PROJECT INITIATION DOCUMENT

Lambert Uwuigbusun, Owen Kilby, Nayed Khan, Diogo Rodrigues and Leo Lovric

IT Management For Business (Level 5)

KC5014 – Enterprise Project Management

Contents

Project Definition

Project Background

Peters' Pharmacies operates in the North East of England, in locations ranging from Alnwick to Whitley Bay. They have 15 stores that have a dispensing chemist as well as selling a range of non-prescription products such as toiletries, cosmetics, and medical products. During Covid-19, the dispensing side of the business has been successful representing 65% of the entire business. However, the non-prescription side has not been as successful, only representing 35% of the entire business. The estimated turnover is down by 40% compared to similar periods of time two years ago. The turnover is currently £20 million and last year's operating profit was £2.1 million. Furthermore, even though general stock levels are high, customers are reporting that they cannot find certain products in the shops. There is often stock in another one of their stores. This means the number of "stock-outs" have increased causing some loss in sales; an influential factor in the 40% drop in turnover.

As a result of this the group Managing Director, Dianne Peters, approached us (EBS) looking for a solution to the problem by introducing the idea of a new processing systems for stock and ordering. Currently, each chemist store keeps its own stock records and in case of shortages, contacts the wholesaler directly to re-order the products. In preference of this, Dianne wants to centralise the purchasing process and use a central warehouse to hold the stocks for each of the chemist stores. The stores will then be able to be frequently re-supplied by the warehouse, based on the past few days of sales. In addition to the demands, Dianne hopes that the vans that are being used to deliver prescriptions will have enough space to deliver the stock from the warehouse to the shops when required.

About Us:
We are EBS a group of 5 self-employed consultants, experienced in IT implementation systems and operate globally.

Objectives:

- Implement a warehouse fully equipped, supplied with stocks, offices and server room.
- Hire appropriate staff across the business to manage the products and maintain the IT systems.
- Implement an ERP system in all 15 shops to monitor the stocks, to alert the warehouse and make orders from the supplier when there is a shortage of products.
- Ensure the frequent supply of products in the shops, based on the few days of sales, utilising the ERP functionalities and the rightful transportation.
- Ensure the project follows all relevant legislation.
- Train staff to use the new ERP system and IT equipment.
- Train staff to handle the products.
- Install security implementations in the warehouse, shops, server room and server to ensure the safety of the staff and business.

Desired outcomes:

- The number of "stock outs" reduced exponentially and manageable in every shop.
- The restocking of the products without needing additional vehicles.
- New ERP system functional in all 15 shops and warehouse.
- An ERP system that alerts the warehouse and supplier when there is a shortage in the shop.

- All staff are fully trained and hired for the new ERP system and product handling.
- Having the ability to track the drivers' routes and location.
- The warehouse fully equipped and centralised database fully functional.
- All the drivers are fully licensed and equipped.
- The warehouse, shops, server room, server and staff passed all the security implementations and safeguarding procedures.
- All legislation papers approved and stored in a safe location.
- Peters' Pharmacies will deliver the stock from the warehouse to the shops when it is needed with the 5 Vans that were currently used and owned by them.
- Lay the ground for further digitalisation of the company

Project Scope

EBS will plan and deliver a new secure purchasing-stocking processing system for Peters' Pharmacies. This will be accomplished by delivering several key products including; a centralised database, an ERP System, a centralised warehouse that will store stock and house the servers to store the database, a transportation system, hiring and training staff to use the new systems and product handling. This will allow the 15 pharmacies to be managed more effectively and to tackle the issues Peters' Pharmacies are currently experiencing, such as stock outs. With the new systems, Peters' Pharmacies will be able to control, monitor and order the stock of every shop, in a single system that can be used not only in the shops but in the warehouse and remotely as well. By being able to monitor and control the amount of stock in each store, it enables the business to make deliveries from the warehouse to any store that is low on stock with the vans at disposal. We will use the software developers to create the centralised database and migrate the data from the shops to the servers. We will use AWS to for our cloud storage and AWS will migrate the data from the shops onto the cloud for the backup. We will utilise the help of the database administrator to set up the server, operating system and software's needed prior the migration. We will also use HP as the server's provider, Microsoft Dynamics 365 to create the ERP system, an ethical hacker to test the database security, Microsoft for the OS of the IT equipment. We will find a warehouse to rent and equip the warehouse and shops with the equipment needed. Finally, the new purchasing processing system will be rolled out through a pilot integration plan to prevent, test and solve any issues that occur.

Exclusions:

- New delivery vans will be excluded because the existing vans that currently deliver prescriptions will be used to move stock.
- A new point of sale system in the shops will be excluded as it is not part of the demands.
- New drivers will be excluded because Peters' Pharmacies currently have enough drivers that can be used for the new restocking process.
- Maintenance and support for the new system after the project is finished will be excluded because there will be insurance in place that will cover the new implementations, offering technical assistance and replacements for a set amount of time, and a main point of contact will be identified for this support.

Constraints

- Make the database secure enough so it complies with the legal requirements such as GDPR, specifically in relation to private medical data. It is important for the reputation of the business that customers trust that their data is safe.
- The new purchasing processing system needs to reduce stock outs.
- The warehouse needs to be big enough to hold stock for every shop.
- The transportation system needs to be able to resupply shops when required.
- Staff need to be trained before or while implementing the new systems.
- Potential equipment shortage and long lead times because of Covid.
- National medical shortage and supply delays due to Brexit.
- Peters' Pharmacies not agreeing with the functionalities or designs and could affect the timescale of the software development.

Assumptions

Assumptions about the current business:

- Stock records in all the 15 stores are on separate databases but with the same consistent structure and on the same platform. If this is not the case, a database structure will have to be created and the inconsistent data from the 15 pharmacies will have to be manually inputted.
- Some of Peters' Pharmacies equipment in the shops are from HP.
- Peters' Pharmacies currently have 5 Vans and 5 drivers at their disposal to run the business transportation.
- Each shop has computers, monitors and peripherals for the purchasing process but these do not meet the requirements of the ERP system that will be implemented resulting in new equipment needing to be purchased.
- The company has lawyers to follow up their business and these lawyers can help us with legalisation compliance.
- The company has an IT Technician for their current technology who can help install and maintain the new technological equipment.

Assumptions we are using for our approach:

- Peters' Pharmacies group would prefer a centralised database on a static server with an online backup rather than the data only being in the cloud as this has a better value to cost ratio, better performance and it is safer in terms of security considerations.
- They also prefer a pilot integration rather than a big bang integration in 3 shops at a time in case there are any issues with the new centralised database due to the complexity of the process and the risk it brings.
- We also assume the pilot integration will be done over 5 weeks with 3 shops being added each week.
- Peters' Pharmacies group prefers the wholesaler being contacted, and the stock being re-ordered automatically by the ERP system when the stock of a product gets to a certain level at the shop and warehouse rather than this being done manually by the shop/warehouse manager. This is because it will decrease the likelihood of mistakes resulting in stock-outs which could affect sales and the customer base. The warehouse manager will still be alerted for approval, to ensure the process occurs and to organize the transport of the product to the shops.
- They would prefer a centralised database from reputable software developers in collaboration with a database administrator because it will be more secure and customized.
- Peters' Pharmacies group would also prefer an ERP System from a credible organisation such as Microsoft Dynamics 365.

- They would prefer a single warehouse with a section in the warehouse to have a server rather than having a separate warehouse for the server because the amount of data needed to be stored on the database is relatively small meaning only one server block will be required, which can be stored in a room at the back of the warehouse.
- Peters' Pharmacies group would prefer fresh staff being hired and trained because the warehouse will need employees and there are not enough employees currently in the organisation to fill these jobs.
- The project will be worked on during weekdays between 8am and 5pm.
- Peters' Pharmacies group can afford a budget up to £1,000,000 for this project.
- They expect the project to be finished within 12 months.
- Peters' Pharmacies group is financially stable enough to rent or buy a warehouse of 8000sqf in the North East as well as cover the other project costs and add the new staff to the payroll.
- Peters' Pharmacies group has 1 main supplier for each type of medication and does not want to change this currently.
- The business has no other projects currently ongoing.
- A warehouse that has 8000 square feet will be enough to store the stock for 15 pharmacies.
- There is an overview of all the products available and their stock level at all the 15 different shops.
- The data that needs to be migrated will be less than 2TB.
- All the contracts we use have a duration of 5 years.
- Warehouse contract includes the bills e.g., electrical.

Project Approach

The approach that is being taken will be to meet the requirements of the client, by establishing a new centralised database, build a suitable technical infrastructure/network and implement an ERP system. The centralised database will be created by the software developers and the ERP system will be created by Microsoft Dynamics 365. The centralised database will be held on servers purchased from HP and have a backup on the AWS cloud. Previously there was no centralized distribution point for all the products offered by the company. A new warehouse will be rented as a distribution point for the shops, to be aligned with the new ERP system. New employees will be hired, including warehouse workers, database admin and a warehouse manager. The transporting system will have to shift from transporting in-between branches to transporting through the centralised warehouse as a collection point. The vans that are being used to deliver prescriptions will be used from now on to transport the products from the warehouse to the shops. Within the company, there will be information about the products available and their stock level at all the 15 different shops. All this available data will be migrated to the centralised database on the servers by the software developers and on the cloud backup by AWS. Finally, to make the usage of the new system as efficient as possible, the staff involved with the new systems will receive in depth training. After all those stages are successfully implemented, the newly created system can go live. The implementation will be done through a pilot scheme with 3 shops being added in the centralisation each week for 5 weeks to ensure issues can be solved on time without putting the entirety of the business at risk.

Project organisation

Corporate or Programme Management

Dianne Peters will fill this role and will be responsible for setting the project's constraints by indicating what they want and assign the project board role to carry out the project on its behalf.

Project Board
The executive roles will be filled by Dianne Peters, Peters' Pharmacies group managing directors. The board will be responsible during all the duration of the project to support the business case and agree with all the outputs and changes that could happen in at different stages.

Senior User
The senior user role will be represented by the warehouse manager and the senior shop manager responsible for all 15 shops managers. It is important to acknowledge that the warehouse manager is responsible for checking the benefits of the centralised database, the software involved whereas the shop manager will check the advantages of the ERP system. The distribution line should be assessed by both parts since it is an integral part of both the warehouse and shop operations to ensure stock is delivered.

Senior supplier
The senior supplier role will be represented by EBS consultants, AWS, Microsoft Dynamics 365 and HP. They are responsible for delivering the products of the project including the database, ERP system, warehouse, transportation, training, servers and cloud backup.

Project Manager
The project manager will monitor the project on a day-to-day basis according to the powers given by the project board. The project manager will also represent the role of the configuration librarian and control the configuration management strategy. This means the project manager will ensure that all the products are stored, protected and controlled as well keep all the records, logs and registers up to date.

Team Manager
The team manager will be responsible for ensuring all teams such as the ERP team and warehouse team are completing the products on-time and on-specification and contribute to the project approach.

Team
The team will include the database administrator, warehouse employees, drivers, IT technician and lawyers. They are responsible for creating and working on the products such as the database, ERP, warehouse, transport and servers.

Change Control Authority Manager
The change control authority role will be responsible for identifying, controlling and managing issues and changes that occur during the project. If there is a request for a change or a product is off specification, they will be responsible for following the change control procedure of capture, examine, propose, decide and implement.

Project Assurance
The project assurance role will be responsible for ensuring the project is progressing as planned and ensuring the products of the project are meeting the specification. They will also share their experiences from past projects to guide this work to specification and within the

agreed timescale. The project assurance position will also make sure the project deliverables will be finished as planned.

Project Support
The project support role will be filled by the project manager assistant and will be responsible for supporting the project manager as required. This may include administrative help or helping the project manager use certain tools or methods.

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Project Interface

There are no project interfaces within this project because no other projects are occurring inside Peters' Pharmacy Group or EBS.

Product Interface

- Contract with the software developers to create the centralized database and migrate the data to it on the servers.
- Contract with AWS for the cloud storage back and data migration to the backup.
- To achieve the same deliverable, it involves; database administrator, project manager, (EBS) consultants, warehouse manager, AWS team and shop managers.
- Contract with HP in providing the server and equipment.
- To achieve the same deliverable, it involves; database administrator, HP team and an IT technician.
- Contract with Microsoft dynamics 365 for the ERP system.
- To achieve the same deliverable, it involves; - Microsoft team, project managers, aassistant project manager, executive (Dianne Peter's) and project management (EBS).
- The ERP system in the warehouse and shops will have an interface with the point-of-sale system.
- The products stocked in the shops will have an interface with the warehouse as a supply system.
- The centralised database will have an interface with the servers as records storage.
- The restocking process will have an interface with the vans and the drivers as transport system.

Business Case

Business Options

Project overview
Option 1
The project does not go ahead and is cancelled because it is not viable.
Advantages:
The business operates as usual; no investment will be required, and it is easier to predict the financial outcome of the next years as they will be similar to previous years.
Disadvantages:
Stock outs will still occur at the same rate or increase to the extent of an exponential loss of customers and sales. Also, the individual shops will have to continue to order directly to the

wholesaler causing lack of efficiency, uncertainty and the turnover may also continue to drop.
Option 2
The project goes ahead but only the minimum that is required will be done, such as a simple database on the cloud with no backup, ERP with very limited functionalities such as viewing the stocks without an alerting system automatic and a small warehouse.
Advantages:
The cheapest strategy for doing the project. The efficiency of the company will increase slightly with the stock outs decreasing which will help the turnover to slightly recover, profit slightly increase, and a new basic system is implemented.
Disadvantages:
The new system will not be as efficient as it could possibly be and there is a higher chance of errors occurring and the new system from failing because some precautions may not have been taken due to the minimum being done. Also, staff may be more resistant in the changes of the new system because the system will not be easy to use without a training.
Option 3
The project goes ahead and the best options are chosen.
Advantages:
The new purchasing and distribution process system will recover the majority or all the turnover loss because the number of stockouts will be reduced to zero or near zero, making stock levels easy to manage, deliver, control and store.
Disadvantages:
This is the most expensive and time-consuming option for Peters' Pharmacies because the best options for the business will require a lot of time to implement and money to invest.
Chosen option
The option 3 has been chosen because the business can afford the costs and has not imposed a strict timeframe. The end products will have met the quality criteria of the client which will in return fix the issues the company has been experiencing, enabling future expansion opportunities, making the company operate more efficiently overall.

How to do the project overall
The current project planned has a cost of £580,000 but there are several alternative methods which will reduce the cost but change the benefits.
Option 1
Find more suppliers for non-prescriptions products and hire more staff members, that have the role of checking the number of stocks and when there is a shortage to request a new order of prescriptions/products.
Advantages:
Being able to make more profit as there will always be a supply of products thanks to the proactiveness of the new staff member and in this way, they can minimise risks of shortages which may help the turnover loss to be recovered and decrease the stock-outs.
Disadvantage:
Not meeting a deliverable of holding stocks in a centralised location, not sustainable for the staff in the role and the cost of the expenses of hiring staff in each store.
Option 2
Find more suppliers for non-prescriptions products and implement an ERP system that monitors, tracks the purchasing process as well as being able to alert the suppliers of a shortage and automatically make a new order.

Advantages:
Risks of shop having low stock is extremely low and stock-outs will likely not happen often. No additional expense required for individual staff in each store to make manual orders.
Disadvantages:
The cost and time to train the staff for the ERP system and the cost of the ERP contract. Also, if there is national shortage, the business will still be affected until the national shortage is sorted.
Option 3
Finding new suppliers for non-prescriptions products or create more rigid contracts with existing ones, implement a new centralised product warehouse, new ERP system in all 15 shops and warehouse, new centralised database and hire appropriate staff.
Advantages:
Having a new purchasing, ordering, and stocking process for the business will result in a better performance overview of the business.
Disadvantages:
Cost of the project and the return on investment is not experienced immediately.
Chosen option
We decided to go with the option 3 because it best meets the requirements of the client and more sustainable.

Centralised database storage
Option 1
The centralised database stored on the cloud.
Advantages:
This is the lowest cost strategy as the cloud storage expense for the backup and hardware expense for a static server block and storage will not be needed.
Disadvantages:
However, the security of this option is poor as a third party will have access to the data, data recovery costs can be more expensive, and it is reliant on the internet so if it goes down on cloud providers side, the pharmacies data cannot be accessed.
Option 2
The centralised database stored on a static server block with a backup in the cloud.
Advantages:
The database will never be inaccessible because if the internet goes down, the data is still accessible in the database.
Disadvantages:
More capital investment is required for the hardware, space is required for the server block and a third-party company can still access the backed-up data.
Option 3
The centralised database is stored on a static server block with a backup stored on another static server block in a separate location.
Advantages:
The database will never be inaccessible because if the internet goes down, no third-party company has access to any of the data, data recovery will be easier to perform because no interaction is needed with another company and there is no limit on the storage.
Disadvantages:
This will be very costly because more hardware will need to be purchased such as a server block and another location will need to be rented/purchased.
Chosen option

The option 2 has been chosen because it has the best value and most appropriate for a company this size. It allows space expansion in the future, removes many of the disadvantages of having the database stored on the cloud and it does not require a lot more capital investment which will be needed with the ideal solution for the reasons.

