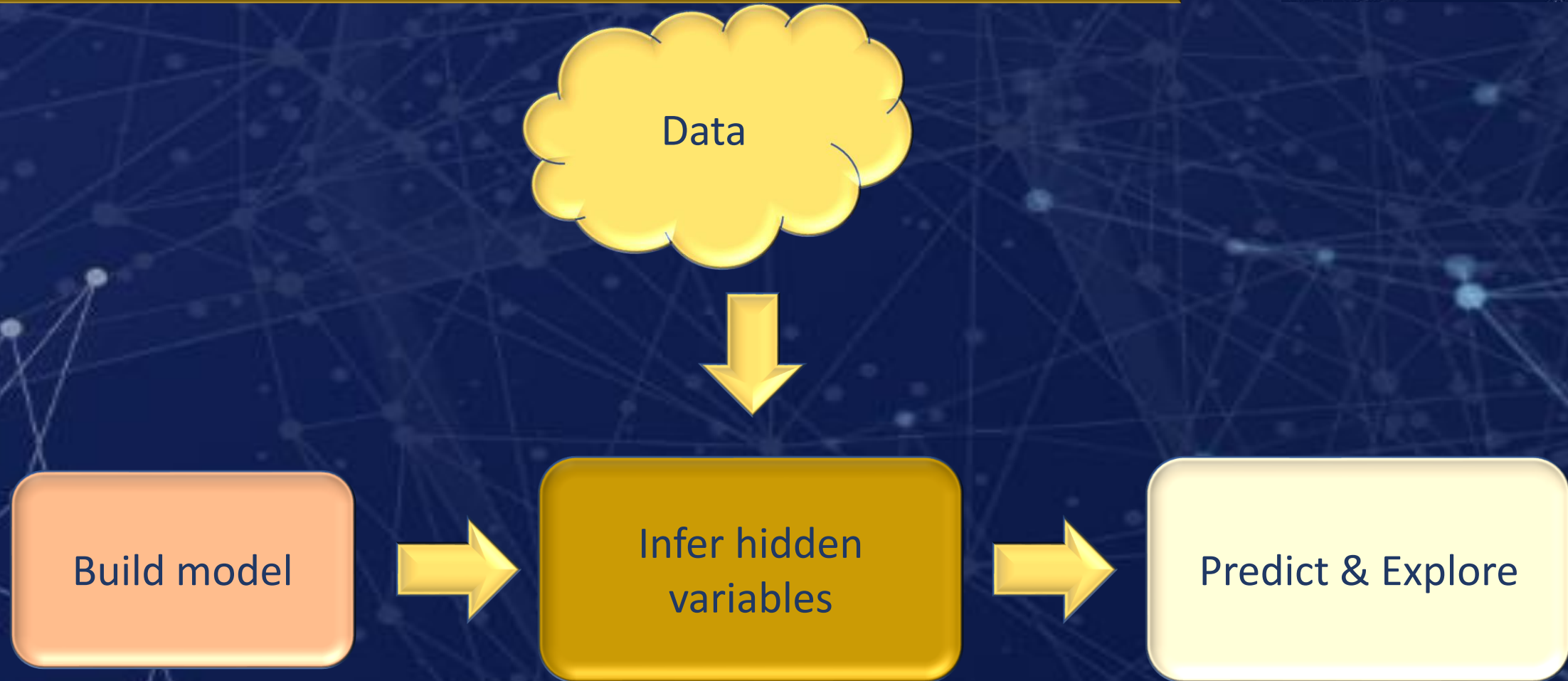
For South Africa By South Africa

- At Risk insights we developed ESG rating model
- FUTURISTIC RISK MANAGEMENT in order to address some of the global challenges which SA is not immune to
- Future is in our hands – how we create sustainability will depend on our intellect not intelligence

Who Should be rated?

