

TDABC at Voray

Case analysis

IE GXMBA 22
COST ACCOUNTING
Group E

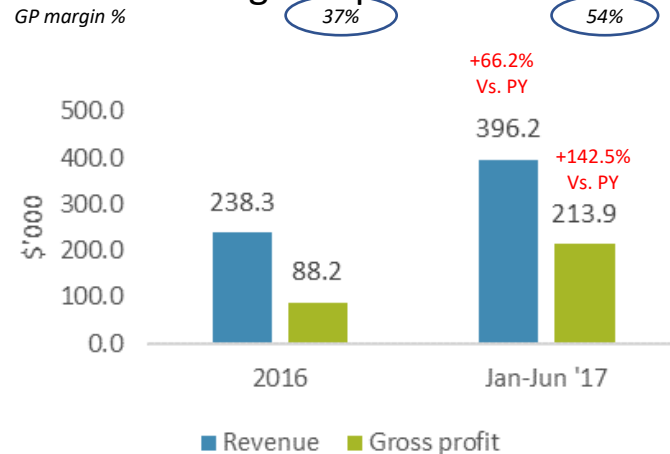
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Introduction and business model

Voray, founded in 2016, is an innovative company providing a community platform for professional networking.

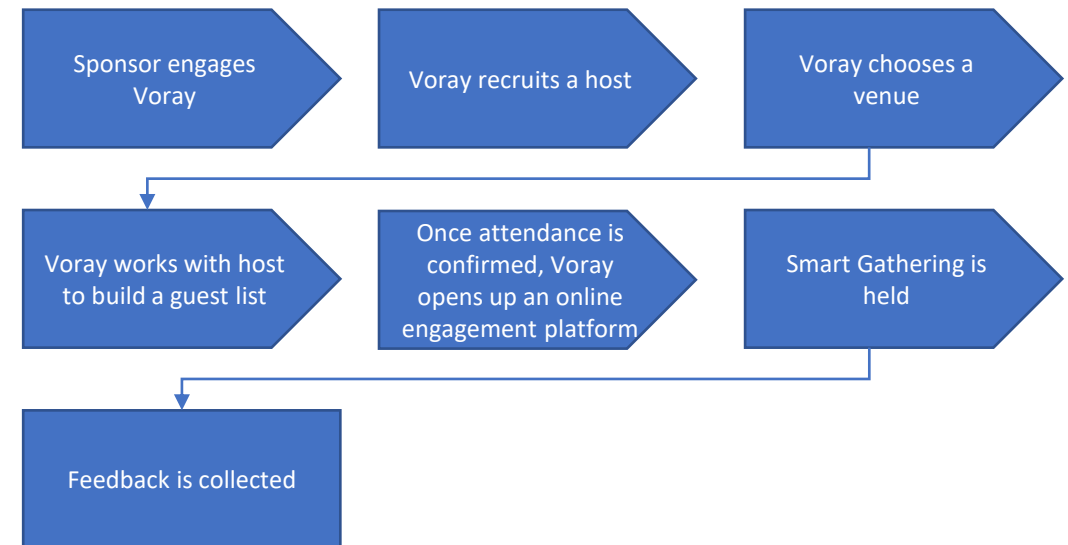
It specialises in organising in person events preceded by stimulating online discussions.

In mid-2017 the company was undergoing a period of intense growth and operational scale up – with events becoming more complex but also realising efficiencies which lead to GP margin improvement from 37% to 54%



The business model is based on charging a fixed price for organising an event depending on the industry, number of guests and chosen venue.

The process includes the following steps:



Q1. What is the problem that Voray is facing?

Problem at Voray

The high growth experienced by Voray is bringing new challenges:

- Increase in business complexity, making pricing decisions and profitability analysis more difficult
- Capacity utilisation
- Growth in support functions (SG&A)

Expansion into new markets in Yr2 of operations:

- Requires investment of resources in business development initiatives which, in the short term, will negatively impact margins

To solve the challenges, Voray had to review several areas:

- Business processes, identifying:
 - The different types of events
 - The activities involved in preparing an event
 - The key drivers impacting costs
- Cost allocation
 - Review of the current allocation policy
 - Build a time driven activity based costing
- Pricing
 - Understand the services and all value added activities provided to customers
 - Review pricing to ensure margin is maintained whilst complexity increases

Q2. Apply TDABC to calculate the profitability of each Smart Gathering. Does this exercise help solve the problem?



