

# Insights Hidden in Data Represent Opportunities for DRUG AND MEDICAL DEVICE DEVELOPERS

**A**s speed and cost become increasingly important in health care, more and more decision making will be “shared,” requiring increased data transparency, collection and analysis. Pharmaceutical and medical device innovators can now generate substantial value across the health care spectrum by leveraging this data to improve decision making, optimize innovation, improve the efficiency of research and clinical trials and build new tools for physicians, insurers and regulators to evaluate products, performance and quality.

## Data Sources and Transparency

Data can be derived from many sources, including the R&D process itself, pharmacists, patients, payers, employers and caregivers. Having mechanisms to collect and analyze this often disparate data to reach actionable conclusions can help companies better identify potential drug and device candidates and develop them more quickly into effective, approved and reimbursable therapies.

A key to gain insight from data is obtaining access to the information itself. Fortunately, the amount of third-party data has grown considerably. The federal government, pharmaceutical companies and other organizations have accelerated the move toward transparency by making stored data usable, searchable and actionable.

Regardless of whether the data comes from existing databases, is captured directly from machines or other mechanical devices or is manually entered into a cloud-based system, it must be cleansed and transformed for specific problems before it can be analyzed. Required for this in modern pharmaceutical and medical device research is a comprehensive internal and external data management system that can access, store and analyze data from virtually unlimited sources and that is designed to reliably drive timely insights.

## Gaining Additional Insight: Context Matters

Once data has been acquired, cleansed and transformed for a given problem or set of problems, insight can be gained through a contextually intelligent data analysis system able to analyze quantitative (numeric) and qualitative

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(text) data sets from multiple sources continuously. This enables researchers to mitigate risk by seeing beyond a single problem or solution — unlike the approach conventional data analysis has historically used. Data can be modeled in more contexts to identify more intricate and obscure connections between patients and a medication, device or procedure.

One of the key applications of the collection and analysis of complex data lies in trends toward accountable care, comparative effectiveness research, evidence-based medicine and payments linked to performance. For pharmaceutical and medical device companies, these trends represent a paradigm shift from previous ROI models. To remain profitable in this environment will require a greater understanding of the forces that underlie commercialization and pricing — not to mention the regulatory body’s requirements for continuous and extended post-marketing data.

The continuous collection and analysis of data variables from a wide variety of sources paint a clearer picture of the landscape, allowing future trends to be spotted earlier and decisions to be made with confidence.

To make this data a useful diagnostic tool, results must be presented in a graphical form that scores and categorizes variances. Data visualization tools and techniques have evolved from simple charts to complex “heat maps,” or network models that indicate complex relationships in mass amounts of data.

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## Opportunities for Innovators

In the pharmaceutical and medical device industries, discovery and development have always been heavily data-driven activities. But having data, understanding it and extending it are very different things, and innovators may be so overwhelmed by the amount of data that opportunities to find answers within that data are left behind. In-house statisticians may monitor data in a traditional sense, but mining the data variables for forward-looking anticipation or predictions takes a more unconventional approach, best provided by a third party. Looking for empirical facts in large bodies of evidence has always been a driver of innovation and the ability to apply this kind of thinking to ever larger and richer sets of data opens up other development opportunities.

Employing data in new ways allows sponsors to identify enhanced business benefits or address immediate problems that need to be solved. In addition, application of the knowledge gained from strategic data collection and analysis can boost ROI by mitigating development or manufacturing risk, solving compliance issues in advance, and better understanding and managing patient care. **PV**

**Accelerated Vision** uses breakthrough data intelligence technology originally developed for the U.S. Intelligence Community to help product developers, patient groups, and other companies gain additional insight into data they own or collect. The company’s solutions, *SeeAll* and *KnoAll*, simultaneously collect and analyze a virtually unlimited number of variables in both numbers and text, and cross-reference multiple data sources in real time. Information thus analyzed is presented in graphical formats that allow relationships and other insights to emerge. Accelerated Vision helps drug and device companies improve ROI by mitigating development and manufacturing risk and resolving compliance issues.

▼ For more information, visit [acceleratedvision.com](http://acceleratedvision.com).



# UNCONVENTIONAL WISDOM

GOOD LUCK  
FINDING NEW  
INSIGHTS  
THE OLD WAY

## “You’re Only As Good As Your Data” is a Half-Truth

The full truth is that you’re only as good as your answers. Accelerated Vision has developed two of the industry’s most powerful data systems, SeeAll and KnoAll, using technology developed for the U.S. Intelligence Community. Our platform allows us to compile both text and numbers from an unlimited number of clinical and nonclinical outcomes and independent data sources simultaneously and analyze them contiguously. Additionally, applying user-definable reporting and visualization tools makes this data a useful diagnostic aid to help mitigate risk, see beyond a single problem or solution, and identify intricate and obscure but useful connections between patients and products. ***We see answers to questions you didn’t even know you had.***

### Do More With Your Data:

- Boost drug and device development ROI
- Gain insight into compliance issues
- Mitigate development and manufacturing risk
- Better understand and manage patient care