

Consultancy research for FACE TECH International: exploring the potential for expansion and offshore manufacturing in specific regions

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Jo Ashburner
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Synopsis

This document outlines suggested strategic locations for the expansion of manufacturing facilities for Face Tech including the Company's body temperature analyser unit, face and mask identification scanner and retinal scanner, currently manufactured in Wales.

We approach this as a collaborative exercise, a discussion document as a starting point for a managed manufacturing expansion strategy. In it we present initial research on where additional manufacturing facilities for FaceTech could potentially be located post pandemic. The aim is to provide stakeholders with a snapshot of the offshore manufacturing environment to assist FaceTech to progress to the Company's next stage of growth.

Covid19 pandemic

The pandemic has affected the global economy in many ways, not least production and demand, supply chain and market disruption and a hitherto unseen financial impact on business and financial markets.

The outbreak of COVID-19 brought on flight cancellations; travel bans and quarantines; restaurants closed; all indoor events restricted; over forty countries with state of emergency declared; massive slowing of the supply chain; stock market volatility; falling business confidence, growing panic among the population and uncertainty about future.

During this time a number of newcos have surfaced which could negatively affect FaceTech's core revenue stream. Concerns about the supply chain and these new competitors has prompted the company to look at reviewing manufacturing costs and consider relocating all or some of its production offshore.

At the Company's request we have limited our research to three specific regions (see below) and to one location within each of the regions, giving reflecting on how the establishment of additional if not alternative manufacturing facilities in any of those areas could work for FaceTech in the medium to long term.

This document does not discuss collaboration with or outsourcing to established companies in the identified regions.

South America

Chihuahua (Mexico)

Montevideo (Uruguay)

São Paulo (Brazil)

Asia

Shenzhen (China)

Visakhapatnam (India)

Taipei (Taiwan)

Africa

Durban (South Africa)

Bulawayo (Zimbabwe)

Tunis (Tunisia)

Regional manufacturing capabilities

To assess the manufacturing capability and associated risk in the identified regions, we have looked to a benchmark of established data.

The Purchasing Managers Index (PMI)¹ is a measure of the prevailing direction of economic trends in manufacturing. A 50+ PMI represents an expansion on the previous month, a reading -50 represents a contraction and the further away from 50 the greater the level of change. The PMI and relevant data produced monthly from surveys are critical decision-making tools for production decisions based on the new orders a manufacturing company expects from customers in future months.

Asia	Current indicator*	Previous indicator
Shenzhen: China ²	49.1	50.9
Visakhapatnam: India ³	54	55.5
Taipei: Taiwan ⁴	55.1	55.5

South America	Current indicator*	Previous indicator
Chihuahua: Mexico ⁵	46.1	49.4
Montevideo: Uruguay ⁶	n/a	n/a
Sao Paulo: Brazil ⁷	47.8	49.8

Africa	Current indicator*	Previous indicator
Durban: South Africa ⁸	57.1	54.1
Bulawayo: Zimbabwe ⁹	n/a	n/a
Tunis: Tunisia ¹⁰	n/a	n/a

*As at Jan 2022

The figures within the three given regions show that Taiwan and South Africa rank the highest while Uruguay. Zimbabwe and Tunisia have no rating at all.

Within the region of South America with overall relatively poor indicators, Brazil appears to be the best option for consideration.

¹ Investopedia. (2019). *Purchasing Managers' Index (PMI) Definition*. [online] Available at: <https://www.investopedia.com/terms/p/pmi.asp>.

Tradingeconomics.com. (2018). *China - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/china/indicators>.

² Tradingeconomics.com. (2018). *China - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/china/indicators>.

³ Tradingeconomics.com. (2019). *India - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/india/indicators>.

⁴ tradingeconomics.com. (n.d.). *Taiwan - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/taiwan/indicators>.

⁵ Tradingeconomics.com. (2009). *Mexico - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/mexico/indicators>.

⁶ tradingeconomics.com. (n.d.). *Uruguay - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/uruguay/indicators>.

⁷ Tradingeconomics.com. (2014). *Brazil - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/brazil/indicators>.

⁸ Tradingeconomics.com. (2016). *South Africa - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/south-africa/indicators>.

