

# Contemporary Practices in Nonprofit Technology Use and Management: An Exploratory Data Analysis

## Humphrey School Capstone Report

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## Keywords

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## Abstract

This capstone paper presents an exploratory analysis of nonprofit technology adoption and management, leveraging NTEN's Tech Accelerate self-assessment dataset and a structured literature review. The study examines technology readiness across five domains, leadership, infrastructure, engagement, organizational culture, and emerging technologies, using data from over 1,200 nonprofit organizations. Key findings reveal that participants who complete multiple assessments tend to show improving technology risk levels, and cohort organizations in NTEN's Nonprofit Tech Readiness program have outperformed peers since 2024. Self-assessment scores declined across all questions post-2021, for unclear reasons that could warrant further inquiry. The analysis identifies organizational characteristics, including staff size, budget, technology investment, and founding decade, as strong predictors of technology risk, with smaller and newer organizations facing greater challenges. Recommendations include further investigating indicators that the Tech Accelerate instrument can help organizations improve technology management practices, expanding data collection, enriching organizational metadata, evolving the assessment instrument, and leveraging the curated literature catalog to inform future NTEN programming. The literature review contextualizes findings using academic and practitioner sources related to questions with the highest and lowest risk flag percentages in each category. The paper concludes that nonprofit technology adoption requires integrated approaches that align digital tools with mission.

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## Introduction

Nonprofit organizations increasingly rely on digital tools and infrastructure to fulfill their missions, yet technology adoption and strategic integration remain uneven across the sector. For example, only 25% of nonprofits have a defined technology strategy, and only 52% report having the resources needed to execute their digital strategy (TechSoup, 2021). NTEN's Tech Accelerate instrument was developed to address these gaps by enabling organizations to assess their technology capacity across four core domains: leadership, infrastructure, engagement, and organizational culture. The instrument is administered online, for free and allows participating organizations to view their areas of technology risk. While the tool has generated a growing repository of self-reported data from more than a thousand organizations, NTEN's capacity constraints have limited its ability to fully analyze this data for broader trends, gaps, or opportunities.

This capstone project was initiated following a recommendation from NTEN CEO Amy Sample-Ward to Jason Samuels, a member of our student team, suggesting that students explore the Tech Accelerate dataset for actionable insights. The primary objective is exploratory: to identify meaningful patterns in technology readiness, highlight areas of concern or success, and surface stories that can inform future training, advisement, or investment strategies. By applying data analysis and integrating relevant literature, the project aims to uncover systemic challenges and identify leverage points that can enhance NTEN's impact across the nonprofit sector.

The main opportunity lies in translating self-assessment data into a strategic map that identifies where participants are excelling, where they are struggling, and where targeted interventions could yield the greatest benefit. This is especially timely given the dataset's continued expansion and the growing urgency of digital transformation in the nonprofit landscape. The outcomes of this project include analytic insights, summarized literature, and visualizations that NTEN can incorporate into its programming, advisory services, and storytelling.

**This document is organized into two parts:**

- **Part 1** presents our exploration of the Tech Accelerate database. We describe our data transformation and analysis methods, note the limitations and challenges encountered, and share key findings through visualizations. This section concludes with actionable recommendations to support NTEN's mission of empowering nonprofit organizations through technology.
- **Part 2** is a literature review focused on nonprofit technology management practices and concepts. Given the breadth of literature in nonprofit and public administration management, we structure the review around the domains measured by the Tech Accelerate instrument. To prioritize focus areas, we draw on our data analysis to highlight the highest- and lowest-performing dimensions. This approach allows us to investigate both the sector's key opportunities for improvement and the strengths that nonprofit organizations can leverage.

## Part 1: Exploration of the Tech Accelerate Database

### Methodology

#### Data Transformation and Sampling

We began by preparing the Tech Accelerate dataset using Power Query in Microsoft Power BI Desktop, a tool well-suited for reshaping and cleaning large, complex datasets. Survey responses were flattened, nested structures were standardized, and new variables were coded to support analysis. Key transformations included:

- **Data cleaning:** We addressed inconsistencies in the dataset by removing answer values of 0 (skipped) and -1 (not applicable). Approximately 130 records with duplicate answer ID and snapshot ID combinations were deduplicated. Outlier values in organizational metrics—such as staff size and budget—were removed. A single date variable was calculated to disambiguate the start and submission dates to address limitations for comparing data by either of the latter variables on their own.
- **Group identification:** Organizations were categorized into groups based on budget size, tech budget size, tech budget as a percentage of overall budget, staff size, tech staff size, and founding decade.
- **Data flattening:** We pivoted a table of over 130,000 answer values by snapshot ID (each snapshot is a single assessment containing a series of answer values). The

result was a flattened dataset of over 3,700 snapshot rows with answer values pivoted into 97 distinct columns for each question ID.

- **Flag variable creation:** A central component of our analysis involved the creation of "warning" and "risk" flag variables to assess overall organizational vulnerability. These flags were calculated using NTEN's pre-designated threshold values for each survey item. Responses exceeding the threshold were assigned a value of 0, indicating no concern. Responses at or below the threshold were flagged as 1, signaling either moderate or high concern. This binary classification enabled us to systematically identify areas of potential risk and aggregate these signals to evaluate broader patterns of technological capacity and readiness across organizations.
- **Data sampling:** Several filters were applied to refine the dataset:
  - Removed legacy snapshots from assessments submitted prior to the 2017 expansion of the Tech Accelerate questionnaire.
  - Removed incomplete snapshots with fewer than ten responses.
  - Retained only the most recent snapshot per organization when multiple existed.
- **Exception reports:** Generated for each filter to ensure transparency.
- **Alternate samples:** Created to support different analytical views:
  - Oldest snapshot per organization (instead of most recent).

- TA Group member organizations (TA Group refers to organizations participating in NTEN's Nonprofit Tech Readiness Program).
- Organizations with multiple snapshots (all, most recent only, oldest only).
- Each TA Group analyzed individually.
- **Derived metrics:** We generated tables aggregating risk flag rates by year, organization type, geographic location, and each grouping variable (budget size, staff size, tech investment levels, founding decade).

### Quantitative methods

The core analysis combined descriptive and inferential statistical methods:

- **Flag rate analysis:** We calculated the percentage of risk flags per question and per organization across multiple groupings to identify systemic vulnerabilities. While our analysis emphasized risk flags, warning flags are also present in the data and represent a future exploration opportunity.
- **Trendline analysis:** We examined score trends over time and across organizational characteristics to identify temporal patterns.
- **Bivariate and multivariate comparisons:** Using cross-tabulations and segmentation analysis, we explored score distributions by budget, staff size, geographic region, and respondent role.

- **Gap analysis:** We compared scores across organizational maturity bands to highlight disparities and areas of unmet need.
- **Pairwise correlation analysis:** We analyzed associations between key variables (e.g., tech staff satisfaction versus engagement in strategic planning) to identify potential predictive relationships.
- **Descriptive statistics:** We computed mean, median and percentile scores across Tech Accelerate's core domains: Leadership, Infrastructure, Engagement, Organization, and Emerging Technology.

### Limitations

Several limitations inherent in the Tech Accelerate dataset are important to consider when interpreting the findings.

The most significant limitation is the subjective nature of self-reported assessment data. All Tech Accelerate scores reflect the internal (emic) perspective of an organizational stakeholder. In some cases, different individuals completed different assessments for the same organization. In rare cases, particularly when assessments were started and completed years apart, a single assessment may reflect input from multiple people.

Assessment of completion rates and timing present additional limitations, especially when comparing data over time. More than 23 percent (297 of 1,283) of snapshots in the sample lack a recorded submission date. Of the 986 assessments with submission dates, over 7 percent (72) were completed in a year following their start date, including 20

assessments with submission delays ranging from three to seven years. For analysis purposes, a calculated date field was used: the submission date where available (77 percent of cases), or the start date otherwise.

Organizational metadata, such as staff and budget size, pose another constraint. These values are recorded at the organization level, not the assessment level, and may not accurately reflect conditions at the time of each assessment. Budget and staffing levels can shift over time due to external events such as the COVID-19 pandemic. In cases where assessments span multiple years—or where organizations submitted more than one assessment—static metadata might not represent the organization’s current state at the time of the assessment.

An intentional limitation was introduced during sampling: for organizations with multiple assessments, only the most recent snapshot was retained. 265 snapshots were excluded so that the sample contains one assessment per organization (1,283 total). This approach supports clean comparisons by organization type, size, and other groupings, but it limits the completeness of longitudinal analysis by omitting historical responses. This limitation was addressed by using alternate samples in lieu of the main data sample, such as with our comparison of organizations’ oldest to most recent assessments.

Sample size and cohort composition also shape the analysis. The dataset contains 1,283 snapshots submitted between October 23, 2017, and July 22, 2025, with annual submissions from 2019 to 2024 ranging from 97 to 246. NTEN’s Nonprofit Tech Readiness program provides cohorts of nonprofit staff with opportunities to strengthen their

technology leadership and planning skills. For several years, the program has used Tech Accelerate as a core tool, and organizations in these cohorts are referred to as “TA Group” organizations. From 2021 to 2024, TA Group organizations represented 26–50 percent of annual submissions and account for 27 percent of the total dataset (344 of 1,283) since 2017.

The average risk flag rate across all snapshots is 47.7 percent. Among seven TA Group cohorts with 21 to 145 snapshots each, average risk rates range from 37 percent to 53 percent. Because cohort submissions make up a large share of the dataset, they can skew overall metrics—especially in longitudinal comparisons. For example, in 2025 to date, overall risk levels are running 2 percent above the historical average. However, among non-cohort assessments, the rate is 5.5 percent above average, while cohort assessments are 10 percent below average.

In summary, the Tech Accelerate dataset reflects correlations derived from self-assessment responses. It highlights patterns of organizational readiness and risk but does not reveal underlying causal mechanisms. The findings align with known challenges in nonprofit technology management and point to areas where vulnerabilities are concentrated. While some trends suggest hypotheses worth exploring in future research, this project remains focused on identifying patterns through exploratory data analysis and contextualizing high- and low-risk areas using insights from literature.

## Results

Our analysis of the *Tech Accelerate* dataset uncovered a range of insights that shed light on sector-wide trends. Notable findings include:

- **Repeat Participants Show Measurable Improvement:** Among 181 organizations with multiple assessments, 61% reduced their overall risk flag rate, with average risk levels falling from 44.2% to 40.8%. The share of organizations in the lowest-risk quartile increased by 50%, suggesting that repeated engagement may support improvement over time.
- **TA Group Organizations Outperform Peers Since 2024:** Beginning in 2024, organizations affiliated with NTEN's Nonprofit Tech Readiness cohorts (TA Groups) reported lower average risk levels than non-group peers. While pre-2024 data showed similar distributions, cohort scores have since diverged in a positive direction.
- **Post-2021 Sector-Wide Decline in Scores:** Assessment scores dropped sharply between 2021 and 2022, with a significant decline in average scores and a corresponding increase in risk flag rates. This shift appears linked to both external disruptions (e.g., the COVID-19 pandemic) and internal changes, including the introduction of more challenging assessment items.
- **Enduring Patterns Confirmed from 2020 Baseline:** Many core trends observed in NTEN's 2020 report remain consistent. High-performing areas such as remote access, file storage, and donation platforms continue to score well, while long-

standing gaps—particularly in data governance, accessibility, and technology evaluation—persist.

- **Organizational Characteristics Predict Risk Levels:** Factors such as staff size, budget, technology investment, and founding decade show clear associations with risk rates. Smaller and newer organizations consistently report higher levels of risk, especially in infrastructure and organizational systems. The presence of dedicated technology staff has the strongest overall correlation with reduced risk. Each of these are explored in the sections below with data visualizations and tables to illustrate results.

#### Repeat Participants Show Measurable Improvement

To analyze risk level change among the 181 organizations in our sample with multiple Tech Accelerate assessments, we isolated and compared two alternate samples - Organizations with multiple snapshots most recent only vs. oldest only.

This analysis found that 61% of organizations showed improvement, with average risk flag rates declining from 44.2% on initial assessments to 40.8% on the most recent. The distribution also shifted meaningfully: the proportion of organizations in the lowest-risk quartile increased by half (see Figure 1). These trends suggest that organizations engaging with the platform multiple times tend to show measurable progress.

Figure 1: Risk Flag Percentage by Quartile distribution; Organizations with Multiple Assessments, Oldest snapshot vs. Most Recent Snapshot

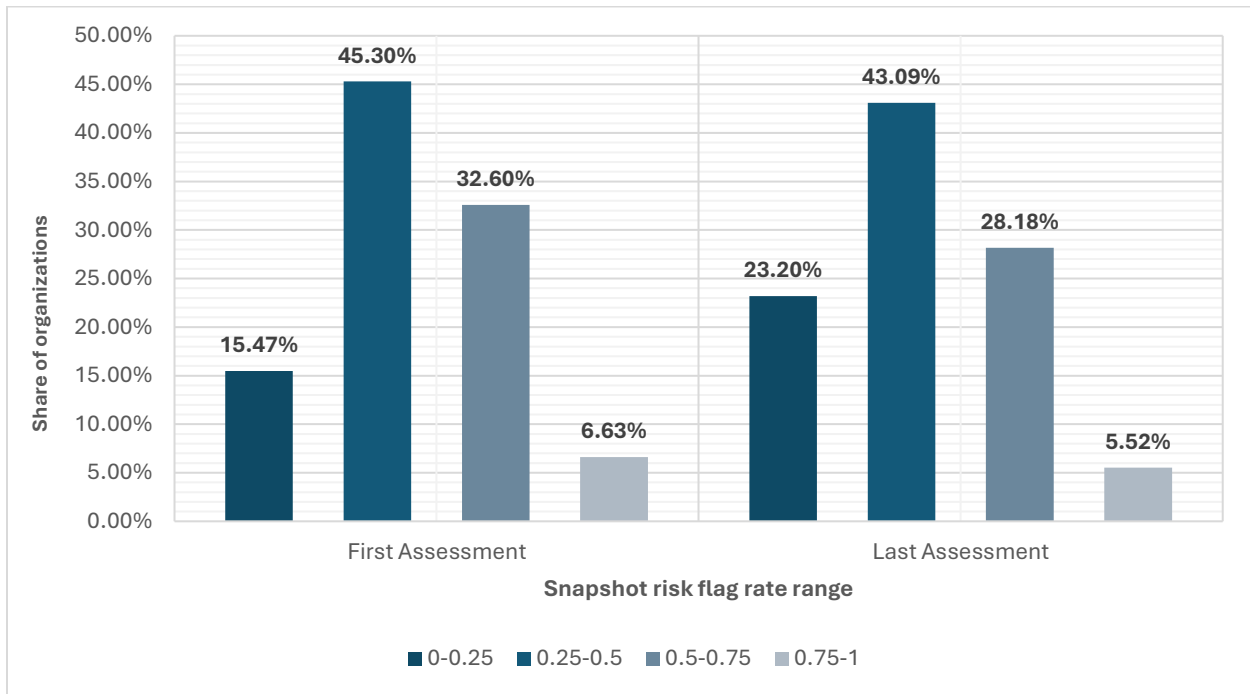
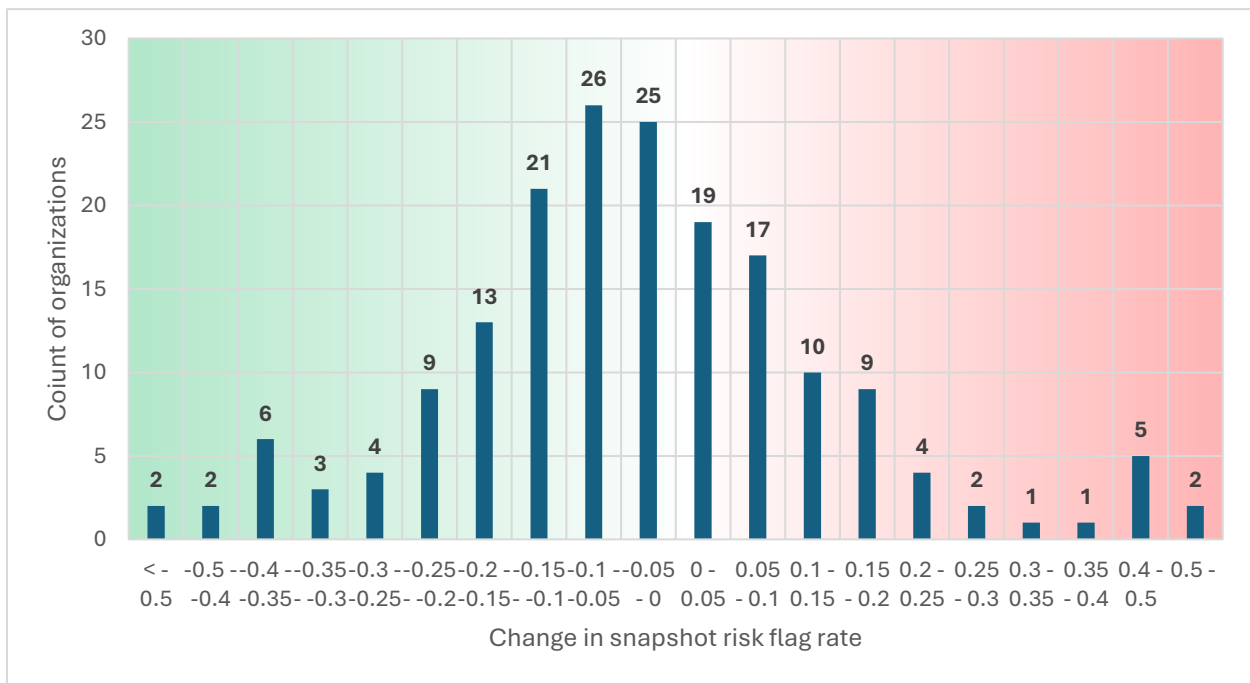


Figure 2: Percentage Change in Risk Flags based on Completion Recency



This supports the hypothesis that repeated engagement with Tech Accelerate may contribute to organizational learning and improvement—a concept echoed in the literature, which frames measurement as not only a means of tracking outcomes but also a driver of reflective practice and adaptive capacity (Searle, 2025).

