



Whitemarsh
Information Systems Corporation

Developing a Return on Investment (ROI)

*Whitemarsh Information Systems Corporation
2008 Althea Lane
Bowie, Maryland 20716
Tele: 301-249-1142
Email: Whitemarsh@wiscorp.com
Web: www.wiscorp.com*

Table of Contents

Introduction	1
Just what is an ROI?	1
ROI Component Parts	4
ROI Summary and Way Ahead	5



Introduction

This article addresses the concept of developing a Return on Investment (ROI). It does so by first defining the ROI concept, then by setting out the components that comprise its creation, and finally by identifying several scenarios under which an ROI is created.

ROI is often used as a selling tool. To say, however that we are not all salespersons in one form or another across varying times is not true. Every time you are “pitching” a project, or improvement, or change in strategy/method, you are clearly “selling.”

Just what is an ROI?

From Wikipedia, and Return on Investment (ROI) is:

...the benefit to the investor resulting from an investment of some resource. A high ROI means the investment gains compare favorably to investment cost. As a performance measure, ROI is used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. In purely economic terms, it is one way of considering profits in relation to capital invested.

There are alternative names for ROI. One such name is “value proposition.” Again, from Wikipedia, a *Value Proposition* “is a promise of value to be delivered and acknowledged and a belief from the customer that value will be delivered and experienced. A value proposition can apply to an entire organization, or parts thereof, or customer accounts, or products or services.”

While there are kinds of nuances in various definitions, these will do. From a formula point of view, the Wikipedia’s calculation is:

- $ROI = (\text{gain from investment} - \text{cost of investment}) / \text{cost of investment}$

The ROI we are addressing here, however has to have a different formula:

- $ROI = \text{Traditional Approach Resources} / (\text{New Approach Resources} + \text{Resources to Adopt the New Approach})$

So, using a business information system example, if through a traditional approach to business information system development, the cost is \$6 million, and through the replaced approach it only costs \$1 million having adopted a new approach that has an adoption cost of \$500K, the ROI is 4. ($\$6 \text{ million} / (\$1 \text{ million} + \$500\text{K})$).



Developing a Return on Investment (ROI)

That would be the ROI on the first cycle of the new approach's adoption. For the second and on, the ROI would be 6 as the costs of adoption would have already been incurred.

My first encounter with the formal need to develop ROIs came from a school-friend of my wife. He rose to being the CIO of a world-wide and very large financial services firm headquartered in Boston. He had been--over the years--listening to the evolving development of my various products. In the spring of 2013 he said to me:

Mike, I really believe that your products and approaches have value. Honest. But here's the thing. Until you can answer these two questions, I just cannot devote corporate resources to investigate what you have:

- If I don't have enough time to do what I must do now, how do I have extra time for you?
- If I don't have enough money for what I must do now, how do I have extra money for you?

Well, he is right, of course. So, I set about during the rest of 2013 and into early 2014 developing a number of ROIs. But where to start? First, I thought that I should set about describing all the really "neat" features of my companies data management approaches, methodologies, and its metadata management system that stores, integrates and interrelates IT work products. But I had already done that without much success. I came to realize that clearly describing solutions without first knowing the issue was a problem. What had not worked in the past an was unlikely to work in the future. So I stopped that approach.

I started to read Sales books. I uncovered one organization, RainToday.com. It is a sales training and performance organization that helps improve sales results. As stated above, we're all salespersons in one form or another across our professional life time. So, I started reading. One author in the RainToday author set stood out: Jill Konrath <jill@jillkonrath.com>. I focused on her articles. Between RainToday and Jill Konrath I ordered and read a bunch of books and many articles.

One conclusion stood out: If you don't know the issue, you cannot configure and/or sell a solution. Put another way, from a sales talk I attended recently, "Don't sell the drill before you know the hole."

Ok. So, taking this advice to heart, I went back to the two "If" questions above and tried to figure out just what the issues were that had to be solved so my friend to give me his time. In short, my approach had to enable him to "make room for me" by reducing his expended resources so there was "extra" resources for me.