⁹ Tradingeconomics.com. (2019). *Zimbabwe - Economic Indicators*. [online] Available at: <https://tradingeconomics.com/zimbabwe/indicators>.

¹⁰ tradingeconomics.com. (n.d.). *Tunisia Indicators*. [online] Available at: <https://tradingeconomics.com/tunisia/indicators> [Accessed 11 Feb. 2022].

Asia: Taiwan (Taipei)

Taiwan as a standalone economy presents as a good proposition for FaceTech.

Many developing nations in the East and Southeast Asia region have taken a major hit economically due to the pandemic¹¹ but Taiwan was among those which survived 2020 without negative GDP growth due to low infection numbers, underlining a robust economy.

Geo politics

To 1945, Taiwan was a colony of Japan which then came under the rule of China. It became what is considered to be a breakaway province at the end of the Chinese civil war in 1949 and sees itself as a sovereign state with its own constitution, military, and elected leaders.

Tensions have recently increased as Beijing talks about taking the island back and this would give China back control of the Taiwan Strait¹² between the North and South China sea – something they overlooked taking control of in 1949.

It is predicted that 'China will be ready to mount a full-scale invasion of Taiwan by 2025.... describing current tensions as the worst in 40 years'¹³.



Tensions between China and India have also thrown light on India's economic dependencies on China. There is a risk of escalation between the two countries with potentially devastating outcomes given both sides are established nuclear powers.

Environmental standing

Taiwan adopted the UN Sustainable Development Goals in 2017 and passed an additional, Taiwan-specific version of them in 2018.

¹¹ Statista Infographics. (n.d.). *Infographic: Which Growth Regions in Asia Will Suffer GDP Losses?* [online] Available at: <https://www.statista.com/chart/21293/projected-change-gdp-growth-coronavirus-developing-countries-asia/>.

¹² Wikipedia. (2022). *Taiwan Strait*. [online] Available at: https://en.wikipedia.org/wiki/Taiwan_Strait#/media/File:Taiwan_Strait.png [Accessed 11 Feb. 2022].

¹³ the Guardian. (2021). *China could mount full-scale invasion by 2025, Taiwan defence minister says*. [online] Available at: <https://www.theguardian.com/world/2021/oct/06/biden-says-he-and-chinas-xi-have-agreed-to-abide-by-taiwan-agreement>.

Cultural and social considerations

The international community continues to express concern over serious human rights situations including infringement of freedom of religion and forced incarceration in China¹⁴ again linked to activities on the border with India, while international human rights organizations recognize Taiwan's unique position in Asia as an advocate for human rights and democracy.¹⁵

A war would undoubtedly lead to cultural and social changes in all three countries, and potentially not for the good.

S E Asia	External Distance (difference between countries)	- Linguistic & ethnic homogeneity - Diaspora - Strong National identity (in food, products features, standards)	- Ease of doing business though there is absence of colonial ties - Enclaves - Political Friendship (ASEAN) - Lower long-run risk?	- Close to each other - Alliances to Europe & US markets - Superior ports, other infrastructure - East Asian production network	- Larger markets size - Foreign companies as export bridges - Robust domestic and export sectors
	Internal Distance (attributes of each country)	- Difference in social norms are limited - Different religions, multi racial society	- Membership with international organisations - Robust legal and security system - Strong Government rules & regulations	- Shared boundaries - Well connected internally - Strong financial sector	- Relatively higher disposable incomes - Labour inputs & productivity - Capital available

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Culturally, Taiwan very much follows a Japanese way of living and working which relies heavily on formality, tradition and hierarchy. Mentsu (face) is important and connected to dignity, honour and public standing, anger is rarely shown and silence is a prevalent communication tool - very different to the UK approach.

Setting up a company in Taiwan

Relatively straight forward¹⁷ and on a par with the UK and US in terms of legislature and process. Importantly the Country does not require a Company to have a Taiwan citizen to be a majority shareholder as with other countries in the region.

The population is diligent and educated to a high standard, setting great store by achievement and qualifications and is recognised as a good source of labour for all industry sectors, notably those in the electronics and tech fields.