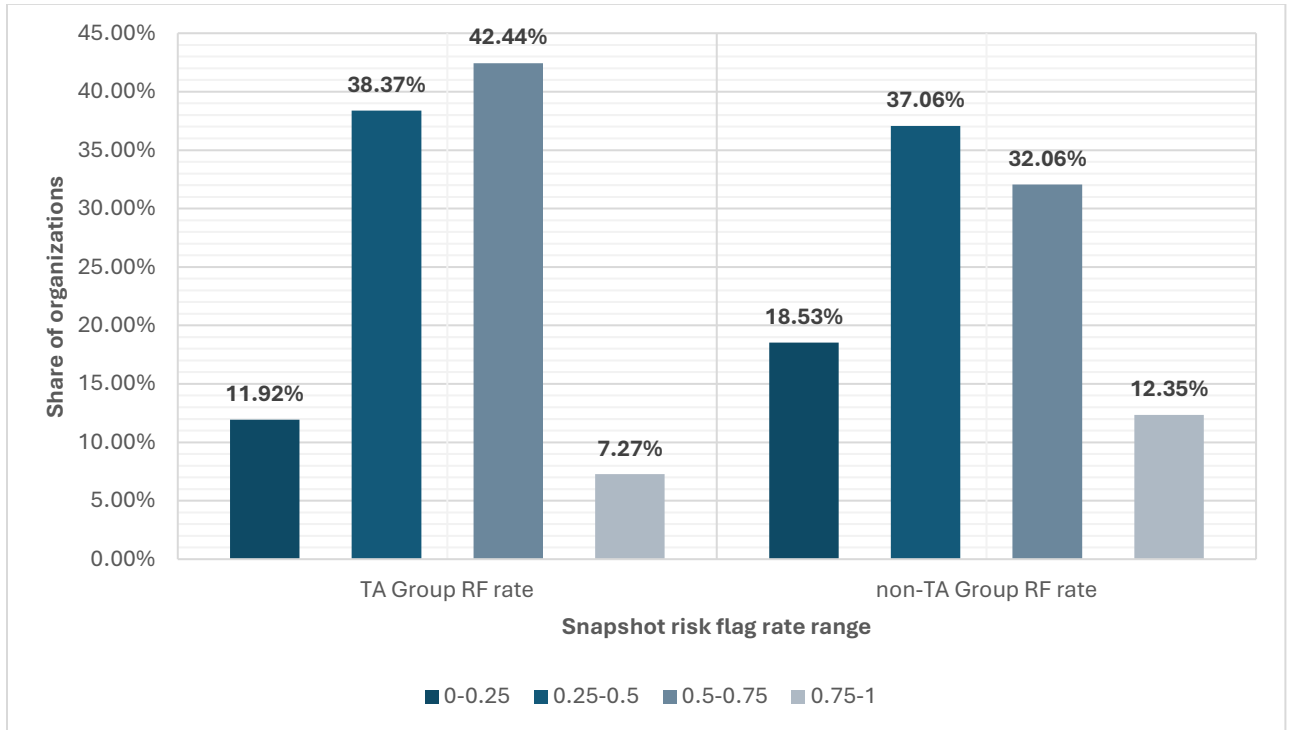
However, these findings should be interpreted with caution. All assessment data is self-reported, and in some cases, different individuals completed assessments for the same organization. As NTEN CEO Amy Sample-Ward has noted, declining scores may not indicate deterioration, but rather increased awareness of underlying issues revealed through deeper internal reflection.

Although the data does not support causal claims, the observed correlation is meaningful. Significant changes in risk levels—whether positive or negative—may reflect substantive organizational shifts. These cases warrant further qualitative investigation to determine whether improvements represent real-world progress and to what extent Tech Accelerate contributed to that change.

#### TA Group Organizations Outperform Peers Since 2024

Nonprofit Tech Readiness is an NTEN program designed to help nonprofit staff build their technology leadership and planning capabilities. According to Amy Sample-Ward, Tech Accelerate assessments have been integrated into these cohort programs for several years. This raised a natural question: has participation in Nonprofit Tech Readiness (TA Groups) influenced scoring trends in the Tech Accelerate data?

Figure 3: Percentage of Risk Flags based on Participation in Tech Readiness Program



We explored whether participation in TA Groups was associated with changes in assessment scores during the 2021–2022 period of sector-wide decline. The data does not suggest that cohort participation contributed to the downturn. Average risk levels among TA Group organizations were comparable to those of non-group peers during this period. However, the distribution of scores differs: TA Group organizations were more likely to fall within the moderate-risk range (40–70%) and less likely to report extremely high or low scores. This suggests a narrower range of variation among cohort participants, possibly reflecting more consistent internal practices, but not a clear overall performance advantage at that time.

BOVEE-GAZETT - SAMUELS

Among groups with at least 21 assessments, average risk levels range from 37% to 53%, with substantial variation across individual TA Group organizations (see Table 1). However, when examined longitudinally, a notable shift emerges beginning in 2024: since that year, TA Group assessments have consistently reported lower average risk levels than those of non-group organizations (see Table 2). This divergence suggests a recent performance advantage among cohort participants, potentially reflecting the cumulative effects of structured engagement or support through the Tech Readiness program.

*Table 1: TA Group Assessment Metrics*

Group ID	Snapshots	Avg Risk	Min Risk	Max Risk	Min Date	Max Date
a62UV000002sIQDYA2	7	47.34%	9.28%	71.15%	4/1/2024	2/12/2025
a628Y000000wk2nQAA	39	52.84%	20.88%	91.21%	3/12/2019	10/12/2024
a628Y000000UBymQAG	109	48.18%	2.33%	92.54%	3/12/2019	6/17/2025
a628Y000000wk2iQAA	145	47.14%	2.33%	89.77%	5/7/2019	6/6/2025
a628Y000000hFY8QAM	1	55.17%	55.17%	55.17%	10/12/2024	10/12/2024
a62UV000002nuj3YAA	33	36.84%	6.19%	79.78%	3/5/2019	6/25/2025
a628Y000000LwoqQAC	45	50.86%	8.51%	91.89%	5/3/2019	6/20/2025
a628Y000000UByrQAG	82	44.13%	8.57%	90.22%	9/27/2020	4/10/2025
a628Y000000EqS8QAK	13	61.67%	40.00%	88.24%	2/2/2023	10/12/2024
a62UV000002nuhRYAQ	21	51.54%	14.94%	75.00%	10/9/2024	4/21/2025

*Table 2: TA Group vs. Non-Group Risk Flag Rates by Year*

Year	Snapshots	TA group	Non-group	Total RF	TA group RF	Non-group RF
2017	25	0	25	39.11%	--	39.11%
2018	36	0	36	46.81%	--	46.81%
2019	246	12	234	43.20%	52.54%	42.66%
2020	119	10	109	40.99%	39.23%	41.17%
2021	97	25	72	39.55%	39.76%	39.47%
2022	184	76	108	51.37%	50.73%	51.94%
2023	231	95	136	50.26%	50.32%	50.22%
2024	175	87	88	52.47%	49.89%	55.01%
2025	170	39	131	48.69%	44.32%	50.01%
				<b>47.74%</b>	<b>48.75%</b>	<b>47.30%</b>

While the observed reduction in risk levels among TA Group assessments since 2024 may be partially influenced by the sampling method—which includes only the most recent assessment per organization—the pattern remains clear: cohort organizations have reported improved self-assessments during this period. Further research is warranted to determine whether these improvements reflect substantive organizational change and to what extent participation in Nonprofit Tech Readiness cohorts may have contributed to that outcome.

#### Post-2021 Sector-Wide Decline in Scores

Between 2021 and 2022, the data reveals a sharp sector-wide decline in self-assessment scores. The overall average score fell by 11.3% and generated 30 percent more risk flags, raising the overall risk flag rate by 11.8%. Every question in the assessment registered a score decline, ranging from 2.5% to 20.5%. Risk flag rates increased across all items as well, with individual question risk flag rate increases between 0.23% and 27.28%, more than doubling the previous rate in four cases.

Leadership—historically the lowest-scoring category—experienced the smallest decline in average scores (see Table 4) and the smallest rise in risk flag rates. In contrast, Infrastructure, the highest-scoring category, saw the largest increase in risk flag rate (see Table 3).

Table 3: Average Risk Rates by Category and Year

year	Risk avg	Count	OG Risk Avg	LD Risk Avg	IF Risk Avg	FC Risk Avg
2017	39.11%	25	43.19%	41.52%	34.38%	37.95%
2018	46.81%	36	49.72%	58.23%	37.82%	43.27%
2019	43.20%	246	46.39%	49.37%	39.65%	38.16%
2020	40.99%	119	43.48%	47.27%	36.44%	38.77%
2021	39.55%	97	38.20%	48.15%	33.42%	42.50%
2022	51.37%	184	51.22%	57.20%	46.36%	52.50%
2023	50.26%	231	51.51%	55.15%	45.10%	50.06%
2024	52.47%	175	51.35%	59.17%	48.73%	51.51%
2025	48.69%	170	48.12%	51.28%	46.47%	49.18%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
<b>2025 vs avg</b>	1.97%		-0.99%	-3.94%	7.64%	3.43%
<b>2025 vs 22-25</b>	-4.96%		-5.04%	-8.21%	-0.16%	-3.18%
<b>2022 vs 21</b>	<b>29.90%</b>		34.09%	18.79%	38.69%	23.53%

Table 4: Average TA Scores by Category and Year

year	Total Avg	Count	FC Avg	IF Avg	LD Avg	OG Avg
2017	2.62	25	2.67	2.72	2.53	2.59
2018	2.45	36	2.46	2.69	2.13	2.44
2019	2.54	246	2.59	2.65	2.35	2.51
2020	2.60	119	2.61	2.72	2.39	2.58
2021	2.64	97	2.57	2.81	2.38	2.68
2022	2.34	184	2.32	2.51	2.16	2.32
2023	2.35	231	2.35	2.53	2.20	2.28
2024	2.30	175	2.34	2.45	2.12	2.27
2025	2.35	170	2.38	2.49	2.22	2.32
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.42</b>	<b>2.58</b>	<b>2.24</b>	<b>2.38</b>
<b>2025 vs avg</b>	-2.65%		-1.43%	-3.60%	-1.01%	-2.37%
<b>2025 vs 22-25</b>	2.28%		1.46%	-0.34%	1.69%	1.08%
<b>2022 vs 21</b>	<b>-11.26%</b>		-9.74%	-10.80%	-9.17%	-13.34%

Following the 2021–2022 shift, Leadership and Infrastructure remain the lowest- and highest-scoring categories, respectively—but the gap between them has narrowed, with both categories converging toward the overall average.

NTEN Communications Director Asmita Ghosh raised the possibility that the post-2021 decline in scores may be linked to the COVID-19 pandemic. This is a plausible hypothesis. The pandemic exposed long-standing technology gaps across the nonprofit sector—particularly around infrastructure and remote work—and those vulnerabilities may be reflected in the assessment data. Several questions showing the largest increases in risk flag rates during this period correspond with known pandemic-era challenges:

- OG 13 – staff ability to access files: up from 11.5% to 32%
- IF 17 – controlled remote access to physical servers: up from 17% to 42%
- LD 15 – review of how technology affects constituent interactions: up from 56% to 73%

Another likely contributor to the 2021–2022 shift is the introduction of new questions to the assessment. Tech Accelerate is periodically updated to reflect emerging priorities, and newly added items tend to yield higher risk flag rates. Questions introduced since 2021 have an average risk rate of 55.6%, compared to 46.2% for pre-2021 questions (see Table 5), suggesting that changes to the instrument itself may have influenced the observed increase in overall risk levels.

*Table 5: Risk Flag Rates - Questions Added Before and After 2021<sup>1</sup>*

<b>Year</b>	<b>Pre-21 Count</b>	<b>Pre-21 RFs</b>	<b>Pre-21 rate</b>	<b>Post-21 Count</b>	<b>Post-21 RFs</b>	<b>Pre-21 rate</b>
2017	1038	406	39.11%	0	0	
2018	2177	1019	46.81%	0	0	
2019	14657	6331	43.19%	31	14	45.16%
2020	7401	3033	40.98%	27	12	44.44%
2021	5993	2294	38.28%	263	180	68.44%
2022	11136	5552	49.86%	2393	1398	58.42%
2023	14250	6966	48.88%	4632	2524	54.49%
2024	10772	5472	50.80%	3535	2035	57.57%
2025	10891	5124	47.05%	4191	2220	52.97%
	78315	36197	46.22%	15072	8383	55.62%

Data volume and distribution also complicate interpretation. Beginning in late 2021, assessment volume increased significantly—coinciding with the broader decline in scores. However, much of this growth stemmed from a small number of high-traffic sources, including TA Group programs and an October 2022 mini-grant initiative that linked funding to identified needs in Tech Accelerate assessments. These concentrated surges likely influenced aggregate statistics and may have introduced bias into year-over-year comparisons.

Given the convergence of confounding factors, including the COVID-19 pandemic, the introduction of higher-risk questions, and shifts in assessment volume, we recommend treating the post-2021 period as a new baseline. Anchoring future comparisons to this

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<sup>1</sup> In a small number of cases, assessments started prior to 2021 were later resumed but then were not officially submitted. Because no submit date exists, the start date is used for this analysis, resulting in some older assessments containing answers for questions which did not exist when that assessment was started.

period, rather than to earlier years, will enable more consistent and interpretable trend analysis moving forward.

### Enduring Patterns Confirmed from 2020 Baseline

NTEN's 2020 Tech Accelerate report, which succeeded the organization's long-running Tech Staffing and Investments series, presented aggregate scores for each assessment question, grouped in half-point increments. This analysis builds on that foundation by applying a risk flag-based methodology, offering a diagnostic lens on organizational vulnerabilities. Many of the 2020 findings are corroborated using this updated approach, but several important differences also emerge—the most significant being the sharp, sector-wide decline in scores beginning in 2021. The sections that follow examine trends within each Tech Accelerate category to highlight both areas of continuity and evidence of change.

#### *Engagement Trends*

The Engagement category included 11 questions in the 2020 assessment and has since expanded to 19—though it remains the shortest of the four categories. In 2020, the average Engagement score was 2.60. In the current dataset, that score has dropped to 2.42. The category's average risk flag rate is 47.5%, slightly below the all-category average of 47.74%.

**High-performing areas remain consistent.** The 2020 report identified strong scores in areas such as mobile communication support, fundraising platforms, list creation, and donation processing. These questions continue to perform well, though some have shown

signs of vulnerability. For example, the risk flag rate for FC 04 (accurate marketing/communications lists) nearly doubled from 2021 to 2022, despite retaining a solid average score (2.83) and remaining among the stronger items in the category.

**Risk flag analysis highlights new strengths.** In the current dataset, the top-ranked Engagement questions by risk percentage are:

- FC 18 – Ability to assess whether programs benefit intended audiences (2.62 avg., 14% risk)
- FC 05 – Effective use of existing marketing/communications systems (2.42 avg., 18% risk)
- FC 19 – Use of constituent input to inform service delivery (2.45 avg., 21% risk)

Interestingly, all three also carry the highest warning flag rates in the category, suggesting underlying ambivalence or partial implementation despite relatively low critical risk. FC 18 and FC 19 were added in 2022, signaling increased emphasis on outcomes and constituent feedback.

**Persistent weaknesses remain.** As in 2020, questions related to volunteer systems and advanced data use continue to rank among the lowest-performing legacy items—specifically:

- FC 03 – Volunteer systems (2.12 avg., 63% risk)
- FC 09 – Advanced data analysis (2.14 avg., 59% risk)

**Accessibility and inclusion now dominate the lowest ranks.** The bottom three

Engagement items by both score and risk rate were all introduced in 2022 and focus on digital equity:

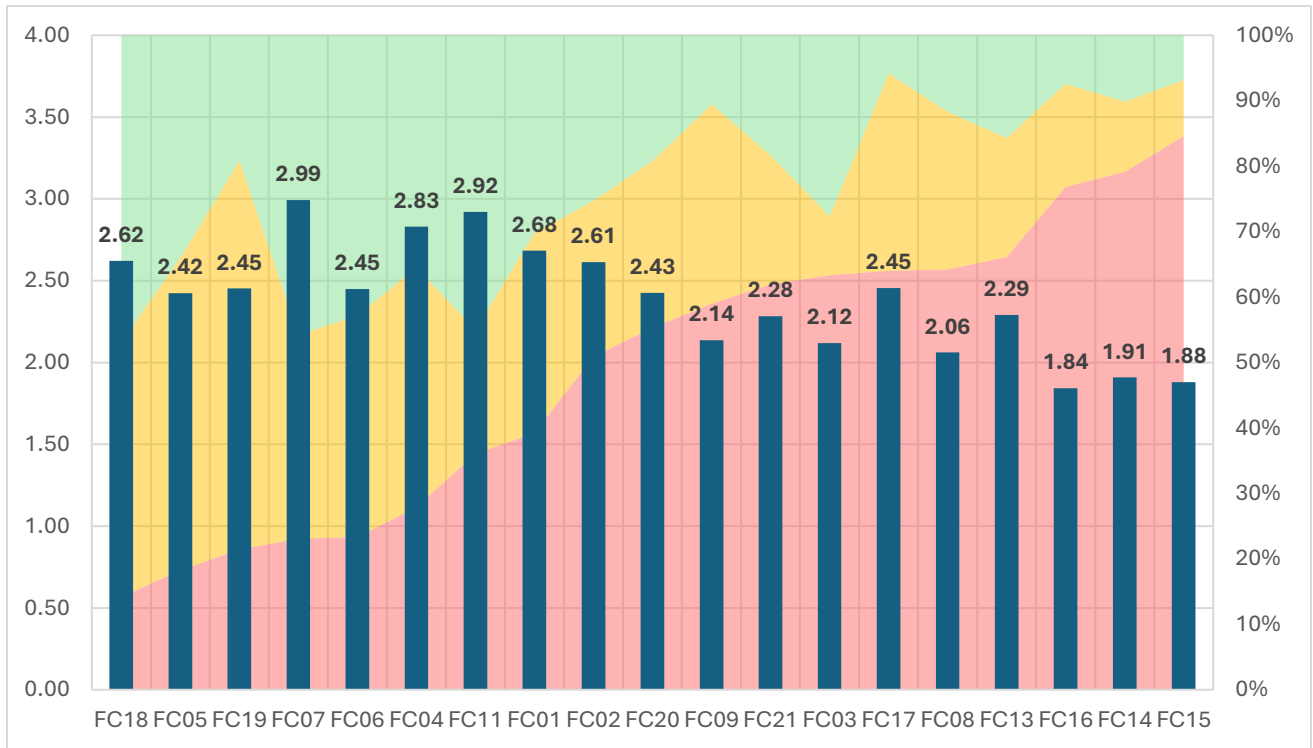
- FC 14 – Website accessibility for users with disabilities (1.91 avg., 79% risk)
- FC 15 – Accessibility of digital programs and services (1.88 avg., 85% risk)
- FC 16 – Inclusion of constituents in technology planning (1.84 avg., 77% risk)

These results suggest that while operational communication systems remain relatively mature, deeper engagement practices—particularly around accessibility and participatory design—continue to lag across the sector.