Implementation Strategy

Option 1 - Big Bang Implementation

The new system is rolled out to all the 15 shops and the warehouse simultaneously.

Advantages:

- Implementation time is shorter.
- Everyone in the company is instantly using the same system causing less confusion.
- Lower costs.

Disadvantages:

- More opportunity for system issues to occur.
- If the system fails, the entire business cannot operate temporarily.
- Harder to fall back to the old system.

Option 2 - Pilot Integration

The new system is rolled out steadily over 5 weeks with the new ERP system being implemented in 3 shops each week.

Advantages:

- Fix small problems as you implement.
- Easier to adjust the new system.
- View the performances of the new system.
- Safer implementation.

Disadvantages:

- Implementation cost is higher.
- Delayed return on investment.

Chosen option:

The pilot implementation, as it is the preference of Peters' Pharmacies business for the safety of the integration plan. It allows them to try the new system in three shops without risking the ongoing business of all their shops.

Restock System Method

Option 1 - Buy More Vans

Buying 10 more vans to match the number of shops and employing 10 more drivers.

Advantages:

- Ensures the restocking process is quicker and safer.

Disadvantages:

- Cost of employing more drivers.
- Cost of the vans and equipment for the drivers.

Option 2 - Keep Vans

Keep the 5 drivers and 5 vans to use for the transportation of the products from the wholesaler to the warehouse and then the warehouse to the stores. Also, ensure the van safety with regular checks and providing the drivers with the appropriate equipment.

Advantages:

- Saving money instead of buying new vans and hiring new drivers.
- Cost of checks and insurances contracts.

Disadvantages:

- Cost of the checks and equipment.
- Could cause delays on delivery to the stores if the demand exceeds the transportation capabilities.

Chosen option

We decided that we would not buy more vans because the business locality in the North East so the shops will not be too far from each other and since we would have a new ERP system that would be monitoring the stocks and alerting the warehouse, when there is a slight shortage in the shop, we believe the drivers will be able to withstand the demand and deliver according to the urgency.

Database Creation Method

Option 1 - Creating the database using program developers

The centralised database is created from scratch by experienced program developers. The program developers will use the software MySQL to code the database in SQL.

Advantages:

- More customization.
- Better build quality.
- Better security
- Issues will be resolved more quickly

Disadvantages:

- Higher cost.
- More time.
- More likely chance of issues occurring.

Option 2 - use a 3rd party company to create the database/ use a pre-build

The centralised database is created by a 3rd party company using their assets.

Advantages:

- Lower cost.
- Less time.
- More reliable.
- Easier to get support/maintenance after the project.

Disadvantages:

- Less customisation

Chosen option

We have chosen to use the program developers because they are more reliable for building a customized and secure database and issues will be resolved faster because the 3rd party will not have to be contacted and arrangements made based on their schedule.

Options: Servers

The options for the servers were between DELL, HP and Sentinel. All of these are well known and well-respected companies with expertise in enterprise server solutions but the company that offered longer cover with their return policy and insurance was HP. Peters' Pharmacies Group also currently has various equipment from HP so we believe it would be wise to use a familiar brand. We considered if to store the servers inside or separately from the warehouse but after careful consideration we decided to implement the servers inside the warehouse. Firstly, because the whole point of having a static database was to be in close contact with the data whereas, if the cloud idea were implemented, this debate would have not happened. Secondly, we have enough room in the warehouse to have a server room and store the servers. Thirdly, it saves money in terms of costs for the bills.

Options: Warehouse

The options were to rent, build or buy a warehouse. Buying a warehouse seemed expensive but enables stability and in the long term, the business would not need to worry about variable expenses such as rent rates and could focus more on sales. However, it is acknowledged that moving or changing warehouse is difficult. Building a warehouse would allow a high degree of customisation as we could pick the size, design and location. However, the cost increases exponentially compared to the previous options. Renting the warehouse will be the least expensive option in the short-term and provides more flexibility.

Chosen option

We decided to rent the warehouse because we believe the business has the opportunity of growing in the coming years, therefore having flexible contracts enables them to have the possibility of relocating to a bigger warehouse in the future. Another reason for renting is to test the actual impact of the project on the business growth. If the business is experiencing financial difficulties that would require instantaneous cash, they can return to the former ordering and stocking process or go for the other alternatives explained in the business option section without having a big loss in comparison to if they were to buy the warehouse.

Options: Staff Training

The options for the warehouse training were to train the staff using online tutorials, in-person training or instruction manuals. The options for training the staff using the ERP system were Microsoft training, online tutorials or instruction manuals.

Chosen option

We decided to train the warehouse staff in product handling by following manuals and face to face training with the warehouse manager that has experience in the field.

As for the ERP system, we decided to use the training provided by Microsoft, as they are the product sellers so they will be able to offer an reliable and in-depth course.

Expected benefits

- Peters' Pharmacies group operating profit last year was £2.1 million. The new purchasing process will increase the profit. This benefit will be visible one year after the new system goes live by comparing the operating profit that was generated in that year with the new system, to £2.1 million to see if it has increased. The benefit tolerance for this expected benefit is that the operating profit should increase by at least 2%. The project manager will be responsible for meeting this expected benefit.
- Currently, all of Peters' Pharmacies shops keep their own stock records. With the new system, they will have a better view of the stock levels of the entire business in an ERP system enabling them to make strategical business plans. This benefit will be visible at the end of the project by comparing usability and clarity of the database with all the stock levels to the 15 separate records in each shop before the new database was created. The benefit tolerance for this expected benefit is that the new database makes it somewhat easier to view all the stock levels. The program developers, database administrator, project manager and Microsoft Dynamics 365 team will be responsible for meeting this expected benefit.
- Peters' Pharmacies Group will have zero or near zero stockouts occurring when this new system is implemented, whereas they are currently experiencing the number of stock outs increasing. This benefit measurement will be made 2 months after the project by looking the number of stock outs occurring compared to before the system was implemented. The benefit tolerance for this expected benefit is that the number of

stock outs decrease significantly and is at zero or close to zero. The project manager will be responsible for meeting this expected benefit.

- Currently, Peters' Pharmacies shops orders are done manually from the wholesaler but with this new system, the stock will be automatically ordered from the wholesaler when it reaches a low level that is been set. Thus, meaning it will be more efficient and low stock levels will be unlikely to occur. This benefit will be visible 3 months after the project by looking at the number of times stock got to a dangerous low level before the system was implemented compared to after. The benefit tolerance for this expected benefit is that the number of dangerously low stock levels is decreased by 90%. The database administrator will be responsible for this.

Other Expected Benefits Include:

- The wholesaler will deliver the stock to the warehouse instead of the drivers therefore getting stock into the shops will be more effective and cheaper.
- Higher revenues as the restrictions due to the pandemic are lifted so the non-prescription product sales will return to normal.
- In case of a national shortage or delays, the warehouse will hold enough stock to keep the business going for several months without supplies.
- Reducing the human error to close to 0 in monitoring the number of stocks sold and managed.
- Ability to manage stock so that the demand for products in stores can be met.
- Ability to order stock more effectively and avoid surplus of products.
- Better overview of the performance of all their stores, enabling them to make informed decisions for future investments such as the location of new pharmacies.

Cost and Timescale

- All the contract costs have been calculated for 5 years.
- Inside the warehouse costs includes all the product we included: the transportation costs; We considered the fuel, MOT checks, road tax, drivers equipment and Insurances costs
- Cost of the warehouse covers the bills.
- Erp timescale consist in agreeing the product customazion as Microsoft currently do that service so the timescale is just for the customazion to meet Peters' Pharmacies. This is a variable timescale because soft wares can have issues or human errors can happen.
- Pilot integration have a variable timescale in terms of issues related to the system.
- Hiring and training timescale is variable as individuals can have variable personal circumstances
- Most of the costs have been calculated for the present costs but we can't guarantee if the future market will be the same.
- The amazon migration cost to the cloud backup is being calculated with their website. calculator
- The software used for the database is MySQL
- Security implementations includes: CCTV, Alarms, Firewall and security guard
- Warehouse equipment:
- Shop and Warehouse IT Hardware from HP
- Microsoft Dynamics License (ERP) is the ERP chosen for this project.

COST OVERVIEW

WED 01/12/21 - WED 31/08/22

COST

£579,991.50

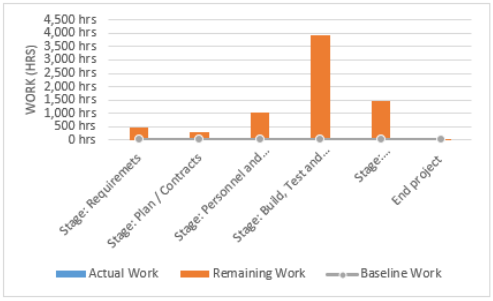
COST STATUS

Cost status for top level tasks.

Name	Cost
Stage: Requiremets	£9,680.00
Stage: Plan / Contracts	£402,815.50
Stage: Personnel and Finance	£37,560.00
Stage: Build, Test and Review	£104,768.00
Stage: Implementation/ Go live	£24,640.00
End project	£528.00

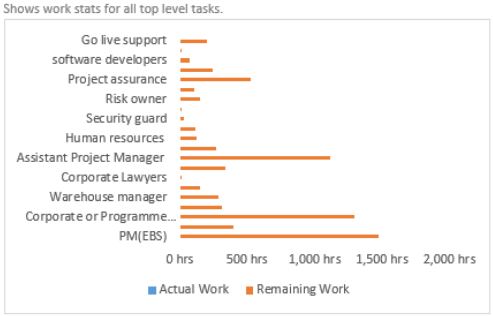
Remaining Work

7,240 hrs



WORK STATS

Shows work stats for all top level tasks.

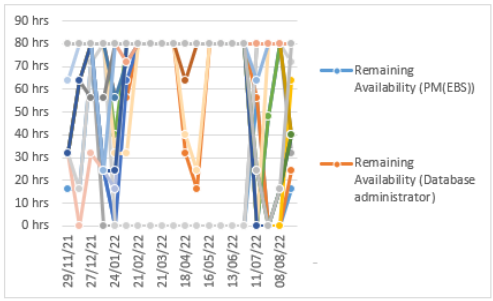


RESOURCE STATS

Shows work stats for all your resources.

WORK OVERVIEW

Wed 01/12/21 — Wed 31/08/22



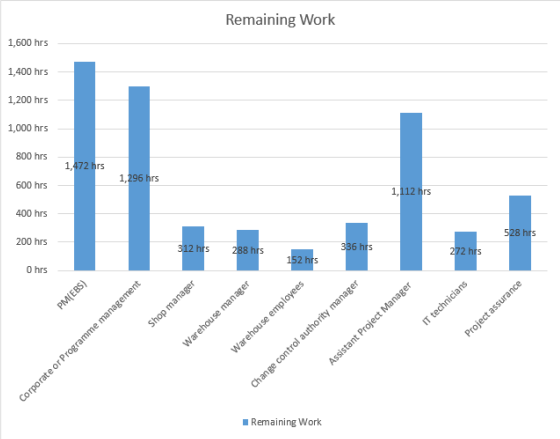
REMAINING AVAILABILITY

Shows remaining availability for all work resources.

OVERALLOCATED RESOURCES

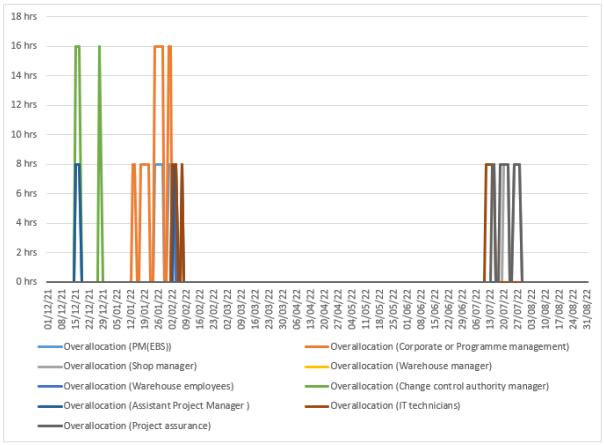
WORK STATUS

Work status for overallocated resources.



OVERALLOCATION

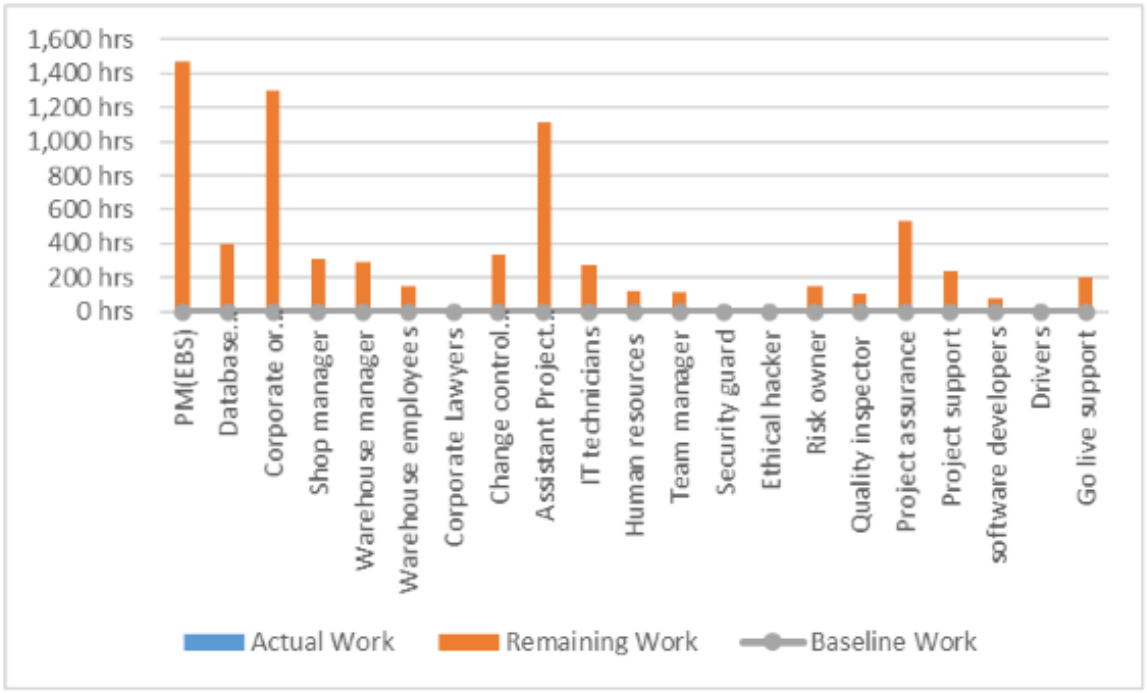
Surplus work assigned to overallocated resources. To resolve overallocations use Team Planner View



RESOURCE OVERVIEW

RESOURCE STATS

Work status for all work resources.



RESOURCE STATUS

Remaining work for all work resources.

Name	Start	Finish	Cost	Work
PM(EBS)	Wed 01/12/21	Wed 31/08/22	£30,912.00	1,472 hrs
Database administrator	Wed 02/02/22	Tue 30/08/22	£6,000.00	400 hrs
Corporate or Programme management	Fri 03/12/21	Wed 31/08/22	£38,880.00	1,296 hrs
Shop manager	Mon 11/07/22	Tue 23/08/22	£4,680.00	312 hrs
Warehouse manager	Thu 13/01/22	Thu 28/07/22	£4,320.00	288 hrs
Warehouse employees	Wed 02/02/22	Thu 28/07/22	£7,600.00	152 hrs
Corporate Lawyers	Wed 01/12/21	Thu 02/12/21	£640.00	16 hrs
Change control authority manager	Fri 03/12/21	Tue 01/02/22	£8,400.00	336 hrs
Assistant Project Manager	Fri 03/12/21	Wed 31/08/22	£16,680.00	1,112 hrs
IT technicians	Wed 02/02/22	Fri 15/07/22	£3,264.00	272 hrs
Human resources	Thu 13/01/22	Wed 02/02/22	£2,400.00	120 hrs
Team manager	Thu 13/01/22	Tue 01/02/22	£1,680.00	112 hrs
Security guard	Wed 02/02/22	Mon 07/02/22	£320.00	32 hrs
Ethical hacker	Mon 25/04/22	Tue 26/04/22	£384.00	16 hrs
Risk owner	Fri 03/12/21	Tue 30/08/22	£2,280.00	152 hrs
Quality inspector	Fri 03/12/21	Tue 30/08/22	£1,560.00	104 hrs
Project assurance	Fri 03/12/21	Tue 30/08/22	£7,920.00	528 hrs
Project support	Thu 14/07/22	Tue 30/08/22	£3,600.00	240 hrs
software developers	Thu 13/01/22	Tue 19/07/22	£5,400.00	72 hrs
Drivers	Thu 10/02/22	Thu 10/02/22	£92.00	8 hrs
Go live support	Thu 14/07/22	Wed 17/08/22	£2,800.00	200 hrs

Milestones	Start Date	Finish Date
Requirement Specifications agreed	01/12/21	14/12/21
All contracts agreed	15/12/21	12/01/22
Hiring finished	13/01/22	01/02/22
Database developed	13/01/22	21/02/22
Warehouse finished	13/01/22	08/02/22
ERP developed	24/01/22	15/04/22
Servers finished	02/01/22	08/02/22
Data Migration finished	27/04/22	10/05/22
Training finished	11/07/22	28/07/22
Pilot Implemented	20/07/22	23/08/22
Go Live Support Finished	14/07/22	17/08/22

Major Risks

Positive:

1. Increased the number of employees.
2. The advantage of the pilot integration is that current production is not disrupted, and migration issues can be fully dealt with before the target system takes over.
3. Increased the number of sales.
4. Better control of stock to meet demands
5. Better performance overview of business
6. Data backed up

Negative:

- Data breach during implementation.
- Extended Downtime Risk ERP
- Application Stability Risk for the ERP
- Increased the costs as the drivers will get paid hourly to supply frequently from the warehouse to the shops.
- Costs for fuel for extended travel to and from warehouse.
- Delays on delivering the products from warehouse to the stores, encase of a big demand from every shop at the same time, due to more stores than the available delivery vans and drivers.
- Training qualifications won’t assure 0% human mistake.
- Vans having accidents that could affect the delivery timescale, equipment’s, and the driver's safety.
- Frequency of criminal activity in the area – theft of product in the warehouse and during the movement of stocks to the warehouse.
- The duration of the project longer than the expectation.
- Peters' Pharmacies cutting the budget for the project during execution.
- Peters' Pharmacies not agreeing with the functionalities or designs and affects the timescale of the software development.
- National medical shortage or delays because of Brexit/ pandemic.

