PLATFORM 3 SOLUTIONS

Third Annual "State of Corporate Technology"
THE RESEARCH

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EXECUTIVE SUMMARY

This research identifies directions, trends, and false positives in the use of enterprise technology for organizations. Every organization today needs technology, whether you mine cryptocurrency or coal. Yet, challenges prevail as follows:

(1) **The accelerated and continuous evolution of base technology at all levels** – from the CPU/hardware to the software and how to optimize the use of *cloud* versus on-premise provisioning.

(2) **More data** – if 'data is the new oil' everyone is drowning in oil. Like oil, it needs to be refined and delivered to the right place in order to be of value.

(3) **Do more with less** – base technology always brings more performance/capacity with lower costs over time. Any fundamental new platforms need to bring better results for less money.

(4) **Governance/Risk/Compliance/Security (GRCS)** – driven by changes in laws, legal actions, internal security officers and always keeping people with criminal intent out of the technology. This area is growing.

(5) **The right people to empower it all** – the 'Great Resignation' is a well publicized example of the ongoing labor shortage within technology. The need for the proper talent within modern IT is complicated and not cheap.

(6) **Chip shortages** – this is driving people to go to the *cloud* because of their inability to procure technology as readily for on-premise use.

In our third year of this research, Platform 3 Solutions' objective is to not only create a snapshot in time regarding the above areas, but also identify trends and cycles in the status, opinions and go-forward plans within business technology. Our findings include:

- Transformation is back in vogue, representing 80% of respondents' opinions of their corporate strategy. In comparison, last year cost cutting was growing but has now decreased by 16%.

- Technology pivots around a big shift in organizational priorities and has been realized by over 90% of our respondents.

- With all these realizations, the top challenges to transformation include resources (65%), infrastructure readiness (45%) and a mix of governance and funding (~40% each).

- 75% responded that *cloud-first* is their platforming trajectory going forward. The reasons and impediments are addressed in this paper.

- Almost 90% state there is wasted money in keeping old tech alive – with 20% stating a significant amount is wasted. This paper also addresses why.

- A consistent theme over the years is the choice of vendors that clients are looking to remove: Oracle, IBM, and Microsoft (on-premise).

- Yet in the go-forward *cloud* platforms, the top choice was Azure (68%) then Amazon and Google (16%).

- Finally, when asked to complete this sentence - "Our management and analysis of data is…", more people felt they were laggards (~25%) and not leaders (12%) with some saying they are 'horrible' (5%)

Of note is the use of words like "urgent", "accelerate" and "technology tipping point" in the context of the "need to execute a digital transformation roadmap". This appeared last year during the global COVID-19 pandemic. In this year's research a similar theme emerged.

INTRODUCTION

Over 50 years ago Gordon Moore, one of the founders of what is today Intel Corporation, postulated, "the number of transistors will double every 2 years". Extrapolate that over 55 years later, and the fundamental components of computing – processing, memory, storage and network – have become so performant and inexpensive these no longer constrain innovation. As each new Intel chip or Cisco router can do 'more with less', we need to direct our attention to the software layer and data.

While hosting, running and maintaining a data center used to be the norm, the cost and complexity are at odds with the advent of *cloud*, where organizations can simply subscribe to a catalog of services that bring innovation and the opportunity to succeed or fail quickly. The result is a time-to-value that is measured in weeks, and the chances of successes now outnumber the failures (in both projects and careers). Consequently, there are two opposing environments competing for the same budget dollars: Legacy and New (*cloud*).

NEW SYSTEM

LEGACY SYSTEM
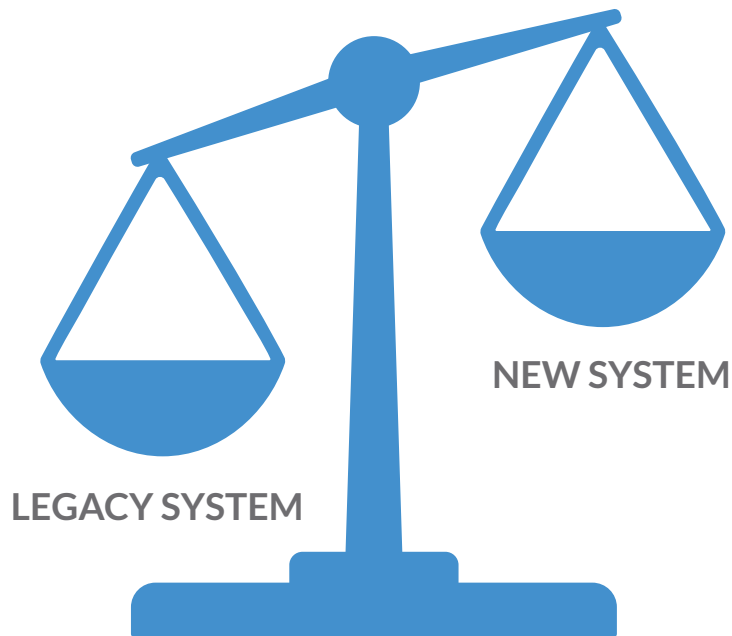
HYPOTHESIS

The research questions were curated to look closely into the following topics as a combination of drivers or impediments around corporate technology perceptions and change:

- The cost and lack of innovation in the current state is too high. Costs include technology debt and data debt accumulated by growing vendor maintenance and licensing cost, internal expertise, total costs to maintain (data center, administration), etc.

- *Cloud* is the new platform as top tiered applications are being migrated and reinvented to drive up capabilities, while also realizing a lower TCO.

- Business Focus: 'shadow IT' has been prolific over the years, beginning with departments hiding servers in a closet, and progressing to using *cloud* services. To be successful, there needs to be coordination that better empowers the business and supports technology personnel.

- Open source has been around for 20 years. It is now at an inflection point in driving the complete technology stack for enterprise workloads, bringing innovation and cost savings like no other.

- A comparison and contrast over the three years of this research from 2020 to 2022 and any projections into 2023 and beyond are included.

RESEARCH RESULTS

To drive consistency year-over-year, the target audience, data gathering and the process have been identical over the last three iterations. Over 80,000 technology professionals who work for US organizations, with over $500 million in annual revenues, were asked to participate. The responses were accumulated using a purchased and private SurveyMonkey questionnaire, with a focus on topics of change, motivations and inhibitors of change, and was comprised of a combination of personal opinion questions, corporate perspective questions and stated directions.

Many of the prompts are repeated topics that we feel are worthy of evaluation over time to track changes in perceptions and strategy. Others are new to this edition, as the speed of change in technology increases and the types of questions that organizations ask pivot.

"What is the priority of your organization at this time?"