*Table 6: Engagement Scores and Risk Levels by Question ID*

Question ID	Average score	% Risk	% Warning	% Clear
FC18	2.62	14%	39%	47%
FC05	2.42	18%	48%	34%
FC19	2.45	21%	59%	19%
FC07	2.99	23%	31%	46%
FC06	2.45	23%	34%	43%
FC04	2.83	28%	37%	36%
FC11	2.92	36%	19%	45%
FC01	2.68	39%	31%	30%
FC02	2.61	51%	24%	25%
FC20	2.43	55%	25%	19%
FC09	2.14	59%	30%	11%
FC21	2.28	62%	20%	18%
FC03	2.12	63%	9%	28%
FC17	2.45	64%	30%	6%
FC08	2.06	64%	24%	12%
FC13	2.29	66%	18%	16%
FC16	1.84	77%	16%	7%
FC14	1.91	79%	11%	10%
FC15	1.88	85%	9%	7%

Figure 4: Engagement Flag Rate by Question ID



*Infrastructure Trends*

The Infrastructure category has expanded slightly since 2020, growing from 26 to 27 questions—now equal in length to the Organization category and slightly longer than Leadership. In the 2020 report, Infrastructure held the highest average score of any category (2.67), and that pattern continues: in the current dataset, the average score is 2.58, compared to 2.42 overall. Infrastructure also has the lowest average risk flag rate at 42.9%, reinforcing its status as a relative strength across the sector. As in 2020, it remains

the category with the widest performance range: eleven questions score above 2.89, while eight fall below 2.09.

**Core strengths remain stable.** High-scoring items related to security and protection continue to lead. Two questions focused on securing financial transactions—IF 06 and IF 27—are tied for the top spot, each with a 3.41 average and a low 13% risk flag rate. HIPAA compliance (IF 25) also maintains a strong score (3.06), though its 46% risk flag rate places it mid-tier due to a stricter risk threshold.

**Mixed trends in other security areas.** While antivirus protection was a standout in 2017 (3.46 average), IF 19 has steadily declined to 2.89, with a risk flag rate of 53%, placing it in the bottom third of the category. A similar downward trend is seen in IF 20, which assesses secure guest wireless networks. Its risk flag rate rose from 21% in 2021 to 37% in 2024, and the question now has one of the highest skip rates in the category—rising from 12.4% to 21.7%—possibly reflecting declining relevance in a cloud-first environment.

**Remote access emerges as a new strength.** Two questions that were not highlighted in 2020 now stand out:

- IF 13 – Access to business systems outside the office (3.36 average, 17% risk)
- IF 12 – Staff devices for remote access (3.01 average, 25% risk)

Both questions have recovered from the 2021–2022 dip and now exceed historical averages. However, they also show pronounced disparities by organizational size—smaller nonprofits report much higher risk on these items than larger ones.

**Persistent gaps remain.** The lowest-performing items identified in 2020 continue to show poor outcomes:

- IF 03 – Business continuity planning (1.76 average, 73% risk)
- IF 14 – Vendor policy management (1.87 average, 77% risk)
- IF 01 and IF 02 – Hardware/software change tracking (1.94 and 2.08 average; 46% and 41% risk)

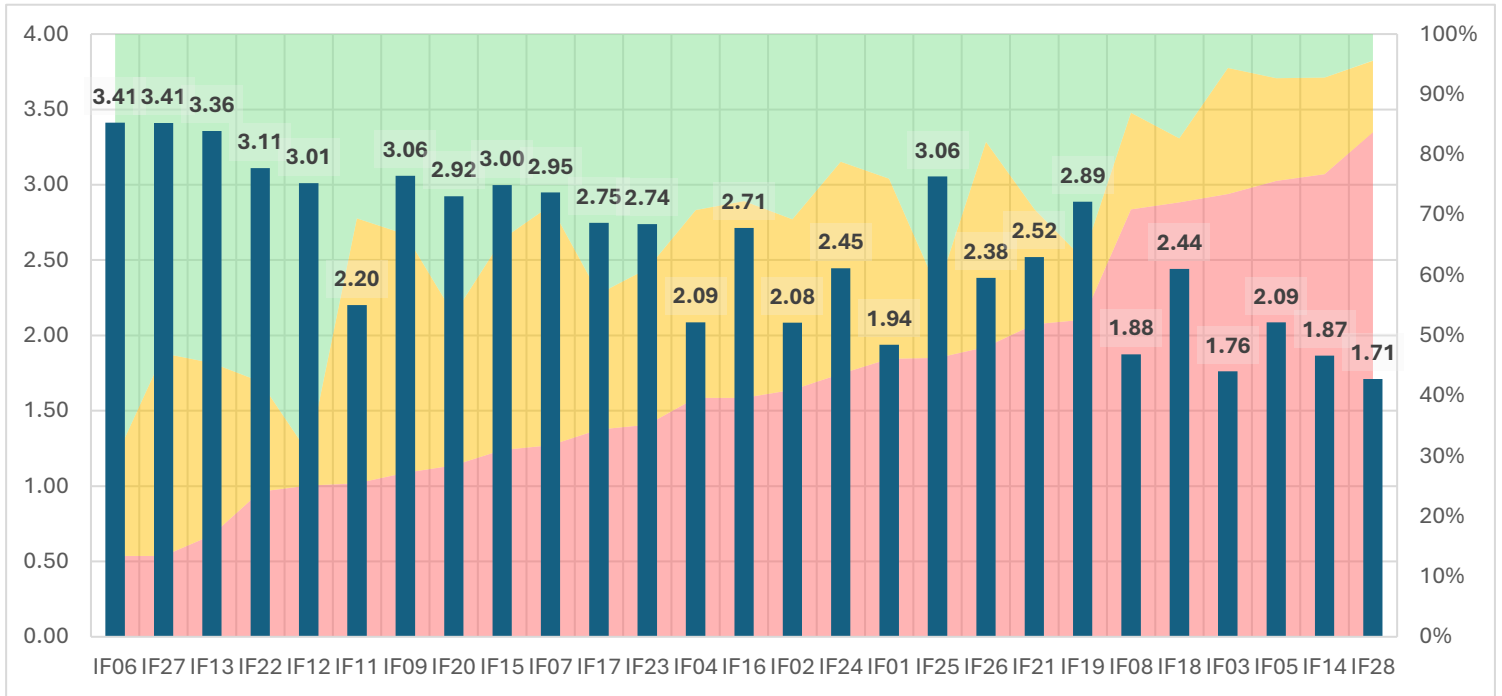
Despite modest improvements, these items remain underdeveloped across most segments and may reflect limited formalization of IT governance processes in smaller organizations.

**New additions highlight emerging concerns.** The lowest-ranked question in the entire category is a 2022 addition: IF 28, which asks whether the organization maintains a policy for removing unnecessary or outdated data. It holds a 1.71 average and an 84% risk flag rate. Another question, IF 05, addresses business system integration. It experienced one of the steepest post-2021 declines—dropping 19.7% in average score and reaching a 76% risk flag rate, where it has remained.

Table 7: Infrastructure Scores and Risk Level by Question ID

Question ID	Average score	% Risk	% Warning	% Clear
IF06	3.41	13%	16%	71%
IF27	3.41	13%	34%	53%
IF13	3.36	17%	29%	55%
IF22	3.11	24%	18%	58%
IF12	3.01	25%	5%	70%
IF11	2.20	25%	44%	31%
IF09	3.06	27%	40%	33%
IF20	2.92	28%	25%	47%
IF15	3.00	31%	35%	34%
IF07	2.95	32%	40%	28%
IF17	2.75	34%	23%	43%
IF23	2.74	35%	26%	39%
IF04	2.09	40%	31%	29%
IF16	2.71	40%	33%	28%
IF02	2.08	41%	28%	31%
IF24	2.45	44%	35%	21%
IF01	1.94	46%	30%	24%
IF25	3.06	46%	11%	42%
IF26	2.38	48%	34%	18%
IF21	2.52	52%	19%	29%
IF19	2.89	53%	10%	37%
IF08	1.88	71%	16%	13%
IF18	2.44	72%	11%	17%
IF03	1.76	73%	21%	6%
IF05	2.09	76%	17%	7%
IF14	1.87	77%	16%	7%
IF28	1.71	84%	12%	4%

Figure 5: Infrastructure Flag Rate by Question ID



*Leadership Trends*

The Leadership category expanded from 16 questions in 2020 to 24 in 2025. Despite this growth, it remains the lowest-scoring area of the Tech Accelerate assessment. No question in the category exceeds an average score of 2.65, and the overall category average is 2.24, well below the cross-category average of 2.42. It also holds the highest risk flag rate at 53.3%, compared to 47.74% overall.

That said, the gap is narrowing. Leadership shows the strongest recent improvement of any category, with 2025-to-date risk levels compared to the 2022–2025 average showing

the most improvement of all categories. This suggests some movement toward baseline stability after several years of stagnation.

**Top-rated areas show high variability.** The 2020 report identified three relative strengths that continue to stand out:

- LD 13 – Presence of a technology champion in leadership (2.65 avg., 38% risk)
- LD 14 – Use of technology to meet board needs (2.55 avg., 14% risk)
- LD 09 – Involvement of IT staff in strategic planning (2.59 avg., 50% risk)

However, even among the highest-scoring questions, warning flag rates are elevated. This indicates that many organizations fall into a middle ground, neither fully deficient nor clearly proficient, making interpretation more complex. For example, LD 25, added in 2025, asks about board involvement in technology planning. It has one of the lowest risk rates (27%) but also one of the lowest average scores (1.83), with over half of responses flagged as warnings rather than risk suggesting partial engagement.

**Score-risk mismatches persist.** Several questions illustrate a disconnect between average scores and risk classification. LD 10, which asks whether technology is integrated into the strategic plan, has a mid-range score (2.38) but the highest risk flag rate in the category (78%), due to its relatively strict threshold. Conversely, LD 09 ranks among the top by score but sits in the middle by risk because many scores fall just below its 2.5 cutoff.

**Persistent weaknesses remain entrenched.** As in 2020, the lowest-performing questions continue to cluster around high-effort or evaluative tasks, including:

- LD 17 – Performing a technology ROI analysis (1.76 avg., 75% risk)
- LD 05 – Surveying staff about technology satisfaction (1.98 avg., 66% risk)
- LD 07 – Sharing best practices externally (2.00 avg., 68% risk)

Additional questions in this low-performing cluster include:

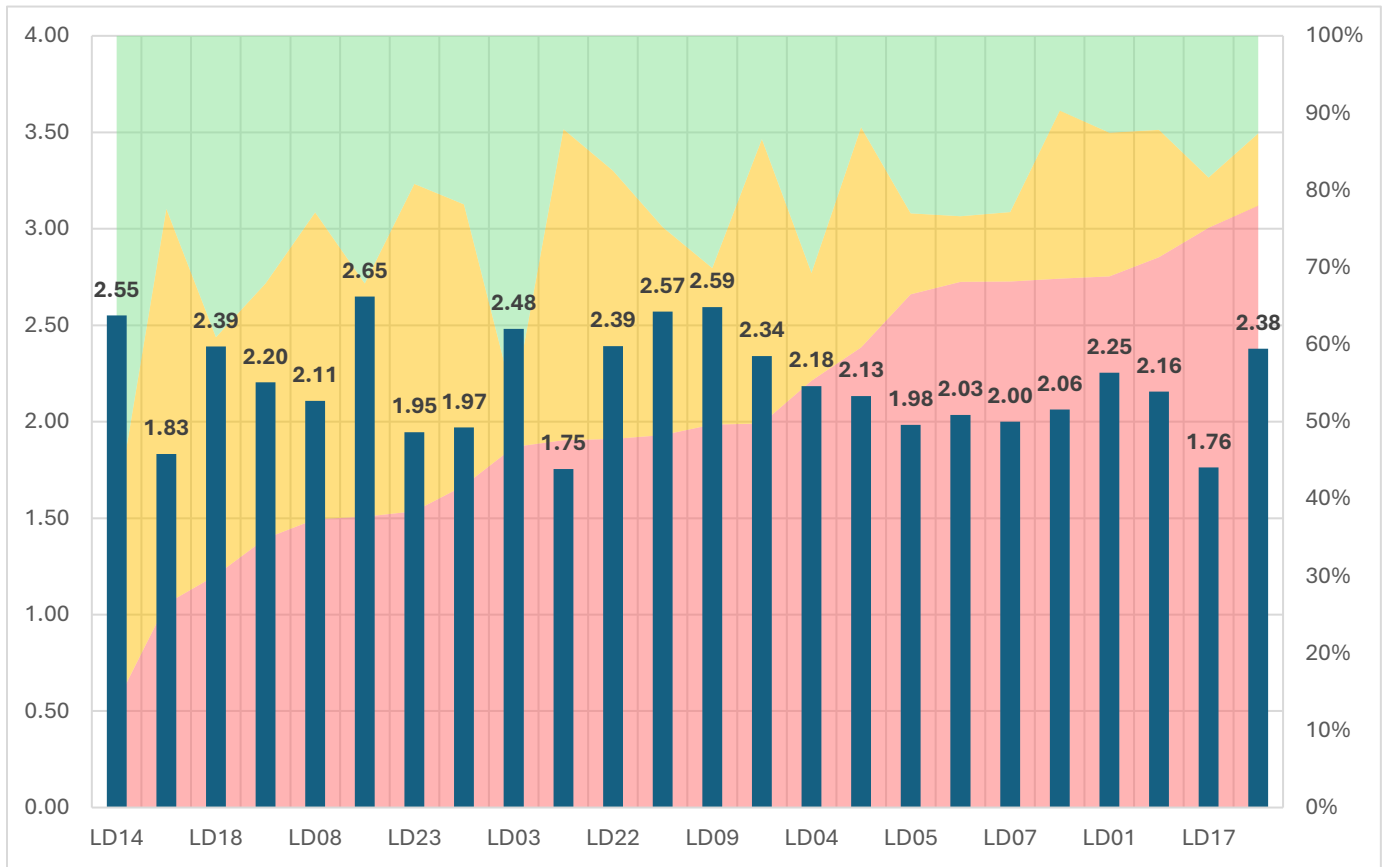
- LD 01 – Reviewing external models of tech use (2.25 avg., 69% risk)
- LD 02 – Sharing tech-related best practices with peers (2.03 avg., 68% risk)
- LD 15 – Reviewing technology’s impact on staff–constituent interactions (2.16 avg., 71% risk)
- LD 19 – Covering access and equipment costs for remote work (2.06 avg., 69% risk)

Taken together, these results suggest that while organizations may be adopting basic leadership practices around technology, they continue to struggle with evaluation, reflection, and external engagement—functions that require strategic maturity, time, and resources.

*Table 8: Leadership Scores and Risk Level by Question ID*

<b>Question ID</b>	<b>Average score</b>	<b>% Risk</b>	<b>% Warning</b>	<b>% Clear</b>
LD14	2.55	14%	25%	61%
LD25	1.83	26%	51%	22%
LD18	2.39	30%	31%	39%
LD06	2.20	35%	33%	32%
LD08	2.11	37%	40%	23%
LD13	2.65	38%	30%	32%
LD23	1.95	38%	42%	19%
LD11	1.97	42%	36%	22%
LD03	2.48	47%	6%	47%
LD24	1.75	48%	40%	12%
LD22	2.39	48%	35%	17%
LD16	2.57	48%	27%	25%
LD09	2.59	50%	20%	30%
LD20	2.34	50%	37%	13%
LD04	2.18	55%	14%	31%
LD21	2.13	60%	29%	12%
LD05	1.98	66%	11%	23%
LD02	2.03	68%	8%	23%
LD07	2.00	68%	9%	23%
LD19	2.06	69%	22%	10%
LD01	2.25	69%	19%	13%
LD15	2.16	71%	17%	12%
LD17	1.76	75%	7%	18%
LD10	2.38	78%	9%	13%

Figure 6: Leadership Flag Rate by Question ID



*Organization Trends*

The Organization category has grown substantially, from 17 questions in 2020 to 27 in 2025, making it tied for the longest section of the assessment alongside Infrastructure. In the 2020 dataset, the average Organization score was 2.53, slightly below the survey-wide average of 2.56. That trend continues: the current average score is 2.38, compared to 2.42 overall, with a risk flag rate of 48.6%, slightly above the 47.74% benchmark.

**Core operational strengths remain stable.** The 2020 report highlighted strengths in staff support and technology alignment, including areas such as file storage, file retrieval, IT support, and internal tool fit. Three of those items remain top performers by both score and risk level:

- OG 14 – Long-term storage of critical files (2.93 avg., 26% risk)
- OG 13 – Ease of file access (2.76 avg., 27% risk)
- OG 15 – Alignment between staff needs and tools (2.97 avg., 18% risk)

Availability of IT support (OG 03) still scores well (2.85), but its risk flag rate (59%) places it in the lower half of the category, largely due to a high-risk threshold of 3.0.

**Newer questions surface data- and impact-oriented strengths.** Several high-performing items not covered in 2020 focus on operational systems and data use:

- OG 11 and OG 12 – Use of self-service systems for HR/finance (2.62 and 2.61 avg., 22% and 24% risk)
- OG 24 – Technology or data increases mission impact (2.44 avg., 20% risk)
- OG 25 – Data used to improve programs (2.63 avg., 16% risk)

These additions point to growing competence in internal systems and evidence-informed practice, especially among larger or more digitally mature organizations.

