CPA Examinations

Winter-2012

December 22, 2012

Saturday 2:00pm to 5:00pm

SKILLS

Course Code

S-402

Business Analysis & Decision Making

Suggested Solution

Time allowed

Reading and planning:	15 minutes
Writing:	3 hours

Notes:

1. All questions are to be attempted.
2. Answers are expected to the precise, to the point and well written.
3. Neatness and style will be taken into account in marking the papers.

Question No. 1

a) Identify the important functions which have to be performed by the Human Resources Department of a commercial bank which has a strength of 17,500 employees deployed in a network of 800 branches located throughout the country. The commercial bank is a well-reputed organization known for its fair business policies, progressive outlook and concern for development of a competent and well-motivated cadre of employees.

b) Research Studies by Human Resource experts have shown that successful organizations create internal work environments in which the employees are able to operate at their optimal levels of productivity.

What are the important Human Resource Management practices which, in your opinion, contribute towards workforce optimization in a manufacturing plant with several integrated workshops and departments?

(10 Marks)

Answers:-

a) The important functions which have to be performed by the Human Resources Department of the commercial bank are:

i. Human Resource Planning

ii. Recruitment, selection and induction of employees

iii. Organisation of departments and design of work flows

iv. Preparation of job specifications and job descriptions of employees

v. Salary and wage administration, including reward systems

vi. Planning for posting and transfers of suitable staff in the various branches

vii. Training and development of staff

viii. Measuring and monitoring of staff performance

ix. Instituting measures for improving motivation and morale of employees

x. Succession planning of competent staff

xi. Handling of employee grievances and complaints

xii. Employee welfare, health and safety

xiii. Compliance with employment legislation and other legal requirements.

xiv. Maintenance of centralised records of all the branches.

xv. Ensuring equality amongst all the branches, policies should be made at central level with equal remuneration and training opportunities for all the 17500 employees.

b) The important Human Resource Management practices which contribute towards workforce optimization in a manufacturing plant with several integrated workshops and departments are:

i. Hiring of Workers: Workers are selected carefully on the basis of their skills to undertake the specialized jobs they are required to perform.

ii. Workforce Planning: The strength of workers in various categories are determined in anticipation of the expected workload and measures are taken for ensuring their availability at the required point of time

iii. Work Processes: Work processes are well-defined and training is provided to the employees to enable them to perform their tasks in an efficient manner.

iv. Working Conditions: The internal working conditions are conducive for maximum achievement and the management supports high levels of performance.

v. Performance Management Systems: Well-designed employee performance systems are instituted in the organizations which are communicated and accepted by all the concerned employees.

vi. Conflict Management: Conflicts due to differences in perceptions, role ambiguities and competition for resources must be contained and resolved by management in a fair and equitable manner to promote team effort for the achieving the organizational objectives.

vii. Reward System: High level of performance is expected from the workers and they are adequately rewarded in a transparent manner for their good performance. Also reduce Staff turnover rate by providing adequate compensation and support.

viii. Employee Service: Make sure that the staff is provided with healthcare incentives, proper maintenance of records and information system.

Question No.2

Local neighbourhood shops are finding it increasingly difficult to compete with supermarkets. However, three years ago, the Perfect Shopper franchise group was launched that allowed these neighbourhood shops to join the group and achieve cost savings on tinned and packaged goods, particularly groceries. Perfect Shopper purchases branded goods in bulk from established food suppliers and stores them in large purpose-built warehouses, each designed to serve a geographical region. When Perfect Shopper was established it decided that deliveries to these warehouses should be made by the food suppliers or by haulage contractors working on behalf of these suppliers. Perfect Shopper places orders with these suppliers and the supplier arranges the delivery to the warehouse. These arrangements are still in place. Perfect Shopper has no branded goods of its own.

Facilities are available in each warehouse to re-package goods into smaller units, more suitable for the requirements of the neighbourhood shop. These smaller units, typically containing 50–100 tins or packs, are usually small trays, sealed with strong transparent polythene. Perfect Shopper delivers these to its neighbourhood shops using specialist haulage contractors local to the regional warehouse. Perfect Shopper has negotiated significant discounts with suppliers, part of which it passes on to its franchisees. A recent survey in a national grocery magazine showed that franchisees saved an average of 10% on the prices they would have paid if they had purchased the products directly from the manufacturer or from an intermediary – such as cash and carry wholesalers.

As well as offering savings due to bulk buying, Perfect Shopper also provides, as part of its franchise:

i. Personalised promotional material. This usually covers specific promotions and is distributed locally, either using specialist leaflet distributors or loosely inserted into local free papers or magazines.

ii. Specialised signage for the shops to suggest the image of a national chain. The signs include the Perfect Shopper slogan 'the nation's local'.

iii. Specialist in-store display units for certain goods, again branded with the Perfect Shopper logo.

Perfect Shopper does not provide all of the goods required by a neighbourhood shop. Consequently, it is not an exclusive franchise. Franchisees agree to purchase specific products through Perfect Shopper, but other goods, such as vegetables, fruit, stationery and newspapers they source from elsewhere. Deliveries are made every two weeks to franchisees using a standing order for products agreed between the franchisee and their Perfect Shopper sales representative at a meeting they hold every three months. Variations to this order can be made by telephone, but only if the order is increased. Downward variations are not allowed. Franchisees cannot reduce their standing order requirements until the next meeting with their representative.

Perfect Shopper was initially very successful, but its success has been questioned by a recent independent report that showed increasing discontent amongst franchisees. The following issues were documented.

i. The need to continually review prices to compete with supermarkets

ii. Low brand recognition of Perfect Shopper

iii. Inflexible ordering and delivery system based around forecasts and restricted ability to vary orders (see above)

As a result of this survey, Perfect Shopper has decided to review its business model. Part of this review is to reexamine the supply chain, to see if there are opportunities for addressing some of its problems.

Required:

a) Explain how Perfect Shopper might re-structure its upstream supply chain to address the problems identified in the scenario.

b) Explain how Perfect Shopper might re-structure its downstream supply chain to address the problems identified in the scenario.

(10+10=20 Marks)

Answer:-

a) Inbound logistics: Handling and storing bulk orders delivered by suppliers and stored on large pallets in regional warehouses. All inbound logistics currently undertaken by the food suppliers or by contractors appointed by these suppliers.
Operations: Splitting bulk pallets into smaller packages, packing, sealing and storing these packages.
Outbound logistics: Delivery to neighbourhood shops using locally contracted distribution companies.

