

**DataKind**

**#GIINGTUESDAY™**

**Insight Report 2017**



# Table of Contents



03	Executive Summary	14-16	Insight Into Nonprofit Organizations' Revenue Streams & Their Missions
04-07	Trends in Philanthropic Giving	16-17	#GivingTuesday Project Partners
08-10	Reaching Donors Through Effective Storytelling	17	Thank You to Our Community
11-13	A Look at Engagement Around the #GivingTuesday Hashtag		

# Data

# EXECUTIVE SUMMARY

## Philanthropic Giving Is What Fuels Social Change. How Can We Increase It?

Launched by 92nd Street Y in 2012 and housed in its Belfer Center for Innovation & Social Impact, #GivingTuesday is a global movement that inspires people around the world to take collaborative action to improve their local communities and contribute in countless ways to the causes they believe in. The movement reaches millions of people with campaigns and activities in all 50 states and nearly 100 countries on the Tuesday after Thanksgiving and throughout the year. On #GivingTuesday 2016, \$180+ million was raised online in the United States alone to benefit a tremendously broad range of causes, and much more was given in volunteer hours, non-monetary donations, and acts of kindness.



While #GivingTuesday's reach has grown significantly over the past five years, philanthropic giving in the U.S. still has not risen above 2% GDP. If we, as a philanthropic community, could increase it by even 1%, the impact would be massive — almost \$4 billion of additional funding for causes addressing tough social issues, from poverty to health care to education and more.

In March 2017, DataKind and the #GivingTuesday team held a weekend

DataDive at Facebook's New York office, supported by the Bill & Melinda Gates Foundation, to better understand #GivingTuesday's impact on philanthropic giving. For example, is #GivingTuesday indeed inspiring new donations or simply shifting the timing of holiday giving?

**Since its inception in 2012, there have been sizeable and increasing donation spikes each year during #GivingTuesday, which data projections show will continue.**

Very fitting for a weekend focused on philanthropic giving, data philanthropy, or the donation of private datasets, fueled the analyses. Over 100 volunteer data scientists, computer engineers and technologists dug into datasets from 36 corporate and nonprofit data providers that have never before made available together. This unprecedented collaboration demonstrates the power of data philanthropy, as the combination of data enabled the teams to uncover new insights on the impact of #GivingTuesday, identify storytelling and social media best practices for effective donation campaigns and better understand the nonprofit sector's revenue streams overall.

The findings outlined in this report show the impact that machine learning and predictive technology can have in boosting the #GivingTuesday movement, as well as the greater nonprofit sector. As DataDives are meant to offer insight and learnings, unearth new questions and identify other areas worthy of deeper exploration and analysis, we hope this will inspire conversation of how we might increase philanthropic giving and unleash more resources to fuel social change.

# TRENDS IN PHILANTHROPIC GIVING

Since its launch in 2012, the #GivingTuesday campaign has continued to steadily gain momentum and is now a powerful and widespread global movement. It is reported that \$180+ million in donations was generated online within the 24-hour period of #GivingTuesday in 2016. However, to date, this figure has been measured by a rough estimate of the net sum of online donations for the day, as there is no centralized source for tracking all national philanthropic transactions. Actual online figures, as well as other offline donations of goods, time and more on #GivingTuesday, are likely much higher. In order to truly measure the correlation between #GivingTuesday and increased philanthropic giving, it is essential to know the impact #GivingTuesday has on charitable donations as a whole and whether it is shifting giving to a particular time of year, changing the distribution of donations among nonprofits, or actually increasing the amount of individual giving taking place year over year.

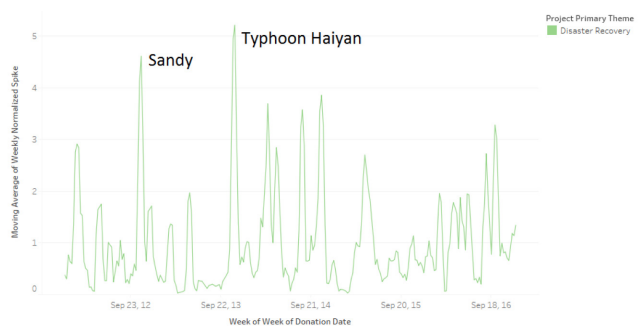
**The DataDive validated that #GivingTuesday provides a net lift to charitable giving.**

The project team analyzed up to 10 years of financial transaction data from multiple payment processors, in an effort to answer these questions and gain further insights into philanthropic giving, donor behavior and nonprofit organizations. Numerous datasets containing information about donors and organizations, along with themes and trends related to #GivingTuesday, were collected and used. From the available data, the team was able to look at

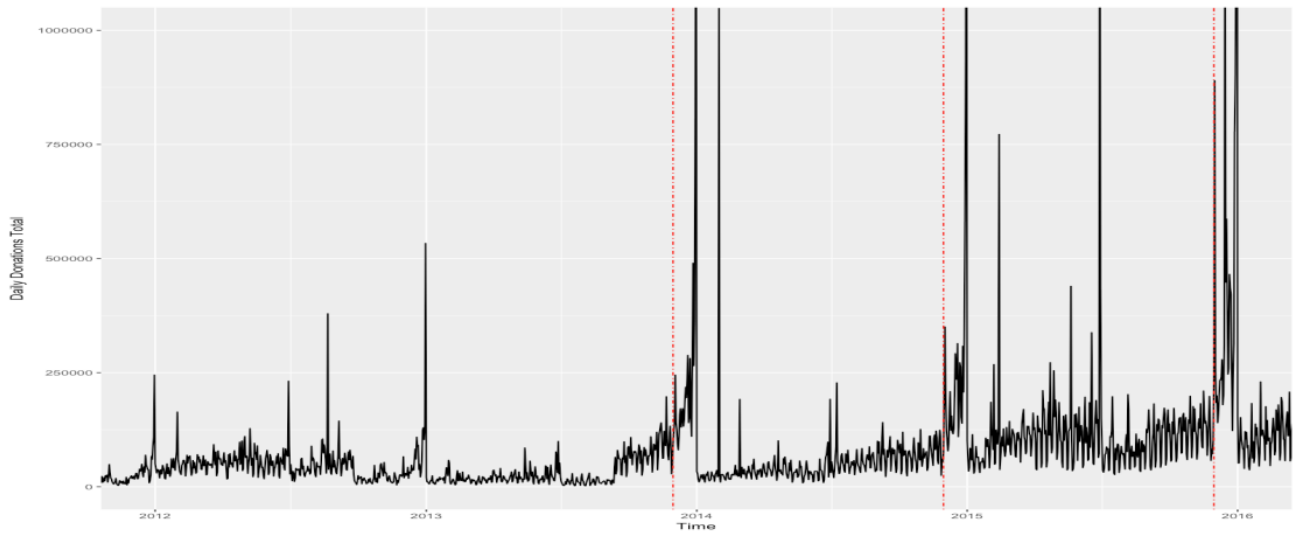
“loyalists” (repeat givers) as well as one-time donors, organizational giving trends, the density and frequency of charitable giving over periods of time, and shifts in giving. The team was also able to analyze the impact of #GivingTuesday on charitable donation behavior in the past as well as forecast future trends in giving, which could empower nonprofits to maximize their #GivingTuesday fundraising efforts.

