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COURSE	Bachelor's Degree in Business Administration.
DISSERTATION TOPIC	What is the impact of implementing new technology and implementing supply chain management in Crash Repair Centre, Coolock, ie.?
SUPERVISOR	Dr. Daniel O'Sullivan
WORD COUNT	
DUE DATE	November 27, 2022

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ABSTRACT.

There will be an investigation into the most effective ways to motivate employees so that they can achieve a best practise approach to their role in the supply chain. This will be done in order to inform stakeholders about how their role as stakeholders might change and/or how they can use technology to advance their careers or trades.

For the purpose of this project, a literature search was conducted on subjects including IT and AI, Database, Supply Management, Traditional Purchasing, and Organizational Culture, in an effort to try to answer the main question, **What is the impact of implementing new technology and implementing supply chain management in Crash Repair Centre, Coolock, ie ?**

Which was then followed by a qualitative primary search that consisted of interviewing five owners of garages, and the findings led to the conclusion that in terms of small garages, it is very difficult for them to compete with large companies, but that they can stay afloat with good performance.

Keywords: Technology : Technology. Management. Supply. Purchasing. Culture

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

What is the impact of implementing new technology and implementing supply chain management in Crash Repair Centre, Coolock, ie ?

1.1 Introduction

With many years in the vehicle repair industry, it has been identified that the auto parts transaction problem persists. Thus, this research project aims to improve the parts supply situation, or if it is possible to eliminate the problem at the Garage, then, a database will be proposed to the Garage, similar and compatible with that of the dealers, so, that can be compatible to find a better and simpler way to order and be prepared for better delivery, or fewer errors. That with the effort this research could discover a solution, or an improvement that helps to improve the organizational culture, reduce waste, improve efficiency, reduce costs, save time, etc. Consequently, this can be useful to any student looking for information on this topic, as well as prospective managers in the auto repair industry.

1.2 Rationale for the study.

In search of how to improve or implement better management in the supply chain procedures of the Crash repair Centre, Coolock Ireland, some suggestions have been seen such as the adoption of an Information System, a Database as well as the use of Information Technology & Artificial Intelligence and implementation of risk in supply chain practices and also, there are some suggestions for writing their corporate culture.

1.3 Statement of the research objectives

Objective Theme 1: What benefits will the use of AI and IT bring to the company?

Objective Theme 2**:** Implementing a Database, what benefits will it bring and how will it impact the company?

Objective Theme 3: What are potential risk while implementing supply chain management in the company?

Objective Theme 4: How will impact new procedures in the corporative culture in the actual state of the company?

1.4 Information gathering & data collection technique used

The qualitative approach, also known as the constructivist in ontology method, is utilised by businesses that fall within the category of garages.

with an inductive approach in the main when conducting qualitative and Ethically with an informed consent to preserve intellectual property, which had five interviews, five participants, four in Ireland, face to face, and one from Mexico via Zoom; the interviews were conducted using an inductive approach in the main.

having a questionnaire with 14 open questions, and because they are asking open questions, the sample is given the opportunity to respond according to their lived experience.

1.5 Expected Outcomes of the study.

New technologies will be examined to inform stakeholders about how their role as stakeholders could change and/or how they can use technology to advance their careers or trades, as well as investigate how best to motivate employees so that they can reach a best practice approach to their role in the supply chain.

With many years of experience in the vehicle repair industry, I have identified that the auto parts transaction problem persists. The expectation of this research project and the objective will be to improve the parts supply situation, or if it is possible to eliminate the problem at the GARAGE, then, a database will be proposed to the Garage, similar and compatible with that of the dealers, so, that you can be compatible to find a better and simpler way to order and be

prepared for better delivery, or fewer errors.

That with the effort this research could discover a solution, or an improvement that helps the workshop to improve the organizational culture, reduce waste, improve efficiency, reduce costs, save time, etc.

Consequently, this can be useful to any student looking for information on this topic, as well as prospective managers in the auto repair industry.

1.6 Chapter by chapter Overview.

CHAPTER II

LITERATURE REVIEW

2.1 Artificial Intelligence & Information Technology.

Artificial intelligence- the ability of artificial gadgets, such as a computer, to perform tasks typical of human intelligence (Matematicas en la vida real, 2021)

Information technology (IT) is the creation, processing, storage, secure transmission, and exchange of all forms of electronic data. IT includes the use of computers, networking, storage, and other physical devices. Usually, business processes are where IT is used (Castagna, 2022)

The edge is the newest ally of automatic data capture. The technology enables devices such as scanners and voice systems to process data at the point of collection. The result is decisions made in real time that are based on reality, as opposed to an obsolete plan (Forger, 2022).

Edge Computing is a distributed computing model of data stockroom computing. This model improves data delivery times almost immediately.

The management of artificial intelligence (AI) ushers in a new era of information technology management. AI management entails communicating, leading, coordinating, and controlling an ever-evolving frontier of computational advancements that references human intelligence

to solve increasingly complex decision-making problems. It entails making decisions regarding three interdependent, interrelated aspects of AI autonomy, learning, and inscrutability, in an ongoing effort to expand the performance and scope of AI.