Marketing & Sales: Specially commissioned signs and personalised sales literature. Promotions and special offers.
Service: Specialist in-store display units for certain goods, three monthly meeting between franchisee and representative.

b) Perfect Shopper currently has a relatively short upstream supply chain. They are bulk purchasers from established suppliers of branded goods. Their main strength at the moment is to offer these branded goods at discounted prices to neighbourhood shops that would normally have to pay premium prices for these goods.
In the upstream supply chain, the issue of branding is a significant one. At present, Perfect Shopper only provides branded goods from established names to its customers. As far as the suppliers are concerned, Perfect Shopper is the customer and the company's regional warehouses are supplied as if they were the warehouses of conventional supermarkets. Perfect Shopper might look at the following restructuring opportunities within this context:

- Examining the arrangements for the delivery of products from suppliers to the regional warehouses. At present this is in the hands of the suppliers or contractors appointed by suppliers. It appears that when Perfect Shopper was established it decided not to contract its own distribution. This must now be open to review. It is likely that competitors have established contractual arrangements with logistics companies to collect products from suppliers. Perfect Shopper must examine this, accompanied by an investigation into downstream distribution. A significant distribution contract would probably include the branding of lorries and vans and this would provide an opportunity to increase brand visibility and so tackle this issue at the same time.
- Contracting the supply and distribution of goods also offers other opportunities. Many integrated logistics contractors also supply storage and warehousing solutions and it would be useful for Perfect Shopper to evaluate the costs of these. Essentially, distribution, warehousing and packaging could be outsourced to an integrated logistics company and Perfect Shopper could re-position itself as a primarily sales and marketing operation.
- Finally, Perfect Shopper must review how it communicates orders and ordering requirements with its suppliers. Their reliance on supplier deliveries suggests that the relationship is a relatively straightforward one. There may be opportunities for sharing information and allowing suppliers access to forecasted demand. There are many examples where organisations have allowed suppliers access to their information to reduce costs and to improve the efficiency of the supply chain as a whole.

The suggestions listed above assume that Perfect Shopper continues to only supply branded goods. Moving further upstream in the supply chain potentially moves the company into the manufacture and supply of goods. This will raise a number of significant issues about the franchise itself.

At present Perfect Shopper has, by necessity, concentrated on branded goods. It has not really had to understand how these goods sell in specific locations because it has not been able to offer alternatives. The content of the standing order reflects how the neighbourhood shop wishes to compete in its locality. However, if Perfect Shopper decides to commission its own brand then the breadth of products is increased. Neighbourhood shops would be able to offer ‘own brand’ products to compete with supermarkets who also focus on own brand products. It would also increase the visibility of the brand. However, Perfect Shopper must be sure that this approach is appropriate as a whole. It could easily produce an own brand that reduces the overall image of the company and hence devalues the franchise. Much more research is needed to assess the viability of producing ‘own brand’ goods.

c) A number of opportunities appear to exist in the downstream supply chain.
As already mentioned above, Perfect Shopper can revisit its contract distribution arrangements. At present, distribution to neighbourhood shops is in the hands of locally appointed contract distributors. As already suggested, it may be possible to contract one integrated logistics company to carry out both inbound and outbound logistics, so gaining economies of scale and opportunities for branding.

One of the problems identified in the independent report was the inflexibility of the ordering and delivering system. The ordering system appears to be built around a fixed standard delivery made every two weeks, agreed in advance for a three month period. Variations can be made to this standard order, but only increases – not decreases. Presumably, this arrangement is required to allow Perfect Shopper to forecast demand over a three month period and to place bulk orders to reflect these commitments. However, this may cause at least two problems. The first is that participating shops place a relatively low standard order and rely on variations to fulfil demand. This causes problems for Perfect Shopper. Secondly, any unpredictable fall in demand during the three month period leads to the shop having storage problems and unsold stock. This potentially creates problems for the shop owner, who may also begin to question the value of the franchise. Hence Perfect Shopper might wish to consider a much more flexible system where orders can be made to match demand and deliveries can be made as required. This would also remove the requirement for a three monthly meeting between the franchisee and the sales representative from Perfect Shopper. Investments in IT systems will be required to support this, with participating shops placing orders over the Internet to reflect their requirements. This move towards a more flexible purchasing arrangement may also make the outsourcing of warehousing and distribution even more appealing.

Perfect Shopper may also wish to investigate whether they can also provide value added services to customers, which not only simplify the ordering system but also allow the shop managers to better understand their customers and fulfil their requirements. The supply chain may legitimately include the customer’s customers, particularly for franchisers. This is already acknowledged because Perfect Shopper produces tailored marketing material aimed at the end-consumer. Point of Sales (PoS) devices feeding information back to Perfect Shopper would allow sales information to be analysed and fed back to the shopkeeper as well as allowing automatic replenishment based on purchasing trends. However, this may be culturally difficult for independent neighborhood shopkeepers to accept. Furthermore, it would potentially include information outside the products offered by Perfect Shopper and the implications of this would have to be considered. However, a whole shop sales analysis might be a useful service to offer existing and potential franchisees.

Customers are increasingly willing to order products over the Internet. It seems unlikely that individual shopkeepers would be able to establish and maintain their own Internet-based service. It would be useful for Perfect Shopper to explore the potential of establishing a central website with customers placing orders from local shops. Again there are issues about scope, because Perfect Shopper does not offer a whole-shop service. However, Michael de Kare-Silver has identified groceries as a product area that has good potential for Internet purchase. In his electronic shopping potential test any product scoring over 20 has good potential.

Question No.3

Branch Rationalisation project

Four years ago RBS Bank acquired ABN Amro Bank, one of its smaller rivals. Both had relatively large local branch bank networks and the newly merged bank (now called FAISAL BANK) found that it now had duplicated branches in many towns. One year after the takeover was finalised, FAISAL BANK set up a project to review the branch bank network and carry out a rationalisation that aimed to cut the number of branches by at least 20% and branch employment costs by at least 10%. It was agreed that the project should be completed in two years. There were to be no compulsory staff redundancies. All branch employment savings would have to be realised through voluntary redundancy and natural wastage.

FAISAL BANK appointed its operations director, Len Peters as the sponsor of the project. The designated project manager was Glenys Hopkins, an experienced project manager who had worked for RBS Bank for over fifteen years. The project team consisted of six employees who formerly worked for RBS Bank and six employees who formerly worked for ABN Amro Bank. They were seconded full-time to the project.

Project issues and conclusion

During the project there were two major issues. The first concerned the precise terms of the voluntary redundancy arrangements. The terms of the offer were quickly specified by Len Peters. The second issue arose one year into the project and it concerned the amount of time it took to dispose of unwanted branches. The original project estimates had underestimated how long it would take to sell property the bank owned or to re-assign or terminate the leases for branches it rented. The project board overseeing the project agreed to the project manager's submission that the estimates had been too optimistic and they extended the project deadline for a further six months.