This has been an opening question every year and has shown an interesting shift back and forth in priorities.
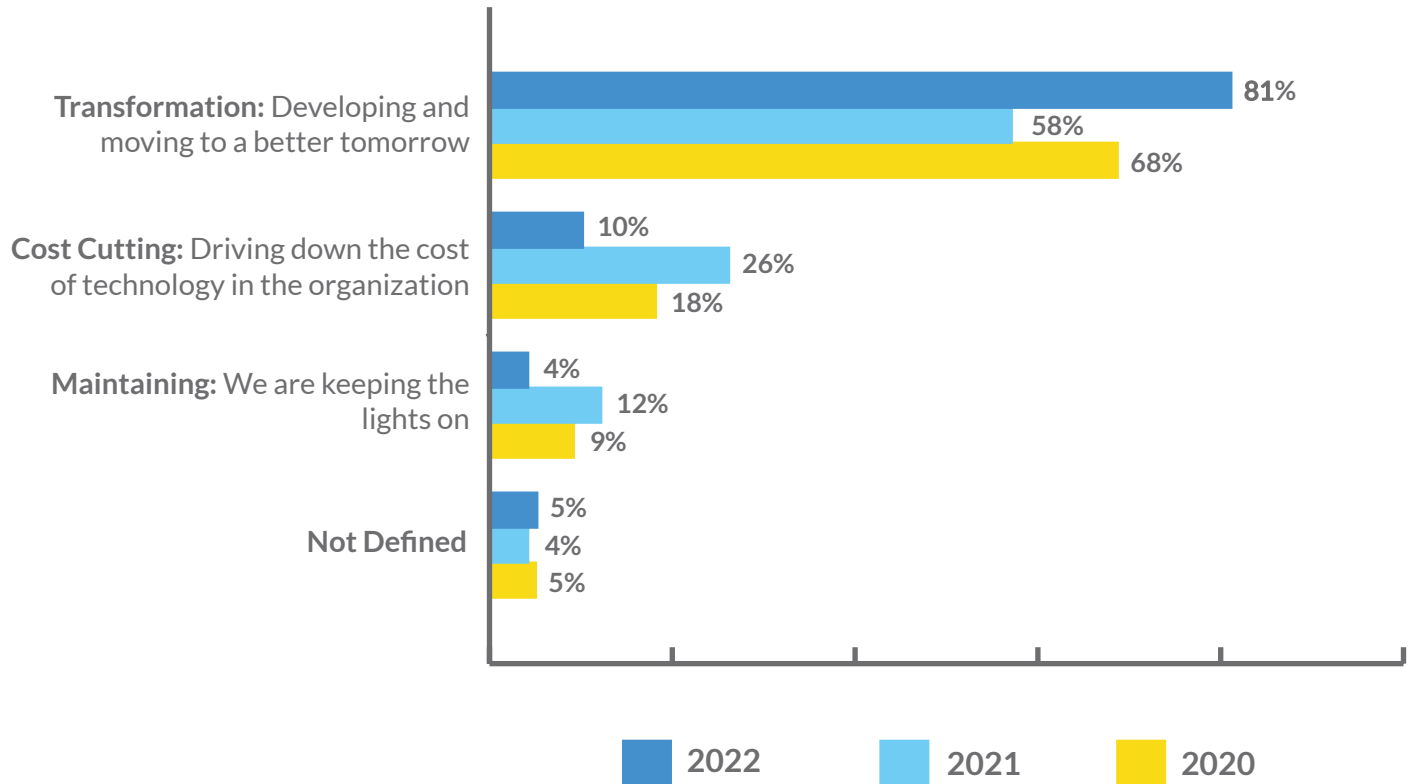
This shows what the broader market is reinforcing:

- The broader economic concerns of COVID-19 hit an apex in the 2021 budget cycles that were defined at the end of 2020 – reinforcing a blip in cost cutting.

- The need to better use technology is the new strategic imperative.

- A focus on *cloud* and innovative, nimbler and less expensive technologies are driving a go-forward strategy.

- The technical and data debts from the last 20 years have accrued and are being reconciled. Maintaining a status quo is not acceptable.

The broader research highlights this trend from multiple perspectives: cost, vendor, *cloud* and motivation perspectives.

**"Does your organization feel there is a big shift in enterprise technology happening –
on-prem-to-*cloud*, buy-vs-make, scripts-vs-code?"**

The idea of making a technology change is in direct correlation to whether the organization feels there is a better
option. This question gets to the heart of the overall perception of what is next.
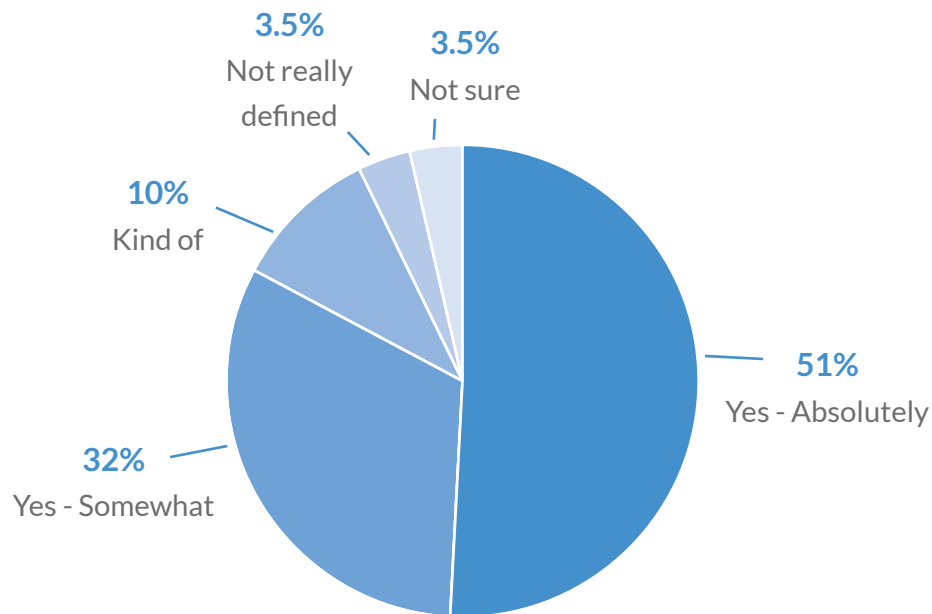
This question confirms that no matter the industry or role, everyone feels there is a degree of change happening
in the following areas: (1) platform (on-premise vs. *cloud*) (2) how technology is purchased (buy vs. make) and (3)
what direction the development process is heading in (scripts vs code).