It has been demonstrated that the AI frontiers have shifted over time, and special issues are helping us learn about AI frontier management (Berente, 2021).

The BA-200 from Barcode Automation Inc., which has been redesigned with improved techniques for reading car codes, is recommended for use in workshops because it allows cars to get closer to the reader, thereby reducing the risk of collision damage and facilitating mounting on lane curbs or islands.

The system is capable of automatically reading identification stickers from a distance of nearly 2 metres at 40 kilometres per hour and possesses the characteristic ability to communicate with computer systems, safety warning (Barcode Reader Redesigned, 2006).

Information systems transcend mere technology, in addition to the components of hardware, software, and data, which have long been considered the core technology of information systems, it has been suggested that a fourth component, communication, should be added.

An information system can exist without the ability to communicate; the first personal computers were standalone machines that did not connect to the internet; however, in today's hyper-connected world, it is exceedingly rare to find a computer that is not connected to another device (Washington State University, Carson College of Business, 2020).

At this time, the accident car repair industry is attempting to implement AI in the trade, but the difficulty remains great; ideally, historical data should be combined with other information in the system, such as spreadsheet data.

We combine the OEM build and repair procedures for the particular vehicle, along with OEM procedures and editorial data, to generate this precise estimate, in discussing what AI estimating specifically offers shops, panellists noted that even when different estimators

examine the same vehicle, there is still a wide variation in estimates; this presents complications, but AI can help collision repair companies increase consistency in their estimates (Yoswick, 2022).

Garages or body shops are not and should not be an exception to the application of new technologies. Tools such as the automatic sensor, the barcode reader, the implementation of a computer system, accompanied by a good AI management, are providing good dividends to companies that have adopted it as part of their new tools, and there are other tools that are in the process of being tested and innovated, such as AI assistance in damage estimations, a barcode reader, and an automatic sensor.

* Are AI and IT an important asset in a company?

*How necessary IT management for a business?

*What kind of AI can be implemented to help garages in order to improve processes?

2.2 Database.

A database is a collection of data that has been organised to make it simple to manage and update. Data records or files containing information, including as sales transactions, customer information, financial data, and product information, are often aggregated and stored in computer databases (Lutkevich and Hughes, 2022)

Beginnings are always difficult, particularly when there is little or no knowledge, which is why a business must accept when there is a problem or a need to move forward. A good way to keep track of numbers, such as accounts, balance sheets, payroll, or invoice information, was traditionally (on paper), but if the company is inundated with more documents and information, it is recommended to adopt the creation of a database so that this tool propels the company's growth and productivity (Ni business info. co. uk, 2022)

That's why Ni business info. co. uk (2022), suggests five reasons why your company needs a good database:

1. Centralized methods

2. Concerns about improved human resources (HR) management

3. Information Management and Customer Relations

4. Effective inventory management

5. Expansion planning

Database does not necessarily have to be stored in the company's CPUs, it can be stored in the cloud, and it is not for us to be amazed at the new technologies, or tools that today can be used for the continuous improvement of a business or also to start, Database is the stored information and software is the intangible tool that transports the information of any device, mobile, computer, camera, to name examples. either to the company's CPU or to the cloud or between both.

According to Valauskas (1994), the use of software tools facilitates the use of Interact users, in particular those with limited Internet experience, have the opportunity to use Interact resources without risk, since it is easy to use and save in the database, either on a CPU or in the cloud or Hybrid.

According to Chaykowsk (2017), he suggests the creation of a database for a folly, in which you can store and process information that will assist you in achieving your objective, even if you decide to delete that information later. Here, the control capacity of the interested party over their information is highlighted. It is also noted that the owner may move and utilise the information as he sees fit, provided that doing so is appropriate.

Access to a different Database that can be connected with the permission of the counterparty, can provide real-time market information, banks, or products or information can also be obtained from third parties in relation to consumers, the term used for this CRM, Customer relationship management, which helps to improve contact with the client, strengthening the bonds of trust and helping to discover and maintain the client's liking and to take advantage of

the segmentation that the use of the d is able to provide (Bernstel and Kessler, 2002).

The importance of a database being very useful for organizations is denoted and assumed, since organizations obtain many advantages, accuracy of information, eliminate errors and streamline HR management processes.

*What benefits grant you company the use of a database?

*Is you company more organized and accurate having a database?

2.3 Supply management vs Traditional purchasing.

According to Sherrer, K. (2022), A supply chain covers every step in the manufacturing process, from sourcing raw materials to delivering the finished product.

Traditional procurement management is an offline method in which everything is handled manually. When a process is manual or offline, it is reasonable that it is lengthy and laborious, posing numerous difficulties for management. As we all know, however, we can rely on technology to handle even the most difficult challenges, and it has done its bit by providing us with an electronic procurement system(Wings2Aspirations, 2018)

According to Davis paint and collision auto center (2020), three major factors contribute to part delays in the vehicle repair business.

1. Global raw material scarcity,

2. Transportation industry personnel shortage, and

3. Increase in international interest rates.

The global lack of raw materials is one of the primary causes of auto part supply delays. The COVID-19 shutdowns in the United States and other nations make it more difficult to generate raw materials by the day. For example, there are periods when there is a global shortage of critical components such as lithium. Because the delay happens at the conclusion of manufacture, even the supplier cannot guarantee timely delivery of car components in this instance. To solve this issue, we are putting in place a solid planning and scheduling structure that will allow us to forecast our part requests and avoid delays.