- ALL LISTED COMPANIES

MACHINE LEARNING METHODOLOGY



MACHINE LEARNING METHODOLOGY

Machine Learning methodology

Structured data	Unstructured data
Supervised learning	Unsupervised learning
Probabilistic models	Non-probabilistic models
Modelling approach	Optimisation approach
Reinforcement	

- The Machine learning methodology relies on algorithms that form part of the Python programming language.
- Algorithms are being used to follow a **structured** or **unstructured data** methodology depending on the data set from the data collating exercise.

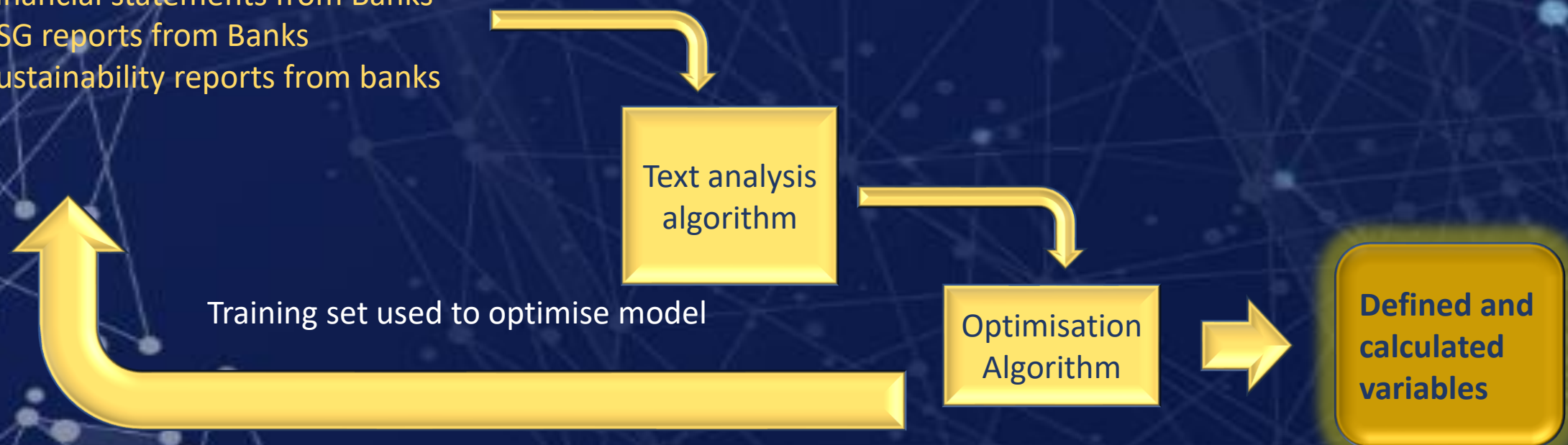
UNSUPERVISED LEARNING

Machine Learning methodology

- **Key assumption:** Data $(x_1, y_1), \dots, (x_n, y_n)$ are i.i.d random labelled examples with distribution \mathcal{D}_p .
- \mathcal{D}_p is an unknown unstructured distribution e.g. Output of Bank financial statements data

