

Return on Investment: Justifying CRM Investments

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Measurement is an essential part of CRM. It permeates much of our marketing vocabulary—customer satisfaction level, customer lifetime value, customer retention rate, customer acquisition cost, etc. However, one of our most important measures may not even have the word customer associated with it—return on investment (ROI).

In this paper, we will: (1) discuss enterprise measures, (2) define ROI, (3) define net present value (NPV), (4) provide guidance on the use of NPV and (5) present detailed formulas and examples in the Appendix.

Enterprise Measures

The basic challenge facing an enterprise is how to allocate its resources wisely. Resource allocation takes two forms: operating expenses and investments. Operating expenses are outlays for day-to-day business activities like marketing, sales and customer service. These activities are most often evaluated using effectiveness and efficiency metrics.

Effectiveness metrics identify how well the process is performed, and efficiency metrics identify how well the process consumes enterprise resources (people, time or money). Examples include: customer satisfaction (effectiveness measure for customer retention and customer servicing activities), awareness and recall (effectiveness measure for advertising) and cost per sale (efficiency measure for the sales process).

Investments are outlays for long-lived, capital assets like buildings, furniture and equipment. Evaluating an investment requires quantifying the value the enterprise receives for making that investment, its ROI.

Traditionally, most marketing resource allocation decisions have focused on operating expenses—advertising, research, merchandising, etc. CRM, however, can be capital intensive, requiring the building of databases, the purchasing of CRM software, etc. The successful CRM practitioner must learn to "speak the language of business" and use ROI analysis to get the funding they need to execute CRM initiatives.

Examples of CRM Investment Costs

- Hardware costs
- Software licensing
- Consulting for implementation of hardware and/or software
- Internal resource costs associated with the deployment of the capital improvement
- Marketing resource costs associated with the deployment of the capital improvement

Examples of CRM Non-Investment Costs

- Marketing piece (direct mail, e-mail, telemarketing script, etc.) development, production and delivery costs
- List/Name acquisition costs
- List/Name enhancement costs (e.g., phone number append, e-mail address append, etc.)
- Outsource costs associated with the development, production and delivery of the CRM communication
- Marketing resources associated with the development, production and delivery of the CRM communication
- Internal resources associated with the development, production and delivery of the CRM communication

Nuances:

- Some companies exclude items from "Sunk Investment" category as Investment costs for the purposes of computing an initiative or project NPV. This systematically overstates the NPV.
- Some enterprises do not consider the upfront capital investments for initiatives or projects. Instead, an annual depreciation amount is included as an ongoing cost impact. The impact of this approach is to systematically overstate NPV.

Example: An upfront investment of \$1 million would have a (\$1,000,000) impact on NPV. Using an annual depreciation of \$200,000 for 5 years (given a discount rate of 15%), the impact on NPV is (\$670,431). Therefore, the use of depreciation in lieu of investment overstates NPV by \$329,569.

a. Revenue Impacts

Revenue impacts reflect the increase and decreases in cash inflows that result from the implementation of the initiative or the project. Revenue impacts should be quantified for each period used in the evaluation of the initiative or project.

Whenever possible, revenue impacts should be based on past experiences. For enterprises with no or limited CRM experience, this may not be possible. Published information, consultant expertise and competitive intelligence may fill this void satisfactorily.

Examples of Revenue Enhancement	Examples of Revenue Reduction
<ul style="list-style-type: none">• Increase in response rates• Increase conversion/booking rates• Increase cross-sell ratio• Decreased account attrition rates• Increase in fees• Increase in pricing• Increase in interest• Increase in balances• Increase in average spend per account• Increase in average number of transactions	<ul style="list-style-type: none">• Decrease in pricing• Decrease in fees• Decrease in interest rates

Nuance:

Some companies treat all revenues on an accrual accounting basis. Most often this is not consistent with the cash receipt. As NPV is a cash flow concept, this corporate practice systematically overstates NPV.

b. Cost Impacts

Cost impacts reflect the expenditure increases and decreases that result from the implementation of the initiative or the project. Ideally, cost impacts for each consumer activity are quantified and available through the Finance or Management Accounting department. Therefore, quantifying costs requires an estimate of expected consumer activities. These estimates should then be multiplied by their respective activity-based costs to determine the impact of these costs.

