Growth and Trends in SPEECH RECOGNITION

QUICK REPORT

Research and Report Provided by Reaction
PREMIUM REPORT CONTENT

This quick report is available to anyone at no cost. However, our full comprehensive reports (including the underlying data) are only available to (1) participating healthcare providers and their organizations and (2) ReactionData clients who actively use our Research as a Service (Raas) platform for their internal marketing and business research projects. See below for more information about obtaining our Premium Reports. The premium content for this report includes:

- Customer recommendation ratings for speech recognition, shown as an aggregate rating of all vendors, and also broken out by department. (Individual vendor C-sat recommendation scores will only be shared on an individual basis to those vendors with a ReactionData license.**)

- A breakout by department of where speech recognition is being used and estimates of growth over the next two years.

- Which speech recognition solutions are being targeted by providers for replacement and underlying reasons why.*

- Verbatim provider feedback** about specific vendors that are at risk of losing contracts (in radiology.)*

- A comprehensive look at current speech recognition market share and mind share leaders, with data broken out by department.

- A list of the healthcare facilities that participated in this research study.

Also, healthcare providers who did not participate can still receive the premium content for this study by signing up to participate in future research studies. See below for instructions.

The following are eligible to receive our comprehensive reports:

1. Clients of ReactionData with active licenses to use our Research as a Service (RaaS) platform receive our Premium Reports at no additional cost. For more information about obtaining a license contact Jeremy Bikman at jeremy.bikman@reactiondata.com.

2. Healthcare provider organizations and their associated networks (Including: hospitals, clinics and practices) do not need a license to receive our full, comprehensive reports. To be eligible, at least one related employee must participate in the associated 60-second, web-based research initiative. We value participation from all caregivers, technology and support personnel, and leadership.

*Because of the sensitive nature of individual vendor data, we withhold this information and disseminate it only to the vendor in question.

**We do not disclose participant names or their healthcare facilities when sharing provider feedback.
While news related to speech recognition is dominated by names like Siri, Cortana and Google Now, this relatively new technology has quietly been serving a higher purpose in certain segments of healthcare—most prominently radiology. However, we’re now seeing traction in cardiology, pathology and even in core EHR systems. The advantages are clear—fewer record errors, improved workflow, simplified communication between IT systems and a more direct connection between patient and specialist. These benefits do not come without tradeoffs. While speech recognition has been around for the past 15 years, it’s a technology that is constantly maturing. Because of this adoption and training have steeper learning curves than do previous methods, and resistance from some provider groups can be fierce.

However, the bigger story in healthcare speech recognition is related to current trends and adoption rates. We reference the Diffusion of Innovation theory for context.

This theory suggests that anytime a new technology hits the scene, we see the market naturally segment itself into categories of consumers based on their propensity to adopt at different stages of the lifecycle. This holds true for purely consumer markets as well as business markets such as healthcare providers and healthcare networks. Analyzing where speech recognition falls both in the bigger picture of healthcare and in specific healthcare segments uncovers some interest insights providers and vendors are sure to find valuable.


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VENDORS COVERED IN THIS REPORT

Dolby

IBM

MX Modal

Nuance

voicebrook
GROWTH AND TRENDS IN SPEECH RECOGNITION

ADOPTION RATES ACROSS DEPARTMENT

Across radiology, cardiology, pathology and EHRs, the collective adoption rate shows speech recognition is catching on and will continue to see significant growth over the next several years, with only 25% stubbornly suggesting they will likely never adopt this new technology. While, overall, this is a growth market, the real insights come from taking a deeper looker look at adoption rates and trends by departments.

Speech Recognition Adoption Across Departments

- Considering It Right Now: 30%
- In the Next 1-2 Years: 27%
- Unlikely to Ever Adopt It: 25%
- Already Using It: 20%

OVERALL TRENDS ACROSS KEY SPEECH RECOGNITION MARKETS
TRENDS IN MARKET SHARE & MIND SHARE ACROSS DEPARTMENTS

Trends in market share and mind share, and the relationship between these two measurements are critical pieces of information every vendor in this space should closely monitor. In this report, market share shows who owns what piece of speech recognition pie within our sample size, while mind share shows which vendors occupy the biggest space in the minds of providers who use or are most likely to adopt these solutions. Think of it this way, market share is an indicator of “what is,” and mind share is an indicator of “what will be.”

