Obsolescence Management

How to Protect Your Business from Hidden Risks

Operivo

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Introduction. Machines age faster than you think

Every factory, every production plant, every technology-based enterprise thrives thanks to its machines. They create value, deliver products, provide jobs, and ensure contract certainty. However, there's one brutal truth most managers don't want to hear: machines age faster than you think.

Aging is not just a matter of mechanical wear. It also involves the loss of manufacturer support, lack of digital compatibility, a competency gap among employees, and changing legal regulations. All of this means that a device that seems fully functional today could become useless tomorrow.

Most companies downplay this problem. "The machine works, so why touch it?" – this is the most frequently repeated mantra. But it's an illusion. A machine that works can be the biggest threat, because at any moment it can stop working – and then it turns out there are no parts, no service, no documentation.

We have seen companies that built their market position for years, only to lose it due to a single failure. We have seen production managers who had to explain to the board why downtime would last weeks or days, not hours. We have seen engineering teams standing helplessly before a machine, because the world had long forgotten how to repair it.

This e-book was created to show you what machine aging management – obsolescence management – truly is. This is not another fad in maintenance. This is not an academic theory. It's a practice that determines whether your company will survive the next decade or fall victim to a single, unforeseen failure.

In the following chapters, you will see what aging looks like from a practical perspective: what are the mechanisms, what are the non-obvious risks, how the illusion of security can lull entire organizations into a false sense of complacency. You will also learn what strategies and tools Operivo uses to enable companies to consciously manage risk and regain control over their future.

This is not a read intended to reassure you. This is a read intended to warn you. If your machines are working flawlessly today – congratulations. But it is precisely at this moment that you should be most concerned about their future.

Chapter 1. The Invisible Adversary

In the world of production and industry, few things are as insidious as the process of machine aging. This is not about visible signs of wear – cracked belts, squealing bearings, or oil leaks. These problems every maintenance engineer knows and knows how to solve. The real enemy lurks in the background, in an invisible, and therefore underestimated, layer. This is obsolescence – the loss of technological, competency, and logistical support, which can hit a company at the least expected moment.

Machine aging is not linear. Machines do not "age" uniformly, and their life cycle is closely linked to manufacturers' business cycles. In practice, this means that your equipment may be mechanically in perfect condition, yet it is already risky today because the manufacturer has not supplied parts or software updates for 5 years. We often hear from clients: "But this line works great, we've never had a major breakdown." However, such an assessment is based on the present, not on a future forecast.

Imagine a packaging machine from the late 90s. At first glance – impeccable. Regular lubrication, scheduled inspections, zero major incidents. But the PLC controller, which controls the entire process, has long been out of support. I/O modules have not been produced for a decade. The documentation has been lost in the archives of the previous manager. From one day to the next, such a system can stop working, and the plant is left with a line worth millions in revenue that is useless.

Why is this so dangerous? Because aging doesn't always give warning signs. In the classic approach to maintenance, engineers look for symptoms of degradation: vibrations, temperature anomalies, leaks. Here – other symptoms must be sought. The machine works until it stops, and then it turns out that repair is not possible. That's why we say that aging is an invisible adversary – its attack is always sudden and surprising.

From a management perspective, this is doubly treacherous. Maintenance reports show low failure rates, OEE indicators look good, and the maintenance budget is under control. Yet, a time bomb is ticking in the financial books. Downtime caused by an old, "good-looking" machine can cost as much as the entire annual investment budget.

Operivo consultants have been drawing attention to this phenomenon for years. We have seen organizations that did not take aging seriously and then had to resort to desperate purchases of parts from the secondary market, overpaying many times over. We have also seen companies that lost customers because they did not deliver goods on time – just because one "innocent" machine suddenly turned out to be difficult to salvage.

> ⓘ **Key takeaways for managers:**
>
> - Obsolescence does not equal wear and tear – a machine can function well yet still pose a threat.
> - Lack of manufacturer support most often means that failure = unplanned modernization of a larger installation.
> - Focusing on current metrics is not enough – a multi-year horizon, based on data and risk analysis, is needed.

If you don't do this, it's not a question of "if" a failure will occur – but "when" and what its true cost will be.

Chapter 2. The Nightmare of an Unforeseen Breakdown

The scenario, which repeats itself all too often, always looks similar. The plant is operating at full capacity, employees are mobilized, deadlines are tight. And suddenly – a breakdown. Initially, it seems like a common occurrence, one of many: a stopped line, an operator calls for service, technicians begin diagnosis. But within dozens of minutes, the true scale of the problem emerges. The part that failed no longer exists in the supply chain. The manufacturer has not supported the technology for years. Service documentation is outdated or lost.

