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Designing an alumni engagement scoring model to measure relationships and raise more money

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Abstract

You have probably heard the saying, 'Engagement leads to giving'. We also know that data should help us make better decisions. So how can we use our internal data to deepen our understanding of alumni engagement and raise more money? The Alumni Relations and Development team at Trinity

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University spent about a year working on a plan for measuring alumni engagement. Why did the Trinity team spend a year developing this? Because a well-planned alumni engagement scoring system can be a reliable tool for identifying and ranking major gift, leadership gift and annual fund prospects. It can also provide a useful tool to measure and track the level of engagement within the alumni base. While studying examples of engagement models, the team conducted an alumni survey and spent a year in active listening mode through a presidential tour to visit alumni chapters in 22 cities. The result from the planning process, survey analysis and active listening is a scoring model that measures alumni engagement based on giving and non-giving support of the university. This paper will share the Trinity experience in developing the model and provide some of the behind-the-scenes discoveries of what really matters.

Keywords

alumni engagement, alumni relations, annual giving, engagement model, fundraising

INTRODUCTION

Institutions of higher education depend on their alumni to be providers of leadership, financial support and ambassadorship to stakeholders, such as local communities, government entities, employers and prospective students.¹ In an environment of increasing competition, accompanied by declining state and federal financial support for higher education,² it is more important than ever for institutions to know how to identify alumni who have a high level of affinity towards their alma mater. Alumni satisfaction with their undergraduate academic experience is a key determinant of affinity towards the institution and a predictor of willingness to support the institution through volunteer efforts and financial donations.³ Traditional survey methods for measuring satisfaction provide aggregate measures that can be correlated with affinity, but most alumni satisfaction surveys do not provide sufficient detailed information to support solicitation strategies. Many higher education institutions are exploring the use of alumni engagement scoring as an insightful tool to measure alumni affinity in a manner that can be used for strategic planning and segmentation.⁴

INTEGRATED DEVELOPMENT TEAMS LINK ENGAGEMENT WITH FUNDRAISING

Many colleges and universities, which have historically maintained an independent alumni relations organisation, are moving towards an integrated development organisation that includes alumni relations, annual giving, major gifts and advancement services as operating entities within the same organisation. There are structural benefits that are associated with integrated development organisations and collaborative insights that result from information sharing between alumni relations and development fundraisers.⁵ The metrics associated with alumni attendance at events, participation in reunions and documented volunteer efforts provide reliable alumni engagement measures that can be correlated with alumni giving.^{6,7} Integrated development teams are well positioned to have access to the most timely and accurate sources of data on alumni engagement and alumni giving, which can be used for the design and implementation of alumni engagement scoring models.

THE SEARCH FOR KNOWLEDGE ON ALUMNI ENGAGEMENT SCORING

Interest in alumni engagement modelling has increased in recent years among higher education institutions. Education sector consulting organisations are offering public workshops and webinars on the topic. In 2015, representatives from Trinity University Alumni Relations and Annual Giving attended a workshop on alumni engagement modelling that was hosted by Academic Impressions. The Trinity attendees returned with a deeper understanding of alumni engagement measurement and several detailed examples of basic models that could be implemented using data that were already available in their institutional database.⁸ Representatives from the Trinity Advancement Services team attended several technical webinars on alumni engagement modelling that addressed the data analytics associated with engagement score modelling.⁹

The Trinity development team also conducted a literature search to find publicly available examples of alumni engagement models that have been implemented by other institutions. The University of Portland Alumni Involvement Rating Scale is a very insightful example of a point-scoring model designed to support alumni relations by focusing on alumni event attendance and volunteerism.¹⁰ An alumni engagement model developed by Marquette University provides an example of an integrated point-scoring model that includes measures for alumni event attendance, volunteerism and giving to the institution.¹¹ An integrated model is the more appropriate tool to support an integrated development organisation, such as the structure at Trinity University.

