

Cameron Balloons Assignment

Forecast sales, by product line:

Estimated Annual Balloon Sales 300 Annual, varies monthly

Estimated Annual Medical Products Sales 12500 Monthly, stable

Estimated Service Parts Sales 20% of Balloon sales, distributed in the same seasonal pattern

Balloon Sales forecast, by month	1	2	3	4	5	6	7	8	9	10	11	12	Total
Proportion	2,5%	5,0%	7,5%	10,0%	12,5%	15,0%	15,0%	10,0%	7,5%	7,5%	5,0%	2,5%	100%
Number	8	15	23	30	38	45	45	30	23	23	15	8	303

Production Policies - "Lean Manufacturing"

Produce Balloons, Spares and Medical Products as required to meet each month's demand

Employ Staff as required in each month to meet production requirements

Inventory Policies -

Balloons are produced to order and finished goods are only kept in stock for an average of 1 week for final inspection and awaiting despatch.
Medical products are produced to meet each month's sales needs, but it holds stocks equal to one month's sales to allow immediate supply.

Spares are important to maintaining Cameron's position as a service-oriented producer.

Cameron keeps roughly 3 month's spares sales inventory on hand throughout the year. Spares inventories are valued at their cost.

Most raw materials and semi-finished components used in manufacturing are bought in as required for production needs.

Balloons take 1/2 month to produce, WIP is valued at the cost of the materials PLUS the labour used NOT the Final Price sold at which it's sold

Bulk supplies of material are bought at the start of each year (January) and are roughly 1/4 of the total materials used in Balloon manufacture.

These bulk materials are used throughout the rest of the year, in proportion to the numbers of Balloons made in each month.

Prices for each product sold, costs for materials and data on labour productivity are given on the spreadsheet following.

Starting Inventory for the year:

£1.275.768 This is comprised of different types of inventory as described on the spreadsheet.

Note: Cameron pays its staff roughly £4000 per month (~150 hrs/week*4.3 weeks/month* £25 average hourly wage)

The costs of hiring and sacking staff could be considered an important issue for the company, given skill levels and labour market inflexibilities.

The costs of hiring staff are estimated to be £4,000 per employee for interviewing, testing and training.

The costs of sacking an employee would be the redundancy payments (averaging £1000).

In addition to those financial costs there would be indeterminant costs due to reduced employee morale and productivity.

If necessary, overtime could be used to allow an additional 25 hrs/employee per month with a wage cost of 1 1/2 the normal wage

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Indicative figure ONLY for teaching purposes. These are NOT real

Estimated Annual Balloon Sales 300 Annual, varies monthly
Estimated Annual Medical Products Sales 12500 Monthly, stable
Estimated Service Parts Sales 20% of Balloon sales