Risk ID	Relating to	Risk description	Impact description	Type (Threat/ Opportunity)	Probability Likelihood (1 Low – 10 High)	Impact (1 Low – 10 High)	Mitigation Strategy/ Resolution Description
1	Time	The timescale of the data migration can affect the daily ongoing business.	It can affect the daily ongoing business as not having a functional centralised purchasing process, could stop purchasing process. Requiring manual work.	Threat	2	9	Hiring highly experience data migration specialist to assist and monitor the process consistently throughout the project
2	Budget/ Cost	The budget not exceeding the cost of the actual project won't be enough to tackle any issues that can cause the delay or implementing a mitigation strategy.	Unable to mitigate any potential risk	Threat	5	7	Have a small budget buffer to catch any extra costs which may be incurred due to delays or extra work being required which was not expected.
3	Budget/ Cost	under budget if no risk was incurred during the implementation.	Increased revues for Peters' Pharmacies.	Opportunity	3	7	Using the budget effectively and wisely.
4	Scope	The scope is referring to a list of specific project goals. This can be altered if there are any changes to	It can change the timescale so even the duration of the project.	Threat	4	8	Leave enough space for the critical path.

		the PBS because even if one part of the PBS is changed then you are automatically affecting the milestone.					
5	Quality	The client reduced the budget	It will cause a cascade process where it will require to cut things down that could affect the quality	Threat	3	7	We can highlight the importance of the budget and how the full use of it it's required to meet the client demand.
6	Benefits	New system running the centralised ordering process, but staff is unable to learn it on time.	Increased cost of training an affect the customer experience as it will encounter in selling process.	Threat	4	9	Ensure that all the staff is fully trained in order to start using the new system appropriatel y

Investment appraisal

The project will cost the company £580,000 in total.

Assuming the project will lead the profit to increase by 8 % through all the advantages that will be mentioned in the following, it will need around three years to make the project pay it off by itself. After two years the turnovers should recover to normal after being 40% down, so the profit should increase again to around 3.5 million (excluding the increase of profit through the project).

Year	Profit	Investment	ROI
0	0	579992	0.00%
1	168000	579992	28.97%
2	336000	579992	57.93%
3	616000	579992	106.21%

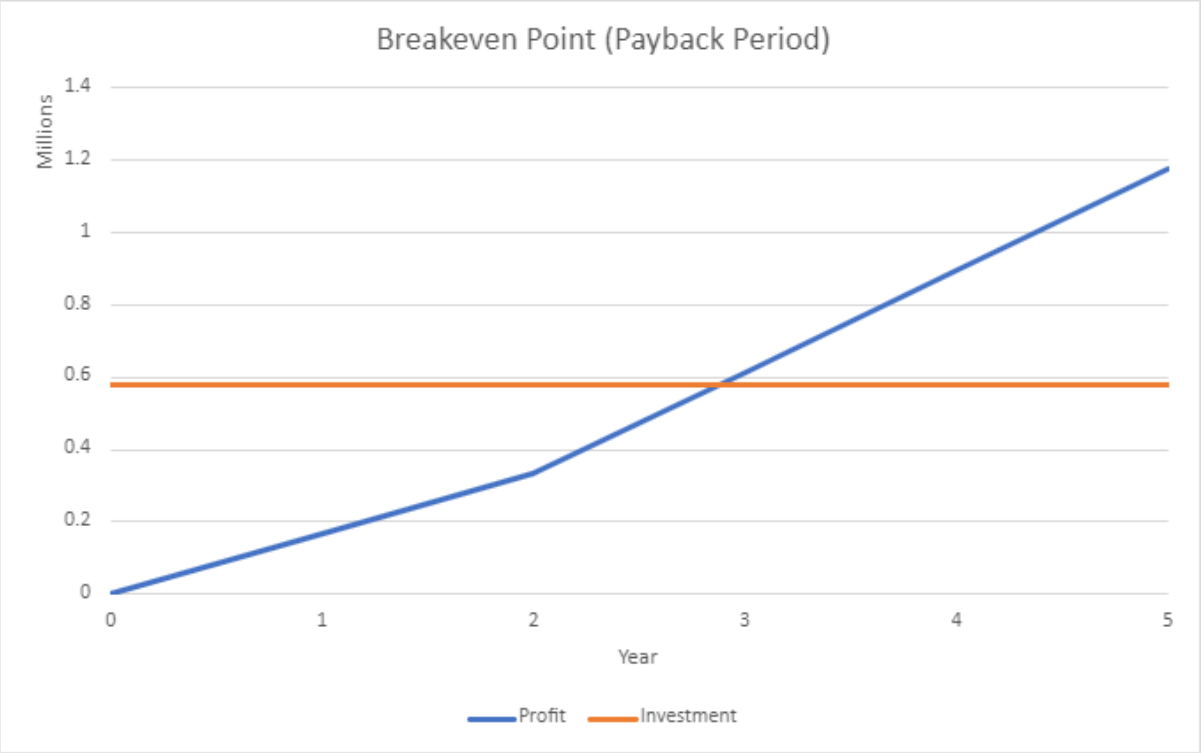
4	896000	579992	154.48%
5	1176000	579992	202.76%

Cost of project	579992
Annual Cash Inflows	205333.33
Payback period	2.82

Year	Assumed Profit	Assumed Annual profit increase %	Profit per year because of the Project
1	2,100,000	0.08	168000
2	2,100,000	0.08	168000
3	3,500,000	0.08	280000
4	3,500,000	0.08	280000
5	3,500,000	0.08	280000

Turnover at 60%	Turnover at 100%
40,000,000	66,666,666

Profit at 60%	Profit at 100%
2,100,000	3,500,000



Financial benefits:

- It opens a lot of possibilities in terms of digitalization and increasing the business growth.

- Increased availability - The number of sales will directly grow with the new centralized database as the number of “stock outs” is going towards zero in each of the 15 shops, customers will always find products to purchase.
    - -> Increased sales
    - -> Customer satisfaction

- A centralized database gives the opportunity to keep records of all the shops in the same format, making it much easier to compare the different data and with that information make better decisions on future financial choices.
- This project makes it easier to open new stores in near future.
- Improved inventory costs - Only carry as much inventory as needed to avoid higher overhead costs.
- Enhanced business reporting – enables new reporting options through real-time data. Through the integrated database for all business processes so there is only one “single source of truth”.
- Improved efficiency of business processes - manual or routine tasks can get automated and smarter workflows can be implemented.
- The warehouse will use the vans that are already part of the company to deliver the stock, therefore it’s not required to purchase new vans.

Project Plan

Project Product Description

Identifier:
v1.0.0
Title:
Centralisation of Peters' Pharmacies Group Purchasing Process and stocking system

Purpose:
The purpose is to centralise the purchasing process and stocking, holding stock at a central warehouse from which each shop will be resupplied frequently based on the previous day or couple of day’s sales.

Composition:
Transport, centralised database, training, centralised product warehouse, server.

Derivation:
To create the products inside the project we will use sources such as the specification that will help us meet the requirements of the project and achieve the expected benefits. We will also use third party products to help us complete the project such as HP servers, MySQL software, AWS assets and Microsoft Dynamics ERP system.

Project mandate:
This project is wanted by Peters' Pharmacies to help reduce the number of stock outs they have been experiencing, help recover some of the 40% loss in turnover and increase the operating profit. Dianne Peters expects to do this by making changes to the ordering and stocking policies as well as centralising the purchasing process by having a central warehouse where stock is held. She would like the vans that are currently used to deliver prescriptions to be used to resupply the 15 shops frequently based on the previous couple days of sales.

Development Skills required:

- Software Developers-Data migration, e-learning and security.
- Warehouse manager will train Peter's staff to have the skills and knowledge required of the new system to operate.
- EBS will organise the infrastructure, create PID, manage the project and collaborate with HP; a company with expertise in enterprise server solutions to implement the server.

Customer Quality expectation:
Server - the server running, network functioning, security requirements implemented, DB software installed, ERP installed, appropriate restrictions, staff trained and hired, server room in the warehouse.
Data - No duplicates, all data is being migrated, no data loss, data backed up.
Warehouse and transport- enough space for the products, safe environment, appropriate equipment, staff hired, staff trained, scheduling system, enough vans, adequate drivers.

Acceptance criteria:
Budget- below £1,000,000
Timescale- within 12 months
Server

- Zero crashing
- Operation functional 100%, network speed between 500mbps and 1000 Mbps
- Establish and Use a Secure Connection
- Use SSH Keys Authentication
- Secure File Transfer Protocol
- Secure Sockets Layer Certificates
- Use Private Networks and VPNs
- Monitor Login Attempts
- Manage Users
- Established password Requirements
- Established Password Expiration Policy
- Used Passphrases for Server Passwords
- Schedule software updates
- Limited server data visibility
- Used Intrusion Detection Systems
- Firewall set up
- Backed Up Server
- Create Multi-Server Environments
- Create Virtual Isolated Environments
- DB software successfully installed
- ERP successfully installed
- Peter's staff are trained when necessary and new staff hired where appropriate
- Server room inside the 100 square feet.

Data- Zero duplicates, 100% of the data has been migrated successfully, zero data loss, 100% of the data has been backed up in Cloud.
Warehouse and transport- 100% of the products have a dedicated storage location with enough space, 100% implemented the safety measures to reduce the likelihood of criminal activity in the area, 100% necessary equipment purchased, all Peter's staff are trained when necessary and new staff hired where appropriate, 100% scheduling completed, have 15 vans and have 15 drivers.

Project-level quality tolerances:
Budget- 10% over the budget
Timescale- without interrupting the daily ongoing business, 20% tolerance over the 10 weeks expectation.
Server- 50% square tolerance for the server space.
Data- 0% unnecessary data, 0% data loss during the data migration and data backed up.
Warehouse and transport- 10% over the space required (8000 square feet).

Acceptance method:

- All proposed products are going to be tested and get improved after receiving feedback.
- All products must be approved by the executives.
- Approvals must be signed by all required parties
- The checks of the data migration will be done by the system administrator, database performance will be measured by the database administrator, security requirements will be tested by an ethical (white hat) hacker.
- Safety inspector will check the safety of the warehouse.
- Project manager will check the schedule, the infrastructure, vans, drivers and licensing.
- The executive (Dianne Peters) will check all the final products against the criteria.

Acceptance responsibilities:

- System administrator
- Ethical hacker
- Safety inspector
- Project manager
- Executive (Dianne Peters)

Prerequisites, Dependencies and Assumptions

Prerequisites

- Data of Peters' Pharmacies to be moved. It needs to be accessible and identified for the project.
- Project aim clearly defined and understood.
- Having access to the systems within the business.
- Having access to the products.
- Having access to the business' current performance data.
- All 15 shops locations have been identified.
- All the company’s staff required for the project will be made available.

Dependencies

- Project cannot start without Dianne Peter’s approval.
- Project cannot start without the data is being gathered within 3 shops prior to the migration.
- Project cannot start before the contracts with AWS are agreed.
- Project cannot start before the contracts with the software developers are agreed
- Project cannot start without a location being identified for the data storage.
- The project cannot start without the purchasing of a server and server room arranged.
- The project cannot start without agreed security implementations.
- Project cannot start without an agreed contract with Microsoft Dynamics.

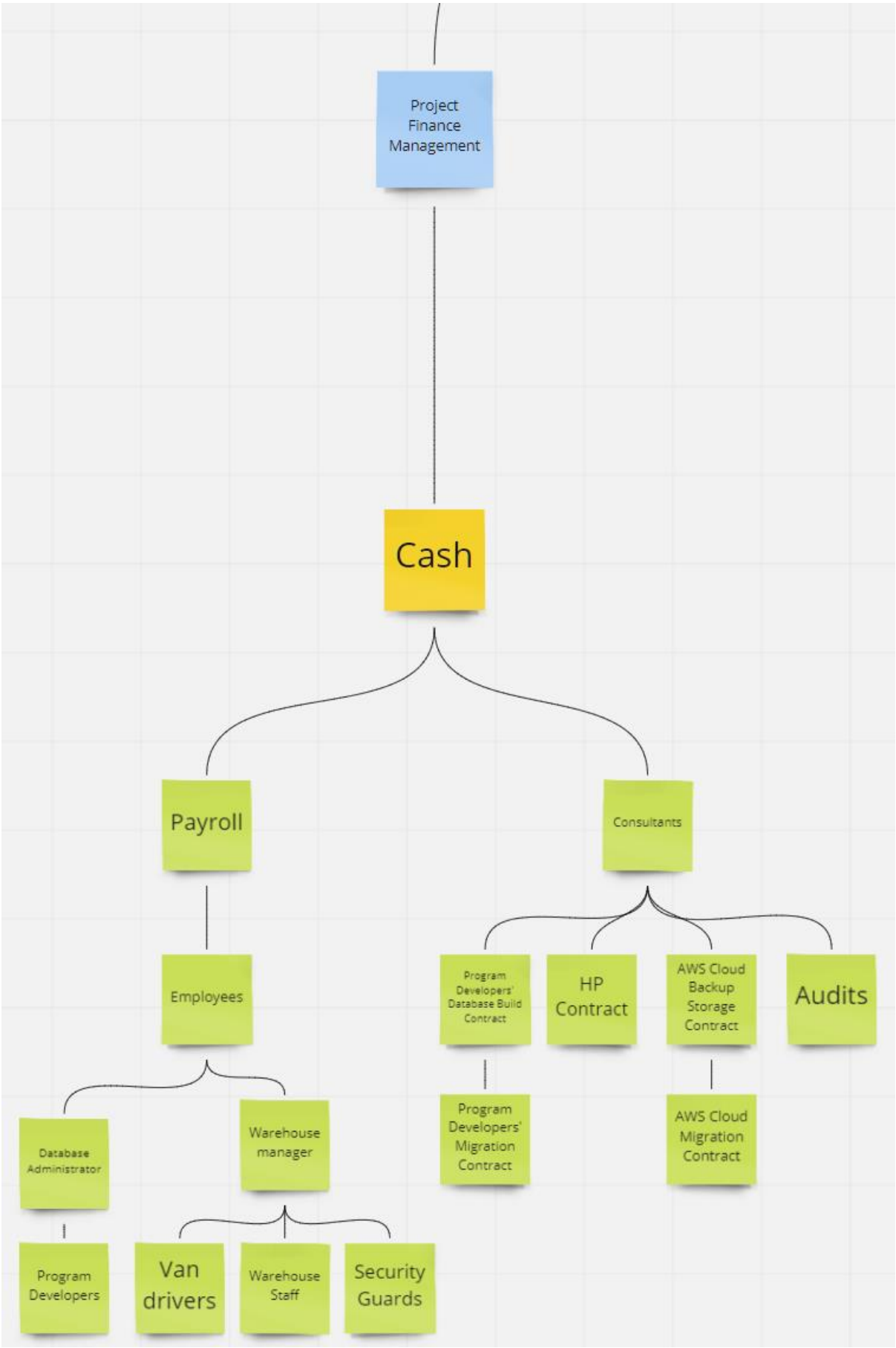
- Project cannot start without Diane Peter's agreement of the ERP design and price.
- Project cannot start without a recruitment and training plan.
- Project cannot start without the purchasing of the equipment.
- Project cannot start without the approval of legislation paperwork.
- Security implementation cannot be implemented without the products and equipment.
- The vans will not be ready unless they pass the MOT checks and any required maintenance carried out.
- The driver's will not be ready unless they all have their licenses and have been provided with the equipment.
- All parties signed a project contract.
- Changes in the covid situation do not cause any inconsistencies in terms of delivery and availability of products needed for the project.
- The products of the software developers and Microsoft Dynamics will be seamlessly implemented.
- The rented warehouse does not entail any hidden damage that would delay the set-up process.

