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This whitepaper describes how the concept of optimization can be applied to fundraising and explains why we believe applying this concept is the most significant breakthrough for fundraising since the introduction of the capital campaign fundraising model.¹

Optimization allows us to produce fundraising models that have never been available to nonprofit organizations in the past. With this new modeling, decisions can be made that will increase fundraising revenue and decrease costs and ensure that the fundraising at nonprofit organizations is operating at peak performance.

OPTIMIZATION

Optimization is a mathematical approach to finding the best element from a set of available alternatives.² The engineering profession first developed the widespread use of optimization to improve the efficiency of production processes. In the past decade, optimization has evolved from mostly an engineering application to a concept that is now used in many areas of science and business. For example, an advertising executive might use optimization to make decisions about the best or optimum expenditure of advertising dollars.³ She might ask, "What combination of TV, print, on-line, outdoor, and gorilla advertising will yield the highest ROI?" Using optimization she will be able to model many different combinations of advertising expenditures and choose the most productive for her product.

Fundraising executives face a question that is very similar to the question faced by the advertising executive, namely "What is the best combination of fundraising programs for my organization?" A director of development might ask, "Should I invest more in direct mail or in the major gifts program?" And the decision is rarely between just two programs. Like the marketing executive, the

¹ Si Seymour provided one of the first descriptions of the capital campaign fundraising model in his 1966 publication, *Designs for Fundraising*. Since this publication, the capital campaign model has served as the foundation of thousands of successful fundraising initiatives.

² Go to [http://en.wikipedia.org/wiki/Optimization_\(mathematics\)](http://en.wikipedia.org/wiki/Optimization_(mathematics)) for more information about optimization.

³ See the article, *Allocating Marketing Resources*, by Sunil Gupta and Thomas J. Steenburgh published in *Harvard Business Review*, March 12, 2008.

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fundraising executive has to decide between multiple fundraising programs. Adding to the complexity, the type of funds raised from these programs is not the same. For example, direct mail is usually not an effective strategy for raising named endowment funds and major gift programs often have disappointing results if the fundraising priority is unrestricted revenue.

Multiple fundraising programs and priorities are the reality of most nonprofits, which means there are hundreds (really thousands) of combinations for the expenditure of fundraising dollars for each organization. How does a fundraising executive make strategic, reliable choices – choices that will have a dramatic impact on the organization's revenue and its ability to fulfill its mission?

Throughout my 27 years of fundraising, there has never been a way for me to objectively choose how to invest in multiple fundraising programs. My experience and intuition, along with trial and error have been my guides. My heart raced when I was asked by a board member, "How many fundraising models have you considered before recommending this combination of programs?" I knew the answer, "This is my very best guess" was just not good enough. Guessing and hiding behind the adage, "fundraising is more art than science" is really not good enough for the board, for charity rating organizations, for donors, or for fundraising professionals. There has to be a better way.

QUANTITATIVE ANALYSIS AND SIMULATIONS

Most successful fundraisers really do operate more from their hearts than from an accounting spreadsheet. We use our intuition to know when and how to ask, when to push forward and when to wait, and when to listen and when to talk. We are busy with the potential donors and programs we are responsible for, and really do not have the time to step back and do any deep quantitative analysis of our work.

Our team at MWO Philanthropic Advisors has delved into the analytics of fundraising with the goal of improving the efficiency of fundraising for nonprofit organizations while simultaneously focusing the fundraising on the organization's priorities. The result is the development and testing

The software simulates 10,000 possible combinations of various fundraising programs' expenses and resulting revenues ...and chooses the best model.



of two new Excel applications. We based our software on an optimization methodology called the Monte Carlo Method.⁴ This methodology provided the theoretical background for us to develop algorithms that predict the outcome of various combinations of fundraising programs. In fact, the software simulates 10,000 possible combinations of fundraising program expenses and resulting revenues, based on the data provided by a specific nonprofit, and chooses the best model.

The combinations of expenses and revenues are chosen randomly and are never repeated. The software saves a simulation if the results are better, based on the parameters set by the user, than the previous simulation. After 10,000 simulations, the Monte Carlo methodology predicts that all viable scenarios will have been tried and the best model will be found. Our testing collaborates this.

