# Trading International Scenario 2030



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## **Executive Summary**

A scenario, in the context of business planning and strategy, is a potential event or combination of events that could be relevant to the organization -- typically because it could create a significant risk or provide a significant opportunity. This is the haunting ground for innovation and sustainable growth.

Training International is an employee-owned independent global \$3 billion supply chain services company with the mission "Excellence in supply chain services". They are here to make your business operations easier and support your trade. Whether it's across the street or across the globe. This report is intended to raise awareness of several potential risks and possibilities that global firms like Training International may face over the next 8-10 years. We extrapolated likely drivers of change in critical areas using the PESTLED360 framework and artificial intelligence system, with current forces observable in the global economy and political order as the starting point. We also examined technological and demographic trends that have been building over the past five years that are nearing a tipping point.

Three main scenarios are considered here, based on various forces around weather events, energy demand and supply, and the adoption and resilience of new technologies in supply chains. They are:

- 1. **The Rise and Fall of Supply Chain Tech** in which advances in core technologies that will help Tradining International's operations and business are considered and contrasted with the risk from cybersecurity incidents impacting these new technologies after they become integral to global supply chains like Training International.
- 2. **Power Plays** in which the risk of geopolitical events and energy demand are considered, and how changes in these forces can impact Trading International's business operations creating opportunities for innovation and threats to mitigate.
- 3. **The Perfect Storm** in which the risk around extreme weather events & energy shortages, esp. in regions in which Training International operates, are discussed end possibilities and threats identified for strategic innovation.

All three scenarios point out strategic initiatives for innovation, to tackle potential threats, and to grab opportunities to leapfrog ahead of the competitors. It is recommended to formulate 3-5 strategic initiatives to find solutions for and/or create a readiness for future solutions through experiments and leanings.

## **Scenarios Overview**

## Rise & Fall of Global Supply Chain

Over the next eight years, until 2030, Training International and others will enjoy steadily decreasing costs and greater efficiency by adopting smart contracts, IoT, and other technology in their operations. But at the same time, a lack of trained cybersecurity engineers (a global shortage since 2020), combined with cyber-criminals moving on to target new victims as traditional sectors 'harden' their cyber security, creates demand to hack into global supply chain systems.

## **Power Plays**

Training International needs to assess the possibility of political and energy driven disruption within specific regions and countries where it operates, and develop contingency plans. These need to cover both production impacts and well as energy price spikes.

#### The Perfect Storms

In this scenario, Training International has to contend with (and manage) weather events impacting their production and/ or distribution, and at the same time, energy costs going up or down, in response to a variety of potential factors.

# Scenario: Rise & Fall of Global Supply Chain

By 2030, Supply Chain Management Tech will be revolutionized by technologies like smart contracts and IoT sensor chains, which have made the global supply chain extraordinarily efficient and highly automated.

In this scenario, a massive cyber attack (carried out by unknown actors) manages to break through cyber security measures, resulting in global shipping chaos. The cyber attack impacts both physical movement (goods cannot be traced) and financial flows (shipping contracts and credit line conditions cannot be enforced, or are wrongly enforced).

This will lead to a push for localization and raw material protectionism as well as 3D printing, refining, recycling, washing, reconstructing, and transforming components and raw materials. Access to local energy, or via trusts, will be the dominator in the scenario as well as controlled cyclic processes for securing zero leakage.

#### **Timeline**

2030	A cyber criminal group successfully launches a ransomware attack on the top 5 global logistics firms, taking control of all data and contracts.
2028	Financial Services firms (banks, insurers and capital markets) all use smart contract and IoT data to make credit decisions for all forward contracts and other business and trade lending terms.
2027	80% of global shipping and trade via air, sea and land now use smart contracts for all terms and settlement, leveraging IoT data for tracking and tracing.
2025	IoT networks become much cheaper and easy to set up as the roll-out of 5G networks gathers momentum. Manufacturers and shippers start tracking individual products from factory to ultimate end-user.
2024	Smart Contracts for bulk materials shipping contracts become the norm for all goods sent to Europe or the US, especially from Asia. <a href="mailto:specially-red">become the norm for all goods</a>

## Core and major loops

There are a number of causal 'loops' that act to either reinforce or slow down the drivers behind this scenario. Some of these are listed below, along with some of the factors / leading data indicators that Training International leadership should monitor, to detect whether this scenario is becoming more or less likely.