"What are your top challenges for digital transformation?" (click all that apply)

| Challenge	Percentage
Technical resources	63%
Governance & compliance concerns	43%
Funding	41%
Infrastructure readiness	40%
Lack of detailed knowledge of our data	25%
Not sure	8%
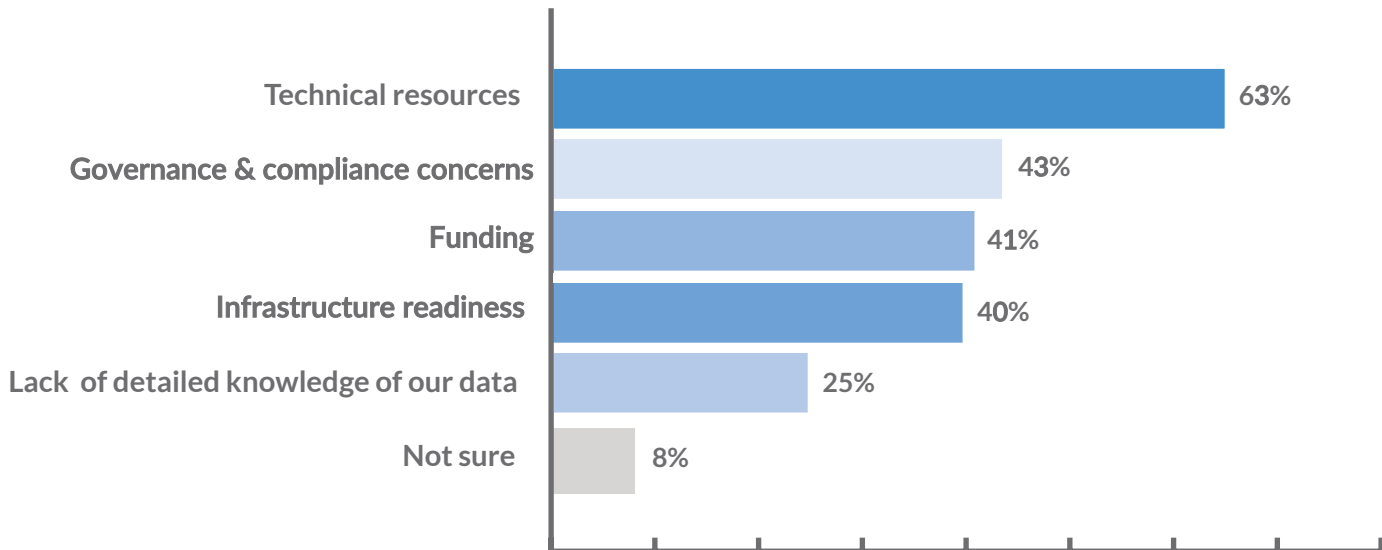
One might assume the top answer would be money related, but funding is much lower. What does stand out is:

- **Resourcing** such as fundamental lack of education, enablement and available resources from a technology perspective. In addition to the speed of new technology evolving faster than the masses learning it, corporations are spending less on technology education. On the other side of this equation is the accelerated retirement during the COVID-19 pandemic of people who created the technology history of these organizations like mainframe programmers.

- **Tech Stack Readiness** is lacking due to the lag between modern data center refreshes of 5-7 years (or more) and the speed to which new technologies emerge. The newest technologies now being considered did not even exist 5-7 years ago. Also, consider the data as well – this is not just a technical debt issue, it is a data debt issue. The readiness to make a move also needs to consider the data.

"Is your organization taking a '*cloud first*' perspective in all future projects?"

No matter your organization, the use of *cloud* is already happening to certain technologies, such as website, email, communications and collaborative applications. When it comes to those traditional off-the-shelf (COTS) applications, or custom applications and integrations that run the enterprise, that is where any re-platforming to the *cloud* is now taking place.

4%
Not sure

22%
No

37%
Yes - Absoutely

37%
Getting there
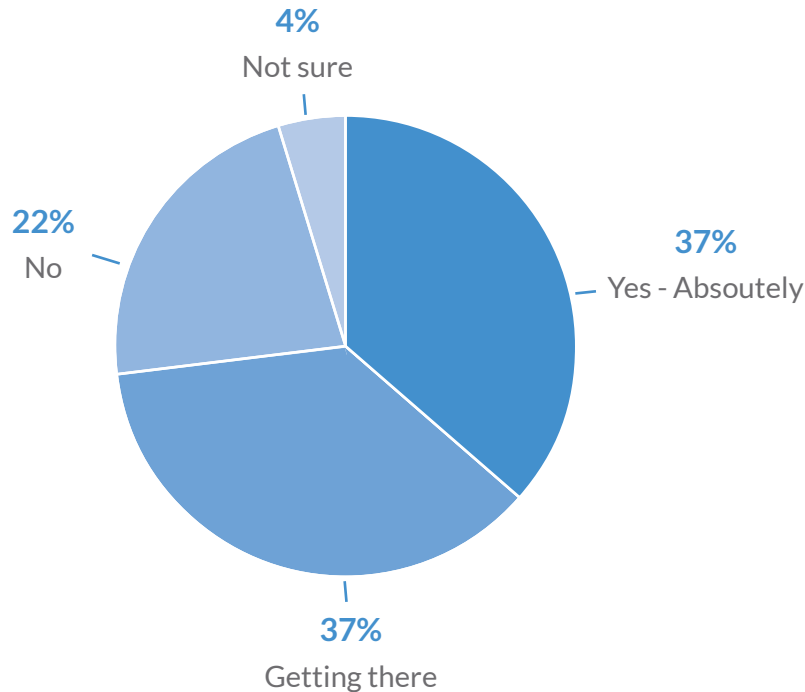
Over 73% stated they are at a '*cloud first*' level of development or will be soon. Considering that '*cloud first*' has become somewhat ubiquitous in recent years, it's surprising to see that over 20% answered 'no' to this question. The majority of these respondents are academic-related organizations (K-12 and universities, government or mid-sized manufacturers).

Like the mainframe-to-open-platform migrations of the1990s, it will take time.

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"Do you think there is wasted money in keeping old tech alive in your organization?"

We ask this question each year because it sets a tone for the need to change the current technology landscape in a corporation to extract more value from enterprise computing.
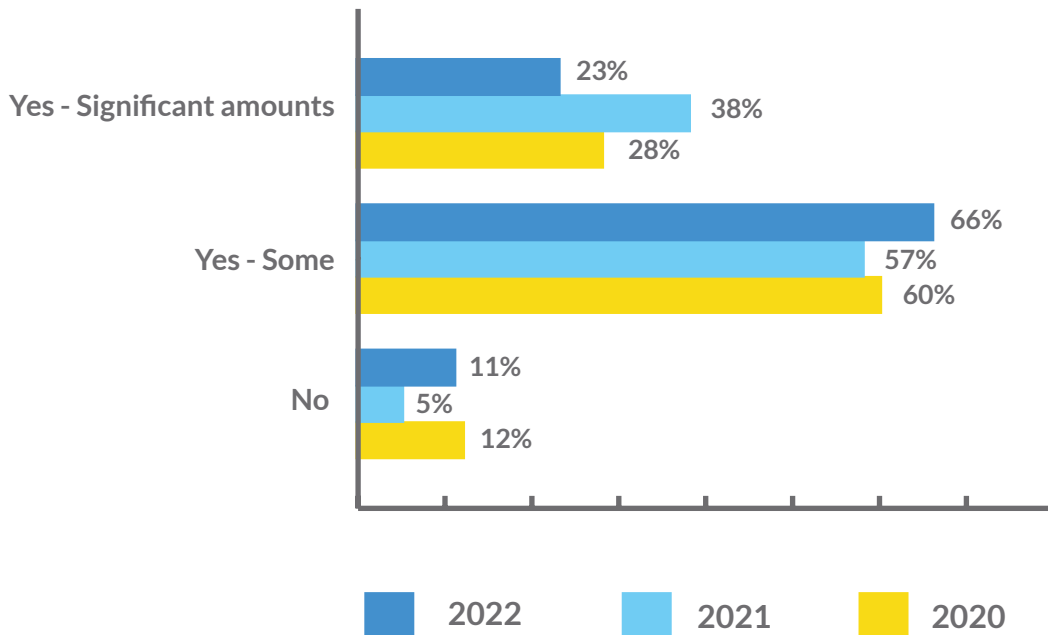
A few constants that are relevant year-after-year:

- Each year, approximately 90% of the respondents stated 'Yes', just to differing degrees.