The project team completed the required changes one week before the rearranged deadline. Glenys Hopkins was able to confirm that the branch network had been cut by

23%. Six months later, in a benefits realisation review, she was also able to confirm that branch employment costs had been reduced by 12%. At a post-project review the project support office of the bank confirmed that they had changed their project estimating assumptions to reflect the experience of the project team.

Potential process initiatives

FAISAL BANK is now ready to undertake three process initiatives in the Information Technology area. The IT departments and systems of the two banks are still separate. The three process initiatives under consideration are:

1. The integration of the two bespoke payroll systems currently operated by the two banks into one consolidated payroll system. This will save the costs of updating and maintaining two separate systems.
2. The updating of all personal desktop computer hardware and software to reflect contemporary technologies and the subsequent maintenance of that hardware. This will allow the desktop to be standardised and bring staff efficiency savings.
3. The bank has recently identified the need for a private personal banking service for wealthy customers. Processes, systems and software have to be developed to support this new service. High net worth customers have been identified by the bank as an important growth area.

The bank will consider three **solution options** for each initiative. These are outsourcing or software package solution or bespoke development.

Required:

a) The branch rationalisation was a successful project.

Identify and analyse the elements of good project management that helped make the branch rationalization project successful.

b) The bank has identified three further desirable process initiatives (see above).

i. Explain, using Harmon's process-strategy matrix, how the complexity and strategic importance of process initiatives can be classified.

ii. Recommend and justify a solution option for each of the three process initiatives.

(20 Marks)

Answer:

a) The elements of good project management that helped make the branch rationalisation project successful might include:

1. A sponsor (Len Peters) was appointed to own the project. A sponsor is required to make important and decisive decisions about project scope, conduct and approach. In the case study scenario, the precise terms of the voluntary redundancy arrangements were quickly specified. Without a

sponsor projects tend to drift and to stall when important decisions have to be made.

2. The objectives of the project were clearly defined. The target was to cut the number of branch banks by at least 20% and branch employment costs by at least 10%. Quantification makes these specific objectives measurable. It should be clear at the end of the project if the project has successfully met its objectives. Projects that have general objectives, such as 'improve management information' are less focused and more difficult to evaluate.
3. Constraints were specified at the outset of the project. For example, a time constraint was defined (two years) and an operational constraint (no compulsory staff redundancies) agreed. This latter restriction meant that the project team was clear at the onset about the scope of the changes they could implement. If constraints are not defined in advance then project teams might suggest inappropriate solutions.
4. An experienced full-time project manager was appointed. The project team was also made up of full-time staff seconded to the project. This meant that they could focus completely on the project and not be distracted by their usual jobs. Parttime secondments to projects rarely work because the team members still have to undertake elements of their day job and the urgency of these often takes precedence over project work.
5. Potential slippage in the project and its cause was identified and dealt with relatively early in the project's life. This meant that early re-scheduling could be carried out and an extension to the deadline agreed. It helps the management of expectations and helps avoid unexpected last-minute changes in scope.
6. The project team formally conducted benefits realisation, reporting on the actual performance of the project. This confirmed that the original objectives had been met. A formal post-project meeting was also held to review lessons learnt on the project. This led to a change in estimating assumptions which had lead to the original optimistic values. Lessons are learnt on many projects which are not fed back into the project management system. Consequently, another team commits the same mistake or operates under the same false assumption.

b).

i. FAISAL BANK could assess the priority of the three initiatives on the process-strategy matrix suggested by Paul Harmon. The matrix has two axes. The vertical axis is concerned with process complexity and dynamics. At the base of the vertical axis are simple procedures often with simple algorithms while at the top are complex processes which may require negotiation, discussion and complicated design. On the horizontal axis is the strategic value of these processes. Their importance increases from left to right with low value processes concerned with things that must be done but which add little value to products or services. On the extreme right of this axis are high value processes which are very important to success and add significant value to goods and services. From these two axes, Harmon categorises four quadrants and makes suggestions about how processes should be tackled in each quadrant.

Low strategic importance, low process complexity and dynamics

This quadrant contains relatively straightforward stable processes which add little business value. They are processes that must be done in the company but add nothing to the company's value proposition. These processes need to be automated in the most efficient way possible. They are often called 'commodity processes' and are suitable for standard software package solutions and/or outsourcing to organisations that specialise in that area.

Low strategic importance, high process complexity and dynamics

This quadrant is for relatively complex processes that need to be done but do not add significant value to the company's products or services. They are not at the heart of the company's core competencies. Harmon suggests that these should be outsourced to organisations which have them as their core business.

High strategic importance, low process complexity and dynamics

These processes lie in the lower right quadrant of the model. They tend to be relatively straightforward processes which, nevertheless, have a significant role on the organisation's activities. They are central to what the business ABN Amros. The aim is to automate these, if possible, to gain cost reduction and improve quality and efficiency.

High strategic importance, high process complexity and dynamics

Finally, in the top right hand quadrant are high value, complex processes which often include human judgement and expertise and are often very difficult to automate. Harmon suggests that these might be the focus of major process redesign initiatives focusing on business process improvement through the improved performance of the people undertaking those processes.

ii. In the context of FAISAL BANK, the following is suggested. Clearly these are value judgements and credit will be given for coherently argued answers which do not match the examiner's conclusions.

- The integration of the two bespoke payroll systems currently operated by the two banks into one consolidated payroll system. Payroll has to be produced but ABN Amros not add significant value to the end-customer. It is unlikely that the recipients of the system (the bank staff) will notice any difference if a new system is implemented. The bank is considering re-developing this process because of the high cost of updating and maintaining two separate systems. This appears to be of low strategic importance. From the case study it is not clear how complex the payroll requirements are or how difficult it will be to transfer data from the current systems to a new solution. The most obvious approach is to suggest that a standardised software package is bought and data transferred to this solution. It appears sensible to undertake this work using the in-house IT departments who will be familiar with the current systems and so should be able to undertake accurate data mapping and successful data transfer to the new system. However, if this is difficult and time-consuming, there might be some benefit in outsourcing the solution and data transfer problems to a specialist software provider, allowing internal IT to concentrate on more strategic applications.

- The updating of all personal computer hardware and software to reflect contemporary technologies and the subsequent maintenance of that hardware. The bank is perhaps looking for efficiency savings through the standardisation of the desktop. Again, this ABN Amros not appear to directly give value to the bank's customers. Consequently, this also appears to be of low strategic importance. However, it could be of relatively high complexity, particularly when considering the maintenance of hardware. There seems a clear case for outsourcing this process to a specialist technology company who can bring all hardware and software up to date and then maintain it at that level.

