

LIFECYCLE MANAGEMENT STRATEGIES FOR ACHIEVING CRITICAL BUSINESS OUTCOMES

Technological advancements are changing the scope and complexity of traditional lifecycle management activities throughout the supply chain. Passive approaches, which sought to expedite reactive responses to unpredictable disruptions, are being replaced by proactive programs designed to continually monitor individual assets, entire systems and workforce performance.

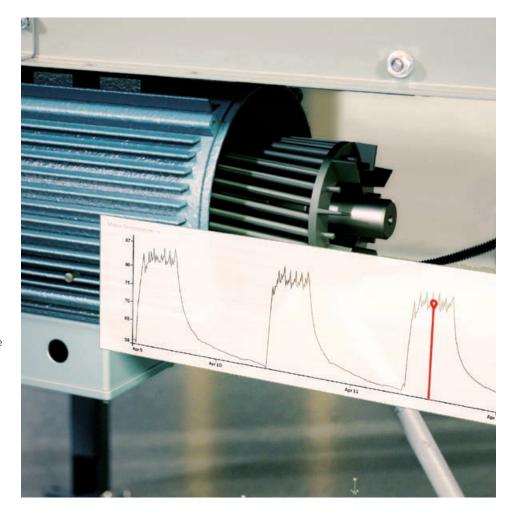
Effective utilization of operational data is driving this lifecycle management evolution and providing operators with a deeper understanding of the key parameters affecting production. This can deliver actionable insights that can be executed in real time during production.

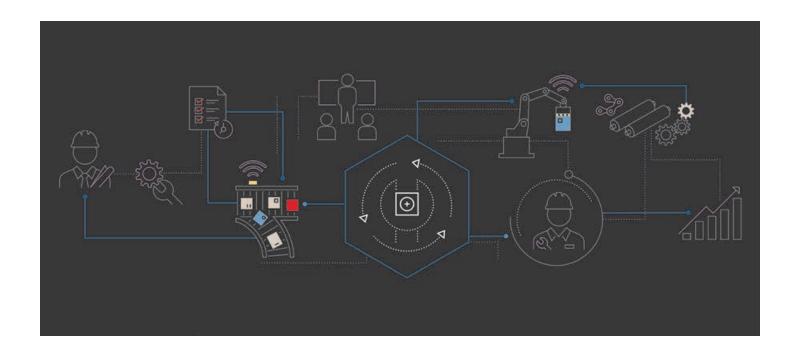
By using sensors to monitor equipment conditions, distribution center (DC) maintenance teams can also optimize maintenance activities in a way that shortens intervention times while preventing disruptions before they occur.

Honeywell Intelligrated Lifecycle Support Services is at the forefront of this new approach to lifecycle management.

Through consultative engagements with our customers, we're combining innovative technology and supply chain industry expertise to deliver asset management plans to supply chain leaders by:

- Integrating data-driven strategies in individual DCs and across enterprises
- Accelerating transitions to predictive analytics
- Achieving critical business outcomes through improved productivity and a reduction of unplanned disruptions





A JOURNEY TO PREDICTABILITY

As consumers demand ever-higher standards of order fulfillment, enterprise supply chain leaders are faced with rapidly changing market dynamics and unrelenting competitive pressures. To meet these expectations, many are working to make same-day delivery their new standard.

Accomplishing this critical business objective will require a reduction in unplanned disruptions and a transition from traditional strategies of "react and respond" to "analyze and predict." As companies embark on this journey to ever-improving predictability, they'll find newfound productivity and uptime replacing old patterns of frequent operational disruptions.

Enterprise objectives

- Reducing the cost-per-case shipped
- Improving system productivity within a DC and across a network
- Ensuring merchandise is in-stock at the point of sale with on-time delivery to retail stores

Operational priorities

- Achieving production targets
- Maximizing labor productivity and retention
- Balancing the flow of materials within a DC to optimize production and meet customer shipping windows
- Increasing system uptime and optimizing planned downtime while avoiding unplanned downtime
- Utilizing performance data to generate actionable, real-time insights that drive productivity during production

Asset condition

- Maximizing equipment uptime and sustaining asset conditions
- Fostering competency among technical personnel in the automated material handling segment, which requires highly skilled technicians
- Maintaining and optimizing accurate spare parts inventories
- Reinforcing internal teams with external resources and technical support, as needed
- Ensuring agile and responsive access to OEM expertise
- Managing equipment obsolescence, system upgrades and modifications

