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Knowledge and Information Management Skills for the Workplace

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INTRODUCTION

In this assignment the author will be researching and analysing the importance of knowledge and information management skills in general and within specified workplace. Anga (2014) gives this definition of knowledge: "Knowledge is what someone knows about something or anything". Knowing about something can be counted as information. So, the author asked himself whether the knowledge comes with the possession of some information or not. However, after further research the complexity of relations between knowledge and information became obvious. Only possession of the information or data doesn't give you the knowledge. The knowledge comes after this data has been processed and analysed or it can be gained from person's own life experience as Wagner (2014) confirms. In the next part of assignment the author will start to establish and analyse the connection between knowledge, data and information more deeply and detailed. Now the author will provide very short introduction of the workplace where knowledge and information skills will be tested and applied during this assignment. The company name is Abbey Cars UK Group. For the future reference it will be simply called Abbey Cars. The company was founded in 1968 as small family run transportation business. These days the company has developed into one of the largest minicabs and private hire operators in UK. The company's main competitors are London Taxis, Uber, Addison Lee and SkyEx. Abbey Cars employing nearly 5,000 drivers on different terms of contracts. The main services provided by the company are: private hire vehicle for hire or contract rent, chauffeur services, school and hospital transportation, events transportation and corporate hospitality such as "meet and greet" airport service. The author joined Abbey Cars as night shift driver, later he became shift controller and currently is a branch manager assistant.

ESTABLISHING A CONNECTION BETWEEN DATA, INFORMATION, KNOWLEDGE AND WISDOM

After we gained some definition of the *knowledge* from previous part of assignment now let's see what the meaning of the *data* and *information* is and how they integrate with each other. Starting with *data*. According to Computer Hope (2018) data by itself is a random sequence of characters, words, numbers and abbreviations. If it's not been put into any context it will mean nothing or very little to us, humans. But when the data was being formatted and organised in some certain way, that's when it becomes *information*. Information understood and utilised by humans. Very good examples of information are computer programs and software applications. Simpler the difference between data and information is presented in the table shown below:

Data	Information
47, Saunton, UB3, Hayes, United, 5HG, Vadim, Kingdom, Avenue, Kozlov	Vadim Kozlov 47 Saunton Avenue Hayes UB3 5HG United Kingdom

Table 1: The difference between data and information, based on source: (Computer Hope, 2018 & Author's Research)

Basically, the information is a processed data, based on which the decisions and actions can be produced and contemplated, that's when it becomes the *knowledge*. There are some requirements to processed data, states Computer Hope (2018). It must comply with 3 main characteristics:

1. *Timely* – must be available on request.
2. *Accuracy* – should be accurate.
3. *Completeness* – should be complete.

People are re – arranging and re – ordering data during the data processing so it can be used more effectively, they also adding some values to make the data processing output more specific. Data processing can be defined as a cycle, the diagram shown below gives more detailed description of it:

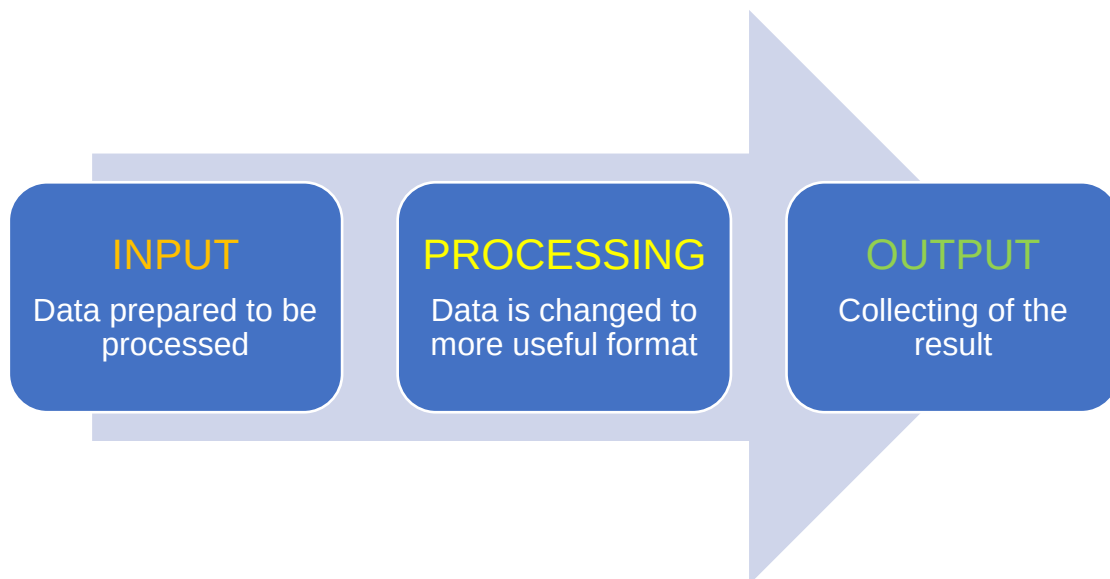


Diagram 1: Data processing cycle, based on source: (tutorialspoint.com, 2018)

