CST3310 – Strategic Information Systems (Enterprise Project) Management

Case Study: Maritime Transport

Pair CST33101910HEA5

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1. Introduction

Our team conducted interview with Maritime Transport, a logistic company, to learn how they operate the business using Management Information Systems.

0.1 Introduction of your consultancy start-up

Mr. ******, reports the overview of their case study - Maritime Transport and reflects on its Globalisation issues and networking issues.
Ms. ***** evaluates the Agile approach to MIS, Impact of Information System on Society, and Intelligence and MIS of Maritime Transport.

	ID	Name	VARK	MBTI	PAEI	Belbin
	M00731620	***	Aural, Kinaesthetic	ENFJ	Entrepreneur	Implement
	M00654131	*******	Read, Write	ISTJ	Producer	Shaper

0.2 Presentation of each group member profile

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0.3 Description of the selected Case Study organisation

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2. Globalisation Issues (marketplaces / infrastructure / workforce)

7.1 Reflection on the organisation's readiness for enter global markets

"Globalization refers to all those processes by which the peoples of the world incorporated into a single world society, global society" (Martin Albrow, 1990)
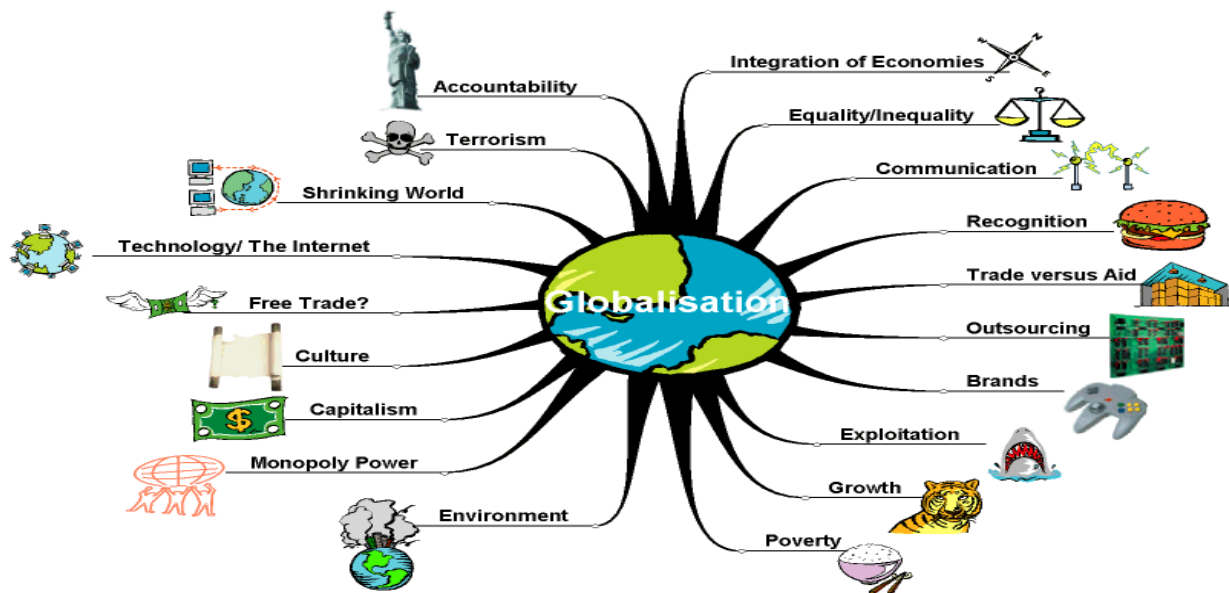
Figure 1: Globalisation Map

Figure 1 reflects the globalisation aspects that are irreversible. It shows transnationality of communication.

	Consider capacity needed in each phase of program or project delivery to: - Implement; - integrate into the business; and - deliver benefits consistently over time.
People	Implementers, Sponsors, Managers, Operational experts, Impacted staff, Partners
	Knowledge/skills/abilities, Experience, Availability, Organizational structures
Processes	Decision making, Portfolio, Program and Project management, Change management, Strategy development and measurement, Communication
	Familiarity, Complexity, Boundary clarity and coordination, Role clarity, Consistency of use, Efficacy, Skills across organization
Technology/ Support Resources	Software/hardware, Bandwidth, Technical experts
	Familiarity, Experience base, Expertise, Availability, Targeted to need
Physical Resources	Financial, Space, Equipment
	Adequacy, Availability
Organizational Systems	Rewards, Accountability, Knowledge transfer
	Efficacy, Supportive of current goals

Fig. 2 Assessing change readiness

To assess Maritime Transport readiness to global market, we evaluate its people and physical resources. The company is run by passionate and knowledgeable management team with an impressive track record of transport and logistic sector experience. As of 2018, Maritime Transport owns 1,600 trucks, 27 depots and get £300m turnover.

7.2 Evaluation of the organisation's infrastructure maturity for globalisation

Key Questions for Global Websites

- Will you have to develop a new navigational logic to accommodate cultural preferences?
- What content will you translate, and what content will you create from scratch to address regional competitors or products that differ from those in the United States?
- Should your multilingual effort be an adjunct to your main site, or will you make it a separate site, perhaps with a country-specific domain name?
- What kinds of traditional and new media advertising will you have to do in each country to draw traffic to your site?
- Will your site get so many hits that you'll need to set up a server in a local country?
- What are the legal ramifications of having your website targeted at a particular country, such as laws on competitive behavior, treatment of children, or privacy?

Fig. 3 Key questions for companies establishing global websites

Specialist expertise gained through years of operating with global supply chain enables Maritime to offer bespoke, cost-effective freight management solution. Maritime proudly offers a highly personalised, 'no project too small, no problem too hard' offering:

- **Intermodal Transport**
- **Short and deep-sea shipping**
- **Airfreight**
- **Project forwarding**
- **Customs clearance**
- **Consolidation and deconsolidation**

7.3 Review of how the organisation's workforce would adapt to globalisation
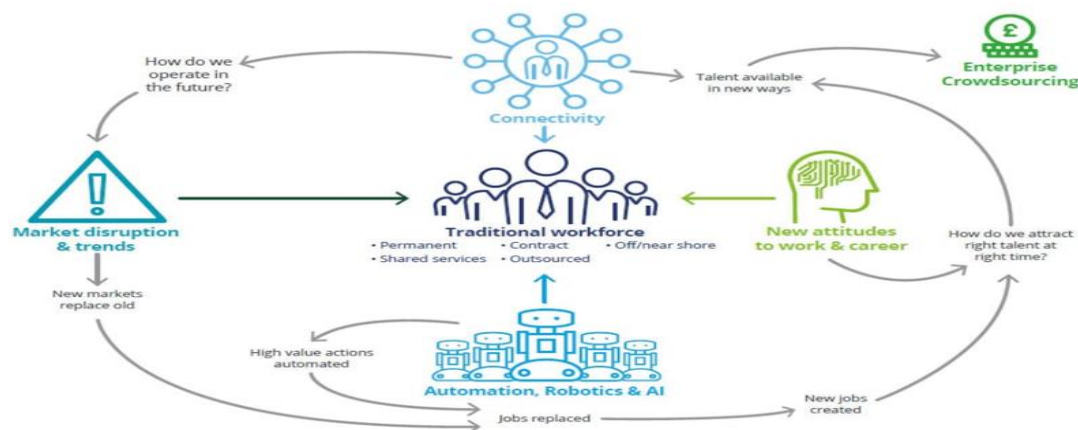
Fig. 4 Global workforce innovation

How Maritime Transport would adopt to globalisation? Maritime Transport should update/train its staff and employees with the latest technology to meet all of its's client container transport needs. As one of the largest UK container transport operators with over 30 strategically placed depots and a fleet of over 1,100 top-spec vehicles.

