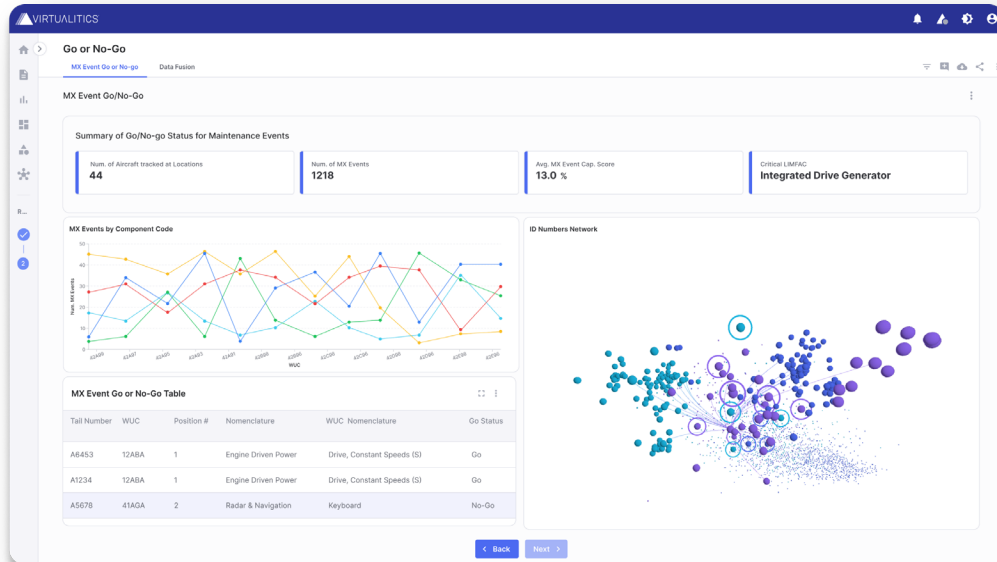


Integrated Readiness Optimization

Exceptional mission readiness demands holistic strategies



Disconnected data systems leave teams without answers and put your mission at risk. Virtualitics transforms data into impact with AI-powered Integrated Readiness Optimization (IRO) applications to improve availability and meet objectives.

AI Makes Integrated Resource Optimization Applications Possible

Powerful AI methodologies fuel each IRO application, synchronizing data across sources to provide an unparalleled view of what is impacting your mission.



IRO Maintenance



IRO Workforce



IRO Materiel



IRO Cyber

Informed Decision-Making Leads to Strategic Wins

IRO Applications guide teams to take impactful action and deliver significant value by combining the science of AI with the knowledge of subject matter experts.

- ▶ Enhanced Coordination
- ▶ Synergized Resource Allocation
- ▶ Effective Risk Mitigation
- ▶ Reduced Unplanned Downtime
- ▶ Increased Productivity
- ▶ Maximized Mission Readiness

IRO Maintenance

Avoid Operational Downtime and Maximize Mission Readiness

Maintenance operations leaders often face siloed technology and manual data aggregation in their efforts to answer mission-critical questions.

IRO Maintenance empowers teams to maintain peak operational readiness by considering inventory, manning, and repair equipment constraints simultaneously.

IRO Maintenance shows:

What is about to fail?

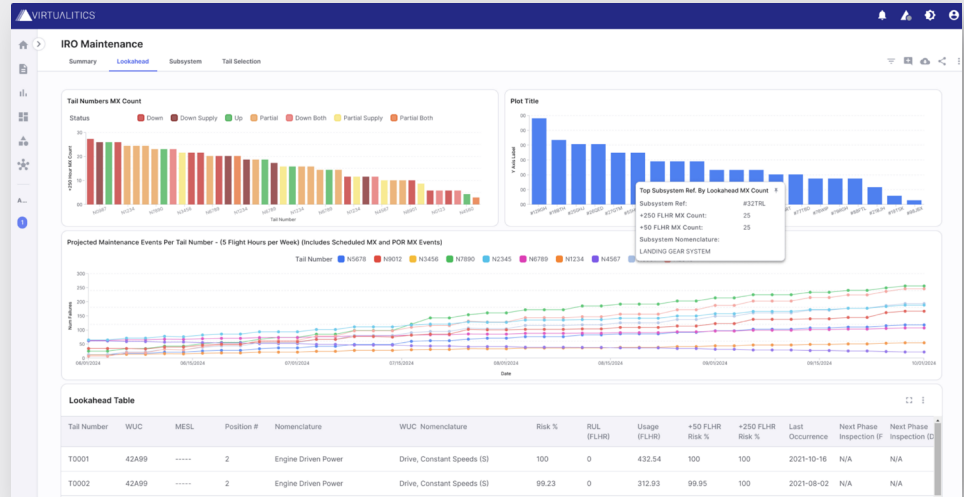
Identify components and assets at risk and when failure is likely.

