



Beyond Keywords

Making the Case for Visual Analytics
in Digital Investigations

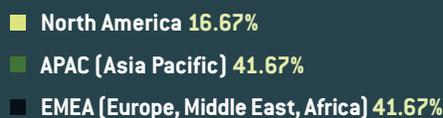
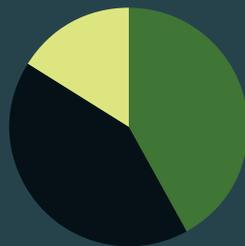
Beyond Keywords

Making the Case for Visual Analytics in Digital Investigations

Nuix surveyed over 200 digital investigations professionals around the world to discover how they used keyword searches and the analytical techniques discussed in our Beyond Keywords white paper. Did our recommendations match up with the experiences of investigators and analysts in the field?

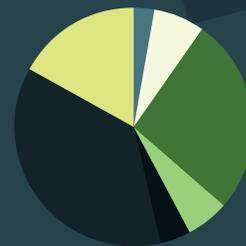
Geographic breakdown

(of respondents who provided contact info)

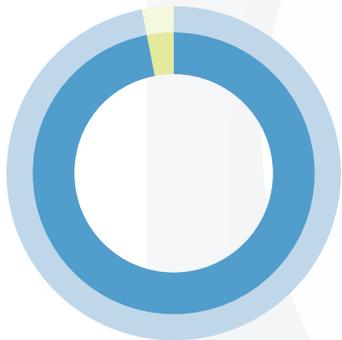


Occupational breakdown

(of respondents who provided this info)



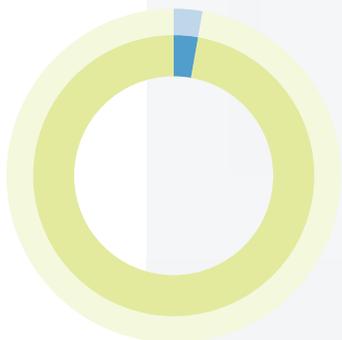
Keyword searches became an important investigative tool as investigations became more heavily focused on digital information. As data volumes grow larger, investigators using keyword searches face huge arrays of results in lists and tables.



97% of respondents use keyword searches as part of their digital investigation workflow to some extent



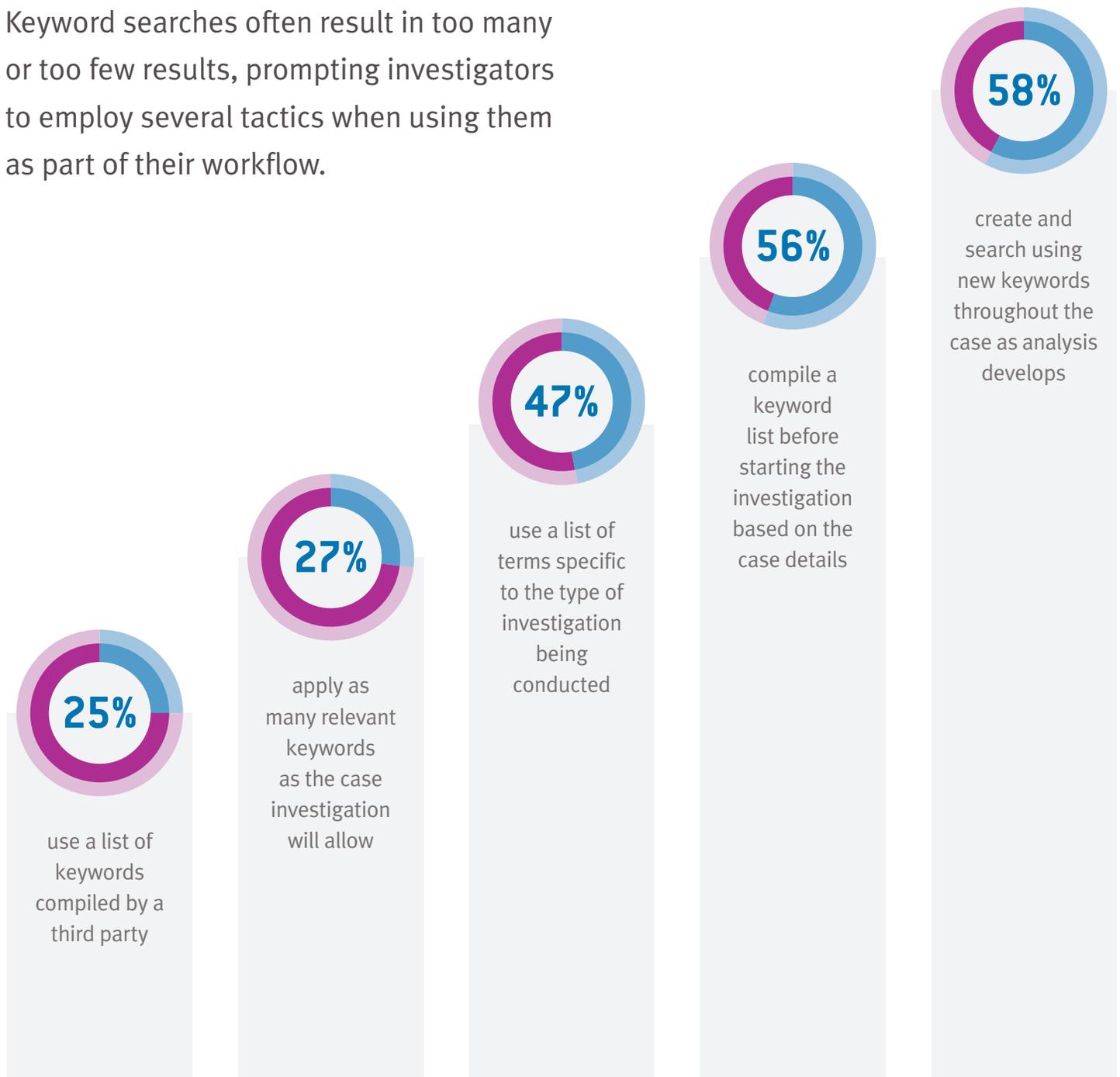
48% say they use keyword searches to a great extent



