Activity Based Costing

Q1 ICAI Mat

Melody is a manufacturer of musical instruments. The company specializes in manufacture of Piano and Electronic Keyboard instruments. They are both labour-intensive products. Therefore, Melody follows absorbed its production overheads based on direct labour hours.

Piano

Melody's Pianos are of very high quality. Client patronage include professional Piano musicians. Some of these instruments are sold in its standard form. However, musicians particularly the concert players require their pianos to be customized to certain specifications. Customization primarily relates to the acoustic quality of the piano sound. Quality of sound is of paramount importance to musicians as it determines the power and warmth of tone. Each musician has a preference to achieve a special quality of sound. Therefore, no two customized Pianos can be the same. Due to its reputation, Melody receives numerous requests for customization from its customers. Ability to provide customization service sets Melody apart from its competitors.

Customization requires the services of professional craftsmen. They are hired as subcontractors for such work based on the need. These craftsmen perform their services within the factory premises. For this a special work, space is maintained by Melody. Melody charges its customers extra for subcontracting cost plus 10%. This would cover the actual cost of subcontracting and any incidental overheads incurred. The Board of Melody accepts that this method of billing is very simplistic. It is unsure if the company is recovering the entire cost of providing this customization service.

Electronic Keyboard Instruments

These are instruments manufactured by Melody are home Keyboards that are targeted at young music enthusiasts who are beginning to learn music. They come in standard sizes, comprised of standard components. No customizations are done to Keyboards.

As a performance management expert, the Board wants your advice. The extract below provides the most recent management accounts for the Piano and Keyboard Division.

Figures in ₹

Sl. No.	Particulars	Piano	Keyboard	Total
1.	Number of items manufactured	1,000	10,000	
2.	Sale Price per unit	2,50,000	15,000	
3.	Revenue	25,00,00,000	15,00,00,000	40,00,00,000
4.	Materials	7,50,00,000	3,75,00,000	11,25,00,000
5.	Direct Labour	8,00,00,000	6,75,00,000	14,75,00,000
6.	Subcontracting Cost	3,75,00,000	-	3,75,00,000

Sl. No.	Particulars	Piano	Keyboard	Total
7.	Production Overheads	4,50,00,000	65,00,000	5,15,00,000
8.	Total Cost of Production (4+5+6+7)	23,75,00,000	11,15,00,000	34,90,00,000
9.	Gross Profit (3 - 8)	1,25,00,000	3,85,00,000	5,10,00,000

Production Overheads

Figures in ₹

Particulars	Amount
Inspection and Testing	3,45,00,000
Space Maintenance Cost for Subcontracting Work (rent, utilities, 2 support staff to maintain storage)	50,00,000
Other Production Overheads (rest of the utilities, rent, salary of support staff at storage)	1,20,00,000

Required

(i) DISCUSS the difference in treatment of production overheads under absorption costing and activity based costing.

(ii) LIST the steps to implement activity based costing within Melody.

(iii) ASSESS whether activity based costing would be suitable for the Piano and Keyboard Divisions.

(iv) ADVISE Melody about the activity based management and ways to improve business performance.

Reference

Appropriateness of ABC

What's **New**

Answer

(i) Product cost under absorption costing method includes all manufacturing costs that are incurred to produce a product {direct material, labour, and overheads (both fixed and variable)}. The allocation of overhead is determined by a single cost driver based on volume of production (popular ones are machine hours or direct labour hours). This driver is applied to the entire production overhead to arrive at the production overhead rate. For example, in the given problem, labour hours are being used to allocate overheads to Pianos and Keyboards. All production overheads are allocated to products based on this driver irrespective of whether this resource was used by the product or not. For example, production overheads include **maintenance cost relating to space for subcontracting work**. This cost is incurred for the manufacture of Piano alone. This portion of the maintenance cost gets clubbed with other production costs. Eventually, an overhead absorption rate is calculated using the ratio direct labour hours for each product. Absorption costing would

ignore the fact that the manufacture of Keyboards does not utilize the space allocated for subcontracting work. This skews the product costing by erroneously inflating the cost of Keyboards, some portion of the cost of manufacturing Pianos passes onto the product cost for Keyboards. Application of a single cost driver may not be the most appropriate way of allocating costs between products. For example, in the given problem, **factory rent** that is clubbed with total overheads and applied to the product cost as part of the overhead rate. Absorption costing ignores that direct labour may not be the most appropriate basis to allocate factory rent overhead to the products.