How should you respond?

Schedule maintenance to optimize resources and availability.

What if?

Find solutions to unanticipated challenges.



AI-Powered Sustainment Operations

IRO Maintenance is based on four key areas that impact operational readiness.



Asset Risk Assessment

Run machine learning survival analysis to determine when and why a component is going to fail.



Operational Planning

Simulate strategies and surges in asset usage to determine impacts on operations and availability.



Resource Constraint Analysis

Identify limiting factors across inventory, staffing, and repair equipment based on current, scheduled, and predicted needs.



Scheduling Optimization

Optimize maintenance schedules based on resource constraints, asset usage, and uptime requirements.

Deployed at Scale in the Mission Today

10 Years

Historical Data + Backtesting

Across 161 bombers, 495 launch facilities, and 99K critical maintenance events

3 Months

Time to Value

From contract award to fielding for additional platforms

1 Million+

AI-Generated Insights

Insights drive strategic prioritization and actionable recommendations

6 Patents

Supporting IRO

With 15+ US Patents attributed to Virtualitics

24%

Open + Scheduled MX Flagged

Potential improvement in jobs flagged as "No-Go" by IRO based on resource constraint analysis

32%

Improved Scheduling

Potential improvement in the efficiency of scheduling team process



IRO Workforce

Maximize the Potential of your Personnel

Commanders are overwhelmed with complex and unstructured personnel data, which can lead to under-informed decisions that negatively impact resourcing.

IRO Workforce enables leaders to quickly identify degraders to workforce readiness, helping to uncover the potential impact to operational initiatives.

IRO Workforce shows:

What is about to fail?

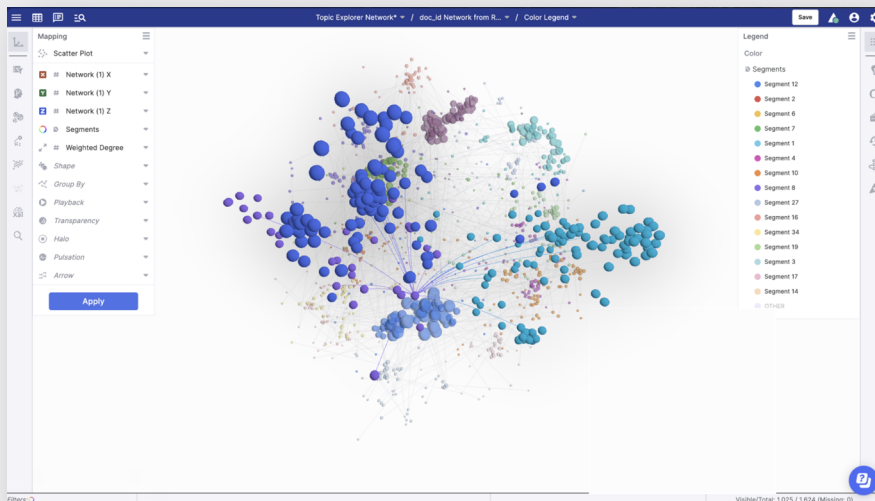
Can we support the mission with available and ready resources?

How should you respond?

Proactively mitigate degraders to workforce readiness, under personnel gaps, and preserve the mission.

What if?

What are the impacts to mission success if we don't take action?



AI-Powered Workforce Planning

IRO Workforce reveals the impact of personnel availability across your mission.



AI-Driven Topic Modeling

Distill corpuses of mission-relevant narrative text into simple, interpretable topics using AI.



Robust Data Pipeline

Run repeatable analytic workflows, including NLP routines, against data extracted from systems of record.



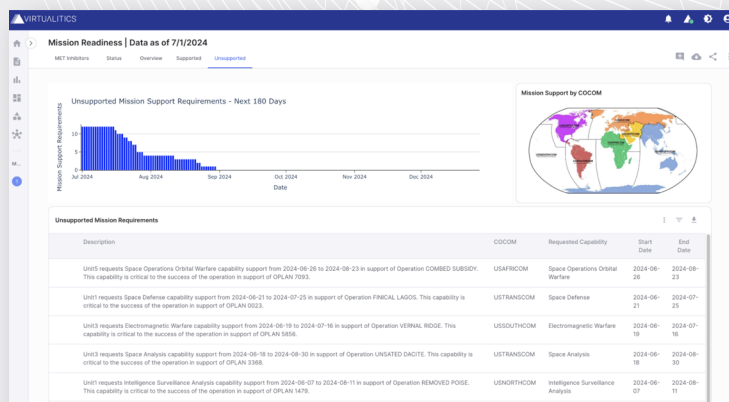
Automated Identify Degraders

Identify factors that degrade readiness across various levels of the workforce, enabling leaders to proactively improve readiness posture.



