

ASSIGNMENT - INTERNATIONAL OPERATIONS

MODULE ACPA 7003 - INTERNATIONAL INNOVATION MANAGEMENT

STUDENT/AUTHOR - MARK WELDON (2012094)

SUBMISSION DATE: 4TH FEBRUARY 2022

DOCUMENT: VERSION 1 (WORD COUNT: XXXX)

CONTENTS

1. Executive Summary	3
2. Introduction	4
3. About PESTLE Analysis	5
4. Political Factors	6
5. Economic Factors	7
6. Social Factors	8
7. Technological Factors	9
8. Legal Factors	10
9. Environmental Factors	11
10. ISO56000 – Benefits and sustainability	12
11. References and Bibliography	13

1. EXECUTIVE SUMMARY

This report has been commissioned by our client, based in mid Wales, who specialise in security systems for domestic commercial and industrial use. Their product range includes home security cameras and commercial CCTV equipment that can be adapted to a range of further commercial opportunities following the ongoing pandemic.

Due to the impact of COVID-19, 'Organisation X' has identified a market opportunity to produce a body temperature scanner to be used at site entrances and at security points to control access to persons who may be showing symptoms of COVID-19, such as an increase in body temperature. The systems can also be developed and purposed to scan for the presence of a face mask or other PPE, so that a more efficiently controlled work environment is possible.

Further possible technical developments may include a retinal scanner, contained within the same systems, so that access may be controlled to only those identified and authorised personnel. This is also under development for inclusion in the same systems and manufacturing processes.

'Organisation X' wishes to position itself to begin global manufacture in 3 key international locations in Africa, Asia and South America, with development and manufacture being initially controlled from the main headquarters located in mid Wales.

This report has been commissioned by 'Organisation X' following their initial investigation of potential international sites for manufacturing and production facilities. This report outlines a short-listing process for three locations in each of these continents and make recommendations for a site on each continent. To conduct this review as impartially as possible, this report provides an overview of the political, economic, social, technological, legal and environmental factors that may impact 'Organisation X' in its development into these key markets. This PESTLE analysis is contained in subsequent chapters and presents the issues and impacts in a structured way to facilitate comparison and selection, as well as plan the strategy and development of each location.

This report will also discuss how innovation management standards such as ISO56000 may be a benefit to 'Organisation X' as it continues to grow into these international markets, controlling the manufacturing process and generating a sustainable and profitable future for the organisation.

Due to the volatile nature of the market opportunity at present the results of this report should be regularly reviewed and updated as necessary, reflecting any recent developments.

2. INTRODUCTION

This report provides an overview of political, economic, social, technological, legal and environment (PESTLE) factors related to increasing the opportunity of a high-tech personal scanning solution in several international markets. The report has a special focus on the efficient and sustainable production of this high-tech solution in several defined international markets, with a focus on location solution supporting this aim.

The objective of this report is to give it overview of some of the most significant factors, compared via a PESTLE analysis, that will have an impact on the development off the scanning technology and related solutions. The use of a PESTLE analysis will allow a 'like for like' comparison off the various potential manufacturing locations, attempting to assess the trends, drivers and impact on the development and manufacture of the product, the business environment and some of the strategies required to develop into each location.

PESTLE analysis is a strategic tool that considers important elements of the potential manufacturing, operating and distribution environment. Each of these elements will have an impact on the organisation and its development in each of these international locations. The analysis supports the companies strategic planning by providing insights about the external environment in which the planned manufacturing process is may take place by analysing each aspect consistently the company will have a comprehensive picture of the development opportunities in each location and this will assist in making the correct selection. endless analysis only external factors are identified it therefore does not provide solutions or strategies to deal with internal or structural issues within the client company. it must also be recognised that this report focuses on a narrow subset of external environmental factors that are directly related to high tech manufacturing in each of these locations.

Document Structure

- A brief overview of PESTLE analysis and how to apply the results in combination with other business analysis tools.
- A summary of each element of the PESTLE analysis as applied to each potential location in the three selected continental spheres of operation. Each of these chapters includes a description of the PESTLE factor/issues and the potential impact on the development opportunity for 'Organisation X'.
- A review and discussion of the use of ISO56000 standards in the development of the product and it's sustainability.
- References and bibliography.

3. ABOUT PESTLE ANALYSIS

PESTLE analysis is a strategic tool that considers important elements of the future operating environment, that will have a potential impact on the organisation and its operation, in these cases in the pre-selected potential location on three new continents. A consistent approach to comparing the finally selected locations will assist in making the selection as informed as possible.

The PESTLE Analysis only aims to identify and compare the most relevant external factors. It does not provide solutions or strategies to deal with the individual factors. This report focuses on a narrow subset of the external issues, focusing the review on the PESTLE factors that are directly related to the use of newly developed and adapted scanning equipment within the security/site entry sectors.

