Robbins-Gioia, LLC
AN ACORN GROWTH COMPANY

Your success is our mission.

INCREASED COMBAT READINESS THROUGH MRO MODERNIZATION

In today's contested operating environments, weapon platforms (ships, aircraft, vehicles, and systems) undergoing Maintenance, Repair and Overhaul (MRO) activities within the Organic Industrial Base (OIB) are limiting factors in the projection of U.S. military power around the world. Robust, secure, modernized planning and scheduling tools that encompass the enterprise ***allowing for timely, relevant decision making*** is critical to optimize scheduling of resources ***reducing the number of days assets are not available for training and deployment***. Natural by-products of increased resiliency across the enterprise are greater capacity, throughput, and resource savings.

A critical part of supporting the warfighter and sustaining mission readiness within the OIB is the ***timely and efficient MRO*** of weapons platforms, systems, and equipment. Weapon system age and high demand means an increased need for depots to ***maximize the utilization of their resources and facilities*** to sustain operational capacity and tempo. Additionally, MRO schedules can be disrupted by unplanned repairs, limited access to critical facilities or specific tools, and skills of the workforce that delay return to service.

Executing within this environment isn't enough; ***Robbins-Gioia, LLC (RG)*** has invested in realistic artificial intelligence (AI) techniques such as machine learning, data mining, and neural networks for ***data driven optimization of maintenance*** programs along with ***predictive analytics*** providing enterprise and localized decision-making for improved performance.

RG REDUCES WEAPON SYSTEM TIME IN DEPOT AND COSTS

The core Jaguar ® Family of Advanced Scheduling Tools (JFAST™) Lynx™ engine is the only proven system able to process schedules of this complexity. RG's modernized software and services allow the MRO professionals to ***reduce the weapon systems time in the depot/shipyard*** adding to enhanced system readiness levels. Reducing depot time is achieved through unparalleled capability and flexibility for managing complex process and scheduling operations involving millions of tasks; including a comprehensive single near-real-time view of total operations across the enterprise, and the flexibility to ***add unplanned requirements***; that allows for ***rapidly recalculate complex schedules*** with up to 50,000,000 elements to factor in time, resource, and facility changes within seconds – all with ***connectivity with adjacent systems*** – Finance, Human Resources, Business Systems, etc.

CLOUD CAPABLE – MOBILE FIRST – DATA CENTRIC

RG's JFAST™ Lynx™ platform is based on three forefront system principles which ***enable a modernized, integrated, configurable, optimized*** enterprise program management solution to deliver sustained value within the OIB.

Access to the system can be extended to the edges of the organization, ***enabling schedule, task, and analytical information*** to flow seamlessly to the point of work, providing ***near-real-time analysis and responsiveness***. Historical information can be used for data mining and machine learning to enhance ***predictive analysis,*** facilitate scenario generation, and inform ***process optimization***. The system architecture also ***consolidates multiple systems*** reducing infrastructure and ensures deployment and integration on server, cloud, or hybrid infrastructures, and takes advantage of native cloud capabilities such as elasticity and mass storage.

RG DELIVERS CAPABILITIES/INCREASED READINESS!

"While the commercial defense industrial base builds most of the weapon's systems and gear for the military, the organic industrial base is often responsible for ensuring those systems stay maintained and operational for the decades that they stay in service. It's for that reason that the military services are all focused on ***modernizing their organic industrial base (OIB)*** to keep it strong and ready for the future."

Improvements to Organic Industrial Base Prepare Services for Future Fight, C. Todd Lopez, March 19, 2021

Today's environment requires efficient OIB response to increase weapon system availability!

The current Department of Defense operational environment includes operating in contested environments, responding to the COVID-19 pandemic, delivering increased capability while being resource constrained, etc., which has affected operational capacity and tempo requirements. A critical part of supporting the warfighter and sustaining weapon system mission readiness is the ***timely and efficient*** MRO of weapons platforms, systems, and equipment. Aging weapon systems and high demands on low density resources have driven increased need for depots to ***maximize the utilization of OIB resources and facilities***. Additionally, MRO schedules can be disrupted by unplanned repairs, limited access to critical facilities, or specific tools and skills of the workforce that delay return to service.