Comprehensive View of Risk

View readiness risk across multiple dimensions, including levels of commands, missions, functions, and capabilities.



AI that Uncovers the Potential in your Workforce

- ▶ Identify Degraders to Mission Readiness
- ▶ Execute Repeatable AI Workflows
- ▶ Capture Overall Unit Readiness
- ▶ Identify, Quantify, and Forecast Risk
- ▶ Provide Data-Driven Clarity in Forecast Assessment, Programming, and Budget



IRO Materiel

Optimize Inventory, Storage, and Movement of Mission-Critical Items

Materiel and munitions personnel are overloaded with time-sensitive requests to prioritize, assemble, restore, and re-warehouse valuable materiel.

IRO Materiel accelerates the research and decision-making required for safely assembling, restoring, and moving materiel between locations.

IRO Materiel shows:

What is about to fail?

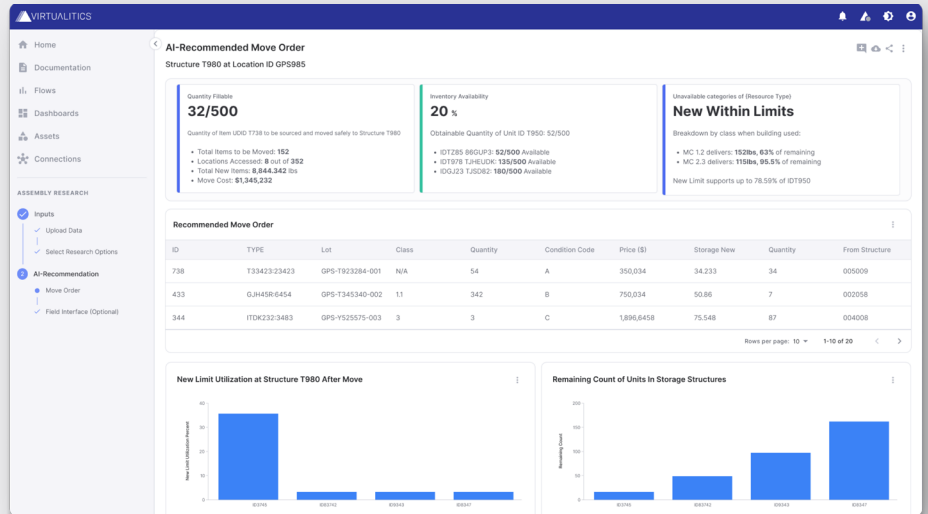
How quickly and effectively can the team access materiel?

How should you respond?

How do we safely and efficiently re-organize materiel?

What if?

What if storage availability and safety requirements change?



AI-Powered Materiel Management

IRO Materiel reveals the information and actions that increase mission readiness.



Rapid Research

Conduct quick, AI-assisted research in service of assembly, restore, and re-warehousing.



Focus on Safety

AI-based move plans verify and adhere to destination NEW limits and compatibility code restrictions.



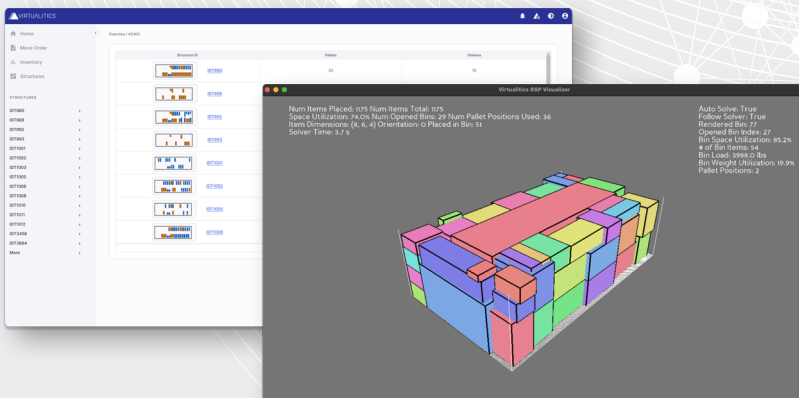
AI-Generated Move Orders

Quickly generate efficient move orders, validated by a state-of-the-art AI-powered constraint solver.