We have seen such situations in various industries: manufacturing, food, pharmaceutical, energy, mining. Regardless of the sector, the course of events is similar – the initial belief in a quick solution gives way to the mobilization of most of the team. The production director must inform the board that the downtime will last not hours, but days, weeks. The sales department desperately tries to reassure customers, but contracts are at risk. Operators and engineers on the floor do everything to "jury-rig" a temporary bypass, but the effect is temporary. In the worst case, it also affects safety.

The nightmare of such a breakdown is that it engages the entire organization. It's no longer just about repair costs – it's about reputation costs, loss of customer trust, organizational chaos. Logistics companies have to cancel transports at the last minute, the finance department counts losses, and the operations department faces employee frustration.

What's worse, the older the machine, the harder it is to find anyone who still has the knowledge to repair it. The generation of engineers who knew these technologies is retiring. Younger employees lack experience in operating equipment from 20 or 30 years ago. As a result, the best teams become helpless when faced with a device that suddenly becomes a black box.

This is not a single breakdown – it's the beginning of a chain reaction. Every day of downtime means losses amounting to hundreds of thousands of Euros. After a week, you risk losing key contracts. After a month – a permanent loss of market position. We have seen companies that, as a result of one unforeseen breakdown, lost the advantage built over years.

For management, this is a brutal lesson: a lack of an obsolescence management plan means a lack of control over one of the biggest sources of risk in the company.

> ⓘ **Key Takeaways:**
>
> - A failure in "unsupported" machinery is not just probable, but inevitable.
> - Its consequences always extend beyond production – affecting sales, finance, and reputation.
> - Without a systemic approach, a company cannot predict and minimize the effects.

Operivo specializes in precisely this area – we help clients avoid this surprise before it occurs. Because once it happens, it's too late for prevention – all that's left is firefighting at any cost.

Chapter 3. Why do most companies not see this?

The greatest paradox of managing machine aging is that in the vast majority of organizations, this problem simply does not exist in their awareness. When we ask technical directors: "Which devices in your machine park no longer have manufacturer support?", there is often silence. And this is not silence due to a lack of risk – it is silence resulting from a lack of knowledge.

The Illusion of Security

If a machine operates and doesn't generate failures, it is naturally assigned "secure" status. Breakdown reports look good, and the maintenance budget is under control. This illusion of stability is often the most dangerous. A lack of incidents does not mean a lack of risk – it only means that the problem has not yet manifested. When it finally appears, it will strike with full force, because for years no one has prepared an emergency plan. Sometimes they don't even know a quick method to restart production.

Shortened Thinking Horizon

Management thinks in terms of quarters, at most a year. Maintenance plans weeks and months. Investments in new lines or machine modernizations are postponed, because there is always something "more urgent." As a result, no one looks at a 3-5 year horizon, and it is precisely within this period that most obsolescence problems emerge. Example: a manufacturer announces that in 24 months, support for a series of controllers will end. For the maintenance department, this is a distant prospect, but for management, it means that in two years you might have several tons of technological scrap in the hall that cannot be used if the controllers start to "fail."

Lack of Monitoring System

Companies have CMMS systems, energy management systems, quality systems. But few facilities have a tool that continuously monitors the support status of machines and parts. Most often, data is scattered – some in Excel, some in binders, some in the minds of experienced employees. And when these employees retire, that knowledge also disappears. This is why we speak of the dark zone of maintenance – an area that is not seen until it explodes.

All of this leads businesses to live in a false sense of security. "If it works, why touch it" – this is the most frequently repeated mantra. But it is precisely this lack of action that causes risk to grow in silence. And eventually, it strikes at the least expected moment.

Psychology of Resistance to Change

One of the biggest barriers in managing machine obsolescence is not technical or financial issues – it's psychological resistance to change. "If it works, why fix it?" is not just a managerial mantra, but a deeply ingrained organizational defense mechanism.

The "Working Machine" Syndrome

People have a natural tendency to avoid risk. A machine that works today is certain and predictable. Modernization or replacement carries uncertainty: will the new equipment work just as well? Will there be implementation problems? Will the investment pay off?

This psychological mechanism causes organizations to postpone modernization decisions until they become inevitable – i.e., until a breakdown occurs. However, at that point, all options are worse and more expensive.

