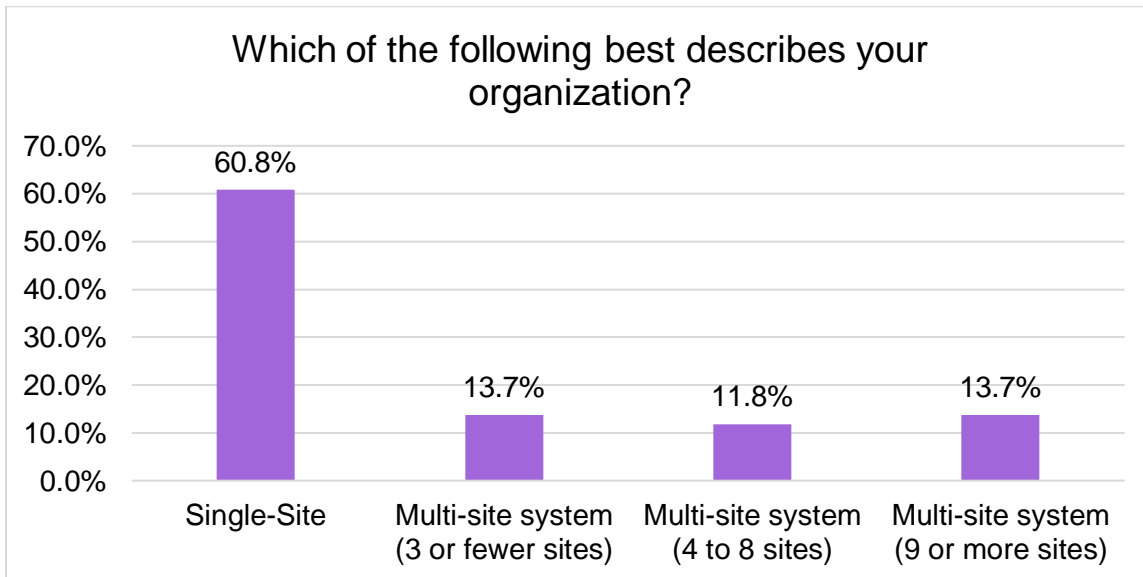


TECHNOLOGY SPENDING

ZIEGLER CFO HOTLINESM

In July 2024, a *Ziegler CFO HotlineSM* survey once again gathered feedback on technology spending among senior living organizations. This survey with input from LeadingAge CAST, has been polled every two years since 2012.

Over 100 organizations participated in this year’s survey. The survey was initially forwarded to CFOs and finance contacts, but was subsequently forwarded to a number of the organization’s Chief Technology/Information Officers for completion. About 61% of respondents were single-site organizations and the remaining 39% represented multi-site organizations.