## #GivingTuesday Disrupts Philanthropic Giving, in a Positive Way

In order to understand whether #GivingTuesday is simply shifting the timing of donations that would have occurred regardless of the campaign or if it is actually contributing to an increase in the overall amount of charitable donations, the team performed a Time Series analysis, which examines a certain behavior over time. First, a test for the presence of structural breakpoints (a shift in the mean) in the time series was conducted. These types of structural breaks in a time series are typically seen in spikes around relief efforts surrounding major natural disasters, such as Hurricane Sandy and Typhoon Haiyan.

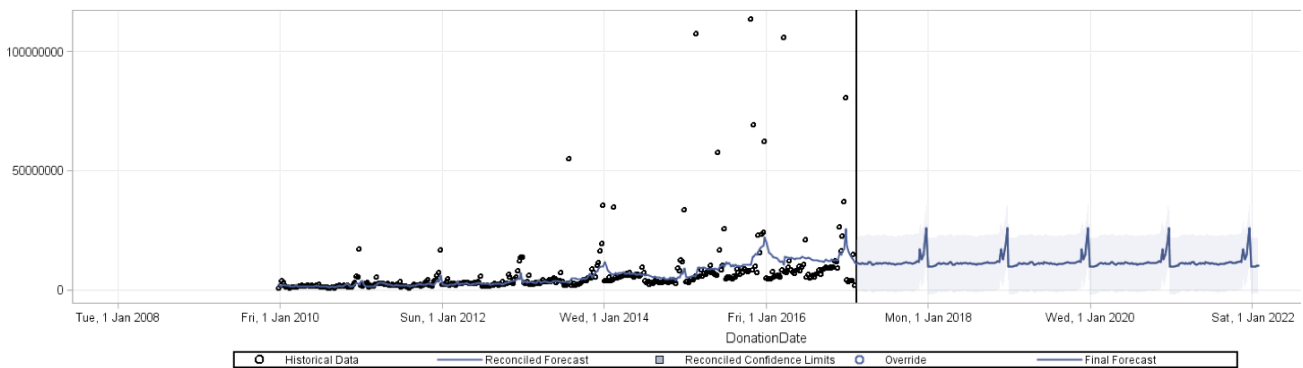


In the Time Series analysis performed for #GivingTuesday, statistically significant breakpoints were found around #GivingTuesday for 2013, 2014 and 2015, showing that the campaign had a notable impact on donations during these years. It should be noted that, while these shifts could in part be attributed to the start of the holiday season (late — November to early December), since its inception in 2012, there has been a sizeable and continued increase in these breakpoints, year over year, during the #GivingTuesday period.



The above graph shows significant spikes in charitable donations around #GivingTuesday for 2013, 2014 and 2015.

A forecast model was developed as well, using daily giving data from 2008 to 2016 to assess the expected trend in future giving. The forecast model showed a continued expectation of spikes in giving during November of each year.



The above model shows continued spikes in charitable giving in the month of November for the coming years.

## #GivingTuesday Helping Grow Charitable Giving

From the datasets used, the team examined the giving behavior of individual donors. For example, in a sample, only 5% of donors regularly gave before #GivingTuesday was established, but after its inception, not only did the average amount of their individual donations increase from \$160 to \$284, their giving frequency increased as well. This indicates that #GivingTuesday may be positively changing giving behaviors (e.g., recurring gifts, increased donations) beyond just motivating donors to give on the day itself.

**A number of compelling indicators were uncovered that bear further examination.**

In addition, it was found that as much as 63% of people who gave on any #GivingTuesday only made donations on one or more #GivingTuesdays and not at other times. This finding is an indication of an area where more investigation is needed into the acquisition, retention and loyalty behaviors of #GivingTuesday donors.

Total Donors	Gave on #GivingTuesday & Other Times of Year	Gave on One or More #GivingTuesday Only
351,939	16,201	10,171

The above chart shows a sample of unique donors since the inception of #GivingTuesday. Donors are broken into two categories — those who gave on #GivingTuesday and donated other times throughout the year, and those who gave only on #GivingTuesday.

In a sample of long-term loyal donors those who gave consistently before 2012 are more likely to give and give more on average on #GivingTuesday than at other times of the year. It was revealed that 7.5% of these donors gave on #GivingTuesday, whereas 6.2% gave on December 31, which in the past has traditionally been the biggest day of the year for donations. This is an indication that #GivingTuesday is highly motivating for engaged donors as well.

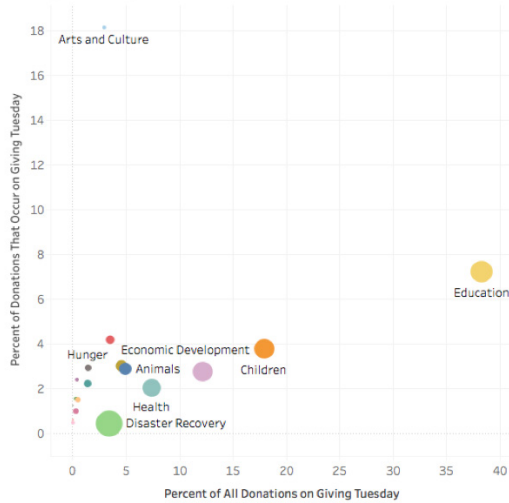
	Giving Tuesday	Dec 31st	Last Week of Dec
All Donors	3.0%	1.4%	4.2%
All Donors Active Since 2012	4.5%	2.1%	6.5%
Loyalists	7.5%	6.2%	16.1%

The above shows various groups of donors and compares giving across key periods of the year.