3% of respondents do not use keywords as part of their digital investigation workflow

Keyword searches are by nature **imprecise**

Keyword searches often result in too many or too few results, prompting investigators to employ several tactics when using them as part of their workflow.

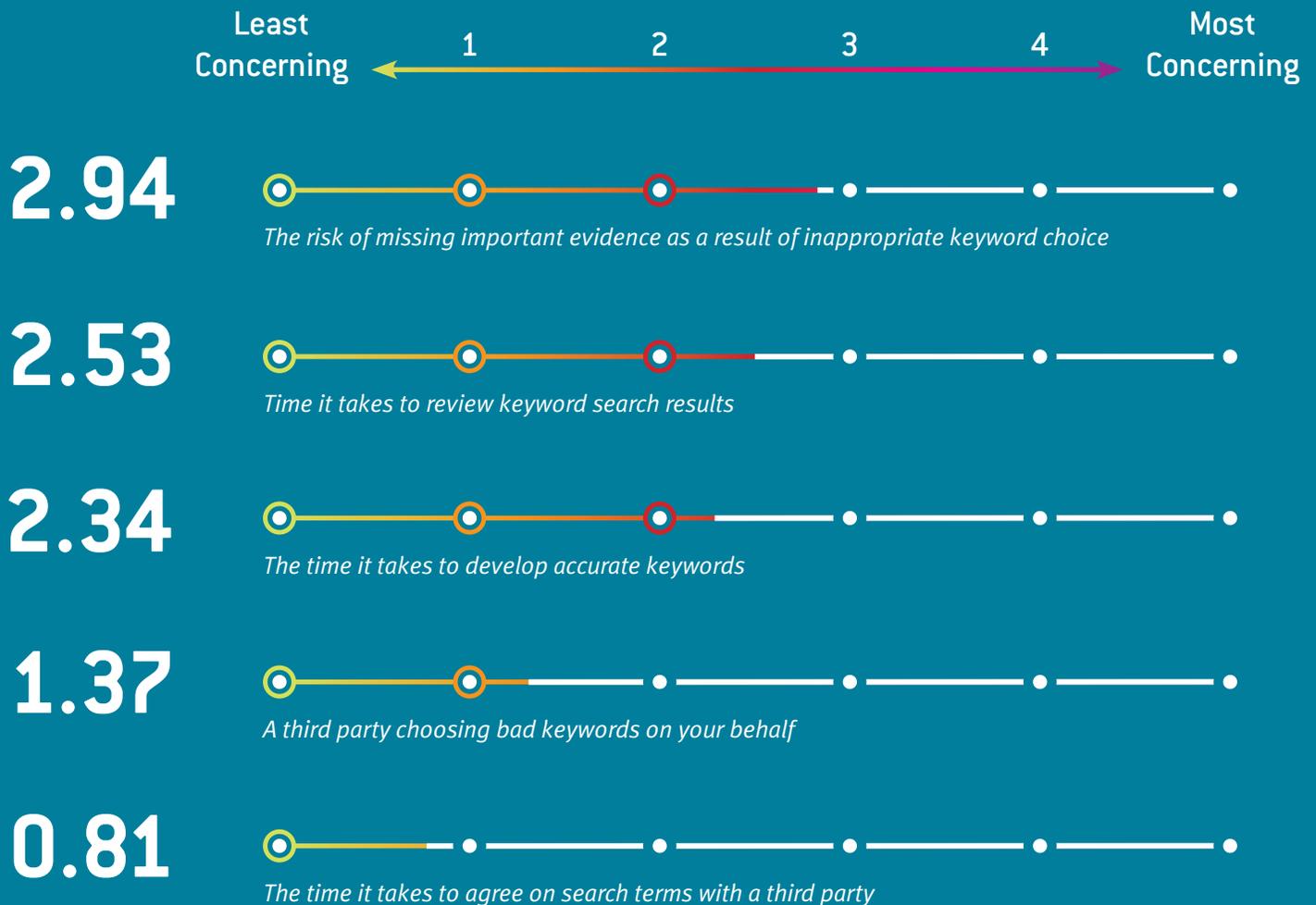


Not surprisingly, investigators are most concerned about the time it takes to find the critical evidence by using only keyword searches and the accuracy of those searches.