3. Networking Issues (Social Networks / Wed 2.0 / IR 4.0)

8.1 Review of the organisation's presence in social networks and media
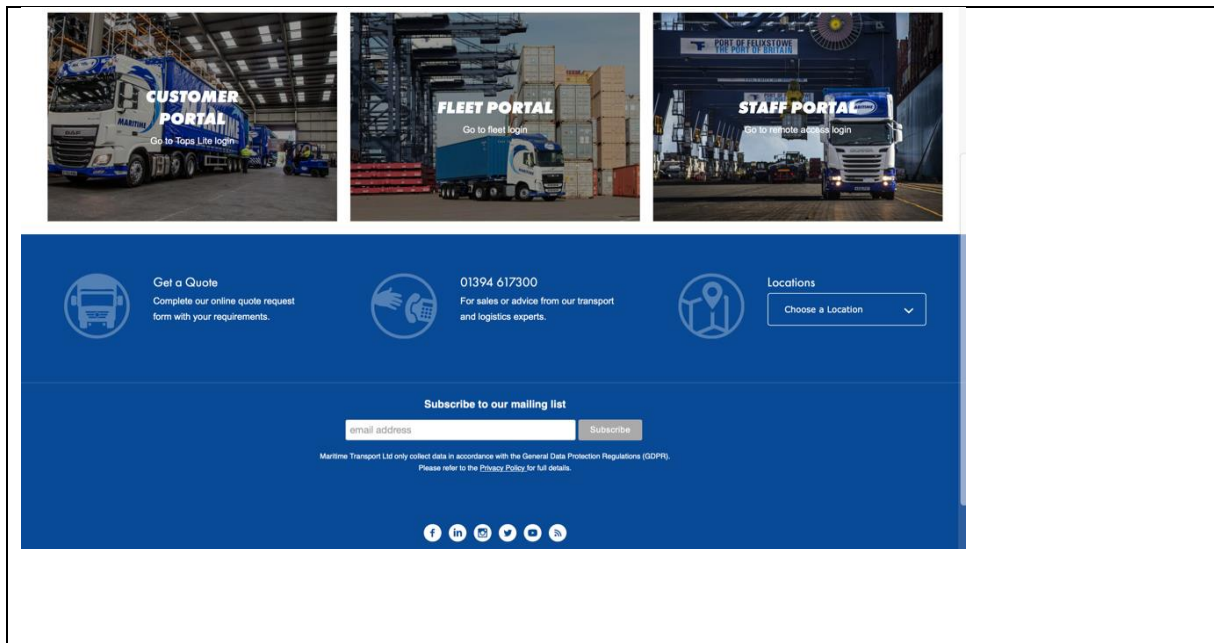
Maritime Transport website provides links to social media (Facebook, LinkedIn, Instagram, Twitter, YouTube and News). It helps them promote their products and services. They also provide a Truck Sales website for clients to find out more and see what tuck on sale is currently available.

8.2 Review of the organisation's use of the Internet for business purposes
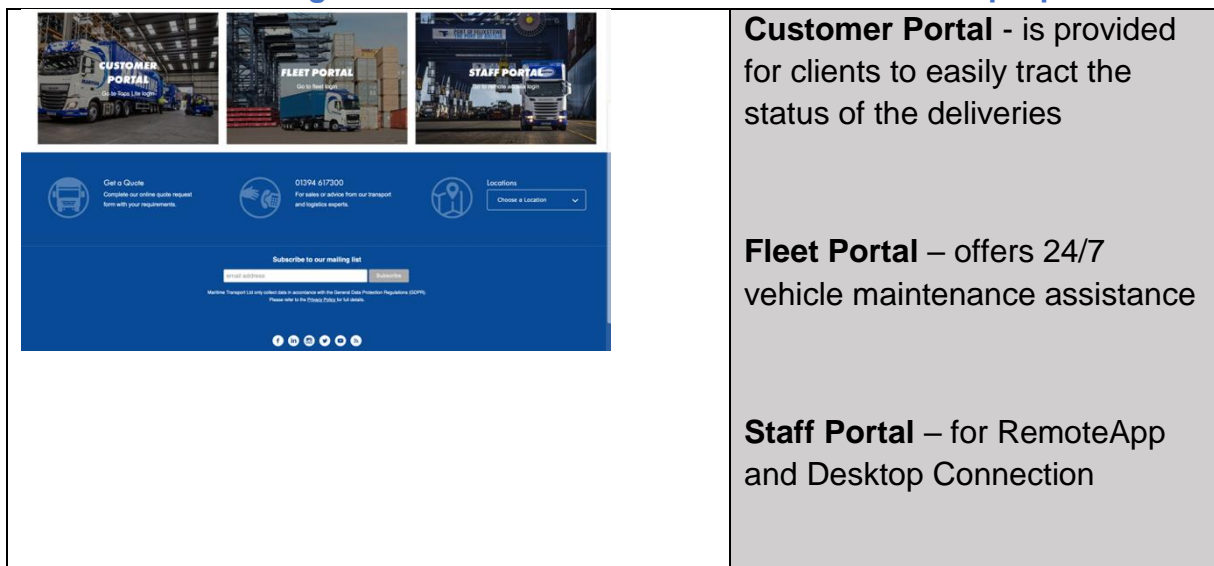
	Customer Portal - is provided for clients to easily tract the status of the deliveries **Fleet Portal** – offers 24/7 vehicle maintenance assistance **Staff Portal** – for RemoteApp and Desktop Connection

Fig. 6 Maritime Transport's portal

8.3 Review of the organisation's practices aligned towards IR 4.0
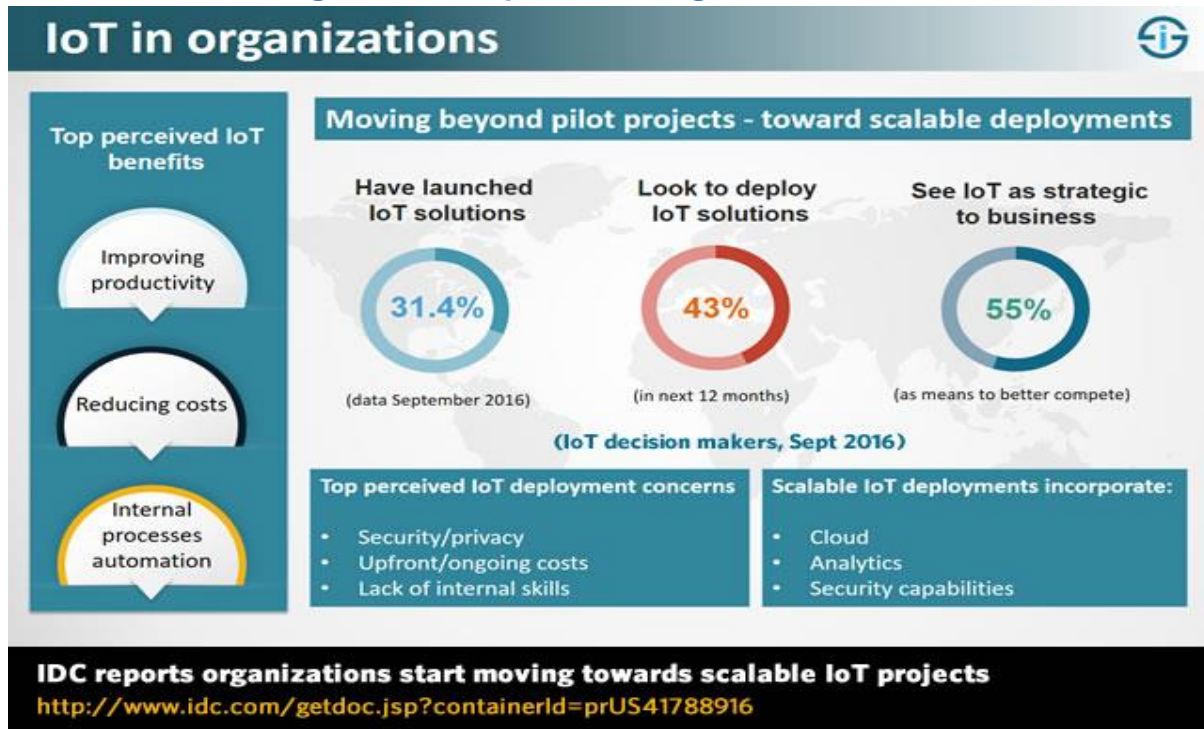
Fig. 7 IR 4.0 benefits

The **fourth industrial revolution** takes the automation of manufacturing processes to a new level by introducing customized and flexible mass production technologies.

> **Maritime provides an efficient, reliable, and flexible range of bespoke intermodal solutions to give its clients greater capacity to move goods, all whilst offering numerous environmental benefits including reductions in CO2 and congestion.**

4. Agile Approach to MIS

9.1 Overview of agile approaches in deployment of MIS

An agile model is essentially a combined iteration, grouped to accomplish a product's development practice. Agile methodology was mainly targeted for helping developers build a project that can efficiently transform requests. The important endeavour Maritime Transport carry in terms of Agile MIS development is that it makes their project achievement easy and rapid. Maritime also uses the agile process as an alternate method that traditionally manage projects and promotes adaptive planning and revolutionary development.

Fig. 8 Importance of different Agile methodologies comprised from Agile Manifesto.