The next main factor causing delays in receiving vehicle components is getting the parts to auto shops. These car parts go across continents and countries, and many of these areas have seen closures. One area in particular that has seen significant delays is US customs. The pandemic has resulted in a significant increase in medical supplies from outside, putting further strain on US customs, which is already understaffed. As a result, all parts passing through US customs

will take substantially longer to pass inspection, causing delays at your local car body shop. The trade war between the United States and China, as well as the Brexit process, have resulted in an increase in tariff costs, forcing many shipping companies to raise their rates significantly. The hefty tariffs had another effect: they forced some shippers to close because they couldn't compete. With fewer carriers, not only are there more delays, but shipping auto components also costs more. (Davis paint and collision auto center, 2020)

The supply chain has changed as a result of events such as the covid-19 epidemic, Brexit, and the many current geopolitical developments, which cause massive delays in many vehicles collision shops in Ireland and most other nations. Even simple replacement components are becoming increasingly difficult to find for auto repair shops these days. Furthermore, many body shops are struggling to persuade consumers that the delay in automobile repairs is simply due to worldwide car parts supply and cars shortages and that they are doing everything possible to avoid car repair delays.

The multinational Automobile corporations have a need for appropriate methods to manage the risks of the supply chain, not because those methods do not exist, but because they do not use the appropriate ones and that risk the final result to the customer or to the reseller who suffers the consequences of a bad or untimely delivery; however, the automotive companies must take into consideration complying with or adapting to the good and correct ones, among them the automotive corporations for their globalised negotiation processes (Vanalle, 2020)

In a three-tier supply chain (SC), we evaluate the impact of interruption risk on a manufacturer's procurement choice. A single first-tier (FT) supplier provides the manufacturer with components. The FT procures its raw materials from a single second-tier vendor (ST). Both layers of suppliers are unreliable, posing a danger of service interruption. Increasing SC visibility through the sharing of information is a potential disruption management approach for the manufacturer.

While the manufacturer can receive disruption risk information for the FT, disruption risk information for the ST is not readily available unless obtained from the FT, which may not be prepared to give ST information (Yoon, Talluri and Rosales, 2020)

 Due to the short product life cycle, supply chain risk management has gained popularity recently. Risk indicators assist assess supply chain hazards. Fuzzy risk assessment has limits.

This study proposes a methodology for evaluating supply chain risk and identifies risk indicators through theoretical surveys of 35 keywords and empirical analysis of 448 questionnaires. Supply chain risks are evaluated using both linguistic and Cloud models. The Cloud model evaluation findings are in the high-risk range (Li, Sun, and Liu, 2021).

A novel approach to supply chain (SC) disruption risk management in which SC behaviour is less reliant on the certainty of our environmental knowledge and its changes. The unpredictability of disruption occurrence and severity shows that creating SCs with a low need for 'certainty' may be at least as significant as planned disruption management measures. Low-certainty-need (LCN) SCs are proposed as a new approach in SC disruption management in the context of this study. A variety of principles and concepts are developed from contemporary and pertinent literature to shape the LCN framework and its management (Ivanov and Dolgui, 2019).

The necessity to recognise numerous supply chain elements that affect supply risk and predict their impact on the design and operation of responsive SCs. We present a conceptual model for SC responsiveness that includes practises like flexibility, agility, internal integration, and visibility. This conceptual model is used to develop a multi-objective, multi-period design and operation model for SC. A heuristic approach is designed to determine the numerical problem's supplier, product, timeframe, and production rate. The upgraded genetic algorithm (GA) generates solutions with greater precision and in significantly less time than its predecessor. Finally, a method for ranking the functions (Nooraie, 2020)

One of the most important processes in the international trades, it is supply chain management, with no doubt about it, that is why different practices need to be implemented in order to avoid al kind of risks, anticipating to the catastrophic events.

*How to cope the risks and how to prevent if possible?

*Is necessary to prevent risks before of placing the order?

2.4 Organisation culture.

The efficient use of resources, efficient processes, and, last but not least, an appropriate corporate culture all contribute to the enterprise's economic development. Under the influence of a business environment that is dynamically changing, corporate culture is gaining importance and justification. It must be monitored and assessed alongside "hard" business indicators. The research investigates the key values that should be implemented at the strategic level in corporate culture to support the economic growth of small and medium-sized businesses (Lorincova, Miklosik, and Hitka, 2022).

Focuses on a study that evaluated the effectiveness of campaigning techniques to corporate culture transformation in Korea. The study was carried out in Korea. Changes in corporate culture can be successful or unsuccessful depending on a number of factors. Discussion of the study's methodology; The reason for making efforts to modify the culture; Performance and results of efforts to change organisational culture; characteristics of successful and unsuccessful businesses (Won-Woo, 2001).