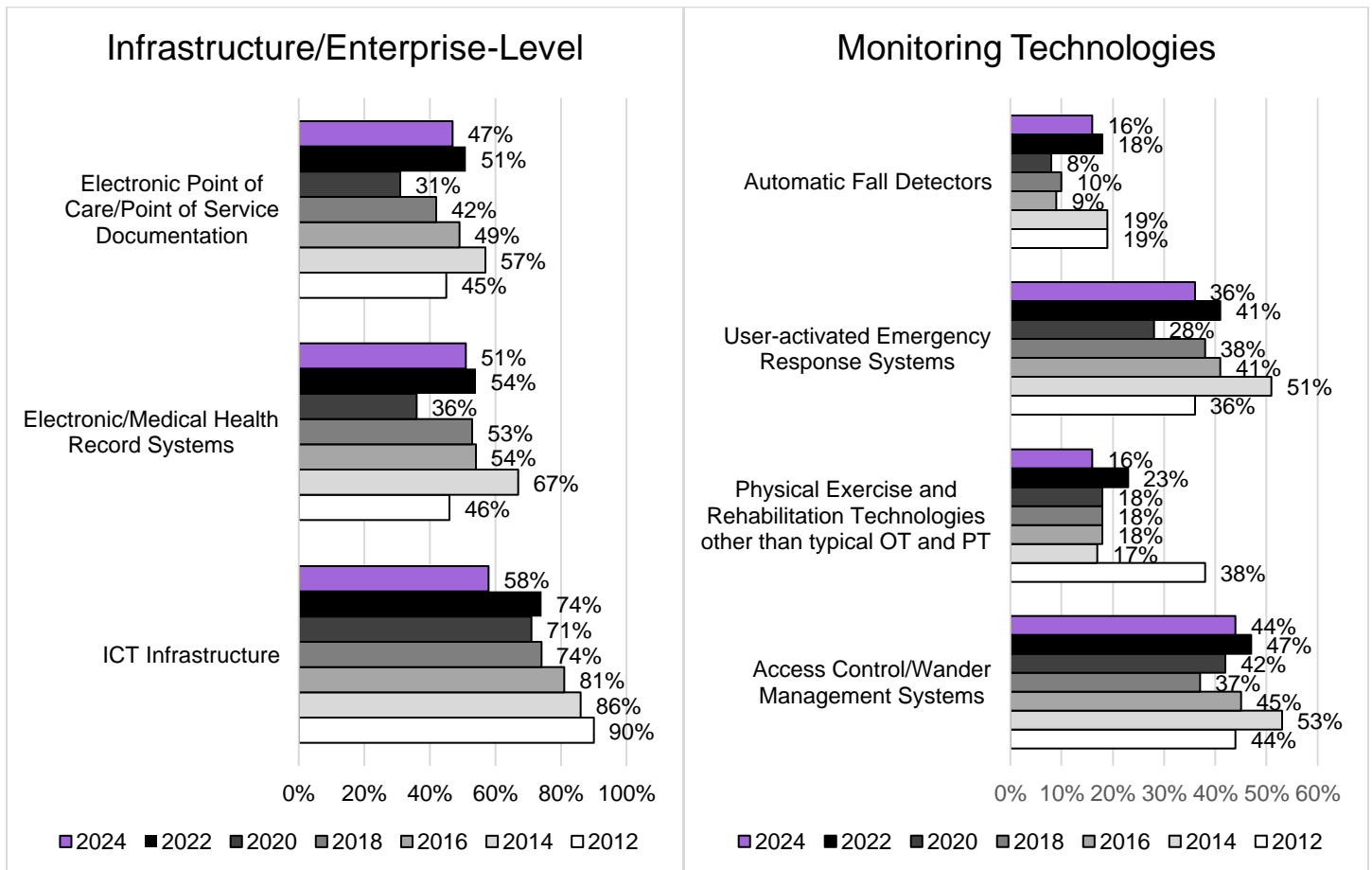
To begin the survey, respondents were asked to select from a list of technologies that are pertinent to senior living providers and related healthcare organizations. They were asked to identify which of the technologies they invested in over the past 12 months, as well as technologies they planned to invest in over the next 12 months.

The table below shows the top five technology investments that senior living providers made over the past year compared to the same investments in 2022.

