

Vendor Support Agreements: A Competitive Weapon for Optimizing Organizational Assets

by Brian Courchesne

Executive summary

For manufacturers, sustaining operations performance levels can be as challenging as achieving improvements. Leading organizations are integrating support, maintenance, and performance improvement services to sustain and improve operational performance, achieve business goals, and maintain a competitive edge. This paper examines the value of support agreements in a new light – leveraging them as a way to drive more value from an organization's assets and to provide potential for competitive advantage.

Introduction

Bringing a manufacturing facility online represents a huge investment. It typically takes years of planning, design, and construction before plant operations can begin. But for existing and new operations alike, achieving the highest possible return on that investment is an ongoing challenge. Reaching the goals of targeted productivity, efficiency, quality, and consistent performance are top priority, but achieving and sustaining levels of high performance is equally important.

Maximizing profits and overall value requires balancing many factors. Organizations that rely on automation systems must strive to get the most out of operational assets by balancing short- and long-term objectives.

Successful operations focus on four key goals:

“Organizations that rely on automation systems must strive to get the most out of operational assets by balancing short- and long-term objectives.”

1. Protect critical investments: sustain and extend the life of business-critical production hardware and software systems.
2. Maximize asset performance: focus on production assets to optimize productivity and performance.
3. Reduce total cost of ownership: balance short-term budgets with long-term needs to effectively manage overall costs.
4. Improve operational performance: seek proactive opportunities to improve overall operational performance.

Leading organizations are integrating support, maintenance, and performance improvement services to sustain and improve operational performance, achieve business goals, and maintain a competitive edge.

This paper presents a perspective on support services as a competitive weapon to not only sustain current operations performance levels, but also to continually improve them – and to be able to measure the ROI of an ongoing support program.

Obstacles to sustaining performance

Whether an organization’s goal is to increase productivity or just do more with less, sustaining operations performance levels can be just as challenging as achieving improvements.

The reasons vary from organization to organization and industry to industry, but most organizations share some common obstacles:

- Today’s automation systems are more complex and require extensive integration.
- Systems are tightly linked to both software and hardware components.
- Ever-changing business needs demand production flexibility and fast response.
- Competitive pressures demand smaller margin for error, consistency, and quality.
- Operational processes seem out of date and in conflict with goals.
- Aging systems and infrastructure continually degrade in performance and efficiency.
- A retiring and shrinking workforce results in loss of experience, skills, and productivity.
- Pressure exists to reduce costs and do more with less.
- Escalating safety, regulatory, and environmental standards create pressure to stay on target.

Targeting optimal performance

The challenges and pressures experienced by manufacturers all combine to lower the performance of an operation and impact the bottom line (see **Figure 1**):

- Operational: sustaining solution performance with changing business objectives and conditions as well as everyday operational challenges
- Infrastructure: maintaining adequate training and staffing, alignment with other complementary infrastructure and solutions/tools
- Evolution: new business and technology initiatives resulting in obsolescence of existing solutions, keeping abreast of technology advancements
- Commitment: inconsistent sponsorship by management resulting in insufficient budget to maintain or lack of monitoring to drive performance