The integrated model includes the basic components that link alumni relations to fundraising and provides measures that allow you to calculate what Chris Marshall of GG+A describes as return on engagement (ROE).¹²

LISTENING TO THE VOICE OF THE TRINITY ALUMNI COMMUNITY

The information on alumni engagement gained from conferences, webinars and examples from other institutions provided an excellent foundation for the design of an internal alumni engagement model. Nevertheless, the Trinity development team needed to hear from the Trinity alumni community to know what is really important to them. The voice of the Trinity alumni community was heard through the results from an alumni attitude survey¹³ and a 22 city presidential alumni chapter listening tour.¹⁴

The alumni attitude survey was conducted in 2015 by Performance Enhancement Group, using the Alumni Attitude Study[®] instrument. The survey results indicate that Trinity alumni give high ratings on the importance of loyalty to the university and strong agreement to the concept that alumni who donate to Trinity are loyal to the university. Alumni place high importance on donations being used to provide financial support to students and low importance on receiving exclusive benefits in exchange for donations. It is very important to alumni that the alumni association is: (1) working to improve the public perception of the university; (2) strengthening the university as an educational institution; (3) keeping the alumni community informed about the university;

and (4) trying to create opportunities for alumni to mentor both students and young alumni. Alumni want the alumni association to host events and keep the community informed about important things happening at events.

In the autumn of 2015 and spring of 2016, the newly installed Trinity President and Vice President for Alumni Relations and Development jointly embarked on a listening tour to visit 22 Trinity alumni chapters, in cities across the country. The objective of the tour was to engage with as many alumni as possible and to hear about their Trinity experiences, their current perceptions of the university and their thoughts on creating the same supportive experience at Trinity for future students that they benefited from during their enrollment at the university. The success of the listening tour extended well beyond model development. The tour was well received by alumni across the country and set the stage for an environment of future collaboration between the university and alumni, regardless of how remotely located they were from the campus.

DESIGNING THE ALUMNI ENGAGEMENT SCORING MODEL

Representatives from Trinity Alumni Relations, Annual Giving, Major Gifts and Advancement Services formed a team to review and discuss the findings from all of the information sources. The team objective was to create the design for an in-house alumni engagement scoring model. Two of the key questions facing the team were 'What variables should be included in the model?' and 'What type of model should be developed?'

One recommendation that resulted from a Canadian Council for the

Advancement of Education conference suggested that alumni relations teams that want to track engagement should start with the outcome that they want to measure and work backwards to define the data that can be used to track progress towards the goal. For example, studying the engagement patterns of current donors will help to isolate and validate data variables for developing a model to identify similar patterns for new donors.¹⁵ Alumni survey results consistently show that participation in alumni activities is significantly higher among donors compared to non-donors, which validates the use of participation in activities as predictor variables in an engagement model.¹⁶ Research studies that were conducted to develop profiles of supportive alumni identified a range of activities that are linked to alumni donors, such as attendance at athletic events, cultural activities, visits to campus libraries and other visits to campus after graduation. The findings show that supportive alumni choose to continue making the institution an important part of their lives after graduation.^{17,18} Examples from other research findings show that alumni donors are more likely than non-donors to volunteer at their alma mater, as well as at other non-profit organisations. This is a significant finding because it addresses the correlation between giving and overall volunteer efforts at non-profits, specifically as it relates to remotely located alumni who are frequent volunteers at other non-profits, but seldom volunteer at their alma mater. The insightful finding related to alumni who volunteer more frequently at other non-profits is that the only reason that they do not volunteer at their alma mater on a frequent basis is usually because they reside in a community that is too distant to reasonably expect them to be active

volunteers.¹⁹ This is an obvious finding, but an adjustment should be made to model volunteerism for distantly located alumni.

REVIEWING DATA ANALYTIC TECHNIQUES FOR ALUMNI ENGAGEMENT MODELS

There is a broad range of data analytic techniques that can be considered for alumni engagement modelling. Examples in the literature include regression, discriminant analysis, additive multi-attribute models, social network analysis, net promoter scoring and other modelling processes.^{20–24} All the techniques that were reviewed can produce some type of metric result that can be used to distinguish between donors and non-donors.

One of the major determinants in the choice of modelling technique is an understanding of how the organisation plans to use the model results. If the objective is to track the change in overall alumni engagement on a year over year basis, aggregate results from a probability model could be a good choice. If the objective is to produce a valid ranking indicator for each individual alum, however, an additive scoring model might be a better choice. Probability models are usually more parsimonious and develop a score based on the probability that the individual matches a defined profile. An additive model can be used to produce a score is based on a weighted sum of the actual points for each individual.