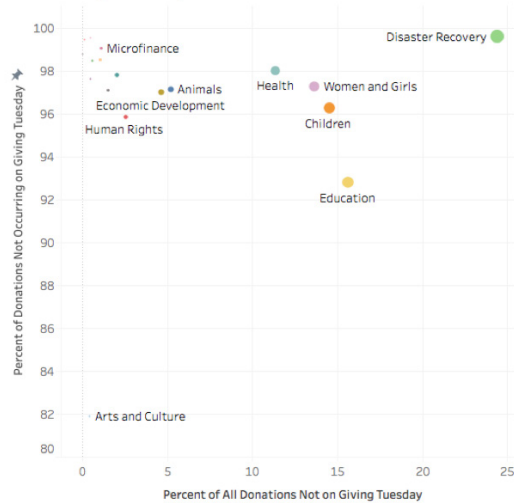
## #GivingTuesday Impact on Different Causes

In looking at the data on online donations made outside of #GivingTuesday, the team found that issue areas like disaster recovery, women and girls, children, and education typically received more online donations than others. Indeed, donations toward education made up the majority of contributions on #GivingTuesday, receiving nearly 40% of all donations made on this day. However, interestingly, arts and cultural organizations saw the greatest increase in donations, in some cases receiving nearly 20% of their annual donations from this single day.

Giving Tuesday



Non-Giving Tuesday

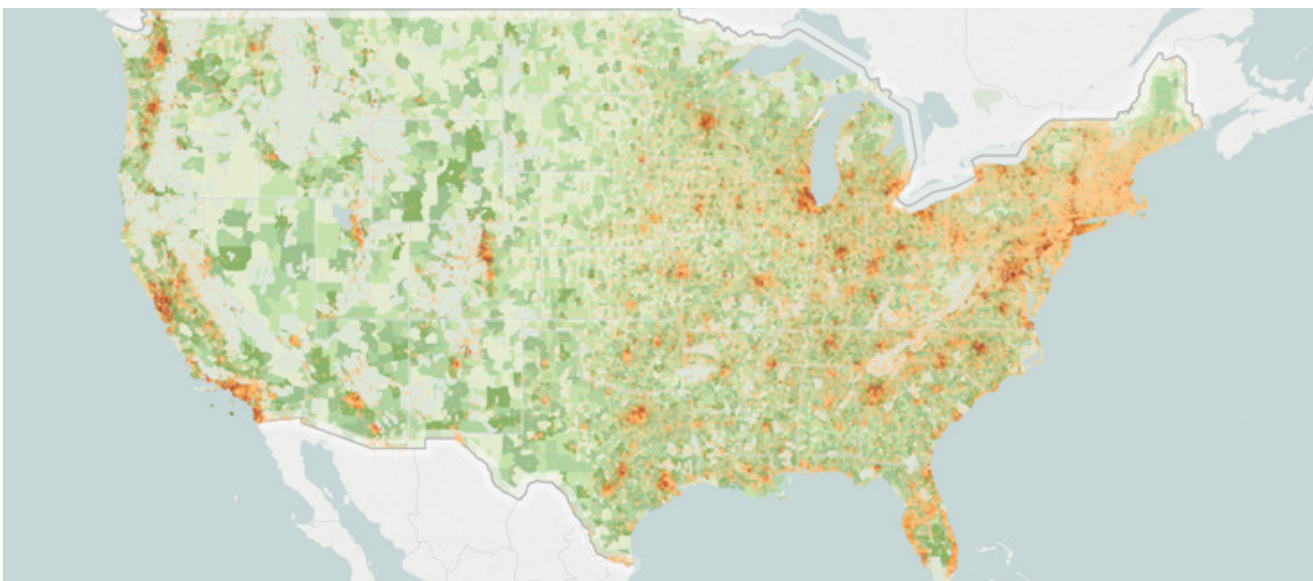


The graph on the left shows the percentage of all donations received by an organization on #GivingTuesday and what percent of the organization’s annual donations this comprises. The graph on the right reflects the same percentages for donations not made on #GivingTuesday. The circles in each graph indicate the dollar value of the donations, however the two graphs are not on the same scale.

## A Glimpse at Giving Across America

Spatial analysis of the data was done to determine the density of where donations occur across the U.S. While the high concentration of donations in coastal areas is not surprising given the higher density in population of these regions, it is interesting to see that the same level of donation density is not found in more populated cities within the central U.S.

The same analysis was performed to see where organizations that received donations from #GivingTuesday were located. From the data, #GivingTuesday was found to be most successful along the east coast.



The above map shows U.S. population and the density of where donations occur across the U.S. (Green: population density, Orange: donation density).

# REACHING DONORS THROUGH EFFECTIVE STORYTELLING

The 2015 and 2016 #MyGivingStory campaigns were nationwide social media storytelling contests that fostered a public discussion about the reasons people give. With support from the Bill & Melinda Gates Foundation, #GivingTuesday asked individuals to reflect upon why they give to a certain nonprofit organization and then share these personal stories (along with an optional photo or video) via a contest entry form. All the submissions were shared in a public gallery, and entrants were encouraged to share their stories more widely to garner votes.

Using data captured from the 2015 and 2016 #MyGivingStory contest entries as well as participants' social media channels, the project team sought to find out what makes a successful story, what motivates people to give and what types of individuals and organizations tend to have the most impactful #MyGivingStory. Through analysis of the text, images and videos included in story submissions along with entrants' social data, the team was able to identify several elements that contribute to more effective and successful storytelling. The insights gained can help nonprofits within the #GivingTuesday community, their supporters, and the greater social sector improve engagement with potential donors in the future and inspire more individuals to donate.