**Process-related gaps persist.** As noted in the 2020 report, policy and process questions remain relatively weak. Items addressing upgrade policies, BYOD management, and prioritization protocols continue to underperform:

- OG 09 – Upgrade policy (2.15 avg., 39% risk, 41% warning)
- OG 07 – BYOD policy (2.17 avg., 76% risk)
- OG 01 – Defined process for prioritizing tech needs (2.06 avg., 68% risk)

These results suggest that many organizations still lack formal frameworks for decision-making, planning, and device governance.

**AI governance and data ethics emerge as major weaknesses.** The four lowest-ranked Organization questions were all introduced after 2020, and three of them are the lowest-scoring items in the entire assessment:

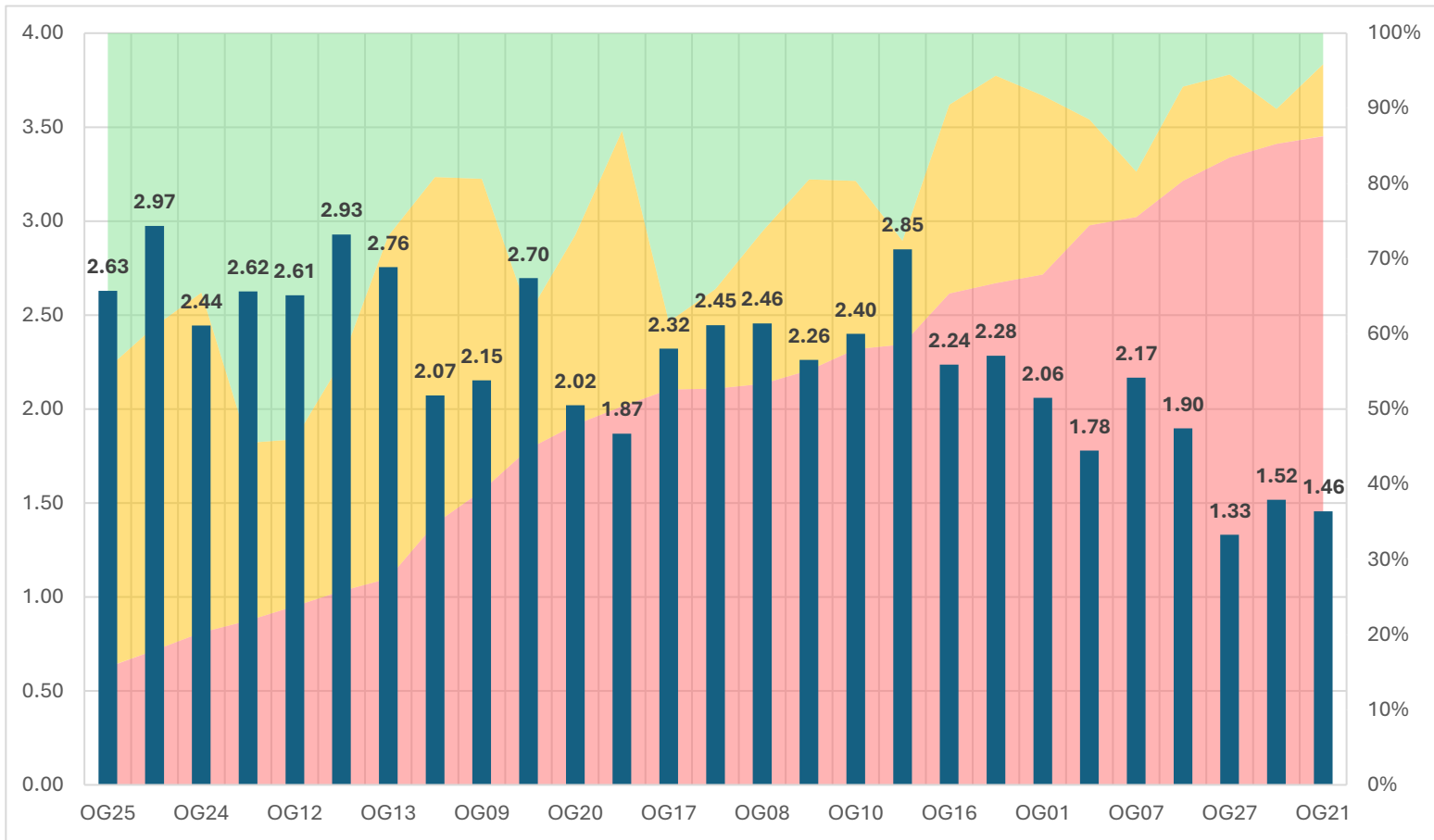
- OG 21 – Reviewing data for bias (1.46 avg., 86% risk)
- OG 26 – Existence of an AI usage policy (1.52 avg., 85% risk)
- OG 27 – Reviewing AI tools for bias (1.33 avg., 83% risk)
- OG 19 – Accessibility of technology training materials (1.90 avg., 80% risk)

These scores indicate that while operational capacity is relatively mature in some areas, ethical, inclusive, and future-facing practices remain significantly underdeveloped across much of the sector.

Table 9: Organization Scores and Risk Levels by Question ID

Question ID	Average score	% Risk	% Warning	% Clear
OG25	2.63	16%	40%	45%
OG15	2.97	18%	43%	39%
OG24	2.44	20%	45%	35%
OG11	2.62	22%	24%	55%
OG12	2.61	24%	22%	54%
OG14	2.93	26%	31%	44%
OG13	2.76	27%	46%	27%
OG18	2.07	35%	46%	19%
OG09	2.15	39%	42%	19%
OG05	2.70	45%	18%	37%
OG20	2.02	48%	25%	27%
OG23	1.87	50%	37%	13%
OG17	2.32	53%	9%	38%
OG06	2.45	53%	13%	34%
OG08	2.46	53%	20%	26%
OG02	2.26	55%	25%	19%
OG10	2.40	58%	22%	20%
OG03	2.85	59%	14%	28%
OG16	2.24	65%	25%	10%
OG04	2.28	67%	28%	6%
OG01	2.06	68%	24%	8%
OG22	1.78	74%	14%	12%
OG07	2.17	76%	6%	18%
OG19	1.90	80%	13%	7%
OG27	1.33	83%	11%	6%
OG26	1.52	85%	5%	10%
OG21	1.46	86%	10%	4%

Figure 7: Organization Flag Rate by Question ID



## Organizational Characteristics Predict Risk Levels

The 2020 Tech Accelerate report concluded that organizational budget and staff size had minimal impact on assessment scores. While staff size showed modest influence in the Engagement and Leadership categories, there was little difference in response patterns between organizations with budgets under \$250,000 and those over \$1 million. Infrastructure and Organization scores appeared largely unaffected by either factor.

Our updated analysis challenges that conclusion. Using risk-level metrics and more granular subgrouping than was available in 2020, we find that both staff size and organizational budget now show significant correlations with scores and risk levels across all four categories.

In addition to these core variables, we also analyzed variation based on:

- **Tech staff size**
- **Technology budget as a share of total budget**
- **Decade founded**
- **Organization type** (e.g., service provider, advocacy, philanthropy)
- **Geographic location**

These dimensions provide a more detailed picture of how structural characteristics shape digital readiness across the nonprofit sector.

### *Staff Size*

Staff size is strongly correlated with lower self-assessed risk rates across all categories, with the most pronounced effects seen in the Organization and Infrastructure domains. Unsurprisingly, nonprofits with fewer than one full-time employee report the highest overall risk, triggering risk flags 65.13% of the time. Risk levels steadily decline as staff size increases, reinforcing the idea that organizational scale brings greater capacity for technology planning, support, and integration.

Infrastructure is the category where staff size appears to have the greatest influence. Risk flag rates in Infrastructure fall below 50% for organizations with more than nine employees and drop to just 25.54% among organizations with 150 or more staff. This suggests that as organizations grow, they are more likely to invest in and maintain the core systems needed for operational stability and security.

The Organization category shows a similar trend, though starting from a higher baseline. It is the highest-risk area for the smallest organizations, with a 69.56% flag rate. Among larger organizations, however, it improves dramatically, ranking as the second-lowest risk category at 34.96%. These patterns underscore the cumulative benefits of scale and point to micro-sized nonprofits as a high-need group for targeted support in foundational technology management.

Table 10: Average Risk Level by Staff Size

Employee range	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	47.16%	220	48.80%	53.69%	41.20%	48.35%
0 - 1	65.13%	57	69.56%	66.00%	64.05%	59.75%
>1 - 3	56.97%	76	58.02%	56.56%	56.44%	56.85%
>3 - 5	57.30%	90	59.09%	59.29%	57.72%	52.20%
>5 - 9	54.71%	117	56.51%	59.24%	50.88%	52.91%
>9 - 14	49.66%	136	50.51%	53.96%	46.28%	48.34%
>14 - 19	45.68%	83	45.65%	49.76%	43.89%	43.58%
>19 - 29	44.99%	126	44.81%	50.81%	39.57%	46.60%
>29 - 49	45.14%	129	44.52%	52.97%	39.50%	45.09%
>49 - 149	38.77%	145	39.41%	47.45%	30.38%	40.73%
>149	34.25%	104	33.96%	44.95%	25.54%	36.28%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	33.96%	44.95%	25.54%	36.28%
		<b>Max:</b>	69.56%	66.00%	64.05%	59.75%
		<b>Diff:</b>	35.60%	21.06%	38.51%	23.47%

Table 11: Average Score by Staff Size

Employee range	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.45	220	2.44	2.27	2.60	2.42
0 - 1	1.99	57	1.87	1.92	2.08	2.11
>1 - 3	2.19	76	2.14	2.16	2.24	2.21
>3 - 5	2.18	90	2.11	2.10	2.23	2.28
>5 - 9	2.26	117	2.17	2.12	2.41	2.31
>9 - 14	2.37	136	2.34	2.22	2.50	2.38
>14 - 19	2.45	83	2.44	2.29	2.57	2.50
>19 - 29	2.47	126	2.46	2.27	2.66	2.44
>29 - 49	2.48	129	2.47	2.25	2.67	2.48
>49 - 149	2.62	145	2.59	2.36	2.87	2.58
>149	2.75	104	2.76	2.44	3.01	2.68
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	1.87	1.92	2.08	2.11
		<b>Max:</b>	2.76	2.44	3.01	2.68
		<b>Diff:</b>	0.89	0.51	0.93	0.57

### *Budget Size*

Organization budget size shows a strong inverse relationship with self-assessed technology risk, mirroring the patterns observed with staff size. Nonprofits with annual budgets under \$250,000 exhibit the highest average risk flag rate at 66.13%, compared to just 40.12% among those with budgets over \$15 million. The Infrastructure category shows the largest budget-based variation, with risk rates dropping more than half from 65.68% to 30.70%. These trends underscore the importance of financial scale in enabling core technology capacity.

While risk levels generally decline with higher budgets, improvements in the Organization and Leadership categories appear to plateau or even slightly regress at the top tier. Organizations with \$6M–\$15M budgets report lower risk in these categories than those with budgets exceeding \$15M. This suggests that after reaching a certain resource threshold, further gains in these areas may depend more on internal leadership practices and governance structures than on raw funding levels alone.

Conversely, Infrastructure and Engagement scores continue to improve at the highest budget levels, with average scores reaching 2.87 and 2.58, respectively. This reflects a stronger and more direct return on investment in operational systems and digital outreach capabilities. Overall, the data supports a nuanced interpretation: while higher budgets clearly support lower risk and stronger self-assessments, the impact varies by category—highlighting areas where money alone may not be sufficient without intentional strategy and leadership.

Table 12: Average Risk Level by Budget Size

Budget range	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	44.26%	665	45.97%	50.61%	39.17%	43.77%
0-250K	66.13%	76	67.53%	67.40%	65.68%	63.62%
250K-750K	56.53%	89	55.64%	57.35%	56.98%	56.20%
750K-1.5M	54.07%	93	55.30%	58.96%	50.45%	51.51%
1.5M-3M	48.37%	103	49.25%	53.50%	43.52%	47.66%
3M-6M	45.86%	114	44.58%	52.66%	40.34%	47.16%
6M-15M	41.74%	79	38.92%	47.68%	38.38%	43.18%
15M+	40.12%	64	41.54%	49.76%	30.70%	40.00%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	38.92%	47.68%	30.70%	40.00%
		<b>Max:</b>	67.53%	67.40%	65.68%	63.62%
		<b>Diff:</b>	28.61%	19.72%	34.98%	23.62%

Table 13: Average Score by Budget Size

Budget range	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.52	665	2.51	2.32	2.66	2.51
0-250K	1.96	76	1.87	1.89	2.02	2.06
250K-750K	2.20	89	2.17	2.13	2.26	2.23
750K-1.5M	2.25	93	2.18	2.09	2.39	2.31
1.5M-3M	2.39	103	2.33	2.23	2.59	2.40
3M-6M	2.44	114	2.41	2.22	2.65	2.43
6M-15M	2.56	79	2.58	2.37	2.73	2.52
15M+	2.58	64	2.53	2.31	2.87	2.58
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	1.87	1.89	2.02	2.06
		<b>Max:</b>	2.58	2.37	2.87	2.58
		<b>Diff:</b>	0.71	0.48	0.85	0.52

### *Technology Staff*

Technology staff count appears to have the strongest overall impact of any variable analyzed. Organizations with no dedicated tech staff report an average risk flag rate of 58.97%, while the rate drops by more than half to 28.37% for organizations with more than ten tech staff. This sharp decline highlights the critical role that in-house technical capacity plays in shaping digital readiness across the nonprofit sector.

While Infrastructure again shows the greatest absolute risk reduction, dropping from 56.04% to 22.81%, the effects of tech staff size are more evenly distributed across all five categories than with other structural factors like total staff or budget. Notably, both Leadership and Engagement show stronger sensitivity to tech staff count. These categories often require ongoing collaboration and integration between technical and non-technical roles, which may explain their responsiveness to internal expertise.

Average scores follow the same upward trajectory. Organizations with no tech staff averaged just 2.13 overall, compared to 2.88 among those with more than ten. Gains are visible in every category, but Infrastructure and Engagement again lead with score increases of 0.84 and 0.65, respectively. These results strongly suggest that investing in dedicated technical personnel—especially beyond the 1–2-person level—is among the most effective ways nonprofits can reduce technology risk and increase capability across the board.

Table 14: Average Risk Level by Technology Staff Size

Staff range	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	47.31%	221	48.85%	53.94%	41.41%	48.36%
0	58.97%	126	59.58%	64.10%	56.04%	56.37%
>0 - 1	51.84%	361	53.23%	56.82%	47.97%	49.95%
>1 - 2	47.42%	233	47.80%	53.08%	43.02%	46.79%
>2 - 3	41.94%	119	42.53%	46.93%	36.52%	43.61%
>3 - 5	43.72%	116	44.38%	49.92%	36.79%	46.26%
>5 - 10	34.13%	60	33.39%	39.08%	30.24%	35.42%
> 10	28.37%	47	28.43%	35.95%	22.81%	28.49%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	28.43%	35.95%	22.81%	28.49%
		<b>Max:</b>	59.58%	64.10%	56.04%	56.37%
		<b>Diff:</b>	31.14%	28.16%	33.23%	27.88%

Table 15: Average Score by Technology Staff Size

Staff range	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.45	221	2.44	2.27	2.59	2.41
0	2.13	126	2.07	1.96	2.25	2.21
>0 - 1	2.31	361	2.25	2.15	2.47	2.36
>1 - 2	2.42	233	2.40	2.24	2.57	2.44
>2 - 3	2.56	119	2.54	2.41	2.72	2.52
>3 - 5	2.52	116	2.48	2.32	2.73	2.45
>5 - 10	2.74	60	2.75	2.54	2.92	2.67
> 10	2.88	47	2.88	2.61	3.09	2.86
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	2.07	1.96	2.25	2.21
		<b>Max:</b>	2.88	2.61	3.09	2.86
		<b>Diff:</b>	0.81	0.64	0.84	0.65

#### Technology Budget (Absolute and as Percentage of Total Budget)

Technology budget trends closely mirror those of overall organization budget, with higher investment levels strongly associated with lower risk and higher self-assessment scores. Risk flag rates drop from 60.97% among organizations spending less than \$5,000 annually on technology to 34.63% among those spending over \$500,000. Even modest

increases in absolute tech spend yield measurable improvements. For instance, Infrastructure risk rates are reduced by ten points when moving from the <\$5K tier to the \$5K–\$15K range, and again by a similar margin when surpassing \$30K—suggesting that operational improvements often follow incremental tech investment.

Looking at tech budget as a share of total organizational spending reveals a more complex pattern. Risk levels decline across all categories up to the 2–3% range, at which point they begin to rise again. This inverted-U trend supports NTEN’s long-held view that 2–3% of the total budget is a “sweet spot” for maximizing performance while maintaining efficiency. Organizations spending more than 5% of their budget on technology report slightly higher average risk levels than those in the 2–3% range, potentially reflecting reactive spending in response to acute challenges or underperformance elsewhere.

Despite the narrower spread in risk rates compared to raw budget figures, scores show consistent gains—particularly in the Infrastructure category, where the average rises from 2.25 to 2.64 as tech investment increases. However, Leadership and Engagement remain relatively flat across the full spectrum, suggesting these areas are less sensitive to financial inputs alone and may require complementary efforts in governance, training, or culture change to see meaningful progress. Overall, both absolute and proportional tech spending show strong alignment with reduced risk and improved capacity, reinforcing the importance of sustained, intentional investment in nonprofit technology.