Concerns about third party supplied keywords rate the lowest overall, likely because only a **small percentage of investigators surveyed (25%) use third-party supplied lists.**

This is most likely in a litigation environment where both parties' counsel agree on lists of keywords as part of the eDiscovery process.

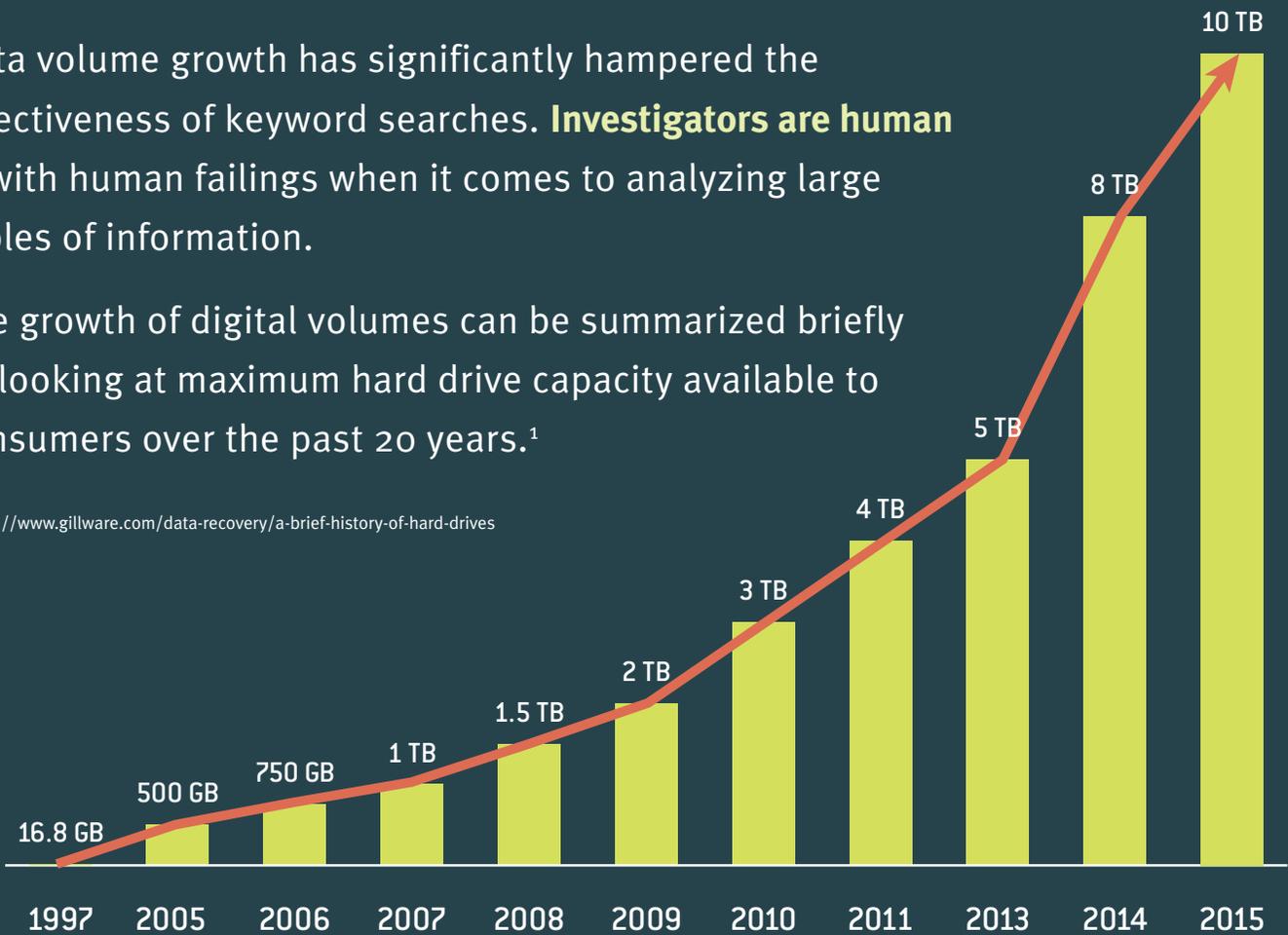
(Scale of 1 being least concerning, 5 being most concerned, here are the average responses for each factor surveyed on)