Maritime started a small development in management information system using the Agile approach. Maritime particularly uses PRINCE2 model to manage their project which is about taking the bits of work for the team and work for the business. It is a model that defines process that focuses on organisation and control over the entire project. This process also encourages rapid execution because projects are well planned before kick-off.

Agile project management deliverables consist of.

- Product backlog: is the complete set of what is required to finish the project.

- Sprint backlog: the user requirements, goals and tasks related to the active sprint.

- Release plan: a schedule for the discharge of a working product.

- Increment: the operating product functionality that is submitted to the stakeholders at the end of the sprint and might possibly be presented to the client.
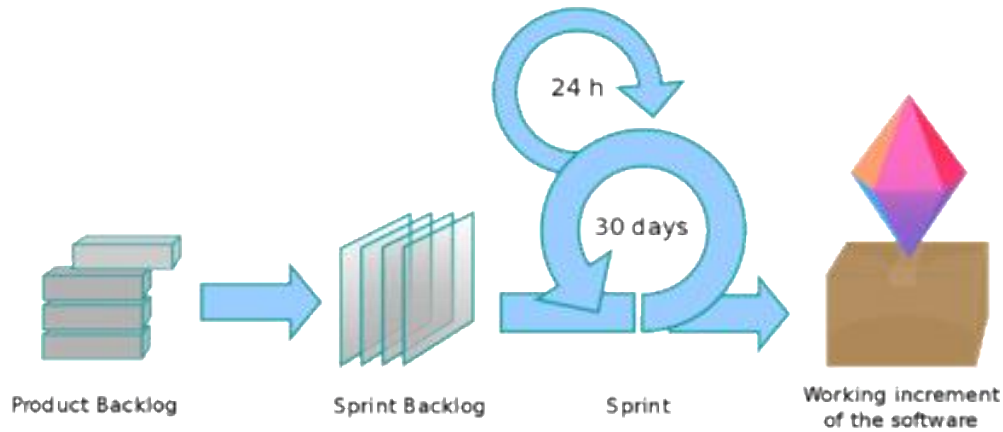
Figure 9: demonstrates the deliverables of agile project management.

9.2 Introduction of an operational plan for transforming current practices

Maritime Transport uses Agile Transformation, which is the basic of forming teams, creating backlogs, and consistently producing increments of running, tested software. Maritime only have a little about transforming current practices, which is moving a project from one software port stack to their own, that's the only simple transformation that they are really concerned about.

We would suggest the 360 degrees approach for Maritime Transport to use because it is self-sufficient, and team can always go back and make amendments from any misstep. The most important benefit of this agile approach is that it supports an organisation with rapid delivery of product and services, breakdown forbearance and provides important team culture.

Figures 10: demonstrates agile transformation approach
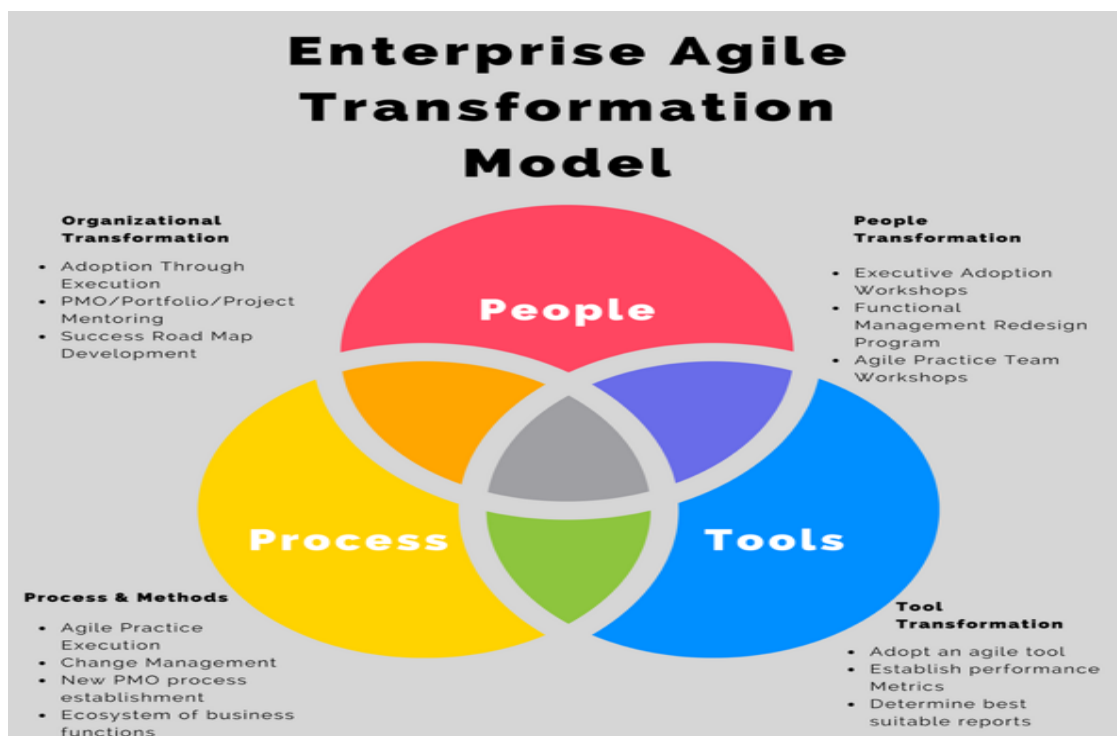
Figures 11: demonstrates agile transformation approach

9.3 Description of measurable key performance indicators for the agile MIS approach

The key KPIs across Agile MIS approach used by Maritime is Sprint, which stress on decision making that occurs in relationship, and strategic goals that employ cross

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functionality, to safeguard software quality / agility. Maritime Transport are still small fledging business team that's still growing. Precisely they have been developing for just 19 months or thereabout. It means they are still building the team, but they also do have KPIs in some of their business. The strategic manager IT department of Maritime Transport quoted "I am a big fan KPIs and understanding the data". He uses PowerBI on his mobile so he could see what his guys are up to from a support desk and monitor if they respond to calls quick enough.
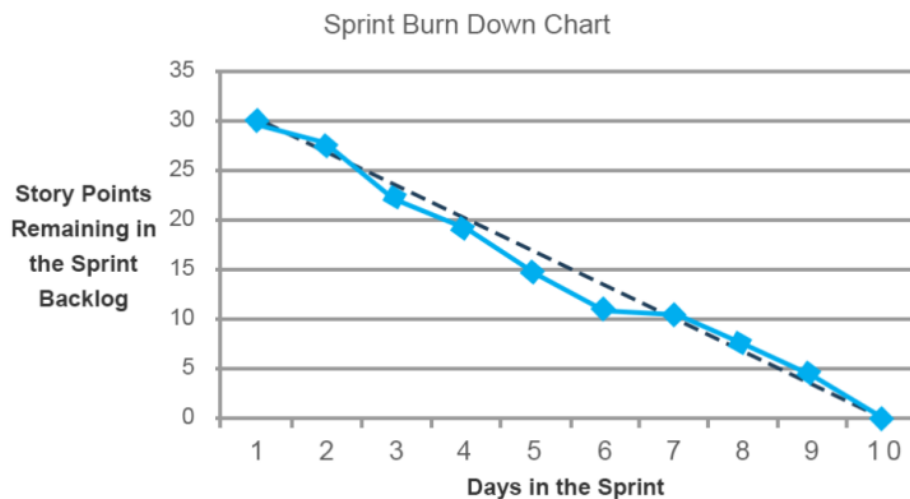
Figure 12: Sprint chart used by Maritime Transport measuring KPI for Agile MIS approach depicting the development target before the end of the sprint.

Figure 13: KPIs formulating progress and performance.