Techniques employed to alter business culture and behaviour, corporate culture is defined as a system of interrelated beliefs, attitudes, or behaviours that are so pervasive that they perpetuate themselves. Before attempting to modify employee behaviour, it is necessary to outline corporate strategies precisely. The corporate strategy that serves as a road map to achieve management's visions. After business strategy has been established, human resource strategies can be developed. Improving the company's capabilities requires achieving employee acceptance and comprehension of the company's vision, strategy, and values (Wilhelm,1992)

Kotter and Heskett's 1992 study on successful corporate culture change management provides one of the most empirically convincing models for organisation change.

The method used by Kotter and Heskett fits the pattern and dynamics of a global social phenomena characterised as revitalization by Wallace in 1956. Applying the psychodynamics

of revitalization demonstrates how this procedure generates an adaptable corporate culture with new behavioural standards. This approach transfers concerned members' reliance wishes to a dominant leader. Understanding how and why organisational cultures evolve can help executives manage organisational change (Phelan,2005)

The importance of corporate culture stems from the fact that it caters to people' views and behaviours. Employees prefer to work for organisations whose corporate culture coincides with their personal values. Additionally, it results in happier and more productive staff.

Traditional corporate cultures foster good performance by establishing settings with rules and rigorous dress codes. In contrast, informal corporate cultures offer a more relaxed and pleasurable environment with less constraints and are frequently more receptive to innovative thought (Indeed, 2021).

The corporate culture of a company is the core, where all things around it are hooked, regardless of the size of the company. If corporate culture is not considered or does not exist in a company, things usually do not work in a normal manner, and that's where you must decide what to do about it, whether to correct, whether to adapt, or whether to cut short and make a real organisational change, which in turn will bring benefits to the company that decides to make the change. The vision and mission of the owners are transmitted to the rest of the team that makes up the corporate culture.

A company grows in a highly complicated, dynamic, and varied environment, which has a significant impact on its operations and methods of reaching goals. Because your strategy is critical to accomplishing your goals, it is influenced by the environment, as are strategic actions like formulation, implementation, and evaluation.

The implementation of the strategy is the most essential stage because success or failure depends on it, primarily owing to a company's indifference towards the environmental factors within it.

The internal environment and comprehension of the company's strategic actions are critical with regard to implementation, as it is decisive for organisational culture; hence, a positive culture is conclusive to increase the achievement of objectives, profitability, and results general

in a business.

*How important the organisation culture is in a company?

*Does a good organisation culture add value to the product or service?

CHAPTER III

METHODOLOGY

3.1 Theorethical Paradigm / Philosophy employed.

Constructivist in Ontology, with an inductive approach in the main when conducting qualitative research this philosophy takes the position that individuals are responsible for developing their own understanding and knowledge of the world around them based on the experiences that they have had in their lives and the reflections of those experiences. Research that needs to explain the behaviour of particular groups in a certain environment and how the experiences of those born in their performance makes use of this paradigm.

When it comes to the experience that both workers and managers have had when working remotely, it is different, and data can be obtained that helps in the development of the investigation. Because of this, the use of this philosophy in this project is due to the fact that it is different, and it is possible to obtain information that helps in the development of the investigation.

3.2 Justification for the adoption of method.

It was decided to do it in the following way because there are not enough workshops to make a mix or a quantitative one, it was believed that it was the best

The qualitative technique, also known as the constructivist in ontology method, is used by firms that are classified as garages. Another name for this method is the constructivist in ontology method.

with an inductive approach in the main when conducting qualitative and Ethically with an informed consent to preserve intellectual property, which had five interviews, five participants,

four in Ireland, face to face, and one from Mexico via Zoom; the interviews were conducted using an inductive approach in the main. the research was qualitative and ethical, with an informed consent to preserve intellectual property.

With a questionnaire with 14 open questions, and because they are asking open questions, the sample is given the chance to

3.3 An outline of sampling technique and sample size.

In order to carry out the investigation, interviews were conducted with five managers from a variety of workshops and areas. The purpose of these interviews was to learn about the experiences these managers have had at work, both in terms of employee management and personally. Additionally, there were five small garages.

3.4 Method employed.

Qualitative Method, this method is used by the type of business that is a garage, Constructivist in Ontology.

with an inductive approach in the main when conducting qualitative and

Ethically with an informed consent to preserve Intellectual Property, which had five interviews, five participants, 4 in Ireland, face to face and one from Mexico via Zoom.

having a Questionnaire of 14 open questions, since they are asking open questions, the sample is offered the opportunity to respond according to their lived experience that they answered the questions based on the topics with their experience.

