



## National Institute of Food and Agriculture Moves Toward 'Open Government' with Open Source BI Implementation

### Solution enables USDA agency to respond more quickly to Congressional inquiries at a fraction of the cost of proprietary software solutions

The National Institute of Food and Agriculture (NIFA), an agency within the U.S. Department of Agriculture (USDA), strives to advance knowledge for agriculture, the environment, human health and well-being, and focuses on critical issues in these areas that affect people's lives on a daily basis. This can include improving agricultural productivity; creating new products; protecting animal and plant health; promoting sound human nutrition and health; strengthening children, youth and families; and revitalizing rural America. To accomplish these objectives, NIFA supports research, education and extension programs in the land-grant university system and other partner organizations.

Because NIFA doesn't perform its own research and education, the agency works closely with dozens of partner organizations and relies on Congressional funding to further its mission. Through white papers, reports and other documents, NIFA informs Congress of emerging research, extension, and education trends and needs and provides feedback on the impact of funded research. Every major land grant institution has to enter data into NIFA's system, detailing plans for using USDA-allotted funds over a five-year period. Data is entered into NIFA's system as a combination of structured and unstructured text, then reports – which can be hundreds of pages – are generated for universities and state partners. For NIFA, managing this data and responding in a timely manner to Congressional inquiries on how funds should be allocated is a complex and challenging task and requires a technology solution that is flexible and easy to use, while still being affordable.

#### FAST FACTS

##### AGENCY

U.S. Department of Agriculture (USDA) - National Institute of Food and Agriculture (NIFA)

##### CHALLENGES

NIFA's proprietary software development platform required development cycles that were long and expensive, while also creating delayed responses to Congressional staff inquiries on emerging research trends for the purpose of securing future funding

##### SOLUTION

Commercial open source solution stack consultation and implementation by Autonomic Resources that included Linux, JasperSoft, Infobright and Talend

##### RESULTS

A flexible, scalable open source platform that eliminates costly vendor lock-in, while enabling more effective data sharing and rapid responses to Congressional inquiries at a fraction of the cost of proprietary solutions

## CASE STUDY

NIFA was using a proprietary Oracle application server platform for business intelligence (BI) development applications. Because the agency had invested a significant amount of money in the platform, it felt compelled to maintain the technology infrastructure for an extended period of time. Eventually, however, it became clear that the organization was outgrowing the platform and an even greater cost investment would be required to manage bigger projects. As the complexity of NIFA's reporting continued to increase, the organization began to experience performance issues with SAP Crystal Reports, such as difficulty dealing with rich text, among others. In order to handle the growing challenges, NIFA determined it would need to migrate up to a full suite of BusinessObjects, which was not an option from a cost perspective. The software and specialized skills required to get a large BI suite up and running were enormous, and even then offered no guarantee that the results would be worth the time, effort and expense.

"Because our branch of the USDA is a funnel for agriculture research, extension and education dollars, we work with a number of different groups and provide them with a variety of reports," said Joseph Barbano, Leadership Management Dashboard project manager with NIFA. "We required a solution that would enable us to turn data around much faster, be more responsive to our partners, and produce reports that were easy to understand. And, we needed to do all of this in a way that was not as cost-prohibitive as our old solution."

Because cost was a major concern for NIFA, the agency began investigating open source solutions. As NIFA evaluated the commercial open source options available to the federal government and worked to determine the best BI solution for its needs, NIFA turned to Autonomic Resources, a leader in Open Standards and Open Technologies integration serving the U.S. federal government. Based on NIFA's budget and the biggest challenges that the agency was facing – long development cycles and expensive programming needed to support the Oracle suite of forms and reports used by NIFA – Autonomic was able to develop a solution that included Jaspersoft, an open source BI tool; Infobright, an analytic database to handle NIFA's large volumes of data; and Talend open source data integration solution for ETL, data synchronization and data migration.

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Leadership Management  
Dashboard project manager,  
NIFA

## CASE STUDY

Autonomic assisted NIFA with the installation into the agency's new Linux environment and also helped educate NIFA on the advantages of embracing Infobright and Talend. The solution enables NIFA to generate reports faster and also provides a format that is easier for its partners to understand. As NIFA implemented its open source solution, the organization was quickly able to realize a significant cost savings, both in the price of the software alone and in the cost of developers that would have been necessary to code and program proprietary software.

"There has definitely been a movement within the federal government to look at open source for controlling costs," said Barbano. "Our CIO is a big supporter of open source, so we had approval from the top down when it came to investigating and implementing open source technologies within our division. For our agency, open source was really an easy sell. We were able to be up and running very quickly and respond much more efficiently to Congressional inquiries – all at a fraction of the cost that proprietary software would have cost us." NIFA has discussed methodologies with Autonomic to develop, design and configure both private and public Cloud solutions that will further extend the agency's ability to scale, while also reducing traditional IT operational costs of hardware, software and contracted labor. Autonomic supports multi-vendor cloud technologies within its ARC-P Cloud family of solutions, enabling the company to advise NIFA on additional technologies as the agency's computing and data management needs evolve.

As NIFA continues to grow in the coming years, the flexibility and scalability of the open source platform allows the organization to continue to handle even larger amounts of data that is increasingly more complex, and the cost benefits will be even more significant as NIFA serves even more partners and individuals.

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## About Autonomic Resources

Autonomic Resources ([www.autonomicresources.com](http://www.autonomicresources.com)) is an information technology and service integration firm that works with U.S. federal government. Core capabilities include the implementation of strategic technologies related to data center automation, cloud computing, open source adoption, IA, nextGen networking, BI implementation and software development services. Headquartered in Cary, N.C., Autonomic is certified 8(a) SDB - Search GSA Schedule #GS-35F-0587R on <http://www.gsaadvantage.gov>.

## About Jaspersoft Corporation

Jaspersoft's open source business intelligence is the world's most widely used BI software, with more than 11 million product downloads worldwide and more than 12,000 commercial customers in 100 countries. Jaspersoft provides a web-based, open and modular approach to the evolving business intelligence needs of the enterprise and is the only BI vendor enabling true multi-tenancy while providing a common platform for on-premise, virtualized, SaaS and Cloud deployments. Jaspersoft's products span the continuum of core BI requirements, including production reporting, operational & embedded reporting and analysis, interactive end-user query & reporting, dashboards and mash-ups, data analysis, and data integration. Its BI software is updated constantly by a development community of more than 135,000 registered members working on more than 350 projects, which represents the world's largest business intelligence community.

More information is available at [www.jaspersoft.com](http://www.jaspersoft.com) and [www.jasperforge.org](http://www.jasperforge.org).

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