ENGAGEMENT MODEL VARIABLE SELECTION

The Trinity team identified variables that would fall into one of the following categories: (1) event attendance; (2) volunteer efforts; (3) philanthropy; gifts

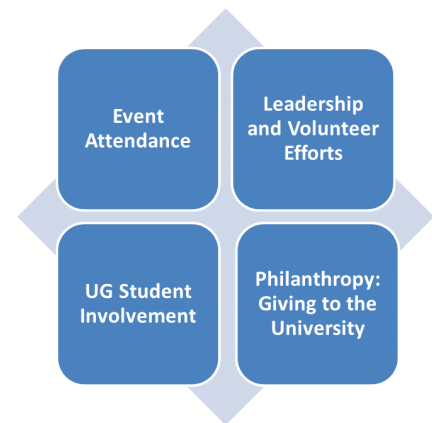


FIGURE 1 Trinity engagement model variable categories

to the university; and (4) undergraduate student involvement (Figure 1). The first three selected variable categories meet the criterion to calculate a basic engagement score.²⁵ Undergraduate student involvement is not included in the structural definition of the basic engagement score, but Trinity added this category after reviewing several research studies that found the level of satisfaction with the undergraduate experience is one of the most reliable factors for predicting alumni giving.^{26–28}

A technical requirement for including a variable in the Trinity model is that the data for the variable must be stored in the university database and the variable must be a required entry item, to avoid the possibility of invalid scoring owing to inconsistent data collection. The team identified several variables that appear to be highly correlated with giving, but they are unreliable measures because there is no process requirement to always store these variables in the database.

ENGAGEMENT MODEL STRUCTURE

The engagement model structure includes two components that separate

the giving variables from the non-giving variables (Figure 2 and Table 1). The giving variables are related to traditional RFM measures, which are Recency of giving, Frequency of giving and Monetary amount of gifts. The non-giving variables include measures that represent actions such as event attendance,

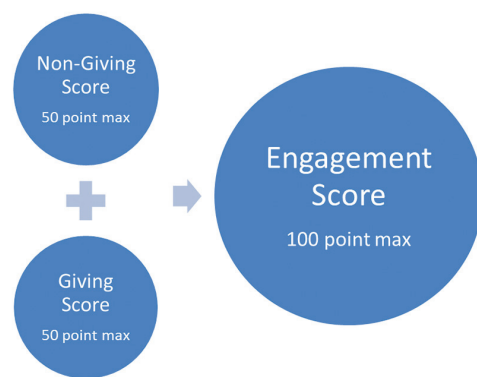


FIGURE 2 Trinity engagement model structure

volunteerism and undergraduate involvement with the university. The non-giving component can have a maximum score of 50 points and the giving component can also have a maximum score of 50 points, for a total possible maximum score of 100 points.

The engagement score is calculated by using an additive multi-attribute value model (Figure 3).^{29,30} Model structures of this type are also referred to as point scoring models. The functional form of the model allows for a weighted value for each variable and an overall point score based on the sum of the weighted variable values.

$$V(x) = \sum_{i=1}^n w_i v_i(x_i)$$

FIGURE 3 Additive multi-attribute value model functional form

TABLE 1 Trinity engagement model variables

<i>Engagement Model Variables</i>	
<i>Non-Giving Component Variables</i>	<i>Giving Component Variables</i>
Event Attendance Last 5 Years	Donor
Board of Trustees	Gave in Last 5 Years
Alumni Association Board	Increased Giving in Last 5 Years
Local Alumni Chapter Board	Number of Years Giving
Reunion Volunteer	Number of Consecutive Years Giving
Reunion Attendance	Giving Level in Last 5 Years
Board of Visitors	Bequest Intentions on File
Departmental Advisory Board	
Greek Alumni Advisory Council	
Career Network	
TU Network of Entrepreneurs	
Alumni Award Recipient	
Varsity Athletics	
Greek Membership	
Email Address on File	
Social Media Subscriber	
Alum Married to Alum	

ENGAGEMENT SCORE CALCULATION AND REPORTING PROCESS

The engagement scoring process uses a web based tool that extracts data from a daily snap shot of the university database (Figure 4). The web-based tool is programmed to perform all of the logic and calculations to assign a score for each individual alum. The scores are calculated dynamically based on information that is constantly being updated in the database. Reports and data files that include the scores can be scheduled for periodic release, as needed. The accuracy

of scoring is dependent on the timeliness and quality of the data.

