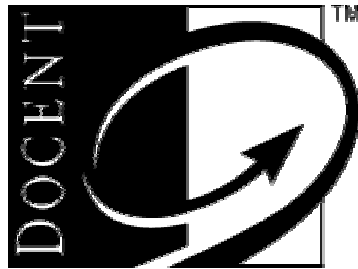


Calculating the Return On Your eLearning Investment

A White Paper Prepared by Docent, Inc.



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Introduction

Helping companies build a business case for eLearning -- centered around a quantifiable, reliable, and compelling estimate of the Return on Investment (ROI) -- is an essential element of the Docent value proposition. As a result, it is critical for Docent to work directly with clients on the process of evaluating and calculating ROI. This paper is designed for use by the Docent field organization and clients to help facilitate and guide this process.

The key to producing a credible ROI is ascertaining the “hard” cost and revenue impact. This paper provides specific assistance on how to recognize and quantify these benefits. It also helps identify the less tangible “soft” competitive benefits and values to individual learners that are important in developing a complete picture of the total return on a proposed eLearning solution investment.

A credible evaluation must also consider the transition and roll out costs of implementing and cutting over to a Docent eLearning solution, such as training, lost productivity, redundant processes, internal marketing and awareness, etc., and not simply the cost to acquire, implement, and support the new technology. However, Docent believes these costs to be a relatively minor factor in the analysis due to the ease and speed of a Docent implementation and the intuitive web-based administration and end-user interface enabling rapid global roll out.

A Docent eLearning solution is expected to deliver a minimum ROI of 400% in the first twelve months versus traditional education and training approaches. In order to collect the data required to substantiate a 400% or more ROI claim, Docent prefers to work directly with the “CXOs” and line of business managers, and not the traditional “training manager.” This is because training managers normally do not have complete visibility to the potential business impact of an eLearning investment. In general, training managers are able to provide data on the cost savings that relate directly to the training function. They can not be expected to provide information such as the organizational cost of employee turnover or the revenue impact of accelerating a new product launch. The traditional training department metrics will typically yield ROIs of roughly 100% for a web-based training project.

When developing the ROI estimate, the analysis should consider the following four categories of potential benefits:

- Hard cost savings vs. alternative solutions
- Hard revenue impacts vs. alternative solutions
- Soft competitive benefits vs. alternatives
- Soft benefits to individuals vs. alternatives

The remainder of this paper (1) defines and further elaborates on these benefit categories, (2) provides a primer on the mathematics of the ROI calculation, and (3) concludes with case studies based on actual customer situations that apply the concepts discussed.

Hard Cost Savings

Hard cost savings are savings that are typically quantifiable in financial value terms and easily estimated or measured. The following are examples of hard cost savings that should be considered when rolling up the total hard cost savings used in ROI calculations:

- 1) Travel (airfare, hotels, meals, etc.) A typical scenario: The alternative solution to Docent is a traditional instructor-lead training (ILT) intervention where all personnel travels to one central location for training. The hard travel savings are easy to calculate. Take the sum of airfare, hotel, meals, car rental, etc. and multiply by the headcount number. In many cases, this alone yields a 400% ROI.
- 2) Facilities
- 3) Instructor fees
- 4) Printing, Distribution and storage costs
- 5) Re-training for growth and turnover, refresher courses, content updates, etc.
- 6) Reduction of customer support costs (call center, customer education, etc.). To calculate the resulting cost savings, one starts with the average cost per minute for support calls. This data is normally readily available from the VP of Customer Support (total expense of call center divided by the number of customer calls per year divided by the average number of minutes per call).