Short-Term Results Pressure

Management boards are evaluated based on quarterly results. Investing in modernizing a machine that "works well" is difficult to justify to shareholders or owners. It's easier to allocate the budget to activities that yield immediate results in sales or marketing.

The problem is that obsolescence doesn't ask about quarterly results. Aging progresses regardless of budget cycles, and its consequences can destroy years of good work.

Perception		Perception		Perception
"The machine has been working without problems for 15 years"		"We don't have a budget for modernization"		"We'll deal with it next year"
Reality		**Reality**		**Reality**
The manufacturer ended support 5 years ago		Emergency modernization costs 3-5 times more		A breakdown doesn't wait for a convenient moment

How to overcome resistance?

Operivo has developed communication methods that help organizations overcome psychological barriers. The key is to demonstrate that obsolescence management is not a cost, but an investment in business safety and stability.

We use concrete data, risk scenarios, and financial analyses that translate the abstract concept of "obsolescence" into business language. This allows management to make informed decisions based on facts, not emotions.

⊘ **Key elements to overcome resistance:**

- Concrete risk data instead of general warnings
- Cost analysis: prevention vs. reaction
- Business scenarios showing the consequences of inaction
- Implementation plan minimizing production disruptions

ⓘ **Manager's conclusions:**

- No failures do not mean no risk – it often only means lack of knowledge
- Organizations operate with a shortened planning horizon, which prevents reaction to foreseeable threats
- Without systematic obsolescence monitoring, every company acts reactively, not preventatively

This is where Operivo provides an advantage. Our tools and methodology allow us to scrutinize machinery parks and clearly indicate where hidden time bombs are located.

Chapter 4. Aging is not just metal and grease

When we say 'old machine,' most people think of worn mechanical parts. But the truth is, that's the least dangerous dimension of aging. Bearings can be replaced, belts can be ordered, lubrication can be improved. The real, strategic risks lurk where neither the mechanic's nor the operator's eye can reach.

Digital Compatibility

Today's plants are interconnected systems. Older PLC controllers or outdated communication interfaces can function for years – until the moment a company decides to implement a new supervisory MES or SCADA system. Then it turns out that the older machine cannot 'talk' to the new systems. This happened in one factory, where a production system update caused three key lines to become partially 'invisible.' Modernization, which could have been planned calmly and more cheaply, had to be carried out in emergency mode, costing several times more.

Skills Gap

Machines age along with the people who operate them. Engineers who installed equipment in the 90s are now retiring. Knowledge of their operation often exists only in their minds. The younger generation is familiar with other technologies and has no experience with 'dinosaurs.' The result? A machine that mechanically can still work becomes costly and labor-intensive because there's no one to repair it apart from external specialists.

Regulatory Risks

Regulations change faster than machine life cycles. A device that met standards yesterday may be legally non-compliant today. In pharmaceuticals, FDA requirements for electronic data records constrained hundreds of machines that were operating perfectly. In the energy sector, new safety standards meant that older switchgear protections became conditionally permissible.

Availability of Parts and Service

This is the most common barrier, but also the most dangerous. Companies try to buy parts on the secondary market, often at many times inflated prices. Lack of quality assurance creates additional risks – failures of regenerated components can cause even greater losses. We saw a plant that paid 40 times more for one controller module than its catalog price years ago – and without certainty that the module would even work.