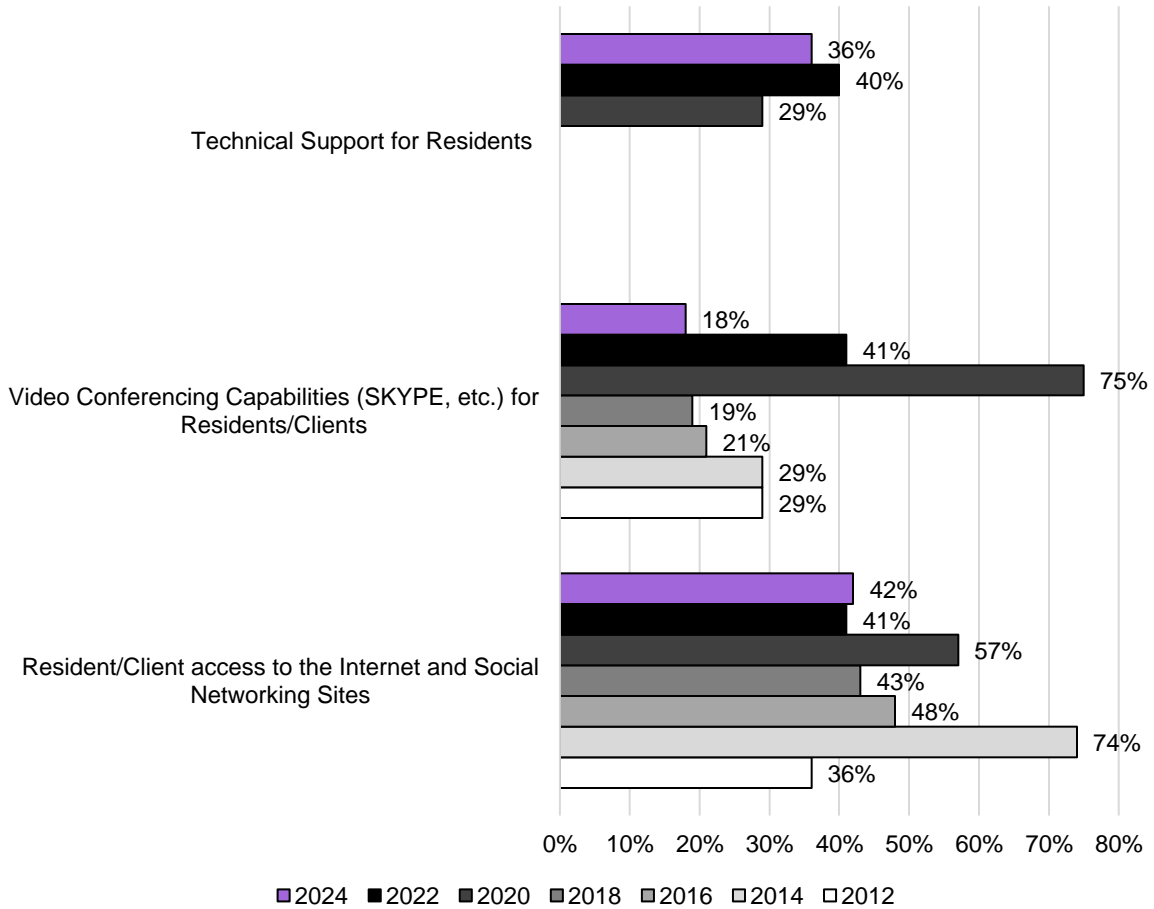
Technology Investments	2024	2022
ICT Infrastructure (high-speed internet connectivity, wired/wireless)	58%	74%
Electronic Medical/Health Record Systems (EMR/EHR)	51%	54%
Workforce/Staffing Scheduling Systems	48%	47%
Electronic Point of Care/Point of Service Documentation Systems (POC/POS)	47%	51%
Access Control/Wander Management Systems	44%	47%

Across the past year, organizations were least likely to have invested in Shared Care Planning and Care Coordination Tools (14%), Health Information Exchange Solutions (14%), and Robotic Process Automation (9%).

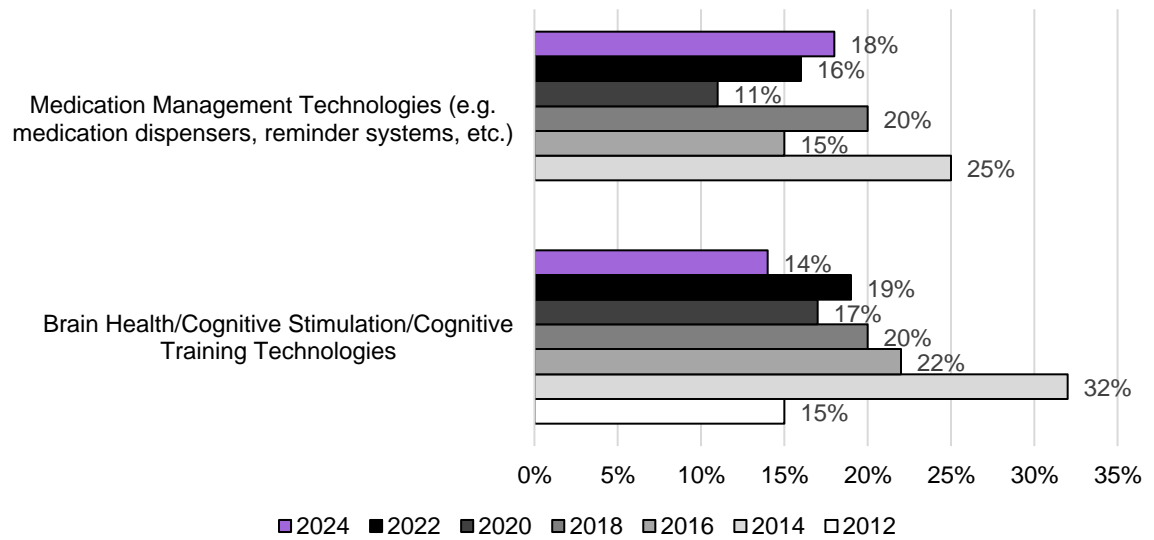
The graphs below show comparisons across the previous years' *Ziegler CFO Hotline*SM studies on technology spending.