- Adoption of IoT in shipping and production (reinforces)
- Cyber security resources staff & systems (lack of, will reinforce scenario risks)
- Innovative contract trials and adoption by shipping companies (reinforces)
- Smart contract enforceability laws and court decisions (monitor)
- Number of Cyber incidents on shipping firms (monitor)

• Number of cyber incidents at Training International (monitor)

#### Scenario reflections

Hacking of the sensors (IOT disrupt) affects the data purity and feedback systems

- Supply chain issues will lead to strategic issues for companies which would lead to economic disruption i.e. shifting of the GDP balance
- Cyber security is a real issue (modern-day pirating), which will lead to a breakdown in data security
- Supply change breakdown will lead to a redistribution of goods and services globally (supply and demand balance shifting)

# **Scenario: Power Plays**

By 2030, it's conceivable that China could invade Taiwan or some regional power play. Similarly, internal political unrest could arise, for example, in Venezuela, with violent internal dissent aimed at regime change.

If these events occur in markets that Training International relies upon as production or shipping sites, it could cause significant losses.

At the same time, war and/or internal political unrest can impact energy prices and supply (i.e., the Russia-Ukraine War). For example, internal unrest in Venezuela or war in Iran could increase oil prices globally, affecting Training International's shipping costs (and possibly production too).

Any geopolitical events impacting energy prices and availability must be assessed and planned for. Asian operations may be especially vulnerable in the case of a Sino-Taiwan conflict or a North Korean attack on any neighbor.

This scenario could lead to either shortages of materials for Training International, or disruption of shipments, or both. It can also lead to increases in the energy input costs for Training International.

#### **Timeline**

2028	China invades Taiwan, or North Korea launches an attack on South Korea
2027	China begins a more aggressive foreign policy, leveraging their Belt and Road Initiative power relationships
2025	Internal unrest rises in Iran as sanctions and attacks on nuclear infrastructure lead to economic collapse - global oil prices surge
2024	Changes in the US leadership result in another withdrawal from global affairs and declining commitment to defending the current  international order br>

## Core and major loops

Causal loops can either dampen or increase the probability of a given scenario becoming reality. The also often contain data points that can be used as early indicators.

In this scenario, loops and patterns to watch out for include:

- Chinese leadership wanting to exert more direct influence over the Asian region and also in African markets. This will be seen in shipping route interdictions and any extension of 'Exclusive Economic Zones (EEZ) around Chinese waters.
- Changes in US leadership leading to a winding down / slow withdrawal from the global hegemony role.

• Internal political unrest in major energy-producing markets - e.g., Iran and Saudi Arabia- and energy-consuming markets.

#### Scenario reflections

Localization would enable Training International to diversify the sourcing of its supplies by building stronger local relationships. This would enable Training International to mitigate negative impacts like China which would prevent their sourcing from the county. Training International can identify alternative ways for sourcing for the US market outside of areas of high geopolitical tensions.

Global companies must consider local and regional tensions that can potentially disrupt local and regional markets and the availability of energy supplies. They must adapt their supply chains and operations processes.

Trump or Republicans changing US Gov't; Training International presence in Asia; Russia/Ukraine chronic conflict; sanctions can play an impactful role as EU works together. Suggestions were to consider multi-sourcing and build resilience instead of relying on single sources; also look at the capabilities of Training International to offset risky scenarios; consider other countries that have grown without potential political conflicts (such as Paraguay). Huge learning was the benefit of global reflections of diverse ideas and looking for resilient patterns - removes fear and identifies possibilities that expand hope.

## Scenario: The Perfect Storms

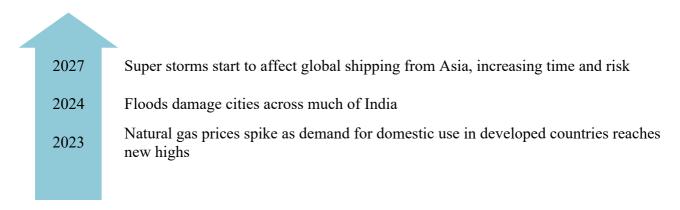
A combination of extreme adverse weather events (extremity and location) and / or energy market changes (prices and availability) could impact Training International greatly.

- Extreme adverse weather events could impact physical manufacturing locations, or shipping routes (i.e. superstorms). They could also impact end country demand (e.g. drought in Europe reducing shipping capacity using rivers).
- Energy prices could rise in response to either (1) greater demand on a steady supply, or (2) any change in physical supply.

In this scenario, Training International needs to build up resilience, both with the ability to store energy against potential shortfalls and also harden infrastructure against climate events (where possible) or ensure production capacity is replicated (i.e., add redundancies)

The events envisioned in this scenario would impact many other entities besides Training International - even governments. It is entirely possible that measures to help mitigate physical effects of weather events in a given area could be required by law. The costs of such measures might be claimed back or paid for by national governments, given their interest maintaining employment and economic activity.