Tablet Field Interface

Usable offline and displays all relevant information and grid-locations, integrated with AI-recommended movement plan.



AI that Revolutionizes Materiel Planning

- ▶ Rapidly Answer Time-Sensitive Requests
- ▶ Generate Permissible Move Orders with Decision Intelligence
- ▶ Optimize Inventory, Storage, and Asset Movement
- ▶ Empower Munitions Personnel with Data-Driven Actionable Insights



IRO Cyber

Stay Online and Secure with AI-Powered Cyber Analytics

Cyber security analysts are often overloaded with information from multiple assets and databases, trying to react to ever-evolving cyber threats.

IRO Cyber empowers teams with AI decision intelligence to find actionable risk across their network and prioritize real-world threats for fast decisions.

IRO Cyber shows:

What is about to fail?

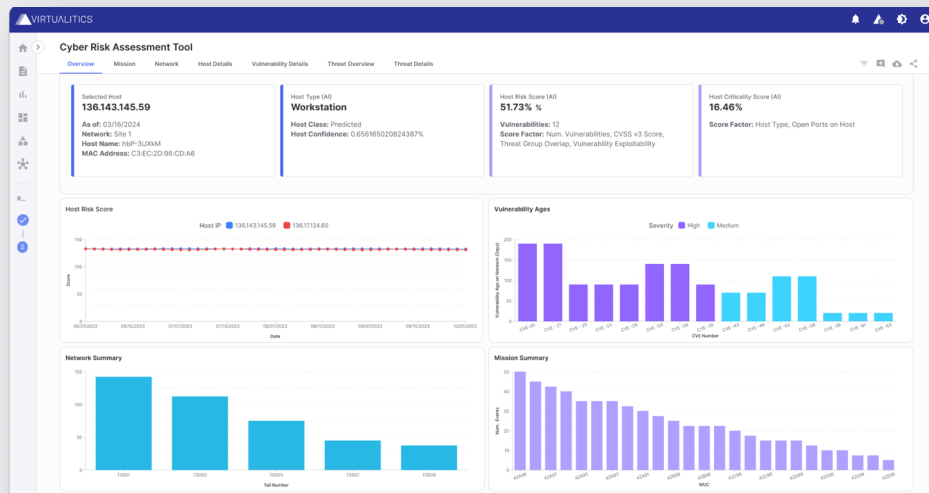
See the overall risk to your networks.

How should you respond?

Prioritize hosts and vulnerabilities to strategically manage risks.

What if?

Consider how to react to adverse events like personnel constraints or high-risk events.



AI-Powered Cyber Analysis

IRO Cyber addresses the areas that impact security and availability most.



Multi-Domain Unification

Combine vulnerability scans, threat intelligence feeds, and AI-powered assessments.



Vulnerability Prioritization

Quickly generate reports for every asset ranked by identified critical vulnerabilities and true risk factors.



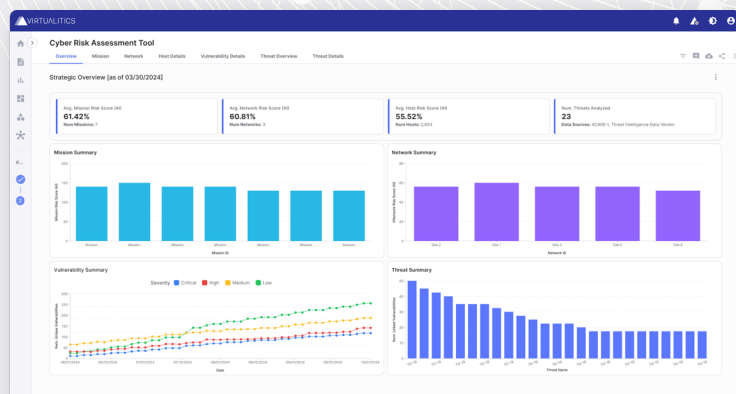
Threat Group Identification

Protect against potential attacks by matching known threat groups and linked vulnerabilities to those present on your networks.



Asset Criticality Assessment

Identify hosts that are likely targets through Host Fingerprinting, Host Type Labeling, and Automated Asset Criticality identification.



Powerful AI Tailored for Cyber Analysts

- ▶ Host/Device Fingerprinting
- ▶ Risk Assessments
- ▶ Threat Actor Analysis
- ▶ Host Type Classification
- ▶ Threat Intelligence
- ▶ Network Vulnerability Analysis
- ▶ Decision Intelligence