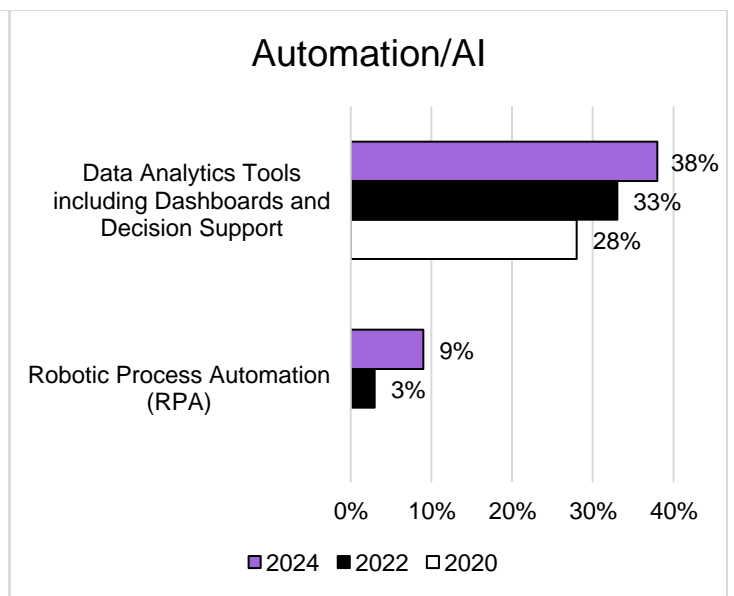
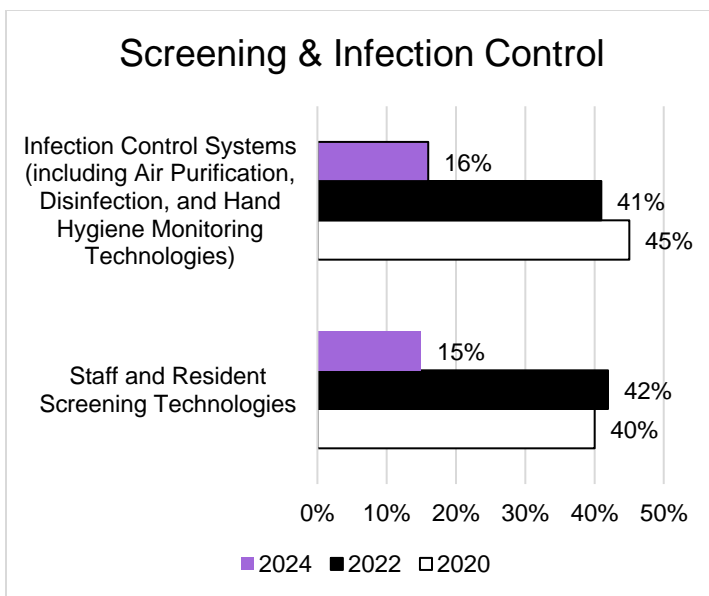