### **Timeline**



## Core and major loops

Causal loops in this scenario, as with the others, are factors to monitor, that can either accelerate or slow down the likelihood of the scenario coming to pass. The loops for Training International to track here would include:

- Number of extreme storms impacting regions and countries where Training International has operations
- Weather events anywhere that impact energy infrastructure,
- Weather events that could impact power for Training International production sites
- Energy price spikes change the cost of production

#### Scenario reflections

This scenario directly affects the value proposition of Training International, as it would impact their promise of having everything delivered "just on time". We consider that given that the weather conditions are already impacting supply chain infrastructure and systems, Training International should have a shift of mindset to focus on capitalizing on local resources and business opportunities such as recycling and advisory services.

Training International is faced with supply issues, government regulations, organizational silos, increased costs, decreased revenues, customer entertaining alternatives, and the urgency of finding solutions and innovations.

## **Key Drivers**

## Sustainable packaging

Consumers' increasing interest in sustainable packaging and new government regulations will likely encourage global cardboard box and container manufacturers to invest in R&D

#### Adverse Extreme Weather Events

Many regions and countries are experiencing unexpectedly severe weather events (e.g. flooding across 35% of Pakistan in Aug 2022, extreme heat in some US and European regions). Depending on the base of operations for some International Trading's divisions (esp. contract manufacturing), ability deliver may be impacted.

## Use of 'Smart Contracts' in global Supply Chain & Logistics

In global shipping, especially of commodities, 'smart contracts' (i.e. the use of blockchain to record contract terms and automate payment or other actions) can lower operational costs and increase certainty (but only if the boundary conditions are well understood and specified!)

## TL01- Low cyber-resiliency against cyber-attacks

Risks associated to... Low cyber-resiliency against cyber-attacks • PERPETRATORS · Spies · Criminals · Military · Kids • VICTIMS · Private sector (businesses) · Public sector (governments) · Academic sector (schools) · Civil society (non-profits and non-governmental organizations) · Individuals

#### PL05- Inflation control

Side effects of decisions made by governments, political parties, and governmental institutions related to... PL05- Inflation control - Interest rates increase by central banks GLOBAL :: related to SL01- - Economic recession artificially created GLOBAL :: related to SL01-

## Political Instability on Global Sourcing

Any political shift involving one or more of the aforementioned triggers has the potential to cause concern at a local level as well as create major global supply chain turmoil.

## Global warming impact on energy

Climate change is likely to both increase electricity demand for cooling in the summer and decrease electricity, natural gas, heating oil, and wood demand for heating in the winter

## Energy Shortage / Crisis

Energy sources and availability differ across geographic regions. Regions with a high % of energy needs met from Natural Gas (NG) are rely heavily on pipelines. Shipping of LNG is not as effective and more expensive and costly. If pipelines get shut off / disrupted in Europe, it will drive LNG prices high, and may lead to a temporary shortage of NG.

#### **Economic recession**

The demand for Trading International's products can be affected negatively

## Embargo and export hinders

Many metals and chemicals can be restricted importing and exporting creating both opportunities and threats to the business

## Machine learning and connected supply change

New materials and new production methods will change the industry buying from Trading International, moving towards materials that can be 3D printed and also exchanged (flexibility and exchangeable materials are getting more and more important due to global supply chain issues). Here we believe mashine learning and interconnected supply change will be imperative

## Laws about Renewable energy and energy supply/usage

Exiting and new energy production and usage regulations are on the horizon, which can impact the production and distribution of Trading International's products.

## Scarcity of raw materials

Companies looking to redesign their supply chains, seeking localization or nearshoring in key geographical areas to reduce impacts in case of interruptions in global trade due to pandemic, armed conflict, inflation, natural and social crises.

## Re-shoring China

Companies changing their providers from China to nearshore locations

## **Economic Polarity**

With BRICS seeking to create stronger economic block to counter US sanctions in countries like Iran

#### **IOT Sensors**

Real time dashboards with shipment location allow for greater data transparency, better planning and decision making

## Drought

Droughts are reducing the navigability of some rivers during times of the year

## **Exports from US**

Reduced trade volumes in plastic, film, sheet, and bag manufacturing and organic chemical manufacturing

## Imports to US

Less-stringent regulations and lower labor costs that exist overseas and expected to outpace export's growth

#### Periods of economic downturn

Can make it difficult for refineries to pass on crude oil costs to downstream customers

## US, Mexico, & Canada Trade

Likely remain favorable export destinations from US due to proximity and favorable trade agreements