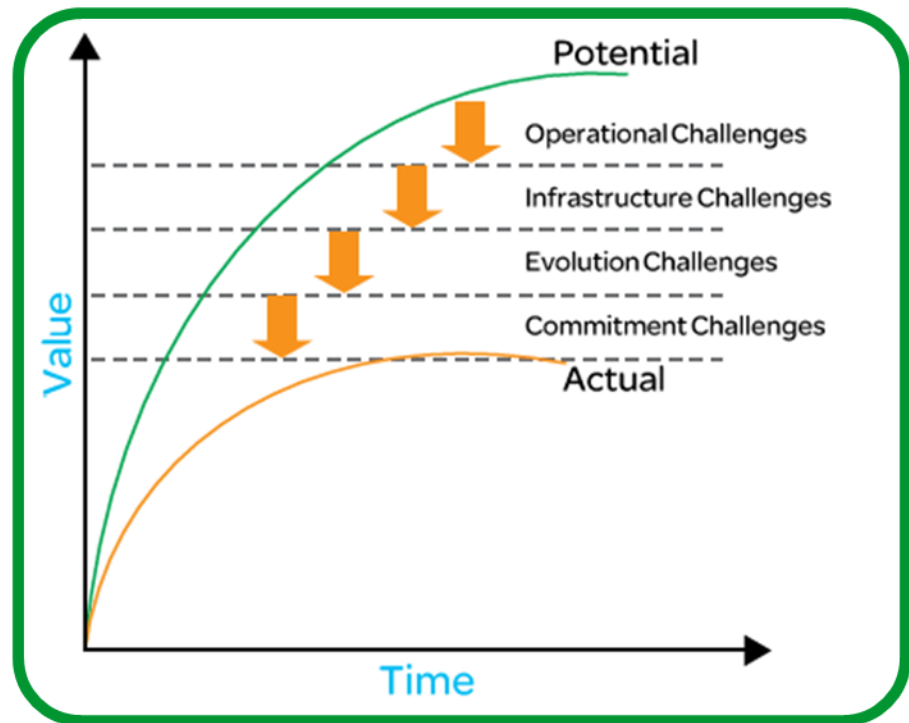


Figure 1
Factors in optimizing performance

Most organizations suffer as a result of dealing with these issues in a piecemeal fashion, reacting to problems when time and budgets allow. Changing anything in isolation can upset the balance between operational elements – the best results come from an integrated approach. Sustaining operational performance involves getting the most out of technology, people, and processes, considering the interaction and integration of all factors.

Sustaining performance

Analysts and operations executives agree that unless an organization can, at minimum, sustain the current level of performance, it's bound to fall back, losing any competitive edge and risking its business. In today's fast-paced, technology-driven world, it's even harder to stay competitive while maintaining performance levels.

“Successful organizations treat support services as a priority for overall performance, business value, and competitive advantage.”

From an operational perspective, sustaining performance means creating an environment that at least maintains current production levels, with efforts focused on two aspects:

- Support: The ability to apply resources to prevent and resolve issues, keeping the facility in an operational state.
- Maintenance: An ongoing effort to ensure assets perform at intended targets at the lowest operating cost.

Improving performance can involve a range of solutions from adding more resources to expanding the plant. Adding new technology is often considered as a first step, but without a clear understanding of the impact on overall resources that include people and processes, technology alone is not a solution.

Services are a critical element in operational performance improvement, whether performed by staff or external resources. Some examples of performance improvement services include:

- Assessments and “health checks” to prioritize efforts for the biggest impact
- Planning and analysis to develop a long-term path consistent with business goals
- Asset-specific tuning efforts such as loop tuning, alarm management, boiler, and control system optimization
- Process optimization, including manufacturing and workflow processes
- Resource augmentation with functional expertise, or extra hands for a specific period
- Training and operator effectiveness efforts to improve productivity and expertise

Synergy for business value

Most operations struggle to maintain an effective balance between support, maintenance, and improvement services, resulting in conflicts for capital expenditure and operating budgets and an “either / or” mindset. By taking a more holistic view and focusing on the common goal, there is an opportunity to integrate these efforts and drive long-term business value.

Support, maintenance, and improvement services are typically managed as unrelated parts of the operations puzzle. But they all have one thing in common: They all support the ongoing performance of an operation. Integrating these elements of operations support can create synergy, producing higher returns on an organization’s overall investment.

This perspective effectively changes the meaning of “support,” moving it beyond reactionary technical support and “downtime insurance” to an approach that includes sustaining and improving operational performance.

By integrating performance improvement services with maintenance and support services, an organization can leverage the resources, skills, and technology of its support service provider and derive tangible benefits.

Leveraging support services

The basic premise to understand about support is that it’s not just an element of insurance for protecting and maintaining production assets. It’s true that every organization needs to assess the risk and potential impact upon its business if a particular system or systems were to experience problems. But the definition of support goes beyond this basic factor in that support services can also help achieve operational performance goals (see **Figure 2**). Successful organizations treat support services as a priority for overall performance, business value, and competitive advantage.