Applying TDABC

Key observations from profitability analysis comparison between current & TDABC approach

Current approach to overhead allocation

	SG1	SG2	SG3	Total
Revenue	\$15,000	\$8,833	\$16,500	\$40,333
Direct material costs	\$1,642	\$1,520	\$4,224	\$7,386
Direct labour costs	\$3,946	\$2,401	\$2,274	\$8,621
Overhead costs (185% of DL)	\$7,300	\$4,442	\$4,207	\$15,949
Gross profit	\$2,112	\$470	\$5,795	\$8,377
GP margin %	14%	5%	35%	21%

TDABC approach to overhead allocation

	SG1	SG2	SG3	Total
Revenue	\$15,000	\$8,833	\$16,500	\$40,333
Direct material costs	\$1,642	\$1,520	\$4,224	\$7,386
Direct labour costs	\$3,946	\$2,401	\$2,274	\$8,621
Overhead costs (TDABC)	\$9,555	\$1,078	\$4,395	\$15,027
Gross profit	-\$143	\$3,834	\$5,607	\$9,299
GP margin %	-1%	43%	34%	23%

GP TDABC vc GP (OH 185%)	-15 pp	38 pp	-1 pp	2 pp
DM % of revenue	11%	17%	26%	18%
DL % of revenue	26%	27%	14%	21%
OH % of revenue (185% of DL)	49%	50%	25%	40%
OH % of revenue (TDABC)	64%	12%	27%	37%

Note:

SG1 – San Francisco (SF) gathering of HR professionals
 SG2 – New York gathering of sales leaders at high-growth companies
 SG3 – New York gathering of Chief Marketing Officers

Comments:

- Under the current approach, Voray allocates OHs as a % of DL. However, since DL is not the driver of activities, the approach leads to under-costing SG1 and over-costing SG2 and SG3, when comparing with the results under TDABC.
- Applying TDABC, Voray is able to understand and estimate the approximate level of time required by each project. Cost is then allocated based on the envisaged activities, resulting in 6% lower total OH cost allocated to the three projects (see Appendix) and overall GP margin increasing by 2pp to 23%.
- Whilst lower margins were anticipated for SG1, due to SF being a new market requiring more resource & time, TDABC analysis revealed that it will be a loss making event.
- Profitability of SG2 increases from 5.3% to 43.4%, reflective of the minimum activities necessary to deliver the service due to a repeat customer and other process efficiencies.
- SG 3 is only marginally impacted.
- Considering purely margins (ignoring any strategic considerations for now) the results indicate that SG 1 in SF should be rejected due to negative margin, whilst the 2 projects in NY should be accepted. However, accepting either of the NY projects would bring down the overall GP margin reported for H1 2017 of 54% and new projects should be priced higher to offset the difference and maintain that. A deeper analysis of the cost drivers, as well as below the line SG&A and EBITDA margin is necessary to ensure target profitability is maintained.

Applying TDABC (calculation details)

Profitability analysis

	SG1	SG2	SG3	Total
Revenue	\$15,000	\$8,833	\$16,500	\$40,333
Direct material costs	\$1,642	\$1,520	\$4,224	\$7,386
Direct labour costs	\$3,946	\$2,401	\$2,274	\$8,621
Total direct costs	\$5,588	\$3,921	\$6,498	\$16,007

No. of hours per activity

Host Identification	45	3	25	73
Venue Interaction	10	1	9	20
List Building	75	0	25	100
Guest Interaction	50	10	10	70
Account Mgt	50	10	40	100
Total hours	230	24	109	363

Host Identification	\$1,597	\$106	\$887	\$2,591
Venue Interaction	\$258	\$26	\$233	\$517
List Building	\$2,971	\$0	\$990	\$3,961
Guest Interaction	\$2,497	\$499	\$499	\$3,496
Account Mgt	\$2,232	\$446	\$1,785	\$4,463
Total overhead	\$9,555	\$1,078	\$4,395	\$15,027
Total cost	\$15,143	\$4,999	\$10,893	\$31,034

Gross Profit	-\$143	\$3,834	\$5,607	\$9,299
GP margin %	-1%	43%	34%	23%

Note:
Calculations are based on practical capacity rates (see appendix)

Comments:

The table on the left provides a detailed view of the activities and costs associated with each project. In the case of SG1 management will have to make a strategic decision whether to accept. For SG2 and SG3, Voray has to find ways to increase the margin so that it will not impact overall performance achieved YTD. There are 3 levers to do that: direct costs, indirect costs and pricing.