## **US Adhesive Manufacturing**

US has maintained a competitive advantage through investment in R&D

## Volatile price of crude oil

Volatile crude oil fluctuations in the Chemical Product Manufacturing industry cause volatile commodity prices; contributed to dye & pigment manufacturing industry high level of revenue volatility; and strong and sudden jumps in the price of crude oil have caused profit declines for paint manufacturing industry in the US

## Volatile price of metals

Accounts for significant amount of macroeconomic disruption. Price volatility especially in steel and aluminum has limited metal wholesaling performance and price of steel is expected to be a larger determinant for metal wholesaling industry performance. It has caused ferrous metal foundry products industry to be extremely volatile and low metal prices have been the result of weakened demand coupled with oversupply in world markets

Scenario 360 - Sample Case Study for Key Driver and Scenario Planning

## Price volatility of ferrous metals

Has a significant bearing on the industry in the US, since participants purchase, process and resell iron and steel

## Price volatility of wood pulp

Will likely continue to pose a potential threat to the cardboard box and container manufacturing industry operators in US.

## Demand for supply chain management services

Will likely to contribute to increased competition for Supply Chain Management services. In general, demand for Supply Chain Management services increases when economy is doing well and private investment is strong.

## Demand for coal-fired electricity generation

Increased demand for coal-fired electricity generation will drive a coal & ore industry recovery in US

#### **Construction Sector**

When construction sector is strong and growing there is: an increase demand for ferrous metal foundry products, plastic building materials and flooring, stone, concrete & clay wholesaling, and inorganic chemicals in building materials.

## Cyclical demand of inorganic chemical manufacturing

Inorganic chemical manufacturing Industry operators in the US will likely merge to expand their customer base to better mitigate cyclical demand fluctuations

## Agribusiness

Controversy surrounding the use of grains for biofuel remains an issue

## Single-use paper & plastic products

Consumers are shifting away from single-use plastic and paper products and paper product manufacturing industry had to grapple with negative publicity surrounding its single-use products

## Demand for fluff pulp products

Increased demand for fluff pulp products at the retail level could stimulate the industry of wood pulp mills in the US

## Advances in supply chain management technology

Opportunity and threat to supply chain management industry

## Threat of direct software providers

Drive supply chain management services firms to focus less on automation and compete by offering more advanced products or hands-on customer support

## Development of pest-resistant, genetically modified (GM) seeds

Results in lower reliance on chemical products

## New and sophisticated product lines for dyes & pigments

Will likely to help certain dye & pigment industry operators secure market niches

## Biotechnology

Biotechnology is expected to become more common in farming over the next five years in the US

## Mercury emissions from cement kilns

Guidelines for limitations are anticipated to become even more stringent in the US

## Regulatory costs and input prices

The average organic manufacturing industry profit is projected to be subdued by rising input and regulatory costs and regulatory hurdles and volatile input prices have caused the number of industry enterprises in paint manufacturing to fall in the US

## Biomass power industry

The financial performance of biomass power industry has depended on the availability of tax credits and prospect of reduced government assistance poses a serious threat to the growing industry in the US

## Plastic bag bans

Will continue to pressure demand for the wholesaling of plastic products

## Changing environmental regulations

Chemical Product Manufacturing industry will have to cope and increasingly stringent regulations on carbon emissions will likely be instituted for nonferrous metal recycles in the US

#### **Environmental Concerns**

Adversely affects growth within multiple segments

## Aversion toward greenhouse gas emissions

Will likely constrain biomass power industry demand.

## Ongoing push for renewable energy

Will continue to reduce demand for traditional energy sources

## Sustainable packaging

Consumers' increasing interest in sustainable packaging and new government regulations will likely encourage global cardboard box and container manufacturers to invest in R&D

## **Specialized Supply Chain Management Services**

Supply chain management service companies that specialize are positioned best

## Nonferrous metal recycling operating conditions

Increasingly unfavorable operating conditions have led to significant consolidation in nonferrous metal recycling in the US

#### Ferrous Metal Foundries

Most foundries operate domestically in the US and engage in minimal international trade

## China and emerging countries

China has become the leader in global production of cardboard box and container manufacturing and the share of cardboard boxes and container production accounted for by emerging economies is anticipated to increase further

## Recycling rates

Recycling rates have been held down by consumers trying to recycle too much

#### **Robotic Process Automation**

The RPA technology should increase operation effectiveness for Trading International. Reduce labour cost, and increase time and accuracy of service delivery.

# Disrupted supply chain caused by dominated countries political conflict

The effect of COVID makes every country and corporate go back to evaluate its position in the global supply chain. Cross countries and local logistic services are affected. This creates both opportunities (new emerging markets) and threats (current markets may no longer be the growth engine)

## The uncertain financial policy

The uncertain financial policy creates very currency exchange volatility. Trading International businesses rely on export and import costs and revenue. Thus, it can cause difficulty in evaluating the next strategic move.