The Army Material Command's (AMC) report on its organic base articulates, "another continuing trend was the ***rate of change in workload*** booked in AMC depots and arsenals. Over half (54%) of all workloads booked into an AMC depot had a ***change made to the original quantity ordered***—a cut, an increase, or a change in delivery date. AMC sees this level of disruption each year, and the friction it causes is a ***risk to industrial operations as it delays delivery and increases carryover***.

RG's modernized software and services allow depot professionals to ***reduce the weapon systems time in the depot and save costs.*** Reducing depot time is achieved through unparalleled capability and flexibility for ***managing complex process and scheduling operations with millions of tasks;*** including a comprehensive single view of total operations across the enterprise; and the flexibility to add ***unplanned requirements*** then ***rapidly recalculate schedules*** to factor in time, resource, and facility changes. Executing within this environment isn't enough, RG has also invested in ***artificial intelligence (AI) techniques*** such as machine learning, data mining, and neural networks for data driven optimization of maintenance programs and predictive analysis and optimization providing ***enterprise and localized decision-making*** improving output performance.

"Several factors have brought the Air Force to this point, said retired Air Force Gen. Hawk Carlisle, president of the National Defense Industrial Association and former head of Air Combat Command. One of the biggest problems: The Air Force has old iron…When planes get old, they inevitably ***need more maintenance*** —whether on a day-to-day basis or as part of ***more intensive overhauls*** that extend an aircraft's life span but take up more time in depots."

US Air Force fleet's mission-capable rates are stagnating. Here's the plan to change that., Rachel S. Cohen and Stephen Losey, February 14, 2022

"Naval Sea Systems-shipyard combines the ***extensive use of data and data analytics***,…It targets areas of opportunity with transparency to highlight key problems to improve our outcomes. We're committed to doing this with a sense of urgency across our enterprise." – Navy Vice Adm. William J. Galinis, commander of Naval Sea Systems Command

Improvements to Organic Industrial Base Prepare Services for Future Fight, C. Todd Lopez, March 19, 2021

RG is focused on improving OIB efficiency increasing DoD Readiness

RG assists the OIB in achieving mission readiness through ***improving the effectiveness of production planning and control*** for maintenance operations, enabling depots to maximize the effective utilization of resources and personnel to ***minimize time taken to return primary weapon systems to service***.

JFAST™ is RG's premier suite of software tools for planning, analysis, and management of complex, mission-critical activities for the OIB. Lynx™ is the latest commercial software version of the proven JFAST™ engine providing both ***critical path*** and ***critical chain*** algorithms and ***advanced constraint management*** with a microservices architecture for ***server or cloud deployment***. Lynx™ also enables ease of integration with enterprise business systems through support of standard-base data and application interfaces.

Developed and continuously evolving over the course of 30 years of use within the OIB, JFAST™ provides the most capable and trusted planning and scheduling solution for large, very complex activities or for portfolios with a high number of individual projects. The best-in-class capabilities of JFAST™ enables customers to ***optimize operational performance*** by reducing planning time, speeding up project initiation, improving resource utilization, and predictive analytics. ***The power of JFAST™ Lynx™ is in its unique ability to handle extremely large, complex schedules with up to 50,000,000 elements and recalculate changes in seconds.*** The core JFAST™ engine is the only proven system able to process schedules of this complexity!

Optimize plans with sophisticated algorithms and predictive analysis.

Enhance insight with real-time data mining and visualization.

Increase productivity with easy-to-use interfaces and process automation.

The JFAST™ Lynx™ platform is based on three forefront system principles which enable a ***modernized, integrated, configurable, and optimized*** enterprise program management solution to deliver sustained value within the OIB.

1. ***Cloud Capable***: The system is architected ensuring ***deployment and integration*** on server, cloud, or hybrid infrastructures, and to take advantage of native cloud capabilities, such as elasticity and mass storage.
2. ***Mobile First***: Access to the system can be extended to the edges of the organization, enabling schedule, task, and analytical information to flow seamlessly to the point of work, ***providing near-real-time analysis and responsiveness***.
3. ***Data Centric***: Historical information can be used for data mining and machine learning to ***enhance predictive analysis***, facilitate ***scenario generation***, and inform ***process optimization***.

