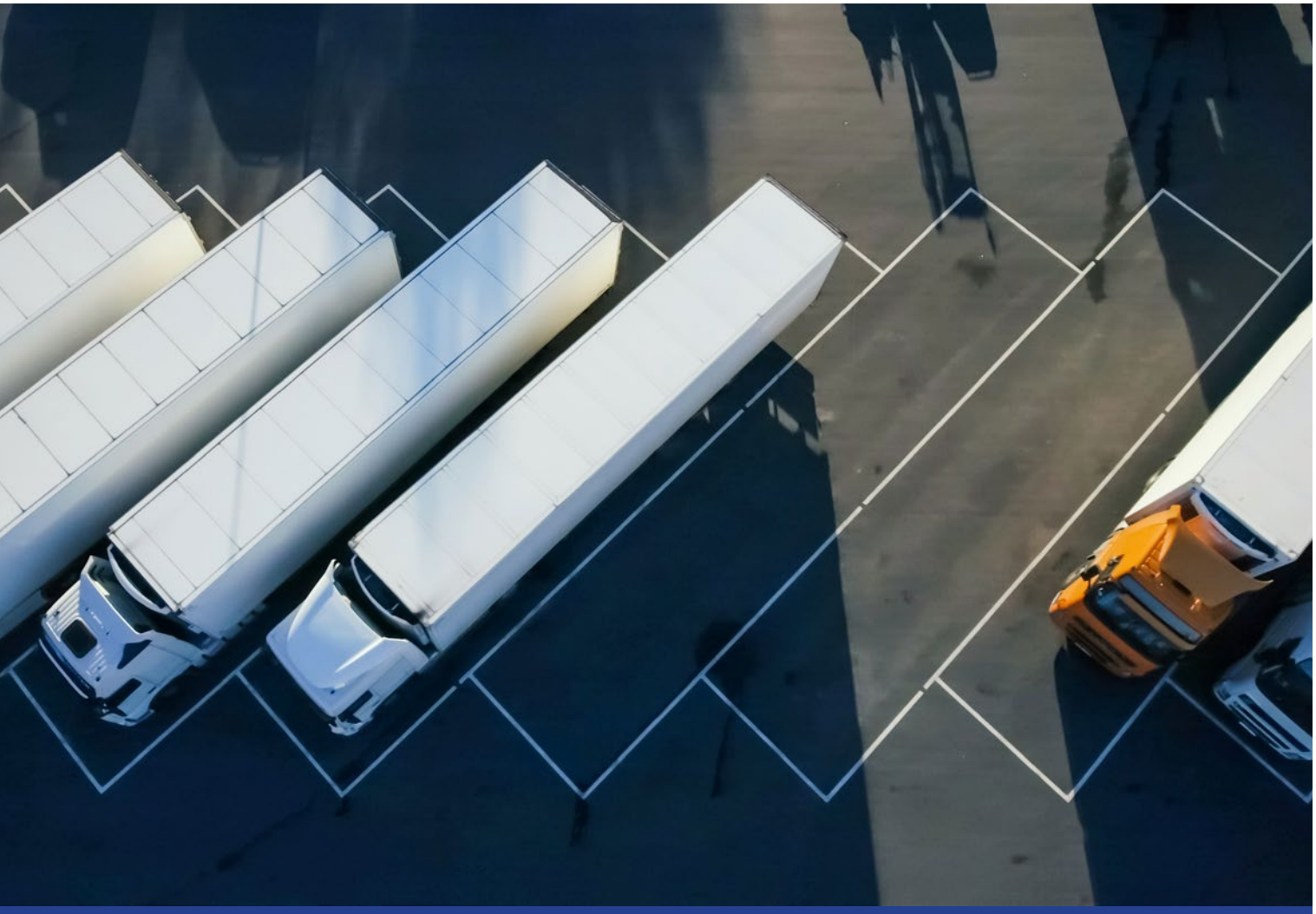

WHITEPAPER

EAM software: the key to efficiency in logistics

Live-link your assets and facilities.

ULTIMO

SEE VITAL SIGNS.
TAKE VITAL ACTION.