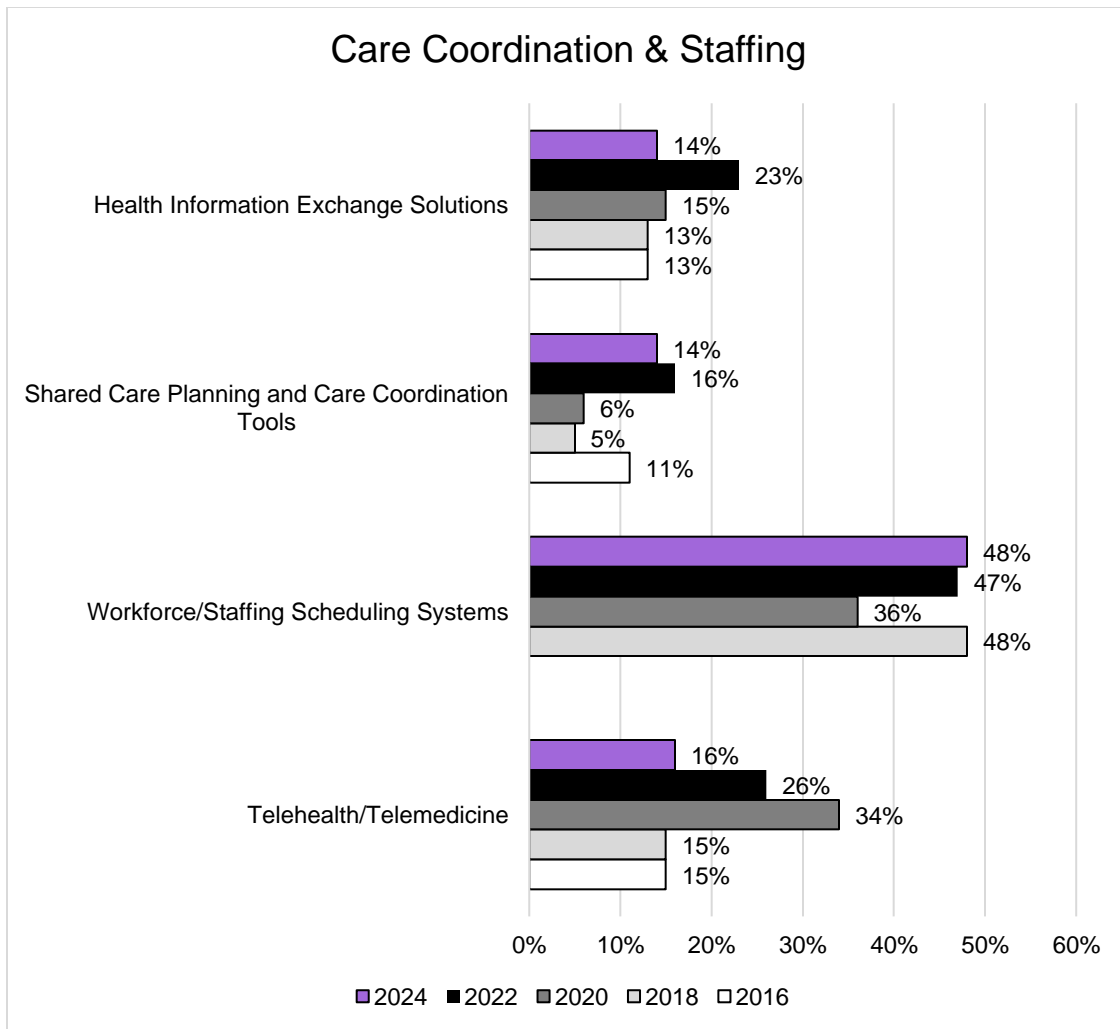