Hard Revenue Impact

Hard revenue impact is the total revenue value of the solution that is often possible to estimate or measure. When rolling up hard revenue impact, consider the following factors:

- 1) Lost revenue (opportunity cost) of not having adequately trained sales personnel.
- 2) Increased productive time on the job (more revenue producing days per sales rep or other customer facing personnel). Note: One can easily determine the revenue value of a sales rep day by dividing total annual revenue by the number of selling days by the number of sales reps.
- 3) Shorter time to product deployment by shrinking training ramp which expands the front end of a product life cycle resulting in increased revenue
- 4) Increased revenue by increasing the sales effectiveness of selling partners
- 5) Increased revenue opportunities by delivering for-fee training and/or certification to customers, partners, and suppliers and ability to deliver more revenue-generating course to more customers

Soft Competitive Benefits

Soft competitive benefits are difficult or impossible to quantify and measure, but they can be as compelling as hard cost savings and hard revenue impact in motivating investment in an eLearning capability. Typically, the business case for an eLearning investment starts with ROI calculations based on the hard cost savings and revenue impact. The soft competitive benefits are then “layered on top” of the business case to provide a more complete view of the total return. When developing a complete picture of the return on an eLearning solution investment, consider the following soft competitive benefits:

- 1) The value of immediacy. Since education is treated as an on-going process and not an event, knowledge transfer is always only a web browser away.
- 2) The value of consistency of delivery. More automated, technology-based approaches to large-scale knowledge transfer are inherently more consistent in their delivery than human interaction which can vary from trainer to trainer and instance to instance for a particular trainer
- 3) The value of certification of knowledge transfer. Certifying knowledge on a large scale is now possible due to web-based eLearning as a cost-effective medium for competency management.
- 4) The value of a closed loop system – improvement with each iteration
- 5) The value of experts performing their job, not teaching classes
- 6) The value of knowing whether employees and/or customers and/or partners are “getting it”
- 7) The value of increased morale gained from simultaneous training (“we’re no longer last on the list down here in South America”)

Individual Values

Individual values are benefits that are experienced at the individual learner level. They represent an additional category of soft benefits that should not be ignored in understanding the complete business impact of an eLearning solution. Individual values include:

- 1) Mass customization = no wasted time
- 2) Persistence of learning, Just-in-time (JIT) activities
- 3) “Knowing where I stand” – motivational aspects
- 4) Clear learning priorities
- 5) “Knowing somebody is watching my progress”

The Mathematics of the ROI Calculation

To calculate an ROI, three data points are required:

- 1) The time period.** Typically this is one year.
- 2) The investment.** This typically includes the price of the software licenses, professional services, and maintenance over the time period of interest, as well as non-Docent costs such as courseware conversion or development, or other professional services, and additional systems and software licenses which may be necessary.
- 3) The return.** This is the sum of the cost savings and revenue enhancements gained from the Docent solution, as derived from the answers to the questions outlined above.

There are three ways that one would customarily present an ROI value to a customer:

- 1) As a percentage.** If the customer gains benefits of \$1,000,000 in 12 months on a total investment of \$250,000 in the same time period, their ROI expressed as a percentage can be calculated as follows:

If, Return = Payback - Investment

ROI = [(Payback – Investment)/Investment]*100, or in this case:

$$[(\$1,000,000-\$250,000)]/\$250,000*100 = 300\%$$

- 2) As a ratio.** ROI is often expressed as a ratio such as 2:1. This is done by simply dividing the Return by the Investment. For example, using the preceding data:

$$\text{Return/Investment} = \$1,000,000/\$250,000 = 4:1$$

- 3) As a time to break-even.** Sometimes an equally compelling way to present the data to the customer will be to show the number of days, weeks, or months it will take to break- even on the investment. This is calculated using the following method:

Time period to break-even = (Investment/Return)*Time Period

Using the data from the preceding example,

$$\text{Time period to break-even} = (\$250,000/\$1,000,000)*12 \text{ months} =$$

$$(0.25)*12 = 3 \text{ months or 90 days}$$

CASE STUDIES

The following case studies provide some examples of how these principles have been applied in practice. Each of these case studies is based on actual customer situations. While these case studies demonstrate the principles described so far on how to estimate ROI for a particular project, due to the variation in the quantity and quality of company data provided, the approach to arriving at and describing the ROI calculation varies from case study to case study. Nevertheless, it is instructive to note the various approaches to deriving and presenting ROI feedback to company decision makers, even in the event that only partial data is available.

CASE STUDY 1: Major Pharmaceuticals Company

Background

The company needs to train 1,000 sales people on a new drug about to be released. The company has exclusive rights to sell this drug for six months before the generic manufacturers respond. The alternative approach to Docent is to bring the 1,000 sales people together in Dallas (their training HQ) for three days of training.