- The development of processes, systems and software to support private banking. This appears to be of high strategic importance and high complexity. It delivers services to end-customers who the bank has identified as a source of business growth. Elements of human judgement and interaction will be required when providing this service. The fulfilment of personal requirements for the wealthy customer will bring variety, risk and reward. The development of processes, systems and software to support private banking should have high priority and should be developed in-house. The success of such an operation should deliver handsome profits to FAISAL BANK. This may mean that, given resources are finite, the development of the new payroll system should be outsourced to a specialist in that functional area.

Question No. 4

ASW is a software house which specialises in producing software packages for insurance companies. ASW has a basic software package for the insurance industry that can be used immediately out of the box. However, most customers wish ASW to tailor the package to reflect their own products and requirements. In a typical ASW project, ASW's business analysts define the gap between the customer's requirements and the basic package. These business analysts then specify the complete software requirement in a system specification. This specification is used by its programmers to produce a customised version of the software. It is also used by the system testers at ASW to perform their system tests before releasing it to the customer for acceptance testing.

One of ASW's new customers is CaetInsure. Initially CaetInsure sent ASW a set of requirements for their proposed new system. Business analysts from ASW then worked with CaetInsure staff to produce a full system specification for CaetInsure's specific requirements. ASW do not begin any development until this system specification is signed off. After some delay (see below), the system specification was eventually signed off by CaetInsure.

Since sign-off, ASW developers have been working on tailoring the product to obtain an appropriate software solution. The project is currently at week 16 and the software is ready for system testing. The remaining activities in the project are shown in figure 1. This simple plan has been put together by the project manager. It also shows who has responsibility for undertaking the activities shown on the plan.

The problem that the project manager faces is that the plan now suggests that implementation (parallel running) cannot take place until part way through week 28. The original plan was for implementation in week 23. Three weeks of the delay were due to problems in signing off the system specification. Key CaetInsure employees were unavailable to make decisions about requirements, particularly in the re-insurance part of the system. Too many requirements in this module were either unclear or kept changing as users sought clarification from their managers. There have also been two further weeks of slippage since the sign-off of the system specification.

The CaetInsure contract had been won in the face of stiff competition. As part of securing the deal, the ASW sales account manager responsible for the CaetInsure contract agreed that penalty clauses could be inserted into the contract. The financial penalty for late delivery of the software increases with every week's delay. CaetInsure had insisted on these clauses as they have tied the delivery of the software in with the launch of a new product. Although the delay in signing off the system specification was due to CaetInsure, the penalty clauses still remain in the contract. When the delay was discussed with the customer and ASW's project manager, the sales account manager assured CaetInsure that the 'time could be made up in programming'.

The initial planned delivery date (week 23) is now only seven weeks away. The project manager is now under intense pressure to come up with solutions which address the project slippage.

Required:

a) **The project plan shows a number of planned activities. Explain how each of the following three activities contribute to the testing and quality of the software for CaetInsure:**
   i. **System testing;**
   ii. **Acceptance testing;**
   iii. **Data migration.**

b) Evaluate the alternative strategies available to ASW's project manager to address the slippage problem in the CaetInsure project.

c) As a result of your evaluation, recommend and justify your preferred solution to the slippage problem in the CaetInsure project.

(6+8+8=20 Marks)

Answer:-

a) .

i. System Testing

The scenario mentions the system specification that has been signed off by CaetInsure. System testing is performed by ASW testers to ensure that the proposed software solution fulfils this specification. The aim is to verify that the system does what it was specified to do and to identify and remove most faults before it is released to the customer for acceptance testing. The key issue here is that system testing is performed by ASW testers and not employees of CaetInsure. Successful system testing relies on the accuracy and completeness of the specification as the software is tested against that specification.

System testing may also include elements of usability and performance testing. Usability testing will focus on the clarity and consistency of the user interface as well as ensuring that the software complies with any standard user interface guidelines. Performance testing will attempt to verify that the system meets specified performance targets, such as a certain response time, when it is processing a specified number of transactions or being used simultaneously by a certain number of users. System testing is the last opportunity ASW gets to address product quality before the product is released to the customer. Any faults in the software will subsequently be visible to end users whose confidence in ASW (and the software solution) will be influenced by its functionality, reliability and usability.

ii. Acceptance Testing

This activity will be undertaken by user acceptance testers at CaetInsure. The scenario mentions the requirements catalogue submitted by CaetInsure in the early stages of the project. User acceptance testers will test the delivered software to confirm that it meets these requirements. These testers will also be concerned about the usability of the software as well as how the software will fit in with the whole business process, including manual and clerical activities. Acceptance testers will evaluate the usability of the software from the perspective of the competence of the actual users of the software – the people who are going to use the system as part of their work.

The key point here is that acceptance testers are employees of CaetInsure. If they believe that the system does not meet their functional requirements, then the reason for this has to be investigated. It is possible that the requirement was not defined in sufficient detail at the outset and so ASW's interpretation of it may not be unreasonable. Whatever the reason for the problem, issues identified in acceptance testing can lead to delay in system implementation and much negotiation about responsibility for putting it right.

iii. Data Migration

Data migration concerns moving the data from the current system used by CaetInsure to the replacement ASW packaged solution. It can take place when user acceptance testing has accepted the delivered software. Once migration has taken place live transactions have to be put through the new system to ensure that it remains up-to-date. The project plan suggests that CaetInsure intend to parallel run their systems for a while. In parallel running, transactions are entered into both the current and the new system and checked against each other. Any discrepancies are investigated. To ensure the validity of comparisons all transactions must be entered into the new system as soon as data migration is complete. This means urgently checking the success of the data migration through statically inspecting the data held in the files of the new system. There are a number of automated tools that can assist in this file comparison. ASW employees will undertake the testing of migration programs with the actual data migration performed by CaetInsure IT staff.