- Organizations have had a few years to reduce the waste of expensive old technology but more improvements need to be made ('Significant Amounts' decreased by 15% since 2021).

- The largest percentage (66%) of respondents noted there is still 'Some' wasted money on old technology.

Certain characteristics of the data also include:

- Organizations that were founded in the last 15 years have less issues with "technology waste".

- Those who grew through acquisitions and have been around more than 20 years have more issues.

"Why do you think older systems are still running in your organization?"

The hard question to ask is WHY – why are older systems running in an organization? Consider the answers given: money, focus and legal.
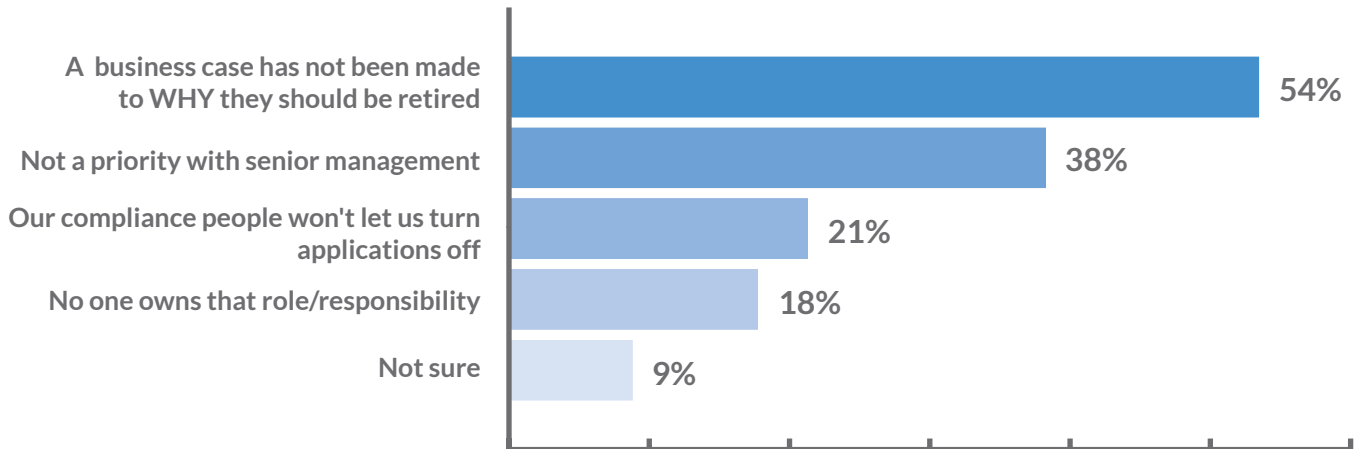
It is Platform 3 Solutions' experience that the primary issue is the challenge of building a business case which mirrors the survey results. The financial model around an on-premise, capital-purchased technology stack against the idea of pivoting to a purely operational expense in a *cloud* brings a lot of assumptions that accountants do not like. This is also why the second biggest challenge is senior management. They focus on what has ROI. So without a business case, it is lower risk to remain in the status quo.

Please complete this sentence - "We are looking to reduce our spend with..." (Check all that apply)

Here we can start to put some substance on the big cost cuts organizations are looking to consider by vendor. The vendor list focuses on systems-of-record with a mix of OLTP versus analytical, on-premise versus *cloud*, and structured versus less structured (documents, etc.).
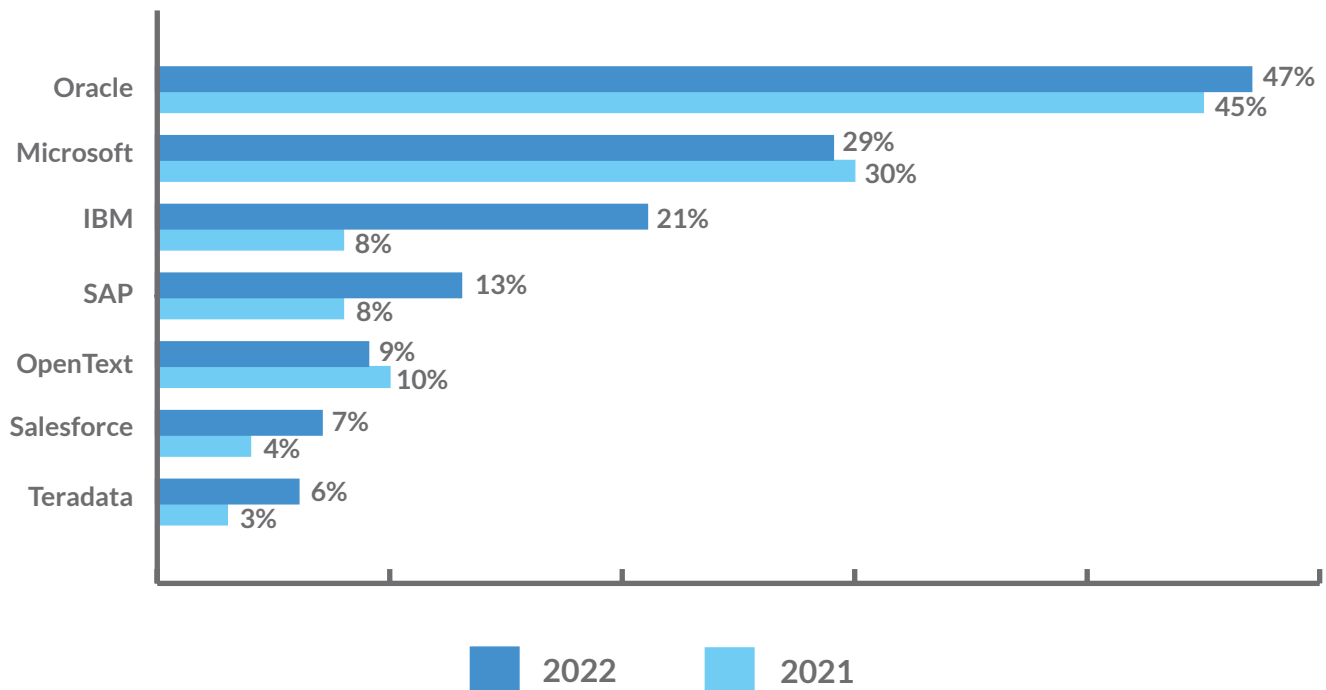
This maps to the authors' experiences helping companies move away from the above legacy vendors because of:

- High cost – traditional annual maintenance/support contracts that bring little value

- Lack of innovation

- Difficult to do business with – there is an entire industry of firms that help in areas like audit support, contract negotiations and contract exits.