Regarding the sources of *information*, there are three main types of sources, their descriptions and examples are presented in the table shown below:

<i>Information source type</i>	<i>Examples</i>
Primary: formatted and organised data sources.	1. Oral histories. 2. Photo, video and audio recordings. 3. Archives. 4. Published books. 5. Magazines, newspapers. 6. Research data.
Secondary: generally exploiting the primary sources in order to analyse or assess some specific event or occurrence.	1. Books. 2. Magazine articles. 3. Research reports. 4. Reviews.
Tertiary: used to recognise and trace primary and secondary sources.	1. Bibliographies. 2. Abstracts. 3. Encyclopaedias. 4. Indexes.

Table 2: Three sources of information, based on source: (UCI Libraries, 2019)

There are many definitions of *wisdom*. During his research for the best definition of wisdom the author came across of this absolutely brilliant quote from Gutierrez (2017): “Knowledge is knowing that a tomato is a fruit. Wisdom is knowing not to put it in a fruit salad”. Gutierrez himself saw that slogan printed on the t – shirt of elderly lady in the Tai restaurant while waiting to be served. In author’s opinion this definition clearly states the difference between knowledge and wisdom. Having or possessing some knowledge doesn’t necessarily mean that we will also acquire the wisdom as a part of the package. The real wisdom starts when the person starting to recall and implement gained knowledge in some practical applications. Because at the end of the day we are all collecting knowledge all the time, even when we are asleep, for example learning foreign languages. The author himself did it by an accident a few times when he was learning English by listening the vinyl through the headphones. Surprisingly, the next day he better remembered the parts, which were playing while the author was half- asleep. During the day we are getting the knowledge through browsing our social media sites, watching TV or listening to the radio. The main problem is how we are going to use all this knowledge to make our lives, lives of other people or our planet better. This will require constant long-life efforts and it will be painful, upsetting, nerve - breaking process. That’s why there are not many wise people on this planet, and if they are wise, then other people starting to admire them and to follow. The author’s lifetime dream is to become wise person himself, so he can teach others how to make their existence much better than it is now and contribute their best abilities to the society they are living in.

Now let’s see how *data*, *information*, *knowledge* and *wisdom* are connected to each other. The best example of relations between those subjects can be presented as Data – Information – Knowledge – Wisdom hierarchy or DIKW Model. According to Fisher (2016), DIKW Model can be described as a pyramid, demonstrated below:

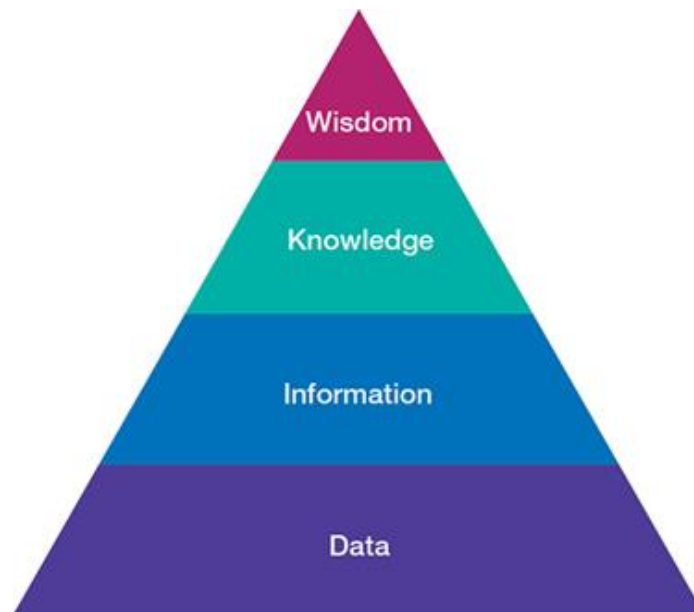


Figure 1: DIKW Pyramid, based on source: (Fisher, 2016)

Fisher (2016) states that it was firstly developed by Russell Ackoff while he was accepting the presidency of International Society for General Systems Research in 1989. However, Weinberger (2010) argues that first recorded occurrence of this hierarchy was made in 1934 by T. S. Eliot in his poem, called *"The Rock: A Pageant Play"*:

"Where is the Life we have lost in living?

Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in information?"

From Weinberger's point of view, to which the author agrees completely, not everything when it comes to moving from information to knowledge is simple and straightforward as it may look. The move from data to information is less complicated compared to information – knowledge move. The author's opinion is that the knowledge in our days is based on different standards compared to knowledge which existed 2,500 years ago. Firstly it concerns the methods of extracting the value from the data today and in the ancient history. Even though our predecessors did have primitive machines for calculations and geolocation, the knowledge was based on true and confirmed beliefs formed on the personal life experience and observing the causes of nature. This knowledge was delivered from generation to generation in the forms of writings on the cave walls, for example, which was information by the way, not just some symbols randomly put on the wall display. The era of computing has drastically changed the way the data being processed. Total confidence and relying on information produced by the machines has led to serious mistakes in decision making. The possibility of the machines been programmed in the way to harm humans was always the main point of concern. As the result of this the knowledge and wisdom can be compromised and corrupted. And there is will be even more worrying things to consider in regards whether trust the machines completely or not very soon. The well-known movie "Terminator" is very powerful warning to all of us, trusting the technology too much. There are must constant human's control of the devices

formatting and preparing information. Therefore the importance of the proper knowledge management cannot be overestimated.

IMPORTANCE OF KNOWLEDGE MANAGEMENT, KEY STAGES OF KM APPLICABLE TO ABBEY CARS

To start discussing the importance of knowledge management or KM, the author first tried to find the most compelling definition of this process. After thorough and detailed research he came across this definition of KM made by John P. Girard (2015): “Knowledge Management is the process of creating, sharing, using and managing the knowledge and information of an organization”. John P. Girard created this definition of KM after searching and analysing of over 100s of descriptions of KM made by various people and organisations. It also can be presented in the form of pyramid, like the one used to describe DIKW Model:

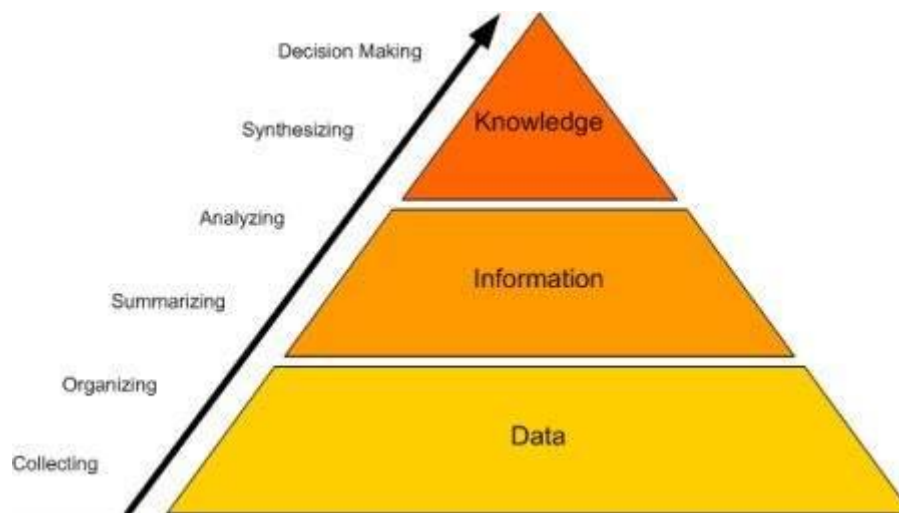


Figure 2: Knowledge management process, based on source: (tutorialspoint.com, 2018 & Author’s research)

All the six key stages of KM process, their implementation and adaptation within Abbey Cars will be explained here in more detailed way:

1. **Collecting:** one of the most vital stages of KM process. Collecting incorrect or irrelevant data could jeopardise the outcome of the data formatting. As the result content of the knowledge will not be accurate. This will affect the decisions made based on the existing knowledge. Therefore the procedure of data collecting must be well – organised and supervised by member of management team, possessing the relevant knowledge. In case of Abbey Cars, weekly booking sales and weekly driver’s attendance reports would very good resources of the data. More detailed explanation on this subject will be given later in the course of this assignment. The other important point of data collection is the way the data will be extracted. For example, weekly booking sales can be fed into the system by the shift controller manually, however the driver’s attendance report can be generated from the software already installed in company’s computer. Data for weekly attendance report will be collected

from the driver's handheld portable device when they sign up for work first time of the day. And final important point of the data collection is the data storage. It must be stored securely to avoid being stolen or corrupted. In case of Abbey Cars the data will be stored by using specific database software application.