Data migration is also important because it is a critical point for considering the quality of data being moved from the current system. Some of the data held in the current system may be inaccurate, incomplete or out of date. Data migration provides an opportunity for cleansing this data and so improving the overall quality of information held in the computer system.

b) The project manager could request an extension to the deadline

The case study scenario suggests that early delays in the project were caused by the absence of key CaetInsure staff and changes in user requirements in the re-insurance module. These delays meant that the full system specification was signed off three weeks later than initially agreed. Unfortunately, the delivery date of the whole project was not re-negotiated at this point as it was suggested that 'time could be made up' during the programming stage. Furthermore, the marketing department of CaetInsure had already

announced the launch of a new product to coincide with the implementation of the software and they did not want to change these dates. However, the project manager could now return to CaetInsure and inform them that it had not been possible to catch up with the proposed schedule and to remind them that the initial slippage had been caused by them. Although the deadline date is associated with a product launch it is unlikely that this is crucial. It is not a matter of life and death. It might be irksome to delay the launch by a few weeks, but it is unlikely that many people will notice or indeed care about it. There are many significant successful products which have been released long after their intended release date. In many ways it is an artificial deadline.
However, there are at least three problems associated with this suggestion. The first is that the delay is now longer than the three weeks incurred at the specification stage. Consequently, the project manager will have to explain that there have been further delays to the project. Secondly, the project manager will have to be very confident about his revised delivery date. The project plan does not explicitly contain any time for programmers fixing faults found in system and acceptance testing and it seems very likely that faults will be found in this testing. Finally, some negotiation will have to take place on the late delivery penalty clause charges the sales account manager agreed in the initial contract. If some (or all) of these clauses are enacted then the profitability of the project will be significantly affected.

The project manager could consider a functional reduction in the scope of the software solution.
The scenario suggests that the re-insurance functionality has been a problem throughout the project. There may also be unresolved issues in other parts of the software. However, it must be remembered that the ASW product is a proven software solution, bespoke development is only concerned with customising the basic product to fulfil certain customer requirements. Therefore it is likely that there are large areas of the software that can be successfully delivered to the customer. The key issue here is whether this reduced functionality will fulfil the requirements associated with the proposed new product which CaetInsure intends to launch. If it does then the delivery of a partial solution does not have a significant business impact and the product launch can go ahead as planned. The project manager needs to discuss this with the customer as quickly as possible. He has to be sure that the reduced scope does indeed fulfil these requirements and, if it does, to focus testing, migration and document production on these parts of the software. He will also have to estimate the delivery time of the second phase of the software that fulfils the complete user requirement.

There are three elements of this suggestion that the project manager should bear in mind. Firstly, the impact of reduced scope on the penalty clauses of the contract. It would appear harsh to deliver a part solution but to still be fully penalised for not delivering the total solution. Consequently some contract renegotiation is necessary. Secondly, there will be an unexpected overhead associated with delivering a second phase which contains the full product. This is the overhead of regression testing, making sure that changes made to the product in the second release do not unintentionally affect the software solution that has already been delivered. Finally, the specification of data migration programs will have to be reviewed to see if they need to be changed in the light of the reduced functionality. Any changes will affect data migration programs which are currently being written or tested.

The project manager could consider taking steps which might reduce the quality of the product

A number of options might be considered around the testing of the software. One option is to considerably reduce system testing and hand over the software to acceptance testing ahead of the proposed schedule. The point has already been made that the software is essentially a package that has to be tailored for specific functions. Consequently, large areas of the software have been tested before, much of it by actual users out in the businesses that are using this solution. Programs for the CaetInsure version will have been unit tested by programmers before they have been released to system testers and so no area of the system is untested, although there will be areas that have not been independently tested. Another option is to reduce the scope of system testing, focusing it on testing functionality rather than usability (which will be one focus of acceptance testing) and performance (which can be difficult to perform effectively in a software house environment where the user's actual hardware configuration cannot be easily mimicked). A further option is to execute system and acceptance testing in parallel.

There are a number of issues with this approach which the project manager needs to consider. The first is that the acceptance testers are likely to find significantly more faults than they would if full system testing had preceded acceptance testing. This can lead to a reduction in customer confidence which could jeopardise the whole project. Secondly, faults identified by both system and user acceptance testers have to be carefully managed. Configuration management becomes a very significant issue and appropriate version control of the software is an essential overhead. Confidence is undermined by the constant releases of new versions of the software, some of which, due to poor configuration management, contain faults which have already been reported and fixed in earlier versions of the software.

The project manager might consider requesting more resources

Finally the project manager may request further resources for the project. The current project plan is at a high level of detail. It does not show how many system testers are actually working on the system or how many technical authors are writing the documentation. It may be possible to add more resources and so reduce the elapsed time of the activity. Resources might also be asked to work smarter or work longer. For example, testing might be prioritised so that the most important areas of the software from the user's perspective are tested first. It may also be possible to automate certain areas of testing or to outsource it to specialist testing companies. Programmers might be asked to focus more on static testing (which is particularly effective at finding faults) and to work overtime to beat their deadlines.

However, the project manager must be aware that adding resources to a late running project often slows the project down as established members of the project team explain requirements, standards and procedures to any newcomers. A key factor here will be the precision of the requirements. If these are well specified then it should be possible to add testing staff reasonably effectively, or indeed to outsource testing to countries where it can be conducted relatively cheaply. It may also be possible to bring in technical authors and automated testing tools specialists who can speed up these activities. Programming is more of an issue. It will be very difficult to bring new programmers up to speed. However, it may be possible to transfer resources from other projects and to support the established programmers by providing appropriate hardware and software.

Finally, the addition of resources to the project will have an impact on project profitability. The project estimate will have assumed a certain commitment of resources. Adding resources will reduce the profit margin and indeed, in the extreme, may make the project itself unprofitable.

c) There is no correct answer for this part of the question. However, it is suggested that a combination of the above strategies would be appropriate. The deadline is not crucial in the wider scheme of things and there is no statutory requirement to deliver on time. However the deadline is significant to the customer and a failure to meet this deadline may cause internal problems and a 'loss of face'. This is particularly significant in this context because ASW is an external supplier. It might have been easier to negotiate an extended deadline if the software were being supplied by an internal IT department. Hence, it might be suggested that, in these circumstances, the deadline should not be extended for an initial release. However, it may be possible to negotiate the scope of this release, making sure that the key functions are in place and tested when the software is delivered. The customer might accept this reduction in scope as recognition of the delays caused earlier in the project when, due to the absence of key personnel, the full system specification was signed off three weeks late.

It could be argued that the current tasks of ASW, system testing and writing the user manual, could be shortened by adding further resources to the project. Effective testing will depend upon the quality of the specifications but it may be possible to add more resources and back this up with reduced test coverage. The amount of testing performed is driven by risk. There has to be a balance between the cost and time of more testing and the consequences of failure. Although the insurance system appears to be mission-critical to CaetInsure, there is a robust current system that could be reverted to during the planned parallel running.

It would also appear that more resources could be added to writing the user manual. There is already slack between the scheduled completion of the user manual and its use in the training course.