Invisible Business Risks

Aging is also a financial problem. Unplanned modernization always costs more than planned. Additionally, there is the risk of losing contracts, the necessity of paying contractual penalties, or losing market reputation. From a management perspective, this is no longer a technical problem, but a business one – directly impacting financial results and company stability.
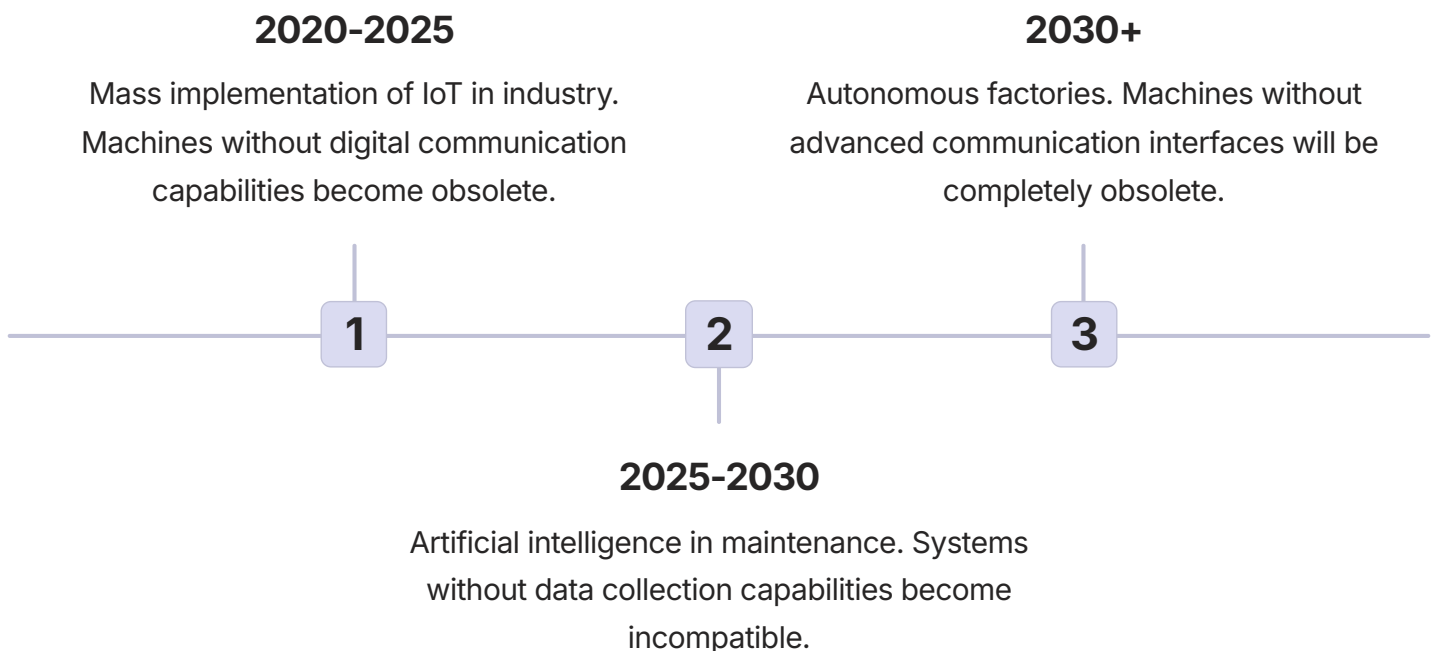
Future Technologies vs. Current Obsolescence

The paradox of modern industry is that the faster new technologies develop, the greater the risk of obsolescence for existing solutions. Industry 4.0, artificial intelligence, the Internet of Things – all these trends accelerate the aging of current systems.

Digital Revolution as an Obsolescence Catalyst

Machines from the 90s and 2000s were designed as autonomous units. Today's requirements for integration with higher-level systems, real-time data collection, or remote monitoring mean that even mechanically functional devices become "digitally impaired."

Example: an industrial robot from 1995 can perform its tasks for another 15 years, but its controller does not fully support the communication protocols required by modern MES systems. As a result, the robot becomes an "island" – it works, but is invisible to production management systems without custom solutions adapted for it by specialists.

2020-2025

Mass implementation of IoT in industry. Machines without digital communication capabilities become obsolete.

2030+

Autonomous factories. Machines without advanced communication interfaces will be completely obsolete.

1   **2**   **3**

2025-2030

Artificial intelligence in maintenance. Systems without data collection capabilities become incompatible.

Cybersecurity as a new dimension of obsolescence

Older industrial systems often do not meet modern cybersecurity standards. As cyber threats grow, companies will be forced to replace equipment not due to mechanical failures, but due to security vulnerabilities.

Operivo helps clients prepare for these challenges by identifying not only current obsolescence risks but also anticipating future technological requirements.

> ⑦ **Strategic questions for a manager:**
>
> - Will your machines be compatible with technologies in 5 years?
> - How quickly are standards changing in your industry?
> - Do you have a plan to adapt to new digital requirements?

> ⓘ **Conclusions for a manager:**
>
> - Obsolescence has many dimensions: technical, digital, human, regulatory, and business.
> - Ignoring even one of these dimensions is enough for a functional device to become useless.
> - Only a systemic obsolescence assessment provides a full picture of the risk.

Operivo teaches organizations to view obsolescence holistically. We show that it is not just a matter of metal and grease, but primarily a matter of strategic advantage or its loss.