Oracle is consistently at the top of the list each year that we ask this question. It is interesting to see the increased exit plan rates from the likes of IBM and Teradata. All of them lack a reasonable and cohesive *cloud* strategy and have fundamentally taken on-premise technologies and made them just as expensive, they lack innovation and are just as difficult to work with as before.

"If your organization has decided on a *cloud* platform, which ones do they include?" (Check all that apply)

The previous question infers what tech vendor the money is coming from in moving to the *cloud*. This question looks at which *cloud* companies are organizations moving to. This was a new question in 2021 and we can now start to see a trend.

Azure — 2022: 69%, 2021: 65%
Amazon — 2022: 39%, 2021: 33%
Google — 2022: 19%, 2021: 23%
Oracle — 2022: 10%, 2021: 19%
IBM — 2022: 6%, 2021: 2%
We have not decided — 2022: 12%, 2021: 15%
We are not moving to the *cloud* — 2022: 6%, 2021: 10%

Legend: 2022, 2021
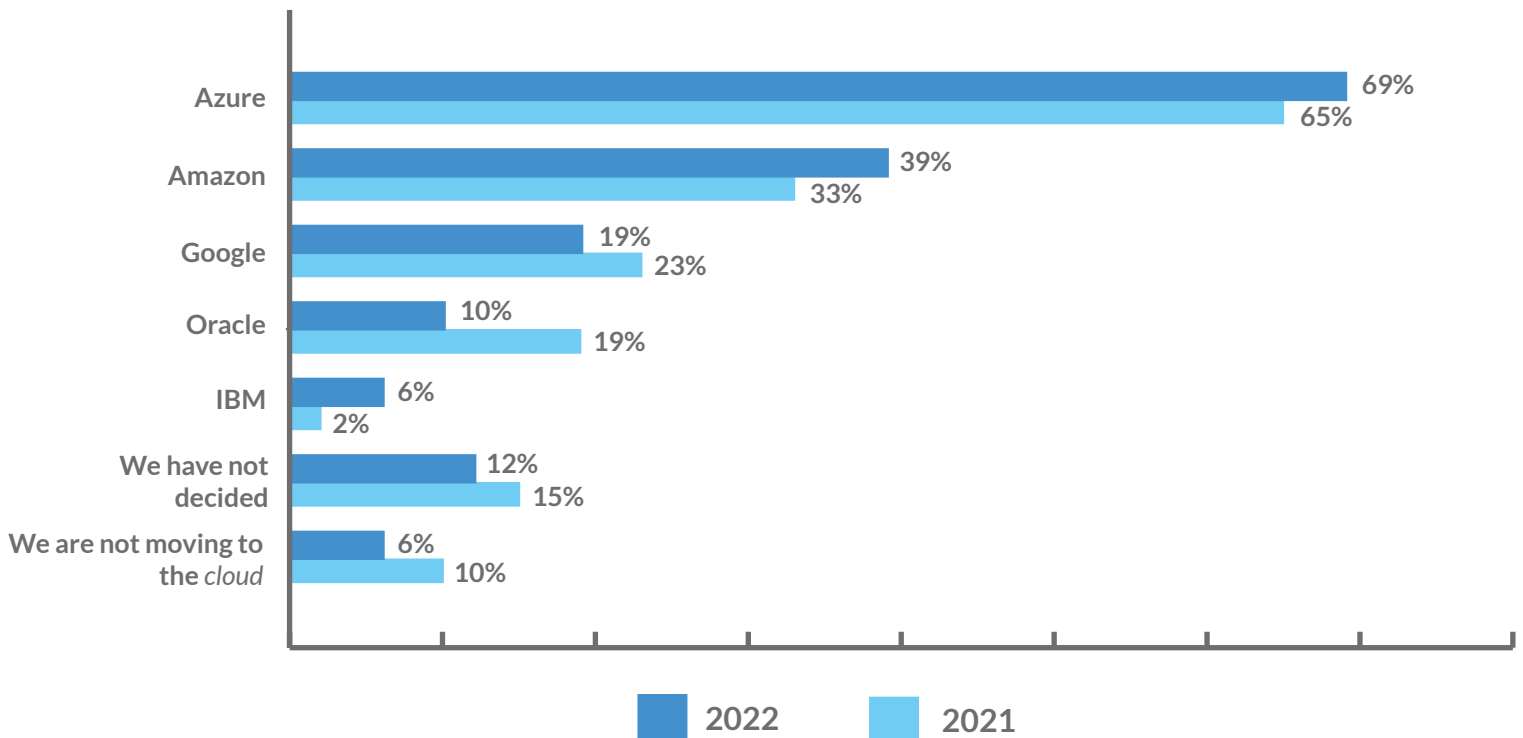
The market has consistently mentioned the three primary choices – Amazon Web Services (AWS), Microsoft Azure and Google Cloud Platform (GCP) – as the *cloud* platform vendors winning clients as their choice of repository and library of tools. After that, the scraps are left to the likes of IBM and Oracle.

Looking at this year-over-year demonstrates additional trends:

- Microsoft Azure and AWS are pulling ahead while GCP and Oracle are falling behind in popularity.

- The lack of a decision or those saying they are not going to *cloud* is decreasing.

"Has the *cloud* lived up to the hype?"