"Lean" Production Policy (Current)
Production = Sales

				Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	
Forecast % Balloon Sales				2,50%	5,00%	7,50%	10,00%	12,50%	15,00%	15,00%	10,00%	7,50%	7,50%	5,00%	2,50%	100%	
Estimated Balloon Sales (Units)				8	15	23	30	38	45	45	30	23	23	15	8	303	Units
Estimated Medical Products Sales (Units)				12500	12500	12500	12500	12500	12500	12500	12500	12500	12500	12500	12500	150000	Units
Estimated service Parts Sales (Balloon = Units)				20% 1,6	3	4,6	6	7,6	9	9	6	4,6	4,6	3	1,6	60,6	Units
Revenue																	
Balloons		Price	£30.000	240.000	450.000	690.000	900.000	1.140.000	1.350.000	1.350.000	900.000	690.000	690.000	450.000	240.000	9.090.000	
Medical Products		Price	£27,50	343.750	343.750	343.750	343.750	343.750	343.750	343.750	343.750	343.750	343.750	343.750	343.750	4.125.000	
Service Parts		Price	£90.000	144.000	270.000	414.000	540.000	684.000	810.000	810.000	540.000	414.000	414.000	270.000	144.000	5.454.000	
Total Revenues				727.750	1.063.750	1.447.750	1.783.750	2.167.750	2.503.750	2.503.750	1.783.750	1.447.750	1.447.750	1.063.750	727.750	18.669.000	
Costs																	
Labour Usage		Hours/Balloon	100	800	1500	2300	3000	3800	4500	4500	3000	2300	2300	1500	800	30.300	
		Hours/Spares	10	16	30	46	60	76	90	90	60	46	46	30	16	606	
		Hours/Medical	0,2	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	30.000	
Total Hours				3316	4030	4846	5560	6376	7090	7090	5560	4846	4846	4030	3316	60.906	
Labour Cost		Wage rate £/Hour	£25,00	82.900	100.750	121.150	139.000	159.400	177.250	177.250	139.000	121.150	121.150	100.750	82.900	1.522.650	
Labour Utilization																	
		Hours/week	35														
		Weeks/Month	4,3														
		Hours/Month	150,5														
		Men/Month (Balloons & Spares)		5	10	16	20	26	30	30	20	16	16	10	5		
		Men/Month (Medical)		17	17	17	17	17	17	17	17	17	17	17	17		
		Total Staff		22	27	33	37	43	47	47	37	33	33	27	22		
		Change in Staff (Hire)			5	6	4	6	4	-	-	-	-	-	-	25	
		Change in Staff (Sack)			-	-	-	-	-	-	-10	-4		-6	-5	-25	
Materials Used																	
Balloons		% of revenue	33,3%	80.000	150.000	230.000	300.000	380.000	450.000	450.000	300.000	230.000	230.000	150.000	80.000	3.030.000	
Medical Products		£ per unit	£2,50	31250	31250	31250	31250	31250	31250	31250	31250	31250	31250	31250	31250	375.000	
Service Parts		% of revenue	10,0%	14.400	27.000	41.400	54.000	68.400	81.000	81.000	54.000	41.400	41.400	27.000	14.400	545.400	
Materials cost				125.650	208.250	302.650	385.250	479.650	562.250	562.250	385.250	302.650	302.650	208.250	125.650	3.950.400	
Total costs				208.550	309.000	423.800	524.250	639.050	739.500	739.500	524.250	423.800	423.800	309.000	208.550	5.473.050	
Contribution				519.200	754.750	1.023.950	1.259.500	1.528.700	1.764.250	1.764.250	1.259.500	1.023.950	1.023.950	754.750	519.200	13.195.950	
Inventory																	
Starting				1.275.768	2.115.868	2.210.268	2.292.868	2.387.268	2.469.868	2.469.868	2.292.868	2.210.268	2.210.268	2.115.868	2.033.268		
Purchases				965.750	302.650	385.250	479.650	562.250	562.250	385.250	302.650	302.650	208.250	125.650			
Used				125.650	208.250	302.650	385.250	479.650	562.250	562.250	385.250	302.650	302.650	208.250	125.650		
Ending				2.115.868	2.210.268	2.292.868	2.387.268	2.469.868	2.469.868	2.292.868	2.210.268	2.210.268	2.115.868	2.033.268	1.907.618		
Inventory by Type				Starting	Planned Monthly												
Spares			165.739	165.739	165.739	165.739	165.739	165.739	165.739	165.739	165.739	165.739	165.739	165.739	165.739		
Balloons			67.834	67834	67834	67834	67834	67834	67834	67834	67834	67834	67834	67834	67834		
Medical			105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670	£105.670		
Stock (Raw & Semi-Finished for Production)			936.525	1776625	1871025	1953625	2048025	2130625	2130625	1953625	1871025	1871025	1776625	1694025	1568375		
Total			1.275.768	2.115.868	2.210.268	2.292.868	2.387.268	2.469.868	2.469.868	2.292.868	2.210.268	2.210.268	2.115.868	2.033.268	1.907.618		