Chapter 5. The Cost of Ignorance

In technical and production management, there is a recurring pattern. For years, a plant operates without major problems, and management becomes convinced that the current operating model is correct. Machines are running, inspections are performed, and maintenance budgets do not exceed plans. Everyone feels safe. Until the day everything changes.

The Mechanism of Disaster

The nightmare usually begins with a minor failure – a burnt-out module, a damaged controller board, an inconspicuous relay. In a normal situation, maintenance technicians replace the part, order a new one, and production resumes. But this time, it turns out that the part is unavailable. The manufacturer has not supported this series for years, the secondary market is empty, and the only available replacement is in Asia and costs forty times more than its catalog price from years ago. Shipping will take a week.

Meanwhile, the line is down. Each day of downtime means tens or hundreds of thousands of zlotys in lost revenue. Operators have nothing to do, logistics rearranges schedules, and the sales department has to explain to clients that orders will be delayed. After a week, management realizes that the cost of the failure exceeds the annual investment budget.

Loss of Contracts

A client who did not receive goods on time starts looking for an alternative

Contractual Penalties

For delivery delays

Loss of Reputation

The market remembers who failed to deliver

Psychological Pressure

On employees who work in chaos and under management pressure

Ignoring obsolescence is not just a technical risk. It is a real threat to the company's market position.

The Domino Effect

A breakdown in an "unsupported" machine is the beginning of an avalanche. First, downtime, then a desperate search for parts, followed by ad-hoc modernizations performed in haste and without a plan. This generates further risks – because temporary solutions are rarely stable. After several months or years, the plant begins to function like a field for emergency repairs, rather than a modern manufacturing enterprise.

Costs vs. Investments

The greatest paradox is that the cost of ignorance always outweighs the cost of prevention. Planned modernization is several times cheaper than emergency modernization. A planned replacement of critical parts and modernization helps avoid downtime. But to do this, one must first know which machines are most at risk.
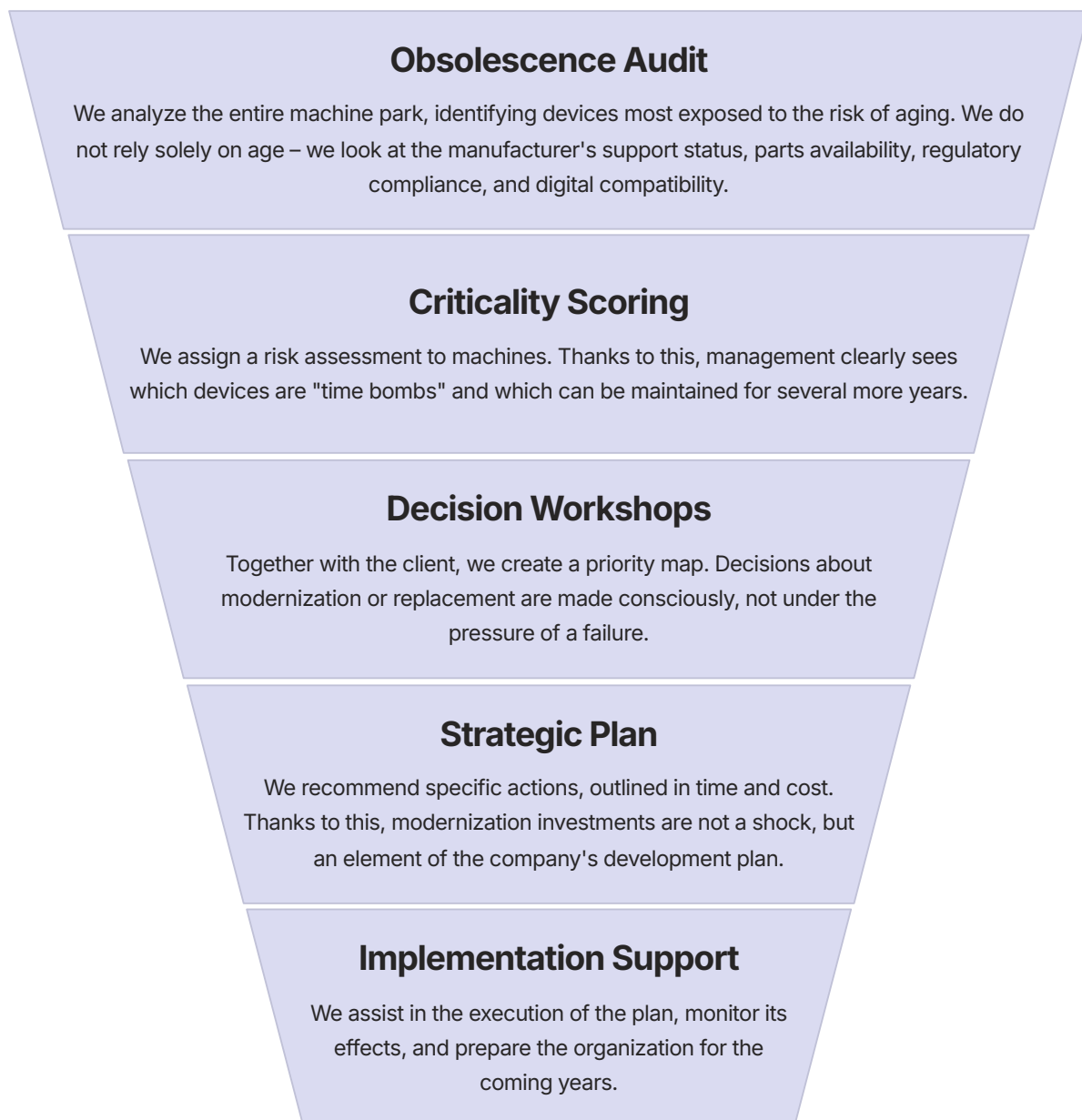
ⓘ **Conclusions for the Manager:**