Business Objectives

- **Maximize sales during six month exclusive-rights-to-sell window**
- **Certify international distribution partner competency to sell drug.** The company is initiating an aggressive campaign to line up distribution channels in new markets where they have no direct presence, most notably, Eastern Europe, Australia, and Southeast Asia. Certifying that these partners are competent to explain and sell this new drug is vital not only to generate sales, but to comply with multiple regulatory agencies in the various countries involved.
- **Establish closer ties to oncologists in order to guide future product development.** One of the customer's strategic objectives is to establish closer ties to the oncologists who prescribe this drug. They see this new drug as a way to strengthen their connection to these oncologists, and to capture valuable data about how their drug is being used, which in turn, will help them in developing and testing future related drugs.
- **Gain market share and enjoy benefits of an improved market position.** This will have an impact on their stock price, the morale of the company, their ability to acquire one of the smaller players in their market, and their ability to recruit and retain top sales talent. The turnover in the sales organization is 25% per year. It is critical that this launch is successful.

Note: These costs are accurate, but extremely conservative for one primary reason: the total cost of the solution is attributed to this single business use. The software can obviously be a valuable part of multiple business solutions, and thus attributing the total cost to this one project represents an extremely conservative assumption. It is the equivalent of attributing the total cost of one's PC to developing the next sales forecast!

Alternative Solution Cost Analysis

Airfare (\$800 * 1000)	\$800,000
Hotel (3 nights each)	\$300,000
Meals	\$120,000
Car Rental	\$60,000
Instructors + Support	\$200,000 (4 people, 50%, 6 months)
Material Development	\$120,000 (1200 man hrs at \$100/hr)
Printing & Distr.	\$200,000
Lost Opportunity Cost	\$24,000,000
Immediacy Cost	\$40,000,000
TOTAL HARD COSTS:	\$1,800,000 (Printing & Distribution)
TOTAL COSTS:	\$65,800,000
ROI on Hard Costs:	466% [(\$1,800K-\$318K)/\$318*100]
ROI on Total Costs:	20,000% +

Lost Opportunity Cost Calculation

- The lost opportunity cost is based on one day of travel per person, and 24 hours of class time versus zero travel time and 8 hours of study time for the Docent solution.
- This means that the average sales person will spend three days more doing their job with the Docent solution.
- In a sales force with an average quota of \$2 MM/year, each day of selling time is worth roughly \$8,000 in revenue to the company (2,000,000 / 250 = 8,000). Three days * 8,000 = 24,000 * 1,000 sales reps = \$24MM.

Immediacy Cost Calculation

- 10 classes will be conducted over 5 weeks (2/week) under the old approach.
- Assume the solution will be deployed worldwide on day one and that it takes one week for each rep to be trained. This will require some management reinforcement.
- This means that, on average, under the traditional approach it would take 2.5 weeks from release until training is completed for each rep.
- The Docent solution is 1.5 weeks faster
- This translates to 8 business days with a revenue value of \$5MM/day as outlined above.

CASE STUDY 2: Global Business Services Company

Background

An international business services company is evaluating web-based training based on a Docent solution as an alternative to the current field-based one-on-one customer training. The company operates a global customer response center to provide additional phone support to its customer base. The company does not charge separately for training or response center support. The customer base is currently 30,000 and expected to expand to 50,000 within one year.

Business Objectives

- Reduce the cost of existing training and support approach
- Increase customer satisfaction through more knowledgeable response center personnel
- Develop new training related revenue streams

Assumptions

Field-based Customer Training:

- 73 people performing one-on-one customer training across the country
- Training session is 2 hours per customer
- 100% of customers are trained
- Cost per trainer is \$50,000 per year
- Travel costs are minimal and can be ignored in ROI calculations
- Cost for each one-on-one customer training session could be as low as \$74 (calculated based on each trainer training 3 customers per day, 225 days of the year, or 675 sessions per year) to as high as \$168 per session (based on the cost of handling the 20 minute CRC calls at \$28 each).
- Docent chose the mid-point of the above range (\$121) as the cost of one-on-one field training session

Customer Response Center:

- 8 CRC reps are dedicated to responding to data and functionality related questions
- Approximately 10% of CRC calls are training related, or 1100 calls/month
- Another measure shows that 800 calls/month were handled by the 8 dedicated reps, although peaks may be as high as 1300 calls/month
- Average time to handle data and functionality related questions is 20 minutes
- Cost per call is \$27-29
- An unknown percentage of the incoming calls to the CRC are referred to the Field Training Course to provide hands-on training to the customer

- Assumption: 1% of the incoming calls to the CRC are referred to the Field Trainers for resolution (110 calls per month) This assumption was considered conservative by the company.