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MASTERING LOGISTICAL COMPLEXITY

LOGISTICS IS A COMPLEX DISCIPLINE IN WHICH ASSET MANAGERS FACE MANY SIMULTANEOUS CHALLENGES. THEIR ABILITY TO PROVIDE LOGISTICS-BASED ASSETS AND SERVICES EFFICIENTLY AND ON TIME IS VITAL TO SOCIETY. THIS APPLIES NOT ONLY TO THE SUPPLY CHAIN BUSINESSES THAT MEET OUR DAILY NEEDS BUT TO ORGANISATIONS WHICH, FOR EXAMPLE, MANAGE WASTE OR CARRY OUT LIFE-SAVING RESCUES.

The most obvious thing these managers have in common is responsibility for managing and maintaining fleets of vehicles to enable high levels of availability and performance. Their management portfolio also inevitably includes a variety of associated fixed assets.

The logistics sector encompasses every aspect of getting materials and goods from their source to the customer. It covers transport (road, sea and air), fleet management (including lorries and other vehicles), warehouse storage (with racking and related equipment), materials handling (using forklift trucks and often automated conveyor systems), and more. Together with these, managers' asset optimisation responsibilities may well include buildings, facilities, workshop equipment and ICT systems.

Activities involving similar assets and processes to those used in the logistics industry can be found many other sectors. Asset managers working for fire and rescue, ambulance, police and other emergency services, for example, share many of the same logistical problems. The same is true in refuse and recyclable collection businesses, for instance.

This white paper is aimed at fleet, maintenance, HSE and other asset managers, as well as engineers and operators, in fields such as logistics, transport, emergency and environmental services. It sets out how enterprise asset management (EAM) software helps cut through the complexity of their job.

Bringing all necessary information together onto one user-friendly platform, an EAM system's clear overview of assets, activities and costs enables more efficient, coordinated management and maintenance. Its many benefits extend to simplifying HSE compliance and futureproofing essential processes.

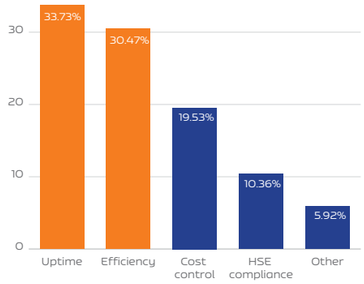

Figure 1 – Asset managers' most important KPI in industry as a whole (source Ultimo 2021 EAM Trend Report data)

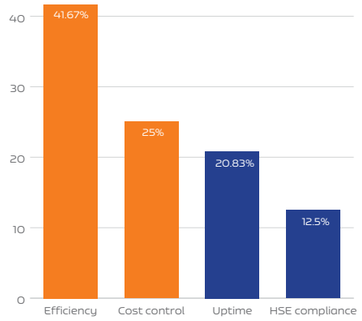

Figure 2 – Asset managers' most important KPI in the transportation and storage sector (source Ultimo 2021 EAM Trend Report data)

Asset managers' priorities

In Figures 1 and 2 we look at asset managers' most important KPIs, according to research conducted for the Ultimo 2021 Enterprise Asset Management (EAM) Trend Report. Respondents were asked to select just one KPI. For industry as a whole, Figure 1 shows uptime and efficiency as the leading concerns. For the sector categorised as transportation and storage, which links most closely with the subject of this white paper, efficiency stands out much more clearly as the priority (Figure 2). Cost control also appears to be a greater issue for this sector, while uptime – although important – ranks only third.

Another comparison is shown in Figure 3, which further explores the issue of asset uptime. While 60% of survey respondents had experienced unplanned downtime in the past year, the corresponding figure for transportation and storage specifically was lower – at 42%. One possible explanation may be that this sector puts extra effort into avoiding unplanned downtime. This makes sense, as the disruption and follow-up work involved in rectifying accidents, breakdowns or failures tends to be more extensive for vehicles out on the road than for assets in a fixed location.

When asked if they knew the average cost per hour of downtime, only 18% of asset managers said yes. In transportation and storage, even fewer – 4% – were aware. Again, this may reflect an assumption that this sector knows very well that downtime is costly – even if that cost is not quantified – and is already making strenuous efforts to avoid it. However, it is clearly concerning that so few asset managers across all sectors are able to access such key data.