- The costs of ignorance are always higher than the costs of prevention
- Loss of contracts and reputation are real consequences of a single serious breakdown
- Emergency modernizations and secondary market purchases lead to a spiral of chaos
- Without an obsolescence management plan, a company becomes hostage to fate

Chapter 6. What Operivo Does Differently

We have seen many companies that have painfully learned what machine aging is. We have seen plants that paid a lot for parts purchased on the secondary market, modernizations carried out in panic, and the loss of customers who could not be regained or it was costly. This experience taught us one thing – it is not enough to maintain current operations. Aging must be managed as a strategic risk.

Operivo Methodology

We have developed a process that allows clients to sleep soundly. Our methodology consists of several steps:

Obsolescence Audit

We analyze the entire machine park, identifying devices most exposed to the risk of aging. We do not rely solely on age – we look at the manufacturer's support status, parts availability, regulatory compliance, and digital compatibility.

Criticality Scoring

We assign a risk assessment to machines. Thanks to this, management clearly sees which devices are "time bombs" and which can be maintained for several more years.

Decision Workshops

Together with the client, we create a priority map. Decisions about modernization or replacement are made consciously, not under the pressure of a failure.

Strategic Plan

We recommend specific actions, outlined in time and cost. Thanks to this, modernization investments are not a shock, but an element of the company's development plan.

Implementation Support

We assist in the execution of the plan, monitor its effects, and prepare the organization for the coming years.

Why is Operivo Different?

Most consulting firms focus on classic maintenance – planning inspections, TPM optimization, or CMMS implementations. We do that too, because it's important, but not enough. **Additionally**, we look at obsolescence from a business risk perspective. For us, the goal is not just to keep the machine alive, but to protect the operational continuity of the entire organization in the future.

Practical Experience

Our team consists of people who have worked for years in production plants and have seen obsolescence firsthand. Thanks to this, we know what chaos looks like when a breakdown stops production, and we know how to prevent it. Operivo is not theory – it's practice transformed into methodology.

According to market analyses, the proper implementation of machine obsolescence management can significantly impact real operational results.

60%	75%	100%
Downtime Reduction	**Savings**	**Awareness**
Unplanned downtime by up to 60%	Reduced emergency expenditures on aftermarket parts	Full awareness of which machines are critical and what investments are needed

> ⓘ **Conclusions for the manager:**
>
> - Operivo not only analyzes but provides a ready-made action plan
> - Our methodology is scalable – it can be implemented by both large corporations and medium-sized plants
> - The greatest value is peace of mind – the awareness that your company will not wake up one day in the midst of a crisis

Risk Assessment Tools and Methodologies

Effective management of machine obsolescence requires a systematic approach to risk assessment. Intuition or experience alone is not enough – specific tools are needed to objectively evaluate which devices are most at risk and in what order actions should be taken.

Obsolescence Risk Matrix

Operivo has developed a proprietary matrix that considers five key dimensions of aging:

Manufacturer Support Status

Does the manufacturer still support the device? Is end-of-life planning in place? Are software updates available?

Availability of Spare Parts

Are parts available through official channels? What is the state of the secondary market? Are there alternative sources?