Direct costs:

- A split of DL between CEO's costs and platform set up costs would be useful to analyse further and understand the drivers in each project. In turn, Voray will be able to take more targeted actions to improve efficiency.
- Allocation of CEO's time, typically part of SG&A, could be one of the reasons for the high DL cost in case of SG1. Voray may need to reconsider the treatment of CEO's costs.
- Direct labour in case of SG2 needs to be challenged since it is for a regular customer, however it is 6% higher than SG3.
- Venue expenses in case of SG3 are 78% higher than those in SG2, mainly driven by the potential host that will be selected, who is vegan. Voray may reconsider and spend more time on host identification to reduce venue costs. A net saving of \$2,000 will increase GP margin to 46%.

Indirect costs:

- TDABC results in OH allocation in proportion to the hours spent on the project. SG1 will take 230hrs (63% of the total) since it is the first time organising an event in SF, 9x more than SG2 (the most efficient project), hence it bears 9x more costs.
- The budget for SG1 was built using worst-case scenario assuming maximum hours. Indirect costs are 64% of revenue and 70% higher than direct costs. Management can evaluate each process in the chain and undertake measures to optimize operations such as avoid building a guest list twice, limit guest interaction and account management.
- In the case of SG3, efforts should be focused on limiting account management as the higher contributor, at 41%, to overhead costs.
- Contingency is not factored in the calculations. Management should discuss whether a risk allowance is needed and how much with a clear set of criteria.

Applying TDABC (calculation details)

Profitability detailed analysis

	SG1	SG2	SG3	Total
Revenue	\$15,000	\$8,833	\$16,500	\$40,333
Total direct costs	\$5,588	\$3,921	\$6,498	\$16,007
Total overhead	\$9,555	\$1,078	\$4,395	\$15,027
Total cost	\$15,143	\$4,999	\$10,893	\$31,034
Gross profit	-\$143	\$3,834	\$5,607	\$9,299
<i>GP margin %</i>	-1%	43%	34%	23%
Total hours	230	24	109	363
Revenue per OH hour	\$65.2	\$368.0	\$151.4	\$111.1

Pricing:

- For SG1, \$15,000 seems to be the minimum expected to be secured. Therefore, the sales team could be directed to start negotiation from a higher price to ensure sufficient cost coverage, test the market and set the right benchmark among clients
- The sponsor for SG2 is a return customer and the event has already reached full efficiency. Pricing might be difficult to adjust.
- Comparing SG3 to SG2, the former is expected to take 4.5x more hours to execute, whilst revenue is only 1.9x higher. Even though price does not seem to be negotiable, if the event is moved to a city other than NY, it should be rediscussed with the client.
- Moving from cost-plus pricing to value-based pricing is key to be able to increase price and profitability. This can be achieved by focusing on selling value added services, considered a differentiator by the client, at an extra price – e.g. pre- and post – event online platform engagement. SF, as a new market, could be a good ground to test a new product development strategy.
- Price sensitivity analysis is presented in the Appendix.

Applying TDABC - conclusion

Comments:

- By adopting TDABC Voray is refining the current allocation practices by: better tracing of costs to specific activities, increasing the indirect cost pools and identifying the cost drivers.
- Applying TDABC, Voray can clearly see the profitability of each event, run scenario analysis, challenge time standards and capacity usage, take informed pricing decisions based on the numbers.
- Therefore, TDABC partially solves the problems faced by Voray. Next step is to consider the numbers as part of the overall business strategy.

Q3. Which **Smart Gatherings** should Voray accept?
Is profitability a sufficient determinant?

Consideration factors for decision making

Comments:

This decision has to be more of a business / strategic decision and not just purely based on numbers.