Activity based costing identifies the cost of each activity and assigns costs to units produced based on the number of activities used by each unit. Instead of being clubbed as a single overhead cost, costs for each activity are captured in their respective cost pools. The most appropriate cost driver is selected. Cost drivers could be volume based (machine hours / direct labour) or transaction based (# of purchase orders). This cost driver is used as the basis to allocate costs to various products based on the utilization of the resource related to that activity. Overhead costs are assumed to be variable, determined (or driven) by the selected cost driver. Here, the **cost of maintaining space for subcontracting** relates entirely to the manufacture of Pianos. Using ABC method, this cost will be allocated only to Piano products since allocation is now based on utilization of the resource to manufacture the product. Again, under this method, **factory rent** could have space utilization as the cost driver. Therefore, using ABC method, the allocation of rent overhead to the products will be made on a more logical basis as compared to absorption costing.

To conclude, product costing using absorption costing is relatively simpler, a method regularly followed for financial accounting purpose. Product costing using ABC method results in more detailed yet accurate figures. It highlights the cost / benefit of various activities that helps management focus on eliminating non-value added activities.

(ii) **Implementation of ABC Method** within Melody would include the following steps:

Activity Mapping: Production process has to be first broken down into various activities. Based on their nature, activities must then be clubbed to form activity pools. Activity pools must then tie in with the products or services.

Cost Pools: Overheads costs are then identified to each activity pools. This gives the cost pool for each category of activity.

Cost Driver: Identify the activity that bring about the cost. For example, space utilization would be a standard cost driver for factory rent. Cost drivers could be volume based or transaction based.

Overhead Rate: Once the cost pool and cost driver are identified, the cost per unit of cost driver (overhead rate) is determined.

Overhead Cost Allocation: Depending on how much of the resource (cost driver) the product utilizes, the cost is allocated accordingly to that product.

Product Cost: The allocated overhead cost is added to the cost of direct materials and labour to arrive at the full cost of production for the unit.

(iii) **Appropriateness of ABC Method** for the Keyboard and Piano Divisions

The Piano Division receives numerous requests for customization from its customers. While it produces only 1,000 Pianos in a year, no two customizations are the same. Therefore, the range of Pianos manufactured by Melody can be considered varied. Production overheads cost, including subcontracting work, form 35% of the total production cost. ((₹3,75,00,000 + ₹4,50,00,000)/ ₹23,75,00,000). Therefore, **overheads form a substantial portion of product** cost. Due to the variety in customization, it is important to price each customization at a rate that will yield an acceptable profit margin to Melody. To do this, manufacturing process has to be segregated into various activities and cost pools. Depending on utilization of resources related to each activity, each Piano can be sold at an appropriate price. If a Piano requires more of a resource from an activity, this can be included in the product cost and factored into the selling price, such that even with customization an acceptable profit margin can be earned. Thus, ABC method can help Melody arrive at a more accurate cost of production as compared to absorption costing.

While, overhead cost is one aspect of ABC analysis, the other information that an organization gets from this framework is that it can identify the activities that add value to the product. At the same time, non-value adding services can be identified (for example storage) and measures can be taken to minimize them. This helps it partner better with its customers and gain a competitive edge.

The Keyboard Division produces 10,000 Keyboards annually, all sold as a standard product with no customization. Activities are standardized, with no variation in the process between the Keyboards. Production overheads form only 6% of total cost of production. (₹65,00,000 / ₹11,15,00,000). Implementation of ABC method is time consuming and complex. Here, due to the standardized nature of production and low quantum of production overheads, ABC method may not be justified for the time and effort involved. In this case, absorption costing may seem to be a more practical approach to arrive at product price.