5. Impact of Information Systems on Society (ethics / privacy / security / CSR)

10.1 Reflection on the ethical impact of the organisation's operations

The impact of information systems of Maritime Transportation is the ethical frameworks, legal aspects and regulations and guidelines of the GDPR. The main advantage of ethics in Maritime Transport is that it promotes ethical behaviour, integrity and excellence, it motivates and inspires practitioners by identifying their reason for being because the organisation is more concerned about the impact they have on environment and currently they operate a fuel-efficient Euro 6-compliant fleet.
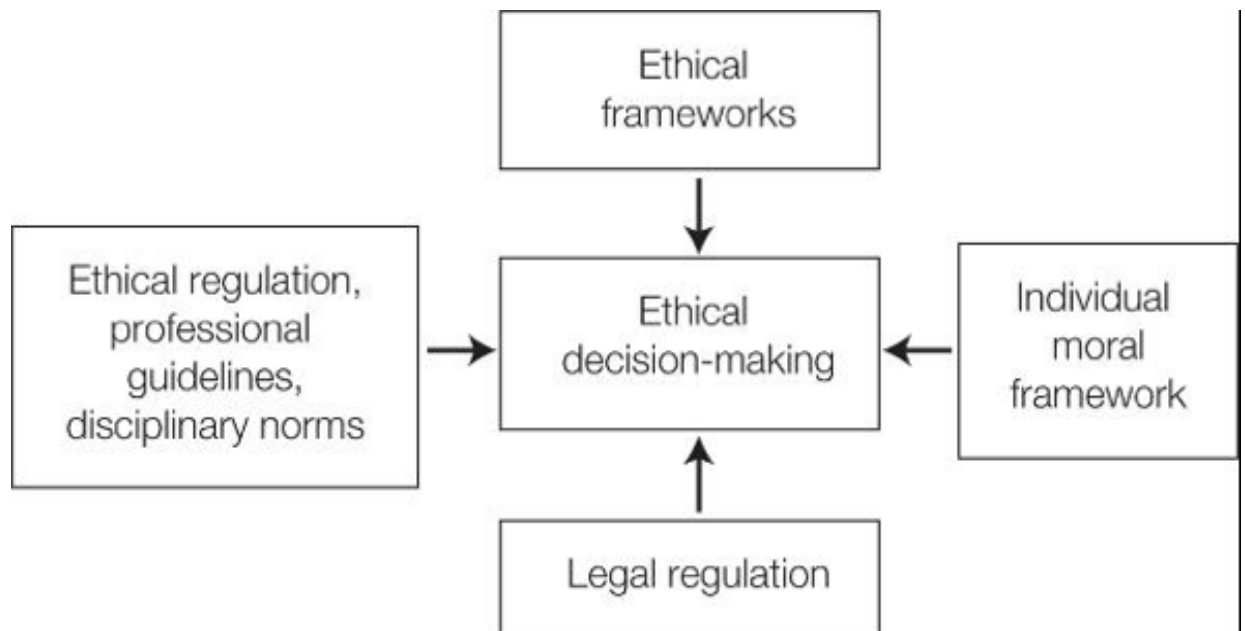
Figure 14: demonstrates the ethical aspect of ethics of Maritime Transport.

The figure below depicts the overview of both political, social and ethical issues in information system.
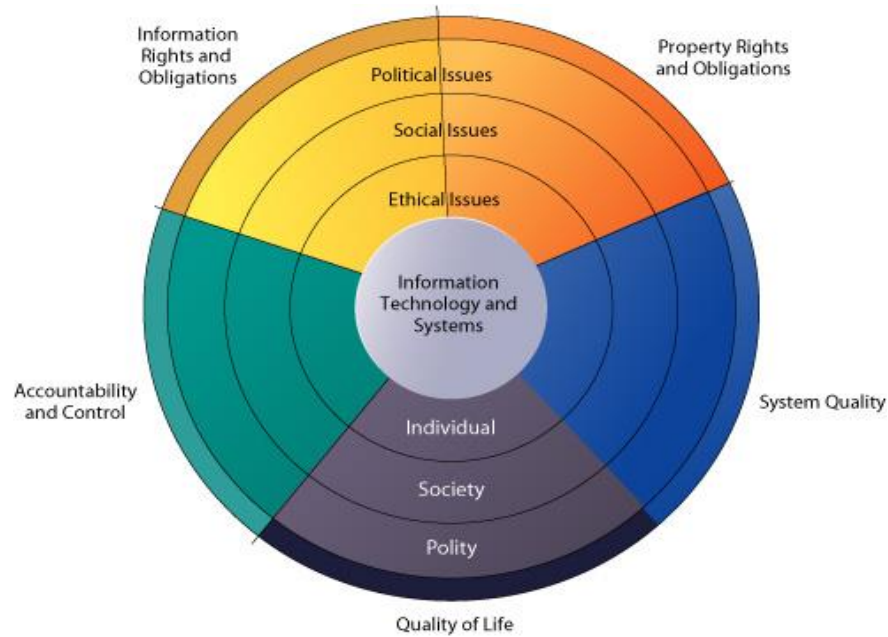
Figure 15: Overview of ethical issues in Maritime's information system

10.2 Evaluation of the organisation's current practices towards privacy / security / safety

Maritime Transport uses up-to-date data in relation to privacy, security and safety which enables the organization to govern how information is managed, collected and distributed for security purposes.

➢ Privacy: Mainly from internal relationship in human resource point of view, Maritime Transport is a bit considerate about privacy policy of HR data because that's the vast majority of where things are going. They had to be more mindful of the fact that the change of learning data is firmly for business. The advantage towards this ethical fact is that it offers Maritime Transport with successful decision making and allowing their clients and employees is to abide to the GDPR compliance in terms of data privacy. In the other hand a major drawback Maritime Transport could face is information leakage. Most companies prefer to trademark inventions which serves as legal rights opposed to anyone who tries to replicate the invention.

➢ Security: The suitable point of security and protection Maritime reflects on to both their clients and employee is the regulation of GDPR. This method ensures that the stakeholders are aware and has given consent to the regulations. The benefit of security to Maritime is that it gains resistance to cyber-attacks as a result it enhances the organisations reputation while protecting their privacy policy, readiness and integrity of data. The disadvantage on the other hand is that it has strict regulations and data breach may occur where a user could gain an unauthorised access to the organisation's personal and confidential information.

➢ Safety: Maritime's current practices in terms of safety is the key to Britain's achievement in the United Kingdom. They depend on the Maritime industry to supply up to 95 per cent of their imports, exports, and much of the food, fuel and materials that they need not just to survive and boost economic growth, but as well for their basic everyday needs. Maritime Transport evaluate their decision formulation and evidence base internally, knowing that they have expertise and experience to help implement the required improvement to safety practices and encourage innovation in the industry while adopting new and evolving technologies. Maritime Transport ambitions towards workplace security is to offer a top global safety service approach, application of legislation and efficient distribution across the Department for Transport (DfT), Maritime and Coastguard Agency (MCA), Marine Accident Investigation Branch (MAIB) and General Lighthouse Authorities (GLAs).

Figure 16: Security issues in computing and their resolutions

10.3 Assessment of the organisation's credo in relation to CSR

Maritime Transport is concern about the effect they have on the community and they are operating a Euro 6-compliant fleet that is fuel efficient. They partner with their local communities to encourage a career in the transportation industry and organisations to raise awareness and funds, like Poppy Appeal and Transaid of the British Legion. As a truly national business, and credo in alliance to Corporate and Social Responsibility (CSR) as forces made by the organization to improve society and contribute sustainable development.
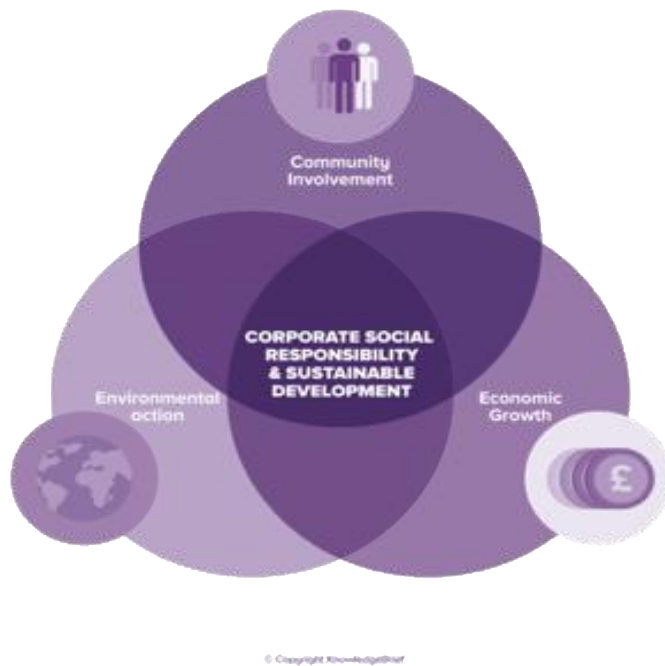
Figure 17: CSR Concept

Maritime Transport prioritise the corporate social responsibility economically, philanthropically and ethically. These are areas that are continuing commitment by Maritime Transport to be ethically and contribute to economic development and sustainable development.

Figure 18: Corporate Social Responsibility pyramid

Figure 19: depicts the pillars of corporate responsibility.