2. **Organizing:** the collected data must be organised. Each company has certain rules when it comes to data organising. In case of Abbey Cars different file sections will be allocated on the company's PC hard drive to store weekly booking sales reports and weekly attendance report requests. These files must be checked on regular basis to avoid data being duplicated.
3. **Summarizing:** at this stage the information will be summarized in order to take the core out of it. Different software packages can be used for that purpose along with various techniques.
4. **Analyzing:** the information will be analysed in order to identify patterns, relationships and common groups. In Abbey Cars it will be done by the member of management echelon, specially trained for that purpose.
5. **Synthesizing:** this is the stage when information becomes the knowledge. The results of the reports can be brought together in order to establish different notions and articles. Later this knowledge will be stored in company's knowledge base to be used in the future. Generally the knowledge base is a software application with possibility to be easily accessed from any location through the internet. In Abbey Cars case the knowledge base is stored on the company's PC hard drive in the head office in Greenwich with availability through an iCloud storage facility protected from unauthorised access.
6. **Decision making:** at this point, the decision can be made based on the recently gained knowledge. For example, in Abbey Cars the analysis of the weekly booking sales can help to identify peak and off – peak hours of busy times. That in the other turn will help to adjust the amount of workforce needed throughout the day and night. As the result the drivers will have more flexibility regarding their working hours patterns, thus more can be achieved in their private lives.

PROPOSED CONCEPTUAL MODEL OF KM FOR ABBEY CARS

Before starting to explain which concept of KM the best choice for Abbey Cars as organisation would be, the author will go slightly back in this assignment to the definition of knowledge and to analyse when the individual knowledge becomes organisational. According to Noble (1996) first attempt to analyse this transition of individual knowledge into organisational was made by two Japanese professors Ikujiro Nonaka and Hirotaka Takeuchi in their book *"The Knowledge – Creating Company: How Japanese Companies Create the Dynamics of Innovation"* published in New York in 1995. They were the first of researchers who identified two types of knowledge existed within Western business management and Japanese companies: "tacit" and "explicit". While the Western b management accepted the explicit form of the knowledge meaning it had to be something formal and systematic, Japanese companies on the other side looked at the knowledge differently. From their point of view the knowledge was not just expression of words and numbers. Tacit knowledge

is something not very noticeable, concealed inside and individual. It cannot be easily formatted like explicit knowledge. Noble (1996) states that two Japanese professors hint the differences between tacit and explicit knowledge are based on the deviation in the Western and Japanese intellectual backgrounds, rationalism of the West on one side and the "oneness of body and mind," as Nonaka and Takeuchi call it, on the East side. The transition from tacit knowledge to explicit and back to tacit again is the creation of organisational knowledge. More visibly it can be displayed as the diagram shown below:

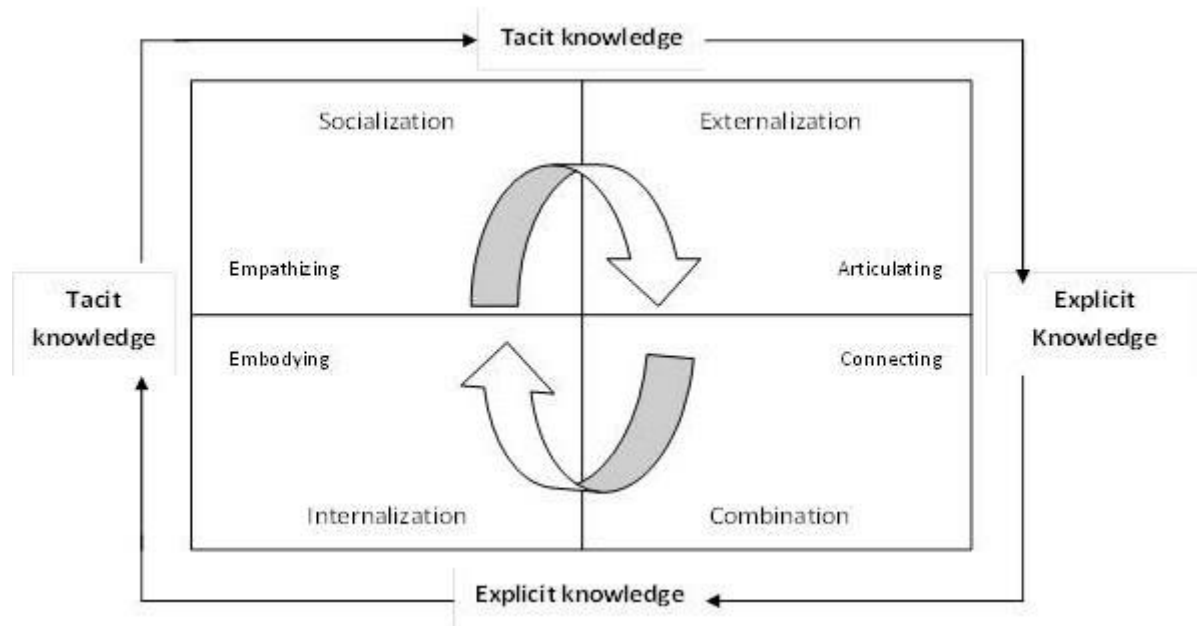


Figure 3: Tacit and explicit knowledge transition, based on source: (Nonaka & Takeuchi, 1995)

After the definition of the individual and organisational knowledge and their relations are been established, the author will try to design and analyse the most efficient concept of KM mostly adapted to Abbey Cars business specifics. Kucza (2001) states that ideally the KM should be covering all the activities the company is involved in. He mentions four models of KM models, their descriptions and relations with each other are displayed in the diagram shown below:

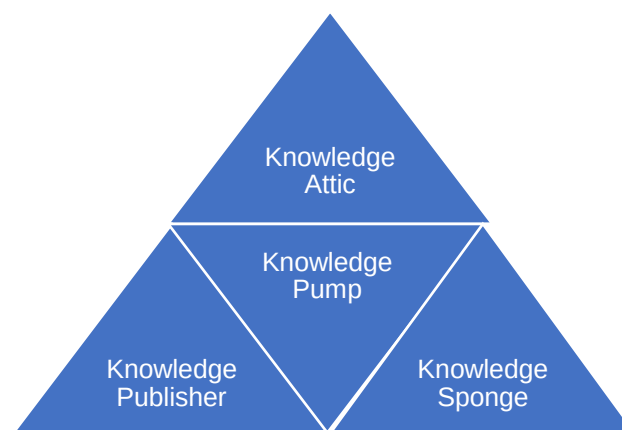
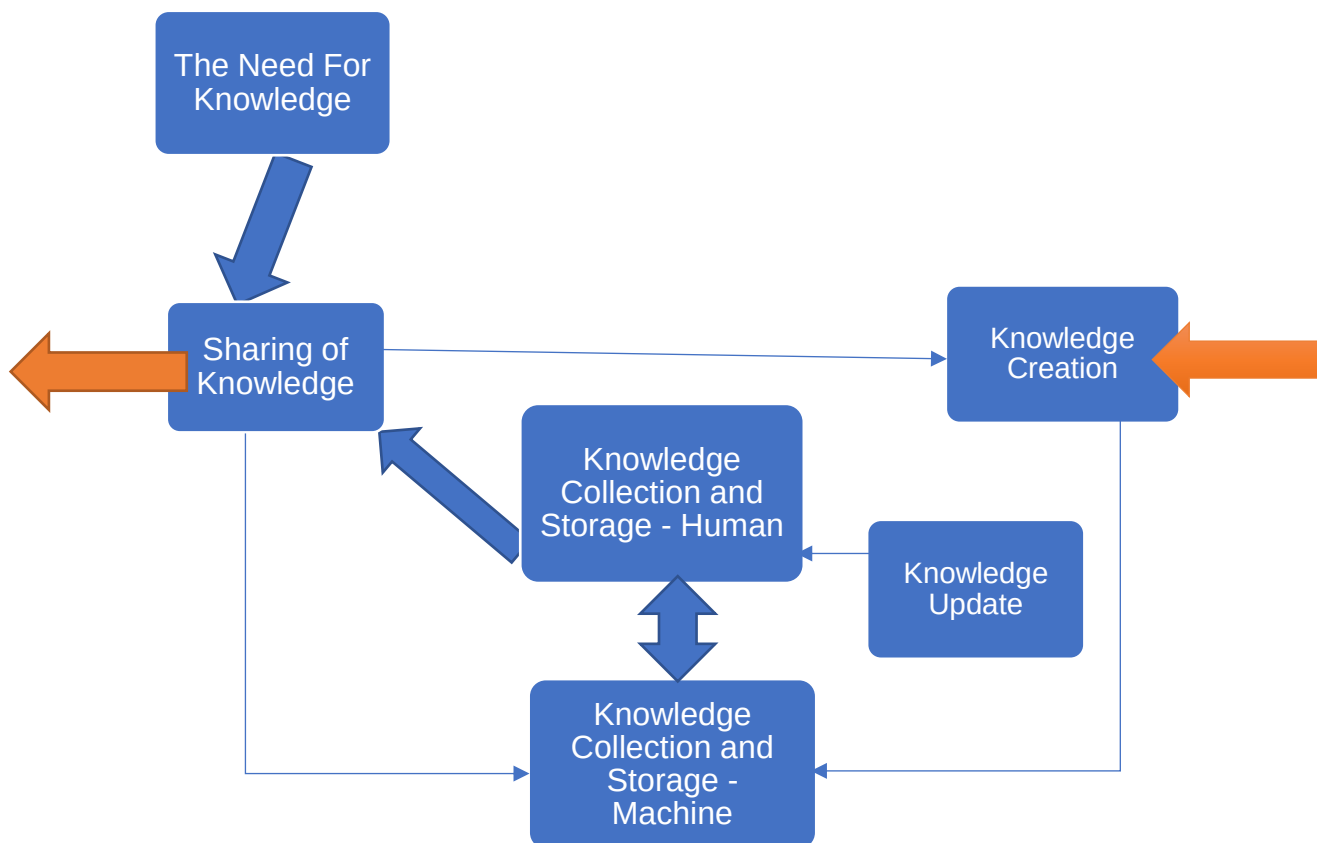