Manufacturing, production and supply chain

In its article on Manufacturing and Trade in Asia¹⁸, McKinsey & Co state that 'Asia [must] align [its] manufacturing footprints with noticeably shifting trade flows which are moving more to domestic trade than exports' than to the rest of the world. It is worth bearing in

¹⁴ Schecter, A. (2021). *Torture, cover-ups in China's camps for Uighurs revealed in new report*. [online] NBC News. Available at: <https://www.nbcnews.com/news/world/new-details-torture-cover-ups-china-s-internment-camps-revealed-n1270014>.

¹⁵ The Borgen Project. (2018). *Top Facts About Human Rights in Taiwan*. [online] Available at: <https://borgenproject.org/top-facts-about-human-rights-in-taiwan/#:~:text=In%20recent%20years%2C%20Taiwan%20became%20the%20front-runner%20of> [Accessed 11 Feb. 2022].

¹⁶ africabusiness.com. (n.d.). *The Role of Culture in Doing Business in Africa – Africa Business*. [online] Available at: <https://africabusiness.com/2016/06/23/the-role-of-culture-in-doing-business-in-africa/>.

¹⁷ 台北創業家. (2021). *How do foreigners set up a company in Taiwan Q&A*. [online] Available at: <https://bit.ly/339emss> [Accessed 11 Feb. 2022].

¹⁸ www.mckinsey.com. (n.d.). *Trends in Asian trade and manufacturing | McKinsey*. [online] Available at: <https://www.mckinsey.com/featured-insights/asia-pacific/manufacturing-and-trade-in-asia> [Accessed 11 Feb. 2022].

mind therefore that exporting goods from Taiwan may be impacted by loss of the Straits to China with potential ramifications on Taiwan's ability to continue business as before.

Intellectual property

Due to its unique international status, Taiwan is not a member of WIPO. However, in 2001 it acceded to the World Trade Organisation (WTO) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Moreover, Taiwan is a party to numerous bilateral agreements, letters of intent and memorandums of interest related to IP rights.¹⁹ (see Appendix one).

Quality of goods

A widely held perception of Asia overall is that it needs to improve its competitiveness with the developed world – its reputation for considerable productivity and quality gaps as compared with the developed world does it no favours against increased demand for tailored products and shorter lead times. Taiwan however maintains an excellent reputation for the manufacture of electrical and technical goods.

Africa: South Africa (Durban)

South Africa as a standalone economy is not an obvious proposition for FaceTech but does have potential.

Politics and geo politics

South Africa is one of the world's most unequal countries. Poverty is deep, structural and worsening; and unemployment remains a substantial challenge.

The ANC's record electoral defeat in November 2021 bodes ill for South Africa's economic stability²⁰. The losses reflect the population's frustration with the perceived mismanagement of public funds, as well as longstanding outrage at the ongoing economic crisis and political corruption.

There are real concerns over recurrent power cuts across the country and rising inflationary pressures due to intensifying supply chain issues.²¹ "Supply chain disruptions, insufficient stocks, load-shedding and escalating cost increases will prevail for a while longer – which in turn are dimming the hopes of a further strong recovery any time soon"²²

¹⁹ www.worldtrademarkreview.com. (n.d.). *Understanding the Taiwan trademark system*. [online] Available at: <https://www.worldtrademarkreview.com/understanding-the-taiwan-trademark-system> [Accessed 11 Feb. 2022].

²⁰ Stratfor. (n.d.). *The ANC's Record Electoral Defeat Bodes Ill for South Africa's Economic Stability*. [online] Available at: <https://worldview.stratfor.com/article/anc-s-record-electoral-defeat-bodes-ill-south-africa-s-economic-stability> [Accessed 11 Feb. 2022].

²¹ tradingeconomics.com. (n.d.). *South Africa Business Confidence | 1975-2020 Data | 2021-2022 Forecast | Calendar*. [online] Available at: <https://tradingeconomics.com/south-africa/business-confidence>.

²² MANUFACTURING IN AFRICA: FACTORS FOR SUCCESS. (2018). [online] Available at: https://set.odi.org/wp-content/uploads/2018/06/Manufacturing-in-Africa-Factors-for-Success_June-2018.pdf [Accessed 11 Feb. 2022].

Environmental standing

South Africa adopted the UN Sustainable Development Goals in 2017 (see Appendix two).