6. Intelligence and MIS (BI / AI / IE)

11.1 Evaluation of the organisation's maturity to integrate Business Intelligence

Maritime Transport's maturity to integrate business intelligence tend to be a vital component of the management's evolution and the company. Currently a crucial enabler of foreign market remains the global maritime sector. Nevertheless, global market is only possible at current levels in Maritime industry. Many modes of transport have attained realistic scale limits, but maritime container ships respond directly to economic forces, becoming double in size more than a decade. As the quantity of the data collected by sea increases, advance analytics performs significant role in the integration of business intelligence. (See figure below which depicts the evaluation strategy to integrate BI at Maritime Transport).

Business Intelligence (BI) justifies basically how developments, architectures or technologies with the importance of BI taking raw data and making them useful information to help decision making. Business Intelligence benefits Maritime Transport when assessing its own capabilities; boost productivity, turn data into actionable information and compare its relative strengths and weaknesses against its competitors.
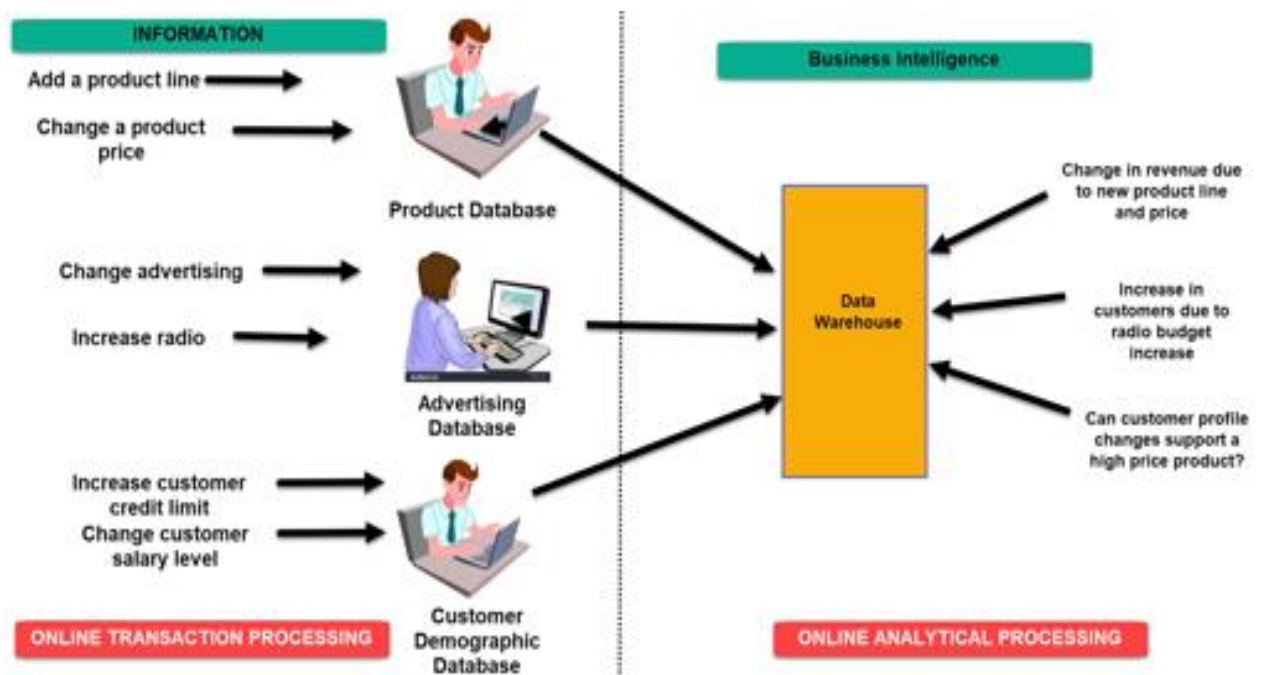
Figure 20: BI strategy that Maritime could use and gain information to make decisions.

Figure 21: Business Intelligence Analytics Workflow

11.2 Assessment of any opportunities for application of Artificial Intelligence solutions

Modern revolutionary technologies are expected to arise and transform the maritime industry in aspects that is not foreseen yet, particularly in areas like; digitisation and Artificial Intelligence (AI).

Artificial Intelligence provides Maritime Transport with the benefit of prediction on activity related to machines, business health, customer service, personalised marketing, operational automation, inventory management. AI powered tools helps Maritime Transport to gain competitive advantage by creating better products and services tailored to their customers as well reduces risk of failures or downtime.
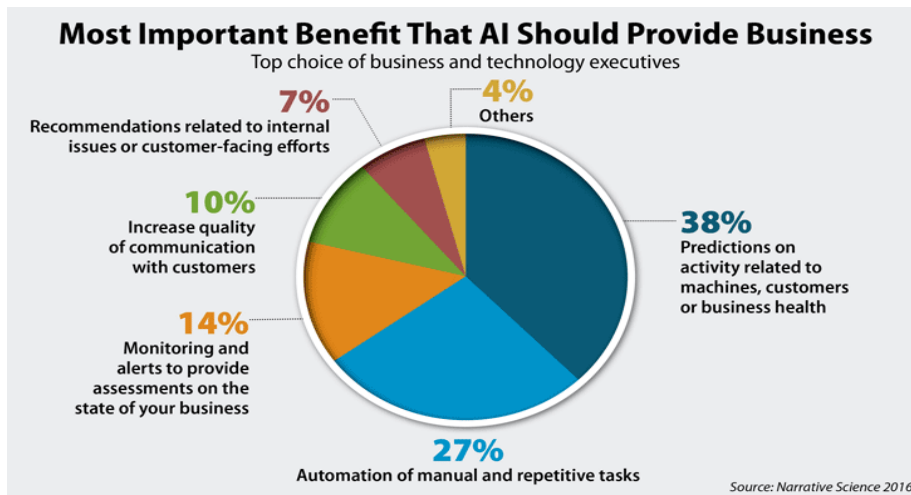
Figure 22: Benefits from using AI

11.3 Assessment of the organisation's capacity to exploit Intelligent Environments

Intelligent Environment (IE) mostly refers to Artificial Intelligence (AI) which mis coordinated by intelligent software agents in a way an interactive functionality can enhance inhabitants' experiences. In terms of smart environments, Maritime Transport uses tachograph to record their drivers working time. Tachograph is basically a little device like a credit card that records Maritime Transport's drivers working time, break period as well as periods of other works undertaken by a driver.

Maritime Transport delivers the most efficient means to transport large amounts of goods over great distances. In the international Maritime Organisation (IMO) estimate, their central role benefits IE through software development strategy that provides services to the firm with the ability to transform their customer experience. It also enhances their competitiveness, efficiency and productivity. This has been made possible by the introduction of intelligent technologies coupled with the software base services like the Tachograph.
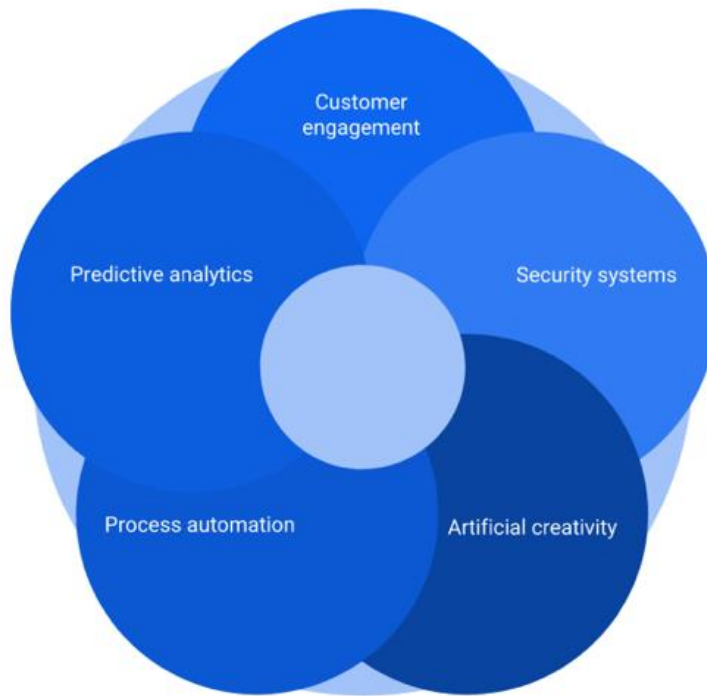
Figure 23: Concept of Artificial Intelligent application in business

7. Conclusions

12.1 Summary of main suggestions for the organisation

In handling *Globalisation issues,* Maritime Transport may apply Merger and Acquisition because it will give more control over the market.