## Insight into the #MyGivingStory Community

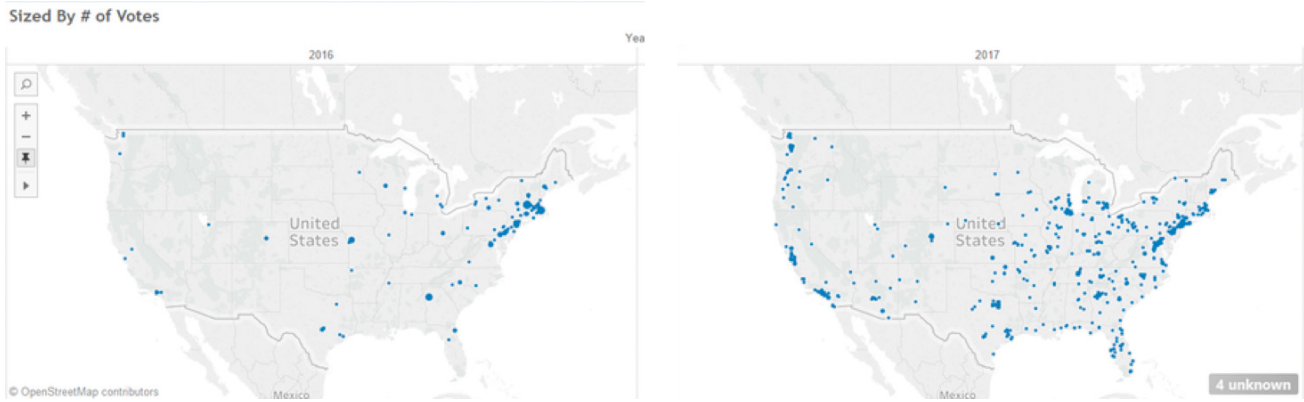
Analysis of both the 2015 and 2016 #MyGivingStory submissions showed that

... the majority of storytellers for each year were women, and largely those between the ages of 35 and 55.

Additional analysis found that storytellers wrote more about their local nonprofit organizations in 2015 than in 2016. It was noticed that in 2016, storytellers tended to branch out to support different types and sizes of organizations. Also, although the number of stories submitted did not increase between 2015 and 2016, there was a wider geographic distribution of storytellers represented in 2016.



The above graphs display the breakdown of #MyGivingStory submissions, by gender and age.

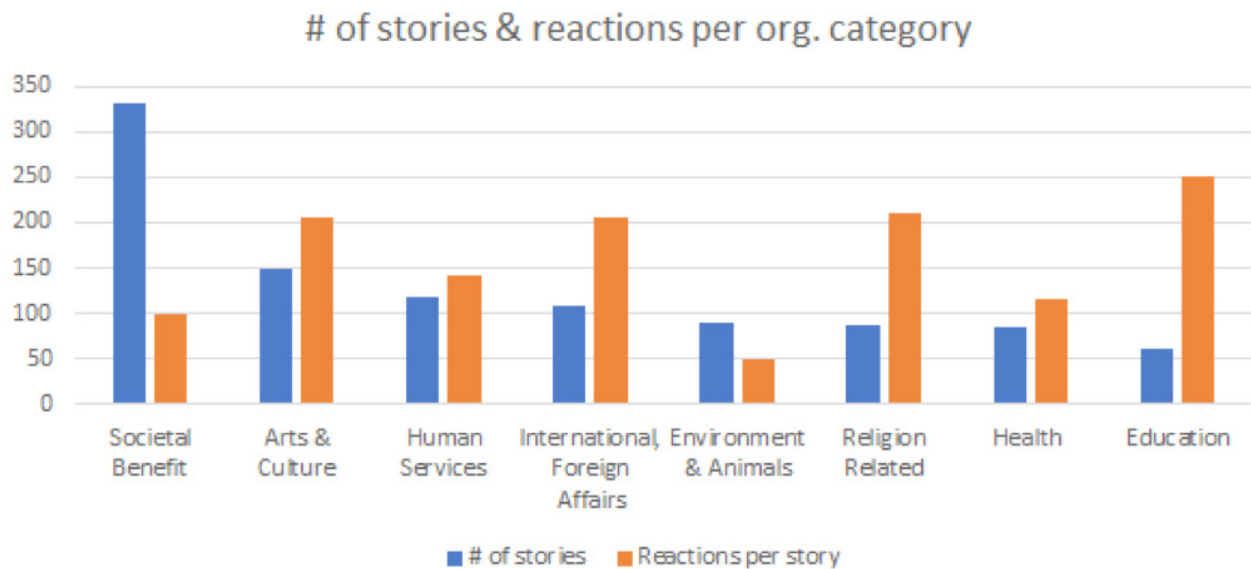


The above illustrates the location of #MyGivingStory storytellers and the number of the votes received by each submission.

## Featured Organizations in #MyGivingStory Submissions

The social network size of the organization featured in the story does indeed have an impact on the story’s success and social engagement. While emotional story drivers are found to be key, stories about organizations that have larger social followings tend to receive greater likes, comments and shares. Social reach of an organization even had a bigger impact than the size of its revenue, which did not show any correlation with engagement.

Interestingly, while most stories submitted concerned civic organizations (i.e.: civil rights and liberties, community improvement, philanthropy/public benefit, voter education/registration), stories about educational and religious organizations attracted the most social engagement.



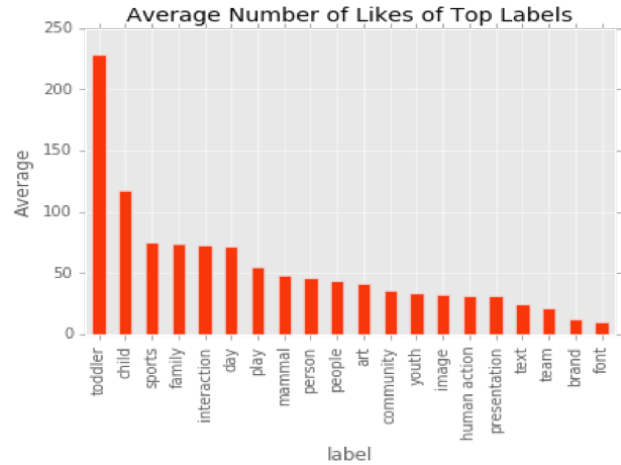
The above graph shows the types of organizations the #MyGivingStory submissions include as well as the number of stories within these categories. It also shows the level of engagement the stories in each category received.