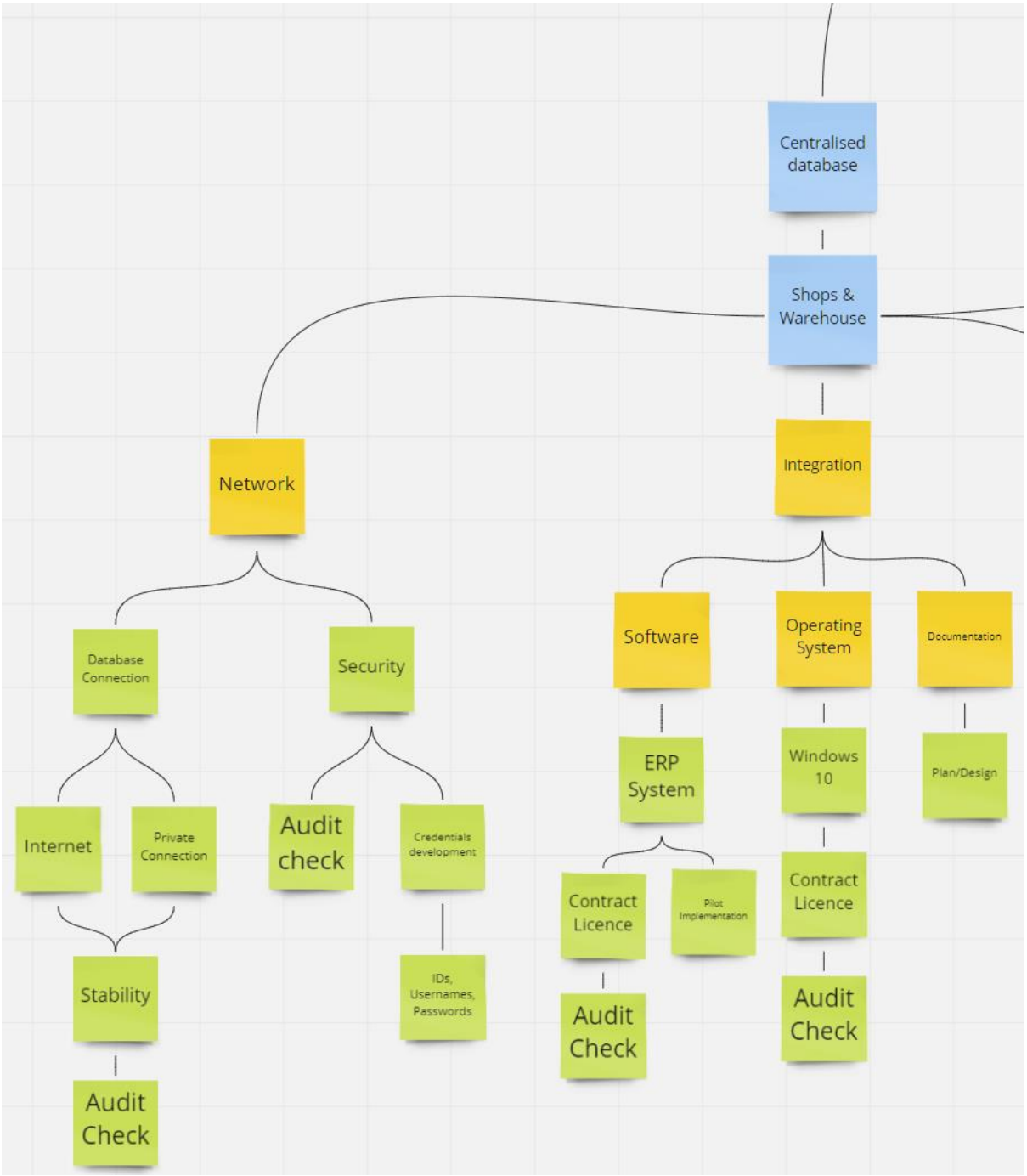
Assumptions

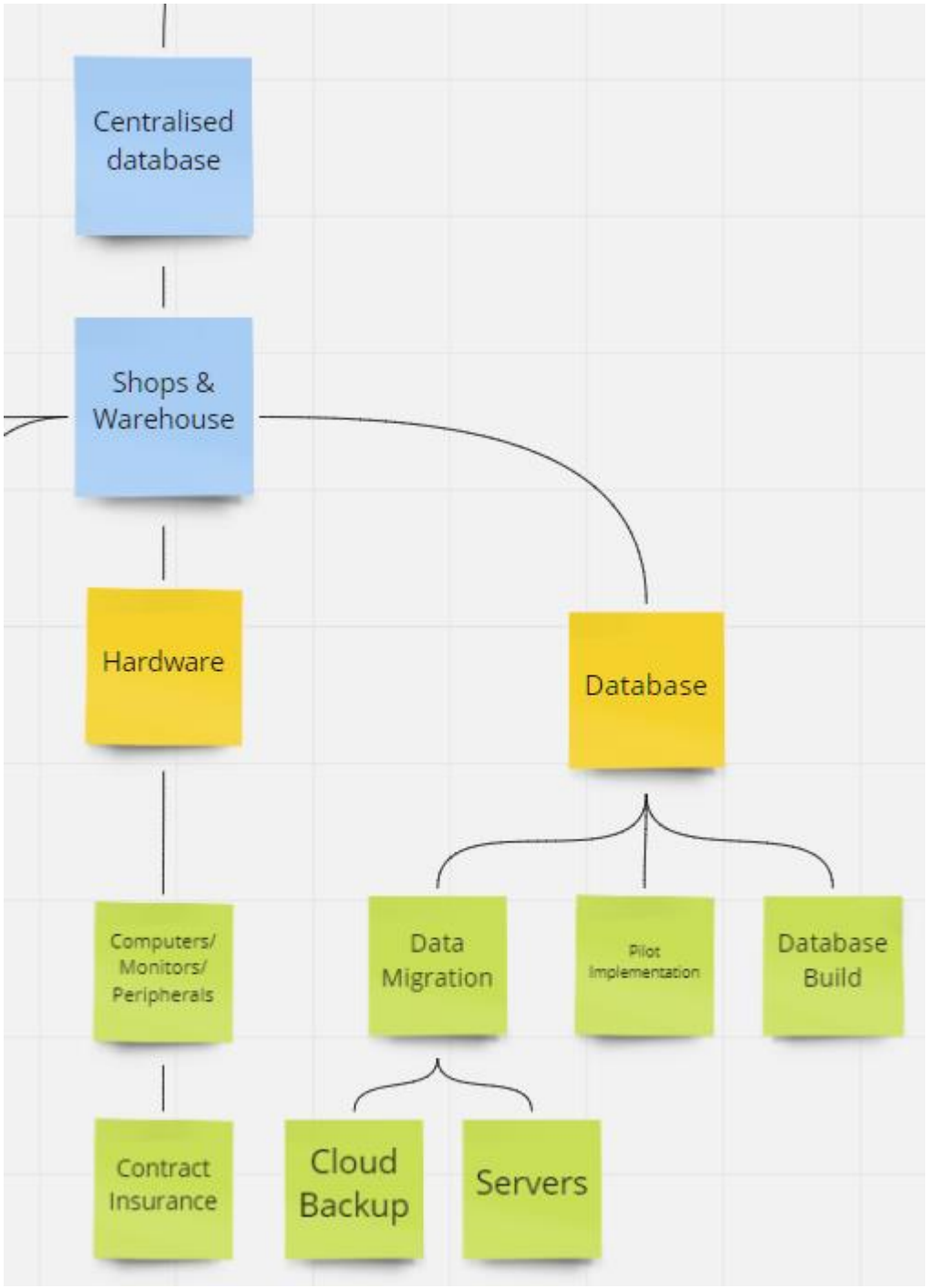
- We assume Peters' Pharmacies have between 400GB to 600GB of data.
- We assume that all the data within the 15 shop's records have the same structure.
- We assume that there are no duplicates and unnecessary data prior to the migration.
- We assume that they do not have a preferrable provider.
- We assume we do not have timescale constraints unless we stop the ongoing business.
- We assume the ERP system covers the purchasing process.
- We assume that they do not have a preferrable provider.
- We assume we do not have timescale constraints unless we stop the ongoing business.
- We assume that the ERP system purchased has alerting and reordering functionalities.
- We need: 8000sqf to stock the products (including space for the server room).
- We need a warehouse with offices and be able to meet the safeguarding procedures.
- We assume that they do not have a preferrable warehouse or location inside the North East.
- We assume we do not have timescale constraints unless we stop the ongoing business.
- We assume that Peters' Pharmacies want us to purchase some stock to be held in the warehouse.
- We assume we have enough vans to move the products.
- We assume the warehouse workers will move the stock into the vans and the drivers will move the stock into the shops when they arrive.
- We assume the drivers can use the transportation equipment.
- We assume that all pharmacies have a stable network that they could connect to.
- The costs of the project are borne by the company itself and will not be financed by third parties.

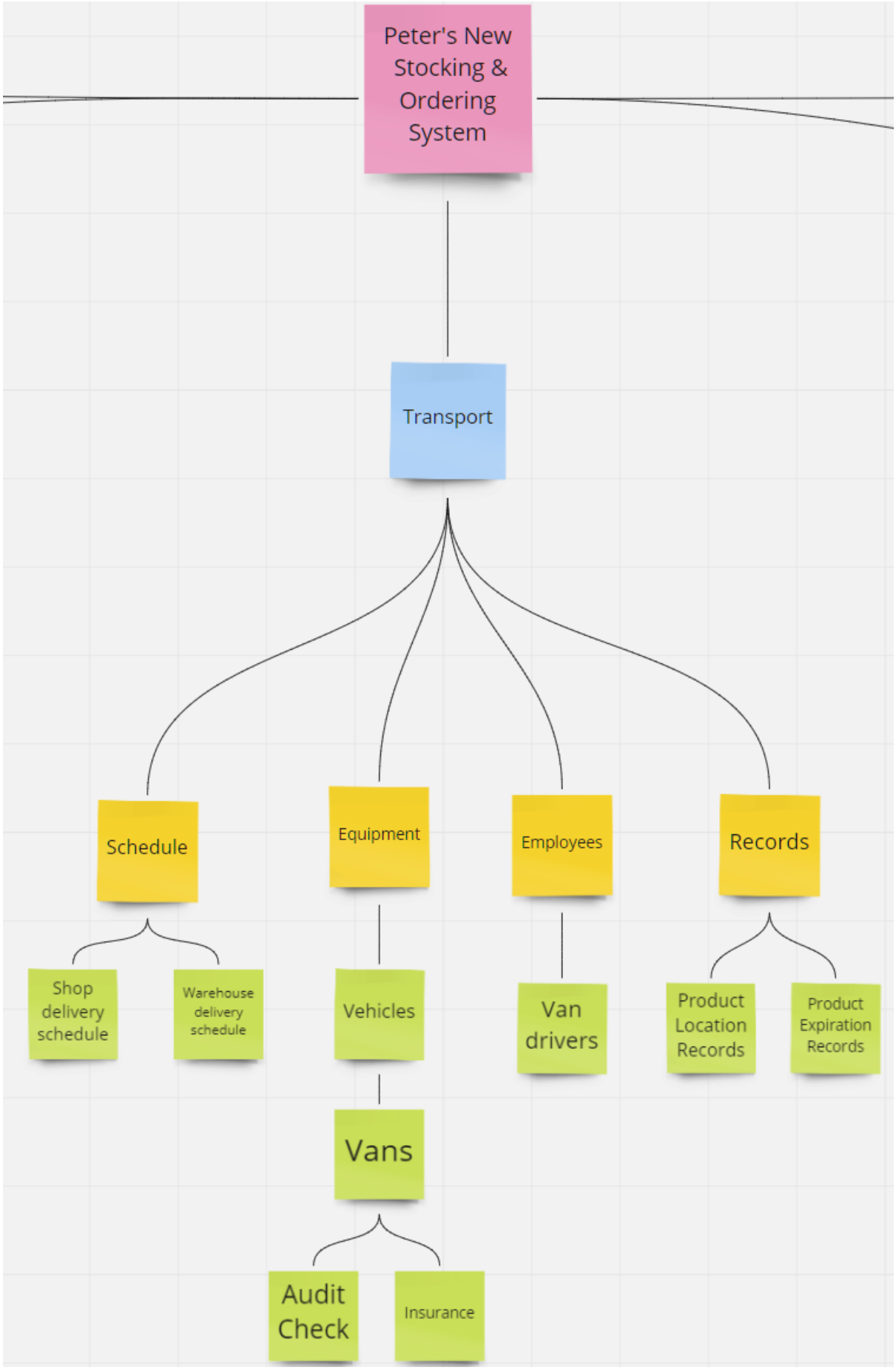
Product Breakdown Structure

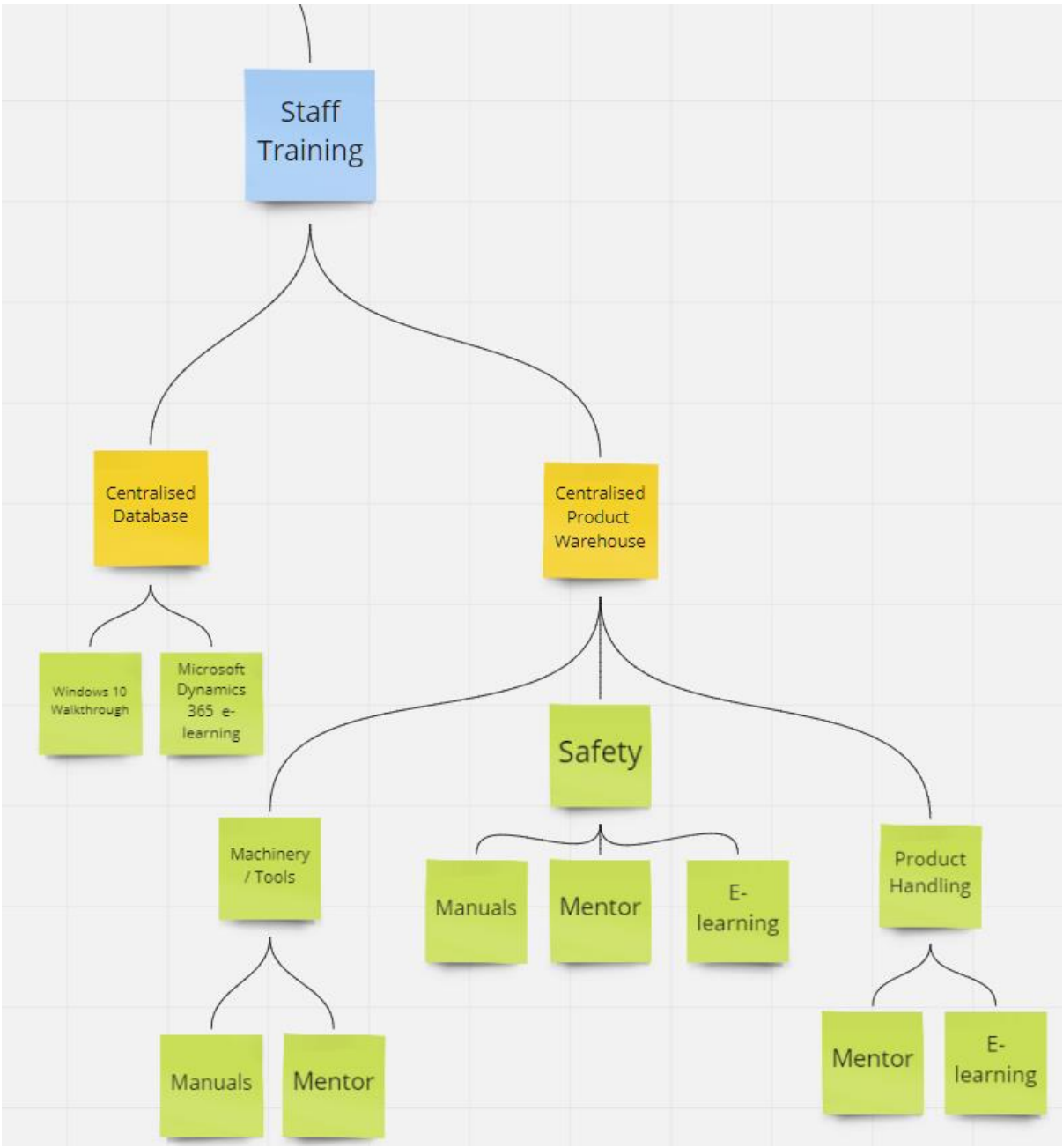
- This is the product breakdown structure from the left to the right:

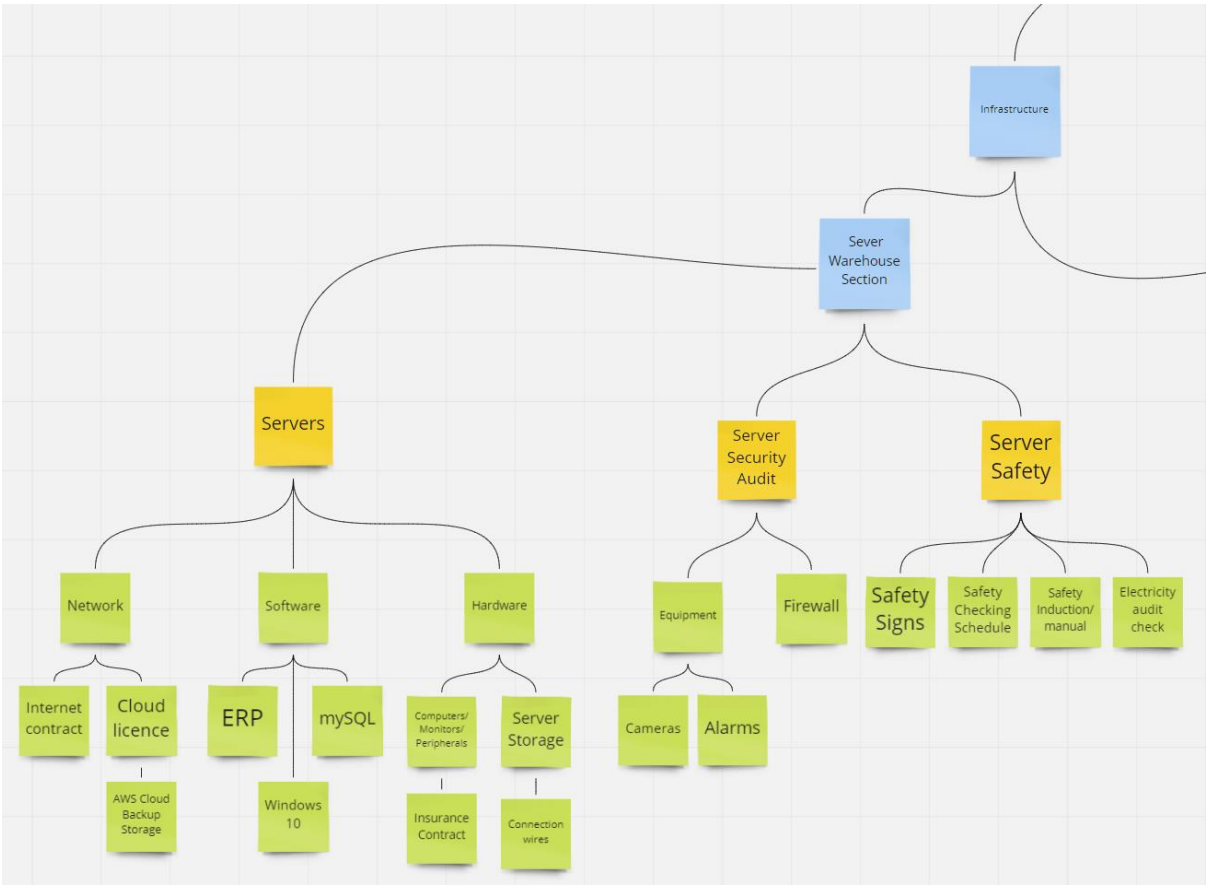

Project Finance Management
Cash
Payroll
Consultants
Employees
Program Developers' Database Build Contract
HP Contract
AWS Cloud Backup Storage Contract
Audits
Database Administrator
Warehouse manager
Program Developers' Migration Contract
AWS Cloud Migration Contract
Program Developers
Van drivers
Warehouse Staff
Security Guards

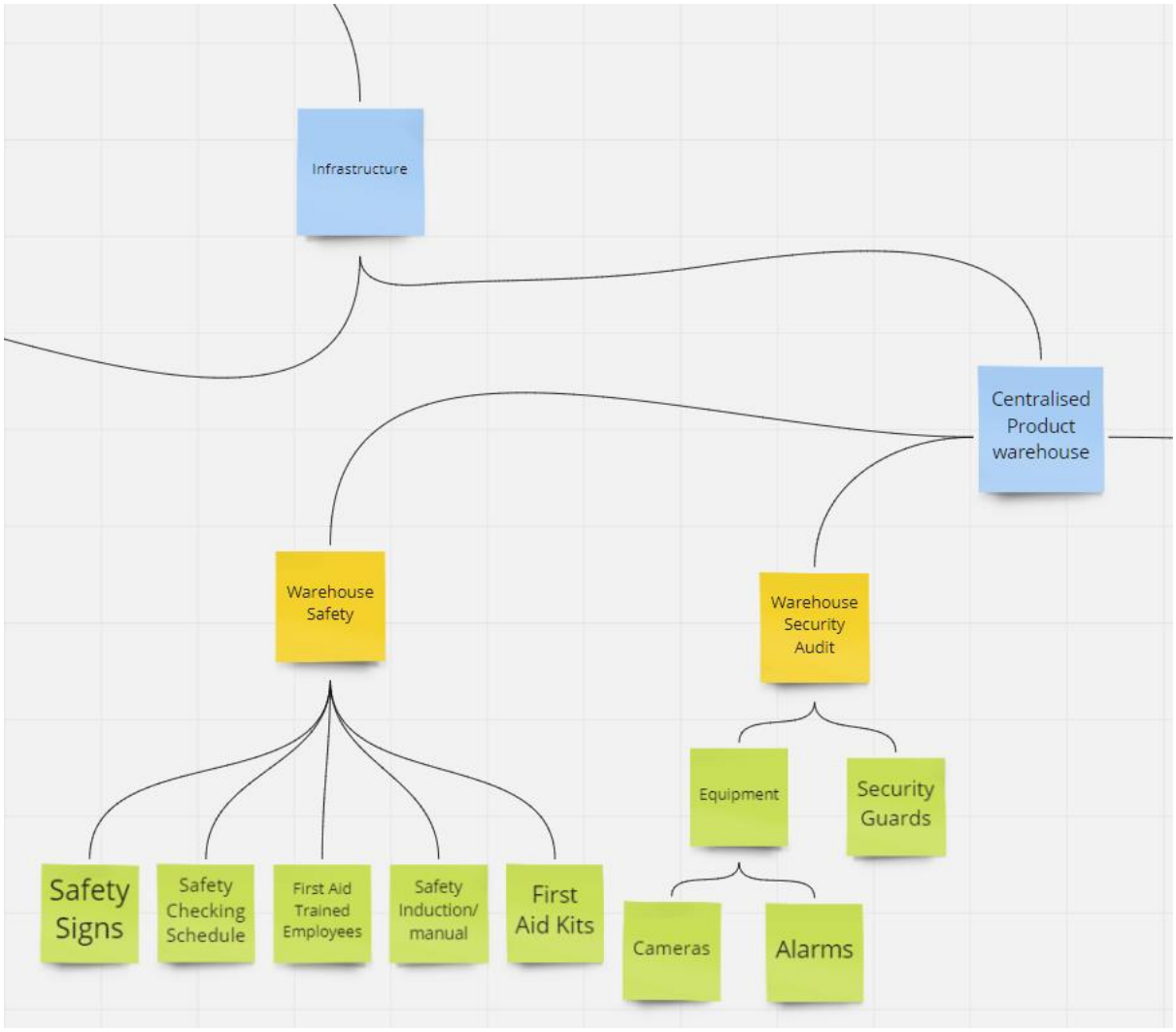

Centralised database
Shops & Warehouse
Integration
Network
Database Connection
Security
Software
Operating System
Documentation
Internet
Private Connection
Audit check
Credentials development
ERP System
Windows 10
Plan/Design
Contract Licence
Pilot Implementation
Contract Licence
Stability
IDs, Usernames, Passwords
Audit Check
Audit Check
Audit Check

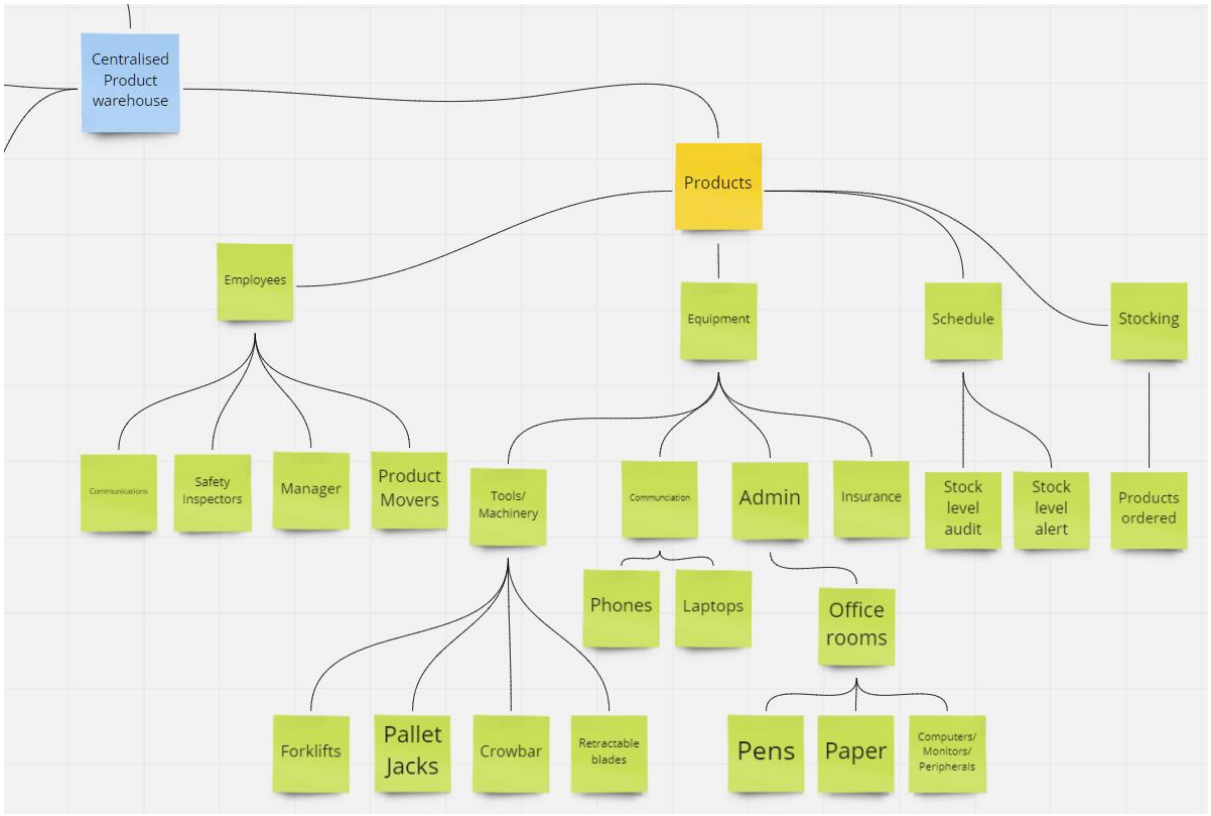

Centralised database
Shops & Warehouse
Hardware
Database
Computers/ Monitors/ Peripherals
Data Migration
Pilot Implementation
Database Build
Contract Insurance
Cloud Backup
Servers


Peter's New Stocking & Ordering System
Transport
Schedule
Equipment
Employees
Records
Shop delivery schedule
Warehouse delivery schedule
Vehicles
Van drivers
Product Location Records
Product Expiration Records
Vans
Audit Check
Insurance


Staff Training
Centralised Database
Centralised Product Warehouse
Windows 10 Walkthrough
Microsoft Dynamics 365 e-learning
Safety
Machinery / Tools
Manuals
Mentor
E-learning
Product Handling
Manuals
Mentor
Mentor
E-learning


Infrastructure
Sever Warehouse Section
Servers
Server Security Audit
Server Safety
Network
Software
Hardware
Equipment
Firewall
Safety Signs
Safety Checking Schedule
Safety Induction/ manual
Electricity audit check
Internet contract
Cloud licence
ERP
mySQL
Computers/ Monitors/ Peripherals
Server Storage
Cameras
Alarms
AWS Cloud Backup Storage
Windows 10
Insurance Contract
Connection wires


Infrastructure
Centralised Product warehouse
Warehouse Safety
Warehouse Security Audit
Safety Signs
Safety Checking Schedule
First Aid Trained Employees
Safety Induction/ manual
First Aid Kits
Equipment
Security Guards
Cameras
Alarms



Product Descriptions

Title: Transport

Purpose: Required to move products from one location to another, in this case from the warehouse to the pharmacies that are low on stock. The warehouse will store their own stock of products and when notified of shortages in certain stores, they will use their own delivery vans to deliver the products.

Composition:

- Existing vans and drivers used for delivery
- New centralised database
- Stock records
- Delivery schedules

Derivation: Existing delivery vans used within the pharmacies will be used to transport the products from the warehouse to the stores. The stock stored in the warehouse will originate from the current suppliers of the pharmacies.

Format and Presentation:

- Existing delivery vans
- Drivers with valid licence and insurance
- People to load/unload stock.

Development Skills Required:

- Driving experience
- Product handling
- Using a Database (Record stock)

Quality Criteria:

- Has the delivery been done on schedule?
- Has the right number of products that are required been delivered?
- Has the delivery been accepted and signed for?

- Have stock records on database been updated?

Quality Method: The checks will be carried out by the delivery driver and the pharmacy staff that are expecting delivery.

Title: Training
Purpose: To provide adequate teaching and practical experience to all staff members involved in the transport and storage of products and the usage of a centralised database.
Composition:

- Practical training
- Teaching

Derivation: Existing staff and newly employed staff that require more knowledge and on the job training.
Format and Presentation:

- Safety training
- Manuals
- E-learning
- Mentoring

Development Skills Required:

- Specialist in Microsoft Dynamics 365
- Good knowledge of centralized databases
- Strong communication skills
- Experience in warehouse safety rules and handling product

Quality Criteria:

- Interview staff and ask about their experience
- An end of training test based on the training given

Quality Method: These checks would be done by the trainer before offering staff the suited role.

Title: Infrastructure- Server Warehouse
Purpose: A server that is suitable for running a centralised database that stores data for 15 pharmacies and a product warehouse of which the pharmacies can have remote access to.
Composition:

- Infrastructure checks
- Selection of hardware components
- Finding a location and building a server room
- Installing operating system and software on to hardware
- Installation of security

Derivation: This will be sourced from a specialist company that has expertise in servers for centralised databases.
Format and Presentation:

- Server
- Hardware

Development Skills Required:

- Cybersecurity
- Database Management
- Networking
- Server Management

Quality Criteria:

- Is the server running?
- Is the server connected to the internet?

- Is the server accepting connections to the database?
- Are security requirements implemented?
- Is the database performance adequate?

Quality Method: The necessary checks will be carried out by the system and database administrator.

Title: Infrastructure- Centralised Product Warehouse
Purpose: This will be the central storage warehouse for the products sold in the fifteen pharmacies. This warehouse will act as a supplier for the business and stock a supply of products for the pharmacies, so that when required, the delivery vans can collect stock and deliver to those pharmacies that are experiencing a shortage.
Composition:

- Centralised Database
- Centralised Server warehouse
- ERP systems in pharmacies
- Delivery vans and drivers

Derivation: The source for the products sold in the pharmacies which will be stored in this warehouse will be the existing suppliers and possibly new ones that the business has made contracts with.
Format and Presentation:

- Storage boxes
- Supply of products
- Handling equipment
- Safety training

Development Skills Required:

- Manual handling safety training
- Database management
- Stock control

Quality Criteria:

- Is there sufficient stock of each product?
- Is there any additional lead time on future delivery of supplies?
- Are deliveries on schedule?
- Are the products stored enough to meet current demand?

Quality Method: The following checks would be carried out by the staff in the warehouse, delivery drivers and the person responsible of checking the database for stock and performance.

Title: Centralised Database
Purpose: A centralised database is a system that would be implemented in Peters'' Pharmacies to centralise the purchasing process and stock so that it could all be monitored and managed from one main database system. It would store information of transactions, orders, stock etc. Its main function is to enable the business to effectively manage the stock in their stores and ensure there is always a supply to meet demand by placing automatic orders to ensure deliveries are done before stores experience shortages.
Composition:

- Ensure there is a server warehouse
- Software developers data migration from old systems to one main centralized system in the servers
- Software developers code the new centralised database
- AWS migrate the data from the old system to their cloud backup

Derivation: The data stored in the centralised database will be derived from the old systems used by the business and will be continued to be updated by the trained staff, we will be using software developers to migrate the data from the old system to the new, as this is a secure and safe way to transport the data without risks of it being compromised or lost.

Format and Presentation:

- Stored data of orders, transactions, stock etc.
- Backup
- Connection to ERP systems

Development Skills Required:

- Database management
- Data migration

Quality Criteria:

- Does the centralised database display all deliverables that meet client requirements?
- Is the database robust/secure?
- Does it display updated information (Real-time stock levels)?
- Has all required data been successfully migrated?

Quality Method: The checks and tests will be carried out by the Database Administrator, software developers and an ethical hacker.

Title: ERP System

Purpose: The main purpose of the ERP system is to enable better monitoring and control of the stock in all 15 pharmacies and the warehouse, as well assist them with their day-to-day business transactions.

Composition:

- Purchasing of the licence
- Build the system
- Customise the system according to the preference of the client
- Align to the business processes of the company
- Hardware purchase

Derivation:

- Data from the 15 stores that is being moved into a centralised database.
- Microsoft Dynamics will create the ERP.

Format and Presentation:

- User friendly for the staff.
- Withing 2GB of storage to perform accordingly in every system in the shops or warehouse.
- Meeting clients' expectations.