Table 16: Average Risk Level by Technology Budget

Tech budget range	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	47.27%	680	49.40%	53.59%	41.91%	46.42%
0-5K	60.97%	93	61.34%	63.66%	60.83%	57.78%
>5K-15K	53.25%	105	52.03%	56.99%	50.67%	54.05%
>15K-30K	48.77%	96	47.15%	52.16%	46.69%	49.74%
>30K-60K	44.87%	94	46.87%	48.30%	40.38%	44.26%
>60K-125K	48.94%	78	48.78%	55.86%	42.93%	49.22%
>125K-250K	38.74%	60	38.11%	46.79%	32.53%	39.06%
>250K-500K	35.64%	31	34.66%	43.29%	27.54%	39.51%
>500K	34.63%	46	35.22%	43.57%	25.77%	36.32%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	34.66%	43.29%	25.77%	36.32%
		<b>Max:</b>	61.34%	63.66%	60.83%	57.78%
		<b>Diff:</b>	26.67%	20.37%	35.06%	21.46%

Table 17: Average Score by Tech Budget as Percentage of Overall Budget

Tech budget range	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.44	680	2.41	2.24	2.59	2.44
0-5K	2.10	93	2.04	2.00	2.16	2.19
>5K-15K	2.26	105	2.23	2.16	2.37	2.27
>15K-30K	2.38	96	2.37	2.25	2.52	2.36
>30K-60K	2.48	94	2.40	2.32	2.68	2.49
>60K-125K	2.36	78	2.33	2.14	2.57	2.38
>125K-250K	2.61	60	2.56	2.38	2.84	2.61
>250K-500K	2.73	31	2.75	2.49	2.97	2.63
>500K	2.74	46	2.70	2.48	3.03	2.69
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	2.04	2.00	2.16	2.19
		<b>Max:</b>	2.75	2.49	3.03	2.69
		<b>Diff:</b>	0.71	0.49	0.87	0.50

Table 18: Average Risk Level by Tech Budget as Percentage of Overall Budget

Tech budget pct range	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	46.96%	738	48.95%	53.26%	41.57%	46.42%
0-0.5%	53.01%	78	50.68%	60.33%	49.32%	52.46%
0.5-1%	48.13%	109	48.29%	52.61%	44.32%	47.75%
1-2%	48.55%	136	49.61%	52.83%	43.08%	49.48%
2-3%	44.55%	79	44.37%	50.00%	40.34%	44.11%

Tech budget pct range	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
3-5%	47.28%	73	46.11%	51.97%	45.69%	45.80%
> 5%	49.73%	70	49.79%	52.62%	46.27%	50.85%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	44.37%	50.00%	40.34%	44.11%
		<b>Max:</b>	50.68%	60.33%	49.32%	52.46%
		<b>Diff:</b>	6.30%	10.33%	8.99%	8.35%

### Organization Age

Organization age closely tracks with budget and staff size, but it also appears to be an independent predictor of technology readiness. Newer nonprofits—particularly those founded in the 2010s and 2020s—report significantly higher risk levels across all categories, while older organizations tend to show lower risk and higher average scores. This pattern suggests that institutional maturity, established infrastructure, and accumulated knowledge may play a meaningful role in shaping digital capacity.

The relationship is especially pronounced in the Infrastructure category. Organizations that were founded in the 2020s show an average Infrastructure score of just 1.95 and a risk rate of 68.98%, the lowest and highest in the dataset, respectively. By contrast, pre-1950 organizations report an average Infrastructure score of 2.84 and a risk rate of just 30.18%. This 39-point spread highlights the persistent digital vulnerability of newer nonprofits, even as they may adopt newer tools or operate in tech-driven environments.

Leadership and Engagement categories also reflect this generational gap, though with slightly less volatility. Risk levels drop steadily among organizations founded earlier in the 20th century, with the lowest overall technology risk seen among those formed between

the 1950s and 1970s. These trends suggest that newer organizations may benefit from targeted capacity-building efforts that accelerate operational maturity, especially in areas foundational to digital stability such as IT infrastructure, strategic planning, and data governance.

*Table 19: Average Risk Level by Organization Decade Founded*

Decade	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	47.41%	220	54.24%	41.36%	48.55%	49.03%
pre-1950	39.05%	127	48.32%	30.18%	39.51%	40.88%
1950s-60s	38.78%	70	45.31%	32.84%	41.36%	38.63%
1970s	46.95%	105	55.87%	40.07%	45.27%	48.20%
1980s	45.38%	129	52.85%	39.73%	43.47%	46.88%
1990s	45.66%	173	49.62%	41.34%	45.88%	46.83%
2000s	49.25%	192	53.47%	46.63%	48.51%	48.94%
2010s	53.62%	217	57.32%	51.07%	52.53%	53.96%
2020s	64.96%	50	63.82%	68.98%	62.01%	64.36%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	45.31%	30.18%	39.51%	38.63%
		<b>Max:</b>	63.82%	68.98%	62.01%	64.36%
		<b>Diff:</b>	18.51%	38.81%	22.50%	25.73%

*Table 20: Average Score by Organization Decade Founded*

Decade	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.45	220	2.44	2.27	2.59	2.41
pre-1950	2.61	127	2.56	2.34	2.86	2.58
1950s-60s	2.63	70	2.62	2.40	2.83	2.57
1970s	2.43	105	2.38	2.18	2.66	2.44
1980s	2.48	129	2.43	2.24	2.66	2.52
1990s	2.45	173	2.41	2.29	2.62	2.45
2000s	2.38	192	2.37	2.24	2.50	2.40
2010s	2.27	217	2.23	2.15	2.40	2.30

BOVEE-GAZETT - SAMUELS

Decade	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
2020s	2.00	50	1.97	2.00	1.95	2.11
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	1.97	2.00	1.95	2.11
		<b>Max:</b>	2.62	2.40	2.86	2.58
		<b>Diff:</b>	0.64	0.40	0.91	0.47

Table 21: Average Budget and Staff Size by Organization Age

Decade	Count	Avg budget	Avg # employees
Pre-1950	66	\$23,644,123	144.4
1950s-60s	20	\$10,253,290	78.1
1970s	51	\$8,887,881	59.1
1980s	51	\$9,869,486	51.4
1990s	99	\$5,842,999	35.0
2000s	105	\$5,686,689	25.4
2010s	118	\$4,084,162	19.9
2020s	27	\$1,371,368	6.8

\* sub-sample of 537 organizations with both budget and employee count indicated and outliers removed

### *Organization Type*

Organization type appears to meaningfully influence technology risk levels and self-assessment outcomes. Among types with at least 20 assessments, Media/Technology organizations report the lowest overall risk flag rate (40.42%) and the highest average scores (2.61), outperforming peers across every category. Their performance is particularly notable in Leadership, where their risk flag rate (43.62%) is more than 10 points lower than any other group—suggesting stronger governance, decision-making structures, or alignment between leadership and technology strategy. Foundations and Faith-based organizations also perform well overall, with relatively low risk and solid average scores, particularly in Infrastructure and Engagement.

At the opposite end, Associations (58.64% risk rate) and Arts/Humanities organizations (50.43%) show the highest levels of concern. These groups consistently report elevated risk across categories, particularly in Infrastructure and Leadership, which may reflect underinvestment in operational systems or decentralized governance structures common in mission-driven organizations. Youth-focused nonprofits also exhibit above-average risk levels despite moderately strong scores in some categories, pointing to possible disconnects between aspirations and implementation capacity.

In the small comparison group, Government entities have very low scores on their two assessments. International nonprofits and For-Profit entities perform relatively well, with International organizations showing high scores and low risk across nearly all categories.

These results suggest that organizational types capture a complex intersection of mission, resources, and operating environment that can strongly influence technology readiness and risk exposure.

*Table 22: Average Risk Level by Organization Type*

Organization Type	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	47.35%	216	49.10%	54.10%	41.26%	48.45%
Association	50.62%	22	54.18%	57.45%	44.89%	46.53%
For-Profit Consultancy	47.91%	21	52.10%	44.90%	42.16%	55.59%
For-Profit Vendor	48.57%	3	45.10%	45.83%	53.85%	45.45%
Foundation	45.07%	30	48.54%	51.91%	35.36%	47.79%
Government	55.03%	2	63.46%	62.22%	31.48%	68.42%
Nonprofit - Advocacy/Political	48.64%	99	47.15%	53.92%	46.75%	47.19%
Nonprofit - Arts/Humanities	50.43%	53	52.51%	56.26%	49.41%	42.54%
Nonprofit - Education/Research	48.10%	114	48.96%	53.07%	45.63%	44.83%
Nonprofit - Environ/Animals	47.19%	144	47.16%	52.38%	43.21%	46.65%
Nonprofit - Faith-based	45.22%	33	46.81%	54.55%	37.34%	44.69%
Nonprofit - Health/Human Servc	47.18%	222	48.48%	53.98%	40.73%	47.56%
Nonprofit - International	40.40%	16	42.68%	40.21%	38.01%	41.44%
Nonprofit - Legal Assistance	47.29%	28	51.77%	51.64%	39.09%	48.24%
Nonprofit - Media/Technology	43.24%	29	45.76%	40.12%	40.93%	46.83%
Nonprofit - Public/Social Good	50.08%	153	50.13%	55.61%	44.99%	50.71%
Nonprofit - Youth	49.98%	68	49.35%	56.02%	46.75%	48.53%
Other	39.59%	30	37.66%	45.77%	34.91%	43.77%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	37.66%	40.12%	31.48%	41.44%
		<b>Max:</b>	63.46%	62.22%	53.85%	68.42%
		<b>Diff:</b>	25.80%	22.10%	22.36%	26.98%

*Table 23: Average Score by Organization Type*

Organization Type	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.45	216	2.44	2.27	2.60	2.42
Association	2.34	22	2.24	2.14	2.51	2.41
For-Profit Consultancy	2.43	21	2.31	2.36	2.64	2.30
For-Profit Vendor	2.37	3	2.38	2.33	2.35	2.47
Foundation	2.47	30	2.39	2.22	2.78	2.39

BOVEE-GAZETT - SAMUELS

Organization Type	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
Government	2.26	2	2.15	2.07	2.69	2.04
Nonprofit - Advocacy/Political	2.40	99	2.40	2.24	2.50	2.44
Nonprofit - Arts/Humanities	2.36	53	2.27	2.18	2.45	2.53
Nonprofit - Education/Research	2.39	114	2.36	2.22	2.52	2.45
Nonprofit - Environ/Animals	2.41	144	2.38	2.23	2.58	2.43
Nonprofit - Faith-based	2.48	33	2.41	2.26	2.71	2.45
Nonprofit - Health/Human Servc	2.43	222	2.39	2.23	2.63	2.42
Nonprofit - International	2.58	16	2.58	2.47	2.68	2.53
Nonprofit - Legal Assistance	2.41	28	2.29	2.27	2.67	2.38
Nonprofit - Media/Technology	2.51	29	2.40	2.55	2.63	2.45
Nonprofit - Public/Social Good	2.36	153	2.33	2.19	2.52	2.36
Nonprofit - Youth	2.37	68	2.37	2.19	2.51	2.38
Other	2.61	30	2.67	2.39	2.76	2.50
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	2.15	2.07	2.35	2.04
		<b>Max:</b>	2.67	2.55	2.78	2.53
		<b>Diff:</b>	0.52	0.48	0.43	0.50

*Organization Location*

Geographic location appears to have a moderate but consistent relationship with technology self-assessment outcomes. Organizations based in the U.S. Midwest and Northeast report the lowest overall risk levels, particularly in the Infrastructure category, where risk flags are lowest. These regions also report some of the highest average scores across categories, especially in Infrastructure and Engagement.

In contrast, organizations in U.S. Territories and the South show elevated risk rates and lower average scores, with the South showing the second-highest overall risk in the U.S. after West. Canadian organizations are clear outliers in this dataset: they report the highest overall risk flag rate (58.06 percent), the lowest average scores across most categories, and the highest risk in the Leadership category (63.83 percent). The cause of

this discrepancy is unclear based on available variables but may warrant further qualitative exploration.

Regional variation in Leadership scores is relatively modest compared to other categories. This suggests that regardless of geography, Leadership remains a broadly shared area of concern. While localized policy, funding, or infrastructure factors may contribute to regional differences, the consistency of certain trends across locations reinforces the broader structural patterns identified elsewhere in the dataset.

*Table 24: Average Risk Level and Score by Organization Location*

Location	Risk rate	Count	OG Risk	LD Risk	IF Risk	FC Risk
	46.68%	227	48.35%	53.29%	40.75%	47.78%
Canada	58.06%	75	58.42%	63.83%	52.07%	58.91%
International	48.45%	61	50.17%	49.95%	46.66%	47.22%
Midwest	44.36%	118	45.59%	52.07%	37.84%	43.58%
Northeast	44.58%	354	45.78%	50.47%	38.81%	44.77%
South	49.14%	149	49.72%	53.90%	45.58%	48.04%
US Territories	51.23%	31	48.54%	51.01%	50.42%	56.06%
West	49.42%	268	49.63%	55.03%	46.20%	47.39%
<b>All Time</b>	<b>47.74%</b>	<b>1283</b>	<b>48.60%</b>	<b>53.30%</b>	<b>42.92%</b>	<b>47.50%</b>
		<b>Min:</b>	45.59%	49.95%	37.84%	43.58%
		<b>Max:</b>	58.42%	63.83%	52.07%	58.91%
		<b>Diff:</b>	12.83%	13.87%	14.22%	15.32%

*Table 25: Average Score by Organization Location*

Location	Total Avg	Count	OG Avg	LD Avg	IF Avg	FC Avg
	2.47	227	2.46	2.29	2.62	2.44
Canada	2.16	75	2.09	2.00	2.35	2.19
International	2.40	61	2.36	2.31	2.50	2.41
Midwest	2.47	118	2.44	2.23	2.68	2.48
Northeast	2.49	354	2.44	2.30	2.68	2.48
South	2.38	149	2.35	2.22	2.52	2.41
US Territories	2.32	31	2.36	2.23	2.39	2.25
West	2.38	268	2.36	2.20	2.51	2.41
<b>All Time</b>	<b>2.42</b>	<b>1283</b>	<b>2.38</b>	<b>2.24</b>	<b>2.58</b>	<b>2.42</b>
		<b>Min:</b>	2.09	2.00	2.35	2.19
		<b>Max:</b>	2.46	2.31	2.68	2.48
		<b>Diff:</b>	0.37	0.32	0.33	0.29

*Additional observations*

Several additional patterns emerged during analysis that merit closer attention. First, question-level comparisons reveal stark disparities between small and large organizations—disparities not always visible in category averages. Based on employee count alone, 15 individual assessment questions show risk flag rate differences of 50 percentage points or more between the lowest- and highest-staffed cohorts. These large gaps suggest structural capacity differences that may affect not only technology maturity but also how organizations perceive and report on risk.

Second, longitudinal trends in item response behavior offer further insight into sector-wide shifts. For example, the proportion of respondents skipping questions related to on-premises server infrastructure (IF 16 and IF 17) has risen steadily over time—from less than one-third in 2018 to nearly 60 percent in 2024. This pattern likely reflects the widespread migration toward cloud-based systems and the concurrent decline in physical server

management. Additional analysis could clarify how this shift plays out across different organization sizes and types, and what implications it has for infrastructure resilience and cybersecurity risk.

Third, the data challenges assumptions about the link between cohort participation and repeat engagement. Of the 181 organizations with multiple assessments in the dataset, 131 are unaffiliated with any cohort group. The repeat assessment rates are nearly identical—14.5 percent among cohort participants and 14.0 percent among non-cohort organizations—indicating that cohort involvement is not a primary driver of repeated platform use. This finding raises important questions about what motivates organizations to return to the assessment tool and how future outreach or design efforts might better support longitudinal engagement.

## Recommendations

This project aimed to identify systemic challenges and potential leverage points within the Tech Accelerate dataset that can inform NTEN's future work. Through exploratory data analysis and a review of relevant literature, we offer the following recommendations to support continued development of NTEN's programming, advisory services, and data infrastructure:

- **Re-use and extend the data model.** The structure developed for this analysis can serve as a foundation for future internal and external research. Standardizing and

documenting it for ongoing use will improve consistency and comparability over time.

- **Investigate indicators of efficacy.** While correlations suggest positive outcomes for some organizations, further research—especially qualitative follow-up—could help determine whether changes in scores reflect actual organizational improvement.
- **Expand data collection and analysis.** The Tech Accelerate dataset remains limited in scale. Increasing both the volume of assessments and the depth of analysis will enable stronger trend identification and more targeted insights.
- **Normalize and enrich organizational metadata.** Adding temporal depth (e.g., capturing budget and staff size at the time of each assessment) and improving consistency in organizational attributes will allow for more accurate longitudinal and segmentation analysis.
- **Continue evolving the assessment instrument.** Updating and refining the Tech Accelerate survey—especially to address emerging technologies and practices—will ensure that the tool remains relevant and reflects the evolving needs of the sector.
- **Leverage the literature review outputs.** Through the literature review process, our team built a catalog that identifies and categorizes hundreds of documents and sources. Continuing use of this catalog can help inform future resource recommendations and program development.

## Re-Use and Extend the Data Model

Risk flag analysis proved to be a valuable methodology for interpreting Tech Accelerate data, and we encourage NTEN and future researchers to continue developing assessment-based insights using this approach alongside other measures.

To support ongoing work, a Power BI Desktop (.pbix) file containing the full data model is included in the project deliverables. This model can be updated by replacing the .csv input files with new Tech Accelerate database exports and refreshing the data. All transformed data tables used in this analysis will automatically update.

The .pbix file can also serve as the foundation for internal or public dashboards, using the Microsoft Power BI service. Additional capabilities—such as modifying or extending the model in Power Query—are supported. For example, since entity IDs in Tech Accelerate originated in Salesforce, the model could be connected to Salesforce via Power BI's connector to integrate CRM data with assessment results.

This data model is a core output of the capstone project and is intended as a reusable tool to support ongoing, rigorous analysis of Tech Accelerate data.

## Investigate Indicators of Efficacy

Key findings 1 and 2 offer preliminary signs of efficacy. They show that organizations completing multiple assessments tend to improve over time, and that TA group assessments have recently trended toward lower risk. These patterns point to areas where future qualitative research could help determine whether score improvements reflect real

organizational change—and if so, how assessment use or cohort participation contributed to that outcome.

This line of inquiry matters because outcome measurement is difficult. It's one thing to clean and report data on outputs; it's far more challenging to connect those outputs to the actual mission-level impacts that nonprofit staff work toward. When that connection is made, it not only validates a program's effectiveness—it builds credibility, motivates stakeholders, and encourages continued engagement. These findings suggest that Tech Accelerate may hold untapped potential as a tool for impact measurement. That possibility is worth pursuing.

#### Expand Data Collection and Analysis

Tech Accelerate is a high-value tool. The assessment is comprehensive, free, and based on the available data, repeated participation may help organizations improve how they manage technology.