- Calculations show us that the SF SG1 is loss making. Nevertheless, if Voray has decided on geographical expansion, initial investment in a few gatherings will be required to build market presence.
- SF seems to offer an attractive market with high demand for professional networking, fitting the business strategy of Voray. It also provides opportunity to deepen connections in the venture capital community that could become regular customers.
- Voray should understand the market pricing opportunity and costs associated with venues in SF.
- Based on current experience in NY, realising economies of scale in SF might be even quicker than in NY during the first 18 months of operations (increase in GP margin from 37% to 54%).
- Final decision should be linked to a long-term plan to expand in SF and the possibility to realise sufficient ROI and reach target profitability in a reasonable period.
- Since SG2 and SG3 in NY are profitable they can act as a cross-subsidizing to SG1 and cover the losses, if all three events are executed in same month/ quarter. Assuming no other projects are taken, that will inadvertently result in an average GP margin of 23% (50% lower than YTD performance). This could be acceptable in the short term, until scale builds up in the new market. In addition, accepting SG1 can help utilized the resources that otherwise would be idle and subsequently dilute the business sunk and fixed cost, therefore increasing revenue and improving the overall margins of the business
- Acceptance and timing of the projects will also be impacted by seasonality aspects, if applicable. At this point, we do not have information on whether some months of the year are leaner than others.

Q4. How can Voray use TDABC to drive its product development and business decisions going forward?

TDABC for Product development and business decisions

Business Decisions:

Voray can use the insights it gets from the TDABC exercise to take **strategic business decisions** as below:

- Decide on the strategic direction and where investment in resources, capabilities and time should be focused and prioritize on. They could go deeper in the existing market and increase current market share **or** go wider and thinner by expanding geographically into new areas and subsequently develop tailored services to support different clients/demands
- Get better clarity and accuracy on costing and the cost implications of their business decisions. Hence ensuring they can grow revenue while maintaining/increasing bottom line profitability
- Optimize and improve employees and resource utilization. With TDABC, Voray can better assess the profitability and suitability of the different opportunities and accordingly decide which project to go after and deploy the adequate resources
- Tracing cost and time spent on each activity will help optimize pricing of the Smart Gatherings and identifying cost leakages. Crucial insights to guide/support any improvement or change decision by management
- Drive better performance management of employees by tracing time and cost impact of their engagement on different activities
- Retain and improve incentives of Superhosts following accurate review and tracing of cost savings brought.

Product Development:

They could use the insights to make **product development decisions** as below:

- The product development is not a stand-alone decision but should be linked to the overall business strategy. A decision of expanding geographically would have a short-term impact of re-allocating and consuming cost, time and resources that could otherwise be focused on product development, improving efficiency and productivity of current services
- Focus on differentiators and value-added services that can be priced separately/additionally to the offer. We can look at the pre and post online platform engagement as a unique/value service that client could pay for as optional item. Hence, this could be used not only to recover some of the cost but to further develop these product/service differentiators as they become a vertical/service line within the business that need continuous investment to create and generate value/revenue
- They can focus on Gatherings by Industry. Host that drives maximum value and profitability based on the cost of activities that are accurately traced and allocated. This can lead to further development, enhancement and streamlining of the relevant product to support growth in this particular industry
- Analyse the time spent by current employees on each task and decide on automation or productivity improvement methods based on priorities starting with the most time consuming or costly aspects
- Use it to evaluate relative performance of employees for their evaluation and find gaps for improvement
- Can predict capacity utilization and take steps to manage or add team capacity to support product development and growth.

Voray Smart Gathering Automated Cost Calculator

Product development

Leveraging the **Time equation** concept, we have developed an Automated calculator for Voray (see enclosed excel) that allows a fast and simple calculation of TDABC.

A simple algorithm that tests the existence of each parameter or characteristic for an event. This allows to study product development in more granularity and take decisions on value added services.

The model creates a BASIC and ALA CARTE menu of cost drivers for each Smart Gathering. This model makes it easy for Voray's sales managers to

- Determine cost and profitability of each gathering in a matter of minutes
- Allows them to value sell better
- Update cost driver's menu as and when Voray introduces new service elements, product features or process efficiencies.
- The identification of basic and value-added elements ensures add on features are priced based on the effort (time) and not undersold in value

The model can also be used to manage team capacity utilisation and plan for resource expansion in line with the business plan.

Additional incentives can be provided to employees that drive efficiencies and cost savings.