Figure 4: KM models, based on source: (Kucza, 2001)

The brief descriptions of KM models can be found here:

1. *Knowledge Attic*: basis of the knowledge, acknowledgment of its collection, no analysis or distribution is provided.
2. *Knowledge Sponge*: enhanced collection of knowledge but the use of the knowledge is not promoted.
3. *Knowledge Publisher*: no improvement regarding collection of the knowledge but encourages the use of it.
4. *Knowledge Pump*: allowing and promoting the use of Knowledge Sponge and Knowledge Publisher.

By the author's opinion the Knowledge Pump Model will be ideal to be used and implemented within the environment of Abbey Cars. It will bring the most out of knowledge management process and the result will improve the organisational development of the company significantly. Based on suggestions from Kucza (2001) the author has created the following structure of KM Model for Abbey Cars:



Legend: Activity flows: 

Internal knowledge flows: 

External knowledge flows: 

Diagram 2: Main processes in KM Model for Abbey Cars, based on source: (Kucza, 2001 & Author's research)

The author established 5 main processes in KM Model adapted for use within Abbey Cars:

1. **The need for knowledge:** identifying the need for knowledge. In case of Abbey Cars there are two needs of knowledge can be established:
 - 1.1 Need to optimise the numbers of drivers involved in day and night shifts throughout the whole week in order to avoid unnecessary use of workforce and wearing of the fleet vehicles.
 - 1.2 To complete the optimisation of the workforce.
2. **Sharing of knowledge:** identifying if the relevant knowledge already exists in the system and can be used to upgrade the required knowledge. In case of Abbey Cars only casual reports on the volumes of booking sales can be found in the system. Driver's attendance reports were missing completely. The outside knowledge can be brought in by using external knowledge flows.
3. **Knowledge creation:** it will have to be initiated because the existing knowledge is incomplete, inaccurate and not up to date.
4. **Knowledge collection and storage:** collecting of the new knowledge in the case of Abbey Cars will be done through generating daily reports on the volumes of bookings done in the office (base), via the phone and online through the relevant application. The required data for those reports will be manually input into relevant database by the shift controller at the of each shift. Later those daily reports will make a base for weekly reports so day to day bookings can be analysed thoroughly. Driver's attendance will also be monitored, and relevant reports produced to compare them with busy and not busy times during the day or night. The extraction will be made from the database fed by the data incoming from the driver's handheld devices. The expanded knowledge will be stored in technical sources (PC hard drive, databases, documents) and non – technical, such as human minds. IT department of Abbey Cars is solely responsible for secure storing of the organisational knowledge.
5. **Sharing of knowledge:** will enable Abbey Cars to share collected knowledge through external flows with marketing companies or software developers and other interested parties and get some reward for that. In that case it's very important that Abbey Cars must be complying with Intellectual Property Act 2014, which protects businesses' intellectual property rights in UK and synchronises UK law with the relevant laws in European Union.