Expanding the volume of assessment data would unlock significant analytic potential. With more responses, NTEN could enable deeper segmentation by organizational characteristics, apply more sophisticated variable combinations, and increase statistical power. At larger scale, the dataset could begin to represent a meaningful share of the U.S. nonprofit sector—enabling stronger inferences about national trends.

This is an ambitious target, but it's worth pursuing. We recommend that NTEN invest in marketing and awareness efforts aimed at increasing assessment completion.

Additionally, we recommend pairing any expansion push with a parallel investment in analysis, beginning with focused efficacy research and extending into other high-potential areas, including:

- A deeper investigation into the post-2021 score declines: what drove it, what organizational and systemic change it reflects, and why certain questions were more affected than others.
- A targeted analysis of disparities: identifying why certain questions carry much higher risk for specific organization types or sizes.
- A review of declining response rates for infrastructure-related questions: assessing whether these shifts reflect widespread adoption of cloud systems or permanent transitions to remote work—and whether those trends vary across the sector.

#### Normalize and Enrich Organizational Metadata

The source data includes outliers and non-numeric entries in the budget and tech budget fields. These were handled through find-and-replace operations in the data model to convert values to numeric format or remove unusable entries. Ideally, this data would be cleaned at the source and standardized going forward so that organizational budget figures are consistently recorded as whole numbers.

A more substantive methodological improvement would be to record budget and staff size as time-variant, dimensional variables rather than static attributes. Because these metrics can fluctuate considerably, capturing them only at the organization level—as is the current practice—obscures temporal changes and limits the accuracy of longitudinal

analyses. For organizations with multiple assessments, or for those that start and complete an assessment years apart, it is unclear whether these values reflect conditions at the time of the assessment. We recommend exploring ways to capture these metrics dimensionally, tied to the timing of each assessment, and assessing whether existing data can be backfilled using public sources such as GuideStar or ProPublica’s Nonprofit Explorer.

We also recommend expanding the organizational metadata fields to support more granular comparisons, including:

- Urban vs. rural location
- National vs. regional vs. local scope
- Whether the organization is led by people in groups who experience marginalization like race, gender, ability, and class.

In addition, we suggest updating the Location field to include an option for “U.S.-based, fully distributed” to reflect the growing number of remote-first organizations.

### Continue Evolving the Assessment Instrument

The Tech Accelerate survey has grown over time into a comprehensive 97-question assessment. As new questions are added to reflect emerging priorities, it may also be time to review and consolidate or retire questions that have shown limited relevance, clarity, or variance.

The following items are potential candidates for removal, revision, or consolidation based on observed patterns in the data:

- **FC 07 – Website support for mobile users**

This question shows consistent scores with little variation across categories.

Mobile responsiveness is now a standard feature in most website platforms.

Consider removal.

- **IF 08 – Secure printing of sensitive documents**

This question consistently receives low scores across all categories, suggesting that the practice is either outdated or uncommon. Consider replacing it with a question focused on secure digital document workflows (e.g., e-signatures or encrypted file sharing).

- **IF 14 – Policies for vendor-maintained systems**

This item is vague and underperforms across all segments, suggesting either low adoption or poor comprehension. Consider revising the question for clarity or removing it.

- **IF 18 – Comprehensiveness of password policy**

Scores are consistently low and show moderate variation. Consider replacing this with a more current question on use of managed authentication solutions such as password managers or Single Sign-On (SSO).

- **LD 14 – Technology use for board communication**

This item shows minimal risk across all categories and likely reflects a mature, standardized practice. Consider removal.

- **LD 19 – Support for remote work costs**

Scores are consistently poor across all segments, suggesting the practice is uncommon despite its importance. Consider removal due to low variation and limited actionability.

- **OG 11 and OG 12 – Use of self-service systems for HR and finance**

These two items produce nearly identical metrics and category trends. Consider consolidating them into a single question.

In addition to refining or removing existing items, we recommend the following additions and improvements:

- **New question:** Assess whether the organization provides cybersecurity training or a phishing prevention program.
- **User feedback loop:** Incorporate an in-app feedback feature allowing respondents to flag questions as unclear, outdated, or especially useful at the time of assessment.
- **Results presentation:** Currently, results in the web interface and PDF are presented in fixed question order. Consider reordering results by questions that have the highest average scores or lowest risk flag rates. Surfacing points where risk

appeared in areas of relative strength first may help organizations identify easier starting points for improvement.

### Leveraging the Literature Review Catalog

Through the literature review, the team compiled a catalog of over one thousand articles, including hundreds of relevant academic and practitioner sources for ongoing reference. Our team used Elicit.com, a platform that applies generative AI to research workflows. Leveraging Elicit's Structured Literature Review feature, we produced machine-generated summaries of the most relevant papers for multiple research questions related to this project. These reports informed the present review and are archived with the project deliverables for future reference.

The collected resources span nonprofit management, technology management, and the intersection of these domains. The complete catalog is available as a downloadable document to support future resource recommendations and program development. This is significant because it provides NTEN with a curated catalog of materials they can draw from to help identify high quality resource links to serve on Tech Accelerate assessment reports in response to answers where respondents exceed risk thresholds.

## Part 2: Literature Review

### Introduction

This literature review is guided by the four core domains defined in the Tech Accelerate framework: engagement, infrastructure, organization, and leadership. We have added a fifth category, emerging technology, which, while not formally included in the current Tech Accelerate instrument, is a recurring theme across multiple questions, particularly those concerning AI usage policies. We include a review of literature on emerging technology in recognition of its growing relevance to the evolving landscape of nonprofit technology use.

Our approach is both deductive and exploratory. We begin with a structured review of literature aligned to each of the five categories. To refine our focus within each domain, we incorporate insights from exploratory data analysis of existing Tech Accelerate results, identifying the highest- and lowest-performing subcategories to highlight areas of strength and persistent challenge. Our primary metric is the proportion of responses that trigger a risk flag—i.e., scores falling below NTEN’s defined threshold for recommended organizational action. We also consider broader literature relevant to each thematic domain to surface best practices, common barriers, and forward-looking recommendations.

For the Emerging Technology category, we first draw from NTEN’s reports and community insights, then expand our review to include nonprofit, business, academic, and public-sector sources. This cross-sector perspective supports a more comprehensive understanding of how contemporary emerging technology themes—such as digital

transformation and artificial intelligence—are evaluated and adopted in mission-driven contexts.

Our review incorporates both scholarly and practitioner literature. We used keyword tagging to map insights directly to Tech Accelerate items and categories, ensuring both conceptual alignment and practical relevance. Throughout the discovery process, we employed several predictive and generative AI tools—specifically ChatGPT Deep Research, Connected Papers, Elicit, Exa.AI, and Microsoft Copilot—to support search, filtering, and summarization. These tools served as accelerators, not as exclusive or uncritical sources; all output was processed by human review and critical synthesis. Our use of multiple AI tools was intentional: we sought to experiment with emerging resources that are increasingly relied upon for research and synthesis, with the goal of better understanding their capabilities as well as their limitations.

## Engagement

Tech Accelerate includes 19 questions related to systems and practices that directly support communication, fundraising, and program delivery with constituents.

Three questions in this section are flagged as significant risks by more than three-quarters of respondents. The two lowest-performing items relate to digital accessibility: FC14 (To what degree is your website accessible for individuals with disabilities, including visual, sensory, and hearing impairments?) and FC15 (To what degree are your technology-supported or digitally delivered programs, services, and events accessible for individuals

with disabilities, including visual, sensory, and hearing impairments?). The third item, FC16 (How often do you include constituents in planning and decision-making processes for technology projects?), highlights a gap in constituent engagement in technology planning.

Two questions in this area show the fewest signs of risk and relate to program data collection and evaluation. FC18 (Are you able to tell whether your programs are benefiting the intended groups or communities?) has the lowest rate of risk flags in the category at 13 percent, though 39 percent of responses still fall into the warning range. Similarly, FC19 (How often is input from clients or program participants collected and used to inform how services are delivered?) has a 21 percent risk flag rate, but 60 percent of responses are warning flags, with only 19 percent unflagged.

### Digital Accessibility

Digital transformations have rapidly shifted communications, transactions, and services online. However, significant disparities remain in who can effectively access these platforms, with one of the most pronounced being the accessibility gap.

Pew Research reported in 2021 that over 40 million people in the United States have a disability. While three-quarters of adults with disabilities use the internet daily, they are nearly 20 percent less likely than adults without disabilities to own a computer or smartphone, and three times more likely to report never going online (Perrin, 2021).

Accessibility is a critical consideration in website design. It not only benefits individuals with disabilities but also improves usability for all visitors and enhances search engine optimization (Heitzman, 2024). The World Wide Web Consortium (W3C) outlines four key principles for web accessibility:

- **Perceivable** – content is presented in ways users can perceive
- **Operable** – users can navigate and interact with the interface
- **Understandable** – content is clear and comprehensible
- **Robust** – content can be reliably interpreted by assistive technologies (W3C, 2025)

Beyond usability, there are compliance and legal risks associated with neglecting accessibility. Organizations that receive federal funding may be subject to Section 508 standards, which mandate that digital content be accessible to individuals with disabilities (U.S. Access Board, 2025). In addition, businesses face increasing legal exposure, with some encountering monetary demands or lawsuits for violations of the Americans with Disabilities Act (ADA)—sometimes pursued by attorneys accused of predatory practices (Maxwell, 2025).

The consequences of inaccessibility are far-reaching. Documented impacts include reduced access to digital mental health services (Kozelka, 2023), student financial aid (Taylor, 2020), public libraries (Yi, 2015), and public health information (Fernandez-Diaz, 2020).

Nonprofit organizations deliver essential services in their communities. Prioritizing accessibility in digital systems design is therefore imperative to ensure equitable access for all.

### Involving Constituents in Technology Planning

Community engagement is widely discussed but translating the concept into authentic and meaningful practice remains challenging. While the value of co-creating solutions with constituents is broadly accepted, success depends on more than simply inviting participation. Community members must feel genuinely heard; otherwise, the process risks fostering resentment among those who feel their input was ignored or exploited for publicity purposes (Pozzebon, 2024).

When constituents are meaningfully engaged, the impact can be transformative. When developed through community-centered approaches that incorporate the lived and learned experiences of staff and constituents, technology becomes a tool for advancing goals while minimizing harm (Bruce et al., 2023). Academic research supports this view. Studies emphasize the value of human-centered design in building successful digital platforms for community-based organizations (Lyles, 2023) and highlight how listening to client communication preferences can improve the adoption of new technologies (Kang, 2020). It is well established in the literature that involving affected stakeholders during the program design phase fosters a sense of ownership and influence over implementation. The same principle applies to digital systems: technologies are more likely to succeed when the people who rely on them have a voice in shaping them (Liket, 2015).

## Data Collection and Evaluation

A more encouraging finding in the data—one that may also serve as a foundation for deeper stakeholder engagement—is the low rate of risk flags on questions related to program data collection and evaluation. The Minnesota Council of Nonprofits defines evaluation as a strategic process, distinct from reporting, that enables nonprofits to improve the effectiveness and efficiency of service delivery (MCN, 2025). The Bridgespan Group similarly distinguishes between data measurement and outcome learning. They recommend beginning with a guiding star rooted in a clear understanding of the system and deep engagement with affected stakeholders, followed by identifying measurable outcomes, monitoring progress, and adapting accordingly (Collins, 2024).

Researchers studying performance measurement in nonprofits highlight several challenges, including the complexity of human behavior, organizational variability, the importance of staff capacity, and the need to integrate user perspectives into system design and evaluation strategies (Carnochan, 2014). Other studies have found a positive correlation between employees' acceptance of new technologies and their perception that the organization is honoring its psychological contract, indicating that implementation strategy plays a significant role in technology adoption (Wraikat, 2017).

A nonprofit's reputation is a key driver of its strategic capacity and influence. Organizations perceived as more effective often secure greater funding and community standing. Data collection and evaluation are essential practices that enable such organizations to both ensure and demonstrate their effectiveness (Mitchell, 2016).

## Infrastructure

Tech Accelerate includes 27 questions related to how systems and data are securely managed to support staff and constituents.

Data management and security strategies tend to evolve with organizational size. Small organizations are typically the most at risk, often relying on informal support from volunteers or board members. Midsize organizations may implement basic platforms with limited formalization, sometimes supported by one or more dedicated technology staff. Large nonprofits generally operate at a scale comparable to corporate IT departments, staffed with specialized professionals across multiple roles.

The lowest-performing items in this section pertain to data governance and cybersecurity. More than 80 percent of responses to IF28 (Do you have and maintain a policy for regularly removing bad or unnecessary data from your systems?) and 75 percent of responses to IF03 (Do you have and test a business continuity or disaster recovery plan?) indicate risk. System integration is also a major gap, with three-quarters of responses to IF05 (To what degree are your key business systems integrated?) identifying it as an area of concern.

Remote access to systems and information is a relative strength in the evaluation data and aligns with broader trends in 2025 across sectors. Like many industries, nonprofits have migrated most or all of their enterprise software to the cloud. Fewer than 25 percent of responses to IF12 (Do you provide staff with devices for remote access to information

and systems, e.g., laptops, tablets, mobile phones?) and IF13 (Are your key business systems and documents accessible from outside the office, e.g., via a cloud or VPN?) are flagged as risks. Both questions show positive trends, with 2025 risk flag rates down nine and thirteen percentage points, respectively, compared to 2022.

However, a key caveat is the significant disparity by organizational size. The infrastructure category shows the largest performance gap between small and large organizations. For example, IF12 is flagged as a high-risk area in over half of responses from organizations with five or fewer staff, compared to fewer than one in ten organizations with 150 or more employees.

### Data Governance

Data governance is a challenge across organizations of all sizes. Even among the largest nonprofits, there is at least 70% likelihood of a risk flag on IF12.

One explanation for this widespread difficulty may be found in research published in the American Journal of Evaluation, which highlights the scaling challenges of operationalizing data-driven decision-making (DDDM). Even within a single organization, individuals often hold divergent views about DDDM practices and culture, making alignment increasingly complex and resource intensive as organizations grow (Maxwell, 2016).

An evaluation of youth-serving organizations' data practices, published in The Journal of Community Informatics, identified several recurring tensions between current data collection practices and ideal standards. These include:

- Differentiating useful from non-useful data
- Contextualizing data through relationships
- Involving constituents in data collection
- Balancing efficiency and thoroughness in data processes
- Ensuring data quality and mitigating bias (Fink, 2022)

NTEN's 2025 Digital Equity Guide offers guidance on data governance aligned with equity, privacy, and ethical data use. Recommendations include:

- Be transparent with constituents about data collection, usage, and retention
- Allow constituents to opt out of data collection
- Collect only necessary data
- Prioritize security and privacy by design
- Understand and comply with regulatory requirements
- Establish and train staff on internal data use and sharing policies
- Identify low-risk vs. high-risk data for AI system inputs
- Develop a data breach and disclosure response plan
- Safeguard constituent data as rigorously as financial data

- Set clear retention policies and delete identifiable data after expiration (NTEN, 2025)

Effective data governance is increasingly essential—not only as a prerequisite for responsible AI adoption but also as a defense against growing security threats. These include both cybercriminal activity, such as ransomware attacks, and legal risks, such as data subpoenas from adversarial actors (Herschander, 2025). The contrast between this high-risk environment and the widespread deficiencies highlighted in Tech Accelerate data underscores the urgency for sector-wide improvement in data governance practices.

### Cybersecurity

The cybersecurity threat landscape is daunting, and organizations need to take active steps to protect the privacy and security of their data. Major risks include both reputational damage and financial and operational impacts. (Cunningham, 2024)

The National Council of Nonprofits advises organizations to start with a risk assessment, determine which data the organization maintains that poses the greatest risks, focus on the most likely actual risks, and consider whether the organization needs to purchase cyber liability insurance. (NCN, n.d.)

Research has repeatedly demonstrated that small and medium size organizations experience significant challenges implementing effective cybersecurity programs. A study that analyzed cybersecurity readiness in small and medium nonprofits during COVID-19 found significant gaps and recommended a greater emphasis on cybersecurity readiness

by senior management at nonprofit organizations. (Bell, 2023) Another study looking at cybersecurity issues and needs in rural Pennsylvania found that it's particularly difficult for nonprofits in rural communities with limited resources and limited staff proficiency to effectively manage cybersecurity issues. (Gardner, 2023)

Information security risks are the dark side of digital transformation, and as the latter continues to accelerate, the importance of addressing the former will continue growing as well. Nonprofit organizations are not immune to these threats, and enhanced sector-wide awareness and improvement in this area is imperative.

### Remote Access

Although this section has largely focused on emerging threats, there are also many significant benefits that have been gained from digital transformation efforts and shifts to cloud infrastructure. Among the most significant of these has been the widespread enablement of remote work.

Business benefits of cloud migration go beyond just remote access. They also fundamentally change an organization's tech stack dynamics in terms of scalability, cost efficiency, and disaster recovery and business continuity capabilities, while accelerating new technology deployment times, enhancing agility and innovation. (Brzozowski, 2024) For nonprofits, cloud management platforms can help create or optimize operations and improve stakeholder relationships, impacting mission fulfillment and program needs. (Azevedo, 2021)

The Tech Accelerate dataset indicates that a declining share of organizations are maintaining on-premises servers. The share of respondents who answered questions IF16 and IF17 (both related to on-premises server security) has significantly declined in the past five years, from over 60% of respondents answering those questions in 2020 to about 40% answering them in 2025. Meanwhile, questions IF12 and IF13 (both related to enabling staff remote access) are simultaneously trending towards improvement while also showing that smaller organizations significantly lag larger ones.

Research indicates that the main barriers to cloud system adoption that small nonprofit organizations encounter are financial constraints (Aliata, 2017), challenges related to technical infrastructure and security (Modisha, 2012), and organizational obstacles related to expertise gaps and resistance to change (Omojola, 2025). The Tech Accelerate data indicates that even relatively small increases in technology funding makes a big difference in this area; organizations with technology budgets under \$5,000 a year show risk flag rates over 50% higher for IF13 and over double for IF12 compared to organizations with \$5,000-\$15,000 annual IT budgets.

## Organization

Tech Accelerate includes 27 questions related to the policies and practices that support equitable and effective technology, access, training, and use by all staff.