As with revenue impacts, cost impacts should be computed for each period used in the evaluation of the initiative or project. Also, it is useful when historical average consumer activity experiences are used to determine projected consumer activities. For enterprises with no or limited CRM experience, published sources, consultant expertise and competitive intelligence may also be used to fill this void.

Examples of Cost Increases

- Hardware maintenance
- Software license maintenance
- Personnel to support new function
- Personnel to support new system
- E-mail support costs (unsolicited, replies, etc.)
- Call center costs to fulfill customer responses
- Account opening costs
- Account servicing and transaction costs
- Account maintenance costs
- Data append and accumulation costs
- Marketing personnel
- Web personalization expenses

Examples of Cost Reduction

- Charge-off rates
- Delinquency rates
- Returned mail costs
- Marketing program cycle times
- Report production time
- Data mining time
- Campaign response analysis time
- Fewer account closing costs
- Product restocking costs
- Business planning time
- Data management and storage costs
- Fewer IT support costs

Nuances:

- Some companies treat all costs on an accrual accounting basis. Most often this is not consistent with the cash expenditure. As NPV is a cash flow concept, this corporate practice systematically understates NPV.
- Some companies use variable costs as their unit activity costs. This approach systematically overstates the NPV by excluding the fixed cost portion of the cost impact. The variable cost treatment is an effective way to manage excess or unavoidable excess capacity in the short term. However, effective long-term capacity management will require that all capacity consumption activities cover both variable and fixed cost components before any capacity expansion is considered.

What is ROI?

ROI has at least two meanings. The first is its traditional financial meaning of annual net income as a percentage of investment. The second is a more colloquial one. This meaning demonstrates the lifetime value of the marketing initiative. This second ROI meaning is the traditional financial measure, net present value (NPV).

NPV permits the concise computation of the value that the marketing initiative will create for the enterprise. As CRM practitioners, justifying investments, whether for a database, software tool, personnel additions or marketing campaign, is a critical skill. This paper provides guidance to the CRM practitioner on how to compute NPV and shares insight into the nuances of NPV.

What is Net Present Value?

Don't be intimidated by this seemingly daunting financial term. Remember, computing an NPV is "just math," and using an NPV is as simple as knowing that an NPV greater than zero is good and one less than zero is bad. (See Appendix for the mathematical formula.)

NPV Components

Discount Rate: The interest rate by which all cash inflows and outflows are divided to understand their value today (in present day dollars). See Appendix for a discussion of the "time value of money."

Investment: The amount of funds that are expended at the initiation of the project.

Revenue Impacts: Increases or decreases in revenues resulting from the implementation of the project or initiative in each time period whether recurring or one time.

Cost Impacts: Increases or decreases in expenses resulting from the implementation of the project or initiative in each time period whether recurring or one time.

c. Discount Rate

In most companies, the Finance or Treasury department will be able to identify this for you. Typically, the discount rate is the company's combined cost of capital or weighted average cost of capital (WACC), sometimes referred to as the corporation's "hurdle rate." The WACC reflects the company's optimal capital structure (ratio of market value of debt to market value of equity), its cost of equity and its after-tax cost of debt. (See Appendix for the mathematical formula.)

d. Investment

The investment is the sum of costs incurred during the implementation of the CRM initiative or project. This is often the easiest component of the NPV formula to identify. The most common mistake is including operating costs as an investment cost.

Answering the following two questions can assist with the proper distinction between operating and investment costs.

Question 1: "Can the initiative be set up or the project be executed as designed without investing this money or using this, or some substitute, resource?"

Question 2: "If this project or initiative is delayed for one year, will this cost be avoided or will this resource be available for another purpose?"

Answer to Question 1

		Answer to Question 1	
		YES	NO
Answer to Question 2	YES	Variable Operating Cost	Initiative or Project Investment
	NO	Fixed Operating Cost	Sunk Investment

Both the "Initiative or Project Investment" and "Sunk Investment" categories should be included as investment costs to compute NPV accurately. (See Note and Nuances below.) However, items in the "Sunk Investment" category should be reviewed to understand why the cost is unavoidable. This review may unearth some corporate good the initiative or project is accomplishing (e.g., making use of software purchased several years ago, but never deployed, etc.).