Efficiency, cost control and asset uptime are, of course, strongly interlinked, as controlling costs and maximising uptime helps to make an organisation more efficient. All three factors are ultimately crucial to profitability. Asked to choose between them, it is interesting that transportation and storage asset managers tended to opt for efficiency. This seems a highly appropriate priority for such a dynamic sector, in which profits are heavily dependent on efficient use of time and resources.

Figure 3 – Percentage of asset managers experiencing unplanned downtime in the last year (source Ultimo 2021 EAM Trend Report data)

CHALLENGES TO EFFICIENCY, COST CONTROL AND ASSET UPTIME

INCIDENT AND ACCIDENT MANAGEMENT IS A KEY EXPENSE FOR BOTH MOBILE AND FIXED ASSETS IN LOGISTICS, WHILE OTHERS INCLUDE DOWNTIME, VEHICLE RETRIEVAL AND REPLACEMENT, DAMAGE REPAIRS AND CARGO LOSSES.

Poor or inefficient maintenance

As we have already touched upon, breakdowns or accidents on the road can be much more disruptive, time-consuming and costly than those dealt with on-site. Incident and accident management is a key expense for both mobile and fixed assets in logistics, while others include downtime, vehicle retrieval and replacement, damage repairs and cargo losses. Along with the financial cost, organisations risk failing to meet contract requirements and losing their good reputation.

Effective maintenance processes help to avoid these problems by keeping assets in a safe, reliable and productive condition. A well-maintained asset may also save further through higher energy efficiency, lower replacement part needs and longer lifespan. There is a hierarchy of approaches to maintenance, with increasing levels of sophistication. The basic level is corrective or reactive maintenance, where action is taken only when a problem becomes noticeable – by which time serious damage may already have occurred. The next step up is routine preventive maintenance, but this can result in parts being replaced too early. Predictive maintenance and condition-based maintenance are more advanced approaches which help determine the ideal moment for intervention.

Importantly, the level of maintenance should be appropriate to the asset concerned, to avoid overspending. It should also be coordinated with asset use and timed to cause the least possible disruption. This is especially true for vehicles, as maintenance may require them not only to be taken out of service but to be moved to a workshop some distance from their normal location.

Poor data availability, overview and utilisation

In addition to maintenance and incident management, logistics asset managers deal with many other processes and expenses. This includes administration of, for example, contracts, personnel, insurance, fuelling and tyre supply. These interrelated and often complex factors need to be considered simultaneously, but often they are managed via different and unconnected information systems – including spreadsheets and paper files as well as software solutions. This makes it difficult or impossible to correlate parameters in problem-solving. It also leads to wasteful duplication of information and effort.

For the Ultimo 2021 Enterprise Asset Management (EAM) Trend Report, asset managers were asked whether their key software systems were integrated. As well as EHS software (for environment, health and safety), this might include systems for EAM, ERP (enterprise resource planning), APM (application performance management), OEE (overall equipment effectiveness) and other purposes. Only around 50% of respondents in transportation and storage, as well as the industry as a whole, reported such integration.

Managers need a clear and integrated overview of all relevant measurements, costs and issues if they are to make fully informed decisions. One area in which this currently seems lacking is performance benchmarking. In the 2021 Trend Report, 56% of transportation and storage asset managers said they lacked the data needed to benchmark performance. Across industries in general, 45% reported this problem.

Today, the amount of data potentially available to help managers with asset management and maintenance optimisation is rapidly expanding. Much digital data is generated, for instance, by internet of things (IoT) devices connected to sensors on vehicles, which monitor asset use and condition. The full value of such data can only be extracted if it is gathered and handled by a software system which enables rigorous analytics.

Failure to take advantage of mobile technology and connectivity

When out on the road or making site visits, drivers, engineers and technicians need a way to record job information and problems. Despite the ready availability and advantages of mobile devices and wireless technology, some still have to depend on slow and often paper-based processes.

Today's mobile apps and cloud-based solutions can make such administration instantaneous and much more efficient, via tablet or smartphone. Similarly, asset managers can have instant access to information and functions in maintenance software and other systems via the cloud. Unfortunately, not all managers are open to this approach.

In the 2021 Trend Report, 37% of transportation and storage asset managers said they felt uncomfortable about using remote solutions such as cloud-based EAM apps.