The path to profitability

- Reducing capital expenditures through productivity across the enterprise while optimizing the timing of capacity expansion investments
- Lowering operating expenses via improved asset, process and workforce optimization
- Creating predictable budget forecasts and staying within specific budget allocations

LIFECYCLE SUPPORT SERVICES - BENEFITS TO YOUR ORGANIZATION

Enterprise optimization

Lifecycle Support Services uses The Connected Distribution Center platform from Honeywell Intelligrated to deliver data-driven, actionable insights. This infrastructure is the foundation for providing a full range of value-added services that achieve customer-defined business outcomes in individual facilities and across the enterprise. Enterprise optimization enables you to:

- Compare DC performance across multiple sites
- Improve productivity across the DC network
- Relentlessly pursue innovation and accelerate the transition to automation
- Achieve critical business outcomes and performance objectives
- Reduce capital and operating expenditures (and make them predictable) by executing a multi-year asset management plan

Operational intelligence

Lifecycle Support Services provides enhanced operational visibility and access to supplementary services — such as innovation assessments and engineered solutions — which drive key productivity metrics.

Companies can leverage this intelligence to:

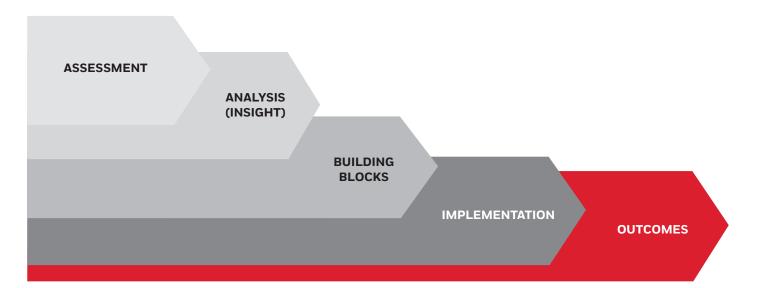
- Gain data-driven, operational insights that can be implemented in real time during production
- Reduce unplanned events to meet production targets and avoid costly heroics
- Maximize productivity by balancing the entire supply chain within the distribution center
- Lower operating costs, such as energy consumption and transportation expenditures
- Improve labor optimization and retention

Asset condition

Lifecycle Support Services provides on-site support, parts, training and remote technical assistance to augment your maintenance team and keep your assets and systems running at peak condition. We can help you:

- Maintain critical systems and ensure proper operation
- Train and retain qualified technicians
- · Minimize response and repair times
- · Access spare parts when you need them
- Optimize the design and implementation of the maintenance plan
- Incorporate planned maintenance downtime into the operations program

DATA DRIVES OUTCOMES





MAKE THE TRANSITION TO OPTIMIZED MAINTENANCE

Connected Assets builds upon the infrastructure of The Connected Distribution Center to help DC operators keep their critical systems running at peak productivity levels. Featuring a suite of robust software and asset-level sensors, Connected Assets continuously accumulates data on equipment and system conditions to provide real-time status and data archiving for an expanded view of overall system performance.

With Connected Assets, you can detect equipment degradation and process inefficiencies to quickly identify conditions that could inhibit productivity or cause unplanned downtime. Connected Assets delivers:

- Real-time notifications of issues affecting an asset or process
- Actionable insights to improve productivity during production
- Dashboard of key system parameters and metrics along with historical data trends for optimizing operation and maintenance
- The abilities to predict and avoid unplanned downtime

Multiple engagement models

Lifecycle Support Services is completely flexible in how we integrate with your strategy. We draw from our spectrum of services to offer multiple engagement models, tailored to your business, culture and strategy. Typical engagement models include:

Guaranteeing critical business outcomes

Lifecycle Support Services can take complete ownership of lifecycle management via a contractual agreement designed to achieve defined critical business outcomes. This approach is ideal for companies seeking to completely outsource lifecycle management activities.

Forming a collaborative model

Lifecycle Support Services can apply any combination of our solutions in a contractual agreement designed to complement your existing resources and integrate them into your lifecycle management strategy. This approach benefits companies that need help achieving their critical business outcomes by augmenting in-house lifecycle management and fulfillment capabilities.

