

Beacon™: Data Management and Analytics Platform

Situation

Data scientists need a **secure platform to develop, train, test, and deploy** models and data sets to build visualizations and applications.

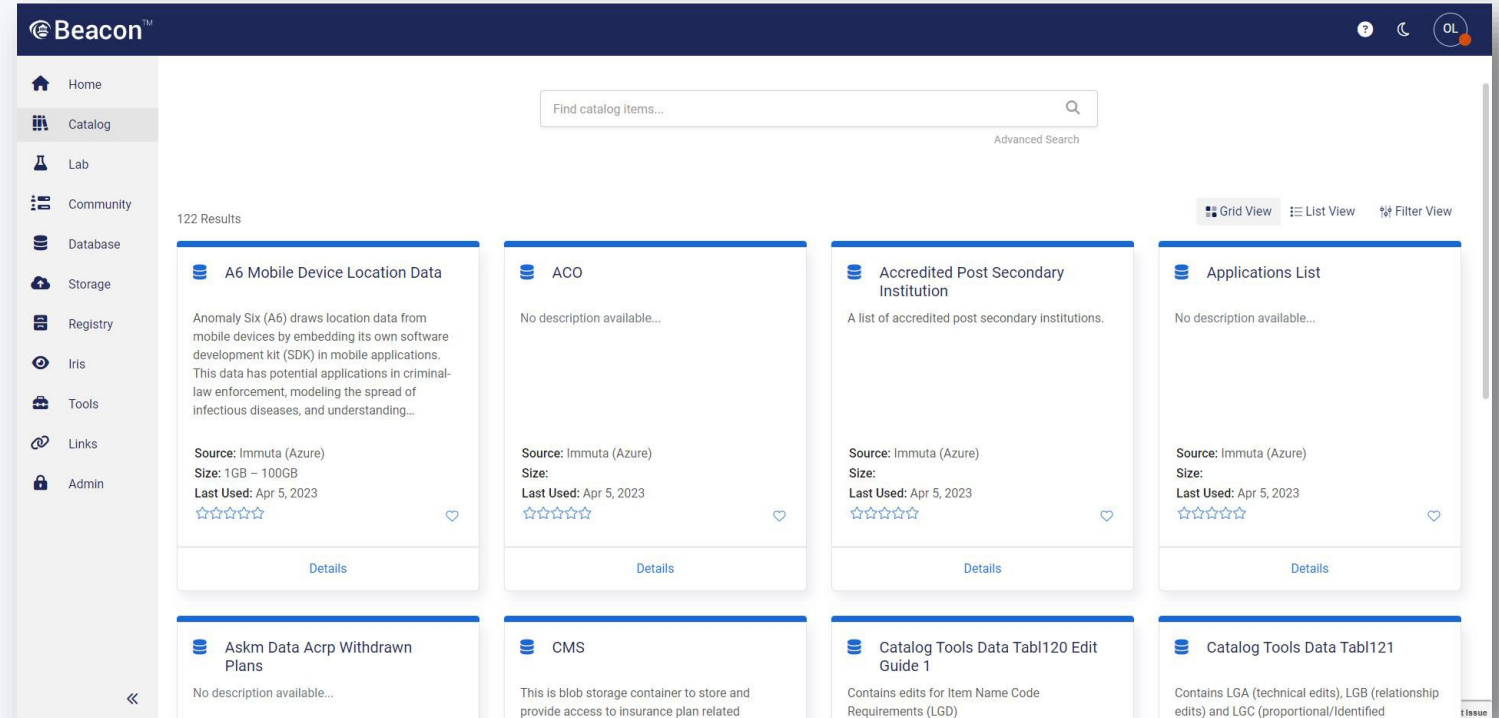
Challenge

Teams often **create and develop solutions for their own needs** without input from other teams, leading to **siloed capabilities** and teams that perform at uneven levels. Budget and resources are spent on singular solutions rather than collaborative, repeatable efforts.

Related Use Case

AI/ML **modeling** and software deployment **services**; **Unstructured data** analytics and **ontology** integration

Solution



Data Catalogs

Synchronized and curated **data sets can be shared** throughout any organization.



Intuitive Workbenches

On-demand data science and ModelOps resources for quick testing up through **externalizing API** endpoints for customers.

LIGER™: Secured LLM Capability

Situation

Our customers are **inundated with unstructured text data**, stored across thousands of documents and databases. Organizations need **versatile tools** for automation, creativity, and problem-solving and to improve efficiency.