¹Treating the operating costs as an investment results in the whole dollar amount (undiscounted) being subtracted as part of the NPV calculation. The impact of this error is the understatement of the NPV for the initiative or project being evaluated.

²If there are investment costs in the "Sunk Investment" category that are included in the NPV and the computed NPV is negative, a second NPV should be computed excluding the "Sunk Investment" costs. If this second NPV is positive, the enterprise has an opportunity to create value that exists only because some previous investment can be leveraged for "free." Be careful to understand and document if alternative uses for this "Sunk Investment" exist to permit the enterprise to make a fully informed decision about how to leverage its "Sunk Investment."

Computing NPV

Once the four components (discount rate, investment, revenue impacts and cost impacts) of the NPV calculation are accumulated, apply the mathematical formula to compute your NPV.

The resulting number is the value the initiative or project holds for the enterprise.

NPV ResultAction

NPV > 0 Accept the Project or Initiative

NPV = 0 Break-even Point; Accept the Project or Initiative

NPV < 0 Reject the Project or Initiative

Nuance:

The time period for which cash flows are evaluated vary by enterprise. Some companies have a 5 or 10 year standard. Others use the expected lifetime of the initiative or project. Be sure to understand the term your NPV analysis must cover before gathering your information.

Some Final Thoughts

Before sharing your findings with the entire enterprise consider the following:

- **Create Scenarios:** The NPV formula results in a single numerical representation. The precision represented by a single number is often misleading. It is useful to create worst case, expected case and best case NPVs. To accomplish this, vary key assumptions, especially those for which the empirical evidence is weakest and those that have the greatest impact on the NPV.
- **Identify Strategic Impact:** Not all effects of an initiative or a project can be reliably reduced to a number, often due to a lack of relevant available information. Understanding and identifying the strategic benefits and costs associated with the implementation of the initiative or project can be key to gaining support for its approval. Examples of strategic impact include competitive position (i.e., first to market), organization-wide customer data consistency, etc.
- **Create Room For Error:** Be generous in your estimates for Investment and Cost Impacts. Be stingy in your estimates for Revenue Impacts. Most enterprises will eventually ask you how you did compared to your estimates. It is nice to have good news to share.
- **Secure Stakeholder Buy-in:** No initiative or project is an island, and nowhere is that more true than for CRM efforts. Getting initiatives and projects approved will require collaborative efforts with affected stakeholders to address their concerns and ensure their support.
- **Ongoing Measurement:** Computing the NPV to get the initiative or project approved is only the beginning of effective measurement activities. As the initiative or project is being implemented, it is useful to document the actual investment, discount rate and revenue and cost impacts and compare these to the projected amounts. This type of closed loop measurement and reporting is a foundation for an effective, learning CRM organization.

Armed with the information provided in this paper, you are prepared to compute the ROI for your initiative or project. Along with customer lifetime value computations, it provides the bedrock for investment decision-making and ongoing measurement of the value of CRM efforts.