Cost of Docent Solution:

- Cost of the first year implementation of Docent is \$290,000

Calculating ROI

Cost Reduction Analysis:

Based on Docent's experience evaluating the impact of the Docent solution on costs in call center applications, the value of the proposed solution can be directly measured in four categories:

- **(1) Field Training Cost Reduction.** By implementing the Docent web-based customer training system and a policy of directing requests for personal training through the On-line Customer Training System, Docent estimates very conservatively that 20% of the incremental customer base in 1999 will not require hands-on training but will instead solve their training needs through self-paced instruction. This will provide a cost reduction to the company of $0.2 \times 20,000 \times \121.00 , or \$484,000 per year.
- **(2) CRC Call Reduction Cost Savings.** Docent asserts that implementation of the Docent On-line Customer Training System as a front-end to the existing telephone call center will reduce the number of training related calls by 25%. In the first year, this should result in a reduction of 3000 calls, at an average cost per call of \$28, resulting in a cost savings to the company of \$84,000 in the first year.
- **(3) CRC Call Duration Time Reduction Cost Savings.** Implementing the solution for both internal use by CRC personnel as well as by customers should result in a 10% average reduction of call duration on training-related support calls. Applying this savings (average 2 minutes per call at a savings of \$1.40/minute) on the 75% of calls not eliminated as shown in item 2 above results in a cost reduction of $12 \times 750 \times \$2.80$, or \$25,200 in the first year.
- **(4) CRC Call Referral Reduction Cost Savings.** The combination of better trained CRC personnel as well as providing an alternative to hands-on field training should result in a 50% reduction in the number of calls referred to the Field Training group for resolution. Based on the 1% assumption above, this would result in a cost savings of $12 \times 55 \times \$121$, or \$79,860 in the first year.

ROI Evaluation Summary:

Given the availability of the Docent system to all customers in a timely manner and the assumptions stated above, the total projected first year cost reductions gained by implementing this system would be \$673,060 in the first year.

Given that the investment in the Docent solution would be \$290,000 in the first year, the first year return on Investment from implementing this system is 132%. After the first year, the Return on Investment will increase to over 1000% per year due to the ongoing cost reductions gained from the expanding customer base while the only additional investment required for the Docent solution is the annual maintenance fee.

In addition, the payback period to recover the cost of implementing the Docent system is estimated at 157 days, or 6 months from the time of deployment.

Intangible Benefits not included in ROI calculation:

- **Increased Customer Satisfaction.** In addition to the above cost reduction related benefits, an intangible benefit of the web-based customer training system is increased customer satisfaction. By making it easier and more convenient for customers to use the product through easier access to training resources, customer satisfaction with the company can be greatly enhanced. While it is difficult to assess the quantitative return, this could result in the purchase of incremental education course offerings, an increased likelihood to purchase incremental subscriptions, and a decrease in the likelihood of customers switching to competitive offerings.
- **Revenue Enhancement Opportunities.** In addition to the above bottom-line, cost-reduction-based Return on Investment analysis, there is additional benefit to be gained by the impact of the Docent solution on top line. Two potential areas of revenue enhancement have been identified and are described below.
 - (1) **Charging for one-on-one Training.** While the two hour one-on-one field training sessions are currently free to customers, discussions with marketing management suggest that it may be possible to charge separately for them in the future. If the Docent solution is used as the no-charge (included-with-the-product training) offering, it may be possible to charge customers for the one-on-one field training as an enhanced product offering. Assuming only 25% of the new customers purchase the enhanced training (5000 per year), and that the enhanced training is priced at cost (\$125 per session), this would yield an incremental \$625,000 of revenue in the first year.
 - (2) **Revenue Sharing on Out-sourced Training.** Discussions with Marketing also indicated an opportunity to capture customer expenditures that are currently flowing to third-party training providers. By outsourcing these programs to Docent instead of the third party, it may be possible to capture 10% of the installed base per year for additional training offerings. Assuming that the

company received a revenue share or sales commission of 33% of the value of the training course sold with an average list price \$500/course, the company could see incremental revenue of \$830,000 in the first year.