CREATING A KNOWLEDGE MANAGEMENT FRAMEWORK FOR ABBEY CARS

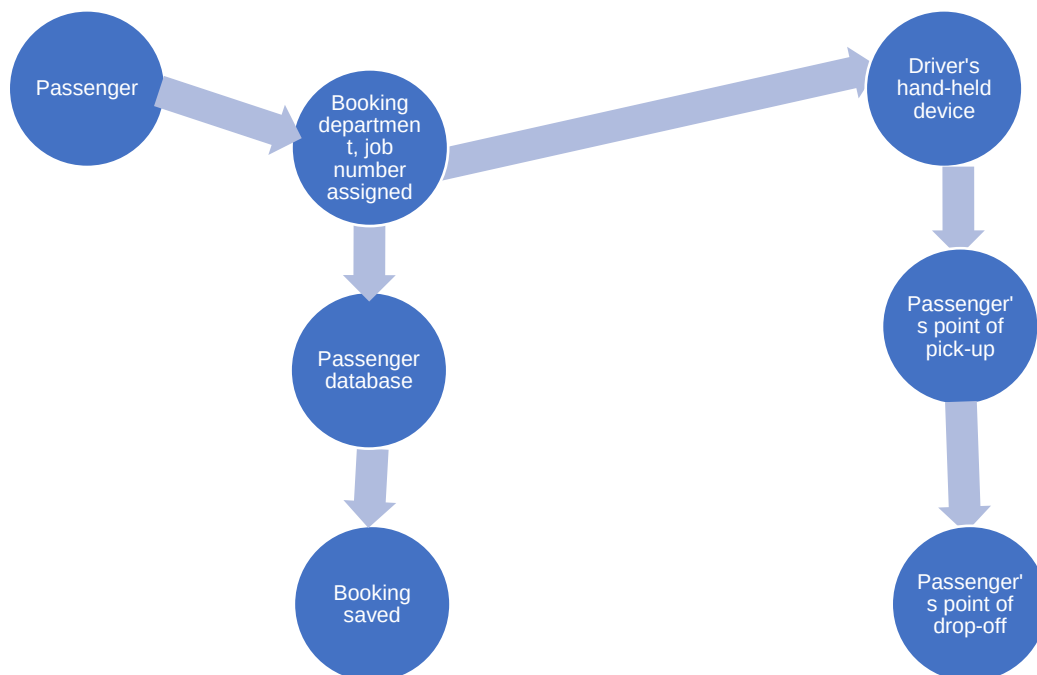
In this final part of assignment the author will be creating and analysing the knowledge management framework which can be applied in the case of the company Abbey Cars. According to Hariharan (2015) the knowledge management framework was firstly introduced in the new Clause 7.1.6 in ISO 9001:2015, which refers to organisational knowledge and its management. As the result of further research, based on the research of Hariharan (2015) the author was able to establish 8 key elements of the knowledge management framework applicable to the company of Abbey Cars:

1. **Knowledge management vision:** every organisation including Abbey Cars must have its own KM vision. KM vision statement of Abbey Cars says: “Knowledge management is an enabler to achieve company’s strategic goals and objectives in more effective and time – saving way. It will be accomplished by making the right knowledge available to the right person at the right time”.
2. **Strategy of achieving the KM vision:** a 360 – degree well – planned KM Model will be providing the strategy to reach fully comprehensive KM vision. This approach will be combining internal and external knowledge.
3. **Leadership and supremacy:** the following list of the guidelines in this element must be observed:
 - 3.1 Identifying organisational priorities and adjusting KM efforts around them.
 - 3.2 Defining performance measures for KM.
 - 3.3 Assigning the right people with the right knowledge to the relevant roles in KM.
 - 3.4 Regular meetings to review the progress of KM and discuss the changes or updates to be arranged.
 - 3.5 Knowledge sharing and results must be recognised and rewarded.
4. **People and structure:** to encourage the employees of Abbey Cars to participate in knowledge sharing replication. KM culture cannot be only available to the management elite of the company. It must be a mass movement.
5. **Culture and change management:** there are few methods to develop this very important part of the framework:
 - 5.1 Rewards and recognition schemes for knowledge sharing and performance.
 - 5.2 Constant communications between senior management and workforce of Abbey Cars regarding culture and behaviour. Relevant training and classes are already been arranged in Abbey Cars.
6. **KM processes:** KM activities such as knowledge sharing, and replication must be standardized methods. Only in this case the business of Abbey Cars will benefit from the knowledge management.
7. **Measuring KM results:** very weak area of the framework for some companies. Constant monitoring of KM progress must be thoroughly documented using standard formats in order to capture the effect of KM.
8. **Technology:** it can certainly help to enhance the progress of KM. Some examples of the use of technology within Abbey Cars are listed below:
 - 8.1 Organising discussion groups on the company’s social media sites to encourage knowledge exchange and virtual collaboration.
 - 8.2 To create knowledge bases.
 - 8.3 To establish YouTube channel with visual presentations to attract comments from experts.
 - 8.4 Review and publish knowledge sharing online on relevant websites.