Development Skills Required:

- Software developers
- UX designers

Quality Criteria:

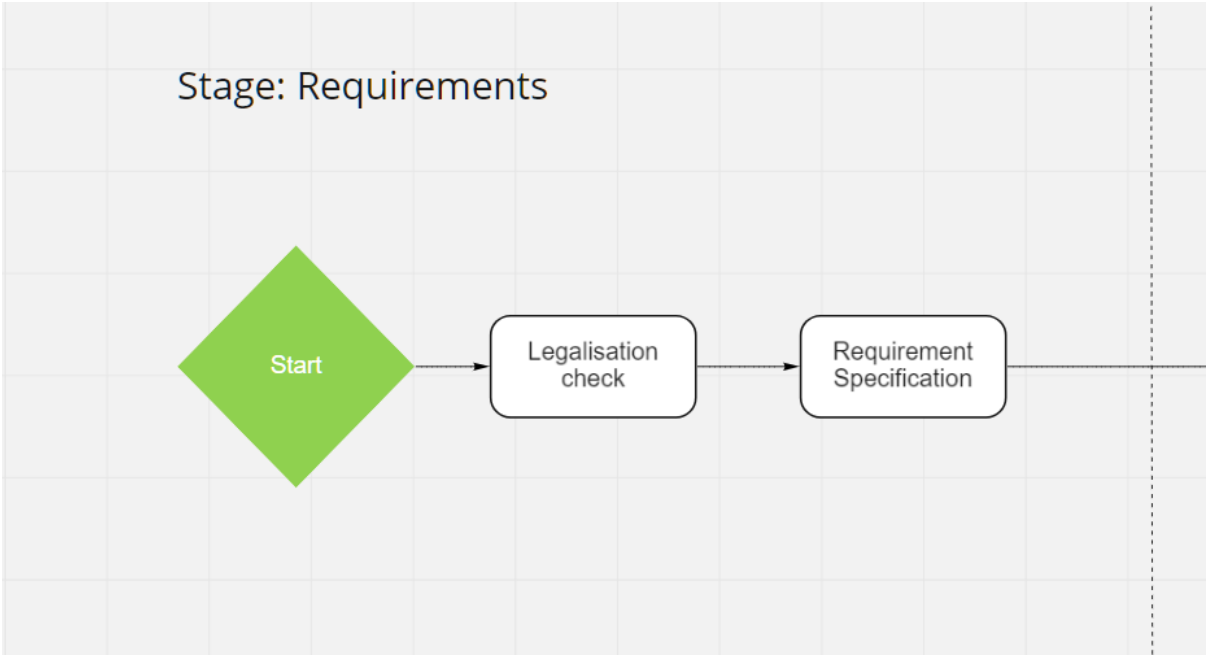
- Accessible remotely from anywhere with a stable internet connection.
- Implemented all the security implementations.

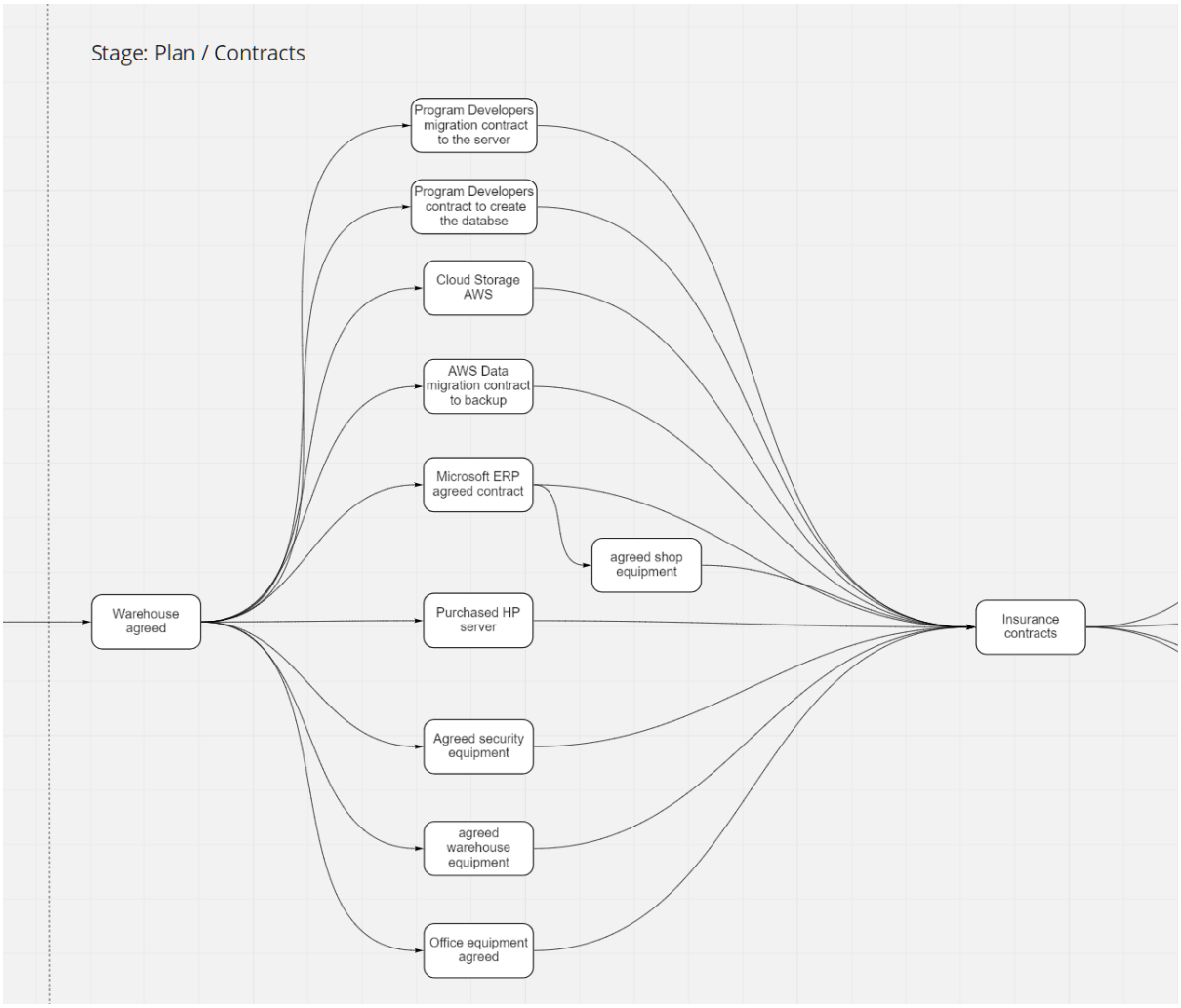
Quality Method:

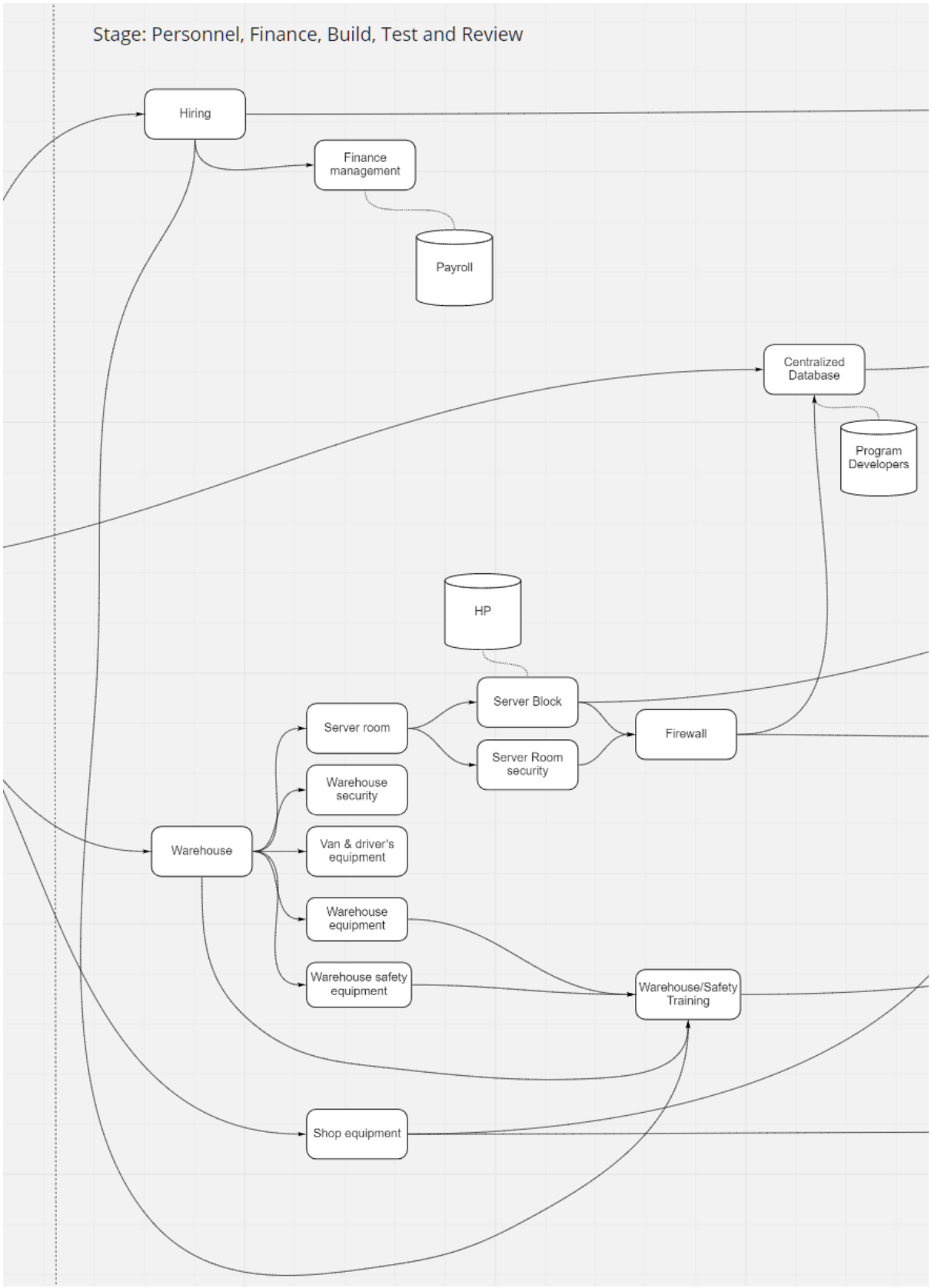
Passed all the software tests from third party companies.

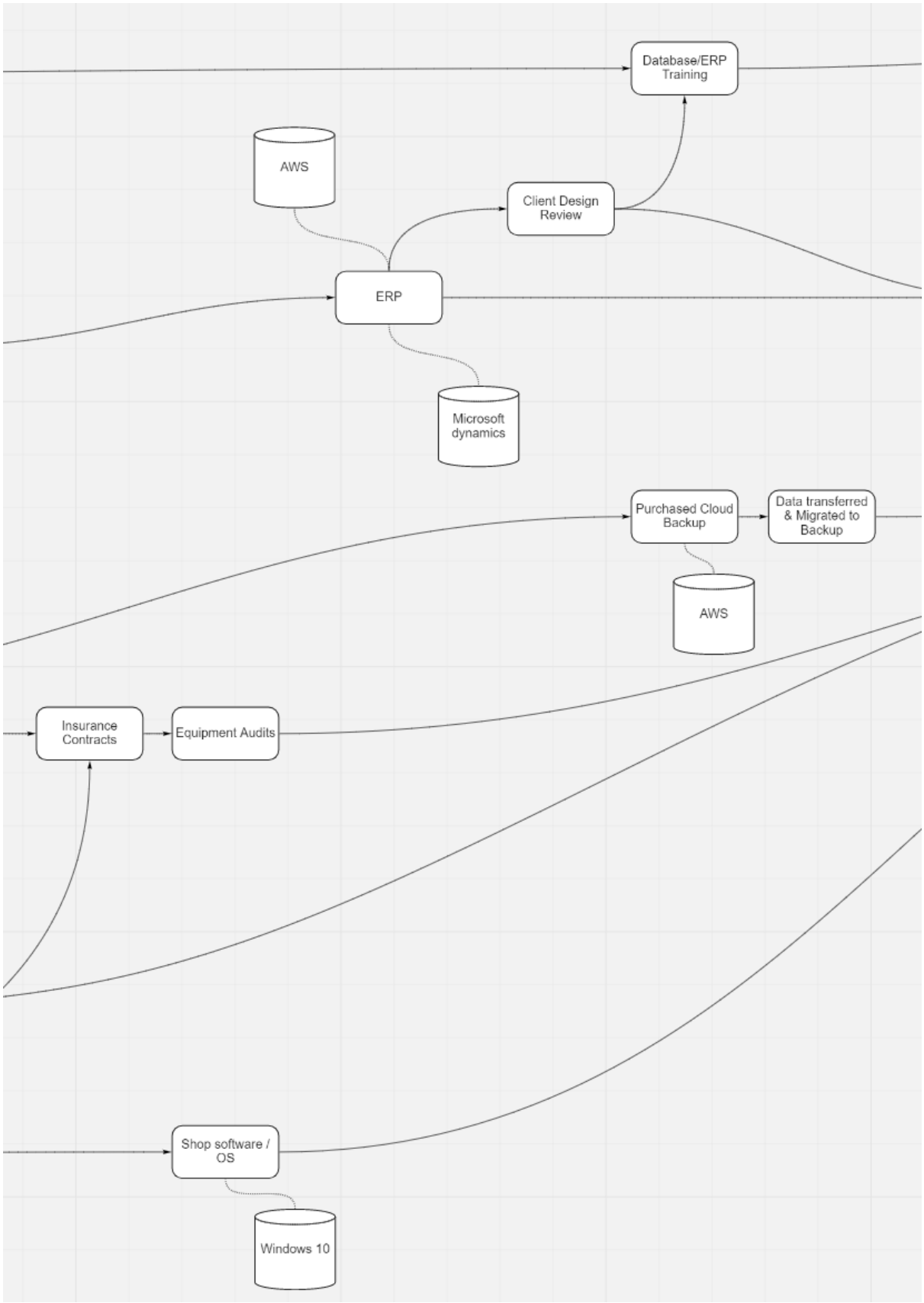
Product Flow Diagram

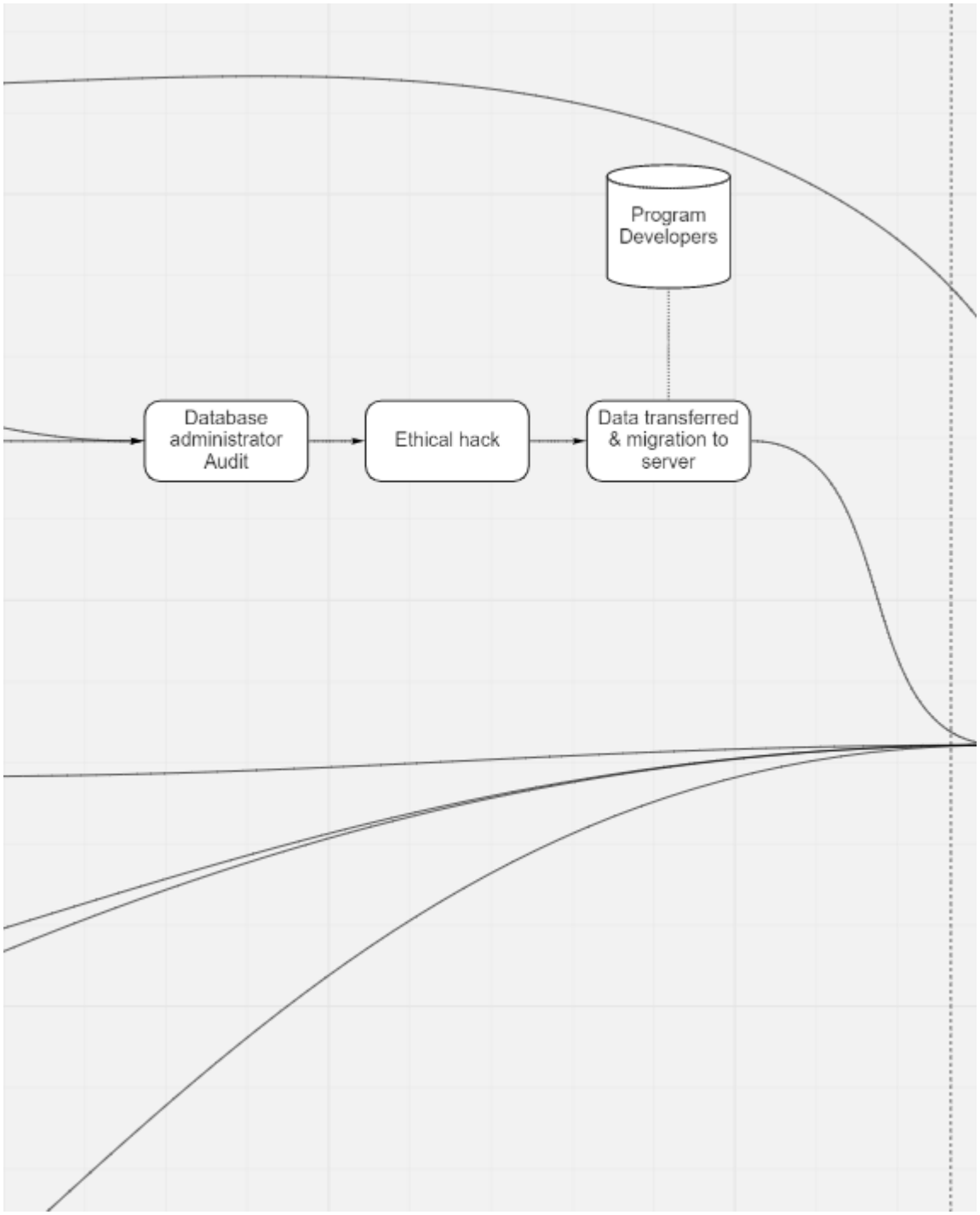
This is the product flow diagram from the left to the right:

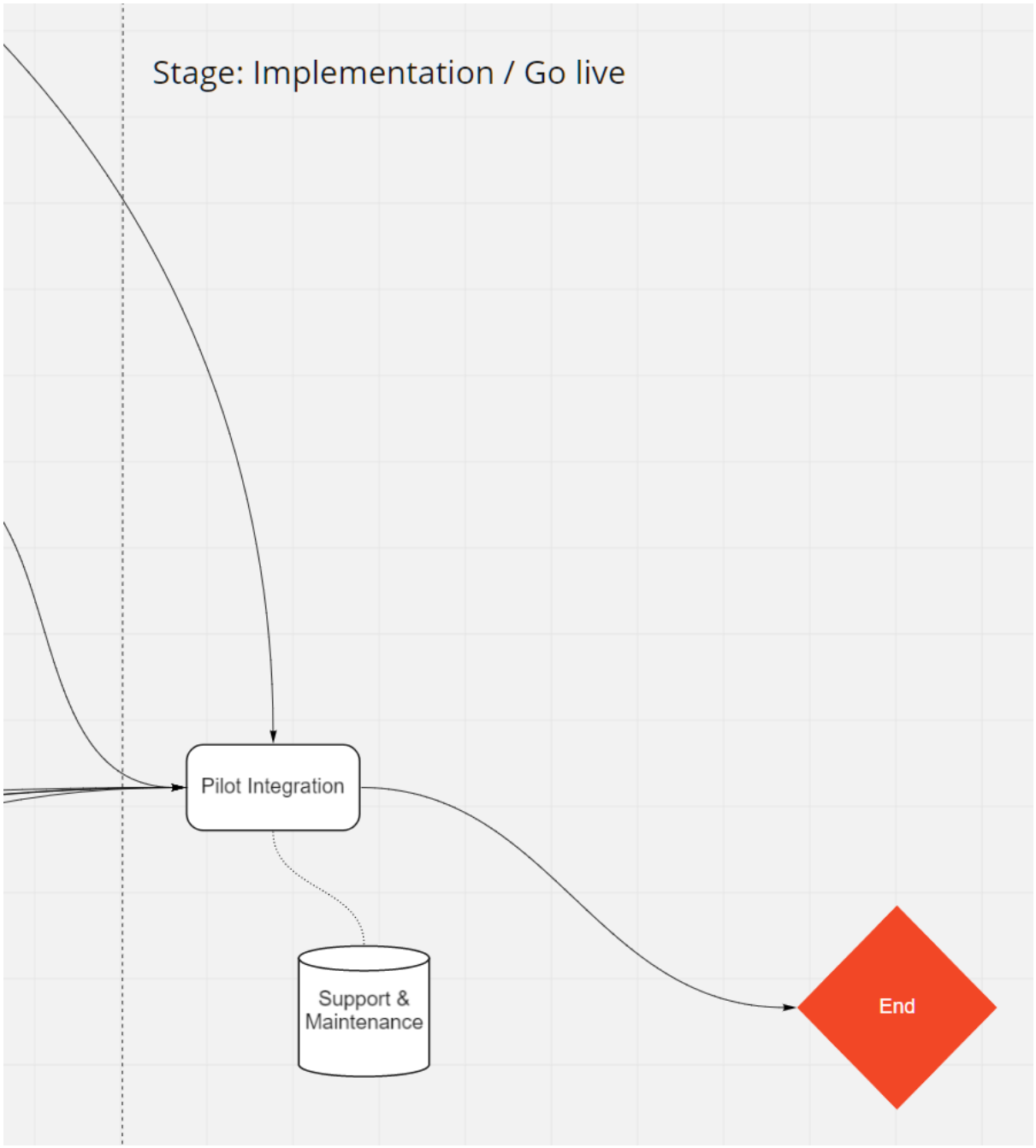

Stage: Requirements
Start
Legalisation check
Requirement Specification


Stage: Plan / Contracts
Program Developers migration contract to the server
Program Developers contract to create the databse
Cloud Storage AWS
AWS Data migration contract to backup
Microsoft ERP agreed contract
agreed shop equipment
Warehouse agreed
Purchased HP server
Insurance contracts
Agreed security equipment
agreed warehouse equipment
Office equipment agreed


Stage: Personnel, Finance, Build, Test and Review
Hiring
Finance management
Payroll
Centralized Database
Program Developers
HP
Server Block
Server room
Server Room security
Firewall
Warehouse security
Warehouse
Van & driver's equipment
Warehouse equipment
Warehouse safety equipment
Warehouse/Safety Training
Shop equipment


Database/ERP Training
AWS
Client Design Review
ERP
Microsoft dynamics
Purchased Cloud Backup
Data transferred & Migrated to Backup
AWS
Insurance Contracts
Equipment Audits
Shop software / OS
Windows 10


Program Developers
Database administrator Audit
Ethical hack
Data transferred & migration to server


Stage: Implementation / Go live
Pilot Integration
Support &
Maintenance
End

Schedule

UPCOMING TASKS

TASKS STARTING SOON IF PROJECT APPROVED

Name	Resource Names	Start	Finish
Requirements specifications(analysis)	Assistant Project Manager ,Corporate or Programme management,PM(EBS),Change control authority manager,Project assurance,Quality inspector ,Risk owner	Fri 03/12/21	Tue 14/12/21
Legislation check	Corporate Lawyers,PM(EBS)	Wed 01/12/21	Thu 02/12/21
Warehouse contract	Warehouse[1],Change control authority manager	Wed 15/12/21	Fri 24/12/21
Software Devlopers contract to create database	Assistant Project Manager ,PM(EBS),Change control authority manager	Wed 15/12/21	Fri 17/12/21
Software Devlopers migration contract to the servers	Assistant Project Manager ,PM(EBS),Change control authority manager	Wed 15/12/21	Fri 17/12/21
AWS Backup Storage Space for the Data	AWS Backup data plan [1],Change control authority manager	Wed 29/12/21	Wed 29/12/21
AWS Data Migration contract for the backup	AWS [1],Change control authority manager	Mon 27/12/21	Tue 28/12/21
Microsoft ERP contract	Microsoft Dynamics 365 ERP supplier (5 Years)[1],Change control authority manager	Mon 27/12/21	Tue 28/12/21
HP server purchase	HP SERVER[1]	Mon 27/12/21	Wed 29/12/21
Warehouse equipment	Warehouse equipment[1]	Mon 27/12/21	Tue 04/01/22
Shop IT equipment	HP equipments (computers)[1]	Wed 29/12/21	Fri 31/12/21
training contract with Microsoft for the ERP and product handling	Trainings[1]	Wed 29/12/21	Wed 29/12/21
Transportation	Assistant Project Manager ,PM(EBS),Change control authority manager	Mon 27/12/21	Mon 27/12/21
Insurance contracts for all products	Warehouse insurance 5 years[1],Risk owner	Wed 05/01/22	Wed 12/01/22
Hiring	Corporate or Programme management,Human resources ,Change control authority manager,Project assurance,Team manager	Thu 13/01/22	Tue 01/02/22
Training	Warehouse manager,Shop manager,Warehouse employees,Shop workers[£15,000.00],Project assurance	Mon 11/07/22	Thu 28/07/22
Finance management	Human resources	Wed 02/02/22	Wed 02/02/22
Software Devlopers create database	software developers,MySQL Software(5 Years)[1]	Thu 13/01/22	Fri 21/01/22
ERP development	Assistant Project Manager ,Corporate or Programme management,PM(EBS)	Mon 24/01/22	Fri 15/04/22
Client Design Review/ customization	Corporate or Programme management,PM(EBS),Assistant Project Manager	Mon 18/04/22	Fri 08/07/22

Shop software /OS	IT technicians	Mon 11/07/22	Fri 15/07/22
Warehouse set up (bills and moving in)	Warehouse manager,Corporate or Programme management,PM(EBS)	Thu 13/01/22	Tue 01/02/22
Server room build	Database administrator,IT technicians,Warehouse manager	Wed 02/02/22	Fri 04/02/22
Warehouse equipment installation	Warehouse employees,Warehouse manager	Wed 02/02/22	Fri 04/02/22
Warehouse safety equipment implementation	PM(EBS),Warehouse employees	Wed 02/02/22	Thu 03/02/22
Warehouse security implementation	IT technicians,Security guard	Wed 02/02/22	Mon 07/02/22
Server room security implementation	Database administrator,IT technicians	Mon 07/02/22	Tue 08/02/22
Shop IT equipment installation	IT technicians	Mon 11/07/22	Fri 15/07/22
Van & driver's equipment checks	Assistant Project Manager	Thu 03/02/22	Mon 07/02/22
Equipment Audits of the warehouse	Warehouse manager	Tue 08/02/22	Wed 09/02/22
Server Block Installation	IT technicians	Wed 09/02/22	Fri 11/02/22
Server OS installation	Database administrator	Mon 14/02/22	Mon 14/02/22
Firewall set up	IT technicians	Mon 18/04/22	Tue 19/04/22
Database administrator Audit check on the database/servers	Database administrator	Wed 20/04/22	Fri 22/04/22
Ethical hacker test	Ethical hacker	Mon 25/04/22	Tue 26/04/22
Transport of the products	Drivers	Thu 10/02/22	Thu 10/02/22
Software Devlopers migration to the servers	software developers	Mon 18/07/22	Tue 19/07/22
Data transformation and migration	Database administrator,IT technicians	Wed 27/04/22	Tue 10/05/22
Data is being backed up on AWS cloud	Database administrator	Wed 11/05/22	Wed 11/05/22
Pilot Integration	Database administrator,PM(EBS),Warehouse manager Pilot integration[£600.00],Shop manager	Wed 20/07/22	Tue 23/08/22
Go live support	Go live support,Project assurance,Project support	Thu 14/07/22	Wed 17/08/22
Review	Database administrator,Corporate or Programme management,PM(EBS),Project assurance,Project support,Quality inspector ,Risk owner	Wed 24/08/22	Tue 30/08/22
End project	Assistant Project Manager ,Corporate or Programme management,PM(EBS)	Wed 31/08/22	Wed 31/08/22

Strategies and Control

Risk Management Strategy/Approach

The Risk Management Strategy is used throughout the project to help plan for and manage risks. This is done with specific procedures that help identify, assess, minimise and control risks.

Risk management procedure

Firstly, risks both positive and negative need to be identified through reviewing lessons, risk prompt lists, risk checklists, brainstorming and filling in a risk register. This will help identify the risk cause which is the risk source, the risk event which is the area of uncertainty and the risk effect which is the impact. Furthermore, early warnings indicators should be prepared to monitor critical areas of the project and provide information on the sources risks can originate from. The positive risks may want to be capitalised on and the negative risks will want to be monitored and avoided.

Next the risks need to be assessed by looking at the probability that they will occur, what they impact, the size of this impact, how the impact may change over the project and the proximity of the risk which is how fast they will materialize if no action is taken. The risks will be assessed through estimation and then evaluation. They will be estimated by using expected values to combine the risk cost, impact and probability. The risks will then be evaluated using the expected monetary value technique which uses the expected values of several risks and adds them together to get a value overall.

After the assessment a plan will be prepared which identifies and evaluates a range of options, then balances the cost of implementing the risk responses against the impact and probability of allowing the risk to occur and then finally choosing an option. Risk responses for negative risks (threats) include avoid, reduce, fallback, transfer, share or accept. Risk responses for positive risks (opportunities) include exploit, enhance, share and reject. This helps protects the project from the biggest risks.

The risk responses will then need implementing which requires more planning as well as resourcing and the plan may also need to be change. Clear roles and responsibilities will need to be allocated as part of the implementation to help with the monitoring and reporting such as the risk owner. The risk owner will be responsible for controlling, monitoring and managing risks including implementing the risk responses, maximising on opportunities and managing threats.

Throughout the risk management procedure, the communication step will be occurring to ensure the information about the risks is communicated to other people involved in the project that may need to know about risks such as the project manager. This will be done through meetings and reports such as the lessons reports, end stage reports, end of project report and highlight reports.

Tools and techniques

- Reviewing lessons - Review positive and negative risks in previous projects to reduce uncertainty.
- Risk prompt lists - Used to categorize risks into types.
- Risk checklists - List of risks that have been identified in the project or occurred similar projects which allows no risks to be forgotten about.
- Brainstorming - Allows more risks to be identified through group thinking.

Records

- Risk Register – This is used to document and track all the identified risks and the important information about them. The probability and impact will be measured numerically from one to ten. One will be the lowest and ten will be the highest.

Reporting (purpose, timing, recipients)

- Lessons report– This is used to capture and share new lessons that we will learn in this project and look at past lessons learnt from previous projects. Lessons about risk will be added to this in the project and lessons about risk will be on the log already from previous projects.
- End Stage report – This is used to give a summary of the current situation of the project and information such as if any new risks have been identified.

Timing of risk management activities

- The lessons report will be updated throughout the project particularly at the beginning and end.
- The risk register will be updated at the beginning of the project and the end of each stage.
- The end of stage reports will be updated at the end of each stage of the project.

Scales for estimating

For the risk probability and impact a numerical scale of 1-10 will be used. One will represent a low probability or impact and 10 will represent a high probability or impact.

Roles and responsibilities

- The risk owner will be responsible for controlling, monitoring and managing risks including implementing the risk responses, maximising on opportunities and managing threats.
- The project manager will create the risk management strategy and create/maintain the risk register. They will also ensure risks are being identified throughout the project.

Risk tolerance

- Any risk that occurs and have a high impact will be escalated.
- The risk budget exceeds a 20% tolerance

Risk budget

The risk budget which will be used if any risk that were identified occur or any new risks that weren't identified occur is £20,000.

Risk Categories

- Strategic / commercial
- Economic / financial / market
- Legal and regulatory
- Organisational / management / human factors
- Political
- Environmental
- Technical / operational / infrastructure

Risk Response Categories

Avoid (Threat) - Change the project so the threat can no longer happen or have an impact.
Reduce (Threat) - Reduce the probability of the event occurring or the impact of it.
Fallback (Threat) - Fallback plan for the actions that will be taken to reduce the impact of the threat if it occurred.
Transfer (Threat) - Some of the financial impact of the threat is taken on by a 3rd party.
Accept (Threat) - More economical to retain the threat than do the risk response.
Exploit (Opportunity) - Take the opportunity to ensure it will happen and the impact will occur.
Enhance (Opportunity) - Increase the probability of the event occurring or the impact of it
Reject (Opportunity) - Not enhance or exploit the opportunity because it is more economical to not do the response but this opportunity should still be monitored encase it changes.

Share (Threat/Opportunity) - Share through the pain and gain formula with certain level limits meaning if the costs exceed the cost plan or the costs are less than the cost plan it is still shared.

Early Warning Indicators

- One month behind the schedule for the project
- More than 25 change requests
- More than 15 issues recorded in the issue register

Quality Management Strategy/Approach

The Quality Management Strategy will ensure that the products of the project that will be delivered to the client meet their quality expectations and the quality standards that we agreed upon. The quality management strategy will be done by identifying all the products, defining them, defining their quality criteria and who is responsible for ensuring that level of quality occurs as well as tracking and implementing the quality methods.

Quality planning

The quality plan will include a definition of the products in the project that are required, the quality criteria of these products, the quality responsibilities of the roles involved and the quality methods that will be used. This will ensure that Peters' Pharmacy will receive all the required products at the appropriate quality standard and will help with communication and control.

Quality control

Quality control ensures that the operational techniques used and that operational activities that occur meet the quality requirements. This is done by quality tests performed by a quality inspector. Furthermore, quality control ensures that ways of unsatisfactory performance occurring are identified and stopped.

Quality control will ensure that all the following is complete to the correct quality standard:

- All the legislation paperwork has been met
- A fully equipped warehouse/offices/server room has been implemented
- All the hardware components are supplied and fully working in the shops/warehouse, server room.
- All the data has been migrated
- The necessary staff are fully trained for the new ERP system.
- The necessary staff in the warehouse are fully trained in safety and product handling
- The new ERP system is fully working in every shop and the warehouse.
- The warehouse and server room met all the security requirements.
- All the drivers have been fully equipped with what they need.

Quality Assurance

Quality assurance will ensure that the direction of the project and the management in the project is appropriate and that it complies with the quality standards and policies. This is done by someone not directly working on the project and they will check that quality planning and quality control is being done.

Tools and Techniques

Each product in the project will have its quality tested and reviewed by the quality inspector. The quality inspector will follow the quality review technique by reviewing the products and checking that they are within the quality tolerances. They will then report back to the project manager and the team manager in a meeting so they are aware of any quality issues that may need appending.

Records

A quality register will be used to record the quality checks on the products. This will include the product name that has been checked, the quality method, who reviewed and approved it, the date it was reviewed and approved as well as the results.

Quality Tolerances

Quality tolerances will be used to ensure the products of the project are within an acceptable level of the performance of the product and the quality criteria.