Summary

By adding the incremental revenue gains to the cost savings previously identified, the total return on investment gained from implementing the Docent system could be as high as 633% in the first year.

CASE STUDY 3: Major Healthcare Company

Background

A leading healthcare company is releasing a new product and wants to maximize market penetration and revenue before competitors can respond.

Business Objectives

- Accelerate the sales ramp for the new product
- Capture market share before competitors' products enter the market
- Provide enhanced metrics to show correlation's between product knowledge, sales skills, and the ability of individual sales reps to meet or exceed forecast revenue.
- Maximize profitability based on earlier revenue ramp; enabling the multi-source product line to capture greater mind share of the sales force in order to meet product line revenue objectives
- Demonstrate the ability to support a full line of anesthesia products with a credible and knowledgeable sales personnel.

Assumptions

- The first year revenue forecast for the product is \$50 Million over the remaining eight months of the year (165 selling days or \$303,030 per day)
- The value of reducing sales rep ramp-up time by 5 days due to web-based training reinforcement is \$1.5M

Calculating ROI

Docent Solution Cost/Return Analysis (First Year):

- Based on the Statement of Work and Proposal provided by Docent, the company's investment in the development of the Web-based Product Training for Proposal site would be \$72,914.00.
- Given the revenue impact of freeing five days of ramp up time for selling valued at \$1.5M, a simple ROI can be calculated: 11:1 Return on Investment in the first year

Docent Solution Cost/Return Analysis (Second Year):

- Second year revenue forecasts for the drug range from \$50 Million to \$100 Million. Depending on the number of additional competitors who enter the market, the value of seizing market share early is potentially \$50 Million per year.
- The value of increasing account capture by 10% via a better trained sales force and reaching accounts ahead of the competition would be an incremental \$5 Million in revenue in year 2, or a 26:1 Return on Investment over the first two years' investment.

CASE STUDY 4: Major Insurance Company

Background

A major insurance company is evaluating opportunities to increase sales force productivity, particularly for new insurance agents.

- Current size of sales force: 10,000 agents
- Number of agents to be hired in 1999: 2400
- Retention currently expected after 3 years: 22%
- Net revenue generation per agent at average productivity: \$300,000
- Ramp time for new hire to achieve full productivity: 18 months

Business Objectives

- Increase overall productivity of agents measure in increase sales
- Reduce ramp-up time for new employees
- Improve sales force retention rates

Calculating ROI

Docent Solution Cost Analysis:

ROI analysis will be based on net revenue contribution vs. Docent investment (\$1.8 Million initial license fees plus \$300,000/year ongoing maintenance). To adjust the following figures for net margin contribution, multiply by the appropriate contribution factor.

Revenue Impact Analysis:

The value of the proposed solution can be directly measured in three ways:

- **(1) Gain from increased agent retention.** If 100% of the 2400 agents hired in 1999 stay with the company and are fully productive after three years at average levels of net revenue generation, total revenue contribution is \$720 million. Based on historical data, only 22% of agents remain, at a projected revenue contribution of \$158.4 million. The value of each percent increase in retention over three years is therefore \$7.2 million (720 million – 158.4 million divided by 78). This translates to a 200% return on investment over three years for each percentage increase in agent retention gained by using the Docent system. Docent estimates that the Docent system could raise retention by 3 to 11 points (to 25% to 33% retention after 3 years), resulting in an ROI of 600%-2200%.
- **(2) Reduction of new employee ramp-up.** Given that average productivity for agents is \$300,000 per year, or \$25,000 per month, a 10% reduction in ramp time (due to more effective skill gap analysis, career development planning and timely delivery of on-line learning) returns \$23.76 million to the company. This conservatively assumes the full 78% current washout rate is within the first 18 months. ($\$25,000 \times 1.8 \times 2400 \times 0.22$). This represents a return on investment over 18 months of 1031%. Given that retention should also be favorably impacted, and the 78% washout occurs over 3 years, not 18 months, the actual rate of return is even higher.
- **(3) Increase in overall productivity of agents.** Given the ability of the Docent system to provide “just-in-time” learning and personalized career development, it is reasonable to assume that average sales agents can be made to more closely emulate star performers. A 1% increase in sales productivity across the entire agent population would result in \$30 Million of incremental revenue per year ($\$300,000 \times 0.01 \times 10,000$). Based on the first year investment in Docent, this would result in a return on investment of 1567%. A sales productivity increase of only 1% over only the middle quintile of the company sales force results in a first-year return on investment of 233%!