Regulatory Compliance

Does the device meet current standards? What legal changes are planned? Are certifications valid?

Digital Compatibility

Can the device communicate with modern systems? Does it support the required protocols?

Competence Availability

Are there people in the organization capable of operating the device? Is the knowledge documented?

Operivo Business Criticality Scoring

Not all machines are equally important for the business. A main line failure has different consequences than an auxiliary device failure. Therefore, each device receives a business criticality rating, for example:

Level	Score	Characteristics
Critical	9-10	Failure stops all production, no alternative
High	7-8	Failure significantly limits production
Medium	4-6	Failure affects some processes
Low	1-3	Failure has limited impact on production

Operivo Risk Map

Combining the obsolescence assessment with the business criticality assessment provides a risk map that clearly indicates action priorities. Devices with high obsolescence risk and high business criticality require immediate attention.
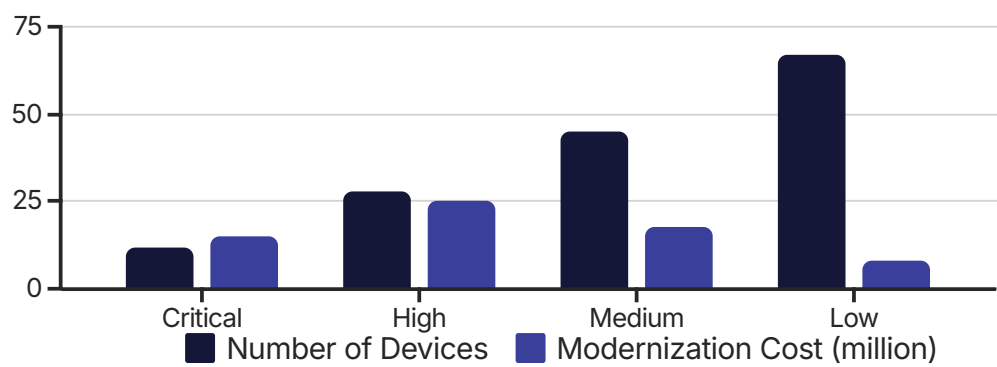
The example risk map shows that although there are the fewest critical devices, they require the largest individual investments and fastest actions.

> ⊘ **Benefits of systematic assessment:**
>
> - Objective investment priorities
> - Ability to plan budgets for several years ahead
> - Arguments for discussions with management and owners
> - Reduction of unforeseen downtime risk

Obsolescence Management Strategies

Once you identify devices at risk of obsolescence, it's time to choose a course of action. There is no single universal solution – each situation requires an individual approach, taking into account the specificity of the device, the company's budget, and the time horizon.

"Last Time Buy" Strategy

When a manufacturer announces the end of part production, the last chance is to purchase a stock for years. This solution works well for devices that still have a few years of operation before a planned replacement.

Advantages: Relatively low cost, maintaining status quo, no production disruptions

Disadvantages: Capital immobilization, risk of part damage in storage, no future guarantee

Selective Modernization Strategy

Replacement of only critical components – most often controllers, communication interfaces, or safety systems. The mechanical part of the machine remains unchanged.

Advantages: Lower cost than full replacement, familiar mechanics retained, quick implementation

Disadvantages: Limited functionality, potential integration problems, shorter time horizon

Full Replacement Strategy

Replacement of the entire device with a modern equivalent. This is the most expensive, but also the most forward-looking solution.

Advantages: Long time horizon, full functionality, manufacturer support, compliance with new standards

Disadvantages: High cost, need for operator retraining, potential production disruptions

→ **Time Strategy**	→ **Priority Strategy**	→ **Integration Strategy**
Staggering actions over time to minimize impact on budget and production	Focus on devices with the highest risk and criticality	Combining modernization with other development projects

Choosing the Optimal Strategy

The decision to choose a strategy should take several factors into account:

Technical Factors:

- Technical condition of the device
- Availability of parts and service
- System compatibility
- Regulatory requirements

Business Factors:

- Investment budget
- Criticality for production
- Planning horizon
- Company development strategy

Operivo helps clients choose the optimal strategy by analyzing all factors and presenting scenarios along with a cost-benefit analysis. This ensures that decisions are made consciously, not under time pressure.