Cultural and social considerations

Region	Level of Attractiveness (Distance)	Cultural Distance	Administrative (Political) Distance	Geographic Distance	Economic Distance
Africa	External Distance (difference between countries)	- Different languages, ethnicities, religions - Different style in national work systems - Varied social norms	- Common coloniser - Limited shared regional trading bloc (E covas, Uemoa, Sadac) - Different monetary and political associations - Political hostility - Institutional weakness	- Physical distance - No common land or water borders - Different time zones, climatic conditions - Lack of sea or river access - Weak communication or transportation links	- Differences in consumer incomes - Differences in availability of human, financial and natural resources - Difference in organisational capabilities, distribution network
	Internal Distance (attributes of each country)	- Insularity - Traditionalism - Spiritualism	- Lack of membership in international organisations - Government involvement is high leading to high sunk costs for business - Lack of clear defined Government policy frameworks - Societal conflicts	- Geographic remoteness - Large land area - Poor infrastructures	- Small economic size, income per capita - Low levels of monetisation - Limited infrastructure and communication network

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Attitudinal surveys conducted since the 1990s consistently show that South Africans display high levels of hostility toward immigration and immigrants. This anti-foreign sentiment is pervasive across virtually all strata of society and manifests in various forms, ranging from everyday street level abuse to discrimination by government officials and recurring bouts of communal xenophobic violence in varying intensity and scale.²⁴

Setting up a company in South Africa

All indications are that this is an arduous and lengthy process. However, a business can be set up, owned and run with 100% foreign ownership, a business visa holder will need to typically own in excess of 25% of the business and a financially independent permit holder has no restrictions.

Particular challenges include a relative shortage of skilled employees. South African economic transformation policies have created additional requirements and costs for UK investors seeking to establish operations in the country but this notwithstanding, transport infrastructure and sophisticated financial and legal sectors are well established.²⁵

New regulations stipulate that a foreign business must employ at least 60% South Africans as a workforce on a permanent basis within the business if a business visa is held. There are however no such requirements for an Independent Financial permit holder.²⁶

²³ africabusiness.com. (n.d.). *The Role of Culture in Doing Business in Africa – Africa Business*. [online] Available at: <https://africabusiness.com/2016/06/23/the-role-of-culture-in-doing-business-in-africa/>.

²⁴ Misago, J.P. (2017). Politics by Other Means? The Political Economy of Xenophobic Violence in Post-Apartheid South Africa. *The Black Scholar*, 47(2), pp.40–53.

²⁵ Foreign & Commonwealth Office (2016). *Overseas Business Risk - South Africa*. [online] GOV.UK. Available at: <https://www.gov.uk/government/publications/overseas-business-risk-south-africa/overseas-business-risk-south-africa>.

²⁶ Intergate Immigration Service (Pty) Ltd. (n.d.). *Starting a Business as a foreigner in South Africa*. [online] Available at: <https://www.intergate-immigration.com/starting-business-foreigner-south-africa.php> [Accessed 11 Feb. 2022].

To take money into and out of South Africa, appropriate tax clearance and declarations of adherence to allowances must be obtained as well as an appropriate audit trail. This could mean the confidentiality of FaceTech's business activities would be compromised.

Manufacturing, production, supply chain

Food and beverages, textiles and clothing are recognised as the dominant manufacturing sectors in South Africa. The signing of the automotive section of the EU–South Africa free trade agreement (TDCA) has helped attract foreign investment through improved market access to European component inputs.

South Africa experienced two significant recent events in July 2021, namely the looting chaos followed by the cyberattack on Transnet's IT infrastructure. The timing, scale and impact of both events will have further repercussions on the economy and supply chains.²⁷

Intellectual property

The cross-border transfer and licensing of intellectual property in South Africa is regulated under South Africa's exchange control regime. This is applicable to both registrable intellectual property, such as patents, trademarks and designs, and unregistered intellectual property, such as copyright.²⁸

Patent and design rights are protected pursuant to the Law of Intellectual Property. South Africa is a member of the Berne Convention²⁹, so copyright does not require registration for protection. The Copyright Law provides protection for authors of literary, artistic and scientific works only. (see Appendix one)

South America: Brazil (Sao Paolo)

Politics

The US Biden administration formally announced during the G-7 summit in June 2021 the laying of groundwork for a parallel US program with major geopolitical implications including Brazil in its plans. Build Back Better World is a plan to improve global infrastructure to counter China's growing influence.³⁰

Brazil's successful auction of deep-sea oil prospects in December 2021 has prompted a boom in international private companies investing and operating in major infrastructure

²⁷ Investec. (n.d.). *Supply Chain Disruptions to Persist Into 2022*. [online] Available at: https://www.investec.com/en_za/focus/logistics-update/supply-chain-disruptions-to-persist-into-2022.html [Accessed 11 Feb. 2022].

