

# Lynker Technologies

## Maximizing Technology Capabilities with Scientific Principles

Science is essential for our nation's health, environment, and prosperity. For scientists, technology enhances the ability to solve problems and make connections. It paves the way for innovation. Lynker, a scientific technology company, addresses mission challenges across a host of government sectors and we emphasize the interdisciplinary nature of technology, with a focus on making connections and improving the value of data.



ROBERT TIBBS,  
CTO

By developing a synergetic engine between scientific principles and modern technology, Lynker has broadened its scope from being an organization focusing on hydrology, mammal research, and genetics, into a full-fledged IT solution provider meeting our client's most demanding needs. In this conversation with CIO Applications, Robert Tibbs, CTO, explains how Lynker Technologies uses prototyping, advanced research, and internal R&D, to enable their clients to meet their mission goals intelligently.

### Humble Beginnings

When we were founded ten years ago, we were a small GIS focused company. We have evolved into being a leader in the scientific community with work at the National Oceanic and Atmospheric Administration (NOAA), the National Science Foundation (NSF), and the Department of Education (ED). As the needs of our customers have changed to AI and Data Analytics, we have found ourselves ahead of the trend. Built from the ground up and based on our scientific principles, we have developed processes and capabilities that help our clients innovate. Today, we have grown to a company of more than 220 employees and are spread across 23 states including Hawaii, and American Samoa.

### The Challenges Our Clients Face

Our clients rely on legacy applications, but technology has rapidly advanced and sustaining older technology is a huge challenge. Many of the government organizations we deal with have ever increasing volumes of data, aging and siloed infrastructure, patchworked legacy application, and are seeking to modernize with enterprise IT solutions.

### Our Solution Spectrum

Our capabilities focus on high impact technology offerings, which includes the implementation of

modern software development methodologies like Agile and DevSecOps. Our services span full life cycle agile development, data management and analytics, legacy system modernization, program and project management, and help desk support and consolidation. Through continuous integration and continuous delivery (CI/CD), we provide fast, low risk, standardized and reliable technology solutions across our client's enterprise. We design, build, and implement comprehensive mission focused IT solutions.

### Our Proudest Feat

Our most impressive work can be found at NSF, where our mission aligned IT support includes the centralization of data management. Prior to partnering with us, NSF had an unsustainable legacy data dissemination platform. We took their aging platform, modernized it, made it cloud enabled, and implemented self-service data analytical capabilities. We did the complete data warehouse redesign and migration as well as developed data mapping to consolidate and aggregate NSF's National Center for Science and Engineering Statistics (NCSES) survey data with ED National Center for Education Statistics (NCES) and Census Bureau data. We inventory and ingest dozens of datasets on educational outcomes, with survey data spanning many decades and questions on demographics shifting as population definitions change with time. Our work has improved the overall usability of NSF's data and we have provided a robust end user data analytics platform to the public giving the user self-service visual analytics capabilities to make new connections and discover new insights. Through all this, we've saved them millions of dollars annually. Since their core mission is the dissemination of key economic indicators around scientific and technical progress in the U.S., advance data ingestion, management, and migration is critical to NSF's success. Due to our strong, agile practices, they are now able to see immediate results and manage fragile data.

### Implementing IT across disciplines

Predictive risk management analytics and advanced Artificial Intelligence (AI) - We maintain all flood and water resourcing models across the U.S., for every major river. When there's ever a flood warning, it typically comes from our team. This is supported by a tremendous amount of geospatial analytics to achieve these capabilities. Advanced AI is used to mimic the operators that control water flow, so we can see the impact downstream and predict how flooding will occur.

Agile software development and Authority to Operate (ATO) - We work in close quarters with the Department of Education as a key partner in their Impact Aid Grant Replacement System, a system that distributes \$1.3 billion annually to U.S. school systems. Lynker manages the project's critical tasks and have implemented their software development cycle, migrated them from waterfall to agile

development practices, managed their PMO, EARB and ATO submissions, and a lot more.

Intuitive mobile applications and cloud - Lynker supports more than 250 internal and many external customers at the Greater Atlantic Regional Fisheries Office (GARFO). Lynker sustains GARFO's existing systems, networks, databases, web applications, and other operational components. To better meet the needs of GARFO's customers, Lynker has provided custom mobile applications for permits, fishing authorization, and vessel trip reporting making the process more efficient, convenient, and timely for the fishing industry, fishery managers, and other users.

### How We Stand Out

It's simple. We're not just an IT company; we're also a scientific company. The whole point of science is to advance knowledge. It's about understanding the data and continuously analyzing the results. We do this with every IT solution we provide, while continually looking to the future. We innovate through internal R&D, developing new packages and platforms for AI. We manage IoT projects and have over 20,000 remote sensors across the U.S. to measure temperature and airflow. Our ability to reinvent our technology offerings helps us stay two steps ahead.

**Our focus on the future provides a springboard for identifying best practices, technology trends, and new solutions before our customers recognize a need to meet their mission challenges, allowing us to be a trust partner and advisor**

Last year, the Washington Technology acknowledged our booming market growth by honoring us with their Fast 50 award. Our certifications in ISO 9001:2015, 27000, 20000 and CMMI Dev 3 demonstrate the importance we place on our processes and productivity.

### The Path Ahead

Our focus now is to continue to provide technology innovations that advance the way agencies operate in the future. Advanced data analytics, machine learning, Robotic Process Automation (RPA) and AI are part of that. We excel at taking difficult processes and turning them into future opportunities to advance and apply technology in ways that make sense. **CA**