As the primary planning and control application, Lynx™ applies the ***organization's defined business rules***, ***integrates with their enterprise business systems*** and ***enables rapid integration*** with available financial, operational, engineering, supply chain, quality management, enterprise resource planning, product lifecycle management, or HR data sources, resulting in ***superior quality control*** and ***efficient depot operations***. The output can be displayed through web forms and by exporting or integrating into other data or visualization systems. Lynx™ supports ***multiple built-in charting and reporting formats***, including Gantt and PERT, and allows the user to seamlessly transition between representations. Lynx™ also includes the foundations to apply ***artificial intelligence (AI) techniques*** such as machine learning, data mining, and neural networks for data driven optimization of maintenance programs and predictive analysis.

Configurable dashboards and filtering allow users to access the most relevant and current information to support ***enterprise and localized decision-making***. Drag-and-drop interfaces, as constraints are identified, provide personalized reporting and analysis without custom scripting, and allow real-time scheduling modifications while also ***identifying the new critical path*** and ***concurrent work opportunities***. A range of supported formats and integrations provide the ability to share and collaborate between the various roles supporting depot maintenance production (e.g., planner, scheduler, production, supervisor) in ***real time*** and can be reused or modified for ***future network planning***.

EFFECTIVE DECISION MAKING CREATES OIB CAPACITY

RG delivers capabilities that supports OIB modernization and resiliency

Lynx™ delivers enhanced out-of-the-box interfaces on a web services architecture to accelerate implementation and provide greater scalability for the enterprise.

Readily Configurable Analytics and Dashboards	• Configurable ***real-time dashboards*** and filtering allow users to examine data without running multiple reports • Drag-and-drop interfaces provide personalized reporting and analysis without custom scripting • Range of supported formats and integrations provide ability to share and collaborate
Powerful Scheduling Functionality with Pre-Configured Interfaces	• High-capability, proven engine for ***critical path and critical chain analysis*** • Able to handle millions of activities and constraints • Interactive network editing with logic check and self-healing features • Support for role-based approval and collaboration • Scenario and what-if capabilities to include forecasting future workload
Improved Integration with Business Systems	• Standards-based APIs provide greater data access and integration with enterprise business systems • Data model optimized for performance, scalability, and future ***Cloud implementation*** • APIs enable improved processing time and ensuring better data integrity
Extendable/Scalable Data Architecture	• User interfaces can be streamlined for individual roles and user productivity • Business rules allows users to ***create, reuse, and share workflows*** within the system • Web services architecture enables interfaces from other business systems to be incorporated

Lynx™ supports all levels of decision makers through all phases of a project – from implementation and configuration to initiation and validation out to actual execution and monitoring, providing localized and enterprise-wide visibility. This critical information helps ***maximize efficiency opportunities*** especially where there are ***shared resources*** that have ***interdependencies*** based on the ***purpose of the work***, for example, across the Air Logistics Complex, Fleet Readiness Center, or Arsenal/Depot. The system can also scale up across enterprises such as the Air Force Sustainment Center (AFSC), Naval Air Systems Command (NAVAIR), Naval Sea Systems Command (NAVSEA), Aviation and Missile Command (AMCOM), Communications-Electronics Command (CECOM), Joint Munitions Command/Joint Munitions and Lethality Life Cycle Management Command (JMC/JM&L), or Tank-Automotive and Armaments Command (TACOM). RG stands ready to provide the software and services to ***ensure the OIB is modernized and resilient*** enabling Department of Defense the ***readiness*** it needs to execute the ***nation's priorities***!