## Characteristics of a Successful Story

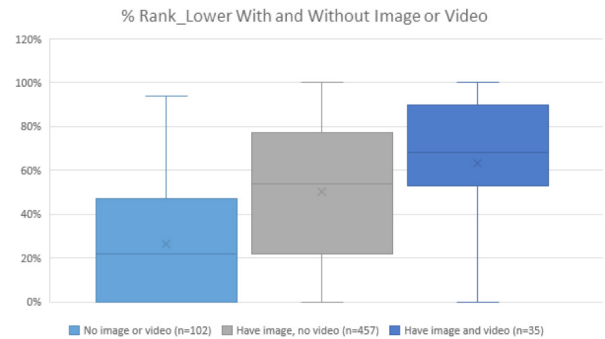
Through analysis of the text, images and videos included in story submissions; the structure and story arc of entries; and participants' social data, the team was able to identify the following elements that contribute to more effective and successful storytelling as well as social engagement:

1. A polished, thoughtful and complete narrative results in higher engagement and overall story success.
2. Photos shared with #MyGivingStory entries were found to have a positive impact on engagement. More specifically, results showed that photos of young children garnered the most attention, while images featuring any type of organizational branding or logos did not work well and received extremely low engagement.
3. Adding an image and/or video substantially improved engagement.
4. The optimal story length for engagement for this type of Facebook contest was found to be between 500 and 600 words.
5. The stories that were most popular and produced the highest levels of engagement were those that followed or were similar in structure to the five-part dramatic arc employed in Greek and Shakespearean drama – which contains five key components: the exposition (setting the stage), rising action, climax, falling action, and resolution.

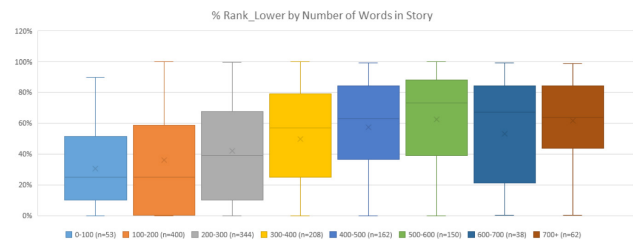
The findings on structure, content and style of storytelling, as well as story length, can be a useful guide for nonprofits and their supporters to engage audiences about their missions.



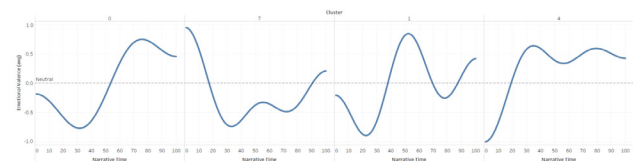
The chart represents the number of likes attributed to stories containing a photo and the types of images associated with these stories.



The above displays the percentage ranking of stories with and without images or video content.



The above displays the percentage ranking of stories in relation to the number of words used in a story.

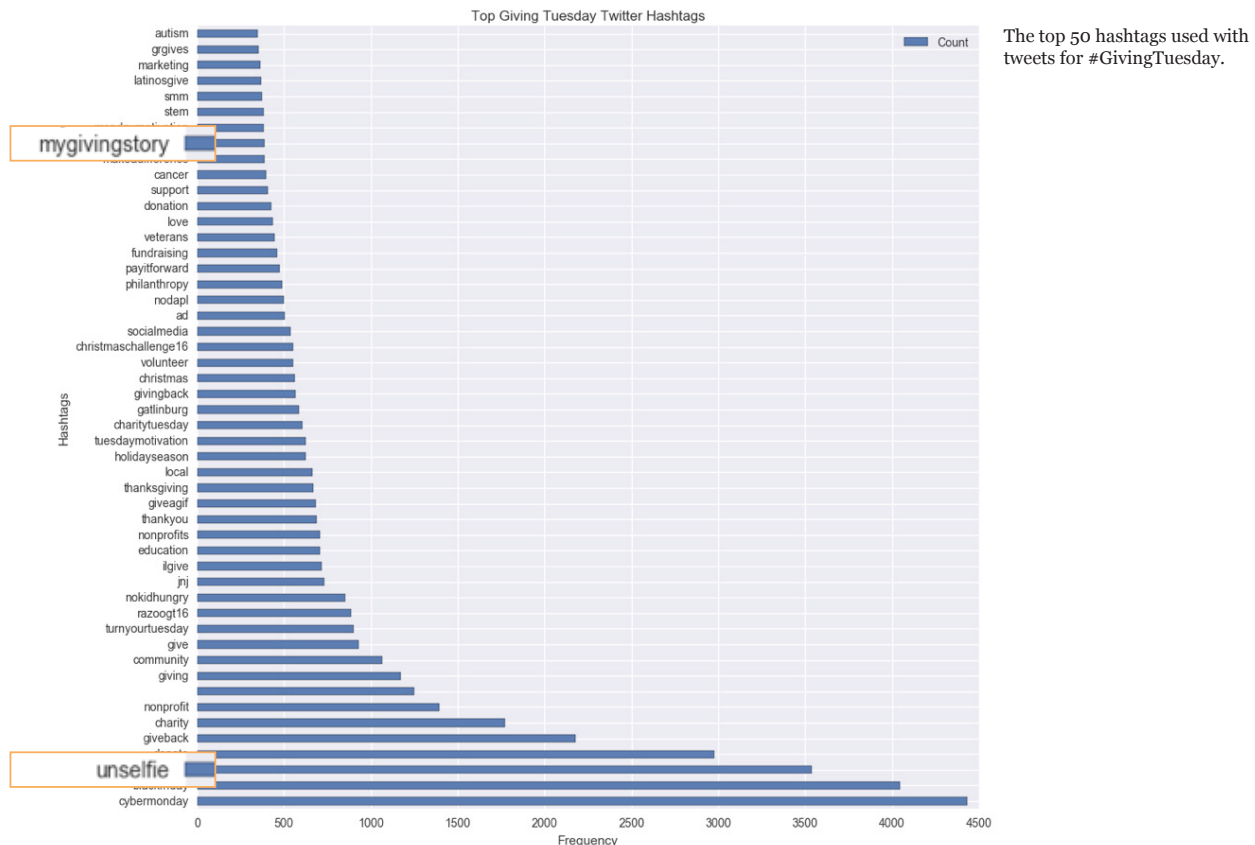


Each of the above charts shows the variance in positive and negative sentiment of an individual #MyGivingStory.