²⁸ A Guide to Doing Business in South Africa. (2017). [online] Available at: https://www.bakermckenzie.com/-/media/files/expertise/mar-resources/Doing_Business_in_SA_Guide.pdf.

²⁹ wipolex.wipo.int. (n.d.). *WIPO Lex*. [online] Available at: https://wipolex.wipo.int/en/treaties/ShowResults?search_what=C&treaty_id=15.

³⁰ Ghitis, F. (n.d.). *Biden Aims to Challenge China in Latin America With B3W*. [online] www.worldpoliticsreview.com. Available at: <https://www.worldpoliticsreview.com/articles/30022/latin-america-is-the-latest-arena-for-china-us-competition> [Accessed 11 Feb. 2022].

projects in Brazil, generating more than USD145bn in investments and USD26bn in fees for the government.

Environmental standing

Economists caution that the October 2022 elections could negatively impact investor sentiment³¹ and it should be noted that the current administration has weakened environmental law enforcement, effectively giving a green light to criminal networks that engage in illegal deforestation in the Amazon and use intimidation and violence against forest defenders.

Cultural and social considerations

Although many Brazilians speak English, some may feel more comfortable in a business setting if an interpreter is present. The Brazilian attitude in business is generally paternalistic and forgiving, albeit machoistic towards women and timekeeping is accepted as being quite casual.

Human rights in Brazil include the right to life, freedom of speech and condemnation of slavery and torture. The Country is ratified under the American Convention on Human Rights.

On the Corruption Perception Index (2016), Brazil ranked 79th out of 176 countries suggesting that the country's public sector is perceived as being corrupt.³²

Setting up a company in South America

Brazil's developing and diverse economy enables companies moving into the country to choose to partner with local companies. This transition aims to minimise potential disruption and gives essential insight on the local economy; there is however a slew of regulation aimed at controlling foreign investment into the country.³³

Employment in Brazil is increasing and approached 62% (its highest to date) by end of 2017. Unemployment is nearing 12% and the cost of labour is falling while wages are rising quarter on quarter.

It is recommended that businesses seek expert advice before employing in Brazil. Unions have great influence and although their achievements have developed the labour market, FaceTech should be aware of how they operate. Brazil's labour laws, which are set out in 900 articles are difficult to navigate and non-compliance can lead to fines and a soured reputation.

³¹ Harris, B. (2022). *Brazil's economic outlook buoyed by big-ticket investments*. [online] @FinancialTimes. Available at: <https://www.ft.com/content/9f4aa39b-a7f8-47f8-b633-dd75b1081636> [Accessed 11 Feb. 2022].

³² Cultural Atlas. (n.d.). *Brazilian Culture - Business Culture*. [online] Available at: <https://culturalatlas.sbs.com.au/brazilian-culture/brazilian-culture-business-culture>.

³³ Sottovia, M. (2018). *Top challenges of doing business in Brazil*. [online] Tmf-group.com. Available at: <https://www.tmf-group.com/en/news-insights/articles/top-challenges/doing-business-in-brazil/>.

Manufacturing, production, supply chain

Manufacturing accounts for about 1/5th of Brazil's GDP and more than 1/10th of the labour force. The South East has the largest, most varied and most efficient establishments in every sector of industry, also employing 3/5th of the Country's industrial workers who earn most of Brazil's wages and produce the largest value of its goods.

The South employs more than 1/5th of the Country's industrial workers and the North East employs roughly half that number - at lower wages than in the South East and South. Within the Southern and South Eastern states, the manufacturing sector in Sao Paulo produces nearly 2/5th of Brazil's manufactured goods³⁴.