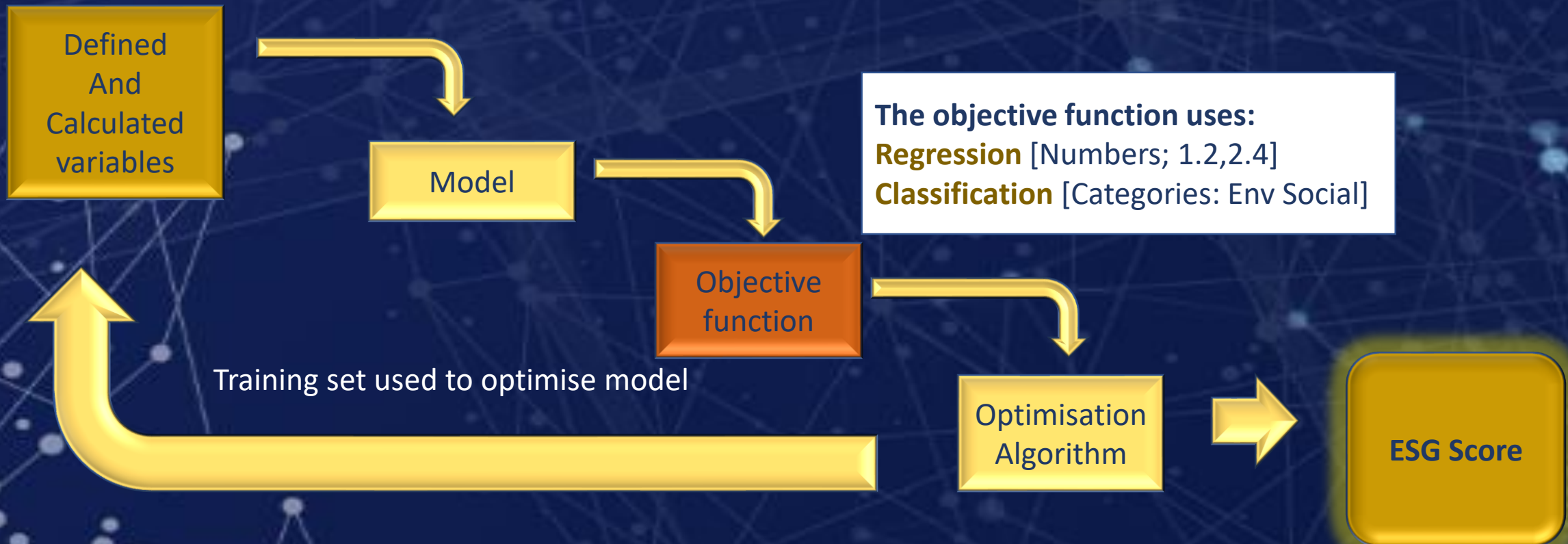
Input

- Financial statements from Banks
- ESG reports from Banks
- Sustainability reports from banks



SUPERVISED LEARNING

Machine Learning methodology



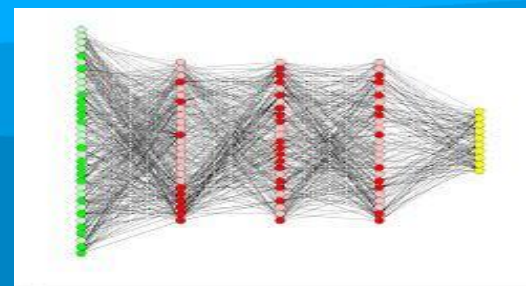
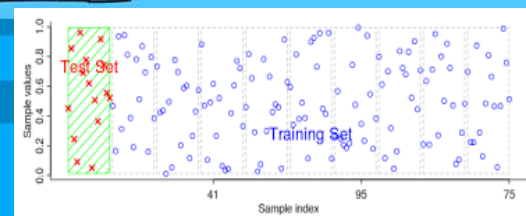
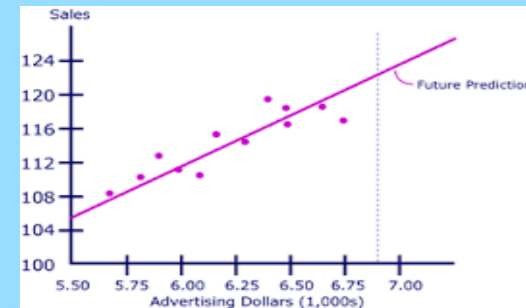
NEXT STEPS – DEEP LEARNING

Deep Learning

Classical
modelling

Machine
Learning

Deep
Learning



CONCLUSION

Old School Investor



VS

New Generation Consumer



- **Warren Buffet** is value investor focused on sustainable **ROE** while new generation of consumers, **Greta Thunberg**, are now focused on inclusive living and planet sustainability. This is a new return!!!