Keywords in Interview (Codes)	IT & AI Theme 1	Data Base Theme 2	Supply Chain Management vs Traditional Purchasing	Organisation Culture Theme 4

				Theme 3	
I N T E V I E W E E	**1**	Optimize processes, make things easier, search for parts, worry for system crashes, no now to have it.	Does not to have one, thinking to get CRM, decent package, distrust, may be for future.	For franchise, OEM parts, website on real time, delay BREXIT and COVID, no storage parts, huge demand not enough supply.	Fairly adaptive, if there a problem all react, individual tasks, sometimes multi-task.
I N T E V I E W E E	**2**	No choice, nowadays everything computerized, does not know much about IT, lack of knowledge on IT.	Does not have one, secretary is in charge of the computer and related, outsourcing IT management.	No storage parts, by phone, delays by COVID and BREXIT.	They do what they are told to do, usually a task.
I N T E V I E W E E	**3**	IT necessary but risky. NVIVO THEME not enough budget.	Does not have one, outsourcing IT management. NVIVO THEME Afraid to be hacked, no taken the risk, no exposure, accounts under threat	No storage parts, only one supplier, by phone, delays by COVID and BREXIT,	Straight forward, normally one task.
I N T E V I E W E E	**4**	Keeping records, not updated with new technology, could be an advantage. NVIVO THEME not enough budget.	Keep data in books still, may be in the future.	No storage parts, by phone, delays by COVID and BREXIT, from two weeks to several months.	Family business, hard to control sometimes, thinking to adopt new management procedures to improve, humans difficult to change.
I N T E V I E	**5**	Optimizing things, for order parts, work on cars.	Does not have one, outsourcing IT management NVIVO THEME Afraid	No storage parts, by phone, delays by COVID.	Fairly adaptive, need to be checked anyway.

W E E		to be hacked, no taken the risk, no exposure, accounts under threat.		

Table 1. y de Interview Coding

3.5 Ethical Section.

I was the one who conducted the interviews, and before I started, I gave each participant a copy of the consent form. On the form, they were told that their participation was entirely voluntary, and that at the institution's request, it was necessary to audio record the interview; however, the recording will be kept confidential by the investigator. The consent forms filled out by those who were interviewed can be found in the appendix.

CHAPTER IV

FINDINGS

4.1 Empirical findings

Before beginning the primary search, an action plan was developed as a strategy to conduct interviews with owners, managers, mechanics, and panelbeatings in six locations in Dublin, ranging from small to large businesses, which resulted in, if not disaster, then a degree of frustration, as it had been planned and agreed that such interviews would occur.

They ultimately did not agree. Five owners of tiny garages were ultimately interviewed, four in Dublin face-to-face and one in Mexico via zoom.

There was a great deal of confusion and some scepticism among the respondents, who were unsure of whether they would cooperate or not.

Five interviews were conducted in the end, and empirical knowledge was identified in practically all five interviewers and two NVivo's.

4.2 Information Technology & Artificial Intelligence.

Are AI and IT significant company assets? Today, many things move because humans have created tools such as information technology and artificial intelligence, such as a system that can automatically read identification stickers from a distance of nearly 2 metres at 40 kilometres per hour and has the ability to communicate with computer systems, as well as safety warning systems (Barcode Reader Redesigned, 2006).

or as Yoswick (2022) mentions, the combination of OEM build and repair procedures for the specific vehicle, along with OEM procedures and editorial data, to generate this precise estimate, in discussing what AI estimating specifically offers shops, panellists noted that even when different estimators examine the same vehicle, there is still a wide variation in estimates; this creates complications, but AI can help collision repair companies increase consistency.

Its known that an information system can exist without the ability to communicate, according to Washington State University, Carson College of Business (2020). The first personal computers were standalone machines that did not connect to the internet; however, in today's hyper-connected world, it is exceedingly rare to find a computer that is not connected to another device.

The writers have spoken the significance and effectiveness of the employment of artificial intelligence and information technology, as well as how their use can add value to a company's final product and promote agility as desirable outcomes.

And using the result of the primary search, it was discovered that the five interviewees agree in part: interviewee 1 notes that the use would optimise the process and make the tasks much easier; interviewee 2 emphasises that in today's world, there is no choice because everything is digital; interviewees three and four say that it is necessary in today's world that it could be an advantage; and interviewee five suggests that the use of new technology such as IT could be an advantage. However, interviewees 3 and 4 said that there is insufficient funding to obtain all they may need today, but that they may do so in the future. A lack of information and

extreme caution were also noted in their responses.

Three very important things stand out here, number one: The interviewees and the authors agree that the use of technology such as IT and AI are and will be a good asset for any company, number two: that most small garages are not aware of technology updates and number three: why there is not enough budget.

4.3 Database.

What benefits grant you company the use of a database? Even though nowadays database does not necessarily have to be stored in the company's CPUs, it can be stored in the cloud, and it is not for us to be amazed at the new technologies, or tools that today can be used for the continuous improvement of a business or also to start, Database is the stored information and software is the intangible tool that transports the information of any device, mobile, computer, camera, to name examples. either to the company's CPU or to the cloud or between both.

Valauskas (1994), comment the use of software tools facilitates the use of Interaction users, in particular those with limited Internet experience, have the opportunity to use Interact resources without risk, since it is easy to use and save in the database, either on a CPU or in the cloud or Hybrid y Bernstel and Kessler (2002) advice the access to a different Database that can be connected with the permission of the counterparty, can provide real-time market information, banks, or products or information can also be obtained from third parties in relation to consumers, the term used for this CRM, Customer relationship management, which helps to improve contact with the client, strengthening the bonds of trust and helping to discover and maintain the client's liking and to take advantage of the segmentation that the use of the d is able to provide, but nevertheless No business info. co. uk (2022) has a particular opinion, noting that Beginnings are always difficult, particularly when there is little or no knowledge, which is why a business must accept when there is a problem or a need to move forward. A good way to keep track of numbers, such as accounts, balance sheets, payroll, or invoice information, was

traditionally (on paper), but if the company is inundated with more documents and information, it is recommended to adopt the creation of a database so that this tool propels the company's growth and productivity.