For *Networking Issues* – LinkedIn, Twitter and Facebook are a preferable social media platform for Maritime Transport. In Facebook for example, it boasts 1.79 billion worldwide users. Facebook is still, far and away, the most popular social media platform. It is also the most evenly distributed demographic of any platform.

Agile Approach is the most suitable approach Maritime Transport should follow is Crystal because it comprised of a family of Agile methodologies that include Crystal Clear, Crystal Yellow, and Crystal Orange. Its unique characteristics are guided by factors such as team size, system critically, and project priorities.

Impact of Information Systems on Society is the most important principle Maritime Transport should have in place is: Profession - It will advance the integrity and reputation of the profession consistent with the public interest.

Maritime Transport can deploy smart sensors within warehouses. Radio frequency identification tags for example, can be used to track location of particular products and therefore aid with picking and logistics.

12.2 Identification of main constraints in applying proposed plans

The main privacy issues associated with the use of IT in Maritime Transport

- What information is being collected?
- Who is collecting it?
- Why is it being collected?
- How is it collected?
- How will it be used?
- How will it be shared?
- What will be the effects of collection and sharing?
What are the risks of collection and sharing?

12.3 Reflection on lessons learnt for the members of the start-up

We as a pair worked efficiently and act accordingly based on our corresponding tasks. We didn't have any issues along because we work consistently, as a result we didn't appoint a team leader because we both cooperate and act accordingly. With this establishment were able to manage the whole process and everything went well.

We also learnt a lot of things that would benefit us in terms of strategic management in business environments and we can reflect on key aspects of global management of information systems.

Nevertheless, one of the most exciting experience we had in this module is the interview we had with both Maritime Transport and Ocado logistics managers. We were able to ask some series of questions based on logistics and they both gave us good insight that helped us in the report even though we focused on just Maritime Transport.

This scenario will enable us to make informed decisions in the future in terms of development, analyse and reflect on findings advocating the importance of using digital technology for strategic management when redesigning business models.

8. Appendix B – Individual reflection

Member 1 – **********

Reflection – Learning Style (Read/write)

The VARK acronym stands for Visual, Aural, Read/write, and Kinesthetics sensory modalities that are used for learning information. According to my Read/write preference for information display as words. This preference stresses content created input and output – reading and writing in all its forms.

Pair CST33101910HEA5

I usually learn more quickly by reading/writing, focusing on producing results of both technical knowledge of what needs to be done, persistence and drive to see it through. And its impact on this report was first the interview we had with our case study organization which is Maritime Transport. It really was a good experience.

Reflection – Personality Type (ISTJ)

As an ISTJ persona, my most important mode of livelihood is dedicated internally, where I take things in via five senses in a literal, concrete fashion. My less important mode is external, where I deal with things rationally and logically. I dislike doing things which don't make sense to me, I make decisions objectively, applying logic and rational thinking. I also have a strong opinion about the way things should be done. I also have one-character trait which puts me at a definite advantage in terms of career success – Perseverance.

Reflection – Teamwork approach (Producer)

Producers often work fast, and they tend to focus on the result and work hard to get things done.

Administrator often work in accounting, or in other process-oriented departments.

Entrepreneurs can often be in senior leadership roles or in marketing or research and development teams.

Integrators are heart of a team or organization. They stand out at bringing people together and maintaining harmony within a group. Integrators also have a high degree of emotional intelligence and empathy.

In assumptions to my PAEI survey result which mostly describe me is;

When I am in a team, I usually feel strong internal sense of duty, which lends me the motivation to follow on tasks. I try to be creative, flexible and communicate with the team members, although I am sometimes seen as forceful and authoritarian if there is a need to get something done because I am apt to show impatience with those who are obstructing progress.

Reflection – Team role (Shaper)

Shaper Belbin team role provides the necessary drive to ensure that the team keeps moving and does not lose focus or momentum.

Usually in a team I tend to communicate what's on my mind with precision. I am organized and methodical in my approach, I can generally succeed at any task which I undertake.

In conclusions to the above-mentioned referring the to the survey results I took from the questionnaire which mostly describe me and which are mostly accurate made

me realised that I am keen in reflecting on formative feedback from our program leaders which I mostly ask my group members to refer to.

Topic 7 – Globalisation Issues (marketplaces / infrastructure / workforce)

1. When assessing its globalisation readiness, an organisation needs to reflect on the technological innovation and organisational change centred on flexibilization and adaptability, the expansion of a specific form of social organisation based on information as the main source of productivity and power, flexibilization of labour relations and weaker trade unions and also the dissemination of common cultural values, also the re-emerge of nationalism.

2. Suitable methods an organisation can choose for entering a global market are consists of the following:

    Licensing-that allows a second-party company in another country to use its intellectual property in return for royalties.

    Merger and Acquisition-allowing the same advantages as a joint venture but offers more control over the market.

    Joint Venture-creating a third company with another partner is often the preferred market entry method, especially in emerging markets.

    Export-which includes direct selling to end consumers where goods are sold through an intermediary such as an agent or distributor.

3. Some issues relating to an organisation's IT infrastructure that is needed for implementing a global strategy are stand-alone systems, regional decentralization, lack of common systems and data, decentralized/no standards, and common global data resources.

4. Appropriate outsourcing model for an organisation, with emphasis on functions outsourced and associated benefits are reduced operating expenses, access to advanced technologies, reduced time to market for products and services, and focusing resources on core profit-generating competencies.

5. The impact of globalisation on an organisation's workforce with emphasis on using IT for remote work and communication is that 95% of employees believe they will be able to work from anywhere in the world within the next 5 to 10 years, and that 90% of people believe technology will allow for deeper connections across distance and time over the next 5 to 10 years.

Topic 8 – Networking Issues (Social Networks / Wed 2.0 / IR 4.0)

1. An organisation should use social networks and media because of the use of web-based technology as an interactive means, usually with a broad audience. Everyone has an opportunity to create, share, engage, go viral and published

content. It helps in the creation of both business and personal relationships with the aim of building a network.

2. Facebook social media platform should be preferred for use by an organisation because Facebook is even, far and away, the most popular social media platform, it boasts 1.79 billion worldwide users, the most evenly-distributed demographics of any platform and has 1.66 billion active mobile users.

3. The top seven success metrics are:

   -Conversion & revenue metrics

   -Amplification & brand awareness metrics

   -Customer service metrics

   -Customer satisfaction metrics, and

   -Engagement metrics which is recommended for organisations to use in deciding their social media presence because it has the highest success metrics.

4. The most common ways an organisation uses the Internet for business are:

   -Collaboration with others.

   -Vendor support and communications.

   -Research competitors.

   -Communicate internally.

   -Customer support and service.

   -Publish information.

   -Sell products or services.

   -Purchase products or services.

   -Marketing, sales, and customer service.

   -Cross-functional applications.

   -Gather information.

5. An organisation can check whether it is ready for IR4.0 by:

   -Checking the employee's skill sets, strategies and organisations by outsiders or beginners: The Newcomers.

   -Checking the smart factory, the smart operations and the smart products by the intermediate: The Learners.

-Checking the data-driven services by the experienced, expert, and top performers: The Leaders.

Topic 9 – Agile Approach to MIS

1. Agile method will improve the outcomes of software development as it emphasizes teamwork, flexibility, continuous improvement and high-quality solutions. It also aims to be clear and measurable using certain main deliverable to track progress and create the product.

2. Responsibilities of each SCRUM team role are categorized as follows:

   Product Owner: is responsible for conveying the perspectives of the organization's stakeholders to the group and liable for the achievement on the venture (ROI).

   Development Team: is responsible for all the exercises and outcomes the team delivers towards their objectives such as developing, programming and designing.

   Scrum Master: is responsible for making and organizing domestic leader who ensures the understanding and execution of Scrum is followed.

3. 18.3 The most suitable approach an organization should follow to achieve transformation towards agile software development is the 360 degrees model. This is because it gives benefit of learning organization, failure tolerance, great team culture and faster quality product delivery etc.

4. 18.4 An organization should take the following steps in other to transform its operation, assess and gauge their present ability so it becomes more agile;

   • Adoption through execution

   • Success road map development

   • PMO/Portfolio/Project mentoring

5. The key benefits an organization has by becoming agile is that it offers an increasingly focus on specific customer needs, flexibility and adaptablity to change, success through more focused efforts, frequency of collaboration and feedback and optimized development process.