Poor retention and sharing of information

Without effective systems and processes for managing and communicating information, an organisation has limited ability to retain and share its gathered data and the cumulative experience of its workforce. This valuable information needs to be recorded, made available for use, and passed on to new generations of employees so it remains with the company as older staff retire.

Several outcomes of the Ultimo 2021 Enterprise Asset Management (EAM) Trend Report survey point to this as an area for attention. For instance, poor communication between different teams is revealed to be one of the biggest risks to uptime. Figure 4 summarises the range of views on uptime risks from respondents in general. Ageing assets top the chart, followed by poor communication. Meanwhile, in the view of transportation and storage asset managers (Figure 4), poor communication ranks as highly as ageing assets.

The survey asked: what do you need to focus on to improve your organisation's response to unprecedented events? Both the overall response and the transportation and storage sector replies identified knowledge sharing and retention most prominently as being key to resilience (see Figures 5 and 6).

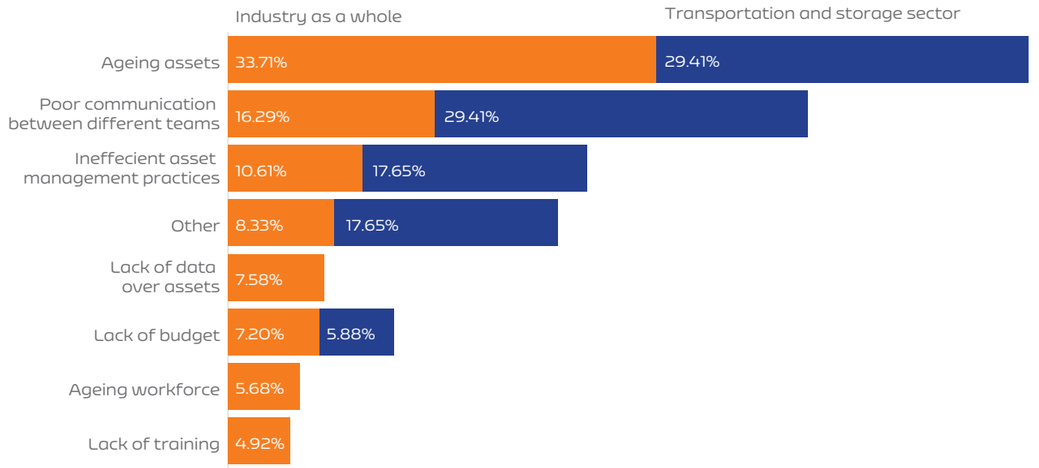

Figure 4 – Biggest risk to uptime in industry as a whole and biggest risk to uptime in transportation and storage sector (source Ultimo 2021 EAM Trend Report data)

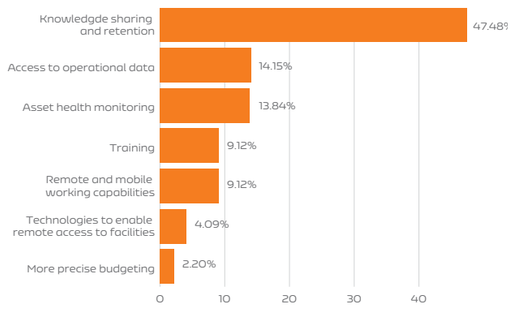

Figure 5 – What organisations in industry as a whole need to focus on to improve their response to unprecedented events (source Ultimo 2021 EAM Trend Report data)

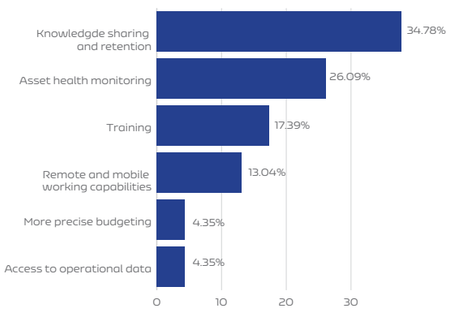

Figure 6 – What organisations in transportation and storage need to focus on to improve their response to unprecedented events (source Ultimo 2021 EAM Trend Report data)