> "Assistant Secretary of Defense for Sustainment Logistics & Materiel Readiness Strategic Plan – Goal 2: Deliver cost effective materiel readiness to meet the DoD's warfighting requirements and in particular need to ensure a Resilient and Responsive Organic Industrial Base."
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> Logistics & Materiel Readiness, Assistant Secretary of Defense for Sustainment, Strategic Plan, October 2021

Focus on enabling the mechanic/technician/artisan

Picture any OIB shop/aircraft/ship/tank/weapon platform work center, imagine an environment where the mechanic/technician/artisan has ***all*** the equipment, parts, tools, technical data, etc. available prior to beginning a task. What if that task was ***prioritized and synchronized*** with other mechanic/technician/artisan's tasks working on the same aircraft, ship, vehicle, and system? Then, what if all the mechanics/technician/artisan's tasks were prioritized and synchronized ***across the entire dock, weapons platform, location, command, etc. and*** consolidated into one application, saving resource time from working across multiple systems? How much more efficiently could the entire OIB enterprise operate?

Can the OIB enterprise continue to operate inefficiently (without Lynx™)?

Lynx™ helps planners, schedulers, mechanics/technicians/artisans, supervisors, and commanders get their assets through the MRO process and back into the warfighters hands by giving them the ***data they need to make real-time decisions***. Schedulers can quickly create filtered, focused views that can be shared, highlighting certain parts or aspects of the network. Users can pan and zoom these images and search for elements within them and the ***generated diagrams*** can be shared or posted for ***collaboration within the organization***.

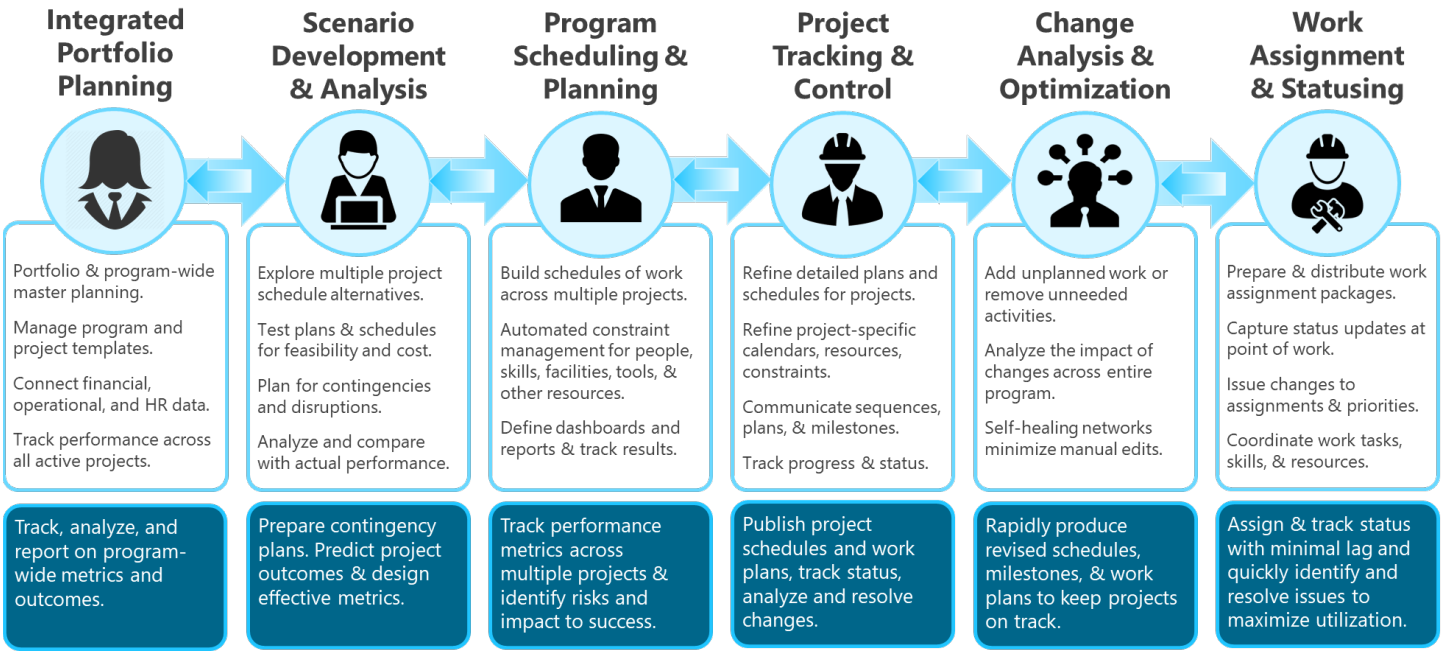
Planners can model the flows and steps their assets take while moving through their facilities during their MRO cycle. Combining this data with ***equipment, tools, and parts availability*** lets the analysis engine best schedule the activities based upon what resources are available and the parts required to get the job done. Lynx™ associates work orders and their routes with their related activities so schedulers can ***track parts as they come off the aircraft and are sent off for repair***. The robust application program interfaces (APIs) that Lynx™ offers allow it to ***easily create links to external systems to link part, material, and inventory data***. The focused graphical interface allows the users to modify their view of the data and then quickly make changes to the network structure. Changes are tracked for later use in data analytics or as part of the approval process.