Well, having been in the IT business for 50 years with a focus on data management and business information systems, and having participated in many long-term projects across a number of IT areas, the following “customer” problems are common to almost all enterprises:

- **Enterprise-wide Project Management.** Knowing what you’re going to do, when, how, how much and when must it be done.
- **Information Systems Planning.** Which areas of the business are you going to tackle in what sequence so that you avoid redundancy and conflict.
- **Data-Centered Development and Management.** Understanding that data models are defined once but are used many times. And, accomplished once, the enable business information systems driven by data models to be profoundly smaller, better engineered, and much easier to be evolved and maintained. Data models become the common “center” across many business information systems, and become the interrelationship-intersections across virtually all business information systems work products.
- **Data Model Manufacturing.** Understanding that the various generalization and abstraction layers of data models from business data elements to commonly employed data structures of concepts to the two database layers of logical and physical which collectively form the foundation for business information system access through views and technology data exchanges through XML can all be set into an data model manufacturing environment.
- **Information System Environments.** Understanding and setting into place the overall business information systems architecture, development, and maintenance environments that support maximum common component design and re-use through business information systems code generation rather than custom programming, the ability to incorporate custom business rule specification and coding without every compromising business information system generation.
- **Information Systems Manufacturing.** Understanding that the creation of “Right the First Time” efficient, effective, interoperable, and non-redundant business information systems can occur after generation and subsequent iterations of business information system operational prototypes based on subsets of enterprise business functions and data models.
- **Enterprise Architecture Development.** Right-sizing, engineering and architecture across the enterprise in a non-redundant manner of all the key IT work-products that become the basis for data model modeling and manufacturing, business information systems planning and manufacturing, and quick, easy, and effective evolution and maintenance.



These are listed in an order of encounter. I ran this list by several CIOs and they all indicated that if I could address these, their life would be bearable and CIO would not: mean “Career Is Over.”

ROI Component Parts

Now that I had an issues list that was verified to be busting budgets, causing lateness, and producing unacceptable results given evolving requirements, the next step was to construct the ROIs for each of these areas.

I had to be figured out was just what constituted a well-crafted ROI. Clearly this could not be a “Trust me!” proposition. That has been asserted and heard too many times before. In IT, the phrase, “Trust then Verify” needs to be changed to “Verify then Trust.” Besides, this is just not like buying a new computer with more memory and/or faster disks. That’s a product. Rather this is a ***change in approach*** solution for the issue. What resulted after a number of tries was the following outline for each developed ROI:

- **Issue.** What was the problem that needed to be addressed. What are the common evidences of failures. What are the typical/traditional expended resources (time and money) that occur that produce in a failed or sub-optimal result.
- **Solution Approach.** What are the characteristics and descriptions of solutions to the issue’s component parts.
- **Solution Engineering.** How the Solution Approach component parts are engineered to arrive at a reliable and repeatable solution to the issue and also a brief solution process that makes “common sense.”
- **ROI.** Given the Issue, Solution Approach, and Solution Engineering, the computation of the return on investment. It must compare before-adoption costs with adoption-costs and the clear specification of the returns resulting from the changed.

The final format for the ROI presentation on the website had two additional sections that appeared at the top of each ROI:

- ROI Savings Summary
- Support Links to materials the provide additional detail to the ROI

ROI Summary and Way Ahead



Developing a Return on Investment (ROI)

What had become clear to me over the past 50 years in IT is that it is the “human element” that is the problem. We have become artists and craftsman. It was Pope Julius, in the movie, *The Agony and the Ecstasy*, who kept demanding of Michelangelo, “When will you make and end of it?”

While the Sistine Chapel was certainly not on the critical path of the Church or the Vatican, data models and business information systems clearly are on the critical path of our businesses. In reaction to IT critical path failures, we first saw that the PC was salvation to the problems of the main-frame. Then it was the server. Then it was “packages.” Today it’s “The Cloud.”

The solution, however, is none of these because the solution blocking issues are timeliness, quality, efficiency, manufacturing, and the ability to evolve. These issues can only be addressed by having right IT environment and manufacturing. Everybody doesn’t need a Duesenberg. Model-Ts are more than good enough. Bringing manufacturing to IT is essential for solving the identified IT issues.

Consequently, the ROIs all have to be based on setting out the issue, describing the solution approach, the solution’s engineering, and finally, the calculation of the ROI once adopted. Needless to say, since most CEOs and CIOs are “Show me persons,” you better be able to immediately demonstrate the actual achievement of the ROIs. Otherwise you will just be another IT solution huckster.

The way ahead therefore is to take your IT issue ROIs to the enterprise “C-level” officers who are not only charged with addressing these issues but will be fired if they don’t deliver, and to clearly demonstrate via presentations and that the determined ROIs are achievable. Then and only then will you be given the time to accomplish what we in IT have been “selling” since the middle 1950s.