For any nonprofit, our software, which we call the **MWO QuickReview** (for a rapid, current year model) and the **MWO Fundraising Optimizer** (for a more complex three-year rolling forecast), can predict the optimal combination of fundraising expenses and revenues, within the parameters the nonprofit sets.⁵ The parameters include:

- ✓ The total amount the organization wants to raise and what type of revenue it wants to raise (unrestricted, restricted, endowed, etc.)
- ✓ How much the organization wants to spend on fundraising overall (including direct and indirect expenses) and any limitations on expenditures for a specific fundraising program
- ✓ Commitments the fundraising program must fulfill for the organization (ex. promises to raise a certain amount annually to support program staff salaries)

⁴ For more information on Monte Carlo Method, we recommend Wikipedia's description at http://en.wikipedia.org/wiki/Monte_Carlo_method.

⁵ More information about the MWO QuickReview and the MWO Fundraising Optimizer is available online at www.mwopa.com.

*An Optimized
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ensures that the
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- ✓ The desired ratio of expense to revenue (often referred to as the cost per dollar raised). Managing this ratio is especially important as all of the major charity rating organizations are using this as one of the key criteria in rating charities.

OPTIMIZED FUNDRAISING

Unfortunately, many leaders are making crucial business decisions about which fundraising programs to grow or reduce based almost entirely on intuition and personal experience rather than intelligent information. It's not a phenomenon unique to fundraising; IBM's consulting business has an entire group devoted to the optimization challenge because so many business executives are overwhelmed with data and do not have the models they need to make good decisions.⁶

Fundraising is optimized when the following criteria have been met:

- ✓ All costs (direct, overhead, and indirect) have been appropriately assigned to the particular fundraising program
- ✓ Revenue is prioritized so programs raising preferred revenue are favored during the optimization process
- ✓ Enough models have been analyzed to ensure that the combination of fundraising program expenditures is the best combination possible
- ✓ The results are monitored and if expenses or revenues do not match the expected results, the program is re-optimized based on new forecasts.

An Optimized Fundraising program ensures that the planned investment of resources in fundraising is being applied in the very best way possible.

⁶ Go to http://www-935.ibm.com/services/us/gbs/bus/html/bcs_centeroptimization.html for more information about IBM's Business Analytics and Optimization.

Because of advances in mathematical theory and computer processing, the fundraising profession is about to change – for the better.



Once the fundraising program is optimized, it is easy to answer powerful questions such as:

- If we had to decrease our investment in fundraising by 10%, what impact would that have on revenue overall and which fundraising programs should be affected?
- If we invested \$100,000 more in fundraising, how should that money be most effectively invested and how much more revenue would that investment generate?
- How will revenue be affected if we increase or decrease our cost per dollar raised?
- We need to raise \$500,000 more each year. Where should we make our fundraising investment to achieve this?

A BREAKTHROUGH

To our knowledge, fundraising leaders have not been able to answer questions like the ones above with any degree of certainty. These, and many more like them, are simple, straightforward questions about how our fundraising programs perform, but the thousands of variables in and between the programs complicate the analysis so that it is beyond any human mind to model. By applying the concept of optimization and the Monte Carlo Method of random simulations, we can now have the computer model virtually all the possible scenarios for an organization's fundraising. And based on the priorities we determine to be most important, we can now identify the best model.

Optimized Fundraising does not replace the art of fundraising. The letters fundraisers write, the conversations they have, the intuition fundraisers have about donors and their motivations for giving -- all of these remain fundamental secrets of success that distinguish the truly gifted fundraiser. Optimized Fundraising embraces the art and includes it in its analysis. It also embraces the more statistical aspects of fundraising where experienced fundraisers know from past experience what response rate to expect from email and mail appeals, what upgrades to anticipate from the phone and

For more information about Optimized Fundraising and MWO Philanthropic Advisors go to www.mwopa.com or call Mike O'Mahoney, 416.500.7902.



door-to-door programs, and the drop-off rates to anticipate in the monthly donor program. All of these are included in an Optimized Fundraising program. And finally, an Optimized Fundraising program encourages the development of new fundraising programs and innovations to existing programs. Potential new opportunities can be modeled together with existing programs so that new can replace or supplement existing programs – but always, always, the best possible model is clear.

Many fundraising techniques and strategies have been developed over the past century, but never before has the fundraising profession been able to model and choose the best combination of programs for a particular organization, in a particular market, with specific goals and in a specific time dimension. Because of advances in mathematical theory and computer processing, predictive analysis can now inform the fundraising management of the development leaders in our profession.