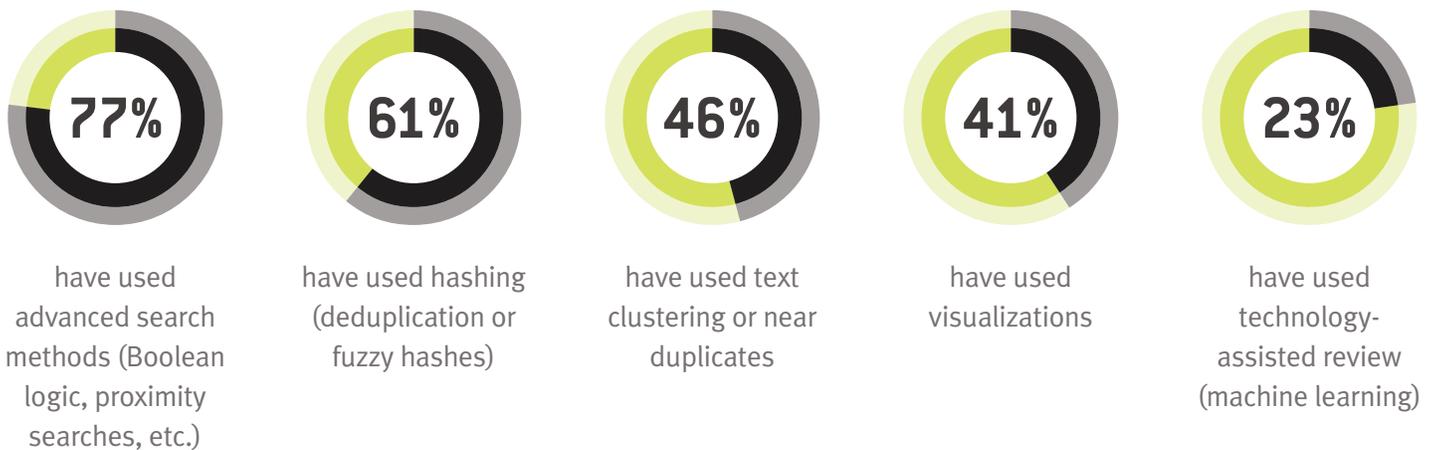
Data volume growth has significantly hampered the effectiveness of keyword searches. **Investigators are human** —with human failings when it comes to analyzing large tables of information.

The growth of digital volumes can be summarized briefly by looking at maximum hard drive capacity available to consumers over the past 20 years.¹

