Finding the most cost effective product

Financial Information Systems-Assignment 1

Mathematical formulas for Product A

Let n be the number of users

Primary site licensing fee = sum of licensing fee for subproducts A1,A2,A3,A4,A5 and A6

Licensing fee for subproduct A1 = n* £ 100

Licensing fee for subproduct A2 = n* £ 150

Licensing fee for subproduct A3 = n* £ 300

Licensing fee for subproduct A4 = 2* £ 5000 for n<=300 ,4* £ 5000 for 301<=n<=600 and 8* £ 5000 for 601<=n<=1000

Licensing fee for subproduct A5 = 2* £ 4000 for n<=300 ,4* £ 4000 for 301<=n<=600 and 8* £ 4000 for 601<=n<=1000

Licensing fee for subproduct A6 = 2* £ 3000 for n<=300 ,4* £ 3000 for 301<=n<=600 and 8* £ 3000 for 601<=n<=1000

Mathematical formulas for Product A

Recovery site licensing fee = sum of licensing fee for subproducts A4,A5 and A6
Implementation fee = £ 200,000 for entire product
Maintenance fee for primary and recovery sites = 18% of sum of Primary site licensing fee and Recovery site licensing fee
Maintenance fee for implementation= 15% of Implementation fee
Hardware acquisition costs for primary and recovery sites= 2*2* £ 5000 for n<=300 ,2*4* £ 5000 for 301<=n<=600
and 2*8* £ 5000 for 601<=n<=1000
Hardware maintenance fee= 10% of Hardware cost C

CAPEX = Primary site licensing fee + Recovery site licensing fee + Implementation fee
+ Hardware acquisition costs for primary and recovery sites
OPEX(per year) = Maintenance fee for primary and recovery sites + Maintenance fee for implementation+ Hardware maintenance fee
TCO = CAPEX + OPEX

Mathematical formulas for Product B

Let n be the number of users
Licensing fee = n*350
Subscription fee(per year) = n*300

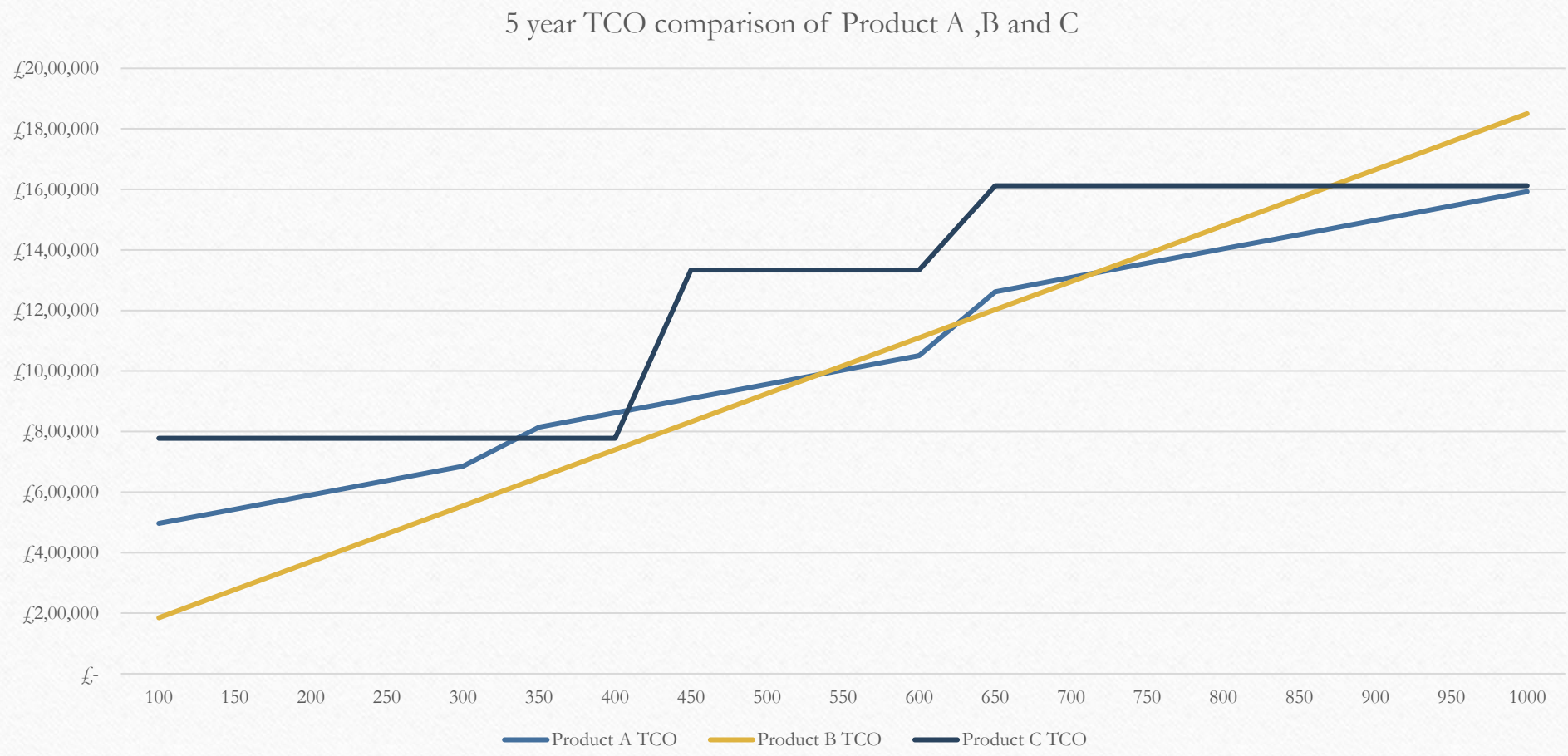
CAPEX = Licensing fee
OPEX(per year) = Subscription fee
TCO = CAPEX + OPEX