MODEL VALIDATION

Several methods were used to examine and validate the results of the modeling process. Quadrant analysis was used to conduct an aggregate examination of the relationship between the giving component scores and the non-giving component scores (Figure 5). The giving and non-giving components are highly correlated ($\rho = 0.441$). The giving component is the largest contributor to the total engagement score.

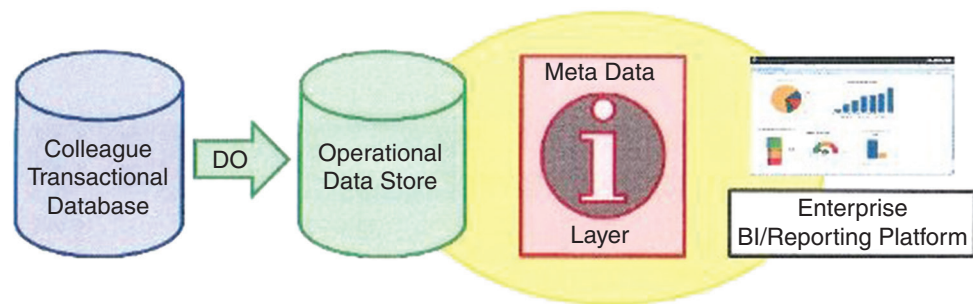


FIGURE 4 Web-based engagement score calculation and reporting process

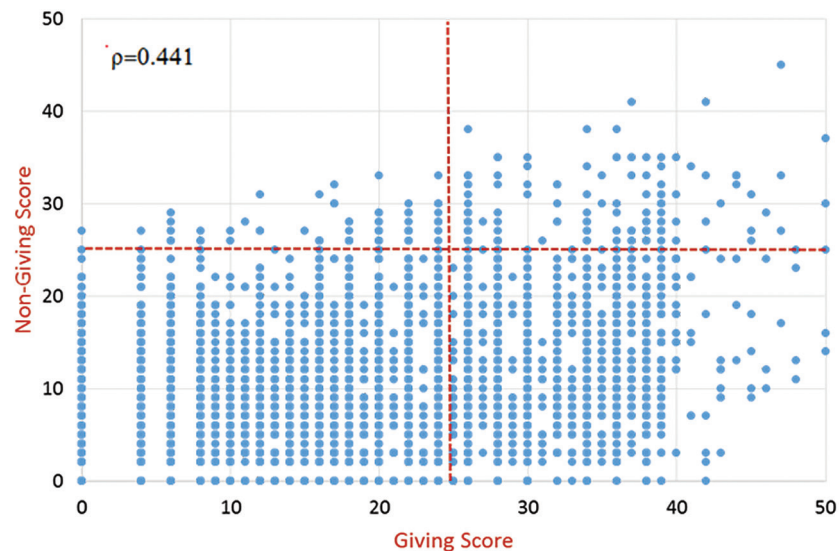


FIGURE 5 Giving and non-giving score quadrant map

The engagement scores for Trinity Alumni Association Board members were used as a benchmark to compare against scores for the total alumni base (Figures 6 and 7). As expected, the average scores for the board members were significantly higher than scores for the total base. It was not surprising to see that the majority of alumni scored low on giving and non-giving, but it

was encouraging to see that the majority of active donors scored high on giving, regardless of how low they scored on non-giving components. A closer examination showed that many of the high givers with low non-giver scores have high sub-scores on the variables related to undergraduate involvement. This finding is supported by the results from earlier reported research^{31,32} and provided