## Government funding schemes and incentives for on-shoring

Govt at a country level providing schemes and incentives to on-shore smart mfg to lessen requirements from low-cost countries such as China. Also supporting local sustainability of supply chains.

## Increasing interest rates

Current impact globally is a rise in interest rates, threatening the low cost of capital available for investment pre and during the first year of C19

## Greater demand for recycled products

consumer demand increasing for a cost comparable recycled materials usage in products.

## Blockchain traceability of recycled products

allowing different levels of costing dependant upon the source and the (energy, time, \$s) costs to recycle

## Political commitment to usage of renewable energy sources

Country level commitment to % usage of renewable energy sources can impact long term capital investment of Trading International supply and distribution chain suppliers and partners decision making.

## Logistics

Political decisions that affect the cross-border logistics the disruption generate newer ways of doing business

## **Government Innovation Budget Spendings**

Govt. schemes and organisational budget- it provides an opportunity for innovation.

## Regulation/Deregulation

If the paper and pulp industry is deregulated, it could open or close the industry to competition.

## The Great Resignation

According to a report by the Federal Reserve Bank of Chicago, the Great Resignation increased the rate of inflation by up to 1.1 percentage points.

#### Work Life Balance

Changing gender roles and diversification has led organizations to take into consideration the wider needs of employees, e.g., long maternity leaves and paternity leaves.

#### **Automation**

The automation of tasks can be hugely beneficial to manufacturers and industry and on the flip side cause unemployment as well as take away business from job search firms.

## **Human Rights and Discrimination Laws**

There is growing pressure on organizations to have a clear strategy on DEI. A growing awareness of a healthy and inclusive work culture that respects mental health awareness will also affect how an organization threads that into their strategy.

## Paperless Future

In the age of digitization, organizations are adopting or planning to adopt digital processes to support their business.

#### Education

The education level of buyers and consumers can affect their buying decisions. As the emphasis is placed by the education system on climate change and sustainable consumption, future generations may be inclined to go toward a paperless economy,

#### Adverse Extreme Weather Events

Many regions and countries are experiencing unexpectedly severe weather events (e.g. flooding across 35% of Pakistan in Aug 2022, extreme heat in some US and European regions). Depending on the base of operations for some Trading International divisions (esp. contract manufacturing), ability deliver may be impacted.

Scenario 360 - Sample Case Study for Key Driver and Scenario Planning

## Use of 'Smart Contracts' in global Supply Chain & Logistics

In global shipping, especially of commodities, 'smart contracts' (i.e. the use of blockchain to record contract terms and automate payment or other actions) can lower operational costs and increase certainty (but only if the boundary conditions are well understood and specified!)

## US \$ Strength - demand for hedging and forward contracts increases

High interest rates combined with equities volatility drives the US dollar to be stronger over the short to medium term. For Trading International's Financial Services Division

## Work from Anywhere

Employees are choosing to take advantage of the new world of work. People want to work in their backyards or hometowns which could be located at a considerable distance or even internationally. This in turn affects the technology needed to support this work culture as well as taxation policies.

## Taxation related to Remote work globally

Employees are choosing to take advantage of the new world of work. People want to work in their backyards or hometowns which could be located at a considerable distance or even internationally. This in turn affects the socio-cultural needs and technology needed to support this remote work culture.

## Hybrid work

After the pandemic, the "new world of work" has shifted the work environment from in-person to virtual. There is a need to have a solid virtual system and policies in place to sustain the new demands. If appropriately addressed, there could be an improvement in productivity and cut expenses, if not, this has the potential to trigger mass resignation.

## **Recycling Initiatives**

Recycling packages is a growing conversation which is great from the "environmental" point of view.

## **Hybrid Work**

There is a need to have a solid virtual system and policies in place to sustain the new demands. If appropriately addressed, there could be an improvement in productivity and cut expenses, if not, this has the potential to trigger mass resignation.

## Space Travel will increase demand for advanced material

As we look towards growing outer-space exploration and travel, demand for Trading International's fondry and shot blasting division will increase over time.

## **Government Priorities in Investment**

There could be a shift in the government's priorities to support organizations that promote sustainable solutions.

## **Rising Shipping Costs**

McKinsey's report indicated: On average, global container shipping rates have more than quadrupled since 2019, and schedule delays have risen. https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/overcoming-global-supply-chain-challenges

## Shortage of supplies

Post-COVID, organizations and industries have encountered a problem with sourcing supplies for manufacturing.

## Charity

Every year, Trading International contributes a total of \$300 000 to different charity organizations all over the world.