(iv) **Activity Based Management** to help Melody improve business performance

Activity based management can help Melody to meet the customer needs while using the lowest possible resource or cost. ABM can be used at an operational or strategic level.

Product Pricing

This would be especially in case of the Piano Division. As explained above, ABC method would enable Melody calculate a more accurate cost of production for each Piano. Currently, **the cost of subcontracting work** used for customizing Pianos is ₹3,75,00,000. This is being charged to the customers with a 10% mark-up to cover for any incidental overhead. However, this is very simplistic. As such the mark-up that can be earned under this method will be ₹37,50,000. However, the cost of maintenance of the area for subcontracting work is higher at ₹50,00,000. Therefore, it can be concluded that Melody is not recovering the entire portion of the incidental overheads incurred by providing the subcontracting work.

By identifying the cost pools relating to the subcontracting work, Piano Division can determine that it is making a loss on the subcontract work as a whole. It could therefore adjust the price of customized Pianos such that it earns an acceptable margin on each sale. This is at an operational level. At a strategic level, Melody can determine which type of

customizations are most profitable. Customizations that are not very frequent, too complex, and costly may be avoided as it takes away resources from Melody in terms of labour, space etc. At the same time, careful consideration should be given to such decisions since it is this customization service that gives Melody an edge over other competitors. Therefore, Melody should take decisions that help it balance the customer base, while keeping the costs low and processes as standardized as possible.

Analysis of Activities

Implementation of ABC method forces the company to take a more detailed look at its activities that comprise of its manufacturing process. It may be found that certain activities can be performed in more efficient manner. Also, activities can be identified as that that add value to the product and those that are not value adding. For example, in the given example, storage is not a value adding activity. Melody can work on a system where it optimizes the production process such that storage requirements are lower. The inventory turnover of Piano can also be improved, since quicker the Piano is shipped to the customer, lower the space requirement. **Inspection** is another non- value adding activity. For example, Melody switch to a standardized procurement system for its raw materials from reputed suppliers. While it may be a costlier option, this may lead to lower defects in the product, therefore requiring lesser need for inspection.

Performance Measurement

Employee resource should be used more towards value adding activities. Proper training would be required to ensure acceptable quality of work. This would automatically reduce non-value adding activities like rework, idle time, and inspection. There has to be proper information system in place that captures such data. This is facilitated through the implementation of ABC costing method and use of ABM. However, to have a successful system, senior management need to be committed to this model, proper communication and training has to be given to employees. To implement such a performance system the management has to commit sufficient time and effort. Cost benefit considerations of having such systems should also be taken into consideration. To conclude, implementing ABM should not take up productive time of employees and become a non- value activity in itself!

Standard Costing

Q2 ICAI Mat

JPY Limited produces a single product. It has recently automated part of its manufacturing plant and adopted Total Quality Management (TQM) and Just-in- Time manufacturing system. No inventories are held for material as well as for finished product. The company currently uses standard absorption costing system. Following are related to fourth quarter of 2018-19:

	Budget	Actual
Production and Sales	1,00,000 units	1,10,000 units
Direct Materials	2,00,000 kg. @ ₹ 30/kg	2,50,000 kg. @ ₹ 31.20/ kg.
Direct Labour Hours	25,000 hrs. @ ₹ 300/ hr	23,000 hrs. @ ₹ 300/ hr.
Fixed Production Overhead	₹ 3,20,000	₹ 3,60,000

Production overheads are absorbed on the basis of direct labour hours.