For example, a combination of high market share but low mind share (by a significant margin) should sound off warning signals to any vendor, as this would indicate a shift is occurring away from their solutions. Conversely, a combination of lower market share and higher mind share indicates that recent measures a vendor is taking to improve their offering are taking hold and having a positive impact on prospective clients. It should be noted that Voicebrook offers a pathology only solution, which skews their position significantly in the overall picture.

**Note: Our market share measurement for this report is based on the sample size of 376 decision-making providers from US-based hospitals.**
Why is Nuance the dominant force?

With few players in this space and one dominant force in both market and mind share, little analysis of the following graph is needed. The relevant question that should be asked is, what is Nuance doing that competitors M*Modal, Dolbey, IBM and Voicebrook are not? Does Nuance have superior technology or better solutions? Did being first to the healthcare arena through acquisitions give them a dominating edge? insights from the marketplace suggest Nuance is more in tune with their customers and the market at large. The debate over who has the superior solution is a game of “he says, she says” and frankly, having a superior solution almost always plays second fiddle to higher quality engagement with customers and the marketplace as a whole.

But wait, it's not all roses.

While Nuance maintains the largest share of the market and the minds of providers, we may be seeing an erosion of their dominance in mind share. In our participant sample size, Nuance owns 88% of the market and 58% of mind share. While they hold the majority of mind share, as defined above, the disparity between these two measurements is an early warning sign to shore up their collective defenses to avoid losing market share to other vendors.

A closer look uncovers two reasons for this. First, M*Modal and Dolbey are finding themselves in the favorable position of having higher mind share than market share, which may indicate they are both making strategic adjustments to their gameplans to better position themselves as trusted speech recognition vendors. Second, we see solutions by IBM and Voicebrook beginning to garner a small amount of attention from providers. Simply put, more placemats at the table mean leaner pieces of the pie.
NUANCE
#1 MARKET SHARE
OVERALL

M*MODAL
#2 MARKET SHARE
OVERALL

DOLBEY
#3 MARKET SHARE
OVERALL

NUANCE
#1 MIND SHARE
OVERALL

M*MODAL
#2 MIND SHARE
OVERALL

DOLBEY
#3 MIND SHARE
OVERALL
THE RENEWAL & REPLACEMENT MARKET ACROSS DEPARTMENTS

It’s clear that across all departments covered in this report, providers that already have a speech recognition solution are happy with the results, with very few planning to switch vendors. This bodes well for those vendors who already have a share of the market.

#### Renewal/Replacement Market

![Bar chart showing market share across different departments: Cardiology, Radiology, Executive/IT, Pathology. The chart indicates high market share for Not Switching vendors across all departments, with a notable presence of Nuance, M*Modal, Dolbey, and other vendors.](image-url)
A discussion about speech recognition adoption by department has to begin with radiology. This healthcare specialty area has always been one of the earliest adopters of technology and was the first to see widespread adoption of speech recognition solutions compared to other departments such as cardiology and pathology. In the big picture of the Diffusion of Innovation curve, radiology departments are often the innovators and early adopters across all healthcare segments. Why is this so often the case? Radiology is the perfect storm of higher profitability, in a more business-like environment and is an area of healthcare that is often insulated from direct patient interaction, which accommodates voice dictation. This certainly doesn’t mean speech recognition is without merit in other areas of healthcare. Departments like cardiology and pathology are adopting but simply fall into the late majority crowds. However, these slower adoption departments present significant opportunities to vendors, which will be outlined below.

Contrasting Adoption Rates Between Departments

![Bar chart showing contrasting adoption rates between departments:]

- **Structured Reporting**
  - Cardiology
  - Radiology
  - Pathology

- **Dictation/Transcription**
  - Cardiology
  - Radiology
  - Pathology

- **Speech Recognition System**
  - Cardiology
  - Radiology
  - Pathology

- **Other/Combination of Solutions**
  - Cardiology
  - Radiology
  - Pathology
CONTRASTING MARKET SHARE & MIND SHARE BETWEEN DEPARTMENTS

When broken out by department, many of the same trends carry over from the overall picture. However, one interesting story is what appears to be an emerging battle over the mind share of heads of cardiology departments. Among our participants, the playing field appears to be relatively level in this measurement. Is this an indication of Nuance’s soft spot or simply an area of less emphasis.