PESTLE analysis helps companies develop scenarios for strategic planning. Depending on the business, the importance of the different factors will vary. Companies may rank the factors based on their likelihood and expected impact to align their business strategies according to the most relevant elements of their operating environment. As the PESTLE analysis only considers external factors, the results should be used in combination with the analysis of internal factors and other tools to support strategic review and plans. Identified PESTLE factors might also feed into the threats and opportunities sections of a SWOT analysis.

4. POLITICAL FACTORS

Political factors include regulations at national international and global level as well as political stability and predictability issues that may have an impact on the business decisions and the return-on-investment potential.

The following issues may be considered when identifying and assessing political factors:

- International legislation
- Current domestic legislation
- Future developing legislation
- International tax policy
- Local regulatory bodies and processes
- Local government policies
- Pressure groups and lobbying interests
- Political conflicts and local domestic stability

The efficient and sustainable development of 'organisation x' is a potential societal interest and therefore the consideration of the political factors is key in the decision-making and risk assessments for the development of each individual international market hub.

The following table summarises the identified political factors and their impact on the opportunity to develop scanning technology in each key continental sphere of operation.

In summary political factors include stability government policy and the activities of regulatory bodies and other lobbying groups that may affect the business through the application of legislation rules and regulations. Political factors are closely tied to legal factors when a more focused on the underlying drivers and the political process eventually leading to legislation that will have an impact on the potential business opportunity.

The main political concerns relating to the capture of personal data through scanning technology has to do with the storage and use of personal data, especially those related to the identification of individuals and their medical conditions. the balance between personal and corporate interests is a significant political issue which will affect the use of the technology in these specific markets. the different approaches to the use of personal data in each situation should be considered when developing this technology and attempting to take this to market. Consideration should be given to replicating best practise as identified in the European Union under the General Data Protection Regulation (GDPR).

5. ECONOMIC FACTORS

In order to gain a competitive advantage and sustainable success companies need to align their strategies to constraints and economic realities within each potential new international location. In addition to purely market driven factors a number of government priorities may affect economic conditions through the application of fiscal measures and public spending/investment.

Economic factors include long term trends of the global economy as well as shorter term market fluctuations with impact on costs and competition as well as the economic implications of political decisions, new legislation and taxation changes. a supporting consideration maybe the available government funding within each local market.

Economic factors to consider include:

- Economic growth potential within each location and continent
- inflation rates and interest rates in each location
- general taxation issues within each location
- any product specific taxation issues related to development and distribution
- any specific technology costs related to each individual location
- Access to grant funding
- the potential for competition and product protection within location
- Customer and end user issues local marketing
- Business operations and development from the local hub into it's continental market

The following table summarises the identified economic factors and their impact on the opportunity to develop scanning technology in each potential operation base.

The capture of personal data through scanning technology and the analysis of that data will become a primary economic driver in the development of the technology. The optimisation of identification and the potential to improve security for clients as well as any compliance issues they face will become key

6. SOCIAL FACTORS

Social factors a reference to the social conditions of individuals or groups within a particular society these are reflected in the preferences attitudes and trends that can influence the market behaviour and wider political decisions and eventually legislation. It's therefore important to understand how social factors may influence funding possibilities legislation and subsequently market demand in order to determine how these factors may influence future business opportunities.

A wide range of social factors can be identified and compared across all the potential international locations considered here in and it is important to note that these social factors may change quickly as employment and economic conditions change.

In considering the opportunity for sustainable development in each international location organisation X' should consider a number of key factors that will improve the social capital social cohesion and economic development potential in each market.

Several social factors need to be considered in this review. Many of these social factors will be reflected in public opinion and individual societies development, feeding into the social structures and constructs in each individual location. these will have an impact on the maturity of the markets as well as the availability of skilled workers in these high-tech industries.

Several social factors need to be considered for each individual potential location. These include:

- Social capital
- human capital
- social cohesion
- productivity
- welfare
- population age distribution
- attitudes to work and career
- attitude's to safety
- attitude's to technology products and they use in societies control

A number of societal factors will have a significant impact on the current and future operating environment of organisation X. The growth of an international organisation will have a positive development then employment and health distribution. Attitudes towards personally scanned data and the use of technology and its perceived benefits one need careful communication in each individual market and transparency regarding how the data is collected and used is critical.

The availability of a skilled workforce with experience in the manufacture of high tech products is perceived to be critical.

7. TECHNOLOGICAL FACTORS

The development of digitalisation and scanning technology in almost all sectors of society has been a dominant trend for some time. The application of these processes to monitoring and security can be seen as a key development in the Far East and particularly in China, where significant monitoring has been applied to control spread of the pandemic. The Internet of Things (IoT) promises to change fundamentally the technological landscape and provides a significant increase in access to information as well as validation of identity.

Over the last decade there has been significant improvements in scanning technology and image recognition. These technologies have become more widely accepted by the general population such as at passport control and other points of entry to managed zones.

In general, policies relating to security intellectual property privacy and to some extent liability will need to be addressed in relation to the adoption of these control mechanism, and cross referenced with Societal issues.

The following section lists some significant technological factors but may need to be considered in the development and deployment of scanning technology.