The CEO intends to introduce activity based costing system along with TQM and JIT for better cost management. A committee has been formed for this purpose. The committee has further analysed and classified the production overhead of fourth quarter as follows:

	Budget	Actual
Costs:		
Material Handling	₹ 96,000	₹ 1,24,000
Set Up	₹ 2,24,000	₹ 2,36,000
Activity:		
Material Handling (orders executed)	8,000	8,500
Set Up (production runs)	2,000	2,100

Revision of standards relating to fourth quarter were made as below:

	Original Standard	Revised Standard
Material Content per unit	2 kg	2.25 kg
Cost of Material	₹ 30 per kg	₹ 31 per kg
Direct Labour Hours	15 minutes	12 minutes

Required

(i) CALCULATE Planning and Operational Variances relating to material price, material usage, labour efficiency, and labour rate.

(ii) CALCULATE overhead expenditure and efficiency variance using Activity Based Costing principles.

Reference

Planning and Operational Variance and ABC based

What's **New**

Answer

(i) **Workings**

Factor	Original Standards (ex-ante)		Revised Standards (ex-post)		Actual (1,10,000 units)	
Material	1,10,000 units × 2 kgs. ×₹ 30	₹ 66,00,000	1,10,000 units×2.25 kgs. ×₹ 31	₹ 76,72,500	2,50,000 kgs. ×₹ 31.20	₹ 78,00,000
Labour	1,10,000 × 15/60 hrs. × ₹ 300	₹ 82,50,000	1,10,000 × 12/60 hrs. × ₹ 300	₹ 66,00,000	23,000 hrs.× ₹ 300	₹ 69,00,000

Material

Traditional Variances

Usage Variance = (2,20,000 Kgs. – 2,50,000 Kgs.) × ₹ 30

= ₹ 9,00,000 (A)

Price Variance = (₹ 30.00 – ₹ 31.20) × 2,50,000 Kgs.

= ₹ 3,00,000 (A)

Total Variance = ₹ 9,00,000 (A) + ₹ 3,00,000 (A)

= ₹ 12,00,000 (A)

Planning Variances

Usage Variance = (2,20,0000 Kg. – 2,47,500 Kg.) × ₹ 30

= ₹ 8,25,000 (A)

Price Variance = (₹ 30 – ₹ 31) × 2,47,500 Kgs.

= ₹ 2,47,500 (A)

Total Variance = ₹ 8,25,000 (A) + ₹ 2,47,5000 (A)

= ₹ 10,72,500 (A)

Operational Variances

Usage Variance = (2,47,500 Kg. – 2,50,000 Kg.) × ₹ 31

= ₹ 77,500 (A)

Price Variance = (₹ 31.00 – ₹ 31.20) × 2,50,000 Kg.
= ₹ 50,000 (A)

Total Variance = ₹ 77,500 (A) + ₹ 50,000 (A)
= ₹ 1,27,500 (A)

Direct Material Usage Operational Variance using Standard Price, and the Direct Material Price Planning Variance based on Actual Quantity can also be calculated. This approach reconciles the Direct Material Price Variance and Direct Material Usage Variance calculated in part.

Labour

Traditional Variances

Efficiency Variance = (27,500 hrs. – 23,000 hrs.) × ₹ 300
= ₹ 13,50,000 (F)

Rate Variance = (₹ 300 – ₹ 300) × 23,000 hrs.
= NIL

Total Variance = ₹ 13,50,000 (F) + NIL
= ₹ 13,50,000 (F)

Planning Variances

Efficiency Variance = (27,500 hrs. – 22,000 hrs.) × ₹ 300
= ₹ 16,50,000 (F)

Rate Variance* = (₹ 300 – ₹ 300) × 22,000 hrs.
= NIL

Total Variance = ₹ 16,50,000 (F) + 0
= ₹ 16,50,000 (F)

Operational Variances

Efficiency Variance = (22,000 hrs. – 23,000 hrs.) × ₹ 300
= ₹ 3,00,000 (A)

Rate Variance = (₹ 300 – ₹ 300) × 23,000 hrs.
= NIL

Total Variance = ₹ 3,00,000 (A) + 0
= ₹ 3,00,000 (A)

Direct Labour Efficiency Operational Variance using Standard Rate, and the Direct Labour Rate Planning Variance based on Actual Hours can also be calculated. This approach reconciles the Direct Labour Rate Variance and Direct Labour Efficiency Variance calculated in part.

