HxGN EAM Constraint Optimizer

Enterprise Asset Management

Efficiently solve your most complicated asset management business challenges

Asset-intensive organizations have massive amounts of data from which they want to drive value and solve problems to achieve specific business outcomes. While problem solving and planning within organizations are still traditionally driven by manual processes, the HxGN EAM (formerly Infor EAM) Constraint Optimizer can help automate processes with a problem-solving engine that offers a library of solvers with data-driven solutions for the most complicated business challenges. EAM Constraint Optimizer improves efficiency and accuracy for organizations by helping to simplify complexities and streamline the decision-making process. EAM Constraint Optimizer removes guesswork from problem solving by using data to drive decisions that eliminate the inefficiencies of human assumptions and judgements, which often result in ineffective outcomes that cost time, effort, and money.

Developed alongside the HxGN EAM 11.7 release, EAM Constraint Optimizer is our first cloud-native problem-solving engine. It's fully integrated with HxGN EAM, connecting all relevant asset management information with two key capabilities: activity dispatch optimization and asset investment planning.

Solver library

- **Cloud-native problem-solving engine**
- **Seamless connection with HxGN EAM**
- **Library of capabilities that provide solutions**
- **Focused on asset-intensive organizations**

Activity dispatch optimization

Save time and costs with automated activity dispatch
Field staff wages and equipment may be your biggest capital expenditures. Activity dispatch optimization benefits field service industries by planning daily dispatch or daily work for your field personnel. It's designed to address the growing volume and complexities of your scheduling needs through field work activity allocation, based on your organization's unique data and asset prioritization.

Dispatch plans are automatically ordered based on priorities, staff skills, worker availability, and proximity to staff assignments. By matching the best resource(s) to the work activities in the most effective order, given that day's constraints, activity dispatch optimization helps reduce significant costs, maximize efficiencies, and increase worker productivity.

Reduce the planning process from hours to minutes
Activity dispatch optimization can empower your back-office managers to take a broader view of dispatch and help eliminate their often mundane, day-to-day work scheduling. The work order and staffing data required for scheduling can be easily organized and configured with just a few clicks. Once configured, the data is automatically sent via

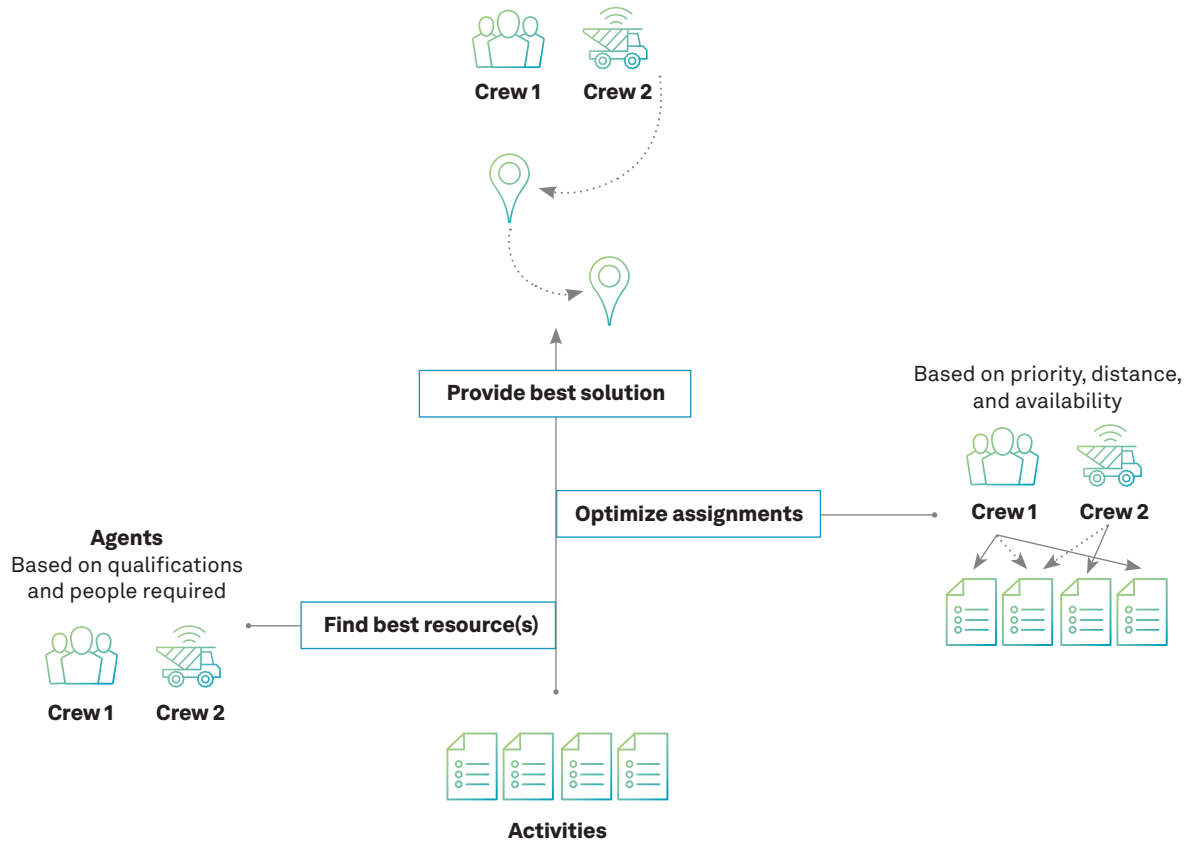your preset schedule, reducing the planning process from hours to minutes.