Providing transactional services

Lifecycle Support Services provides purely transactional engagement models for companies that simply need to procure specific services from our comprehensive portfolio of solutions. This model also allows companies to explore our capabilities and expand the partnership over time.







LIFECYCLE SUPPORT SERVICES — PORTFOLIO OF STRATEGIC SERVICES AND SOLUTIONS

We offer a comprehensive portfolio of strategic services and solutions, which constitute the key building blocks of a successful lifecycle asset management plan. Through consultative engagements that assess both your equipment condition and operational efficiency, we can help you choose from:



Innovation assessments and system modeling for the development of asset management plans



Engineered solutions for innovative system modifications and upgrades



Optimized management of Honeywell Intelligrated spare parts



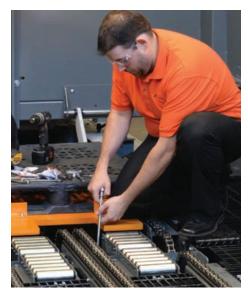
Data acquisition, visualization and analytics that yield actionable insights



Dedicated technical advisors who can provide Honeywell Intelligrated expertise directly to site operations and maintenance teams



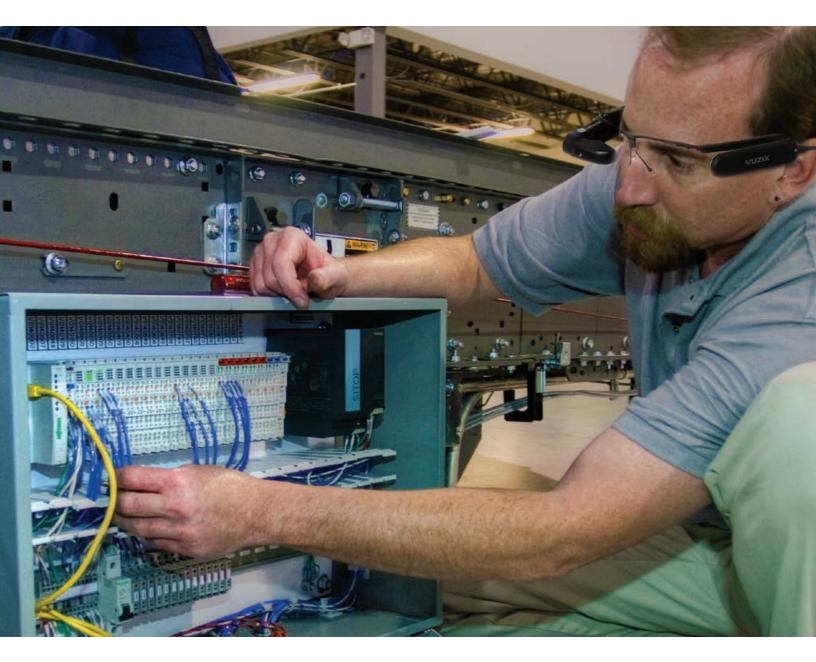
24/7/365 technical support, which may be enhanced with TechSight augmented reality glasses to boost resident technician competency



Resident supervisors and technicians



Training in automated material handling technology



OPTIMIZE DC PERFORMANCE AND ASSET MANAGEMENT LIFECYCLE SUPPORT SERVICES



ENGINEERED SOLUTIONS

Obsolescence Management, Changes to Business Operations, Upgrades



TECHNICAL SERVICES

Field Service, Technical Support, Productivity Assessments, Connected Assets



CONTRACT SERVICES

Resident Technicians, IRIS, Technical Advisors, Asset Management Plans, Assurance 360



TRAINING

Direct and Remote Competency Enablement



HONEYWELL INTELLIGRATED SPARE PARTS

Inventory Optimization, Consignment, Refurbishment, Put-Away

THE CONNECTED DISTRIBUTION CENTER

The pace of change in modern commerce is putting tremendous pressure on fulfillment operations. To stay competitive and protect profits, companies need solutions that help them achieve maximum throughput, day-to-day flexibility, future-proof scalability and intelligence to make informed decisions.

The Connected Distribution Center helps companies make the digital transformation necessary to increase reliability, improve utilization and maximize productivity through:

- Intelligent, data-driven, high-speed execution
- Automated, adaptable processes for machines and workers
- Optimized utilization with the ability to seamlessly adapt and expand
- Insights and predictive analytics, from sensors to the cloud

THE FUTURE IS WHAT WE MAKE IT



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