The primary research on this topic returns the following results: the majority of interviews do not have a clear understanding of the significance of utilising a database, none of them have a database as such, and interviewees 1, 2, and 3 do not know how much time they spend using a database. They have a database, but as they remark, they pay an outsider to manage all computer-related tasks. Interviewees 4 and 5 do not have a database either; they carry their belongings in books. Still, the five interviewers agreed that they may adopt a database in the future, and interviewees 3 and 5 expressed concern about the possibility of a database hack, thus it is believed that the interviewees will acquire a database in the future. They need a database system to expedite their daily tasks in the garages.

4.4 Supply chain Management vs traditional purchasing.

How to manage the risks and, if feasible, prevent them. Even with technological improvement, it is necessary to identify multiple supply chain variables that effect supply risk and estimate their impact on the design and operation of responsive supply chains (SCs) in the present day. We provide a conceptual model for SC responsiveness that encompasses flexibility, agility, internal integration, and visibility practises. The purpose of this conceptual model is to establish a multi-objective, multi-period design and operating model for SC. A heuristic approach is intended to find the supplier, product, timeline, and production rate for a numerical problem. The improved genetic algorithm (GA) creates solutions with more accuracy and in a shorter amount of time than its predecessor. Finally, a ranking system for functions (Nooraie, 2020)

The trade war between conflicting nations and the Brexit process have led to an increase in tariff expenses, leading many shipping businesses to drastically boost their rates. The high tariffs also resulted in the closure of certain shippers who were unable to compete. With fewer

carriers, not only are there more delays, but also the cost of transporting auto components increases. (Davis paint and collision auto centre, 2020) It should also be noted that the supply chain has changed due to events such as the covid-19 epidemic and the many current geopolitical developments, which have caused massive delays in many vehicle collision shops in Ireland and the majority of other countries. Auto repair firms are finding it increasingly difficult to locate even the most basic replacement parts. In addition, many body shops struggle to persuade customers that the delay in auto repairs is a result of global car parts supply and car shortages, and that they are doing all necessary to prevent auto repair delays.

In this aspect, our interviewees stated that they did not anticipate anything positive from BREXIT, but because it appeared so remote, they did not take it very seriously, much less an unanticipated incident like COVID that effectively halted everyone. The five interviewees agreed that it was not profitable for them to have a parts warehouse in their business and that there have been too many delays and shortages in the delivery of parts over the past two years, despite the fact that the global financial crisis affected all industries, including the automotive industry. One interviewee stated that he searched for OEM components on the manufacturer's website, while the other five stated that they continued to use the traditional purchase method, via landline or cell phone.

According to Wings2Aspirations (2018), traditional procurement management is an offline process where everything is managed manually. When a process is manual or offline, it makes sense that it will be time-consuming and arduous, offering several challenges for management. However, as we all know, we can rely on technology to overcome even the most challenging obstacles, and it has done its part by providing us with an electronic procurement system.

Here we see that he refers to the fact that around 90 percent of interviewees continue to use the traditional purchasing method, placing orders over the phone, despite mentioning some form of management.

4.5 Organisation culture.

Does a good organisation culture add value to the product or service?

According to Won-Woo (2001) a study that evaluated the effectiveness of campaigning techniques to corporate culture transformation in Korea changes in corporate culture can be successful or unsuccessful depending on a number of factors. Discussion of the study's methodology; The reason for making efforts to modify the culture; Performance and results of efforts to change organisational culture; characteristics of successful and unsuccessful businesses, but

before attempting to modify employee behaviour, it is necessary to outline corporate strategies precisely. The corporate strategy that serves as a road map to achieve management's visions, Improving the company's capabilities requires achieving employee acceptance and comprehension of the company's vision, strategy, and values (Wilhelm,1992) In contrast, informal corporate cultures offer a more relaxed and pleasurable environment with less constraints and are frequently more receptive to innovative thought (Indeed, 2021).

And the result of the interviews says interviewee number one that his team is very adaptable and that normally each member of his team is assigned a task at a time, but that if there were any problem they react in favour of solving it as a team and that the As the owner and general manager, you sometimes have to multitask. Interviewee number five also said that his staff adapted to changes with agility, 2 and 3 are authoritative and mentioned that things have to be done, yes or yes.

and number 4 said that his business was family-owned and that it is a little more difficult to control the changes, because you can't run to anyone just because yes, they are family.

It is denoted that although logically it would be suggested that in a workplace with less staff, it would be easier to renew or implement organizational changes in the culture, this is not the case, the empirical evidence in this result says that it depends on the leadership of the owner,

CEO or manager, for the strategies to be implemented, attracting the implementation mostly by conviction, exemplary, and if value and quality are added to both the product and the service.

4.5 NVivo Hacking and Budget

According to Kaspersky (2022), Hacking is finding and then using a computer system or network's vulnerabilities to hack is the act of trying to obtain unauthorised access to someone else's or an organization's data.