Topic 10 – Impact of Information Systems on Society (ethics / privacy / security / CSR)

1. The main advantage of code of ethics in an organization is that it can foster an environment of trust, ethical behaviour, integrity, and excellence. It motivates and inspires practitioners, by trying to define their raison detre (reason for being). The

benefit of code of ethics are numerous. It spells out one's values to employees and tells them whether one values or respect teammates.

2. The most important principle an organization should have in place using code of conduct is professional conduct which clarifies an organization's mission, values and principles, linking them with standards of advancement in integrity and reputation of the profession consistent with the public interest.

3. The main privacy issues associated with the use of IT in an organization is data breach, where organizations lose data due to cyber-attacks that occurs in sensitive information related to individuals and organisations.

4. The main security issues associated with the use of IT in an organisation is Cyber Security. It is the top global threats facing all kinds of businesses like; Distributed Denial of Service (DDoS), Internet of Things (IoT), Hacktivist, Drone jacking, Ransomware and Mobile malware which involves multiple malicious software types.

5. Priorities of an organization's CSR programme are; ethical priority, economic priority, philanthropic priority etc. these areas are the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and society at large to contribute towards sustainable development.

Topic 11 – Intelligence and MIS (BI / AI / IE)

1. Business intelligence benefits an organisation to assess its own capabilities; boost productivity; turn data into actionable information; compare its relative strengths and weaknesses against its competitors; identify trends and market intelligence; and respond quickly to change – all to gain competitive advantage.

2. Artificial Intelligence (AI) provide businesses with wide range of benefits, including prediction on activity related to machines, business health, personalised marketing, customer service, operational automation, inventory management and recruitment. AI-powered tools help companies gain a competitive advantage by creating better products and services tailored to their customers, reduce risk of failures or downtime.

3. Artificial intelligence (AI) affects company's mining process technology that aims to understand how their employees are behaving. Some major areas of organisation that may be affected by AI are Smart technology to inform decision-making, media, telecom; A streamlined supply chain; Customer relations etc.

4. Intelligent Environment (IE) benefits an organisation through software development company that provides financial services to organisations with the ability to transform their customer experiences. Organisations also benefits from IE because it enhances competitiveness, efficiency and productivity.

5. An organisation can deploy smart sensors to gain from Intelligent Environment (IE) by controlling different aspect of environment that is orchestrated by self-programming pre-emptive processes (e.g. intelligent software agents) to create an interactive holistic functionality that enhances occupant experiences. IE is aspired to be sensible or have a proactive attitude and continuous reasoning on how to help the users of that environment.

The word "Intelligent applied to environment mostly refers to Artificial Intelligence".

Member 2 – ***************

<u>Reflection - Learning Style (aural, kinaesthetic)</u>

Using the survey results from the **VARK** questionnaire to assess my learning style, it shows that I am more of an *aural* type of learner which I consider one of my strengths. In our lectures with Dr George, our professor for the strategic information system, not only he discussed the theory presented on the PowerPoint, but it was also interesting and informative to hear from him real-life examples about enterprise strategic management. It leads to sharing different insights among the class during our labs. The survey also shows that I am *kinaesthetic* learner, which is another important learning style because learning should not be purely from the textbook/slides (theory), it can be balanced with some physical activities and this is what our class experienced when we started this course, we met at the tennis court and enjoyed some physical and mental activities that help us discovered our strength and weaknesses when working in a team.

Aural – describes a preference for information that is heard or spoken. It is a learning style that prefers learning through group discussion, lectures, using mobile phones, email, radio, web chat, and speaking. This preference also includes talking to oneself and talking out loud. People with this preference speaks first even before sorting things out. Aural describes a preference for information that is heard or spoken.

Kinaesthetic – refers to people who are connected to reality because they give importance to learning from the experience of doing something. This preference includes simulations, demonstrations, movies and videos of real things, as well as case study, practice and applications which requires the details of who will do what and when.

<u>Reflection - Personality Type (ENFJ - the giver)</u>

According to the survey results from the **MBTI** questionnaire, it shows that I am an *extraverted intuitive feeling judging or simply the giver*. As an ENFJ, I am more concern in dealing with how I fit with my own value system and how I fell about things which shows that I am more focused on external than the internal living mode.

ENFJs are good in bringing out the best in others because they understand and care about people. Their personal satisfaction is by making things happen for people through love, support and encouragement. But ENFJs have a tendency to be hard on themselves and when alone they can turn to dark thoughts so they might avoid being alone and better to do activities that involve people. They can prioritise other people's needs and overlook their own needs. ENFJs have also the ability to make

people do exactly what they want them to do and use their power over people to manipulate them.

Reflection - Teamwork Approach (entrepreneur, integrator)

Using the survey results from **PAEI** questionnaire, it shows that I have a very good skill in *entrepreneur* which is an effective teamwork approach. The survey also shows that I am a good *integrator*. For our group enterprise project, I created our group chat in WhatsApp. It was a very effective way to disseminate information like updating group members relating to the progress of our project.

Entrepreneurs are inspired by what's possible. They see things that other people can't see, takes calculated risk and shared vision of the future. Entrepreneurs can often be in marketing, senior leaders or in research and development. They are more on a global than a local perspective and solve problems and make decisions using the unstructured approach

Integrators brings people together and maintains harmony in a group. They are considered the team or organization's heart. They tend to work methodically and slowly because the focus is not the end result but the process which is an unstructured approach in solving problems. Integrators know how to build trust and they often lead with kindness so they can play a role in building the culture of an organisation.

Reflection - Team Role (implementer, complete finisher)

Using the survey results from the **Belbin** questionnaire, it shows that I'm a good *implementer*. I suggested to my members that we should always refer to the formative feedback we got from our professors when improving our group report. The survey also shows that I am a *complete finisher* type of student, which is a very important trait. Using GOALs, we are creating our individual portfolio in LinkedIn where we discussed what we learned about strategic information system. We have also used a Twitter account for our group GOALs by posting our discussion relating to our case study – Maritime Transport. As a member, I always encourage my members to provide their answers on LinkedIn and Twitter on time.

Implementer plans an efficient workable strategy. They are good in organising work that needs to be done and turning ideas into action. But they can be slow in responding to new possibilities or a bit inflexible.

Complete finishers are good in scrutinising work from errors and sets high standards of quality control. But their perfectionism can be extreme which could lead to overdoing.

Topic 7: Globalisation Issues (marketplaces / infrastructure / workforce)

1. Globalisation readiness assessment:
   - Technical innovation strategy
   - Product adaptation strategy
   - Availability and security strategy
   - Low price strategy
   - Total adaptation and conformity strategy

2. Methods for entering global market:
   - Export is direct selling to costumers; indirect exports of merchandise through on a third party.
   - Licensing method allows the use of intellectual property by a second-party company in another countries in return for royalties.
   - Joint venture is creating a third company with another partner.
   - Merger and Acquisition is having more control over the market.
   - Greenfield investment provides complete control over sales when setting up a wholly owned local subsidiary.

3. Issues for implementing global strategy:
   - Challenges and obstacles to global business system
   - Global business strategy and structure
   - Management challenges in developing global systems

4. Outsourcing model:
   - Onshore outsourcing are services from another company within the same country are engaged.
   - Nearshore outsourcing is an outsourcing arrangement that is contracted by an org. in a nearby country.
   - Offshore outsourcing is writing code and developing systems using organisations from developing countries.

5. Impact of globalisation:
   - Going global is creating both challenges and opportunities for individuals and not just knowledge work that is being performed remotely.
   - Machines will destroy and create jobs supplanted through surging capabilities of robots and artificial intelligence.
   - Offices transform is a face-to-face communication and collaboration.
   - Co-working everywhere will not just be for the self-employed and entrepreneurs.
   - Economy of individuals is extended rather than permanent workforces.
   - Polarisation of work opportunities are a globalised work and increased automation.
   - Longer working lives is an idea of retirement at 65 or earlier will fade away.
   - Value driven through customer data refers to organisations' success based on the quality of their customer service.

Topic 8: Networking Issues (Social Networks – Wed 2.8 / IR 4.0)

1. Organisation's presence in social network and media establishes interconnected internet communities that help people make contacts that would be unlikely to have

met otherwise. It is a practice of expanding the number of one's business and/or social contacts by making connections through individual.

2. Facebook is a preferable social media platform because it boasts 1.79 billion worldwide users. Facebook is still, far and away, the most popular social media platform. It is also the most evenly distributed demographic of any platform.