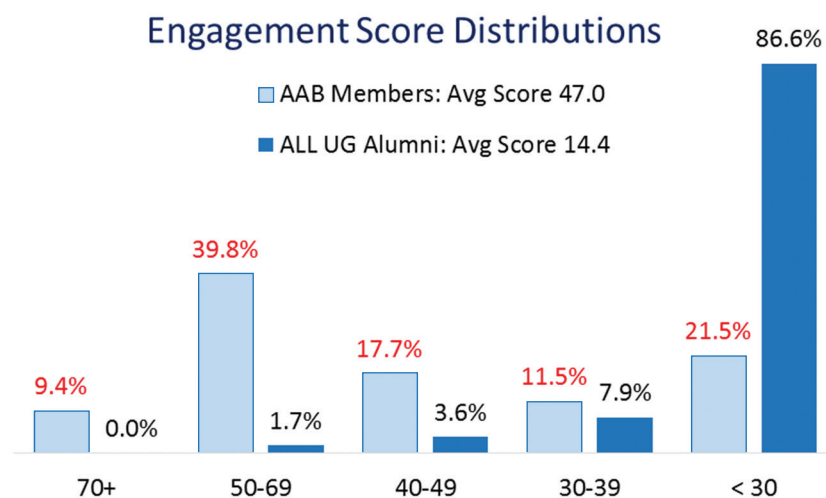


FIGURE 6 Engagement score distributions

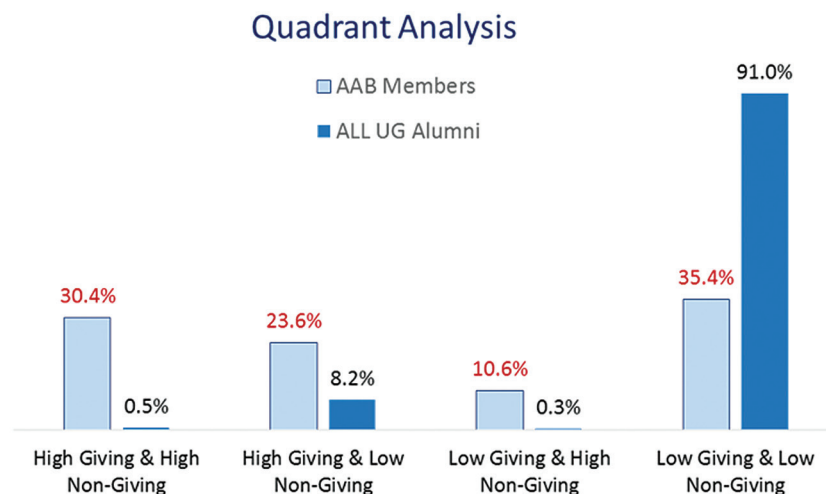


FIGURE 7 Quadrant analysis of Alumni Association Board members, all alumni

direction for including both alumni and undergraduate related activity in the model.

SEGMENTATION BASED ON ENGAGEMENT MODEL RESULTS

Alumni engagement scores are calculated for each individual, and the overall results can be aggregated to provide segmentation mappings that support planning for annual fund and capital campaigns.³³ The engagement score is a one dimensional ranking measure, but the additive components of the score can be used to create engagement segments based on a multidimensional perspective of the alumni base.³⁴

The k-means cluster analysis algorithm is a tool that can be used to organise a large population into strategic groups of individuals who are different across the groups, but similar within each group, based on a defined set of characteristics. Several examples are available on the use of k-means analysis for segmentation with RFM data.^{35,36} RFM data are based only on gift history, so it is limited to giving data. K-means analysis using engagement data for segmentation extends the classification criteria beyond RFM by adding non-giving data for event attendance and volunteer efforts.

A k-means cluster analysis model based on engagement data for a random sample of approximately 25,000 Trinity alumni was used to create a five-segment model. The model results were calculated using the giving and non-giving components of the engagement score. The results of the segmentation were added to a comparison table along with other indicators of affinity to the institution, such as average measures on giving history and event attendance.

The comparison shows that the alumni segments created from the model provide a good separation of the alumni base on key measures that that can be used in strategic planning for solicitation and recruitment for volunteerism (Table 2).

The segments are labelled from A to E: where A, very high engagement; B, high engagement; C, average engagement; D, low engagement; and E, very low or no engagement.

ENGAGEMENT MODEL USE BY THE TRINITY ADVANCEMENT TEAM

The Trinity advancement organisation is actively using their engagement model for several purposes. The information from the model is used to support efforts by the Alumni Relations, Annual Giving and Major Gifts departments at Trinity.

Alumni relations has an ongoing need to recruit leadership volunteers for reunions and alumni events in locations across the country. Listings are produced for selection of alumni to contact and recruit for as candidates for the leadership roles. This is not a difficult task in communities that are close to the university because the alumni relations staff members are personally aware of local alumni who actively participate in alumni events. The recruitment task is more difficult for alumni events that are in other parts of the country. Alumni listings that include an engagement score for each alum provide an additional control feature that allows the team to sort a class list by engagement. This has made it much easier to rank and identify high probability volunteer candidates from a list of 500 to 600 class members.