When platforming projects, corporate IT needs to accomplish two fundamental functions: make more possible...for less money. Up to this point, infrastructure projects have been treated as a capital expenditure, and the financial assumption models were set. *Cloud* technology is structured in an expense format and every little thing has a cost. Plus, the idea of 'sizing' is more complicated and difficult to measure. There is a feeling that *cloud* is less expensive than on-premise, but it is hard to quantify those costs and it is dependent on the workload.
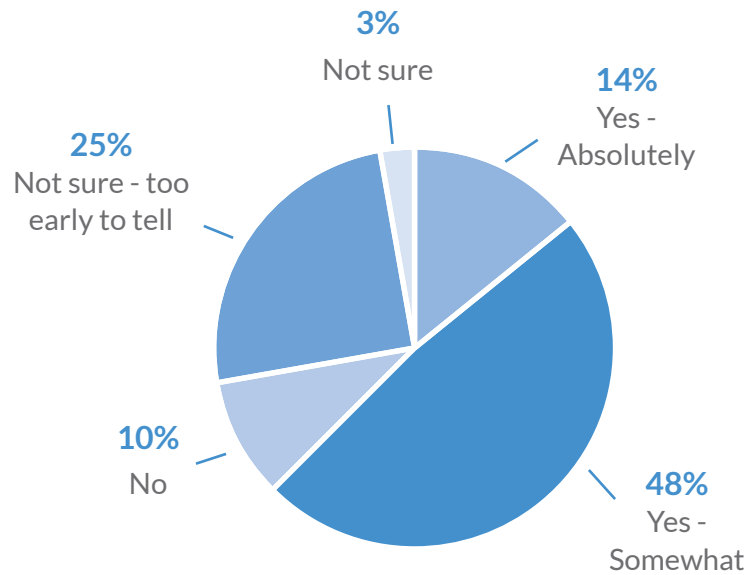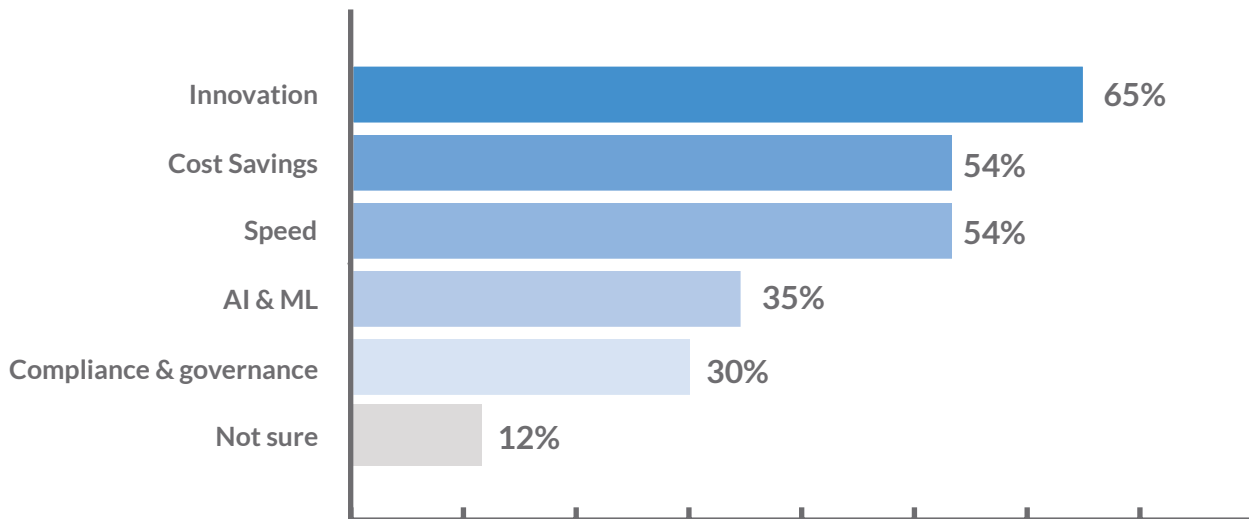

With all the energy around *cloud*, there is still a healthy mix of answers to this question. Only 14% answered with an absolute 'yes', leaving 86% who have not fully felt the technical and financial success in using the *cloud*.

## "What are top reasons to move to the *cloud*?" (Click all that apply)

Even with doubt, there is hope for the *cloud* and the responses to this question reinforce that fact. Here are the key benefits:

- Innovation – All tech innovation is now on *cloud*-centric technologies
- Time to market (speed) – The tech platform is no longer what hinders product roadmaps
- Cost savings – With pressure to 'do more', there is also pressure to do it 'for less'
- Analytics and automation (AI/ML) – Terabytes and Petabytes of data require these tools

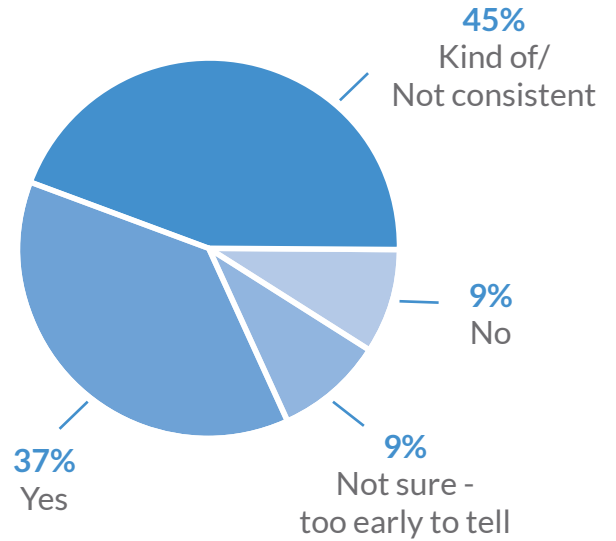| Category	Percentage
Innovation	65%
Cost Savings	54%
Speed	54%
AI & ML	35%
Compliance & governance	30%
Not sure	12%

What is most interesting about the results is that they are not typical of other technology trends. Cost savings is the usual number one reason. In fact, cost savings is tied for second with 'speed'. Speed as in time to market, performance and elasticity. The *cloud* allows organizations to utilize and bring differentiation with innovation and fast. Considering the speed of change within the technology stack, all capabilities are needed . The system of engagement, systems of record and systems of analysis/AI are now within reach for everyone. Without 'innovation' organizations will find themselves acquired on the cheap or out of business. Consequently, innovation is the top reason for moving to the *cloud*.

"Is a data archival and application decommissioning strategy built into your move to the *cloud*?"

25%
Not sure

21%
No

54%
Yes
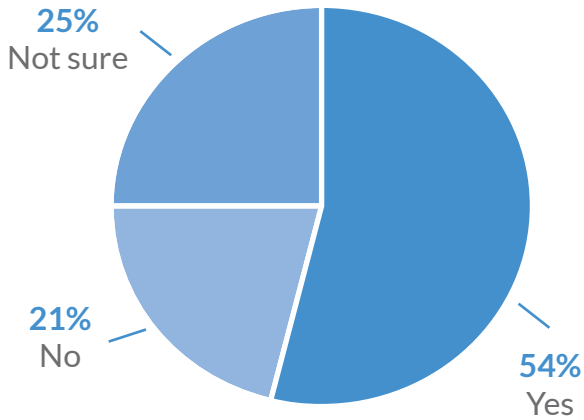
"When old technology needs to be turned off, does your organization have a formal process?"

45%
Kind of/
Not consistent

9%
No

9%
Not sure -
too early to tell

37%
Yes

"Out with the old, in with the new" is not just an old saying, it is a mindset for the future of technology. These two questions combined represent what has to take place on the other end of a migration, which is the process of archiving and decommissioning the old technology. No ROI calculation for a new project works if you cannot remove cost with the old technology.

Please end this sentence - "Our management and analysis of data is ..."