In addition, the impact of the enhancement of sales productivity on the overall valuation of the company has not been calculated, but given the huge potential impacts shown above, the ROI based on change in company valuation could be stunning.

CASE STUDY 5: A Leading Enterprise Software Company

Background

Due to time constraints, Docent has not had the opportunity to discuss with the software giant the specific metrics that would enable Docent to predict ROI for the specific application under discussion. However, by making some assumptions based on industry norms and applying them to the data which has been received from the software company to date, a ball park estimate of the potential returns can be estimated.

Business Objectives

- Develop a new (online learning) revenue stream
- Reduce support costs associated with response center volume

Cost and Revenue Impact Assumptions

- On-line training will be priced at \$100 per training unit, and the average course will cost one training unit
- 100,000 paid student training events in first year
- Net margin on on-line education is 25%
- Each trained student will eliminate one half of one call to the company's support line at net cost of \$28 per call

Calculating ROI

ROI contributions stem from two factors

- **(1) Revenue Enhancement.** The Hosted Asynchronous Training Tools Infrastructure project will enable \$10,000,000 in incremental gross training revenue in the first year, which makes a net contribution of \$2,500,000 to the company. This is greater than 10 times the investment in Docent, providing an ROI of >900% in the first year alone.
- **(2) Customer Support Cost Reduction.** By eliminating 50,000 calls to Support, overall costs will be reduced by \$1.4 Million/year. This is more than 6 times the investment in Docent over that time frame, resulting in an ROI of >500% in the first year alone.

The above ROI analyses are by no means exhaustive but is intended to provide some idea of the scale of return that can be obtained by deploying the Docent solution given a limited data set provided by the customer.

Conclusion

While it is not always straightforward to calculate ROI for eLearning projects, anyone that claims ROI is too hard to calculate for eLearning -- as a reason for not moving forward with an eLearning project or investigation -- is making excuses.

What they are really saying is that education and training is not a priority. Ask them how their organization calculated the ROI on their advertising campaign or their ERP project. In this situation, the challenge may not be developing a credible ROI but getting decision-makers to understand the total value proposition of eLearning. As with any general business or IT investment decision, information is imperfect, controlled experiments are impossible, and risk, uncertainty and change are the rule, not the exception. As a result, ROI is at best evidence of goodness based on sound logic and probabilities. ROI is particularly effective at:

- facilitating investment prioritization by making apples to apples hard number to hard number comparisons between investment options; allowing decision-makers to focus on the intangible benefits separately
- setting investment screening thresholds (e.g., consider only projects that deliver ROIs of at least 200%.)
- imposing some discipline on the part of vendors and decision-makers to support business impact claims by taking a more methodical and quantifiable approach to business justification, and;
- enforcing an understanding of the top/bottom line business impact of the investment since it is impossible to complete an ROI analysis without understanding the potential impact on cost and revenue generation.

However, the use of an ROI analysis must be used in context of a broader evaluation framework. ROI is just one of several financial measurement tools that can be used to support an investment decision, and financial measures represent only one decision criteria. Decision-makers may want to complement their ROI financial measures with other methods that address the key limitations of ROI metrics. For example, ROI does not factor in risk and does a poor job accounting for intangible rewards. Other, financial methods include net present value, scenario planning, and options theory. If used properly within the context of a "balanced scorecard" evaluation framework that factors in non-financial decision criteria, ROI can be an invaluable tool in your eLearning investment decisions.