ASW might also consider starting writing the data migration programs before week 22. It appears from the project plan that ASW are waiting for system testing to be complete before writing these programs. It may be possible to start beforehand, writing migration routines for the parts of the system that have already passed system testing.

The acceptance testing is outside the control of ASW. It is being performed by CaetInsure. However, again CaetInsure might consider reducing the time taken for acceptance testing by adding more resources to the task and by accepting a greater risk of failure during parallel running.

On balance, it might be suggested that further resources are quickly added to the project and that the test coverage is reduced. Hence the solution is largely concerned with adding resources and potentially reducing quality. If the customer is happy to slightly reduce the scope of the initial release to reflect past delays then this is a bonus. However, it is suggested that in this project the delivery date should remain fixed. Relaxing this is not an appropriate strategy in this instance.

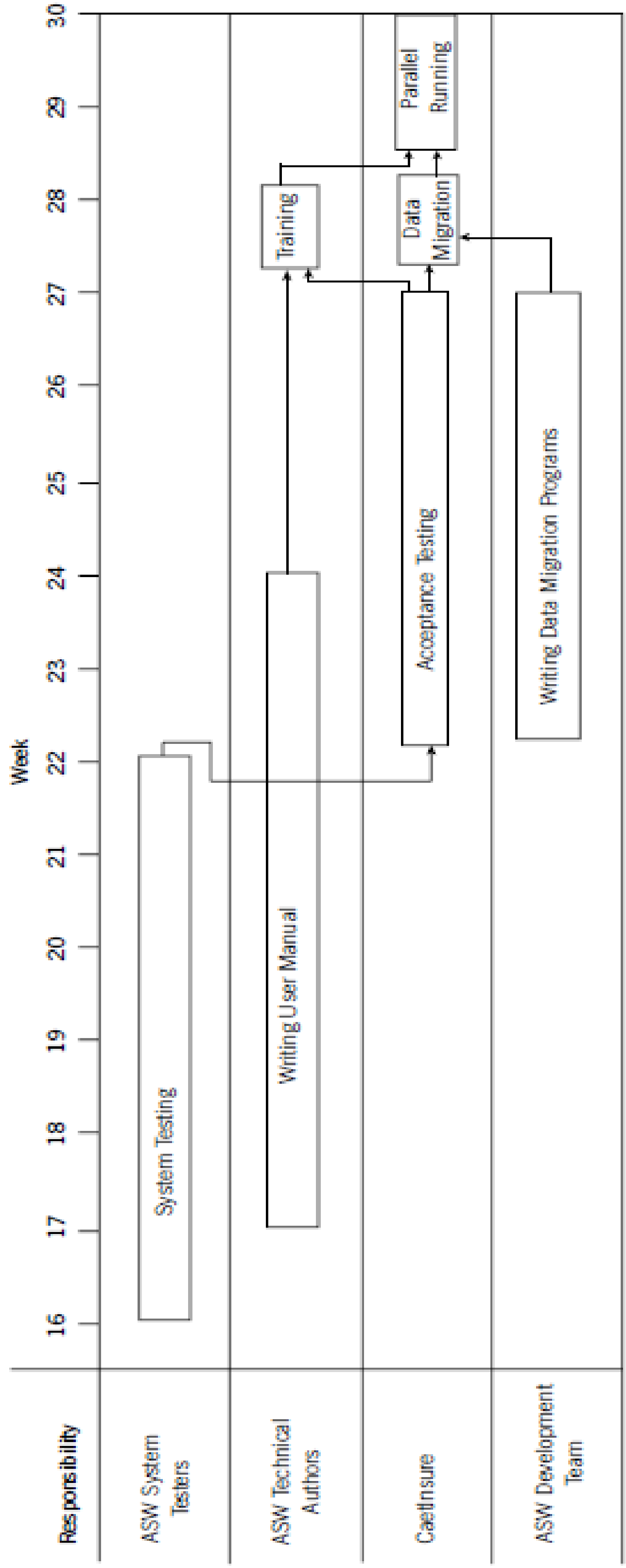

Figure 1: Project Plan – ASW: CaetInsure Contract

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Question No. 5

Samsung offers warranties for electrical and electronic equipment to both business and household customers. For a fixed annual fee the company will provide a free fault diagnosis and repair service for equipment covered by the warranty. A warranty lasts for one year and customers are invited to renew their warranty one month before it expires. Samsung employs 340 full-time engineers around the country to undertake these repairs. It costs about $6,000 to train a newly recruited engineer.

When equipment breaks down the customer telephones a support help line number where their problem is dealt with by a customer support clerk. This clerk has access to the work schedules of the engineers and an appointment is made for a visit from an engineer at the earliest possible time convenient to the customer. When the engineer makes the visit, faults with equipment are diagnosed and are fixed free of charge under the terms of the warranty.
Samsung is extremely concerned about the relatively high labour turnover of its engineers and has commissioned a report to investigate the situation. Some of the findings of the report are summarised in the following table (table 1). It compares Samsung with two of its main competitors.

Company	Labour Turnover*	Average salary ($)	Profit Sharing Scheme	Average days holiday/year	Performance related pay	Average training spend per year per engineer ($)
Samsung	12%	24,000	No	20	No	1,000
Safequipe	8%	23,000	Yes	23	Yes	1,500
Guarantor	7%	22,500	Yes	25	Yes	1,250

* Labour turnover is the number of engineers leaving in the last year as a percentage of the number of engineers employed at the beginning of the year

An exit survey of engineers leaving the company recorded the following comments:

1. 'There is no point in doing a good job, because you get paid no more than doing an ordinary one. Average work is tolerated here.'
2. 'This is the first place I have worked where learning new skills is not encouraged. There is no incentive to improve yourself. The company seems to believe that employees who gain new skills will inevitably leave, so they discourage learning.'
3. 'The real problem is that the pay structure does not differentiate between good, average and poor performers. This is really de-motivating.'

The HR director of Samsung is anxious to address the high turnover issue and believes that quantitative measurement of employee performance is essential in a re-structured reward management scheme. He has suggested that the company should introduce two new performance related pay measures. The first is a team based bonus based on the average time it takes for the company to respond to a repair request. He proposes that this should be based on the time taken between the customer request for a repair being logged and the date of the engineer attending to fix the problem. He argues that customers value quick response times and so the shorter this time the greater the bonus should be for the whole team.

In addition, he proposes an individual bonus. This will be based on the average time taken for an engineer to fix a reported fault once they have arrived. This is the average time taken for the engineer to repair the fault from the start time of the job to its completion. He argues that the company values quick repair time as this increases business efficiency and so the quicker the fix the greater the bonus should be for the individual.