Analysis of the data reveals that the lowest-performing item is OG21 (Do you have a policy and practice for reviewing data for bias?). Another low-performing item addressed in

this literature review is OG19 (To what degree are your technology-related training materials accessible to all staff and offered in multiple formats for different learning styles?). Both questions are flagged as risks in more than 80 percent of responses.

Two newly added questions related to artificial intelligence also show very poor performance: OG27 (Do you have a policy and practice for reviewing artificial intelligence tools or applications for bias?) and OG26 (Do you have a policy defining appropriate use of artificial intelligence tools or applications?). Data collection for these questions began in early 2025, with just over 100 responses for each. More than 80 percent of those responses meet the risk flag threshold. These topics will be discussed further in the Emerging Technologies section of this paper.

The highest-performing item in the Organization category is OG25 (To what degree has the use of technology and data allowed the organization to increase its program and/or mission impact?), with only 15 percent of responses indicating risk. OG24 (How regularly is data used to improve or adapt program implementation?) follows closely, with a risk flag rate of approximately 20 percent.

### Reviewing Data for Bias

Data is not neutral. Although often perceived as objective, data is produced through human decision-making and reflects the biases inherent in those processes. When data is misinterpreted as purely objective, it obscures critical context and limitations (Hobor, 2022).

A practical recommendation for organizations seeking improvement in this area is to conduct a racial equity audit. Such an audit begins with an internal examination of purpose, leadership, strategy, and culture, and then extends to assess partnership demographics. Equity-focused assessments like this can provide a strong foundation for sustainable organizational change (Harris, 2023).

Nonprofits are also encouraged to embed equity into their measurement, evaluation, and learning practices. Centering constituents through authentic engagement during program design can lead to better-informed data collection by clarifying which outcomes matter most to the communities served (Collins, 2025).

To mitigate bias in data, organizations must be intentional about the questions they ask and the methods they use to collect information. Candid offers a useful example: the organization revised its approach to collecting gender, race, and ethnicity data by incorporating constituent feedback. By aligning data options with individuals lived identities, Candid shifted toward a more inclusive, people-centered data collection model (Gagarin, 2024).

### Accessible Training Materials

Training policies are most effective at reducing digital inequity when they combine strong technological infrastructure with human-centered support. A foundational step is grounding training efforts in adult learning principles. Malcolm Knowles' Four Principles of Adult Learning are widely referenced:

- Involvement – adults learn best when involved in planning their learning
- Experience – adults learn best through action and reflection
- Problem-Centered – adults learn best when challenged by real-world problems
- Relevance – adults learn best when the content is meaningful and applicable

(Cohen, 2024; Satterfield, 2025; Hooper, 2018; eLearningAcademy, 2023; University of San Diego, 2022)

Established instructional models such as Knowles’ Principles, the ADDIE Model, and Bloom’s Taxonomy offer a strong starting point (Nonprofit Learning Lab, 2024). However, these frameworks often fall short in addressing diverse learning styles and accessibility needs.

Research shows that co-creating content with communities enhances both relevance and engagement (Drazich, 2021), that peer-led and cohort-based learning fosters trust—particularly in marginalized populations (Lee, 2023), and that training is more inclusive when offered in multiple formats and languages to reflect the diversity of staff backgrounds (Dona, 2022). The literature also warns that intersectional and demographic considerations are too often overlooked, perpetuating inequities in access and outcomes (Silva, 2024).

NTEN’s 2025 Equity Guide offers actionable recommendations for making training more accessible:

- Use examples and visuals that reflect a diversity of experiences

- Design all materials for accessibility
- Provide materials in the languages commonly spoken in the community
- Ask trainees directly about accommodation needed
- Support different learning styles through varied training formats

By combining instructional design with the best practices with a commitment to equity and inclusion, organizations can co-create more effective and inclusive training programs with their stakeholders.

### Program Impact

Using data to adapt programs and measure impact is a relative strength in the Tech Accelerate assessment results, with fewer than 20% of respondents flagged as at risk in this area. One likely driver of this progress is the influence of program funders, who often require data collection and measurement as a condition of funding—and frequently provide resources to support these efforts (Nikita, 2024).

Measurement is valuable not only to gauge success but also as a learning process that builds organizational capacity to apply data meaningfully (Searle, 2025). However, to be effective, the data collected must align with the organization’s theory of change and broader strategic goals. Without that alignment, measurement efforts risk becoming irrelevant or disconnected from impact (Katell, 2015).

Despite progress, systemic barriers persist. Organizations may struggle to identify meaningful metrics, lack the technical skills to manage data effectively, or find it difficult to prioritize data work within resource-constrained environments (Mayer, 2022).

The National Council of Nonprofits recommends several practical strategies to simplify and improve data practices:

- Create a clear measurement strategy
- Conduct a data audit to assess current practices and needs
- Eliminate nonessential measurement tasks and tools
- Streamline data processes through automation and documentation (Strong, 2023)

Systems change work is inherently complex, difficult to sustain, and even harder to measure. The nonprofit sector's growing commitment to data collection and evaluation represents a promising shift, with significant potential to support long-term impact.

## Leadership

The Tech Accelerate instrument includes 25 items focused on organizational technology leadership and the extent to which technology supports strategic decision-making, organizational culture, and mission effectiveness. This section captures the frequency and maturity of practices such as board participation in technology planning, evaluation of staff practices, budgeting, and alignment with strategic direction. Because Leadership is consistently the lowest-scoring category in the Tech Accelerate dataset, we have expanded our analysis to better understand contributing factors and support the application of best practices.

Our analysis identified the lowest-performing items—based on the percentage of risk flags—as LD10 (integration of technology into the organization’s strategic plan) and LD17 (conducting return-on-investment analyses for technology initiatives). While board involvement in technology planning (LD25) and technology-related risk management (LD24) triggered fewer risk flags, both showed warning flag rates near 50 percent and below-average scores, suggesting latent issues even where critical risk was not present.

The highest-scoring items included LD13 (presence of a technology champion in leadership), LD16 (existence of a dedicated technology budget line item), and LD18 (staff job descriptions including technology-related skills). These items point to areas of relative strength that could serve as leverage points for improving technology leadership across the sector. In the sections that follow, we explore each of these areas in greater depth, linking them to recommended practices and actionable strategies.

## Integrating Technology into Strategic Plans

Nonprofit organizations, like the for-profit and government sectors, are increasingly integrating technology into their strategic plans to enhance mission delivery, improve operational efficiency, and expand stakeholder engagement (CFO Selections, 2023). Scholars highlight that this integration is not merely about adopting digital tools but about aligning technological capabilities with organizational goals (Hannerman et al., 2024). Studies show that strategic technology adoption in the nonprofit sector is often driven by pressures to demonstrate impact, compete for limited funding, and meet rising expectations from donors, clients, and volunteers (Gregory & Howard, 2009; Guo & Saxton, 2014; Barman, 2017; Yale Insights, 2018).

Nonprofits are adopting tools such as customer relationship management (CRM) systems, data analytics platforms, and cloud-based collaboration software to support fundraising, program delivery, and performance measurement. However, the literature also notes that successful integration requires leadership commitment, a clear strategy tied to delivering impact, digital literacy across staff, and a change management strategy to overcome resistance and ensure alignment with the organization's mission (Ahmed et al., 2024; Dicks, 2024; McKinsey & Co., 2024).

Despite growing enthusiasm for digital transformation, nonprofits often face significant structural and cultural barriers to integrating technology strategically. Research indicates that limited financial resources, inadequate IT infrastructure, and a risk-averse culture can hinder effective technology adoption (Hackler & Saxton, 2007). Moreover, many nonprofits,

regardless of size, face similar barriers to technology adoption. These include a lack of a dedicated technology staff with appropriate skills to assess and implement digital tools within a broader strategic framework, a lack of leadership support for technology implementation (often due to financial constraints and caution about implementing expensive new systems), and a prevalence of software specialized for fundraising but not for program delivery (Godefroid et al., 2024).

As a result, technology use tends to be ad hoc or reactive rather than purposefully integrated. Scholars argue that bridging this gap requires a more intentional approach to digital planning—one that treats technology as a driver of mission outcomes rather than a peripheral support function. This shift involves rethinking governance structures, investing in digital capacity-building, and embedding technology considerations into the organization's overall theory of change (La Piana, 2018).

### Board Engagement on Technology Issues

In the nonprofit sector, it's increasingly important for boards of directors to take an active role in technology governance. Susan Kenny Stevens' 2001 book, *Nonprofit Lifecycles*, frames the idea that organizations have different needs at different lifecycle stages, including from their board of directors. Start-up organizations frequently have working boards, where board members volunteer their time and talents to help run the organization. Mature organizations on the other hand are staffed by professionals who run the operations, while the board is better kept focused on governance policy and community relationships. (Stevens, 2001)

Nonprofit boards play fiduciary, strategic, and generative roles (Chait, 2005), and their members have legal duties of care, loyalty, and obedience to the organization. (NCN, Board Roles and Responsibilities). In today's world, the scope of board responsibilities now extends to guiding technology strategy and managing digital risks. Hannerman et al. (2024) report that only about a quarter of nonprofits have a defined digital strategy, despite evidence that organizations with successful adoption strategies are four times more likely to achieve positive outcomes.

Board engagement is becoming increasingly critical as digital technologies play a growing role in advancing organizational objectives. However, these technologies also introduce new risks related to privacy, data collection, and analytics. Nonprofits are particularly vulnerable to cyberattacks; according to Crowdstrike (2024), hackers often target nonprofits due to their limited technology budgets and high-impact missions.

To address these challenges, experts recommend that nonprofits increase efforts to recruit tech-savvy board members, incorporate technology governance topics into board member onboarding programs, and establish technology committees led by board members with relevant expertise and who regularly liaise with their organization's technology staff.

### ROI Measurement of Technology Strategies

Measuring the return on investment (ROI) of technology strategies in nonprofit organizations presents unique challenges due to the sector's mission-driven focus and the difficulty of quantifying social impact (Nielsen et al., 2020; Evey, 2023). Traditional ROI

frameworks, often rooted in for-profit metrics like revenue growth or cost savings, are insufficient for capturing the full value of technology investments in nonprofits. Scholars and practitioners argue for more nuanced approaches that integrate both financial and non-financial indicators, including improvements in service delivery, stakeholder engagement, and organizational learning (Moody, 2015). For instance, the adoption of customer relationship management (CRM) systems may not yield immediate financial gains but can significantly enhance donor retention and engagement, ultimately contributing to long-term sustainability.

Research also suggests that clear outcome measurement frameworks—such as logic models or balanced scorecards—can help nonprofits track the strategic benefits of technology in alignment with their mission (Kaplan, 2003). Strategic goal-setting frameworks like Objectives and Key Results (OKRs), often used in for-profit organizations, can also be adapted for nonprofit organizations (Mullen, 2023; Laker, 2024). Building effective mechanisms for ROI measurement depends on leadership buy-in, clear goal-setting processes, and ongoing data collection and evaluation processes that are embedded into strategic planning cycles.

### Technology Champions

Technology champions play a critical role in driving adoption and embedding best practices within nonprofit organizations, where change efforts often hinge more on trust and peer influence than formal authority. Unlike top-down implementation strategies, champion-driven adoption leverages informal networks to build confidence, model usage,

and contextualize new tools within the organization's mission (Microsoft, 2018). In resource-constrained settings, tech champions help translate the abstract promise of digital systems into tangible improvements in service delivery, stakeholder engagement, and operational efficiency (PwC, 2024). Their presence helps ensure that technology initiatives are not perceived as external impositions but as mission-aligned enhancements to the work staff already value.

The role of the champion is well established in the change management literature, with scholars and practitioners emphasizing their centrality in driving transformation. John Kotter identifies the formation of guiding coalitions and visible champions as foundational to successful change efforts (Kotter, 1995), while Prosci and the Change Institute highlight champions as critical translators who bridge leadership intent and staff experience (Change Institute, 2021; Prosci, 2023).

In nonprofit settings, where cultural alignment and trust are paramount, effective tech champions possess not only technical proficiency but also emotional intelligence, credibility, and a deep sense of purpose. These characteristics enable them to lead through influence, reduce resistance, and create conditions for sustained learning and behavior change—factors consistently cited as predictors of success in change initiatives (Training Industry, 2018; HBR, 1995).

To leverage tech champions effectively, nonprofit leaders should begin by identifying individuals who exhibit mission alignment, communication skills, and baseline digital fluency. These champions should be visibly supported with leadership endorsement, time

allowances, and access to resources such as training, community platforms, or pilot opportunities (Microsoft, 2018).

Beyond individual enablement, champions should be empowered to build peer-driven change network – trusted spaces where staff can ask questions, share successes, and learn collaboratively. Crucially, organizations must also establish structured two-way feedback channels so that champions can surface frontline insights and challenges to leadership, while leadership reinforces how technology efforts align with strategic goals. When designed with intentionality, this ecosystem of support allows champions to serve as critical enablers of mission-aligned digital transformation.

### Technology Budgeting

Technology budgeting in nonprofit organizations continues to reflect structural underinvestment, driven by both internal constraints and external funding limitations. NTEN’s 2024 Nonprofit Digital Investments Report found that 69% of nonprofits rely solely on general operating funds for technology, with little support from grants, major donors, or government contracts (Hulshof-Schmidt, 2024).

This model reinforces a short-term, reactive approach to budgeting, where hardware and software are prioritized, but staff training, cybersecurity, and long-term planning are often overlooked. The Chronicle of Philanthropy’s 2024 survey echoes these findings: while 77% of nonprofits expect technology needs to grow in the next two years, only 19% say they’re using technology in advanced ways (Daniels, 2024). The gap is particularly evident

in staffing, with 64% of organizations saying a lack of in-house expertise is a major obstacle to their tech strategy.

Best practices in nonprofit technology budgeting increasingly emphasize strategic segmentation, inclusive decision-making, and full lifecycle planning. Brown (2024) recommends using a complexity vs. benefit matrix to prioritize IT spending, seeking dedicated funding for technology from donors, and avoiding technical debt – the long-term costs that are incurred by adopting cheap and unsustainable technology solutions. McCoy (2023) recommends segmenting expenditures by criticality level and establishing clear KPIs for technology investments. Landeman (2025) highlights often-missed budget categories—such as training, backups, and cybersecurity—as essential to long-term digital resilience.

Yet NTEN’s 2024 report shows only 1% of tech budgets go toward staff enablement, and only 22% of organizations report having adequate evaluation capacity for new tools (Hulshof-Schmidt, 2024). These gaps point to a broader need: technology budgeting must be reframed as a strategic and participatory function, where nonprofits allocate not just for tools, but for the systems and people who sustain them.

To shift toward more resilient digital ecosystems, nonprofits and funders must transform both budget structure and culture. NTEN’s Equity Guide for Nonprofit Technology urges organizations to embed technology into strategic planning cycles, engage boards in digital oversight, and reject the notion of tech as administrative bloat (NTEN, 2025). The Chronicle of Philanthropy report found that nearly 62% of nonprofit

leaders want more time to vet and implement IT solutions, and 34% cite the learning curve as an obstacle to implementation, highlighting the need for training and proactive planning (Daniels, 2024).

Transparency is also critical: although over half of nonprofits report technology spending to internal leadership, only 13% share that information with funders, perpetuating the false perception that digital costs are peripheral to mission work (Hulshof-Schmidt, 2024). To correct this, organizations should integrate tech budgeting into programmatic storytelling and advocate for funding that supports full implementation, including training, evaluation, and iterative improvement.

### Tech Skills in Nonprofit Job Descriptions

As technology becomes more deeply embedded in nonprofit work—from fundraising platforms to digital service delivery—tech skills are no longer confined to IT departments. But many job descriptions still don't reflect this shift. Some are vague or outdated, while others overemphasize tools rather than the outcomes those tools enable. According to NTEN, this mismatch between job requirements and tech capacity can create barriers to hiring and advancement, especially for candidates from underrepresented backgrounds who may not have had equal access to formal training (NTEN, 2023).

A better approach centers job descriptions around outcomes, transferable skills, and a commitment to learning. Nieto-Rodriguez (2023) says that rigid, task-based descriptions often fall out of date quickly and discourage cross-functional collaboration or experimentation with new tools. Instead, they argue that job postings should describe

what the role is meant to accomplish and how tech skills support that mission. For example, rather than simply listing “experience with Salesforce,” a nonprofit might say: “Use CRM data to improve donor retention and personalize engagement.” This not only signals the purpose of the technology but also opens space for capable, mission-aligned candidates who may not yet be experts but can learn on the job.

To make this work in practice, nonprofits should clearly define which tech skills are essential on day one and which can be learned with support. They should also involve staff in shaping job descriptions, avoid overly technical jargon, and name their internal systems so expectations are clear. Job descriptions should not demand every possible task or be the sole responsibility of HR to write (Long, 2025). As AI becomes more prevalent, skills that augment new AI tools should also be prioritized (Loaiza & Rigobon, 2024). These include skills like empathy, critical thinking, effective communication, and creativity.

## Emerging Technologies

Across all sectors, organizations are focused on adopting digital technologies to improve their efficiency and effectiveness (IBM, 2024). In recent years, deploying artificial intelligence (AI) has become an imperative for many organizations, with the Center for Effective Philanthropy (2024) finding that 82% of nonprofits report using AI, and McKinsey (2024) estimating that 92% of private sector firms plan to invest in AI within the next 3 years. However, nonprofit organizations and private sector firms are also pursuing other technologies, such as cloud computing, cybersecurity, remote work, and the Internet of Things (IoT) (McKinsey, 2025; IBM, 2024). These efforts are grouped under the term digital

transformation and represent a significant shift in how organizations not only utilize technology, but also how they measure effectiveness, acquire and utilize talent, and pursue their missions.

To create value, emerging technologies must be integrated into an organization's workflows and processes (McKinsey, 2025; Feigenbaum and Gross, 2021). Recent scholarship on AI adoption shows that efficiency gains are limited when organizations adopt new tools, but then do not provide sufficient training to human operators or update their value-producing activities to take advantage of the technology's unique capabilities (Humlum and Vestergaard, 2025). These findings show that it is at least as important for nonprofit organizations to pay attention to the policy and governance of new AI tools as it is to adopt them.