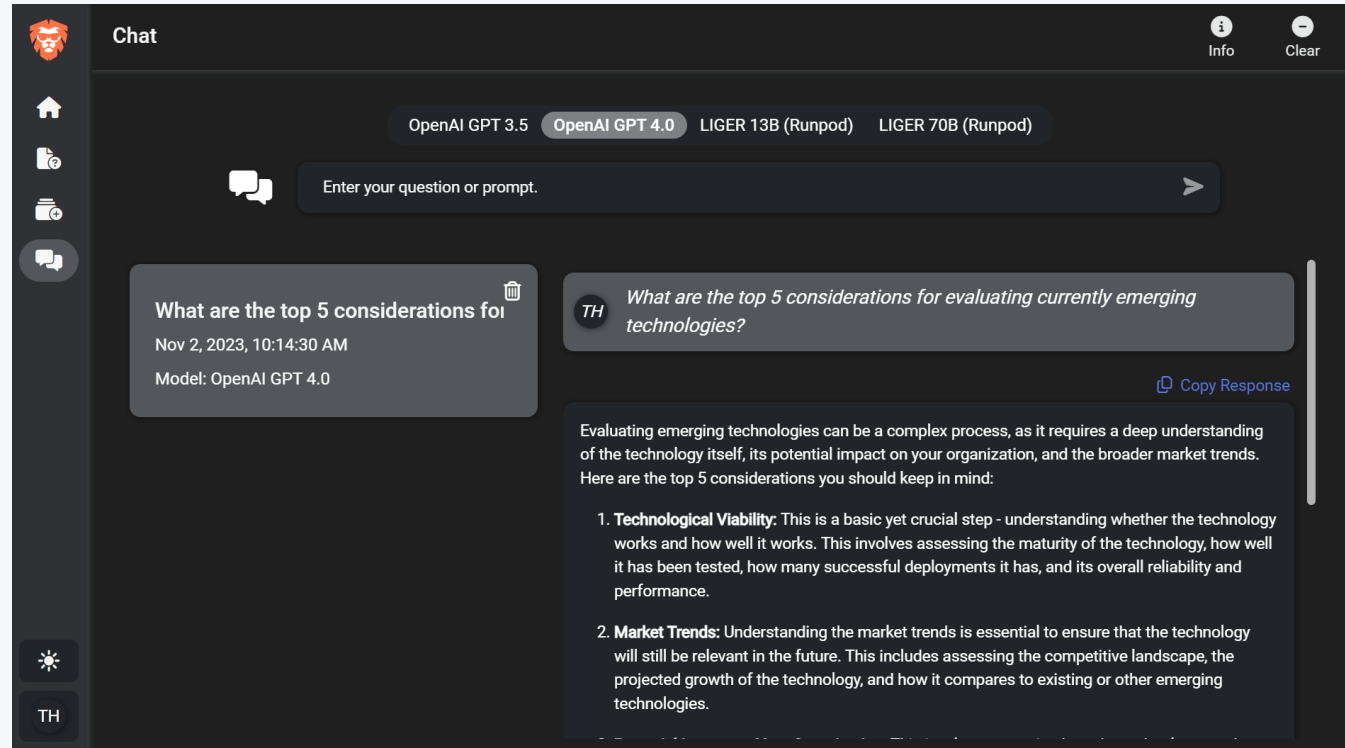
Challenge

Manual efforts are slow and often result in **missed information and incomplete summaries**. They also do not allow for agility when mission requirements change.

Related Use Case

Streamlined development and deployment of **large language model (LLM) enabled solutions** across thousands of pages of policy documents

Solution



Semantic Search

Connect text data to immediately **enhance domain knowledge**.



Large Language Models

Run models with **tens of billions of parameters** with competitive latency, even with dozens of concurrent requests.

Forge™ Innovation Platform (FIP)

Situation

Organizations require **integrated workflow solutions** that can efficiently facilitate accelerated innovation.

Challenge

Traditional federal acquisition can change from concept to delivery:

- Requirements don't always align with desired outcomes
- Agile methodology can outpace stakeholders' ability to navigate systems and assure accountability

FIP enables LMI to **deliver innovation** with **speed, clarity, and transparency** throughout the entire process.

Related Use Case

Dynamic data on skills and availability of personnel for **rapid staffing** of projects

Solution

The solution is demonstrated through three overlapping screenshots of the Forge™ Innovation Platform (FIP) interface. The first screenshot shows the 'Create a New Project: Naval Operations Management System (NOMS)' workflow, including project title, type, and a technical description. The second screenshot displays 'Suggested Agile Frameworks' and 'Suggested Roles and Team Members' for the project, listing roles like Scrum Master, Product Designer, and Software Developer with associated team members and keywords. The third screenshot shows a 'Team Members' table with columns for Product Owner, Scrum Master, Innovator, and Subject Matter Expert, listing team members and their roles. Below the table, there are sections for 'What You've Missed' (including a 'NOMS Kick-off Meeting' with date, time, and attendees) and 'Upcoming Meeting' (with date, time, and agenda).



Conceptualization

Accelerates innovation

for research and development
for our customers.



Delivering Innovation

Maximizes ROI by increasing
quality, efficiency, transparency,
speed, and scale while leveraging
technology innovation.