There are a lot of ways malicious users might access a company's data, including phishing, a technique that uses unaware staff as a gateway. Fortunately, there are a number of ways for businesses to defend themselves and their data from such attacks (Expert Panel Forbes Councils Member, 2022)

It is advised to carry out certain procedures on a regular basis, such as changing your passwords frequently, updating your software, switching to a version you trust, and limiting employee access to sensitive data.

Budgets can be utilised to encourage people since they would internalise the goals because they were involved in their creation. Those involved in the budget should share information. Budget restrictions will have a detrimental impact on motivation. Furthermore, there is a link between control loss due to negative attitudes and task difficulty (Shim and Siegel, 2022)

When the second one was being carried out, the interviewee suddenly became very nervous and asked to end the interview, to which he asked the reason, to which he mentioned that it was fear of being hacked and that he did not want to be recorded because of it, in the end he agreed to to finish the interview and in the fifth interview the anguish was also discovered, when talking about the database, as far as the budget is concerned, interviewee 3 and interviewee 4 both commented that they did not resort to or obtaining new technologies for low budget.

Here it can be said that small businesses and/or with a smaller or insufficient budget, they tend to distrust for fear of losing, but not those with a sufficient budget that creates a state of trust,

it is part of human behavior.

For this reason, it can be deduced that support for small businesses is crucial in an economy, since these garages serve a segment where large and wealthy garages do not enter due to high service prices.

CHAPTER V

CONCLUSIONS, LIMITATIONS AND SUGGESTIONS

5.2 Conclusion

It is concluded that the investigation that was carried out for this project turned out to answer the main question **What is the impact of implementing new technology and implementing supply chain management in Crash Repair Centre, Coolock, ie ?**
and gives good reasons and solutions for the garage.

5.3 Limitations

There were only two limitations, one, the large workshops are not very willing to cooperate, and two, you have to be aware of the agreed dates and ask them for a certain amount of time for the interviews**.**

5.4 Suggestions

It is suggested that future research on this topic be taken as a basis, this experience that you have gathered, in planning and making sure that the interviewees confirm their interviews.

REFERENCES LIST

Matematicas en la vida real (2021). *¿Qué es la inteligencia artificial y cómo funciona?* Available at: https://www.youtube.com/watch?v=_tA5cinv0U8 [Accessed 30 Nov. 2022].

Castagna, R. (2022). *Information Technology (IT)*. [online]

https://www.techtarget.com/searchdatacenter/definition/IT. Available at:

https://www.techtarget.com/searchdatacenter/definition/IT [Accessed 6 Nov. 2022].

Forger, G. (2022) 'ADC at the edge: Automatic data capture just got a new ally: the edge. The technology allows everything from scanners to voice systems to process data on the edge of where it is collected. The result is real-time decisions that deal with reality--not a plan that no longer applies', Logistics Management, 61(4), pp. 42– 46. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=buh&AN= 156175496&site=ehost-live (Accessed: 18 May 2022). Berente, N. et al. (2021) 'Managing Artificial Intelligence', MIS Quarterly, 45(3), pp. 1433–1450. doi: 10.25300/MISQ/2021/16274.
'Barcode Reader Redesigned' (2006) Security, 43(9), p. 140. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=buh&AN= 22409230&site=ehost-live (Accessed: 18 May 2022).
Washington State University, Carson College of Business (2020). What Are Information Systems, and How Do They Benefit Business? June 8, 2020. [online] Washington State University, Carson College of Business. Available at: https://onlinemba.wsu.edu/blog/what-are-information-systems-and-how-do-theybenefit-business/ [Accessed 18 May 2022].
Yoswick, J. (2022). Fully Automated AI Collision Repair Estimating 'Not There Yet'. [online] Auto Body News. Com. Available at: https://www.autobodynews.com/index.php/john-yoswick/item/25051-fully-automatedai-collision-repair-estimating-not-there-yet.html [Accessed 18 May 2022].
Lutkevich, B. and Hughes, A. (2022). *Definition Database (DB)*. [online] TechTarget.

Available at:

https://www.techtarget.com/searchdatamanagement/definition/database#:~:text=A%20databa

se%20is%20information%20that,data%2C%20financials%20and%20product%20information

. [Accessed 30 Nov. 2022].

Ni business info. co. uk (2022). 5 reasons why your business needs a good database. [online] Ni business info. co. uk. Available at: https://www.nibusinessinfo.co.uk/content/5-reasons-why-your-business-needs-gooddatabase [Accessed 18 May 2022].
Valauskas, E. J. (1994) 'Creating Internet-accessible databases with AppleSearch and Gopher Surfer', Database, 17(5), p. 99. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=buh&AN= 9410271416&site=ehost-live (Accessed: 18 May 2022).
Chaykowski, K. (2017) 'WikiLeaks Proposes Creating A Database Of Verified Twitter Users', Forbes.com, p. 21. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=buh&AN= 120637923&site=ehost-live (Accessed: 18 May 2022).
Bernstel, J. B. and Kessler, L. (2002) 'Smart Move: Creating an "Intelligent" Database. (cover story)', ABA Bank Marketing, 34(9), p. 14. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=buh&AN= 8543183&site=ehost-live (Accessed: 18 May 2022).
Sherrer, K. (2022) 'What is Supply Chain Management? Definition & Examples', CIO

Insight, p. N.PAG. Available at:

https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=buh&AN=158548565&site=ehost-live (Accessed: 30 November 2022).