¹<https://www.gillware.com/data-recovery/a-brief-history-of-hard-drives>

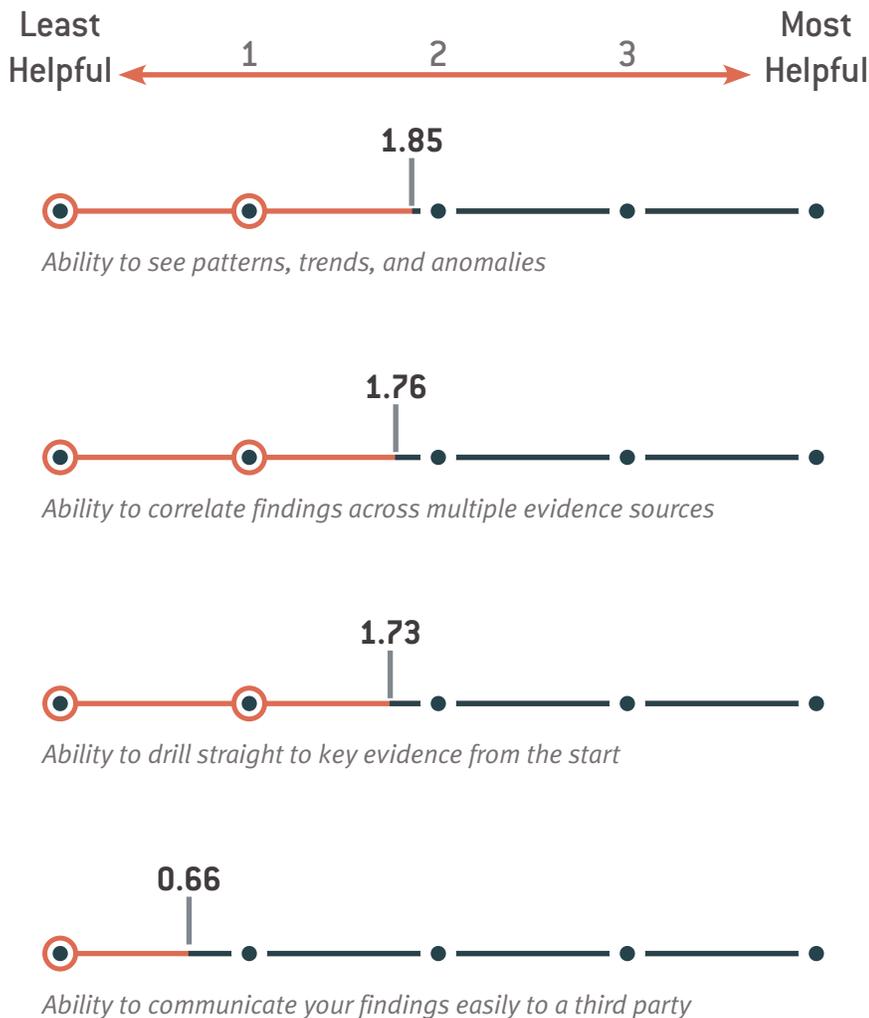


Bigger hard drives allow more data to be stored, which typically means more information to sort through. Investigators are turning to complementary methods of dealing with evidence to overcome the deficiencies of using keyword searches alone.



Interestingly, respondents said the ability to see patterns, trends, and anomalies would be most helpful in making their investigation workflow more efficient and focused. Yet, despite this, **only 41% have used visualizations**, which help achieve this outcome.

(Scale of 1-4, 1 is least helpful, 4 is most helpful, here are the average scores from the responses)



Visualizations offer the context and flexibility that keyword searches and other methods simply cannot offer. Despite this, **59% of those surveyed have never used visualizations in their cases**, for various reasons.



say there's a lack of data visualization tools on the forensics market



say it's the prohibitive cost of data visualization tools on the forensics market



don't have time to apply data visualizations



don't believe data visualizations help with computer analysis

The value of data visualizations, however, is not lost on this group. Close to half (48%) are interested in exploring the value of visualizations in their forensic workflows.

The way it's always been done

Keyword searches play an important role to this day. Despite their prevalence, however, they are an imperfect method of identifying relevant evidence from large (and growing) data sets. Keyword searches by their nature are likely to turn up huge amounts of responsive documents or data, forcing investigators to manually sort through the results in a time-consuming and inefficient manner.

While investigators have many other options for working through case evidence, there's a resistance to abandoning keywords altogether. Why is that? The results of this survey point to the common tendency to keep doing things "the way we've always done them." Whether that is because of institutional resistance or stubbornness on the part of investigative teams, the reality is that keyword searches will continue to become less suited on their own to answering the very real need for timely, efficient analysis of case data.

For more information, visit
nuix.com/white-papers/beyond-keywords
nuix.com/investigation

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North America

USA: +1 877 470 6849

EMEA

UK: +44 207 877 0300

DE: +49 711 7811 8630

APAC

Australia: +61 2 9280 0699

» Email: sales@nuix.com

» Web: nuix.com

» Twitter: [@nuix](https://twitter.com/nuix)



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