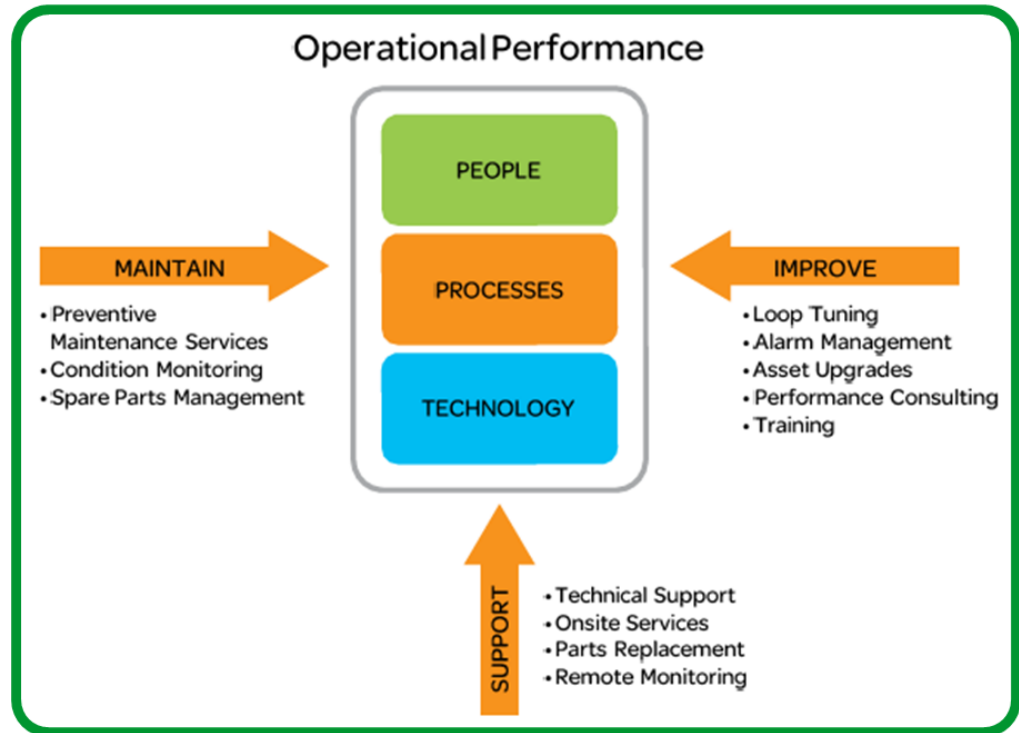


Figure 2
Support services contribute to meeting performance goals

Proactive support and maintenance

Support + Services + Maintenance = (Greater) ROI

Support must extend beyond providing reactive services whenever there is a problem. Leading organizations strive for a collaborative relationship with their support vendors, who can work proactively to help meet performance goals through service elements such as upgrade planning, access to value-added information, and guidance on improving asset performance.

Many operations are finding that by taking a holistic perspective on support, services, and maintenance, they can achieve synergy and drive value to the bottom line. This approach is effective for organizations that are growing as well as those that are focused more on production efficiency and reliability.

By integrating a broader perspective on support with performance improvement services and proactive maintenance, organizations can drive greater operational performance and greater business value.

Successful organizations are finding that they can get enormous value by leveraging the skills and experience of their automation vendors. Beyond knowing how to implement and configure their products, automation vendors understand what those products were designed to deliver, and how to tune them in a production environment to get the most out of them. Whether it's performing advanced process control, tuning control loops, rationalizing alarms, or delivering MES integration, forward-thinking vendors offer services that can drive improved performance.

More strategic services should be considered to learn and apply industry best practices, modernize plant operations, integrate operations systems with business systems, or develop more effective knowledge management practices. Looking at the big picture from a broader and deeper perspective can produce some valuable results to improve performance, even in the short term.

Maintenance as an asset

Maintenance must be considered as part of the picture, too. Maintenance is often viewed as a necessary evil or an impediment to production. But when it is seen as part of the equation, organizations can proactively integrate maintenance as a key element for improved operational performance.