3. The metrics use to decide organisation's social presence are:
- Social media monitoring
- Market share data
- Brand tracking
- What the competition is doing
- Information from media agencies

4. The common ways an organisation uses the internet for business are:
- Gather information
- Collaborate with others
- Vendor support & communications
- Research Competitors. Communicate internally
- Customer support & services. Publish information
- Purchase Products or Services
- Sell Products or Services
- Marketing, Sales & Customer Service
- Cross-Functional Applications

5. Organisation can check its readiness for IR4.0 through the following assessment:
Strategy and organisation - Strategy, Investments, Innovation management
Smart Factory - Digital modelling, Equipment infrastructure, Data usage, IT systems
Smart Operations - Cloud usage, IT security, Autonomous processes, Information sharing
Smart Products - ICT add-on functionalities, Data analytics in usage phase
Data-driven services - Data driven services, share of revenues, share of data used
Employees - Skill acquisition, Employee skill sets

Topic 9. Agile Approach to MIS
1. Agile method will improve the outcomes of software development because it is used to deliver complex projects due to its adaptiveness, emphasise collaboration, flexibility, continuous improvement, and high-quality results. It also aims to be clear and measurable by using six main "deliverables" to track progress and create the product

2. Product owner: is the product expert who represents the stakeholders and is the voice of customer.
Development team: Group of professionals who deliver the product.
Scrum master: Organised servant-leader who ensures the understanding and execution of Scrum is followed.

3. The most suitable approach an organisation should follow is Crystal because it comprised of a family of Agile methodologies that include Crystal Clear, Crystal Yellow, and Crystal Orange. Its unique characteristics are guided by factors such as team size, system critically, and project priorities.

4. Agile Transformation Program:
- Know client
- Prepare for change
- Explorers

- Stabilization
- Agile@scale
- Refreshing coaching

5. The main benefits an organisation can have by becoming agile are:
- Increased flexibility
- Increased productivity
- Increased transparency
- Higher quality deliverables
- Decreased risk of missed objectives
- Increased stakeholder engagement and satisfaction

Topic 10. Impact of Information Systems on Society (ethics / privacy / security / CSR)

1. Code of Ethics advantages:
- Set out the ideals and responsibilities of the profession
- Exert a de facto regulatory effect, protecting both clients and professionals
- Improve the profile of the profession
- Motivate and inspire practitioners, by attempting to define their reason for being
- Provide guidance on acceptable conduct
- Raise awareness and consciousness of issues
- Improve quality and consistency

2. The most important principle an organisation should have in place are
Public - It shall act consistently with the public interest.
Client and employer - It shall act in a manner that is the best interests of their client and employer.
Product - To ensure that their products and related modifications meet the highest professional standard possible.
Judgement - To maintain integrity and independence in their professional judgement.
Management - Managers and leaders shall subscribes to and promote an ethical approach to the management of software development and maintenance.
Profession - It shall advance the integrity and reputation of the profession consistent with the public interest.
Colleagues - It shall be fair to and supportive of their colleagues.
Self - It shall promote an ethical approach to the practice of the profession.

3. The main privacy issues associated with the use of IT in an organisation
- What information is being collected
- Who is collecting it
- Why is it being collected
- How is it collected
- How will it be used
- How will it be shared
- What will be the effects of collection and sharing
- What are the risks of collection and sharing

4. The main security issues associated with the use of IT in an organisation

- Data protection law
- Data localization
- Law weakening
- Data retention

5. The priorities of an organisation's CSR programme
- Diversity and Inclusion
- Environmental Sustainability
- Global enrichment
- Governance
- Organizational Health
- Philanthropy
- Supply Chain Integrity

Topic 11. Intelligence and MIS (BI / AI / IE)

1. Business Intelligence (BI) benefits for business through turn data into actionable information, boost productivity, insights into consumer behaviour, gain sales and market intelligence and improve visibility.

2. Business benefits from using Artificial Intelligence (AI) through predictions on activity related to machines, customers or business health, automation of manual and repetitive tasks, monitoring and alerts to provide assessments on the state of your business, increase quality of communication with customers, and recommendations related to internal issues or customers-facing efforts.

3. The areas of an organisation that may be affected by AI are IT, Customer Service, Sales, Marketing, Finance/ Accounting, R&D, Strategy, and Operations/Manufacturing.

4. Organisation can benefit from Intelligent Environments through a range of possible applications for Ambient Intelligence and Smart Environments. Organisation can look at the future of the area with expectation and hope that it will bring to everyday life a range of available solution.

5. Organisation can deploy smart sensors to gain Intelligent Environments by creating systems which integrate Smart Environment with Ambient Intelligence and is based in the pervasive/ ubiquitous availability of services.

9. References

1. Google.com, (2020). *Maritime transport evaluation maturity to integrate business intelligence – Google Search* [ONLINE]

https://www.google.com/search?q=maritime+transport+evaluation+maturity+to+integrate+business+intelligence&rlz=1C1JZAP_enGB887GB888&sxsrf=ALeKk02Vl

2. Maritimetransport.com, (2020). *Maritime Transport - Corporate Social Responsibility* [ONLINE] Available at: https://www.maritimetransport.com/corporate-social-responsibility [Accessed 6/3/2020].

3. Academia.edu, (2020). *Review of Maritime Transport Safety and Security Practices and Compliance levels: case studies in Europe and South East Asia | Eliza GAGATSI – Academia.edu* [ONLINE] AVAILABLE at: https://www.academia.edu/7065301/Review_of_Maritime_Transport_Safety_and_Security_Practices_and_Compliance_levels_case_studies_in_Europe_and_South_Asia [Accessed 6/3/2020]

4. Maritime Safety Action Plan [ONLINE] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813274/maritime-safety-action-plan.pdf [Accessed 6/3/2020].

5. www.maritimetransport.com. (2020). *Maritime Transport - The UK's leading Container Transport Company*. [online] Available at: https://www.maritimetransport.com [Accessed 25 Jan. 2020].

6. Leadingagile.com, (2020). *The Basics of agile Transformation | LeadingAgile Field Notes* [ONLINE] Available at: https://www.leadingagile.com/2018/07/the-basics-of-agile-transformation/ [Accessed 9/2/2020].

7. Getzephyr.com, (2020). *Key KPIs Across Agile Methodologies* [ONLINE] Available at: https://www.getzephyr.com/insights/key-kpis-across-agile-methodologies [Accessed 9/2/2020].

8. Cleverism. 2020. *Industry 4.0: Definition, Design Principles, Challenges, And The Future Of Employment*. [online] Available at: <https://www.cleverism.com/industry-4-0/> [Accessed 24 March 2020].

9. http://www.unesco.org/new/en/social-and-human-sciences/themes/international-migration/glossary/globalisation/

Figure 1: https://www.intechopen.com/books/globalization-approaches-to-diversity/the-role-of-the-international-organisms-in-the-globalization-process

Figure 2. O'Brien, J.A. 2011. Management Information Systems. McGraw-Hill Higher Education. ISBN 978-0071221092.

Figure 3. https://www2.deloitte.com/uk/en/pages/tax/solutions/global-workforce-innovation.html

Figure 4 & 5. https://www.maritimetransport.com/login-portal

Figure 6. https://www.industrie40-readiness.de/?lang=en

Figure 7: https://www.iscoop.eu/industry-4-0/

Figure 8 https://www.360logica.com/blog/the-importance-of-different-agile-methodologies-included-in-agile-manifesto/

Figure 9 https://zenkit.com/en/blog/agile-methodology-an-overview

Figure 10 https://medium.com/@MrAsk/agile-transformation-approaches-top-down-bottom-up-and-360-degrees-at-all-levels-cafc5aab75d8

Figure 11 https://inteligenca.lpages.co/agile-transformation-success-model/

Figure 14 https://www.bloomsburycollections.com/book/what-are-qualitative-research-ethics/ch2-thinking-ethically?from=search

Figure 15 http://jonathandkline.blogspot.com/2013/03/chapter-4-ethical-and-social-issues-in.html

Figure 16 https://www.veritis.com/blog/top-15-cloud-security-threats-risks-concerns-solutions/

Pair CST33101910HEA5

Figure 17 https://www.kbmanage.com/concept/corporate-social-responsibility

Figure 18 https://www.doosan.com/en/intro/credo/

Figure 19 https://www.veritis.com/blog/top-15-cloud-security-threats-risks-concerns-solutions/

Figure 20 https://www.guru99.com/business-intelligence-definition-example.html

Figure 21 https://www.tableau.com/learn/articles/business-intelligence

Figure 22 https://www.tableau.com/learn/articles/business-intelligence

Figure 23 https://www.bbntimes.com/en/technology/artificial-intelligence-in-business

Pair CST33101910HEA5