- Basic infrastructures
- R&D activity, innovation
- technological developments
- competing technologies
- related/dependent technologies
- technological maturity
- manufacturing capacity
- technology access, IPR, licensing, patents

8. LEGAL FACTORS

A review of the legislation rules and regulations that define the legal frameworks within each potential international location will need to be undertaken in order to define future strategies for development within each continent of operation. legislative development typically follows political decision making and so and need to monitor the societal development will be required to understand and predict future law implementation.

The deployment of scanning technology will generate significant volumes of personal and technical data. considerations should be given to the main risks relating to perceived discrimination, privacy violations as well as data ownership and copyright. it should be recognised that legislation within this sphere of operation is evolving rapidly and so may lag behind development within other countries.

Legal factors that pertain to both national and international law dictate the rights and responsibilities for companies, individuals and public actors.

Factors and issues to consider include:

- Trade restrictions
- Data Protection
- Copyright, patents / Intellectual property law
- Consumer protection and e-commerce
- Health and safety law

The development and implementation of this scanning technology will affect many sectors off the economy industry and society in each location. it is suggested that 'Organisation X' adopt the best practise approach, ensuring compliance in all locations. Issues such as encryption protocols need to be adopted at the highest international standards enabling easy global competition for the developed product.

9. ENVIRONMENTAL FACTORS

Environmental factors include external environmental influences on the operating conditions of the business, the impact the business has on local and wider environment during both manufacture and use, as well as the influence of wider societal opinion and activist groups with the power to affect the business.

- Waste management
- Recycling
- Laws regulating environment pollution
- Attitudes toward environmental issues and ecological impacts
- Air and water pollution
- Weather and climate change

Careful consideration needs to be given to the manufacturing impacts and waste management in each specific location so that the business is working too best practise in the most sustainable way possible. Consideration of the materials used in manufacture and their source and recycling potential will support the development of location focused circular economy.

10. ISO56000 – BENEFITS AND SUSTAINABILITY

ISO56000 is a relatively new standard introduced just before the pandemic in early 2020 the standard provides a set of management tools and processes to allow creative collaboration and innovation to flourish within organisations, creating successful and sustainable businesses.

With effective innovation management systems developed across the growing organisation, the business will be better prepared for growth, increased agility and resilience for the challenges and disruptions faced by the global supply chains at present.

The ISO 56000 innovation management system was published and released immediately before for the disruption of global value chains of early 2020, caused by the COVID-19 pandemic. Adoption of the standards allows manufacturing companies to accelerate their programmes of innovation and transformation, looking for ways to apply and innovate their solutions into evolving market. The pandemic has also exposed weaknesses in the manufacturing supply chains. This can be counteracted through the development of innovation collaborations that create and applying new solutions to the issues thrown up by the pandemic.

The ISO 56000 provides a framework to ensure that businesses have captured all the aspects of innovation management in a system that clearly identifies when new expertise and partners are required. The application of systematic management of new opportunities addresses the need for the business to extend its scope and market reach.

The requirements of many societies for increased control measures identified by the pandemic at both macro and micro scales have highlighted the need for the application of new technology such as scanners and identification technology to ensure the safety automatic communities in the most efficient and safe way possible.

The recommended uptake of ISO56000 by 'Organisation X' will help to meet The United Nations Sustainable Development Goals (SDGs) where economic environmental and societal issues are all addressed and considered in the application of the standards. The SDGs

11. REFERENCES AND BIBLIOGRAPHY

17 Goals to Transform Our World Available at: <https://www.un.org/sustainabledevelopment/> (Accessed: 5th Feb 2022).

Data protection and your business., Available at: [Data protection and your business - GOV.UK \(www.gov.uk\)](https://www.gov.uk/data-protection-and-your-business). (Accessed 8th Feb 2022).

ISO 56002:2019. Innovation management — Innovation management system — Guidance Available at: <https://www.iso.org/standard/68221.html> (Accessed 8th Feb 2022).

Manzini, Raffaella & Lazzarotti, Valentina, 2016. Intellectual property protection mechanisms in collaborative new product development. R & D management, 46(S2), pp.579–595.

Medical Devices Regulations 2002 (SI 2002 No 618, as amended) (UK MDR 2002). Available at: <https://www.legislation.gov.uk/uksi/2002/618/contents/made> (Accessed: 10th Feb 2022).

Pearson, A.W. (1991) Managing innovation: an uncertainty reduction process; in Henry, J. and Walker, D. (eds), Managing Innovation, Sage/OU.

Satell, G. (2017) Mapping Innovation: A playbook for navigating a disruptive age. 1st edn. New York: McGraw-Hill

SUSTAINABLE DEVELOPMENT GOALS Available at: (Accessed: <https://www.iso.org/sdgs.html> Accessed: 10th Feb 2022).

Tidd, J. and Bessant, J. (2013) Managing Innovation: Integrating Technological, Market and Organizational Change (5th ed.). Wiley & Sons (ISBN 978-1-118-36063-7)

Trott, P. (2017) Innovation Management and New Product Development (6th ed.). Pearson (ISBN 978-1-292-13342-3)