Many operations teams keep a supply of spare parts for critical equipment, but what effort is made to ensure that those parts are kept at current revision levels, upgraded to new technology, or even maintained? Some vendors offer programs to manage spare parts for their clients, even to storing them in controlled areas with guaranteed response times.

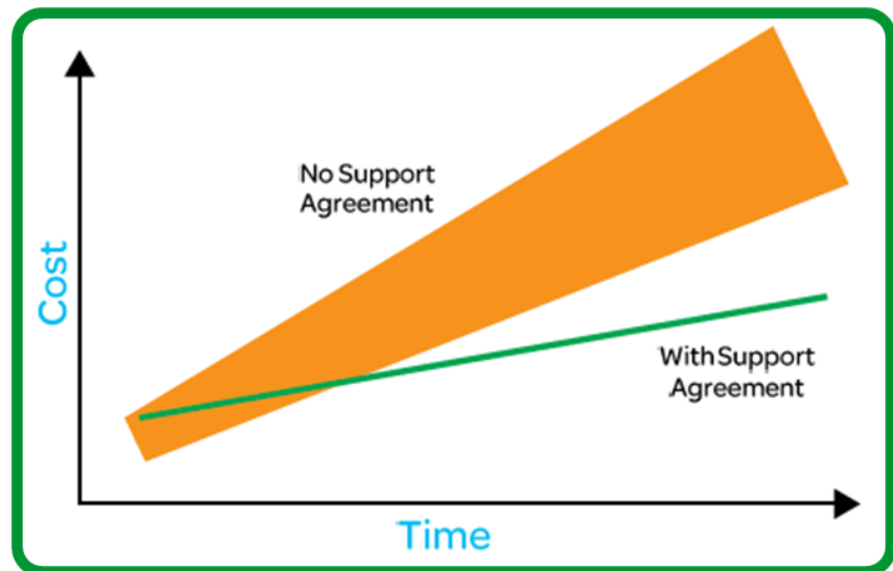
In addition, most maintenance departments face the challenge of impending retirements, and these teams often struggle to keep up with all the new technologies. As software becomes more integrated into operational systems, the task of maintenance becomes even harder – for new staff members as well more experienced personnel. Businesses can leverage their vendors' resources to take advantage of their knowledge and experience not only with their products, but also with complex applications.

Many operations struggle to justify the ongoing cost of support. For those who view support as insurance, the question is really one of risk and impact. But for organizations that have solved a major problem through support services, the value is clear (see **Figure 3**).

Cost vs. benefits

Figure 3

An example of the relative costs over time to maintain systems with and without a formal support agreement



The preventive aspects of support are a “hidden” and often overlooked value. Not unlike performing preventive maintenance on equipment, it’s very difficult to estimate the value of installing available software updates, training operators on updated procedures, or upgrading to current equipment. But these activities are all geared to prevent future problems and sustain performance.

What does one hour of downtime cost an operation? What would it cost if an organization had to buy all the upgrades included in its support program? These are factors to consider when justifying the value of support. In most cases, when added up over time, the expense of not having a formal support program far outweighs the program cost.

Integrating other elements of proactive service and maintenance offers even greater benefits. By including services aimed at improving operational performance, and tapping into a knowledge base of deep experience and skills along with other proactive support, problems can be avoided and additional benefits can be achieved.

Without a support agreement, support costs can vary widely. It may cost less at first, but sustaining the same performance levels costs more over time without formal support.

Business case for support programs

Simply put, a business case justifies an expense by comparing the benefits that will be realized from an investment in capital or operating cost. While the costs of an investment are usually easy to measure by its price tag, the benefits are much harder to quantify. In the context of a “sustain and improve” support model, benefits include:

“Anything that delays production impacts an organization’s customers, reputation, and shareholder value.”