11%
Not sure

3%
Horrible - terrible -
nonexistent

12%
Market leading

27%
Lagging our
competitors

47%
On par with our competitors/
Good enough
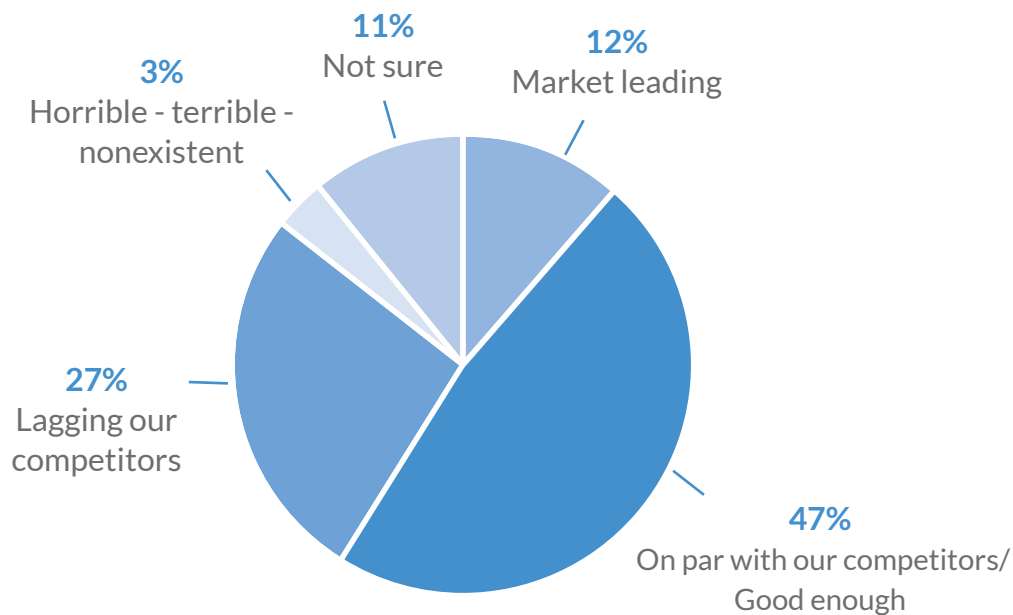
If 'data is the new oil' it needs to be managed, refined, and delivered in a way that matters. Looking at these answers, people are more pessimistic (30%) than optimistic (12%), and nearly half say that they feel they are on par with competitors. Of note is the high degree of complacency with 47% saying "good enough".

"If your organization grows through acquisition, are the systems and data effectively merged and reconciled?"

There are two kinds of corporate growth, organic and acquisition. When an acquisition takes place there is a polarizing situation that plays out in terms of what to keep and what to remove. The new systems and technologies may work better than yours. You need to decide what to keep of the old. At the same time, the business model in any acquisition is to take out expense to drive proper pay-back for the acquisition. So, the best plan is often take out as much technology expense as possible.

The primary takeaway here is not just that 24% of the respondents felt they knew how to acquire, but that the rest either don't know how or they avoid acquisitions all together.

6% Not sure

16% No

24% Yes, very much

16% We do not acquire organizations

38% Kind of
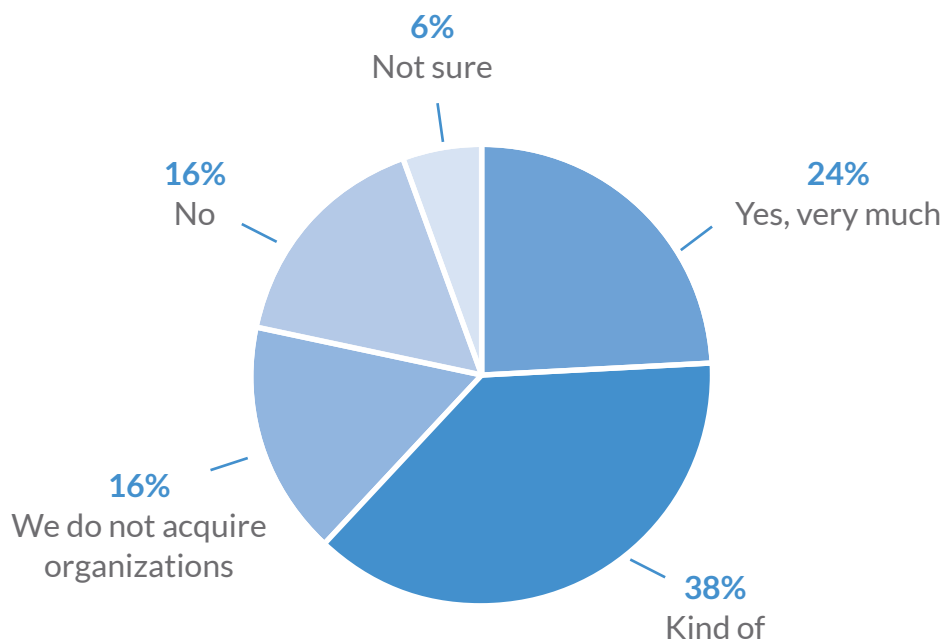
"Do you feel your organization has a good knowledge of your customers/ members/ citizens (sometimes called a '360-degree customer' view)?"

Finally, all of this is about making the customer experience better, whether you are a B2B or B2C organization. This can only happen if everything else mentioned above in this research (technology, costs, governance, data) has been reconciled. A quarter of all respondents replied with an absolute yes, while everyone else has doubts.

5%
Not sure

5%
No, it's horrible

20%
Kind of

25%
Yes, absolutely

45%
Yes, somewhat
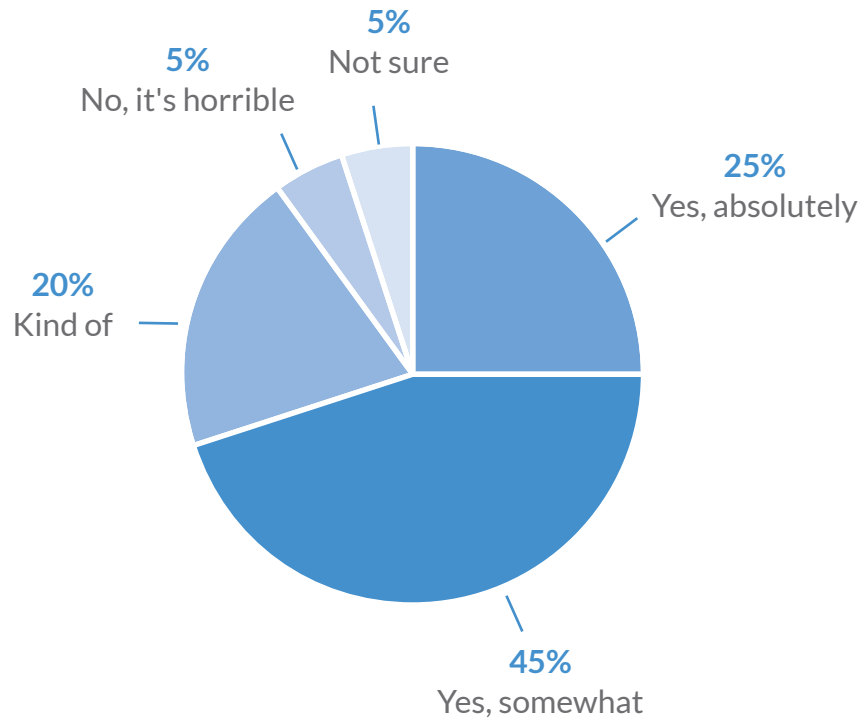
"Has your organization decided you can work from home permanently?"