Annual giving teams are charged with conducting multiple annual fund

TABLE 2 Engagement segmentation table

<i>Alumni Engagement Segmentation</i>					
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
Engagement Score	52.0	32.4	31.9	18.9	6.3
Giving Score	34.0	26.6	16.9	14.2	2.4
Nongiving Score	18.0	5.8	15.0	4.7	3.9
Events (last 5 years)	13.0	2.4	7.1	1.8	2.3
Gift Count (years of giving)	28.0	19.2	7.4	7.1	1.2
Lifetime Giving (mean)	\$110,433	\$4,216	\$1,309	\$924	\$187
Lifetime Giving (median)	\$5,767	\$1,560	\$292	\$215	\$0
Gifts Last 5 Years (mean)	\$38,431	\$2,295	\$146	\$71	\$0
Gifts Last 5 Years (median)	\$2,012	\$425	\$75	\$20	\$0
Gift Capacity (number of prospects)					
\$10MM+	14	8	4	1	8
\$5MM-\$10MM	5	4	0	3	5
\$1MM-\$5MM	30	16	2	7	28
\$500K-\$1MM	5	19	4	12	40
\$250K-\$500K	97	135	38	130	318
\$100K-\$250K	180	434	138	521	1276
\$50K-\$100K	295	857	405	1294	3685
\$25K-\$50K	169	627	426	1306	4477
Under\$10K	32	142	299	649	2280
\$10K-\$25K	53	197	284	754	2637
No Rating	1	10	68	280	675
<i>n=</i>	<i>881</i>	<i>2449</i>	<i>1668</i>	<i>4957</i>	<i>15429</i>

campaigns during each fiscal year. Alumni listings are used to identify and contact alumni for solicitation. An effective segmentation model can provide information that allows annual giving teams to improve the efficiency of the solicitation process by rank ordering the prospect pool based on the probability of success during each solicitation contact.³⁷ The Trinity engagement scoring model provides information that can be used to segment the alumni pool, by identifying alumni who are the highest probability solicitation contacts and also identifying alumni who may not be worthy of contacting if campaign

resources are limited to a specific number of contacts.

An examination of recent annual fund campaign results revealed that average engagement scores for donors were significantly higher than average engagement scores for non-donors (Figure 8). The findings from the annual fund campaigns support the use of engagement scoring as a strategic tool for resource allocation, such as ranking prospects for contact based on their individual probability of response to an annual fund solicitation.

Trinity major gift officer portfolio listings include a calculated engagement

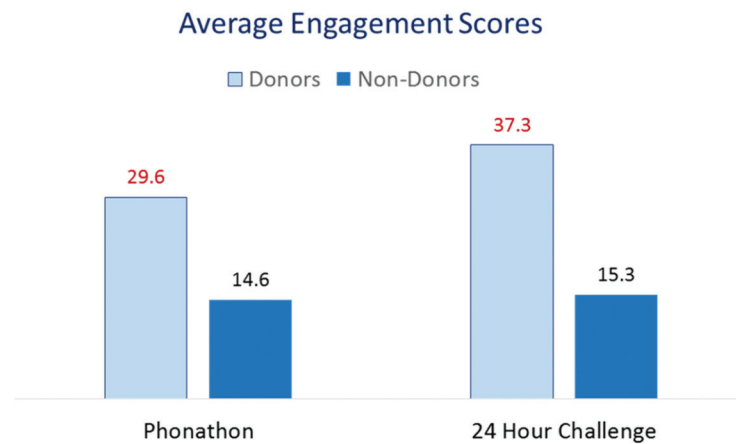


FIGURE 8 Recent annual fund campaign results

score for each individual prospect. Most prospects at the same gift capacity level are fairly comparable on ownership of assets, but they may be quite different in terms of philanthropic intent towards the institution. The engagement score provides an additional measure that ranks a pool of equally qualified high capacity prospects by their affinity towards the institution. The numeric scores from engagement modelling also provide metric values that can be used as probability weighting factors to adjust gift estimates for strategic planning purposes, such as campaign pyramid development.

CONCLUSION

Institutions of higher education are increasingly reaching out to their alumni for leadership and support, as state and federal support for higher education continues to decline. Alumni engagement scoring can provide an analytic tool for measuring aggregate changes in alumni engagement and defining a segmentation structure for the alumni base. The metric scores from engagement models can also be used to rank

individual alumni based on their probability of response to solicitations and requests for volunteerism. A well-designed engagement scoring model can provide valuable information to support the collaborative efforts of alumni relations and the philanthropic objectives of advancement fundraisers.

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