Contrasting Market Share Between Departments

What speech recognition system do you use?
Contrasting Mind Share Between Departments

Which speech recognition system will you consider?
CONTRASTING THE LIKELIHOOD OF PROVIDERS RECOMMENDING THEIR VENDORS BETWEEN DEPARTMENTS

When it comes to knowing how healthy a relationship is between a vendor and a customer the most important data point by far is whether or not a customer will recommend the vendor to others they come in contact with. When asked about the likelihood of providers referring their vendors to other providers, the results were in positive territory across all departments, albeit marginal in some cases. The maturity of speech recognition solutions in radiology is evident by recording the highest score of almost eight out of ten in this metric.

How likely are you to refer this solution to a friend or colleague?
INDIVIDUAL PROVIDER RECOMMENDATION SCORES

While we collect data on individual vendors that may be favorable or not, some information is sensitive enough that we don’t release it in a public format. However, below are the individual provider recommendation scores displayed anonymously. Vendors with ReactionData licenses can contact us directly to obtain sensitive data such as c-sat and provider recommendation scores.

The Takeaway

Vendors in this space have done a nice job putting themselves in the good graces of their clients. This means less turnover in the future, compared to other areas of healthcare IT. However, it should be noted, there’s a world of difference between sixes and sevens in this metric compared to eights and nines. Vendors still have work to do.
CONCLUSION

Speech recognition will definitely become a more prominent feature in patient record creation with widespread adoption in radiology and significant growth happening in a number of additional departments, as well. As the AI (artificial intelligence) behind this technology continues to improve, so will the ability to more quickly and accurately adapt to the unique nuances of individual’s speech patterns. This will slowly move more of the late majority and laggards off the fence, opening up some additional, moderate growth opportunities.

As with any developing technology, higher adoption rates and greater standardization across the different solutions, should cause the ROI to become more readily apparent, and the day will come when keyboards will be relegated to error correction tools rather than the primary source of information input.

The pioneers of this technology, as well as the benefactors of early stage technology acquisitions are well positioned in healthcare to dominate this market. However, with the amount of growth that is currently underway, there is plenty of action for new, smaller or more niche vendors, if they get in the game now. Three to five years from now, we’ll likely be viewing the trend on the downslope of the Diffusion of Innovation curve and vendors in this space will be strategizing about how to retain and grow current contracts or win replacement business. In the simplest terms, speech recognition in healthcare is a market on the verge of maturity but still full of opportunity.
Why we release our research to the healthcare community?

Does your organization budget money each year for market research initiatives, reports or tools that typically provide little or no ROI? Unfortunately, the market research industry has operated for so long on very outdated and flawed methodologies that businesses rarely use the terms “market research” and “ROI” in the same sentence. We’re on a “mission of mercy” to show what effective business research should look like and our free industry reports are the wakeup call.

Businesses today are sandwiched between handing control of research projects to slow, outdated firms or conducting their own research through the use of survey tools. Both options are recipes for underwhelming performance and depressingly low expectations. So why do organizations keep conducting business research? Because getting intel is that important. You’ve heard the saying, “Some data is better than no data?”

With that, we give you Reaction, the world’s first Research as a Service (RaaS) platform designed for use within your business. That’s right, we are not a market research firm and please don’t ever call us one. At its core, we designed Reaction to make ROI the focus of all business research you conduct with your customers, prospective customers or the market at large. Because of our user network of more than 250,000 healthcare providers and our methodology of best practices, Reaction is blazing fast, elicits an incredible response from any healthcare provider audience and creates direct opportunities to generate new business...some people call that lead generation.

When we let Reaction out of its cage, we couldn’t let our clients have all the fun. So, we use Reaction to gather super salient data in days, not months on a host of healthcare topics to show the market what business research should look like. The takeaway? Demand much more from your market research budget. To find more contact Jeremy Bikman at jeremy.bikman@reactiondata.com or visit us at www.reactiondata.com.