We end this research by inquiring what employers are doing in relation to where employees do their work. We will continue to ask this every year. Combining the COVID-19 pandemic, the 'great resignation' of people and the overall shortage of key employee types, flexibility is the new benefit.

Category	2022	2021
Yes	32%	17%
It was always that way	4%	2%
Hybrid - sometimes come to an office	45%	38%
No	15%	32%
Not sure	4%	11%

2022   **2021**
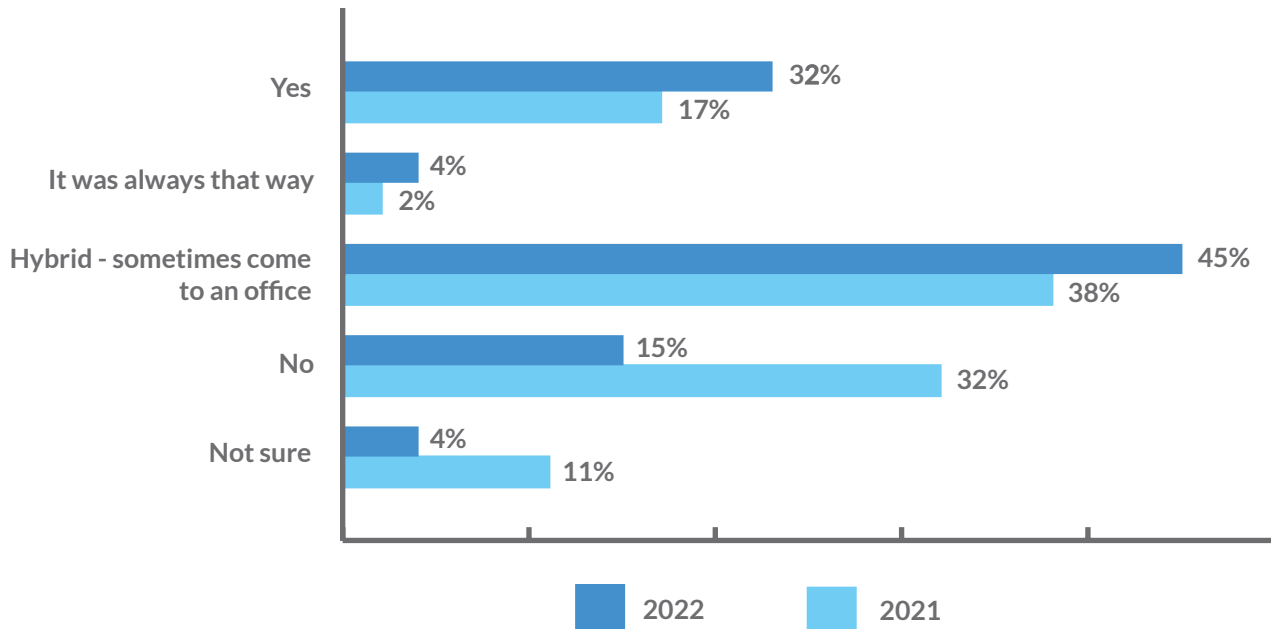
The majority, 81%, seem to have options, while 15% are being pulled back into the building every day. Yet the softening of the tone on 'no' from 32% to 15% over the course of a year shows promise.

SYNOPSIS

Over the years this annual research has found a degree of consistency in some areas, uncovered items that are both obvious and more subtle, and has found results in new fundamental needs for organizations to consider:

- The 80%/20% rule prevails –80% of organizations have a focus on 'transformation' while 20% are 'status quo' or 'cutting costs.

- The challenges in transformation technology center around technical resourcing (63%), funding (41%), compliance (43%) and infrastructure readiness (40%).

- The technology vendors with which organizations are looking to reduce their spending are Oracle (47%), Microsoft (29%) and IBM (21%).

- The top reasons to go to the *cloud* are **innovation (65%),** cost savings (54%) and speed (54%).

- The *cloud* platform leaders from our research brought up some interesting results. Azure (69%), Amazon (39%) and GCP (19%).

- Why old technology is still running in an organization is consistently answered "Not a management priority" and "A business case has not been made".

Gartner's point of view is a befitting way to end this research. Gartner's opinion is a result of their annual market forecast. "This year is proving to be one of the noisiest years on record for CIOs," said John-David Lovelock, distinguished research Vice President at Gartner." Geopolitical disruption, inflation, currency fluctuations and supply chain challenges are among the many factors vying for their time and attention, yet contrary to what we saw at the start of 2020, CIOs are accelerating IT investments as they recognize the importance of flexibility and agility in responding to disruption." In other words, if you don't change you won't be competitive in the market-place. Mr. Lovelock's quote ends with, "As a result, purchasing and investing preference will be focused in areas including analytics, *cloud* computing, seamless customer experiences and security."[1]

Table 1. Worldwide IT Spending Forecast (Millions of U.S. Dollars)

	2021 Spending	2021 Growth (%)	2022 Spending	2022 Growth (%)	2023 Spending	2023 Growth (%)
Data Center Systems	207,306	6.7	218,634	5.5	230,385	5.4
Software	614,494	15.9	674,889	9.8	754,808	11.8
Devices	809,452	16.1	824,600	1.9	837,844	1.6
IT Services	1,185,103	10.6	1,265,127	6.8	1,372,892	8.5
Communications Services	1,443,419	3.4	1,448,396	0.3	1,477,798	2.0
Overall IT	**4,259,773**	**9.5**	**4,431,646**	**4.0**	**4,673,728**	**5.5**

Source: Gartner (April 2022)

[1]https://www.gartner.com/en/newsroom/press-releases/2022-04-06-gartner-forecasts-worldwide-it-spending-to-reach-4-point-four-trillion-in-2022

NEXT STEPS

Though this research brought to light many notable changes to needs and perceptions of technology debt, there are several important results that should be noted.

- Assess and inventory the current tech stack: what should be kept in place, what should be migrated (ex. Oracle to Postgres) and what should be retired.

- When moving to the *cloud*: consider how to cleanout the old, low-value data as re-platforming is taking place.

- The *cloud* is like a mainframe where the subcomponents have a cost. In the *cloud*, it is also about disk performance, network movement (ingress and egress) and the death-by-a-100-cuts in what you pay to accomplish the simplest of tasks.

- Make the move easier with the right tools and a new platform that makes database migrations as low risk as possible.

- When done right, the *cloud* can bring a client everything they would hope – but the platform vendors will not always tell you where you are over-provisioning (and thus spending). Work with a third-party partner to help identify these moments.

Platform 3 Solutions is a global leader in end-to-end legacy application migration and retirement solutions. Platform 3 Solutions offers a full suite of proprietary products, services and support to empower secure and seamless transitions of data and applications, eliminate technology debt and deliver the ROI to invest in technology modernization. Our proprietary Platform 3 Technology Debt Score™ accurately measures an organization's existing technology debt. Our Platform 3 ROI Assessment™ converts technology debt data into a defendable ROI model that demonstrates true savings that will be delivered through Platform 3 to free up cash to invest in modernization and ensure data compliance.

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