In the field, this optimized work order scheduling ensures your staff and teams are focused on the right tasks, at the right time, and are spending significantly less time traveling between locations.

In addition to efficiently scheduling work, EAM Constraint Optimizer can also list activities that can't be scheduled. This can help minimize worker downtime and eliminate significant scheduling frustrations of your managers and staff.

For example, scheduling an activity may not be possible due to your team's inability to satisfy the day's constraints—whether it's because of lack of crew availability, missing parts, additional maintenance needed, or simply not enough time in the day. These unassigned tasks are also included in the scheduling report, providing broader visibility.

Activity dispatch optimization

Activity schedule optimization determines the best schedule solution based on resource and activity constraints
Ordered list of assignments

Crew 1   **Crew 2**

Provide best solution

Based on priority, distance, and availability

Optimize assignments ────── **Crew 1**   **Crew 2**

Agents
Based on qualifications and people required

Find best resource(s)

Crew 1   **Crew 2**

Activities

HxGN EAM Activity dispatch optimization matches your best resources to field work activities, listing assignments in a sequential order that optimizes operational productivity.

Optimize work dispatching based on business drivers

- **Work priorities**
- **Staff skills**
- **Team and individual availability**
- **Hours needed for work vs. what's actually available within the workforce**
- **Proximity of the work to the starting location (e.g., shop or hub)**

Activity investment planning

Make strategic data-driven investment decisions with ease

Aging infrastructure, growing demand, limited budgets, and scarce resources all present challenges for organizations in determining how best to plan future investments to maintain the highest level of service. These decisions are complex and not an easy task when considering how to balance cost, risk, and performance improvements across hundreds of competing assets interventions. Asset investment planning benefits any organization that requires long-term planning by creating investment action plans for future time periods.

It can evaluate the vast number of possibilities, determining when and where to invest in your assets or projects by allocating the appropriate investment options at the right times based on your organization's unique budget- and asset-related data.

Maximize your hard-earned capital

Asset investment planning provides data-driven answers to fundamental questions, such as: How big a budget do you need? What should you spend it on? And when should you spend it? Asset investment planning support action planning with multiple element configurations allowing the configuration of several budget and asset specific parameters (priority, inflation rate, planning length, depreciation rate, usability length, replace vs fix, etc.) for added flexibility, such as:

- **Budget forecasting**—In a hypothetical situation with no budget constraints, create a plan that tells how much budget you would need to perform every asset intervention on time.

- **Budget allocation**—Considering real-world budget constraints, create a plan that shows when and where to best allocate those funds by targeting on-time investments and prioritizing those which may occur late.

- **Allow for early investments**—fill up your planning periods as much as possible by allowing investments to be selected early if the budget allows.