## Modern Slavery Act Statement

Refers to modern slavery as below poverty line level wages or people confined to camps, etc... In the event of a deviance from this ethical stance, this may result in reputation and PR damage for the company.

## **Entrepreneurial DNA**

Employees have a stake at Trading International. They are emotionally and personally invested in the success of the organization.

#### Extreme weather conditions

Weather conditions are severe in some areas due to global warming. Fires and dry water bodies could affect supply chain processes due to the temporary closure of ports.

## **Equipment maintenance**

One of the risks heavy machinery companies face is downtime on the machines. The downtimes in the machines will result in productivity loss and also result in salary cost to be borne.

#### Govt Cultural and Infrastructure Predictions for Sweden

https://www.quantumrun.com/country-predictions/sweden/2030 How does Trading International plan to align with Sweden's future goals 2025, 2030, 2035 and 2040?

Scenario 360 - Sample Case Study for Key Driver and Scenario Planning

## "Instant gratification" behaviour

Consumers have become more demanding of short and quick services and delivery times, which has affected supply organizations by pushing them to improve their processes to match these requirements. Organizations that are able to face this challenge will retain and attract customers, whereas companies that are unable to do so, will most likely have to be restructured or will fully disappear.

## Political Instability on Global Sourcing

Any political shift involving one or more of the aforementioned triggers has the potential to cause concern at a local level as well as create major global supply chain turmoil.

## Changes in security requirements

security requirements in shipping are evolving in response to security threats around the world

## Countries dependence on each other

Countries are depending on each other in the supply chain. If tensions arise (like Ukraine and Russia), they may be delay or cancellation in shipments Ukraine-Russia War The Russian invasion of Ukraine has already destabilized global energy markets. This situation needs to be monitored closely over the next 12 months with the prospect of conflict escalating further

#### Inflation and recession

raw materials cost increase

## **Quiet Quitting**

Employees are not working outside of their working hours. Setting boundaries.

## **Great Resignation**

shortage in labor supply

## **Advanced Technology**

advanced technology in production could reduce labor cost and save time

## Digitalization

this can be a good factor to drive efficiencies in packaging, recycling, producing paper, etc.

## Cybersecurity Attacks

As more and more companies are focusing on digital transformation, cyber attacks are increasing. Scenario 360 - Sample Case Study for Key Driver and Scenario Planning

## **Employee Protection**

Focusing more on health protection and employees' rights after the pandemic

## Increasing regulations

regulatory restrictions in increase in Europe and US may have a threats to this business.(eg. not doing business with Russia)

## Law about energy supply/usage

New regulations for using energy for production

#### **CSR**

Donation to charity

## **Digital Transformation**

Generation Z people are attached more to technology. e-books are preferred over hard copy books.

#### PL01- COVID-19

Side effects of decisions made by governments, political parties, and governmental institutions related to... COVID-19: - Currency creation without real GDP growth LOCAL - Inflation Reduction Act of 2022 (US) LOCAL - National debt increases with/without the IMF (International Monetary Fund) LOCAL

## PL02- Food sovereignty

Side effects of decisions made by governments, political parties, and governmental institutions related to... Food sovereignty - Limits on farmers imposed to control food production (Netherlands) LOCAL - Food availability decrease LOCAL - Food prices increase LOCAL

## PL03- Global warming

Side effects of decisions made by governments, political parties, and governmental institutions related to... Global warming - Energy production back to coal (Germany) LOCAL :: related to EN02- - Limits on farmers imposed to control food production (Netherlands) LOCAL - Inflation Reduction Act of 2022 (US) LOCAL

## PL04- Political purposes

Side effects of decisions made by governments, political parties, and governmental institutions related to... Political purposes - Limits on oil & gas imports from Russia (Europe) GLOBAL - Side effects of

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economic sanctions against Russia (Europe) GLOBAL - Potential of current international hybrid/cold war tensions becoming WWIII GLOBAL

#### PL05- Inflation control

Side effects of decisions made by governments, political parties, and governmental institutions related to... PL05- Inflation control - Interest rates increase by central banks GLOBAL :: related to SL01- - Economic recession artificially created GLOBAL :: related to SL01-

#### PL06- Public trust

Side effects of decisions made by governments, political parties, and governmental institutions related to... PL06- Public trust - Propaganda and censorship wars make truth almost unavailable to the public GLOBAL - Backlash against political leaders LOCAL

## PL07- Electoral purposes

Side effects of decisions made by governments, political parties, and governmental institutions related to... Electoral purposes - Re-definition of concepts in economics (US) LOCAL - Persecution of political enemies (US, Mexico) LOCAL