# A LOOK AT ENGAGEMENT AROUND THE #GIVINGTUESDAY HASHTAG

#GivingTuesday is a globally recognized hashtag and one that is associated with very high use and engagement. In an effort to understand how the #GivingTuesday name and hashtag could be used to inspire a higher level of engagement and increase the value of #GivingTuesday's efforts toward growing philanthropic giving, use of the #GivingTuesday Twitter hashtag on #GivingTuesday 2016 was analyzed to understand the ways in which stories on social media propagate and motivate potential donors within networks. Particular attention was paid to the use of other hashtags within a tweet, the individual or organization initiating the tweet, and the tweet interactions (i.e.: likes, retweets). Tagged tweets from 2016's #GivingTuesday were also analyzed to identify the geographical locations of individuals or groups tweeting about #GivingTuesday and to determine the characteristics of those using the social media platform successfully, so that other nonprofits can learn from this and apply these same elements to their own social media fundraising efforts.

Analyzing more than 600,000 tweets from #GivingTuesday, the team identified the top 50 hashtags that were tweeted together with #GivingTuesday. The top 10 hashtags associated with #GivingTuesday included unselfie, donate, nonprofit, community and giving, as well as CyberMonday and BlackFriday.



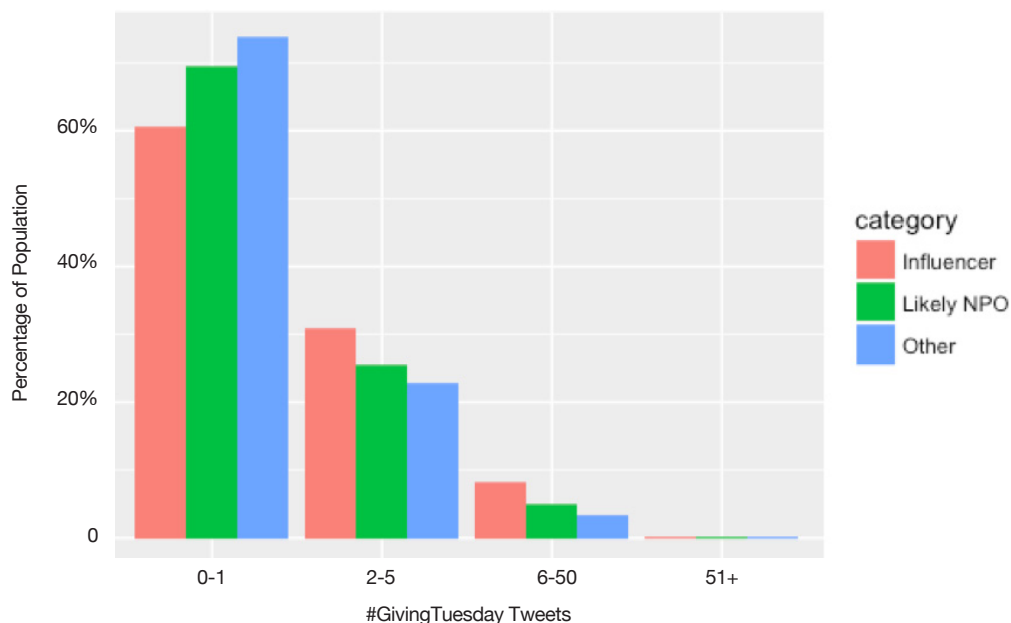
The team also found that using certain words when tweeting tended to produce more social engagement. In addition to “RT” and “GivingTuesday”,

**... terms such as “donate”, “help”, and “giving”, were most successful in gaining retweets.**

Word	Number of Tweets	Number of Retweets	Score
RT	89,222	556,247	6.234
Givingtuesday	83,237	496,454	5.964
Donate	9,469	73,176	7.728
Help	14,948	103,398	6.917
Today	11,167	737,92	6.787
Giving	7,044	454,04	6.446
Amp	11,008	68,376	6.302
Please	5,754	33,407	5.806
Support	14,266	78,866	5.528
Give	11,519	62,681	5.442

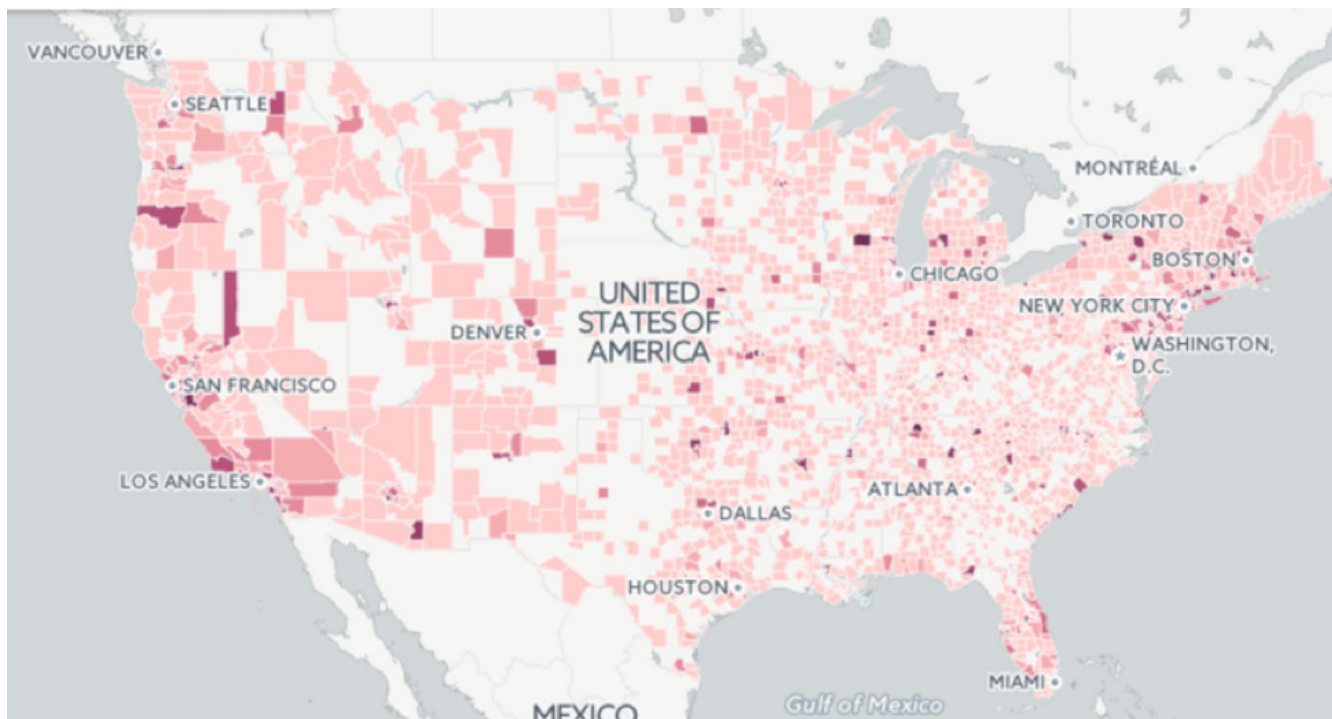
The success of specific words in gaining retweets can be seen in the table above. The score is the ratio of retweets to tweets.