Drawing from ***critical path and critical chain*** methodologies, the system also provides a ***prioritized numerical order*** for work to be accomplished based upon activity attributes that aids schedulers and line workers in understanding which activities have the most impact to their completion date.

Development with the Work Force in mind

Lynx™ was designed and built using **a role-centric** methodology, not just features and capabilities. This role-focused methodology ***results in a system that gets users to the data they need the most in a quick and efficient way***. As part of our agile development process, the Lynx™ team performed industry research and conducted user meetings with our clients resulting in a ***list of roles and their desired business functions*** that were then targeted for the system to support. This design methodology allows for the ***prioritization of development activities*** for the ***most beneficial capabilities*** to support the organization.

The user experience was designed around supporting the flows and interfaces these roles need to get their work done in a more ***repeatable and efficient way***, with the workflows ***configurable by the users, teams, or groups*** to match how their specific organization flows work, allowing them to incorporate their institutional best practices into their workstream.



Analyzing your most complicated programs

The JFAST™ Lynx™ scheduling algorithms are **optimized for performance and scalability**, having the ability to schedule tens of millions of activities, constraints, and resources rapidly.

Projects can contain multiple schedules, which can be flexibly defined in terms of working days, number of shifts, task increments and other factors. Configurable calendars can be applied to schedules, activities, and resources allowing schedulers to accurately model how their work is being done.

JFAST™ Lynx™ supports the creation of **integrated master schedules** either for large, very complex activities or for portfolios with a high number of individual projects, in both cases enabling constraints and resources to be managed across the entire program.

Broad schedules contain many projects within a portfolio, which ***share resources*** and have ***interdependencies*** based on the ***purpose of the work***, for example across the Air Logistics Complex, Fleet Readiness Center, or Arsenal/Depot. The system can also scale up across enterprises such as the Air Force Sustainment Center (AFSC), Naval Air Systems Command (NAVAIR), Naval Sea Systems Command (NAVSEA), Aviation and Missile Command (AMCOM), Communications-Electronics Command (CECOM), Joint Munitions Command/Joint Munitions and Lethality Life Cycle Management Command (JMC/JM&L), or Tank-Automotive and Armaments Command (TACOM).

Deep schedules contain many related tasks and elements within ***a weapon system or an entire program of work***, such as all the major jobs and master/selected operations as well as commodities on order status and repair kits. Lynx™ gives the mechanic/technician/artisan the ability to start at a summarized view of their data but the drill down into the specifics to examine progress or make updates where they need to. They can also easily shift between graphically viewing and editing their data to save time using the interface and enabling timely reporting through status changes.

Lynx™ supports all levels of decision makers through all phases of a project – from implementation & configuration to initiation & validation out to actual execution and monitoring, providing localized and enterprise-wide visibility. Our design methodology allows for the ***prioritization of development activities*** to bring the most efficient and beneficial features to support the organization and ***get valuable weapon systems back into the warfighter's hands and increase weapon system availability and ultimately DoD Readiness!***

About RG

RG partners with clients to test and refine every solution to meet their exact needs. We take pride in tackling complex management challenges with fresh and innovative insights and in transforming our clients' vision into reality.

Contact Us

RG HQ

99 Canal Center Plaza, Suite 300

Alexandria, VA 22314

T: 703.548.7006

www.TeamRG.com

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