NTEN's research emphasizes the critical role of policy and governance in effective and equitable technology adoption among nonprofits. According to NTEN and IFTF (2024), successfully integrating artificial intelligence requires ongoing assessment and intervention at multiple levels—individual, organizational, and systemic—to achieve equitable outcomes. Specifically, NTEN highlights the importance of regularly reviewing AI tools for biases, defining appropriate use policies, and routinely maintaining data hygiene. These dimensions of effective digital transformation have been operationalized in the 2025 Tech Accelerate instrument as OG27 (policies and practices for AI bias review), IF28 (removing bad or unnecessary data), and OG26 (establishing clear guidelines on AI tools).

## AI Bias Review

Bias audits are essential in mitigating risks inherent in AI systems, particularly for nonprofit organizations whose missions center on advancing social good, and in some jurisdictions are required by new legislation (NTEN; 2024; Zielinski, 2024). Left unchecked, algorithmic bias can inadvertently perpetuate inequalities or reinforce discriminatory outcomes, undermining trust and effectiveness (IBM, 2023). AI systems have the potential to reinforce racial stereotypes and provide other forms of harmful output based on underlying biases in their training data (Buolamwini, 2017).

Robust bias review processes incorporate regular evaluations at each stage of the AI lifecycle, from initial model training to ongoing deployment, emphasizing proactive management of potential harm and continuous alignment with organizational values (Partnership on AI, 2023). Effective bias audits require organizations to embrace transparency and accountability, fostering greater stakeholder confidence and enhancing organizational credibility (Algorithmic Justice League, 2024). IBM's AIF360 framework and the White House's Blueprint for an AI Bill of Rights outline systematic processes for detecting and mitigating bias through established fairness metrics and iterative evaluation cycles (IBM, 2023; White House, 2022).

Alvarez et al. (2024) also point out that biases can emerge in the implementation of AI systems by human operators, which they refer to as emerging bias. This occurs when AI systems are used to perpetuate the biases embedded in the organization itself, rather than biases that are found in the system's training data or technical processes. They

recommend that organizations adopt holistic policies to address bias, including auditing the entire pipeline of AI utilization, creating multi-stakeholder review bodies, and prioritizing diverse data sources that incorporate intersectionality and ensure representation.

To implement effective AI bias reviews, nonprofit leaders should first establish organizational guidelines defining bias and fairness criteria and audit frequencies. Frameworks like the White House AI Bill of Rights or NTEN's AI Framework for an Equitable World can serve as organizing principles for AI adoption. Organizations should then mandate regular training for technical and non-technical staff on bias identification, including using practical toolkits such as IBM's AIF360 (IBM, 2023).

Champions or dedicated AI ethics officers should receive visible executive support, enabling them to convene cross-functional teams for regular reviews and to openly communicate findings and corrective measures. Furthermore, establishing structured feedback loops with affected communities ensures bias audits are contextually informed, culturally competent, and responsive to stakeholder needs, thereby reinforcing organizational accountability and mission alignment (Partnership on AI, 2023).

### Data Hygiene

Data hygiene practices underpin the reliability and effectiveness of AI and other digital applications. Poor data quality (e.g., outdated, inaccurate, or inconsistent datasets) compromises organizational decision-making, decreases operational efficiency, and increases compliance risks (KPMG, 2025). Robust data hygiene not only safeguards the

integrity and efficacy of AI-driven initiatives but also ensures adherence to privacy regulations, reduces risk exposure, and enhances public trust (Virtuous, 2023).

Industry leaders similarly underscore the value of structured data governance frameworks that delineate roles, responsibilities, and routine maintenance practices, providing organizations a practical blueprint for sustainable data management (Gartner, 2023). Furthermore, compliance with regulatory frameworks such as GDPR underscores the necessity for rigorous data hygiene standards to avoid legal and ethical liabilities (TechGDPR, 2025). GDPR legal requirements emphasize the importance of routine audits, purpose limitation for AI tools, and minimizing the amount of data that is collected.

To effectively embed data hygiene practices, nonprofit leaders should first formalize a data governance policy that clearly defines responsibilities and standardized data maintenance procedures. Implementation of key pillars of quality like accuracy, consistency, completeness, and timeliness should be prioritized (IBM, 2023). Data stewards or governance committees should receive training and executive backing to oversee and enforce data entry protocols, routine audits, and periodic cleaning processes. Nonprofits should also establish reporting mechanisms (e.g., dashboards for critical data) that regularly communicate data quality metrics and create a data quality “stage gate” review that corrects erroneous data before it is published or enters the decision-making cycle (Gartner, 2023).

## Establishing Clear Guidelines for AI Tools

Establishing clear guidelines for AI tools is essential for nonprofit organizations seeking to integrate emerging technologies responsibly while preserving mission integrity, stakeholder trust, and legal compliance. AI technologies, especially generative AI, introduce new risks such as the bias issues already discussed. NTEN (2024) reports that nonprofits should implement structured governance mechanisms tailored to their scale and mission scope, while Stanford HAI (2024) highlights that AI utilization is increasingly a subject of legislation at local, state, national, and international levels. Without clear usage boundaries, nonprofits risk deploying AI tools in ways that misalign with their values, mission or unintentionally expose them to legal risks.

NTEN's AI Governance Framework for Nonprofits (2024) advocates for mission-aligned AI adoption guided by principles of equity, transparency, and community-centered design. It provides tools such as customizable policy templates, risk assessment checklists, and guidance on establishing cross-functional review boards. TechSoup (2023) recommends that organizations establish a cross-functional AI review team to evaluate potential tools based on criteria such as equity, explainability, and mission relevance. Siegel (2024) writes that organizations should develop clear goals tied to their mission and what they aim to predict, then use transparent metrics to monitor these and review their impact.

To establish effective AI guidelines, nonprofit organizations should begin by drafting a formal AI use policy that defines approved tools, data boundaries, and risk mitigation steps (Responsible AI, 2024). Policies should address risk, data management, workforce

training, procurement and compliance. Leadership should appoint an AI ethics liaison or a small cross-functional review team tasked with evaluating AI use cases, documenting decisions, and updating policies as needed. They should also implement practices like red teaming to pressure test AI uses and identify potential risk areas (Singh et al., 2025).

AI-related decisions, especially those involving donor segmentation, service provision, or public communications, should undergo an ethics and bias review and be documented for accountability. Regular staff training should build fluency in responsible AI practices, while transparent communication with stakeholders about AI usage enhances legitimacy and trust. By combining policy, oversight, training, and transparency, nonprofits can mitigate harm and harness AI in as ethical a manner as possible to advance their missions.

## Conclusion

This literature review, guided by the four core domains of the Tech Accelerate framework—engagement, infrastructure, organization, and leadership—and expanded to include emerging technology, paints a nuanced picture of the nonprofit technology landscape in 2025. Across all domains, the findings reveal a sector making meaningful strides in areas such as program data collection, technology budgeting, and the emergence of internal technology champions, while still facing entrenched gaps in digital accessibility, constituent engagement in technology planning, data governance, equitable training, and strategic technology integration.

Our approach combined structured review with exploratory data analysis, mapping literature directly to Tech Accelerate items and categories to ensure conceptual alignment and practical relevance. This process was accelerated by the deliberate use of multiple predictive and generative AI tools—ChatGPT Deep Research, Connected Papers, Elicit, Exa.AI, and Microsoft CoPilot. The experiment affirmed these tools’ strengths in rapidly discovering relevant resources and synthesizing information but also exposed persistent weaknesses: occasional misattribution or hallucination of content, over-reliance on single sources, and the inability to substitute for the domain expertise, judgment, and critical synthesis of skilled researchers. The lesson we draw is AI can be a powerful accelerator, but only when paired with human oversight and integrated into a rigorous, values-driven research process.

The evidence gathered here reinforces that technology adoption in the nonprofit sector cannot be treated as a purely technical exercise. Progress in each domain requires cultural change, leadership commitment, equitable governance, and an intentional alignment of digital tools with mission outcomes. Emerging technologies, particularly AI, bring both transformative potential and new risks, underscoring the urgent need for clear policies, robust data hygiene, bias audits, and cross-functional governance structures.

Nonprofits stand at a critical juncture. The opportunities for impact are expanding, but so too are the risks of exclusion, inequity, and strategic drift. Meeting this moment will require integrated, intentional strategies that weave technology into every layer of organizational planning and practice—strategies that are grounded in equity, informed by

data, guided by community voices, and supported by sustained investment in people and systems. The path forward is not about adopting the newest tools for their own sake, but about building the technical, ethical, and organizational capacity to ensure that technology serves as a true enabler of mission and social good.

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## Appendix: Tech Accelerate Rating Items

### Engagement Questions

- **FC01** - Roughly what proportion of data related to fundraising is controlled in a managed business system (vs. stored in ad hoc spreadsheets, documents)?
- **FC02** - Do you have a complete, accurate history of information regarding donors, volunteers, partners, clients or program participants, and other constituents?
- **FC03** - How accessible and usable is information about volunteers (e.g., clearances, hours served, interests)?
- **FC04** - How capable are you of preparing accurate lists of addresses or emails for targeted communications to various constituent groups?
- **FC05** - To what degree do you use the potential capabilities of the existing business systems that support your marketing and communications activities?
- **FC06** - To what degree do you have a process to ensure information on websites is updated regularly?
- **FC07** - To what degree does your website support mobile users?
- **FC08** - How often do you utilize information about engagement from visitors to your website, social media, and other online outlets to prioritize marketing investments and programs?
- **FC09** - To what degree do you evaluate the effectiveness of the information you communicate to constituents through various channels?
- **FC11** - Do you offer multiple options for donation payments (e.g., credit card, PayPal, automatic account withdrawal, recurring donations)?
- **FC13** - To what degree are you prepared to continue to operate if a staff member responsible for marketing or communications technology leaves the organization (e.g., processes documented, backup staff trained)?
- **FC14** - To what degree is your website accessible for those with disabilities including those with visual, sensory, and hearing disabilities?
- **FC15** - To what degree are your technology-supported or digitally-provided programs, services, and events accessible to those with disabilities including those with visual, sensory, and hearing disabilities?
- **FC16** - How often do you include constituents in planning and decision-making

processes for technology projects?

- **FC17** - How often are you able to make technical adjustments to meet accommodation requests by staff or constituents?
- **FC18** - Are you able to tell whether your programs are benefitting the intended groups or communities?
- **FC19** - How often is input from clients or program participants collected and used to inform how services are delivered?
- **FC20** - Roughly what proportion of data related to communications is controlled in a managed business system (vs. stored in ad hoc spreadsheets, documents)?
- **FC21** - Roughly what proportion of data related to program delivery is controlled in a managed business system (vs. stored in ad hoc spreadsheets, documents)?

### Infrastructure Questions

- **IF01** - To what degree do you track and log changes to configurations of your software systems?
- **IF02** - To what degree do you have a process in place to track and log changes to hardware?
- **IF03** - Do you have and test a business continuity or disaster recovery plan?
- **IF04** - Roughly what proportion of information that is needed to manage technology infrastructure is controlled in a managed business system, as opposed to ad hoc documents?
- **IF05** - To what degree are your key business systems integrated?
- **IF06** - Are your systems that accept credit card information PCI compliant?
- **IF07** - To what degree do your systems and processes protect proprietary or sensitive data (other than credit card or HIPAA/PIPEDA-related information), such as names, addresses, and social security (US) / social insurance (Canada) numbers?
- **IF08** - Do you have secure mechanisms for controlling the printing of sensitive documents?
- **IF09** - To what degree do you manage physical access to your facilities?
- **IF11** - To what degree do you utilize the potential capabilities of the existing software that supports management of your technology infrastructure?

- **IF12** - Do you provide staff with devices for remote access to information and systems (e.g., laptops, tablets, mobile phones)?
- **IF13** - Are your key business systems and documents accessible from outside the office (e.g., via a cloud, VPN)?
- **IF14** - Do you have policies for vendor-maintained systems?
- **IF15** - How completely, consistently, and quickly do you disable access to all systems, both internally hosted and cloud-based, upon employee departure?
- **IF16** - If you have physical servers, to what degree are they secured (such as in a locked room) and protected from environmental damage (such as fire and water)?
- **IF17** - If you have physical servers and a need for staff to access them remotely, to what degree is your remote access controlled and monitored?
- **IF18** - How comprehensive is your password policy for staff computers and accounts?
- **IF19** - To what degree is antivirus software deployed, updated, and run on staff computers?
- **IF20** - To what degree is your wireless network secured, including partitioned wireless access for guests or visitors?
- **IF21** - Are your websites closely monitored for inappropriate activity from external parties, such as hackers?
- **IF22** - To what degree do your phone systems support modern features such as call forwarding, remote access to voicemails, or voicemails sent to email?
- **IF23** - To what degree are organization sites remote from your headquarters set up with the same level of technology as the main site?
- **IF24** - Roughly what proportion of the information and data that drives program operations is controlled in a managed business system (vs. stored in ad hoc spreadsheets or documents)?
- **IF25** - If you collect information protected by HIPAA (US) or PIPEDA (Canada), or other regional regulations, to what degree are you compliant?
- **IF26** - To what degree do you review how technology can strategically improve your organization's administrative efficiency?
- **IF27** - Are all of your financial transactions managed in secure business systems?
- **IF28** - Do you have and maintain a policy for removing bad or unnecessary data from

your systems regularly?

## Leadership Questions

- **LD01** - To what degree do you review how other organizations or industries are using technology to address the challenges faced by your organization?
- **LD02** - To what degree does your organization's leadership share best practices or other information about your technology experience with other organizations?
- **LD03** - Do you have policies for conflicts of interest with vendors, consultants, constituents, or other relevant constituents?
- **LD04** - To what degree are key reports generated automatically from standard business systems?
- **LD05** - Do you survey your staff to assess their satisfaction with your organization's available technology?
- **LD06** - To what degree do you educate employees about how the organization's data and IT systems benefit the organization and its mission (e.g., reimbursement, regulatory compliance, constituent safety)?
- **LD07** - To what degree do your IT or technology-responsible staff share with other organizations best practices or other information about your technology experience?
- **LD08** - To what degree do you review how technology is affecting your staff interactions and organizational culture?
- **LD09** - To what degree do IT or technology-responsible staff members participate in strategic and planning discussions with the executive team?
- **LD10** - Does your organization integrate technology into your strategic plan?
- **LD11** - To what degree does your board incorporate technology considerations in its planning and review activities?
- **LD13** - Is there a champion in the leadership of the organization who obtains buy-in for technology strategy and investments?
- **LD14** - How well does your use of technology to communicate with your board meet your needs?
- **LD15** - To what degree do you review how technology is affecting interactions between your staff and constituents?
- **LD16** - Does your organization have a defined technology budget that in some way

separates technology expenses from other general “overhead” or “supplies” line items in your annual operating budget?

- **LD17** - To what degree does your organization conduct a return on investment (ROI) analysis or study as part of its technology investment process? For example, in planning a software, hardware, or service purchase, is an evaluation of costs and impact on the organization and community conducted?
- **LD18** - To what degree do all staff job descriptions include the technology responsibilities and skills associated with the position?
- **LD19** - Do you cover access and equipment costs associated with remote working, including home internet and mobile phone costs?
- **LD20** - To what degree is your organization able to make decisions about program strategy based on the data currently collected/available?
- **LD21** - Do you have a strategy for your data collection and priorities?
- **LD22** - To what degree are you able to use data to tell whether the programs are resulting in the intended outcomes?
- **LD23** - To what degree do you educate board members about how the organization’s data and IT systems benefit the organization and its mission (e.g., reimbursement, regulatory compliance, constituent safety)?
- **LD24** - How often do your board members participate in technology risk management discussions?
- **LD25** - How often do your board members support the planning or reviewing of tech priorities for the coming 2-3 years?

## Organization Questions

- **OG01** - To what degree do you use a defined process for prioritizing technology needs, selection, and implementation?
- **OG02** - Does your organization provide a budget for technology-related professional development, such as training, memberships, conferences, or certifications?
- **OG03** - To what degree do you provide technical support to staff for device and business system issues?
- **OG04** - How often do you train your staff about how to use IT tools and systems / data effectively?
- **OG05** - To what degree is information about the treatment of confidential

information incorporated into new employee onboarding and employee handbooks?

- **OG06** - Do you have a policy defining appropriate use of social media by employees related to their work?
- **OG07** - Do you have a policy for staff using their own devices for work?
- **OG08** - Do you have a policy defining appropriate use of the internet at work?
- **OG09** - To what degree do you have and implement a policy for upgrading staff devices such as computers and mobile phones?
- **OG10** - To what degree are you prepared to continue to operate if an IT or technology-responsible staff member leaves the organization (e.g., systems documented, backup staff trained)?
- **OG11** - To what degree is information required by finance from staff collected through self-serve systems (e.g., expense submission, billable time reporting)?
- **OG12** - To what degree is information required by human resources from staff collected through self-serve systems (e.g., vacation time or performance reviews)?
- **OG13** - How easily can staff find necessary files to support their work (e.g., spreadsheets, contracts, other documents)?
- **OG14** - Do you store all critical email and files for future reference (e.g., legal issues or e-discovery)?
- **OG15** - How does staff use of internal communications and collaboration tools (e.g., email, instant messenger, text messaging) meet organizational needs?
- **OG16** - To what degree do you use a structured approach for implementing IT projects?
- **OG17** - To what degree do you have a process in place to track and log non-technology business assets (e.g., vehicles, material inventory, donated items)?
- **OG18** - How frequently do you assess staff needs and priorities for technology-related training?
- **OG19** - To what degree are your technology-related training materials accessible to all staff and offered in multiple formats for different learning styles?
- **OG20** - Do you have a policy for sharing data safely and appropriately with other organizations?
- **OG21** - Do you have a policy and practice for reviewing data for bias?

## BOVEE-GAZETT - SAMUELS

- **OG22** - Do you have a policy and practice for disaggregating data by key demographics including race and ethnicity, gender identity, and disability?
- **OG23** - How frequently are staff with data-related responsibilities (from data entry to decision-making) assessed on and provided training or support on data skills?
- **OG24** - How regularly is data used to improve or adapt program implementation?
- **OG25** - To what degree has the use of technology and data allowed the organization to increase its program and/or mission impact?
- **OG26** - Do you have a policy defining appropriate use of artificial intelligence tools or applications?
- **OG27** - Do you have a policy and practice for reviewing artificial intelligence tools or applications for bias?