Required:

a) Assess the deficiencies of Samsung's current rewards management scheme.

b) Analyse the limitations of the proposed performance measures suggested by the HR director.

(10+10=20 marks)

Answer:-

a) High labour turnover is not always a problem for an organisation. Some companies, particularly those pursuing a strategy of cost leadership, can tolerate low commitment and high turnover, employing unskilled workers who are easy to recruit and train. However, this is not the case at Samsung where the engineers play a key role. The high turnover of engineers is of particular concern for two reasons.

- The scenario suggests that the company have two primary sets of customer-facing employees. The customer support clerks, who record and schedule repairs, and the engineers who actually fix the faults. Of these, only the engineers meet the customers face-to-face. Hence the motivation of the engineers, their commitment to the company and their proficiency in undertaking the repair is vital to Samsung. Their behaviour will affect how the customer perceives the company and also the probability of them renewing their warranty agreement. High labour turnover in such a key customer-facing job is a major issue.
- The cost of training engineers is significant. The case study suggests that it costs the company approximately $6,000 to train an engineer when they join the company. Table 1 shows that Samsung spends an average of $1,000 per year in keeping each engineer up-to-date with new products and product changes. Although this figure is lower than its competitors, it is still a significant investment compared with other industries. The training costs are additional to other recruitment costs incurred by the company. These costs would include advertising the posts and the cost of organizing and conducting job interviews.

Hence the high turnover of engineers is a significant problem to Samsung.

Table 1 is primarily concerned with the reward options offered by Samsung and two of its competitors. Reward options usually contain three elements – base pay, performance pay and indirect pay. Organisations have to decide how each of these three components should be balanced in the reward mix. Samsung have taken an approach which stresses base pay and pays little attention to performance and indirect pay. Although their annual average pay is greater than their competitors, engineers cannot gain extra pay to reflect work-related performance. Samsung's approach fails to recognise that many organisations (including two of its competitors) now reward their employees with a level of pay dependent upon an individual's performance. Performance related pay ties additional payments directly to the performance of the task. This may be at an individual or team level or both. Both of Samsung's competitors offer this. Its absence was recognised by two engineers in the exit survey;

- 'There is no point in doing a good job, because you get paid no more than doing an ordinary one. Average work is tolerated here.'
- 'The real problem is that the pay structure does not differentiate between good, average and poor performers. This is really de-motivating.'

This absence of performance related pay has also been recognised by the HR director who has proposed two performance related pay measures (one individual and one team-based). Performance related pay may also be distributed organisationwide. Additional income can be given to employees to reflect the size, growth or profitability of the firm. Table 1 again suggests that Samsung is not competitive in this area, with both Safequipe and Guarantor offering profit-sharing schemes.

Indirect pay (or employee benefits) is the part of the reward management package provided to employees in addition to base and performance pay. Health and life insurance, pension plans, company cars and social club membership are all examples of indirect pay. Table 1 includes two measures that might be relevant here; days holiday and expenditure on training. Again Samsung performs less well than its competitors. A failure to invest in employees is likely to contribute to poor performance and high labour turnover. It appears that the company sees training as a cost rather than as an investment and employees' knowledge as a threat rather than an opportunity. Human Resource Development perceives that an organisation's investment in the learning of its people 'acts as a powerful signal of its intentions' (Bratton and Gold). That the company is sending out the wrong signal is suggested by a further quote from the exit survey.

- 'This is the first place I have worked where learning new skills in not encouraged. There is no incentive to improve yourself. The company seems to believe that employees who gain new skills will inevitably leave, so they discourage learning.'

Samsung needs to revisit its reward mix. High labour turnover and the comments of the exit survey suggest that annual salary is not the prime determinant of satisfaction.

b) In performance related pay, income is tied to the level of ability and output. Advocates of this approach suggest that a job's performance measures demonstrate to the employee what the employer considers to be the key tasks they want employees to perform. Measures also suggest what level of performance is expected in those key tasks. However, for these measures to be successful, the employee has to perceive that the measures are both relevant and achievable. There are at least two significant issues here (both of which appear in the performance measures suggested by the HR director).

- Firstly, that the parameters that underpin the measure are under the control of the employee who is attempting to achieve a defined performance. There is little point in setting targets that are outside the scope of the employee's influence.
- Secondly, that the measures that relate to the employee are not at odds with the measures applicable to the whole organisation. So employees are not encouraged to work in a way that maximises their income but which reduces the performance or profitability of the organisation as a whole.

The HR director at Samsung has proposed two performance measures. The first is a team-based bonus based on an average time it takes for the company to respond to a repair request. He proposes that this should be based on the time taken between the customer request for a repair being logged and the date of the engineer attending to fix the problem. He argues that customers value quick response times and so the shorter this time the greater the bonus should be. Although quick response to a customer request for a repair is important, the potential problem with this measure is that it is influenced by parameters largely outside the influence of the team. Firstly, it depends upon the availability of an engineer and this availability is largely determined by how many engineers the company decides to employ. Secondly, the scenario makes it clear that the visit is scheduled 'at the earliest possible time convenient to the customer'. This may be some considerable time in the future, particularly for householders who have to make arrangements to stay at home to allow the engineer access to the equipment they are repairing. To make this a legitimate performance measure the lead time to repair has to be in the hands of the team, which it clearly is not.

In addition, the HR director proposes an individual bonus. This will be based on the average time taken for an engineer to fix a reported fault once they have arrived. This is the average time taken for the engineer to repair the fault from the start time of the job to its completion. He argues that the company values quick response time as this increases efficiency and so the quicker the fix the greater the bonus.

At least this measure is partly in the hands of the repairer. However, there are at least three problems with this measure;

- The length of the repair is likely to depend upon the complexity of the problem and the design of the equipment being repaired. The measure would penalise engineers working on complicated problems on complex equipment.
- The length of the repair may influence the quality of the repair. There might be a temptation to perform a relatively quick fix, with a high probability of a future failure. Indeed the measure might encourage engineers to maximise their income by performing a number of quick repairs that do not address the underlying problem. The effect of this on Samsung could be potentially disastrous. Their current business model depends upon the company minimising calls and repairs during the warranty period. In contrast, the performance measure might lead to more calls, increasing the pay of the engineer but undermining the profitability of the company.
- There could be problems with engineers reliably reporting the correct start and end time of a job. The engineer may be tempted to falsify these times, reducing job time but perhaps increasing the time apparently spent in travelling and performing administration.