#### PL01+ Nutraceuticals to...

Market opportunities Nutraceuticals to... - Combat stress & fear in individuals LOCAL :: related to TL02+ - Increase body/mind/spirit performance GLOBAL :: related to TL02+

## EC01- Impact: first businesses, then population

Trends in economy... Impact: first businesses, then population - Supply chain disruptions of basic materials GLOBAL - Downfall trend of financial markets GLOBAL - Inflation increases and control attempts fail GLOBAL - Potential of current international hybrid/cold war tensions becoming WWIII GLOBAL - Fall of USD as reserve currency GLOBAL

## Inflation impact on profits

Governments can raise or lower corporation tax, which will impact on profits. They can also affect businesses by increasing value-added tax on products or business rates. In addition, inflation alters tax systems and social insurance contribution

## Global warming impact on energy

Climate change is likely to both increase electricity demand for cooling in the summer and decrease electricity, natural gas, heating oil, and wood demand for heating in the winter

## Eurozone crisis threatens global growth

Euro sovereign debt crisis will influence international trade and global economy through affecting factors supply, consumer and investment demand for basic and raw materials.

## Mining space resources

The Moon, other planets and asteroids contain a rich diversity of minerals, gases and water that could be used to provide raw materials, energy and sustenance to sustain human life and enable exploration deeper into space. For example, the Moon have already yielded remarkable discoveries.

# EC01- Trends in economy impacting businesses first, then population

• Supply chain disruptions of basic materials GLOBAL • Downfall trend of financial markets GLOBAL :: - Inflation increases and control attempts fail LOCAL - Potential of current international hybrid/cold war tensions becoming WWIII GLOBAL • Fall of USD as reserve currency GLOBAL :: - A Collapse In Fiat Currencies Within The Next 2 Years? (Alasdair Macleod) Principles for Dealing with the Changing World Order (Ray Dalio) - Hidden Secrets of Money (Mike Maloney) • Rise of RUB & CNY as reserve currencies GLOBAL :: - Saudi Arabia open to sell oil in other currencies - India open to pay oil/petroleum imports from Russia in RUB - China builds alternative international payments platform to exit SWIFT

# EC02- Trends in economy impacting population first, then businesses

• Supply chain disruptions of goods for families LOCAL • Availability decrease of goods for families LOCAL :: related to SL01- • Price increase of goods for families LOCAL :: related to SL01-

## EC03- Trends in economy impacting population and businesses alike

• Inflation increases in many countries as a result of... GLOBAL :: related to PL01-, PL03-, SL01- :: - Currency creation without real GDP growth LOCAL - Inflation Reduction Act of 2022 (US) LOCAL - National debt increases with/without the IMF (International Monetary Fund) LOCAL • Price increase of fuels derived from oil/petroleum used in transportation LOCAL :: related to SL01- • Price increase of electric energy (from solar, wind, gas, carbon) LOCAL :: related to SL01- • Collapse of multiple fiat currency systems (2023-2024) GLOBAL

## EC04- Trends in economy impacting special financial markets

• Precious metals prices manipulation GLOBAL :: - Banks continue selling paper promises - Government tolerates • Collapse of housing market (2022-2023) GLOBAL

#### EC01+ Nutraceuticals to...

Market opportunities Nutraceuticals to... • Combat stress & anxiety in individuals LOCAL :: related to TL02+ • Increase body/mind/spirit performance GLOBAL :: related to TL02+

## SL01- High impacts on population's quality of life

Civil unrest due to... High impacts on population's quality of life • Availability decrease of goods for families LOCAL :: related to EC02- • Price increase of goods for families LOCAL :: related to EC02- • Price increase of electric energy (from solar, wind, gas, carbon) LOCAL :: related to EC03- • Price increase of oil/petroleum fuels LOCAL :: related to EC03- • Inflation increase in many countries as a result of... GLOBAL :: related to EC03- :: - Currency creation without GDP growth (international) - Debts increase with the IMF (International Monetary Fund) (international) • Side effects of inflation control GLOBAL :: related to PL05- :: - Interest rates increase by central banks GLOBAL :: - Economic recession artificially created GLOBAL

## SL02- Fear of replacement

Civil unrest due to... Fear of replacement • Availability of remote workers in cheaper economies GLOBAL :: related to DG01- • Automation with physical/software robots LOCAL • Artificial intelligence LOCAL

## SL03- Decrease in public trust towards...

Civil unrest due to... Decrease in public trust towards... • Traditional news media sources GLOBAL • Political leaders (international surveys) GLOBAL

#### SL01+ Nutraceuticals to...

Market opportunities Nutraceuticals to... • Combat stress & anxiety in individuals LOCAL :: related to TL02+ • Increase body/mind/spirit performance GLOBAL :: related to TL02+