Talent Ignite™: Maximize your Talent. Meet your goals.

Situation

Organizations need to be able to understand their people and upcoming demands to make strategic decisions and optimize their talent.

Challenge

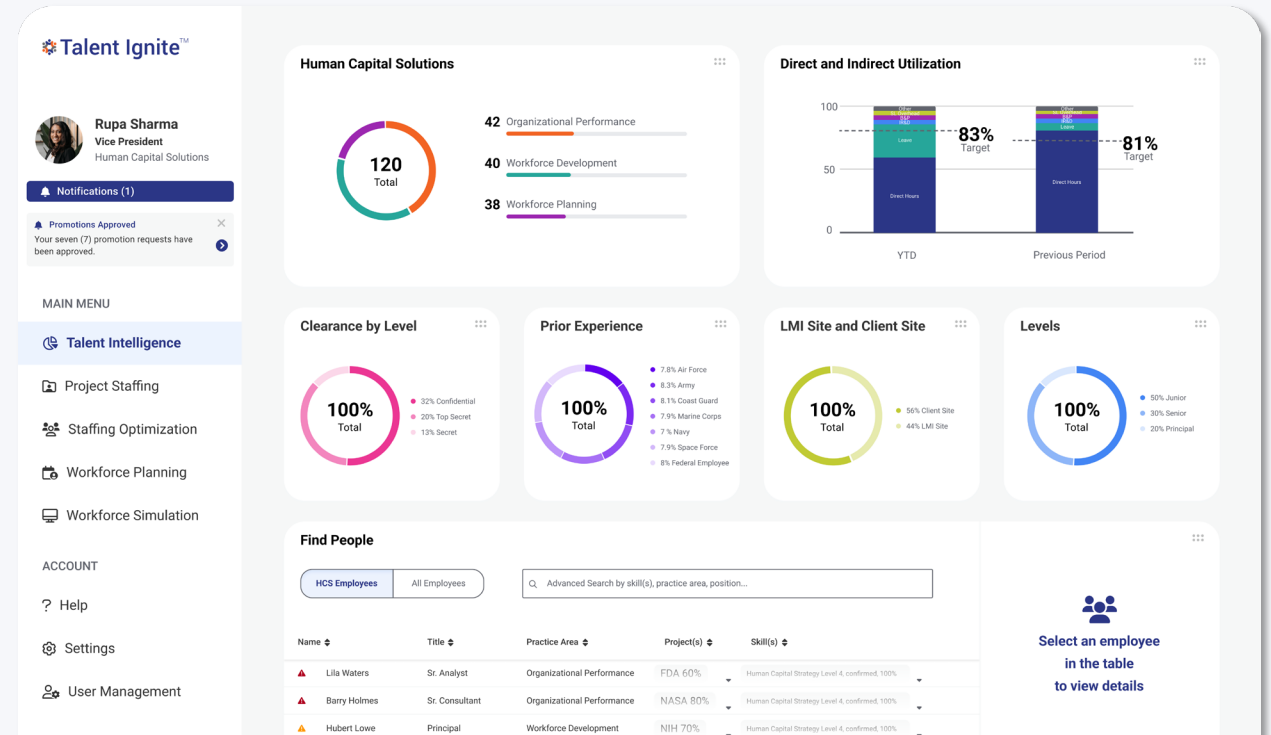
HR systems often don't combine data from disparate sources or provide customizable and flexible ways to visualize, plan, and optimize talent to help leaders make **strategic decisions** now and for the future. Answering questions such as...

- Who has the skills and availability to staff this project?
 - What talent will I need in the future? How do I get talent to support my needs?
- ... can be nearly impossible.

Related Use Case

An organization that has many disparate HR systems with a need to **integrate** and **visualize** data to **optimize** staffing and workforce decisions.

Solution



Workforce Planning

Visualizations that **identify upcoming skills** needs and future gaps in the workforce.



Talent Intelligence

Recommending specific **employees to fill roles** considering skills, proficiency, experience, and availability.

Data Mesh: Enterprise-scale Data Management

Situation

Organizations are increasingly looking to **leverage data as a first-class citizen** and **scale** the use of data in ways that are **flexible and sustainable**.