- Reduction in the loss of production capacity – support elements that ensure asset availability, which reduces downtime
- Maintaining systems for maximum longevity – services that keep systems current and performing as intended, avoiding capital expenditures
- Improvements in production performance – services that will increase production capacity, productivity, yield, efficiency, and quality
- Increasing operations staff performance levels – support elements that increase staff productivity, effectiveness, and skills
- Cost savings through discounts, economies of scale, and service “packaging” – leveraging available pricing structures to reduce costs for equivalent or greater service levels

Additional consideration could be made for avoiding business and safety risks as well as fines caused by failure to meet regulatory, environmental, and safety standards – or performance penalties due to failure to meet contracted deliverables. Anything that delays production impacts an organization’s customers, reputation, and shareholder value.

Estimating the value to be gained from a support investment requires some basic assumptions. For example, measuring the value of reducing production downtime requires addressing these questions:

- What does a unit of downtime cost an operation?
- How often is that downtime likely to occur in the target time period?
- How do specific support elements reduce the likelihood of that occurrence?
- What is the predicted impact of those support elements?
- What is the impact on other parts of the operation?

The starting point to estimating the value of support is to define an operation’s “serviceable events,” which are opportunities to directly impact operational performance – for good or bad. An example of a serviceable event is the breakdown of a key pump. In a comprehensive support program, factors that influence the performance of that pump could include:

- A preventive maintenance program to reduce the risk of premature failure
- Condition monitoring to get early warning of impending problems
- Fast access to spare parts to make repairs
- Redesign of procedures to speed pump repairs and reduce impact on production
- Performance tuning to ensure a reasonable load on the pump
- Access to resources with the skills and training to diagnose and repair the pump

Table 1 illustrates the impact on production resulting from a breakdown in a key pump. By using historical information, industry standards and best practices, the example shows that an effective support program could reduce the number of annual incidents to three and shorten the downtime by an hour.

Table 1

A support program can reduce the impact of equipment or system breakdown upon production, performance, and cost.

Impact of Pump Breakdown				
	Incidents / Year	Downtime / Incident	Cost of Lost Production	Annual Impact
No Support Program	5	4 hours	\$10,000 / hour	\$200,000
With Support Program	3	3 hours	\$10,000 / hour	\$90,000
			Annual Savings	\$110,000

In this example, a comprehensive support program that integrates elements of performance improvement services with maintenance and support services could save \$110,000 per year.

While there are a number of assumptions required, and the example examines a single asset, it's clear that by applying the premise across an operation, significant benefits are possible.

Side-effects considerations

A serviceable event can impact an operation beyond the immediate incident. In many industries, the cost of a process re-start is significant, with an impact on energy costs, environmental controls, product quality, and operator safety. An incident could impact related aspects of the manufacturing process, causing a ripple effect throughout the operation. Additionally, an incident could cause waste, affect overall quality, and hamper inventory levels. These "side effects" are very real, but extremely difficult to quantify.

Positive Serviceable Events

Serviceable events can offer opportunities to add value to production operations. While some positive events are difficult to quantify value, others can provide a measurable benefit, such as:

- Access to software upgrades that increase productivity
- Access to hardware upgrades that improve asset performance
- Planning services to make the best decisions about future activities and upgrades
- Access to expertise and knowledge libraries to augment staff experience
- Training courses to improve overall effectiveness and productivity
- Consulting reviews to improve procedures for safety management
- Periodic audits of regulatory compliance, environmental and security management

Conclusion

It is possible to win the battle to sustain operational performance. It takes a broader perspective and the willingness to integrate options for support, maintenance, and performance improvement. It is also possible to measure and demonstrate the benefits that such a program can provide.

To do so, organizations should leverage support agreements to help protect their critical investments in production hardware and software; maximize asset performance; manage budgets to reduce total cost of ownership; and enact proactive steps to improve overall operational performance.

Leading organizations that take this approach view support not as a cost, but rather as a valuable resource that provides a real competitive advantage.



About the author

Brian Courchesne is a Services Marketing Director for Schneider Electric. He focuses on promotion and positioning of value-added offers for Customer Support Services, Advanced Services, and a range of Modernization Services. Prior to joining Schneider Electric in 2007, he worked in various sales support roles and has more than 30 years experience, including consulting services, sales support, marketing, management, and product development.