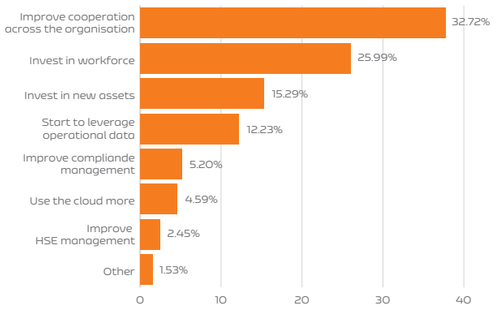

Figure 7 – Most important step to futureproof operations in industry as a whole (source Ultimo 2021 EAM Trend Report data)

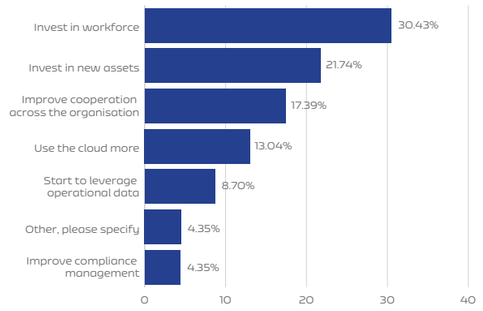

Figure 8 – Most important step to futureproof operations in transportation and storage (source Ultimo 2021 EAM Trend Report data)

This sector differed from the average response when asked to name the single most important step needed to futureproof operations (see Figures 7 and 8). Most notably, transportation and storage asset managers placed investment in the workforce highest. Improving cooperation across the organisation was top choice for respondents as a whole and reached the top three in this specific sector.

In terms of training, the study suggests that investment in the workforce is rather low. Within the whole response base, 69% of companies gave maintenance staff no more than 24 hours of training per year. For transportation and storage, nearly 90% of companies fell into that bracket. Where formal training opportunities are minimal, passing knowledge to personnel via information systems presumably becomes even more important.

The survey showed that over 70% of respondents' companies (and 67% in the transportation and storage sector) had experienced problems in finding suitable candidates for open positions. Lack of candidates with suitable experience was the main challenge, with all the transportation and storage sector respondents and over 50% of the overall respondents stating it as the main reason. Again, this could be taken as an argument in favour of using improved knowledge sharing to retain valuable existing expertise and develop the abilities of relatively inexperienced recruits.

HOW AN EAM SYSTEM INCREASES EFFICIENCY

FUNDAMENTALLY, AN ENTERPRISE ASSET MANAGEMENT SYSTEM BRINGS ALL DATA RELATING TO AN ORGANISATION'S ASSETS INTO ONE PLACE. THIS AVOIDS DUPLICATION OF INFORMATION AND EFFORT, GIVES CLEARER VISIBILITY OF RELATED ACTIVITIES, COSTS AND ISSUES, AND ENABLES BETTER CORRELATION AND COORDINATION.

Easy-to-use platform

With the Ultimo EAM system, each of the challenges discussed earlier can be addressed via a single, easy-to-use asset optimisation and management platform. This is much more than a maintenance management software system. Instead, its modular EAM software is built into a total solution which covers whatever assets and processes the operator wishes to include.

Fleet maintenance and fleet management, along with their related administrative activities, are an obvious starting point. Other assets covered may include lift trucks, plant and workshop equipment, IT resources, infrastructure, facilities and buildings. Ultimo HSE (health, safety and environment) software modules are also often integrated into the system.

Ultimo consultants can integrate the customer's existing systems with enterprise asset management software. For example, EAM integration with a transport management system used to plan vehicle deployment and activity helps optimise the timing of maintenance. Ultimo's asset planner shows 'maintenance windows' within which the vehicle can be inspected, tested, serviced or repaired with least impact on productivity.

Similarly, links can be made to obtain useful data from, for example, fuel card suppliers, vehicle onboard computers, barcode scanners, parts stock lists and financial systems. The consultants' preparatory work with customers includes business scans and workshops which identify what systems they use, what EAM software modules they need and how these can be integrated or interfaced. They then make the necessary connections.

Adaptable software

An Ultimo EAM system is easy to adapt to meet any special needs. It can also be expanded over time to incorporate further functions and achieve additional improvements in the customer's business. HSE software integration, failure analysis, training and labour deployment planning are just a few examples of the add-ons available.

With a clear overview of costs and issues, managers can make better cost control decisions. The total cost of ownership (TCO) of each asset becomes easy to calculate, while all relevant associated data, details and documentation are readily accessible. Armed with this knowledge, managers can maximise the cost efficiency of an asset's use and plan the ideal time for its replacement.