- **Allow budget rollover**—Maximize your allocated funds across the planning timeframe by allowing unused budget portions from one period to be rolled into the next.
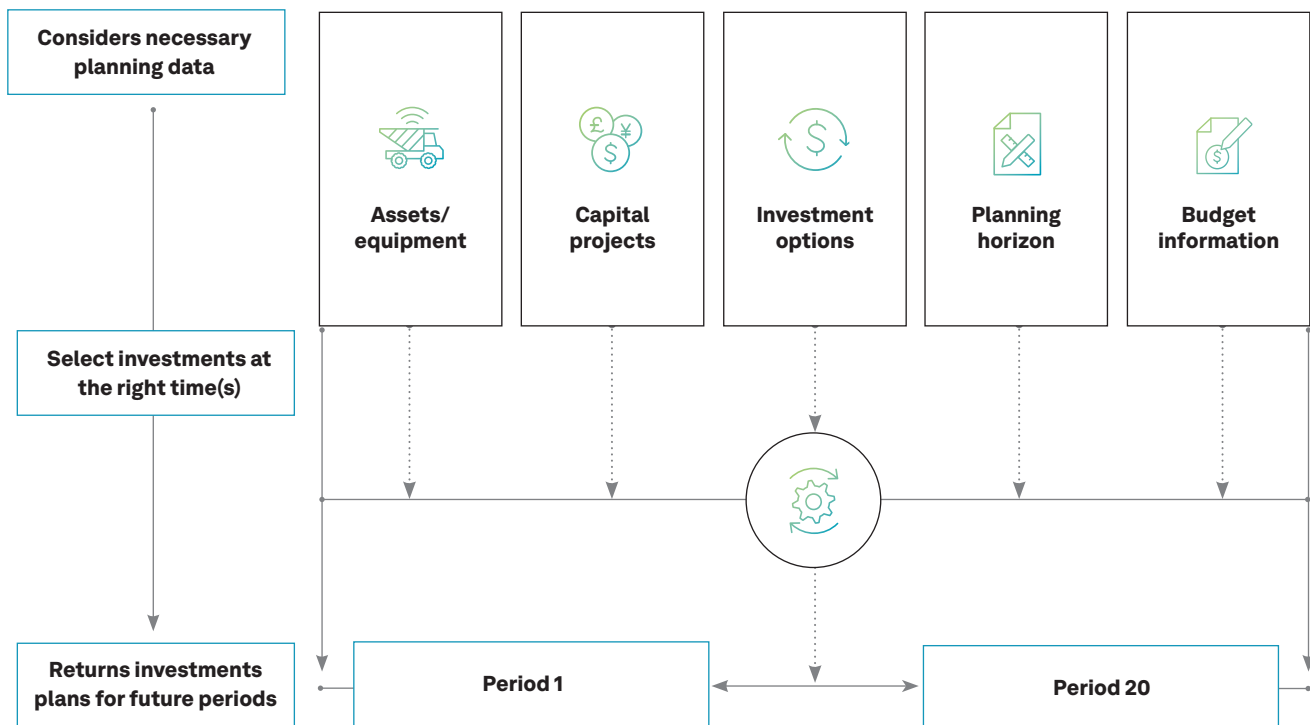
EAM AIP planning results

You can optimize investment planning directly from within HxGN EAM.

Benefits of the asset investment planning tool

- More effectively meet service level objectives
- Make the right investments in the right assets at the right time
- More effectively evaluate business risks
- Future-proof investments

This planning can empower your teams to efficiently create, manage, and communicate investment plans across the organization. You can create numerous what-if scenarios to compare and contrast the impacts and trade-offs of different funding, risks, conditions, and allowances to determine the best overall plan. The planning solution generates sustainable, long-term benefits and value, enabling your organization to measure performance against service goals to maintain clear alignment between asset investments and policies, strategies, and objectives.

Considers necessary planning data	Assets/ equipment	Capital projects	Investment options	Planning horizon	Budget information
Select investments at the right time(s)					
Returns investments plans for future periods	Period 1		Period 20		

Multiple factors are evaluated to determine the best investment strategy for your organization.

HEXAGON

Rely on scalability and security

Because EAM Constraint Optimizer runs on the Amazon Web Services® (AWS®) cloud platform, you can be assured that your business-critical data is always protected with the highest standards of secure protection and security. Cloud deployment ensures that your users have access to the most up-to-date version. Being provisioned on AWS also means that only the needed computing consumption is provided. This reduces your operational costs because you're not paying for unused computing resources.

Leverage Hexagon's innovations

HxGN EAM Constraint Optimizer is built to solve persistent challenges faced by asset-intensive industries. With a focus on streamlining and simplifying the complexity of daily scheduling and investment planning, we continue to invest in innovations within and outside of these areas, such as incorporating dynamic crew routing to handle emergencies and predictive maintenance capabilities. Long-term, our goal is to provide an extendable framework for problem solving, where you can create and execute your own problem solvers to handle capabilities that are specific to your business.

To learn more, visit **eam.hexagon.com**

About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build, and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at hexagon.com and follow us @HexagonAB.