VORAY SMART GATHERING AUTOMATED COST CALCULATOR

Cells in red are preset values and formula

Cells in green are for the team to edit with a value of 1 wherever applicable

Assumption:

Assumed a sliding scale for Venue Interaction, Guest Interaction and Account Management based on data provided in case. This is editable if the scale is different

		Budget ed hours	Budgeted Indirect cost rate	SG1	SG2	SG3	Price of SG1 (\$)	Price of SG2 (&)	Price of SG3 (SG3)
BASIC PACKAGE (Minimum base hours needed for an event)									
	base host identifictaion - past host	3	35.49	1	1	1	106.5	106.5	106.5
	base venue interaction - returning venue	1	25.83	1	1	1	25.8	25.8	25.8
	base list building - none from team	0	39.61	1	1	1	-	-	-
	base guest interaction - min is 10	10	49.94	1	1	1	499.4	499.4	499.4
	base account mngmnt - min is 10	10	44.63	1	1	1	446.3	446.3	446.3
		24					-	-	-
ALA CARTE ADD ON OPTIONS (Different Parameters that can vary for each activity depending on the Gathering nature)									
Host Identification	if past guets	7	35.49	0	0	0	-	-	-
	if from employee referral	22	35.49	0	0	1	-	-	780.7
	if from community referral	42	35.49	1	0	0	1,490.5	-	-
	if cold outreach	63	35.49	0	0	0	-	-	-
Venue Intraction									
	new venue sliding scale (asusmption)	2	25.83	0	0	0	-	-	-
		3	25.83	0	0	0	-	-	-
		4	25.83	0	0	0	-	-	-
		5	25.83	0	0	0	-	-	-
		6	25.83	0	0	0	-	-	-
		7	25.83	0	0	0	-	-	-
		8	25.83	0	0	1	-	-	206.7
		9	25.83	1	0	0	232.5	-	-
		10	25.83	0			-		
List Building									
	building one list by Voray employees	25	39.61	1	0	1	990.2	-	990.2
	building second list later	50	39.61	1	0	0	1,980.4	-	-
Guest Interaction									
	sliding scale			0	0	0	-	-	-
		20	49.94	0	0	0	-	-	-
		30	49.94	0	0	0	-	-	-
		40	49.94	1	0	0	1,997.6	-	-
		Max 50	49.94	0	0	0	-	-	-
Account Mngmnt									
	Sliding sclae								
		20	44.63	0	0	0	-	-	-
		30	44.63	0	0	1	-	-	1,339.0
		40	44.63	1	0	0	1,785.3	-	-
		Max 50	44.63	0	0	0	-	-	-
				230			9,554.5	1,078.0	4,394.6

Q5. If you were the CEO of Voray, how would you communicate the company's costing system to employees? To investors?

Message from the CEO

TO EMPLOYEES:

At Voray, what makes us stand out is the exclusively curated nature of the services we provide through our high-end and meaningful networking events. This is achieved by the time all of you, along with our hosts, put into the detailed designing, planning and executing of each gathering, making it unique and valuable.

While we have healthy growth with good profitability overall, you will agree that we are facing many challenges like handling our demand, deciding which customer event to accept/ reject, how to price events, articulating the value of our services, how to efficiently use our team's bandwidth, or how to determine the real profitability of each gathering. Most of these problems point to a lack of granular understanding of our costs. To solve these problems, we are introducing a refined cost calculation method, that will give us better insights.

A Smart Gathering event is a unit of measure of profitability for us. We have identified 5 main activities that are critical to one gathering – Host Identification, Venue Interaction, List Building, Guest Interaction, Account Management. Based on historic trend, we have identified approximate time that each activity takes based on presence or absence of certain characteristics by gathering. We have tabulated it in our Cost model which is a Time-Based Activity Costing. As a services business with high indirect costs, I believe this costing approach will allow us to allocate costs correctly to each of our gatherings. I encourage our sales; operations & community teams to leverage it and bring our calculations based on this cost systems as we discuss projects during our Deal Table.

Let me also assure you that this analysis will not be the sole factor that determines our business decisions. We will additionally use this as one of the important data points in our decision making.

TO INVESTORS:

Voray is a Services business characterised by high indirect costs, hence we are introducing a refined Costing system that allows us to allocate our costs as granularly as possible to our Smart Gatherings which are our units of profitability measurement.

Using a refined cost system allows us to take informed decisions on how to manage the demand to drive better profitability through more accurate pricing, optimised cost and higher operational efficiency. Moreover, this will also help us understand our team's productivity and bandwidth utilization better. We will be better equipped to invest in resources and technology that help us be more productive. With an improved costing system we can make more informative strategic decisions about future business expansions to ensure whilst the business is growing, profitability is maintained.

Conclusively, this approach will guide us prioritising and investing in projects that maximise profitability for us as a business and for you as investors.