Mathematical formulas for Product C

Let n be the number of users
Subscription fee(per year)= 2* £ 25,000 for n<=400 ,6* £ 25,000 for 401<=n<=600 and 8* £ 25,000 for 601<=n<=1000
Customisation/Implementation fee = £ 500,000 for entire product
Hardware acquisition cost= 2* £ 5,000 for n<=400 ,6* £ 5,000 for 401<=n<=600 and 8* £ 5,000 for 601<=n<=1000
Hardware maintenance fee= 10% of Hardware cost

CAPEX = Subscription fee + Customisation /Implementation fee + Hardware costs
OPEX(per year) = Subscription fee + Hardware maintenance fee
TCO = CAPEX + OPEX

5 year TCO analysis graph of Products A,B and C



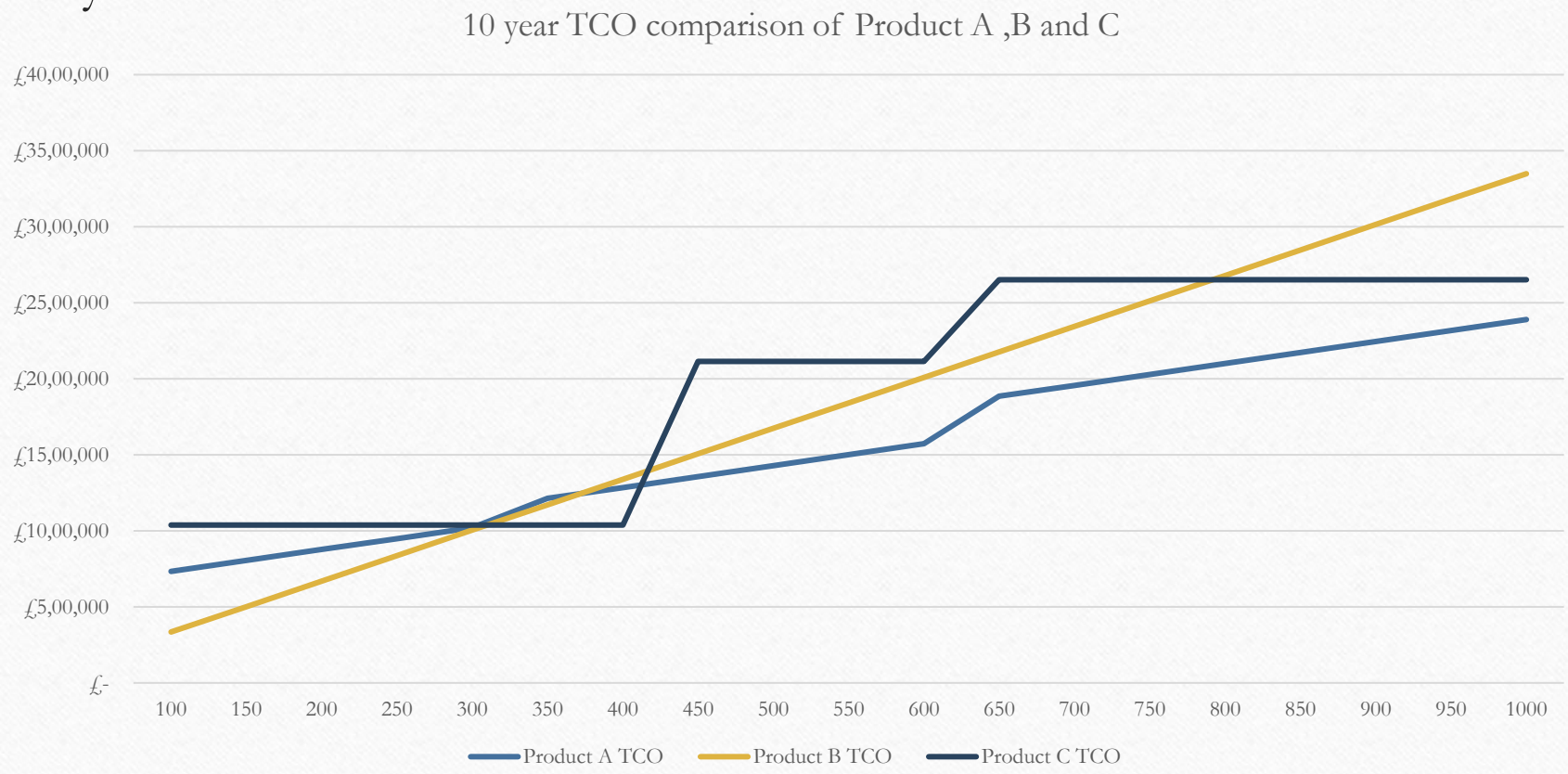
Calculation of expenditures for 300 users(from 5 year TCO analysis)

Products	Total CAPEX	Total OPEX	Total TCO
Product A	£ 4,16,200	£ 2,69,264	£ 6,85,464
Product B	£ 1,05,000	£ 4,50,000	£ 5,55,000
Product C	£ 5,70,000	£ 2,08,000	£ 7,78,000

Analysis of the 3 products and conclusions

- Product A has a non linear growth with abrupt increases after 300 and 600 users due to the licensing fee of subproducts A4,A5 and A6 which takes the number of PCs into account rather than the number of users.
- Product B has a linear growth with the cost directly proportional to the number of users.
- Product C has a non linear growth with abrupt increases after 400 and 600 users due to hardware costs which takes the number of PCs into account rather than the number of users.

- If we are only considering the 5 year TCO analysis it might seem like the costs of Product A and C coincide at about 1000 users after which Product A has a higher cost compared to product C. To clarify this misconception we look into the 10 year TCO analysis.



- The 10 year TCO analysis shows that when the number of users are below 300 then product B has the lowest costs of the three products.
- As the number of users increases beyond 400, the cost of product A is always less than the cost of product C.
- Therefore from the 10 year TCO analysis we can conclude that of the three products, product A is the most cost effective product.

5 additional cost factors

- **Installation cost:** Individuals with expertise in installing the application would have to be hired to ensure proper installation of application wherever required.
- **Integration cost :** Cost for integrating the new application with the already existing system. This would require professionals experienced in the field to be hired.
- **Testing cost:** Once the product is installed, testing of application on the product needs to be done to ensure it runs smoothly. Thus testers have to be hired for the same.
- **Backup costs:** Since bank information is highly sensitive and crucial, backup systems need to be in place to ensure this data is never lost. Setting up a backup centre will lead to increase in costs.
- **Downtime and failure expenses:** Since banking system are a 24 hrs system which works 7 days a week for 365 days, it must be ensured that downtime if any is as low as possible to ensure smooth functioning through effective mechanisms in place. This would require additional costs.