Resident-Centric Technology

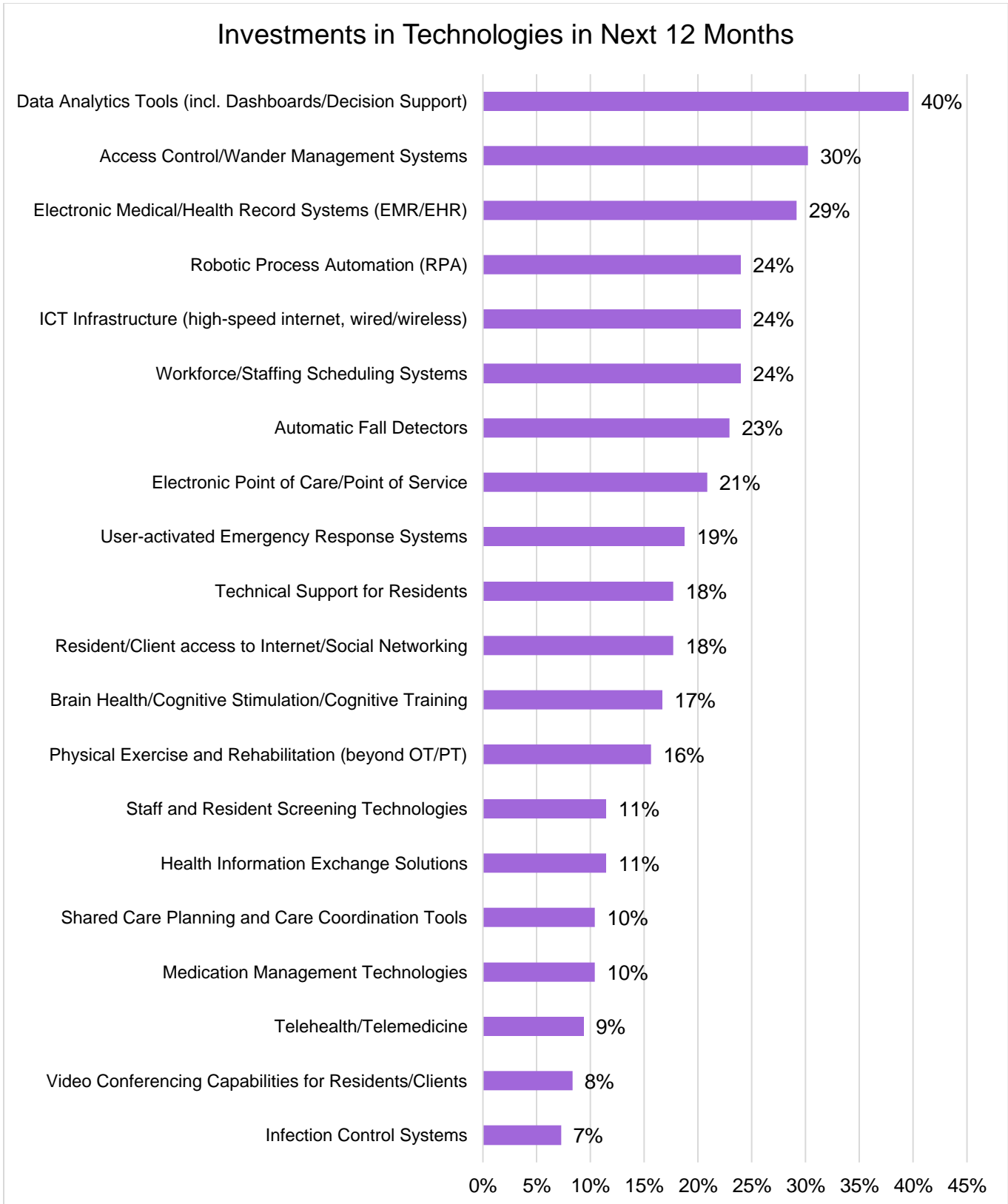


Cognitive Fitness/Assistance





The survey also asked about future spending. Specifically, the respondents were asked to specify whether they plan to invest in various technologies in the year ahead.



Survey respondents were asked to identify what percentage of their capital and operating budgets were devoted to these technologies in the past 12 months. The tables below show the average and median figures for the capital and operating budgets, respectively. See the tables below for a year-over-year comparison. Please note some outliers have been removed.

	Percentage <u>Capital</u> Budget Devoted to Technologies					
	2024	2022	2020	2018	2016	2014
Average percent (<i>TOTAL</i>)	8.8%	8.3%	8.0%	10.0%	11.8%	12.2%
Median percent (<i>TOTAL</i>)	6.0%	5.0%	5.0%	7.0%	7.0%	9.5%
Average percent (<i>Single-sites</i>)	8.7%	9.1%	7.2%	10.4%	11.7%	12.1%
Median percent (<i>Single-sites</i>)	5.0%	5.0%	5.0%	7.0%	7.0%	10.0%
Average percent (<i>Multi-sites</i>)	8.9%	7.1%	9.3%	9.7%	11.8%	12.2%
Median percent (<i>Multi-sites</i>)	8.0%	5.0%	5.0%	5.0%	7.0%	8.0%