APPENDIX

Comparison of overhead cost and allocated hours

	SG1	SG2	SG3	Total
Overhead costs (185% of DL)	\$7,300	\$4,442	\$4,207	\$15,949
Rate per hour (PC)				\$41.6
Total hours allocated				383
Overhead costs (TDABC)	\$9,555	\$1,078	\$4,395	\$15,027
Rate per hour (derived)				\$41.4
Total hours allocated				363
Reduction in hours				20
%				5%
Reduction in overhead				\$922
%				6%

Applying TDABC (calculation details)

Calculating the new Allocation Base

Profitability analysis was based on both Theoretical & Practical capacity in terms of available working hours, which were used to arrive at the cost per hour. **Hourly rates based on practical capacity were then used to compute the project costs.**

Theoretical capacity

Activity	Yearly			
	No of employees	Total Budgeted indirect cost	Budgeted Hours of cost	Budgeted Indirect Cost
Host Identification	2	\$133,432	\$4,160	\$32.1 per hour
Venue Interaction	1	\$48,568	\$2,080	\$23.4 per hour
List Building	3	\$223,392	\$6,240	\$35.8 per hour
Guest Interaction	3	\$281,658	\$6,240	\$45.1 per hour
Account Mgt	3	\$251,733	\$6,240	\$40.3 per hour
Total OH Cost		\$938,783	\$24,960	\$37.6 per hour

Theoretical capacity has been based on the following assumptions:

- 5 days / week, 8 hours / day = 40 hrs / week
- 52 weeks per year
- Total available hours: 2080

Practical capacity

Activity	Yearly			
	No of employees	Total Budgeted indirect cost	Budgeted Hours of cost	Budgeted Indirect Cost
Host Identification	2	\$133,432	\$3,760	\$35.5 per hour
Venue Interaction	1	\$48,568	\$1,880	\$25.8 per hour
List Building	3	\$223,392	\$5,640	\$39.6 per hour
Guest Interaction	3	\$281,658	\$5,640	\$49.9 per hour
Account Mgt	3	\$251,733	\$5,640	\$44.6 per hour
Total OH Cost		\$938,783	\$22,560	\$41.6 per hour

Practical capacity was calculated based on the following assumptions allowing for:

- 2 weeks vacation, 8 public holidays, 7 sick days (total of 200 hours)
- Total available hours: 1880
- Hourly rates increase on average by 10.6% on average
- These are the rates applied for further calculations



voray

Applying TDABC

Profitability analysis with Theoretical capacity

	SG1	SG2	SG3	Total
Revenue	\$15,000	\$8,833	\$16,500	\$40,333
Direct material costs	\$1,642	\$1,520	\$4,224	\$7,386
Direct labour costs	\$3,946	\$2,401	\$2,274	\$8,621
Total direct costs	\$5,588	\$3,921	\$6,498	\$16,007

No. of hours per activity

Host Identification	45	3	25	73
Venue Interaction	10	1	9	20
List Building	75	0	25	100
Guest Interaction	50	10	10	70
Account Mgt	50	10	40	100
Total hours	230	24	109	363

Host Identification	\$1,443	\$96	\$802	\$2,341
Venue Interaction	\$234	\$23	\$210	\$467
List Building	\$2,685	\$0	\$895	\$3,580
Guest Interaction	\$2,257	\$451	\$451	\$3,160
Account Mgt	\$2,017	\$403	\$1,614	\$4,034
Total overhead	\$8,636	\$974	\$3,972	\$13,582
Total cost	\$14,224	\$4,895	\$10,470	\$29,589

Gross Profit	\$776	\$3,938	\$6,030	\$10,744
GP margin %	5%	45%	37%	27%

vs GP PC	\$919	\$104	\$423	\$1,445
% change in GP	444%	3%	8%	16%

- Knowledge of costing based on theoretical capacity could be useful during times of business slow down and low activity.

Price sensitivity analysis

Price sensitivity analysis

	SG1	SG2	SG3	Total
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Increase in revenue by:

5%	\$15,750	\$9,275	\$17,325	\$42,350
10%	\$16,500	\$9,716	\$18,150	\$44,366
20%	\$18,000	\$10,600	\$19,800	\$48,400

Gross profit, if revenue increases by:

5%	\$607	\$4,276	\$6,432	\$11,315
10%	\$1,357	\$4,717	\$7,257	\$13,332
20%	\$2,857	\$5,601	\$8,907	\$17,365

GP margin

4%	46%	37%	27%
8%	49%	40%	30%
16%	53%	45%	36%