Quality Methods

Quality Planning
Quality Control
Quality Assurance

Roles and Responsibilities

The quality inspector will be responsible for the quality and will perform the quality checks and test on all the products as well as updating and maintaining the quality register.
However, other roles will also be responsible for quality:

- Corporate Management (Dianne Peters)- Provides quality assurance and details about the quality management strategy.
- Executive (Dianne Peters) - Approves the quality management strategy and confirms the acceptance of all the products
- Senior User (Shop manager, Warehouse manager)- Approves the quality management strategy and provides quality acceptance criteria for the products.
- Senior Supplier (EBS, AWS, Microsoft Dynamics 365, HP)- Approves the quality management strategy, methods, techniques and tools.
- Project Manager (EBS)- Prepares for the quality management strategy, documents the quality acceptance criteria and makes sure the team manager uses quality control.
- Team manager (EBS)- Creates products that align with the quality acceptance criteria, manages quality controls, creates quality records, informs the project manager of each product's quality status.
- Project Assurance - Gives advice to the project manager about the quality management strategy.
- Team (Database Administrator, Warehouse employees, drivers, IT technicians, Lawyers) - Creates products that align with the quality acceptance criteria

Team examples:

- The drivers will test the Vans and ensure the equipment are functional or alert their manager if they are faulty.
- The Warehouse manager role is to ensure all the equipment needed/ products for the warehouse have been provided and all the legislation paperwork stored safely.
- The Database administrator check the status of the server, managing the database and carry out all the maintenances required for the server.
- IT specialists are responsible for ensuring all the IT equipment's, software's (ERP) and operating system are supplied and implemented in the shops.
- Project Manager will check that the staff is trained for the ERP system in all the shops and for the product handling in the warehouse.

Configuration Management Strategy /Change Management Approach

Configuration Management Strategy

The configuration strategy will ensure that the project's products will be identified, controlled, stored and protected appropriately as they are being developed.

Configuration Management Procedures

Planning

Plan and decide the level of configuration management and how this will be done. The level of control will be high with every product being broken down with a high level of depth to get each component.

Identification

Identify and specify every single component of the products of the project at the high level of control to create the configuration item record. A system will be used to assign a unique number to each configuration item.

Control

Control the ability to baseline and approve products as well as make changes after authorization has been given. A product will be baselined when it needs to be frozen for a particular reason such as a review. If a change is needed to be done to a baseline product a new version will be created and the original will stay the same and be stored.

Status accounting

A product status account will contain all the current and past data from every single product which will be used, control the status of each product as well as examine risks and issues. This will be used throughout the project.

Verification and audit

An audit and review at the end of each stage of the actual state of a product compared to the state of products in the configuration item records. Furthermore, these audits and reviews ensure the configuration management procedures are being followed as stated in the configuration management strategy.

Configuration Management Strategy Examples:

- The database will have restricted access allowing only certain employees with usernames and passwords to be able to login to help protect the data.
- All data, information and documents will be stored in our servers with a backup on our cloud space to ensure it is encrypted and protected even if the servers are lost.
- Look for risks that are in the risk register relating to configuration management.
- Look for lessons that could be learnt in the lessons log about configuration management

Configuration Management System

The Configuration Management System will be used on all of the products which includes the centralised database, centralised product warehouse, sever warehouse section, staff training and transport.

Products Storage

- Centralised Database and ERP – The centralised database and ERP system including the data, structure, code and software will be stored on our servers with a backup on the cloud.
- Centralised Product warehouse – The centralised product warehouse section paperwork such as the contracts, insurance, equipment lists, security, employee applications and information will be stored on our servers with a backup on the cloud.
- Sever Warehouse Section – The sever warehouse section paperwork such as the contracts, insurance, hardware lists, security measures, system administrator information will be stored on our servers with a backup on the cloud.
- Staff training – The staff training paperwork including results of employees and which employees have completed certain courses will be stored on our servers with a backup on the cloud.
- Transport - Transportation paperwork such as van schedules, van maintenance and transportation equipment will be stored on our servers with a backup on the cloud.

Products security

All the products will be stored on our servers with a backup on the cloud with password protection to ensure only authorized users can access the products to ensure they are not stolen, lost or damaged.

Product versions

When a new version of a product is created it will be given a version number such as ‘v3’ as well as a date such as 09/11/21 to ensure all of the different versions are easy to find, access and go back to if necessary, such as a piece of information accidentally being deleted.

Records

- **Configuration Item Record**

The configuration item records are going to be created to provide a record of such information as the history, status and version of each item as well as the relationships between each item. The set of configuration item records for a project is often referred to as a configuration library.

As soon as the need for a product has been identified, usually as part of a planning exercise, a configuration item record will be created. It will be updated during controlling a stage, managing product delivery, managing a stage boundary and closing a project’s processes.

For every main product of the project the following five criteria have to be tracked:

1. Unique item identifiers
2. Version numbers
3. Statuses
4. Relationships with each other
5. Any issue numbers that caused changes to the products

- **Product Status Accounts**

The products status accounts will be created and used to provide information about each of the product’s states, versions and their defined limits.

- **Daily Log**

The daily log will be used for any important events that occur each day such as required actions and informal issues.

- **Issue Register**

The issue register will keep a record of all the formal issues and maintain the information about those issues such as their ID, type, description, status, who raised it, the date it was raised and the date it was closed. This is monitored regularly by the project manager.

- **Issue Reports**

The issue reports are only created for formal issues and it describes issues from the issue register in greater detail. It contains a description, assessment of the impact and recommended actions for a request for change, off-specification or another problem/issue.

- **Roles and Responsibilities**

The project manager will be responsible for configuration management strategy as the project is mid-sized. They will need to ensure all the products are stored, protected and controlled. Also, they will need to manage the product versions and keep all the records, logs and registers up to date.

Change Responsibilities:

- Corporate Management (Dianne Peters)- Provide the strategy for issue resolution, change control and configuration management.
- Executive (Dianne Peters) - Decide on the change authority and change budget, choose the severity issue rating scale, choose the priority issue rating scale and communicates with the Project manager about change.

- Senior User (Shop manager, Warehouse manager)- Communicates with the Project manager about change and helps to make decisions on escalated issues focusing on still achieving the expected benefits.
- Senior Supplier (EBS, AWS, Microsoft Dynamics 365, HP)- Communicates with the Project manager about change and helps to make decisions on escalated issues focusing on still maintaining the complete solution.
- Project Manager (EBS)- Implement corrective actions, communicate with the project board about changes, communicate with the Change control authority manager about the changes/issues, communicate with the team manager on how to implement corrective actions, create and update the issue registers/reports as well as manage the configuration management procedure.
- Change control authority manager (EBS)- Manage the issue and change control procedure.
- Team (Database Administrator, Warehouse employees, drivers, IT technicians, Lawyers) - Implement corrective actions
- Team Manager (EBS)- Implement corrective actions
- Project Assurance (Project Manager Assistant) - Provides advice on how to examine and solve issues.
- Project Support (Project Manager Assistant)- Assists the project manager, help with the configuration management, help with the issue and change control procedures, help produce and maintain the Configuration Item Records, Product Status Accounts and issue register.

Priority and Severity

Changes that will have a significant impact on the project's tolerances will be considered as high priority and severity. Also, changes that will have a small impact on the project's tolerances will be considered as low priority and severity. The priority will be measured numerically one will represent low priority and five will represent high priority. The severity will be measured descriptively using low, medium, and high. The level of the priority and severity will determine if the change needs to escalated and who will deal with it such as the change control authority manager, project manager or project board.

Change Management Approach

Issues

Issues can occur at any point in the project. Issues that could occur include a request for change, being off-specification and any other problems or concerns that are raised. To minimize issues occurring which may cause a change to take place midway through the project, the project scope and assumptions will be clear and detailed at the baseline.

Issue and Change control procedure

If there is a request for a change or a change may be needed due to a product being off-specification then we will follow the PRINCE2 issue and change control procedure of capture, examine, propose, decide, and implement. This will help us manage and control the products and the project as a whole.

- The issues/changes will be captured meaning the issue type will be determined and its severity and priority will be levelled.
- The issues/changes will then be examined. This will be done by breaking the project down into sections. These sections will then be assessed in terms of their impact and their severity and priority will be checked.
- The solution options will then be identified and evaluated. After this process the best option will be recommend to the change control authority manager.

- The change control authority manager will then decide if the solution option will be approved, rejected or postponed. If the change control authority manager approves the solution option, they will then decide if it should be escalated.
- When the solution option is implemented records such as the issue register and daily log will be updated. Also, plans may need to be adjusted and corrective action may need to be taken to ensure deviations from the plan are fixed which will help stop stage/project tolerances from being breached.
- However, if the stage or project tolerances are forecasted to be breached during a review of the changes an exception plan will be requested by the project board and will need to be created by the project manager or change control authority manager.

Change Budget

The change budget of this project will be £20,000 because the most likely things to be changed will be the equipment or the ERP system in the shops. This change budget will cover the costs generated from a change occurring.

Communication Management Strategy

Stage 1- Requirements and legislation check

The people involved in this stage is the Assistant Project Manager, Dianne Peter's (Executive), the Project Manager (EBS) and the Lawyers for Peters' Pharmacies. The way in which they would communicate is either by Microsoft Teams or face to face meetings depending on the Covid-19 government guidelines. The reason for is because at this stage of the project there needs to be a clear understanding of the requirements and key deliverables which can only be achieved when it is done at a time when all people involved is present and can provide prompt responses.

Stage 2- Plan/Contracts

The individuals involved in this stage are the Lawyers and Executive from Peters' Pharmacies, the Project Manager (EBS) and their Assistant. Due to the Covid-19 pandemic and based on the recent government guidelines, most of the communications may be done via post, email, Microsoft Teams or in person. Especially, if the communication involves senior individuals, as they would use a safe and recognised platform as their communication may consist of classified information. The agreements of contracts will require checks and signatures to authorise them by the relevant individuals, this that will require face to face contact and some contracts can be dealt electronically if face to face is not possible.

Stage 3- Personnel and Finance

The people required at this stage are Human Resource, the Project Manager (EBS), Shop Manager and the Warehouse Manager. The communication between them will be done via email, phone calls, face to face or using Microsoft Teams. Most likely, the communications made at this stage will consist of classified information of indivduals or financial reports, therefore the methods of communication must be secure and reputable if its an application. Hence why face to face is the preferred method as for example interviews, first impressions of individuals can be examined. Also, some roles do require practical assessments. But this will al depend on the goverment guidelines at the time.

Stage 4- Build, Test and Review

The experienced individuals involved in this stage are the AWS team, software developers, Microsoft team, the Project Manager (EBS) and the Ethical Hacker. The way in which they would communicate is via email and in person face to face. As in this stage the

individuals will need to carry out practical work and may use email to schedule dates and send copies of reports of tests. Also, as the data they would be handling is sensitive, they would need come in person when dealing with it, to ensure that it is done according to the Data Protection Act.

The Project Manager will be responsible for the CMS and for its good execution throughout all the project. Since there is no access to previous standards about formats, communication, or any lessons used previous by the company this strategy will be checked with the Project Assurance to fill all the Project Board needs.
The Project Manager is responsible for all the communication with the Project Board. At the end of each stage of the project there will be a meeting where all the reports and outputs will be presented after review with the Team Manager and may be filled an End of Stage Report. Each two weeks, so the Project Board is always familiarized with the project, Highlight Report will be sent via email by the PM. Communication with entities outside the project, e.g. suppliers, will be controlled by the Senior Supplier of the project.
Day to day communication between Project Manager, Team Manager and all work members will be done in a project group created previously in Microsoft Teams. As these members will have daily contact, face to face meetings will happen on a regular basis and should be recorded using the Meeting Log. More sensible and important information, shared between PM and TM or with the Project Board, should be done via email. Communication with suppliers may also be done via email. Final stages meetings will be hosted by the project board in a room previously arranged in the company headquarters.
A Correspondence Log will be filled by the project Manager, to quantify and evaluate communication between work members on email, since PM will have access to all the communication. Any failure detected will be immediately reported to all members in a way to boost collaboration between co-workers. In the final stages' meetings, the Senior User may fill a Meeting Log with information about date, subject, inputs and outputs (PM can choose to fill a Performance Log).
It’s important that all stakeholders on the project feel that their communication needs are fulfilled. In this project the stakeholders recognized are:

- Project Board
- Project Manager
- Project Team, as well the Team Manager
- Employees, mainly warehouse Manager and Shops’ Managers

Communication between the Project Board, Project Manager, Project Team is well defined in the paragraphs above. Warehouse Manager as Senior User is present in all the final stages meeting as part of the project Board. The shops’ managers will receive monthly input by the warehouse manager via email about the progress of the project to help the migration, ERP modules and specifications choices. It’s important that everyone involved has the right input about the process of the project, so right choices are made.

Project Controls

The project controls are the tools and techniques that are used to manage and control the project. These logs, registers and reports will help with learning lessons, predicting and understanding the project. They also influence the outcome of the project and products.
The controls being used in this project are:

- **Daily Log**

The daily log is similar to a diary and it records things that aren't caught by the other records, logs and registers. It logs informal issues, significant events or required actions.

ID	Date	Event/Action/Problem	Responsible	Results

- **Issue Register**

The issue register tracks and captures of all the formal issues and maintains the information about them. This helps make people aware of issues in the project that need to be. An issue could be a request for change, something being off-specification or any other problem or concern. The priority will be measured numerically, one will represent a low priority and five will represent a high priority. The severity will be measured descriptively using low, medium, and high.

ID	Issue description	Issue status	Raised By	Type	Priority (1-5)	Severity (Low, Medium, High)	Date Raised	Date Close

Each issue has three status types:

- Unsolved
- Solved
- In development

- **Issue Report**

The issue reports are only created for formal issues, and it describes issues from the issue register in greater detail. The priority will also be measured numerically one will represent a low priority and five will represent a high priority. The severity will also be measured descriptively using low, medium, and high.

ID	
Issue description	
Impact Assessment	
Recommended action	
Type	
Priority (1-5)	
Severity (Low, medium, High)	
Date Raised	

Date Close	
Raised By	
Report Author	

- **Highlight Report**

The highlight report is a summary of the stage status at certain intervals which is used by the project board to monitor the project and stage progress.

ID	
Week Number and Date	
Actor	
Summary	
Costs	
Schedule	
Change Requests	
Risks	
Work Packages Status	
Tolerances	

- **Quality Register**

The quality register is used throughout the project and shows an overview of all the planned quality activities including the reviews, tests, acceptance and workshops. It also shows an overview of the status of all the quality activities and at the end of the project, the history of all the project activities can be seen which will be useful for the end of stage and end of project reports.

Product ID	

Product Name	
Quality Method	
Producer	
Reviewers	
Approver	
Review Date	
Approval Date	
Results	

- **Correspondence Log**

A log of all the conversations that occur during the project. This will include conversations between employees, Peters' Pharmacy Group as well as 3rd party consultants such as AWS, HP and Microsoft Dynamics 365. This will be useful in keeping track of agreements and encase there is a disagreement or lawsuit.

ID	Date	Subject Description	To	From	Relevant?	Duration between responses

- **Product Status Account**

The product status account provides information about each of the product's states, versions and their defined limits. This will be useful for reporting to the board the status of the products and which version each one is at.

ID	Product Name	Stage	Produce by	Quality Status	Product Status

- **Configuration Item Record**

The configuration item records provide information about each item. This information includes the history, status and version of the items, as well as the relationships between each item.

Item ID	
Item Name	

Last Update Date	
Version	
Management Stage	
Item Type	
Status	
Source	
Owner	
Users	
Location	
Related	
Cross reference	
Issue causing changes	

- **Risk Register**

The risk register will document and track all the identified risks and the important information about them. It will also allow risks to be analysed easily and monitor them through the duration of the project. The probability and impact will be measured numerically from one to ten. One will be the lowest and ten will be the highest.

ID	
Risk Author	
Date Registered	
Risk Category	
Risk Description	

Probability (1-10)	
Impact (1-10)	
Proximity	
Risk Response	
Status	
Risk Owner	

- **End of Stage Report**

The end of stage report is used to compare the stage's performance to the stage plan. The report provides a variety of information about the stage performance and the status of the stage. This will help the project board to decide if the project needs to be shut down, the scope needs to be changed or the next stage can be approved.

ID	
Week Number and Date	
Author	
Project Manager Report	
Business Case Review	
Team performance	
Costs	
Dates achieved	
Risks	

Tolerances	
Lessons learned	

- **End of project report**

The end of project report is used at the end of the project to determine if the project is ready to be closed. It confirms if the products of the project have been delivered, if the expected benefits have been realised and how well the project went overall.

Project Manager report	
Business Case Review	
Objectives Review	
Products Review	
Team Performance Review	
Lesson Learned	

- **Lessons Log**

The lesson log records useful knowledge and experiences from previous projects that apply to this project. Every member of the team working on the project looks at these lessons.

ID	
Effect on the project (Positive/Negative)	
Recommendations	
Lesson Seen Before	
Date Logged	
Logged by	
Priority (1-5)	
Stage	

- **Lessons report**

The lessons report is used to register the lessons learnt during the execution of the project. It can be filled in at the end of the stage or end of the project. This is will allow the knowledge and experience gained through this project to be shared and stored for future projects. The lesson report is shared with the project board at the end of the project.

ID	Date	Lesson Description	Reason

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