(ii) **Material Handling**

Efficiency Variance = Cost Impact of undertaking activities more/ less than standard

= (8,800 orders* – 8,500 orders) × ₹ 12

= ₹ 3,600 (F)

$$(*)\left(\frac{8,000 \text{ orders}}{1,00,000 \text{ units}}\right)\times 1,10,000 \text{ units}$$

Expenditure Variance = Cost impact of paying more/ less than standard for actual activities undertaken

= 8,500 orders × ₹ 12 – ₹ 1,24,000

= ₹ 22,000 (A)

Setup

Efficiency Variance = Cost Impact of undertaking activities more/ less than standard

= (2,200 runs* – 2,100 runs) × ₹ 112

= ₹ 11,200 (F)

$$(*)\left(\frac{2,000 \text{ runs}}{1,00,000 \text{ units}}\right)\times 1,10,000 \text{ units}$$

Expenditure Variance = Cost impact of paying more/ less than standard for actual activities undertaken

= 2,100 runs × ₹ 112 – ₹ 2,36,000

= ₹ 800 (A)

Q3 ICAI Mat

Aquatic Feed (AF) is the leading manufacturer of fish and other sea animal feed. AF has made its credit pioneering effort and service for over one decade in development of culture, processing and exports with its state-of-art fish feed and processing plants. Hallmark of AF is constant upgradation of aquaculture technology bringing latest developments in the field to the doorstep of the Indian aquaculture farmer. It stands as a leading provider of high quality feed, best technical support to the farmer and caters to the quality standards of global customers.

One of its fish feed product is "B" which is produced by mixing and heating three ingredients: B_1, B_2 and B_3. It uses a standard costing system to monitor its costs.

The standard material cost for 100 Kg. of "B" is as follows:

Ingredients	Standard Qty. (Kg)	Cost per Kg. (₹)	Cost per 100 Kg. of "B" (₹)
B_1	42	3	126
B_2	62	6	372
B_3	21	2	42
	125		540

Notes

- B1, B2 and B3 are agricultural products. Their quality and price change significantly every year. Standard prices are determined at the average market price over the last three years. AF has a purchasing manager responsible for purchasing and pricing.
- The standard mix is decided by the Managing Partner having 15 years' rich experience in aquaculture field. The last time this was done at time of launching the "B" that was six years back. The standard mix has not been changed since.
- Mixing and heating process are subject to some evaporation loss.

In current month 4,605 Kg. of "B" was produced, using the following ingredients:

Ingredients	Actual Qty. (Kg)	Cost per Kg. (₹)	Total Cost of "B" (₹)
B_1	2,202	2.8	6,165.60
B_2	2,502	7	17,514
B_3	921	2	1,842
	5,625		25,521.60

At every month end, the production manager receives a statement from the Managing Partner. This statement contains material price and usage variances for the month and no other feedback on the efficiency of the processes is provided.

Required

EVALUATE the performance measurement system in AF.

Reference

Material Variances

What's **New**

Comments

Answer

The statement reported, ₹ 2,062 favourable material price variance. The responsibility for controlling the materials price variance is usually the purchasing manager's. Undoubtedly, in current scenario, the price of materials is largely beyond his or her control; however, the price variance can be influenced by such factors as quality, quantity discounts, distance of supplier's location, and so on. These factors are often under the control of the purchase manager. The production manager is responsible for material usage and cannot be held responsible for the material price variance.

Since total usage variance reported, ₹ 1,406 favourable, production manager could assume good performance. However, if usage variance is considered in more detail, through the mix and yield calculations, it can be observed that variance was driven by a change in the mix and by using a mix of ingredients which was different from standard, it has resulted in a saving of ₹ 840; Similarly, it has led to a favourable yield. It is worthwhile to note that changing the mix could impact the product quality and sales as well, however, no information has been given about this.