An analysis of the source of those tweeting showed influencers (more than 5,000 followers) were found to make up only about 17% of the unique users tweeting with the #GivingTuesday hashtag, however, they tweet far more frequently.



The above graph shows the types of individuals and groups tweeting about #GivingTuesday and the levels of activity associated with each.

The team also created a map of all geo-tagged tweets from the 2016 #GivingTuesday. Interestingly, it shows some surprising pockets of high Twitter activity surrounding #GivingTuesday in less populated areas of the country as well as other regions, primarily in the Midwest, with zero Twitter engagement on #GivingTuesday.



A map of #GivingTuesday tweets based on geo-enabled tweets. The locations in red represent the level of Twitter engagement, while areas in white indicate no engagement.



# INSIGHT INTO NONPROFIT ORGANIZATIONS' REVENUE STREAMS & THEIR MISSIONS

Many of the organizations who participate in #GivingTuesday are tax-exempt and therefore required to file an IRS 990 Tax Form. Used by government agencies to prevent abuse of tax-exempt statuses, the 990 form contains rich detailed information about an organization, including its financial sources, expenditures, mission and programs. In June 2016, the IRS released Form 990 filings since 2011, making the data open to the public.

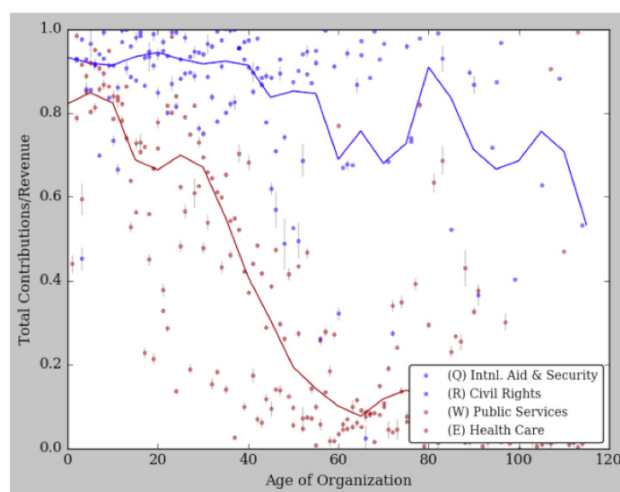
Accessing this now-open data, the team explored the most recent 2016 tax filings of multiple nonprofit organizations to gain insights about their:

- **Financial situations** - what are the primary sources of income and revenue for different organizations and how do they spend their available resources
- **Missions & program descriptions** - what do these organizations do and what are the types of programs they provide

Currently most 990 form data is only available in individual xml files — data formats that are not easily comprehensible by the general public. The team first had to conduct a deep dive of all the data and then transform and organize the information for further exploration. From this, the team was able to create a blueprint for building a database that would make this information more user-friendly for the public. The work completed

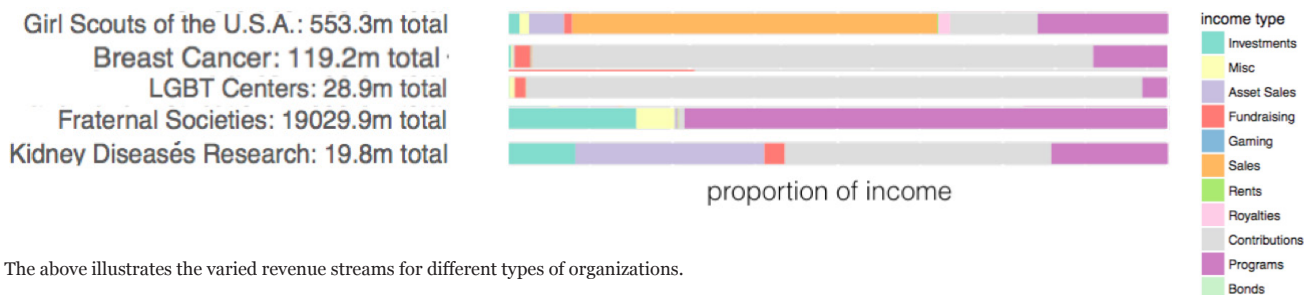
here, with the creation of this blueprint and a sample database, alone is of great value to the social sector, as it can help make information that was previously difficult to access and interpret more available for future analysis.

Analyzing the data, it was found that organizations in areas such as international aid and civil rights, in which the donor is helping another beneficiary, are always reliant on donations and grants, regardless of age of the organization. However, public services and health care, in which the donor may be the beneficiary, depend largely on government funding and are initially reliant on donations but, over time, shift to other sources of revenue, such as investments, sales and program service revenue.



The above illustrates the relationship between age of an organization and the percentage of revenue from donations by case type.