Wings2Aspirations (2018). Challenges Faced in Traditional Offline Procurement Process. [online] Wings2Aspirations. Available at:

https://medium.com/@wings2aspirationsofficial/challenges-faced-in-traditional-offline-procurement-process-f9cef4be6863 [Accessed 6 Nov. 2022].

Davis paint and collision auto center (2020). Impact of supply chain on auto collision repairs. [online] Davis paint and collision auto center. Available at: https://paintandbody.com/impact-of-supply-chain-issues-on-auto-collision-repairs/?utm_source=rss&utm_medium=rss&utm_campaign=impact-of-supply-chain-issues-on-auto-collision-repairs [Accessed 20 Aug. 2022].

Vanalle, R. M. et al. (2020) 'Risk management in the automotive supply chain: an exploratory study in Brazil', International Journal of Production Research, 58(3), pp. 783–799. doi: 10.1080/00207543.2019.1600762.

Yoon, J., Talluri, S. and Rosales, C. (2020) 'Procurement decisions and information sharing under multi-tier disruption risk in a supply chain', International Journal of Production Research, 58(5), pp. 1362–1383. doi: 10.1080/00207543.2019.1634296.

Li, S., Sun, Q. and Liu, S. (2021) 'Risk assessment for supply chain based on Cloud model', Journal of Intelligent & Fuzzy Systems, 41(2), pp. 3523–3540. doi: 10.3233/JIFS-210883.

Ivanov, D. and Dolgui, A. (2019) 'Low-Certainty-Need (LCN) supply chains: a new perspective in managing disruption risks and resilience', International Journal of Production Research, 57(15/16), pp. 5119–5136. doi: 10.1080/00207543.2018.1521025.

Nooraie, V. et al. (2020) 'A multi-objective model for risk mitigating in supply chain design', International Journal of Production Research, 58(5), pp. 1338–1361. doi: 10.1080/00207543.2019.1633024.

LORINCOVÁ, S., MIKLOŠÍK, A. and HITKA, M. (2022) 'The Role of Corporate Culture in Economic Development of Small and Medium-Sized Enterprises', Technological and Economic Development of Economy, 28(1), pp. 220–238. doi: 10.3846/tede.2021.15983.

Won-Woo Park (2001) 'The Corporate Culture Change Campaigns in Korea: Lessons from Their Failures', Asia Pacific Business Review, 7(4), p. 89. doi: 10.1080/713999112.

Wilhelm, W. (1992) 'Changing corporate culture- or corporate behavior? How to change your company', Executive (19389779), 6(4), pp. 72–77. doi: 10.5465/AME.1992.4274485.

Phelan, M. (2005) 'Cultural revitalization movements in organization change management', Journal of Change Management, 5(1), pp. 47–56. doi: 10.1080/14697010500036106.

Indeed Editorial Team (2021). Corporate Culture Examples and Benefits. [online] Indeed. Available at: https://www.indeed.com/career-advice/career-development/corporate-culture-examples-benefits [Accessed 18 May 2022].

Kaspersky (2022). What Is Hacking? and How to Prevent It. [online] Kaspersky. Available at: https://www.kaspersky.com/resource-center/definitions/what-is-hacking [Accessed 30 Nov. 2022].

Expert Panel Forbes Councils Member (2022). Nine Practical Ways to Protect Your Company from Hackers and Phishing Attacks. [online] Forbes. Available at:

https://www.forbes.com/sites/theyec/2021/03/16/nine-practical-ways-to-protect-your-company-from-hackers-and-phishing-attacks/?sh=4b43cb044e44 [Accessed 30 Nov. 2022].

Shim, J.K. and Siegel, J.G. (2022). *Budgeting Basics and beyond*. [online] O'Reilly. Available at: https://www.oreilly.com/library/view/budgeting-basics-and/9780470389683/9780470389683_motivation.html [Accessed 30 Nov. 2022].

-INTERVIEW QUESTIONARIE-

- ❖ How many people work in your organization?
  - (0 to 10 b)11-25 c) 26-50 d) above 50
- ❖ Why is important using IT in nowadays business?
- ❖ What are the potential risk factors you might consider when implementing new technology?
- ❖ How do you currently maintain your database?
- ❖ Do you have a formalized structure to maintain a database?
- ❖ What all elements would you consider maintaining in a database for your business?
- ❖ How do you currently source your spare parts?
- ❖ What factors do you consider when storing your inventory?
- ❖ During the last 2 years (pandemic period), what were the major challenges you faced?
- ❖ Has Brexit affected your supply or have there been any major changes that have impacted your business?
- ❖ How do you deal with contingencies during deliveries for spare parts?
- ❖ How reactive is your workforce to change and what kind of change?
- ❖ How many people work on average work on 1 task when it has been assigned by the team leader?
- ❖ Have your job duties and roles been clearly defined to you?

- QUESTIONARIO ENTREVISTA –

- ❖ ¿Cuántas personas trabajan en su organización?