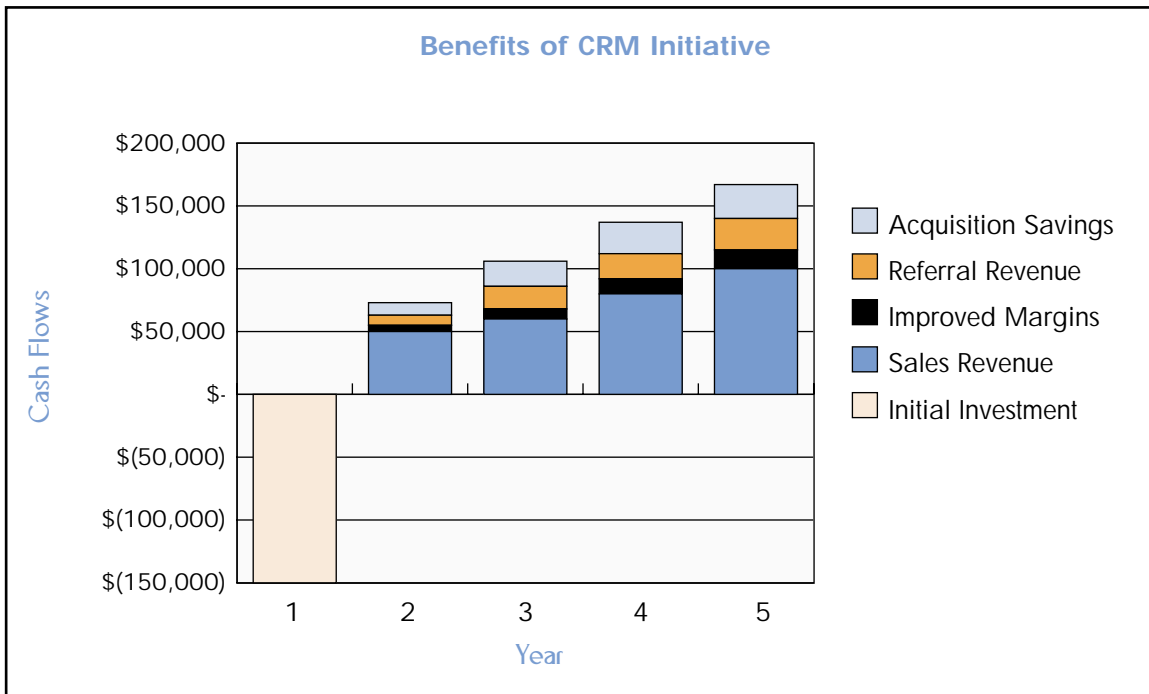
Appendix

NPV Formula

The formula for NPV is as follows:

$$NPV = \sum_{t=1}^n \frac{(R_t - C_t)}{(1+r)^t} - I$$

where **t** represents time, **n** represents the number of time periods, **R** is revenue impacts, **C** is cost impacts, **r** is the discount rate and **I** is the Investment



Example of CRM Project NPV Evaluation

In order to ensure that readers will be able to calculate NPV on their own after reading through this paper, we have created a simple CRM initiative for a hypothetical organization. This organization, let's call them e-Music.com, is an e-commerce site that sells consumer music CDs and DVDs via the web. They would like to initiate a marketing campaign to gather customer music preferences in a data warehouse and then profile their customers for different offers.

The spreadsheet below outlines the revenues and expenses associated with this CRM project. The revenues are from music purchases online projected over the first 3 years of the project. The expenses are project costs of setting up the data warehouse to store the customer preference information. The bulk of their expenses occur during the first year, but subsequent expenses occur over the following 2 years.

The project shows a net loss for the first year, then net gains for the next 2 years. The NPV calculation, discounted at 10%, returns an NPV of \$57,087. This means that this project should be accepted, because the revenues outweigh the costs over the life of the project.

NPV Calculation	Year 1	Year 2	Year 3
Revenue			
Number of Purchases	7,700	3,850	1,925
Revenue from Purchases	\$654,500	\$327,250	\$163,625
Expenses			
Project Cost	\$225,000	\$0	\$0
Project Costs/ Product	\$62.50	\$62.50	\$62.50
Total Project Costs	\$481,250	\$240,625	\$120,313
Net Revenue	\$(51,750)	\$86,625	\$43,313
Discount Rate	10%	10%	10%
NPV	\$(47,045)	\$71,591	\$32,541
Cumulative NPV	\$(47,045)	\$24,545	\$57,087

NPV Calculation Using Excel

Most business professionals today will not calculate NPV by hand. Fortunately there are tools to help them get the answers they need – quickly. The NPV calculation can easily be calculated using a spreadsheet program like Lotus 123 or Microsoft Excel. This is the easiest way to get a quick NPV calculation for a project or initiative.

About Quaero

Quaero helps companies maximize their customer profitability through its CRM services with development of CRM roadmaps, rapid data mart development, customer analytics and campaign management implementations. Quaero brings its strong CRM expertise coupled with its analytics and technology expertise to companies in financial services, retail, e-business, communications and healthcare to develop long and profitable customer relationships. Quaero supports the needs of companies to translate their customer contacts into long-term profitable relationships through its three lines of business:

- Quaero msi marketing consulting and systems integration
- Quaero csp outsourced CRM services
- Quaero Answers research and training

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