Thanks to the EAM system's capacity to handle large amounts of information from a variety of sources, big data is no longer overwhelming but instead becomes a source of useful and actionable business insights. In particular, greater use can be made of data gathered by digital communication, connectivity and IoT technology. For instance, Ultimo will integrate with third party software which collects condition, fault and activity data from smart sensors in vehicles or on static assets.

Easy access from any location

Users can easily access the Ultimo cloud-based EAM system's information and functions from any location, via smartphone, tablet, laptop or desktop. This gives flexibility for remote and home working, where appropriate, and saves on the time and cost of travel.

For drivers, engineers and technicians, the Ultimo EAM system provides 'self-service' functionality via a very simple phone or tablet screen interface. This gives them instant access to instructions, information and reports, wherever they are, and in a similar way allows them to enter details of job progress or equipment failures, for instance. Their input goes immediately and directly into the Ultimo system for action, with no paperwork, separate systems or intermediate staff involvement to delay the process.

The Ultimo EAM system also produces instant reports in any format required. This saves much time and gives extra confidence when it comes to enforcing and demonstrating HSE compliance. It also simplifies reporting in relation to audits, quality control and insurance requirements, for example.

Last but not least, the Ultimo system's user-friendly functionality improves communication, sharing and accessibility of data for the whole organisation's benefit. Employees become contributors of useful data, which makes the system more powerful, while cooperation between individuals, teams and sites is enhanced. The system also has the effect of transferring an ageing workforce's expert knowledge into the EAM software, so it can benefit future employees.

Managers need a clear and integrated overview of all relevant measurements, costs and issues if they are to make fully informed decisions.

ULTIMO EAM FOR GREATER EFFICIENCY – NOW AND IN THE FUTURE

IN LOGISTICS-BASED BUSINESSES, HIGH LEVELS OF EFFICIENCY ARE ESSENTIAL TO MEETING SOCIETY'S NEEDS WHILE MAINTAINING ECONOMIC VIABILITY. EFFICIENCY DEPENDS, IN TURN, ON EFFECTIVE COST CONTROL AND ASSET UPTIME MAXIMISATION. ALONG WITH THE COMPLEXITY OF THEIR VEHICLE FLEETS AND RELATED FIXED ASSETS, LOGISTICS ASSET MANAGERS MUST HANDLE A WIDE VARIETY OF OTHER SIMULTANEOUS TASKS AND CHALLENGES.

Inadequate, poorly costed, uncoordinated or badly timed maintenance is a major threat to uptime and profitability. Unclear visibility of activities, issues, performance and costs, through inefficient, separate information systems and lack of vital data, is an obstacle to sound decision-making and firm control over assets. Failure of organisations to embrace mobile, connected and cloud-based technologies exacerbates the problems of poor communication, sharing and retention of information, which lower efficiency and limit future prospects.

Ultimo's enterprise asset management system solves these problems by bringing all relevant functions and data together into a single, easy-to-use asset optimisation and management platform. Its modular enterprise asset management software creates a total solution covering whatever assets and processes the individual customer wishes to include. It can also be integrated or interfaced with other systems, inside and outside the customer's organisation, to draw in further useful data and improve coordination. This is especially important in optimising the timing of maintenance actions.

Total overview

The Ultimo EAM system enables a clear total overview, for better decision-making and cost control. It makes good use of data gathered from multiple sources – including IoT devices – and provides easy, remote access to cloud-based information and functions. For drivers, engineers and technicians in the field, its software allows fast, paperless, remote information transfer to and from the system. It also helps to enforce and demonstrate compliance with HSE and other industry regulations through instant report production. In addition, it helps futureproof vital processes against changing demand, unprecedented events and retirement of expert staff by aiding communication, sharing information and passing knowledge to new generations.

Ultimo is the #1 EAM Cloud platform that provides its customers with control over their assets and an unmatched and proven Return On Investment. Its benefits include increased uptime; management of costs and an extension in the lifespan of equipment; reliable control information; ease of adherence to laws and regulations and the assurance of a safe working environment. With Ultimo you see vital signs and you take vital actions.

Live-link your assets and facilities.

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