Prices and quality of three agriculture ingredients are changing significantly every year. Using ex ante prices and usage standards can implicit an outdated view of variances. Failing to separate variances caused by uncontrollable factors and planning errors from variances caused by controllable factors can be demoralizing for the managers.

In addition, managers are not involved in setting the standard mix and the same has not been changed for six years despite continuous changes in the quality and prices of the ingredients. This can also mislead the managers i.e. to carryout control activities which are based on the outdated standards.

Furthermore, a true image is missing in relation to managers' performance as statement does not include any feedback or comments on the variances. Even no follow up is being taken on the same.

Overall, it appears that AF is not having comprehensive performance measurement system and this could adversely impact the firm in long run.

Workings

Price Variance

Input	Actual Qty. (Kg)	Std. Cost (₹)	Actual Cost (₹)	Std. Cost (₹)	Variance (₹)
B1	2,202	3	2.8	0.20	440 (F)
B2	2,502	6	7	1 (A)	2,502 (A)
B3	921	2	2	-	-
	5,625				2,062 (F)

Usage Variance

Input	Standard Qty. (Kg)	Actual Qty. (Kg)	Difference (Kg)	Std. Cost (₹)	Variance (₹)
B1	1,934	2,202	268 (A)	3	804 (A)
B2	2,855	2,502	353 (F)	6	2,118 (F)
B3	967	921	46 (F)	2	92 (F)
	5,756	5,625	131 (F)		1,406 (F)

Mix Variance

Input	Rev. Actual Qty. (Kg)	Actual Qty. (Kg)	Difference (Kg)	Std. Cost (₹)	Variance (₹)
B1	1,890	2,202	312 (A)	3	936 (A)
B2	2,790	2,502	288 (F)	6	1,728 (F)
B3	945	921	24 (F)	2	48 (F)
		5,625	NIL	840 (F)	

Yield Variance

Input	Standard Qty. (Kg)	Rev. Actual Qty. (Kg)	Difference (Kg)	Std. Cost (₹)	Variance (₹)
B1	1,934	1,890	44 (F)	3	132 (F)
B2	2,855	2,790	65 (F)	6	390 (F)
B3	967	945	22 (F)	2	44 (F)
	5,756	5,625	131 (F)		566 (F)

Supply Chain Management

Q4 ICAI Mat

Memorable Travels is a tour operator offering holiday packages to a variety of customers. They advertise and promote their packages using print advertising in newspapers and colourful brochures. A basic holiday package would include transport from the city to the destination, stay, food, attractions, or activities. Memorable Travels has been in business for the past 15 years. It has standard agreements with its suppliers based on which it has been offering standard holiday packages to its customers. Profitable business over these years has resulted in surplus cash that the company intends to reinvest in its business. Recently, the management has noticed increase in the number of complaints regarding these packages. This has resulted in lesser number of customers opting for these tours.

A study of these complaints has indicated that customer expectations from a holiday trip vary depending on their age group. Accordingly, Memorable Travels wants to offer customized holiday package trips that would suit the travellers' expectations. It wants to increase the number of packages offered to customers in addition to adding variety to them. This would provide customers the choices from which they can customize their holidays with the help of Memorable Travels.

The management wants to understand the need and importance of supplier chain management in a service organization such as itself.

Required

(i) DEFINE the objective of Memorable Travels should have when considers incorporating the supply chain management framework into its business model.

(ii) IDENTIFY possible components of Memorable Travels' upstream supply chain.

(iii) SUGGEST the key processes in the business model of Memorable Travels.

Reference

In service sector

What's **New**

Answer

(i) Memorable Travels is providing a service wherein it uses its assets, staff, and resources to provide customized travel packages to its customers. It should consider how to utilize its assets and staff to design and manage its supply chain such that it meets the customers' demand in a cost-effective manner. Customers' demand is uncertain due to (a) customization of holiday packages to suit their individual expectations and (b) sensitivity of travel to factors like economic prosperity, law, and order etc.