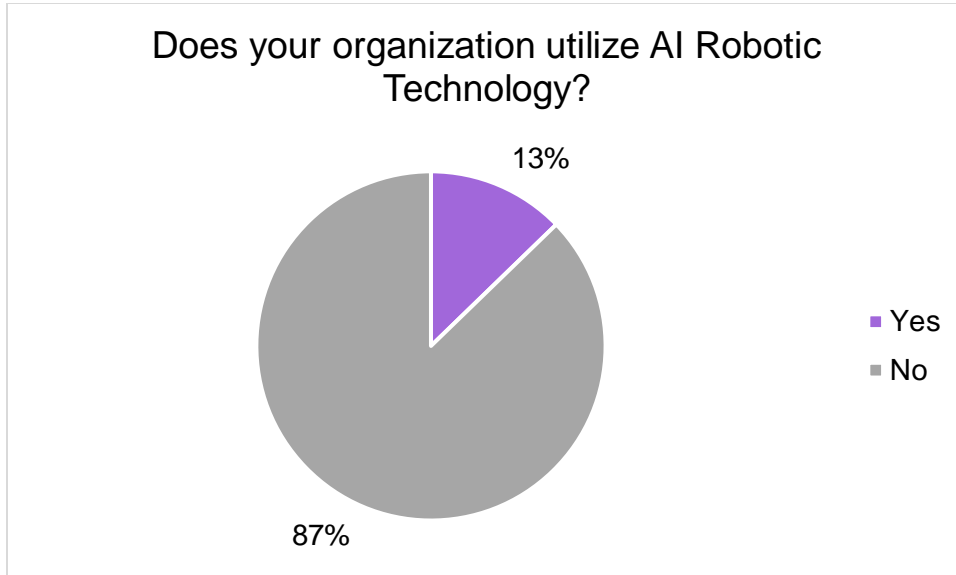
	Percentage <u>Operating</u> Budget Devoted to Technologies					
	2024	2022	2020	2018	2016	2014
Average percent (<i>TOTAL</i>)	3.5%	3.4%	3.0%	3.2%	2.5%	2.7%
Median percent (<i>TOTAL</i>)	2.4%	2.0%	2.0%	2.0%	2.0%	2.0%
Average percent (<i>Single-sites</i>)	3.7%	3.5%	2.5%	3.5%	2.4%	2.5%
Median percent (<i>Single-sites</i>)	2.8%	2.0%	2.0%	2.0%	2.0%	2.0%
Average percent (<i>Multi-sites</i>)	3.1%	3.3%	3.9%	2.8%	2.6%	2.9%
Median percent (<i>Multi-sites</i>)	2.0%	2.0%	2.4%	2.0%	2.0%	2.0%

A similar set of questions were asked specifically as to technological investments in facility-related assets.

	Percentage of <u>Capital</u> Budget Devoted to Campus/Building/Facilities					
	2024	2022	2020	2018	2016	2014
Average percent (<i>TOTAL</i>)	15.5%	13.8%	11.1%	12.0%	6.9%	13.4%
Median percent (<i>TOTAL</i>)	7.0%	5.0%	5.0%	6.0%	5.0%	7.0%

	Percentage of <u>Operating</u> Budget devoted to Campus/Building/Facilities					
	2024	2022	2020	2018	2016	2014
Average percent (<i>TOTAL</i>)	6.4%	5.7%	4.2%	4.5%	2.1%	3.8%
Median percent (<i>TOTAL</i>)	2.0%	2.0%	2.0%	2.0%	2.0%	1.8%