Question No. 6

Retail pharmacies supply branded medicinal products, such as headache and cold remedies, as well as medicines prescribed by doctors. Customers expect both types of product to be immediately available and so this demands efficient purchasing and stock control in each pharmacy. The retail pharmacy industry is increasingly concentrated in a small number of nationwide pharmacy chains, although independent pharmacies continue to survive. The pharmacy chains are increasingly encouraging their customers to order medicinal products online and the doctors are being encouraged to electronically send their prescriptions to the pharmacy so that they can be prepared ready for the patient to collect.

Pharmacy Systems International (PSI)

Pharmacy Systems International (PSI) is a privately owned software company which has successfully developed and sold a specialised software package meeting the specific needs of retail pharmacies. PSI's stated objective is to be a 'highly skilled professional company providing quality software services to the retail pharmacy industry'. Over the last three years PSI has experienced gradual growth in turnover, profitability and market share.

PSI Financial information

	2007	**2006**	**2005**
Turnover ($000)	11,700	10,760	10,350
Profits ($000) (pre-tax)	975	945	875

Estimated market share	26%	24%	23%
Number of employees	120	117	115

PSI has three directors, each of whom has a significant ownership stake in the business. The chief executive is a natural entrepreneur with a past record of identifying opportunities and taking the necessary risks to exploit them. In the last three years he has curbed his natural enthusiasm for growth as PSI has consolidated its position in the market place. However, he now feels the time is right to expand the business to a size and profitability that makes PSI an attractive acquisition target and enables the directors to realise their investment in the company. He has a natural ally in the sales and marketing director and both feel that PSI needs to find new national and international markets to fuel its growth. The software development director, however, does not share the chief executive's enthusiasm for this expansion.

The chief executive has proposed that growth can best be achieved by developing a generic software package which can be used by the wider, general retail industry. His plan is for the company to take the current software package and take out any specific references to the pharmaceutical industry. This generic package could then be extended and configured for other retail sectors. The pharmaceutical package would be retained but it would be perceived and marketed as a specialised implementation of the new generic package.

This proposed change in strategic direction is strongly resisted by the software development director. He and his team of software developers are under constant pressure to meet the demands of the existing retail pharmacy customers. On-line ordering of medicinal products and electronic dispatch of prescriptions are just two examples of the constant pressure PSI is under from their retail customers to continuously update its software package to enable the pharmacies to implement technical innovations that improve customer service.

Ideally, the software development director would like to acquire further resources to develop a more standardized software package for their current customers. He is particularly annoyed by PSI's salesmen continually committing the company to producing a customized software solution for each customer and promising delivery dates that the software delivery team struggle to meet. Frequently, the software contains faults that require expensive and time consuming maintenance. Consequently, PSI is being increasingly criticized by customers. A recent user group conference expressed considerable dissatisfaction with the quality of the PSI package and doubted the company's ability to meet the published deadline for a new release of the software.

Required:

The proposal to develop and sell a software package for the retail industry represents a major change in strategy for PSI.
Analyse the nature, scope and type of this proposed strategic change for PSI.

(10 Marks)

Answer:-

a) The proposal to develop and sell a software package for the general retail industry represents a major strategic decision for PSI. Up till now it has been relatively successful in identifying and servicing the software needs of a specialist niche market – the retail pharmacy market. In Michael Porter's terms it is currently a focused differentiator. Its proposed entry into the general retail market represents both a new product and a new market and so, using the perspective of Ansoff's growth matrix, it is a diversification strategy with high levels of risk. The proposal would lead to significant strategic change and, perhaps not surprisingly, is meeting resistance from the software development director who is responsible for a key activity in this change.

Johnson, Scholes and Whittington (JSW) argue that there is a danger in believing that there is 'only one way, or one best way, to change organisational strategies'. They believe that most strategies are profoundly influenced by earlier strategies and their success or failure. Consequently, strategies are often incremental in nature, adding to or adapting, previous or existing strategy. Rarely is the proposed change so fundamental that it challenges the existing business model and the processes and activities that support it.

JSW make use of a model developed by Balogun and Hope Hailey, which identifies four types of change which have very different degrees of impact. It is suggested that there are two key measures of change. Firstly, the nature of change – how big is it? Incremental or 'step-by-step' change does not challenge the existing way of doing things and may indeed reinforce the organisation's processes and culture. It is therefore likely to meet less resistance than Big Bang or quantum change, which represents significant change to most or all the organisation. Often this Big Bang change is necessary to respond to a crisis facing the firm, such as a major fall in profitability, and/or the appointment of a new chief executive.

Secondly, the scope of change process is important – how much of the firm's activities are to be changed? If the change does not alter the basic business model (or 'paradigm' in JSW's terms) then it is regarded as 'a realignment of strategy rather than a fundamental change in strategic direction' (JSW). However, if the proposed change is a radical challenge to the existing business model or paradigm then it is regarded as a transformational change.

The consideration of the two key measures of change enables the identification of four types of change. These four types are used in this answer but other models and approaches would be acceptable.

	Scope of change	
Nature of Change	**Realignment**	**Transformation**
Incremental	Adaptation	Evolution
Big Bang	Reconstruction	Revolution

- Adaptation is a change that can be made within the current business model (realignment) and it occurs incrementally. JSW argue this is the most common form of change in organisations.
- Reconstruction represents significant change in the organisation, often prompted by a crisis, such as an unwelcome takeover bid, but it does not require a fundamental change to the business model. Turnaround strategies where the aim is to rapidly reduce costs or increase revenues to ensure business survival may affect the whole organisation, but not change the basic business model.
- Evolution is a change in strategy, which requires the business model to be significantly changed over a period of time. The perceived need for 'transformation' may be as result of careful business analysis leading to a planned evolutionary change. Alternatively, change may take place through an emergent process where the scope of change only becomes apparent once it is completed.
- Revolution affects the whole of the organisation and the scope of change requires a fundamental shift in the business model – the way the firm chooses to compete.

Viewed dispassionately, it appears that PSI's proposed move into the general retail market represents an evolutionary change. It is incremental because it will build on the skills, routines and beliefs of those in the organisation. However, it is transformational because the proposed move away from the current market niche to a market which requires a generic solution is a fundamental change in strategic direction. It is likely that internal processes and activities will need to significantly change for the company to successfully develop and sell the new packages. In PSI's case, the evolution is driven top-down, by the chief executive's desire to create a company which is an attractive acquisition, at which point he can realise some or all of his investment in the company.

Interestingly, the three directors may not all perceive the change as evolutionary. The entrepreneurial chief executive and the sales and marketing director may see the proposal as adaptive change, realigning the company to take advantage of a business opportunity which will lead to realising their personal goals. Indeed they may see the current product as just the specific implementation of a generic retail software solution. In contrast, the software development director is more likely to agree with our assessment of the change as evolutionary.