Business processes must be effectively coordinated across organizations and functions to meet the customers' expectation in the best possible manner. The ability of Memorable Travels to respond to its customers' demand defines its operational capacity. Having more capacity (capability) to meet customers' demand helps it be more responsive and flexible. However, this has to be balanced with its ability to maintain an effective supply chain management. A supply chain is effective only when Memorable Travels and consequently the ultimate customer, is able to get the required level of service from its suppliers.

(ii) As mentioned in the problem, a basic holiday package would include transport from the city to the destination, stay, food, attractions, or activities. Accordingly, possible components of Memorable Travels upstream supply chain would include **partnerships with:**

(a) Transport providers – road, rail, and air travel providers. This includes travel to the holiday destination as well as the local transport within that location.

(b) Lodging and accommodation providers – hotels, bed, and breakfast providers etc.

(c) Local food producers and restaurants.

(d) Providers of tourist attractions and activities.

(iii) Key processes in the business model of Memorable Travels would be:

Information Flow

Information flow is critical at various stages:

- to understand expectations of customers
- to share this information with the suppliers of service with whom Memorable Travels has partnership
- to establish clear service level agreements with these suppliers and to clearly define the scope of work
- to be able to monitor the performance of these suppliers. Performance has to be monitored because it will impact payment settlements with these suppliers
- to collect constructive feedback from customers about the performance of these suppliers

Capacity and Skills Management

Memorable Travels has to develop the ability to cater to various expectations of its customers. It has to develop assets and skilled staff who can attract customers and help them customize their holiday packages. To enable this, the company has to invest in its organization, processes, assets and staff. As mentioned above in point (a), information flow is a key process in this business model. The company has to invest in its processes to ensure that information flow is smooth and accurate. Similarly, it has to invest in assets like IT infrastructure, offices and also develop a skilled staff who can provide quality service. Memorable Travels should also have the ability to develop pool of suppliers who provide good quality service. Better capacity to cater to customers' demand better will ensure that Memorable Travel can develop and maintain its business efficiently. However, since building capacity and developing skills comes with a cost, that has to be balanced out with the revenue it generates.

Demand Management

Memorable Travels will have to focus on how to generate demand for its products. In tune with changing times, Memorable Travels will have to change its marketing from print based advertising to online advertising in order to have a larger outreach to attract customers. The company should be able to manage variation in customers' expectations in a cost-effective way. As explained in point (b) above, this will be determined by the capacity of its operations and skills of its employees. Higher the capacity more the flexibility in its operations.

Customer Relationship Management

Customer segmentation and monitoring help in understanding customer's needs in a better way and to focus on efforts to meet those needs through proper and timely communication of information with its service suppliers. However, the cost of maintaining this framework should not exceed the revenue that each customer segment generates. Accordingly, customer account profitability analysis should be prepared for each customer segment.

Supplier Relationship Management

As part of the customer relationship management, specific needs of customers would be identified. Based on these needs, potential suppliers who provide services of the requisite quality need to be identified. Service level agreements need to be drawn up after comprehensive rounds of negotiations. It is imperative to have a clear understanding with these suppliers regarding the quality service expected.

Service Delivery Management

Agreements with suppliers will help to ensure that expectations of customers of Memorable Travels are being met. Service performance must be monitored, checked continuously for compliance. Any deviation from scope may have an impact on the payment settlement to be made with the supplier.

Cash Flow

As mentioned above, service delivery should be monitored to ensure that payment is made only to the extent the agreed quality of service is delivered. Periodic payments to suppliers should be made based on service level agreements. Similarly, cash inflow from customers should be monitored to avoid any bad debts. Pricing for packages should be based on the level of service offered. Again, clear understanding of the terms of contract is essential to avoid uncertainties.

All processes within the company are linked to each other. Understanding the customers' expectations have a direct impact on the supply chain. Therefore, proper co-ordination is required for smooth functioning of the organization and its supply chain.