## TL01- Low cyber-resiliency against cyber-attacks

Risks associated to... Low cyber-resiliency against cyber-attacks • PERPETRATORS · Spies · Criminals · Military · Kids • VICTIMS · Private sector (businesses) · Public sector (governments) · Academic sector (schools) · Civil society (non-profits and non-governmental organizations) · Individuals

# TL02- Decreasing digital freedom (privacy and personal data protection)

**TBD** 

# TL02- Decreasing digital freedom (privacy and personal data protection)

Risks associated to... Decreasing digital freedom (privacy and personal data protection) • PERPETRATORS · Private sector (businesses) · Public sector (governments) · Criminals • VICTIMS · Individuals · Academic sector (schools) · Civil society (non-profits and non-governmental organizations)

## TL01+ Technologies becoming ubiquitous

Availability of... Technologies becoming ubiquitous • Telecommunications GLOBAL · Internet access · Mobile phones • IoT (Internet of things) GLOBAL · Home · Office

## TL02+ Technologies rapidly gaining acceptance

Availability of... Technologies rapidly gaining acceptance • Blockchain beyond crypto-currencies LOCAL • Process automation with physical/software robots LOCAL • Health & Wellness products and services LOCAL :: BODY · Combat illness & pain in individuals · Increase performance, extend longevity :: MIND · Combat stress & anxiety in individuals · Increase performance :: SPIRIT · Combat solitude & fear in individuals · Increase performance

## TL03+ Technologies with disruptive potential

Availability of... Technologies with disruptive potential • Artificial intelligence LOCAL • Quantum computing LOCAL

## **ESG** Requirements

There is little agreed upon ESG Standards between countries and industries creating confusion and disagreement and impacting investments and investors.

## LG01- Regulatory instruments in topics becoming ubiquitous

Mandatory compliance with... Regulatory instruments in topics becoming ubiquitous • Privacy & Personal data protection LOCAL • Combat · fraud LOCAL · money laundering LOCAL · corruption LOCAL · terrorism funding LOCAL

## LG02- Regulatory instruments with adverse effects

Mandatory compliance with... Regulatory instruments with adverse effects • Limits on farmers imposed to control food production and use of fertilizers (Netherlands) LOCAL :: related to PL02- • Redefinition of concepts in economics (US) LOCAL • Inflation Reduction Act of 2022 (US) LOCAL

## EN01- Anthropogenic residue dispersion and presence increase in...

Potential impact on forests and business continuity due to... Anthropogenic residue dispersion and presence increase in... • LANDSCAPE · Air · Water · Soil • LIVING CREATURES · Plants · Insects · Animals · Humans GLOBAL

## EN02- Global warming (natural and anthropogenic)

Potential impact on forests and business continuity due to... Global warming (natural and anthropogenic) • EFFECTS · Extreme temperatures · Draughts · Floods • FORCED REGRESSION · Energy production back to coal (Germany) :: related to PL03-

## **EN03- Threat of upcoming pandemics**

Potential impact on forests and business continuity due to... Threat of upcoming pandemics

## EN04- Ozone layer depletion

Potential impact on forests due to... Ozone layer depletion

#### EN01+ Nutraceuticals to...

Market opportunities Nutraceuticals to... • Combat illness due to presence of micro-residues in humans GLOBAL :: related to TL02+ • Combat stress & anxiety in individuals LOCAL :: related to TL02+ • Increase body/mind/spirit performance GLOBAL :: related to TL02+

#### EN02+ Potential ISO 14001:2015 certification

Market opportunities Potential ISO 14001:2015 certification • Zero-waste industrial process • Forest management • Social responsibility • Recycling

## DG01- Availability of remote workers in cheaper economies

Dynamics with impact on business Availability of remote workers in cheaper economies :: related to SL02-

## DG02- Migration to economies with better quality of life

Dynamics with impact on business Migration to economies with better quality of life

## DG03- Population dynamics (2020-2050)

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Dynamics with impact on markets Population dynamics (2020-2050) • 2020 · Children ++++ · Teenage +++++++ · Young adults ++++ · Mature adults +++ · Elders + • 2035 · Children ++ · Teenage ++++ · Young adults +++++ · Mature adults ++++ · Elders +++ • 2050 · Children + · Teenage ++ · Young adults ++++ · Mature adults +++++ · Elders ++++ Scenario 360 - Sample Case Study for Key Driver and Scenario Planning
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## **People From Different Countries**

People from a range of diverse cultural backgrounds

Reduce demand for paper to to electronic medias

Could be in soci-cultural

Reduce demand for paper to to electronic medias

**TBD** 