Challenge

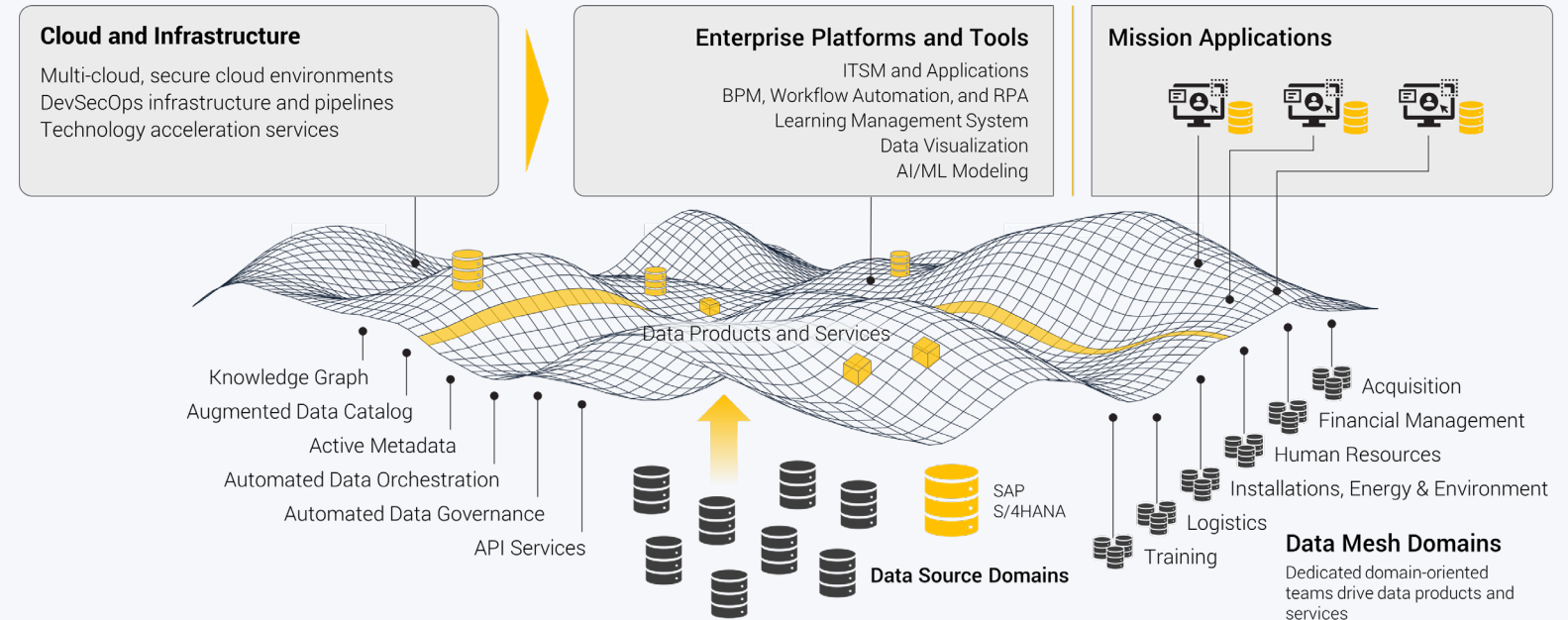
Traditional data management approaches create **bottlenecks** for the enterprise:

- Centralized data teams have finite capacity and competing priorities.
- Data teams rely on functional data experts for guidance on how to use data.
- Data governance and access controls are often opaque and slow.

Related Use Case

DoD organizations shifting from a system- and platform-centric focus towards a data- and use-case focus

Solution



An Ecosystem of Solutions

With strategic **enterprise mesh services**, federated communities can operate in a **technology agnostic** way within their domain.



Enterprise-At-Scale Context

Data mesh prioritizes **decentralized, domain-driven data management**. This federated approach allows an organization to execute **enterprise-at-scale data-use** objectives.

Measuring “Contestedness” to Optimize Decision Support for Supply Distribution

Situation

The Joint Force needs to **distribute supplies to tactical points of contact** that are highly dynamic and span the spectrum of conflict.

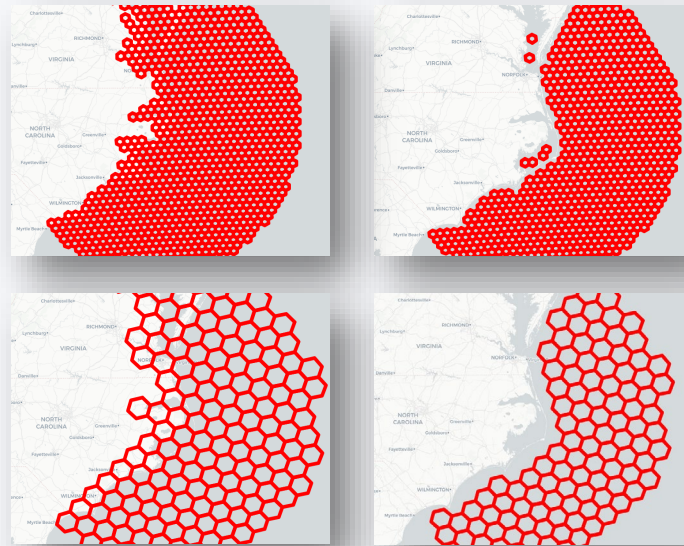
Challenge

The Joint Force needs to ensure precision sustainment and materiel readiness in contested environments. This requires **optimized decision support with tradeoff analysis** of supply distribution given **specific threat environments, operational limitations, and predicted demand**.