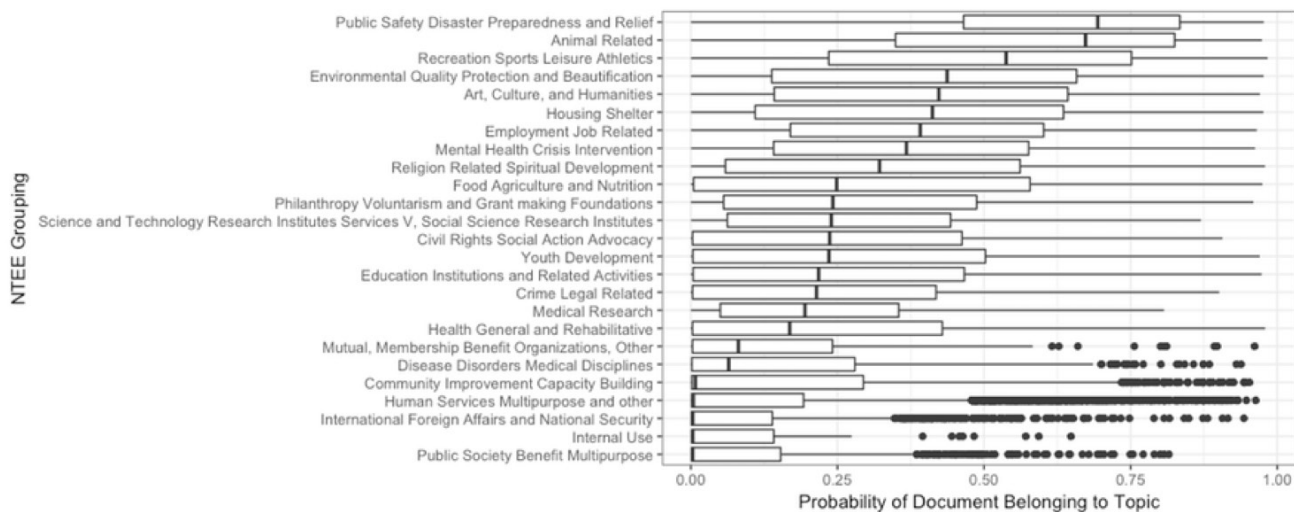
The team focused in on a few organizations and their funding sources as examples to illustrate the varied types of organizational revenue structures that were observed in the data. Unsurprisingly, it was shown that the Girl Scouts rely heavily on sales for income, while other organizations that support causes such as breast cancer and LGBT depend on contributions. Interestingly, it was found that fraternal societies generate a sizeable amount of their income through investments, while other organizations, such as kidney diseases research, derive their income largely from assets.



The above illustrates the varied revenue streams for different types of organizations.

Applying topic-modeling methods, it was found that in most cases, NTEE1 codes — the accepted means for identifying and categorizing 501(c)3 organizations — could be automatically applied. With roughly 30% of nonprofits missing either the EIN<sup>2</sup> or NTEE<sup>1</sup> code on their tax forms, this technique could prove to be very useful. From the plot below, we can see that the words and phrases in certain NTEE<sup>1</sup> classes that were more descriptive (e.g.: public safety, disaster preparedness and relief) have a higher probability of matching well with the mission statement text, while other categories which are seemingly more general (e.g.: internal use) did not match up as well.

In addition to some exploratory analysis on expenses and revenue, the team looked into the mission statements, as well as the project and activity descriptions of the organizations, which allowed them to validate the NTEE classifications – finding that the categories indeed make sense.



Above is a sampling of the NTEE categories and the level of accuracy the classifications had when matched to an organization’s mission statement.

Using these techniques, the team was also able to automatically map NTEE codes to the United Nations' Sustainable Development Goals (SDGs). These seventeen goals and related targets and indicators are used by organizations, funders and governments to assign funding and measure impact. This work has broad application for the social sector: organizations can find other stakeholders working toward common objectives, funders can find

nonprofits working in areas they are interested in supporting, and governments and other stakeholders can compare impact data to the flow of funding and application of interventions. All of this can now be done without manual intervention, research or reporting – including those organizations working toward specific SDG objectives who have not reported their work using the SDG taxonomy.



# #GIVINGTUESDAY DATADIVE PARTNERS

## #GIVINGTUESDAY™

Launched by 92nd Street Y in 2012 and housed in its Belfer Center for Innovation & Social Impact, #GivingTuesday is a global movement that inspires people around the world to take collaborative action to improve their local communities and contribute in countless ways to the causes they believe in. The movement reaches millions of people with campaigns and activities in all 50 states and nearly 100 countries on the Tuesday after Thanksgiving and throughout the year. On #GivingTuesday 2016, \$180+ million was raised online in the United States alone to benefit a tremendously broad range of causes, and much more was given in volunteer hours, non-monetary donations, and acts of kindness.

### Host Sponsor



When people mobilize around the causes they care about, it builds a safe and supportive community. Facebook's charitable giving tools make it easy for its community to raise money for the causes they care about directly on Facebook. More than 150 million people around the world are connected to a cause through Facebook and collectively they act as volunteers, donors and activists from raising money for nonprofits to raising awareness about disaster relief efforts. Facebook's charitable giving tools have made it easy for people to raise millions of dollars for both nonprofits and people in need directly on Facebook.

### Education Sponsor



Metis accelerates the careers of data scientists by providing full-time immersive bootcamps, evening part-time professional development courses, online resources, and corporate programs. On the Saturday preceding the DataDive, DataKind partnered with Metis to provide a free Natural Language Processing workshop for volunteers who'd like to hone their skills in advance of the event.



# THANK YOU TO THE COMMUNITY

None of DataKind's work is possible without the dedication and talent of our volunteers. We are grateful to the more than 100 volunteers who gave their time and talent to uncover all the insights highlighted in this report. In particular, a special shout-out to the Data Ambassadors who not only helped scope the work, but also led their volunteer teams to victory.

We also want to thank the many data providers that generously donated data for the event. With this being the first time some of these organizations ever shared their data, this unprecedented collaboration allowed the volunteer teams to answer entirely new questions about philanthropic giving and conduct analyses not possible before.

---

## Data Ambassadors

---

**Brian d'Alessandro**  
**Caitlin Augustin**  
**Karry Lu**  
**Harlan Harris**

**Rachael Rho**  
**Tim Rich**  
**Friederike Schüür**  
**Nil Simsek**

**Susan Sun**  
**FNU Tushar**



# DATA PROVIDERS



**Abila**  
**Agora for Good**  
**Benevity**  
**Blackbaud**  
**Bloomerang**  
**Classy**  
**Crowdrise**  
**Deposit a Gift**  
**Donately**  
**DonationXchange**  
**DonorPerfect**  
**DonorsChoose**  
**Frontstream**  
**Fundly**  
**Fundraise.com**  
**Fundraising Effectiveness Project**  
**Fundrazr**  
**GiveGab**

**Global Impact**  
**GlobalGiving**  
**GoFundMe**  
**Goodworld**  
**Growth in Giving Initiative**  
**HIPGive**  
**idonate**  
**iModules**  
**Indiegogo**  
**Kindful**  
**Little Green Light**  
**Movember Foundation**  
**Neon**  
**Network for Good**  
**PayPal**  
**Razoo**  
**Salsa**  
**WePay**



**DataKind**

**#GIINGTUESDAY™**

**Insight Report 2017**