



ARRIA + TIBCO WHITE PAPER

HOW INTELLIGENT AUTOMATION FUELS DIGITAL TRANSFORMATION

ARRIA

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Why do we need automation?

THE ABILITY TO GIVE people the information they need when and where they need it is paramount for any enterprise. Solutions that deliver access to actionable insights based on trustworthy, real-time data are invaluable for business executives.

Providing decision makers with analytics presented in a format they can understand is an operational necessity; people ingest and process information in different ways.

Some people have the luxury to take as much time as they need to analyze an Excel spreadsheet and draw accurate conclusions from data.

Many of us, however, do not have this luxury and require more than pie charts and graphs to get at the full story our data has to tell.

To achieve positive outcomes, management teams must fully comprehend the reasons behind key business metrics conveyed in corporate and financial reports. Understanding root causes for growth and retention—or loss and attrition—is the key to optimizing operations.

In finance, for example, adding natural language to reporting means you get expert, easy-to-understand written narratives that complement visualizations. This not only demystifies complex analytics, but also extends the reach of data intelligence across all levels of an organization.



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HOW INTELLIGENT AUTOMATION FUELS DIGITAL TRANSFORMATION

Intelligent automation has revolutionized how companies and personnel interact with, consume, and leverage data intelligence.

With more insights into their data, management can make better-informed decisions, faster.

Currently, natural language generation (NLG) is combined with business intelligence (BI) and automation in myriad use-cases, such as enterprise financial reporting, investment portfolio per-



RPA+BI+NLG Systems-to-People workflow for real-time actionable insights

Robotic Process Automation (RPA)

Instantly perform the tedious human tasks of assembling data from disparate systems.

TIBCO Business Intelligence (BI) Dashboards

Provide illustrative two-dimensional visuals of the newly aggregated data.

Arria Natural Language Generation (NLG)

Instantly produce expert narrative that explains insights found both within the displayed BI visuals and also within all of the underlying data.



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“Natural language generation platforms automatically create linguistically rich descriptions of insights found in data. This makes information easier to understand and possibly more engaging. By 2022, 25% of enterprises will use some form of natural language generation technology.”

– **Gartner**, *Market Guide for Natural Language Generation Platforms*, 27 June 2019

formance, pharmacovigilance, clinical trials, compliance reporting, semi-automated journalism, and even weather reports. Gartner predicts that by 2022, 25% of enterprises will use some form of natural language generation technology.

In this whitepaper, we examine how BI, natural language, and robotic process automation (RPA) are three driving forces behind intelligent automation.

The driving forces behind intelligent automation

RPA's influence on intelligent automation. According to findings from a recent Economist Intelligence Unit study, more than 90 percent of the 502 global executives surveyed said that their organizations are using automation technologies (like RPA), and most are satisfied with the returns they are seeing. However, not all expectations are being met. Automation alone is no longer enough.

While RPA platforms automate the collection and organization of data into structured formats, intelligent automation harnesses complementary technologies, such as NLG, that extend the reach, impact, and value of analytics in financial reporting.

Data intelligence: Interpreting financial information. Intelligent automation technologies, according to Deloitte, let organizations overhaul business processes—not only achieving higher speed and precision but going beyond RPA to automate predictions and decisions on the basis of structured and unstructured inputs.

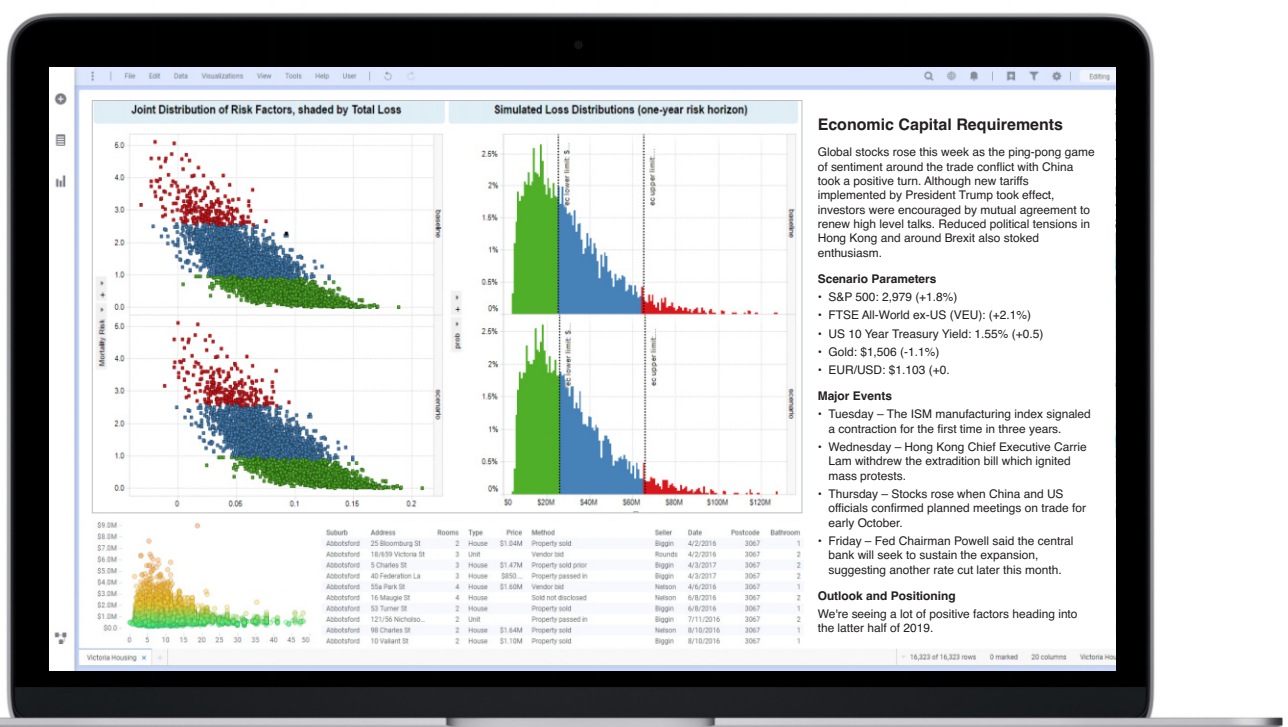
In the world of financial reporting, intelligent automation delivers better performance, enhanced efficiency, and accuracy. And per the aforementioned research, combining various applications of artificial intelligence (AI) with robotic process automation appears to be the most powerful factor helping organizations increase revenue. To extract true intelligence from data, analytics must communicate