Related Use Case

Contested logistics supply optimization and predictive logistics across theatres

Solution



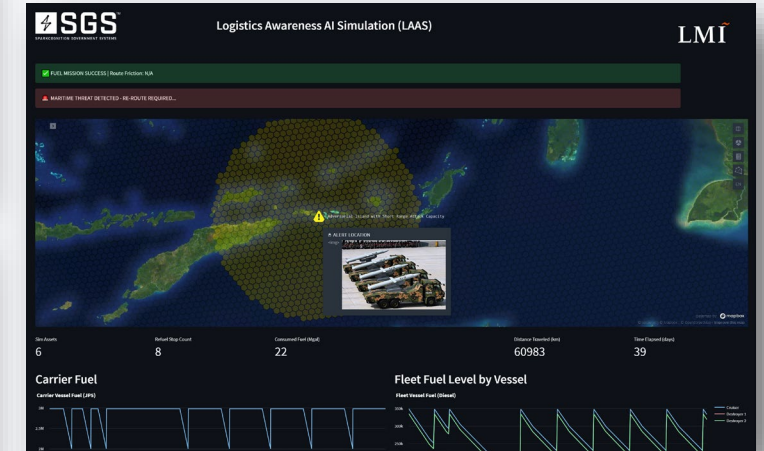
Degree of "Contestedness"

Develop a framework to **represent "contestedness" along a spatial grid**.



Decision Support Optimization

Optimize decision support with tradeoff analysis of fuel supply runs given a specific threat environment informed by "contestedness."



SCRAPE-IT: Strategic Agility

Situation

Our customers need to have agility in their supply chain management decisions.

Mitigate risks by providing alternative options in case the primary supplier encounters disruptions.

Challenge

Human research can delay supply chain management. Supply chain managers need to have access to **alternative suppliers** to **ensure agility**.

Related Use Case

A web application that maintains **operational flexibility**

Solution

The screenshot displays the SCRAPE-IT web application interface. At the top, there is a search bar with the text 'Enter a Company Name' and a magnifying glass icon. Below the search bar, the text 'ACME MAGNETICS' is entered. To the right of the search bar are two buttons: 'FILTER' and 'DOWNLOAD CSV'. Below the search bar, the results are displayed in a list. The first result is for 'ARNOLD MAGNETIC TECHNOLOGIES CORPORATION' with a score of 86.0. Below the company name is a phone icon and the number '585-385-9010', and a website icon and the URL 'WWW.ARNLDMAGNETICS.COM'. Below this is the address '770 LINDEN AVE, ROCHESTER, NEW YORK, USA'. A paragraph of text follows: 'Arnold Magnetic Technologies Corporation is a leading manufacturer of high-performance magnets and magnetic assemblies. Established in 1898, the company has a rich history in the magnetic industry. They specialize in producing custom-engineered magnets for various applications, including motors, sensors, medical devices, and aerospace systems. Arnold Magnetic Technologies Corporation is known for their commitment to quality, innovation, and customer satisfaction.' The second result is for 'DURA MAGNETICS, INC.' with a score of 85.5. Below the company name is a phone icon and the number '419-882-0591', and a website icon and the URL 'WWW.DURAMAG.COM'.



Supplier Analysis

Using **advanced machine learning** and **natural language processing** to identify alternative suppliers.



Supply Chain Resiliency

On-demand resources that offer redundancy and ensure **continuity of operations**.

LogSmart™ Supply: When Risks Are High, Turn Risk Data Into Decisive Action

Situation

Organizations receive reports from multiple **data illumination vendors** that **highlight risks** within their supply chain.

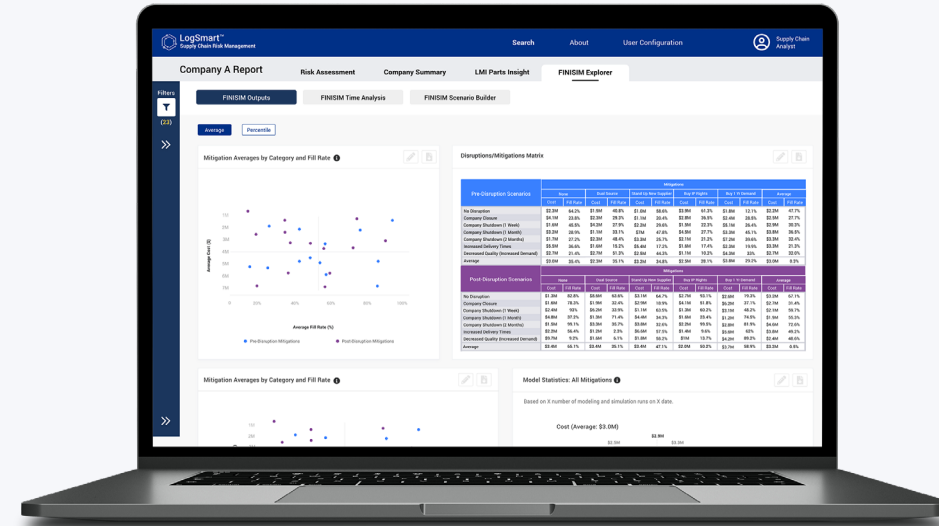
Challenge

The illuminated **data doesn't provide the “so what”** on what steps should or could be taken to mitigate the risks. Supply chain managers often **wait weeks or months for analyst reports**.