Both transportation and communication infrastructures are strong in Brazil. With a coastline stretching for more than 7,000 km, Brazil excels at ocean shipping, but it should be noted that most inland waterways are remote from populated and industrialized areas. Brazil has c.700 airports and the ninth largest railway system in the world, able to handle freight.

Economists consider Brazil to be one of the strongest countries in emerging markets despite the recession between 2013 and 2016.³⁵

Intellectual property

Patent and design rights are protected pursuant to the Law of Intellectual Property. Brazil is a member of the Berne Convention³⁶ and copyright does not require registration for protection. The Copyright Law provides protection for authors of literary, artistic and scientific works only. (see Appendix one).

³⁴ Ronald Milton Schneider and Martins, L. (2019). Brazil | History, Map, Culture, Population, & Facts. In: *Encyclopædia Britannica*. [online] Available at: <https://www.britannica.com/place/Brazil>.

³⁵ Kemp, A. (2019). *Doing Business in Brazil*. [online] QAD Blog. Available at: <https://www.qad.com/blog/2019/04/doing-business-in-brazil>.

³⁶ wipolex.wipo.int. (n.d.). *WIPO Lex*. [online] Available at: https://wipolex.wipo.int/en/treaties/ShowResults?search_what=C&treaty_id=15.

In summary

Were it not for the ramifications of the very real threat of a war in Indo China, we would recommend Taiwan as a clear choice for FaceTech's manufacturing considerations.

South Africa is a very open to foreign investment but known to be corrupt and xenophobic. As part of a much greater landmass, South Africa one of the few countries in Africa optimistically developing along Western lines but with a devalued Rand and strict regulations on money flow in and out of the country, it may be too early in South Africa's regeneration for FaceTech to invest and successfully (and safely) grow its manufacturing proposition.

Brazil is a fast growth country, closest to the US markets geographically in terms of potential sales. There is a well-established supply chain and a business culture relatively easy to do business with. Culturally, this South American country's ambitions are the most closely aligned to FaceTech.

Sao Paulo in particular has a strong manufacturing presence and from the choices of regions, rather unexpectedly and for the reasons outlined, we would recommend FaceTech further investigate the option of moving manufacturing to Brazil.

ISO 56000

ISO (International Organization for Standardization) was founded in 1947 is the world's largest developer of voluntary International Standards. Developed through global consensus, the ISO helps break down barriers to international trade and since it began has published more than 19,500 international standards covering almost all aspects of technology and business which a knock impact on all our lives.

The remit within ISO 5600 is for businesses to:

- rethink how they manage innovation partnerships
- manage the methods they use for achieving success in innovation
- learn how to provide training on innovation management and discover why they need to carry out innovation management assessments.

"Innovation is about creating something new that adds value; this can be a product, a service, a business model or an organisation. The value that is added is not necessarily financial, it can also be social or environmental and the ISO 56000 family will help significantly improve the ability of businesses to survive in our changing and uncertain world, enabling them to permanently reinvent themselves. (Alice de Casanove, Chair of the ISO)".³⁷ A consolidated innovation management system (IMS) would help Facetech improve on their current methodologies and use standardised terminology to communicate consistently about their processes, achievements and learning paths globally.

³⁷ Heires, M. (2008). The International Organization for Standardization (ISO). *New Political Economy*, 13(3), pp.357–367.

Appendix one

Intellectual property rights

In order to be able to manage IP effectively as a business asset it is necessary FaceTech to consider and qualify what the Company means by the intellectual property, how it will achieve water-tight IP internationally were FaceTech to move production offshore and what that will involve. Once this has been established, FaceTech should thoroughly investigate what rights are already held worldwide by organisations and/or individuals for any whole, or parts of the whole, of the Company's product line and this research will also help the Company identify what has already been tried and tested and what has failed and succeeded.

It may be that FaceTech considers collaboration at a manufacturing level to avoid reinventing the wheel. There are benefits to risk sharing and resource pooling, tech convergence, industry deconstruction and knowledge sharing.

Appendix two

The environment and UN sustainable development goals

Adopting the 2030 Agenda for Sustainable Development³⁸, world leaders resolved to free humanity from poverty, secure a healthy planet for future generations, and build peaceful, inclusive societies as a foundation for ensuring lives of dignity for all.