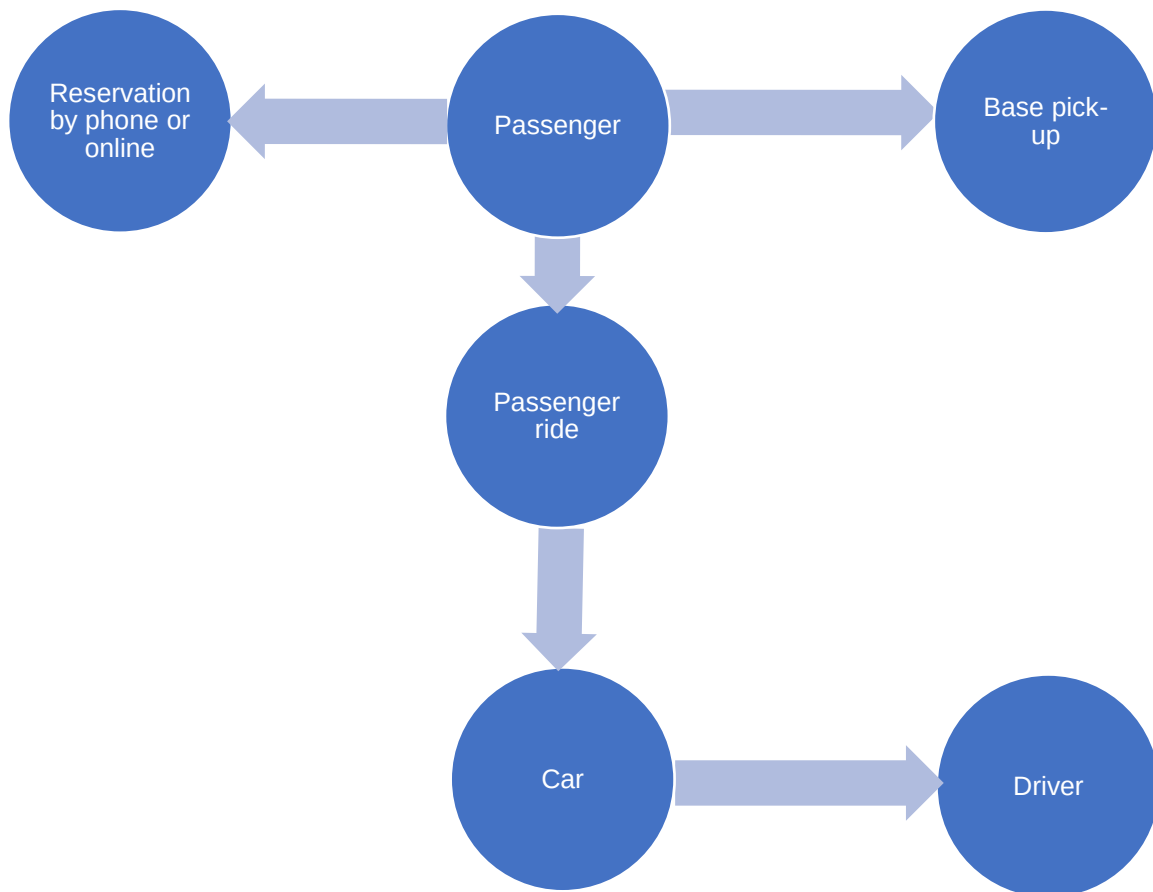
CONCLUSION

During the preparation of this assignment the author completed extensive and thorough library and internet research on the articles related to the topic of assignment. The author tried to establish the real meaning of data, information, knowledge and wisdom and their relation to each other. He also established and explained the importance of knowledge management, it's application and implementation to the case of Abbey Cars. The author also attempted to create the conceptual model of KM specifically tailored to the needs of Abbey Cars organisation. And finally, the proposed knowledge management framework as the core plan of the whole KM process was defined and revealed. Regarding his own experience and knowledge gained during the work on this assignment, the author had his eyes opened for the first time on things he never even knew existed before. The results for the author and the company are looking fantastic. The other task standing ahead is how to implement all this gained knowledge in the author's way to wisdom and the company's way to prosperity and success.

APPENDICES



Appendix 1: Data flow diagram for Abbey Cars, based on source: (Chaffey and White, 2010)



Appendix 2: Entity relationship diagram for Abbey Cars, based on source: (Chaffey and White, 2010)

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