Related Use Case

Assess **parts-related risk** and predict changes in readiness

Solution



Accelerate Decision-Making

No need to wait for a report. **Access analytics** when you and your team need them.



Build Supply Chain Resilience

The **most complete list of negative impacts** to guide responses to shortages, disruptions, or emerging situations.



Decipher Data No One Else Can

Take your data a step further using **modeling and simulation** to move from identified risks to optimized mitigation.

LogSmart™ Fleet

Situation

Leaders and operators **lack the ability to facilitate fleet management and lifecycle analysis** at an enterprise level.

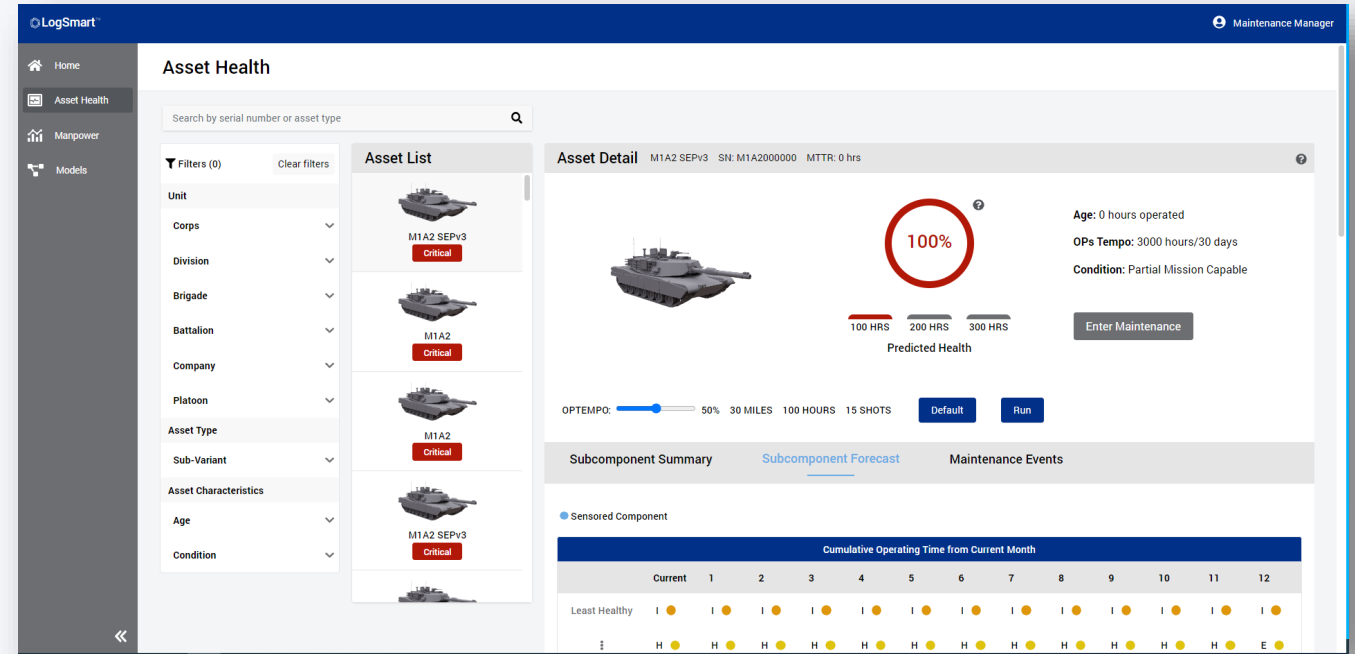
Challenge

Predictive maintenance, supply chain, total cost of ownership calculations, and resourcing **data reside in disparate systems**, creating an **inability to prepare** for budget volatility. Leaders cannot see a holistic fleet performance picture, making risk of system failure and impact to operational capability difficult to understand.

Related Use Case

Visualizing KPIs for users **across the fleet** and **predicting** when **asset failures** will occur

Solution



Improved Demand Insights

Improve supply and maintenance actions and reduce costs by leveraging **predictive analytics** and **prescriptive models** of asset health.



Increase Asset Availability/Capability

Enhance maintenance period **efficiency**, reduce unnecessary inspection time, and decrease waiting time for critical parts.

Cost of Readiness Engine

Situation

Complex organizations often grapple with the challenge of gaining a clear understanding of how near-term resource allocation decisions can impact their **operational effectiveness** and the tradeoffs involved.