The 2030 Agenda is deliberately ambitious and transformational, with a set of 17 integrated and indivisible Sustainable Development Goals and targets as a universal agenda, applying to all countries.

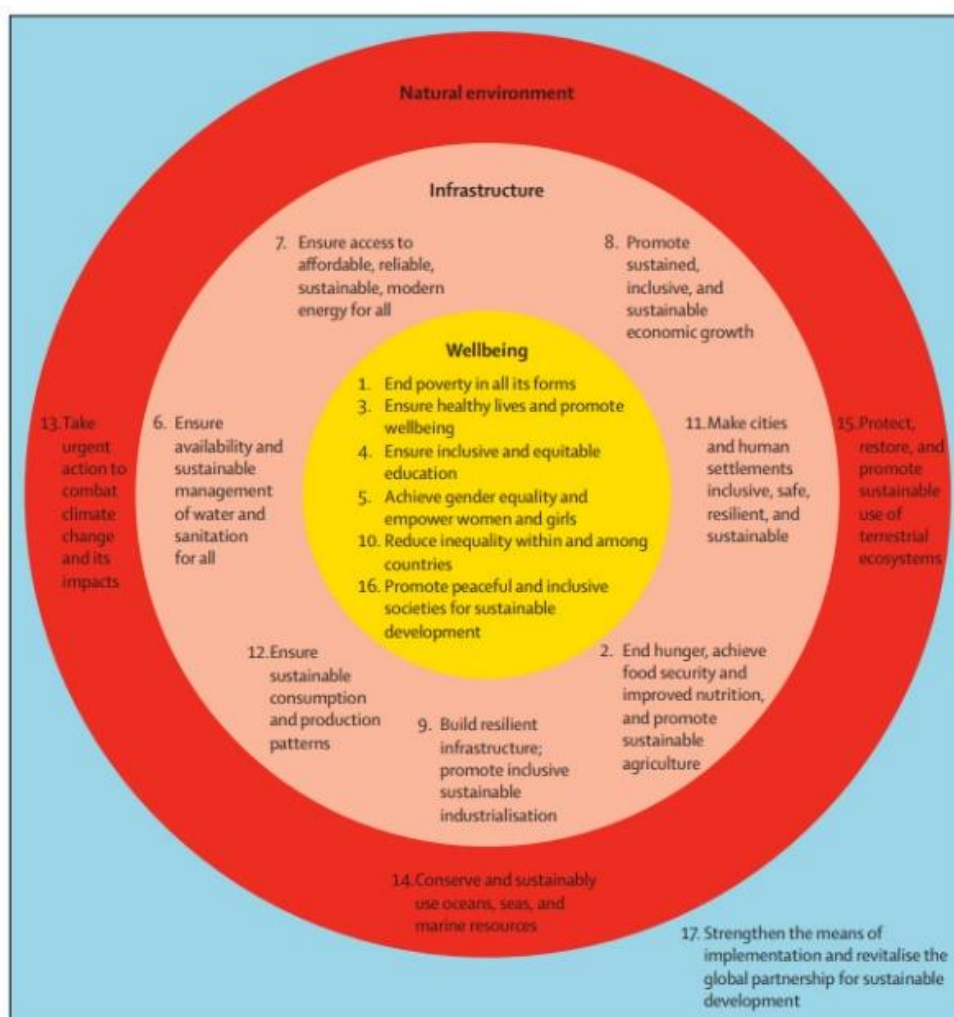


Figure: Framework for examining interactions between Sustainable Development Goals

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³⁸ The Sustainable Development Goals Report 2017. (n.d.). [online] Available at: <https://unstats.un.org/sdgs/files/report/2017/the-sustainable-development-goals-report-2017.pdf>.

³⁹ Waage, J., Yap, C., Bell, S., Levy, C., Mace, G., Pegram, T., Unterhalter, E., Dasandi, N., Hudson, D., Kock, R., Mayhew, S., Marx, C. and Poole, N. (2015). Governing the UN Sustainable Development Goals: interactions, infrastructures, and institutions. *The Lancet Global Health*, [online] 3(5), pp.e251–e252. Available at: <https://www.thelancet.com/journals/langlo/article/PIIS2214-109X%2815%2970112-9/fulltext> [Accessed 20 Oct. 2019].

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