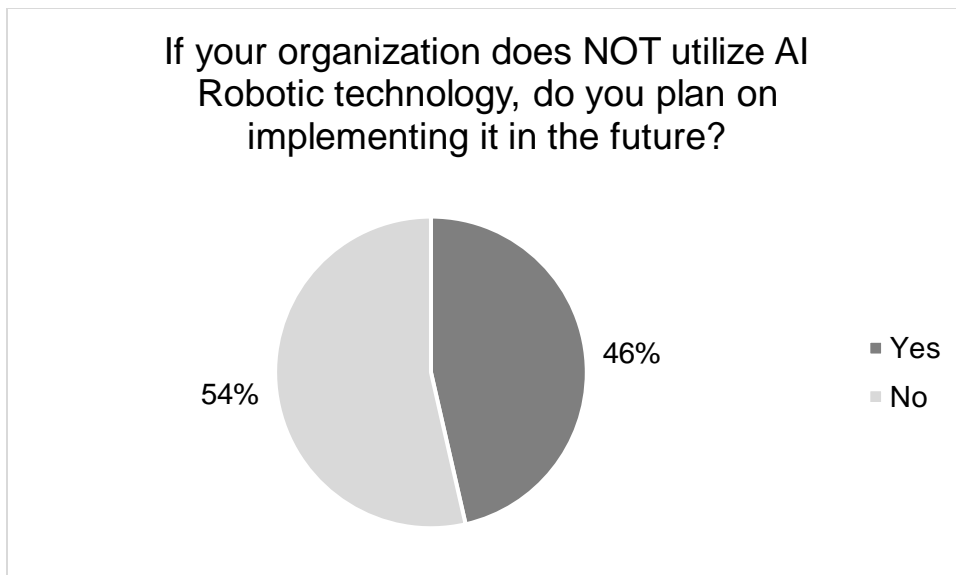
Respondents were asked whether they currently utilize Artificial Intelligence Robotic Technology. The chart below shows 13% do utilize it, however, the majority do not.



Of those who said “yes,” the vast majority utilize AI Robotics for **dining services** such as serving food and bussing tables. A few mentioned other uses of AI, such as utilizing ChatGPT to **write policies and code**, or using built-in **AI assistant** functions on internal messaging systems.

When those same people were asked how AI has benefited their organizations, the most common response was **less stress on staff**. They also mentioned **automated processes** and **saving on labor** costs. It is worth noting several providers mentioned it was **too early to tell** what impact AI would have on their organization.

Those who answered “no” to the question regarding AI robotic technology were then asked if they had plans to implement it eventually. Respondents were split nearly evenly, with 46% saying they were planning to use AI Robotic technology in the future, and 54% saying they had no plans to do so.



Lastly, the survey allowed for open-ended comments to be made. Below is a sampling of those comments, which may be edited for length or minor grammatical changes.

- *Our organization faces the same challenges as many providers with capital constraints and limited budgets to spend on technology. AI and the use of RPA or other robotics can dramatically affect costs but most providers still don't understand how this can be leveraged and so more focus needs to be spent on educating the providers and showing them real life examples of how this can benefit them.*
- *TV technology is beginning to be an issue. Many streaming apps changing the landscape of services.*
- *Continued strengthening of Wi-Fi throughout the entire resident campus. Most tech feeds on top of the connectivity.*
- *One of the biggest goals for 2024 was reviewing the overall software and systems currently in place. We are checking for duplication and overlapping of services to reduce operational expenses and prepare for additional future plans of improving technology on the campus.*
- *We have looked at robotic AI assistants for things like carrying trays to resident tables and assisting with food delivery, but it seems like staff tend to walk along with the robots and use them more like a cart than an autonomous robot, so the tech wouldn't really save on FTE or provide any ROI.*
- *Ongoing operating expenses for software solutions continue to increase in price.*
- *Technology spending has been fairly linear for the past 5 years, but we do not anticipate this will be the case moving forward. We are actively exploring the application of AI and data analytics to our operations and know both of these areas will soon transform our daily operations.*
- *Updating older existing systems and hardware to better systems and more advanced technology, looking into more ways to leverage technology to build better data and be more efficient and less reliant on paper.*
- *We are looking to improve our nurse call system/wandeguard/resident fall detection systems but not sure everything we'd like to do is worth the cost.*
- *Not upgrading in the foreseeable future. Current systems are adequate.*
- *I am beginning to struggle with continued IT investment without a return on investment. With the expectation of higher staffing requirements, it becomes hard to find an offset to the significant cost of IT programs and services that are most often coming with a monthly fee.*
- *We have a long way to go, but we are moving in the right direction. Technology needs to be more than the standard practice of allocating 3% of budgets, both capital and operational. As our reliance on technology grows, we must invest more to keep our data safe and effectively utilized.*
- *We don't have plans to implement AI Robotic Technology in the near future but will continue to learn more about it and move that direction when the cost/benefit analysis makes sense.*

The senior living organizations' responses included in this report have been collated without verification of the accuracy of the data/comments therein. The results provided do not express an opinion of nor can they be guaranteed by Ziegler.

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