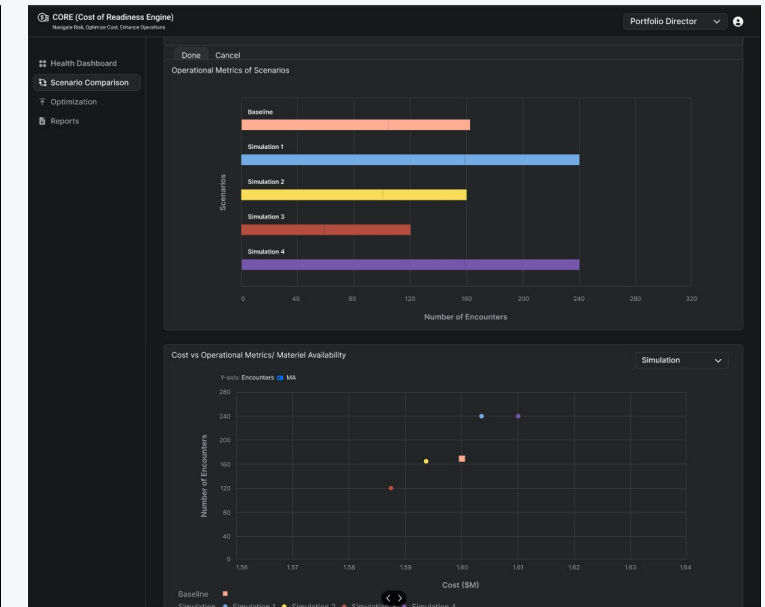
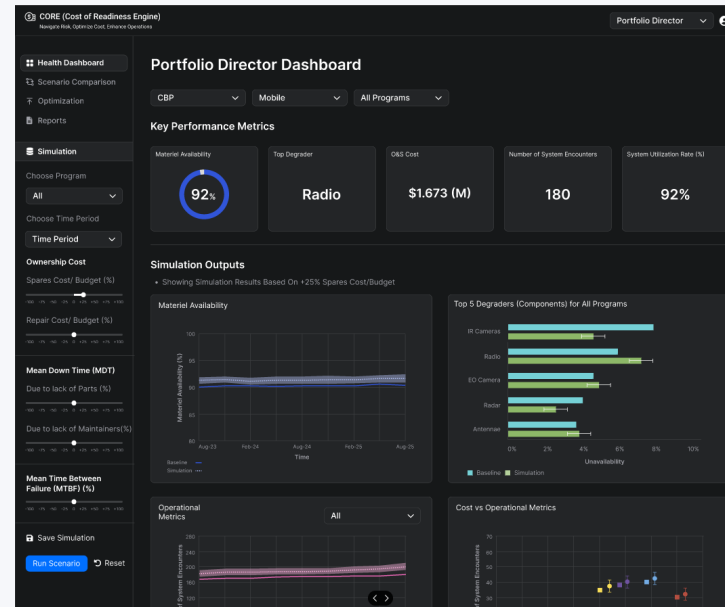
Challenge

Organizations require **decision support** tools that enable decision-makers to intuitively grasp and visualize the tradeoffs between readiness and cost. These tools should facilitate “what if” scenarios, empowering decision-makers to gain a comprehensive understanding of the inherent tradeoffs linked to **resourcing decisions**.

Related Use Case

Balancing the risks and specific operational impacts associated with cuts in sustainment funding

Solution



Multi-Objective

Enables **resource prioritization** within a dynamic environment.



Data-Driven Insights

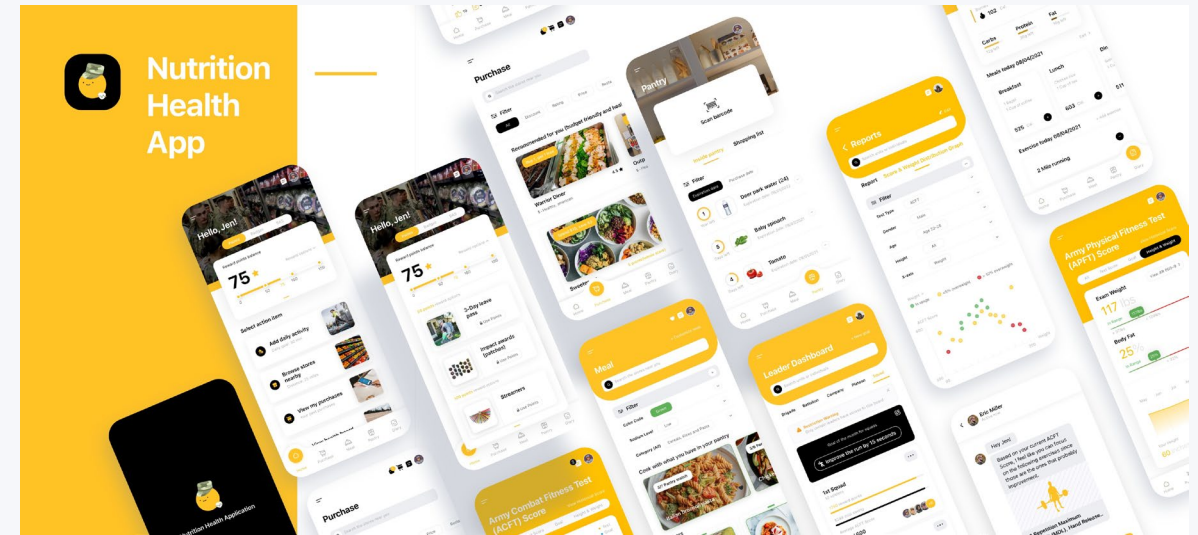
These insights can inform **strategic decisions**, process improvements, and future planning.