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actionable insights that can be easily understood by a diverse audience. The combination of language analytics, written or spoken, and visual analytics, for example, can empower stakeholders across an entire organization to understand various performance metrics and the factors affecting corporate strategy.

The power of natural language to increase the ROI of BI

Many BI dashboards use NLG technology to produce analytical narratives the complement data visualizations and also highlight insights not shown in visuals. Identifying and highlighting not-so-obvious trends and correlations with NLG increases the value and reach of BI, providing actionable insights and greater transparency to decision makers.



Arria NLG combined with TIBCO Spotfire gives users the power to transform their data into insightful, meaningful, natural-language stories and reports. For the first time, the value contained within mountains of data can be communicated in written language everyone can understand.

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Not every member of the C-suite shares the CFO's acumen. Many executives prefer analytics presented as language that doesn't just summarize what happened, but also explains why it happened.

Intelligent automation is applied to virtually all aspects of financial reporting and operations that are business-rules-based, repetitive, and non-subjective. In this area, it continues to drive improved accuracy, greater productivity, and increased efficiency.

By taking away rote, boring tasks, intelligent automation frees personnel to tackle higher-value, strategic work.

To make data-driven decisions, management and employees need real-time access to information detailing key performance indicators (KPIs). To address this need, smart business leaders have invested in BI platforms such as Tibco Spotfire, Microsoft Power BI, Tableau, Qlik, and MicroStrategy.

By automatically collecting, organizing, and presenting data from disparate platforms and applications in a single interface, BI dashboards have become invaluable resources for financial planning and analytics (FP&A) professionals.

Most financial planners and accountants do not possess engineering expertise, nor are they particularly IT-savvy. BI dashboards are inherently intuitive and easy to use; coupled with comprehensive functionality, these attributes eliminate the time and money of having to train employees to use and manage a dizzying array of software for each phase of data discovery.

Operating within a single environment streamlines data synchronization. Historically high-friction endeavors like budget forecasting, variance analysis, business modeling, and other processes now require little more than a few clicks.

Modern BI dashboards collect data, configure the presentation, and present findings as visualizations. Most are customizable and can consolidate charts and graphs on a single screen, providing users with an overarching view of marketing performance, sales, supply-chain efficiency, and other common situations.

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By combining advanced language analytics with computational linguistics to narrate all available data, NLG narratives provide users with explanatory, contextual written analysis that supports and adds value to the visuals.

Of note, is that continuing adoption of open APIs makes it quick and easy to connect BI platforms to hundreds of everyday productivity applications, such as accounting software, CRM, marketing automation, and payroll.

BI environments that also incorporate NLG's advanced language analytics that can automate the analysis of large data sets immediately so that it can be understood by a wider population of employees.

A place to get started with your transformation

Consider the following scenario: data analysts who prepare financial reports for their company's CFO know that their "audience" is a skilled interpreter of data visualizations.

However, not every member of the C-suite shares the CFO's acumen. Many executives prefer analytics presented as language that doesn't just summarize what happened, but also explains why it happened.

Natural language generation (NLG) complements BI dashboards. It does this by increasing the return on a company's investment in BI—and it does this almost immediately. By combining advanced language analytics with computational linguistics to narrate all available data, NLG narratives provide users with explanatory, contextual written analysis that supports and adds value to the visuals. As a result, users get a comprehensive story with actionable insights.

The ability to translate the data behind visuals into contextual voice and/or written narratives enables organizations to communicate more effectively with both external and internal stakeholders.

Marketing and sales leaders, for example, can justify corporate strategies to employees who otherwise may question the validity of new ideas.

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Knowledge is power and combining explanatory storylines with visualizations in a single environment exemplifies data intelligence and fosters enterprise-wide data literacy.

Wrapping up

As noted, intelligent automation has revolutionized how companies and personnel interact with, consume, and leverage data intelligence. Accordingly, the role of data analysts and data scientists will evolve, reallocating their energy from tedious assignments to higher-value tasks.

Advanced computational linguistics technologies, like NLG, add intelligence to automation in the form of descriptive insights that make it easy for people without statistical backgrounds to understand and act upon data.

Affecting sustainable change in an enterprise can be a huge undertaking, but smart executives have embraced intelligent automation, fueling digital transformations—a requisite for success in the 21st century. ■

**For more information, including a demo tailored to your
specific use case, please email: sales@arria.com
arria.com**

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