Failing Forward with LMI's Forge™ – Nutrition Health App

Situation

A DoD organization had an idea for an app that would engage and educate the next generation and establish individualized healthy food, exercise, and lifestyle standards.

Engaged with LMI's Forge™



Result

The Forge™ developed a hi-fi mockup using the pre-existing requirements, allowing stakeholders to:

30 days

10 days



See the app and understand user experience



Provide rapid feedback for iteration



Determine that the broad vision was not a fit for their objectives



See app pre-acquisition and save time and money

Vitality Hive: Drawing Meaning From Disparate Health Data

Situation

Wellness is holistic with elements of activity, nutrition, and behavioral data. Organizations need **access to all elements of this data** to increase the ability to make strategic decisions around soldier readiness.

Challenge

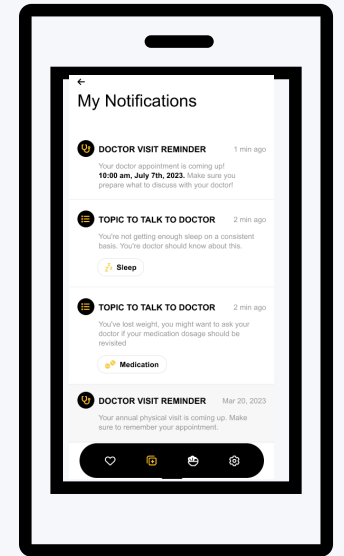
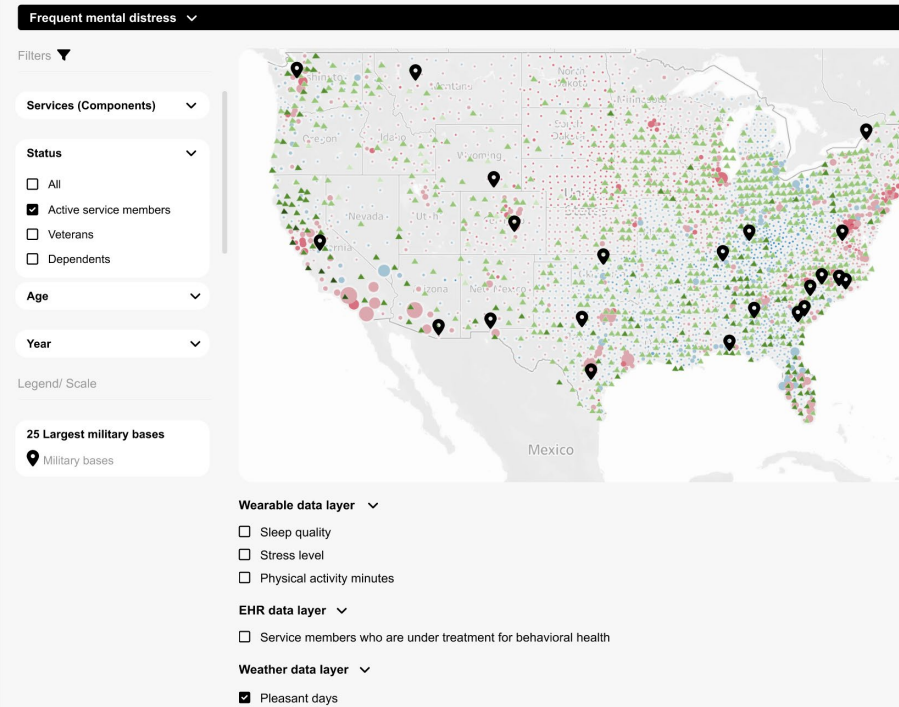
This valuable **data lives in silos**, limiting its potential to illuminate decisions that achieve **maximal impact**.

Related Use Case

Collecting valuable pieces of disparate individual data to draw meaningful connections across an aggregate

Solution

Geo-Health Map



Combining Data

Comprehensive data sets enable **accurate decisions** based on all relevant factors.



Navigating Complexity

Respond quickly to changing market conditions, **emerging trends, and unexpected challenges**.