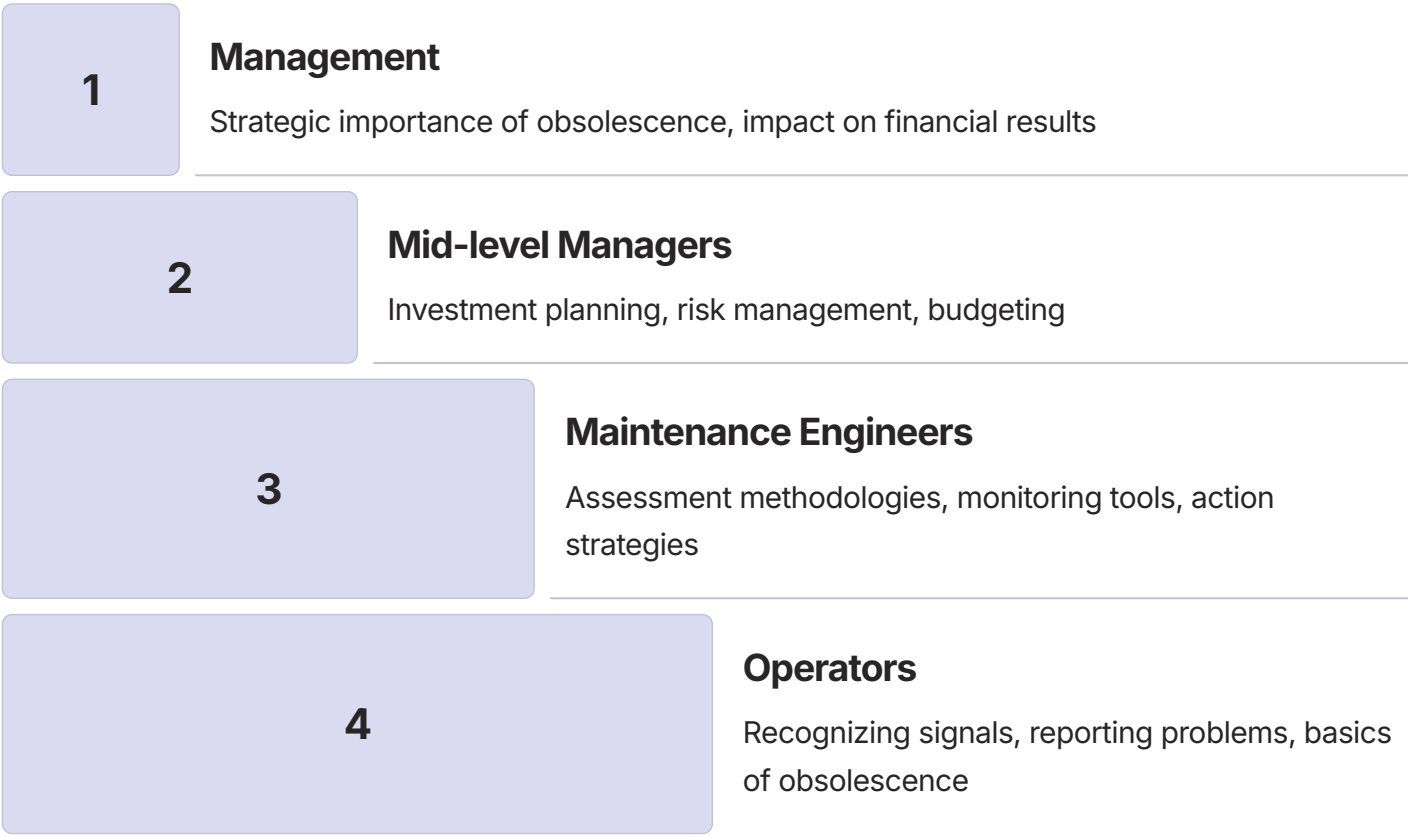> ⊘ **Key principles for strategy selection:**
>
> - There is no single solution for all devices
> - The strategy must be tailored to the budget and organizational capabilities
> - It's better to act proactively than reactively
> - Any strategy is better than no strategy

Building a Culture of Obsolescence Awareness

The best tools and methodologies cannot replace human awareness. Managing machine aging is not just a matter of technology – it is primarily a matter of organizational culture. Companies that effectively deal with obsolescence are those where everyone – from operators to management – understands the importance of the problem and actively participates in its solution.

Education at All Levels

Obsolescence awareness must be built systematically, at every level of the organization. Operators should know how to recognize the first signs of aging. Maintenance engineers must be able to assess risk and plan actions. Management should understand the business consequences of ignoring the problem.

1	**Management** Strategic importance of obsolescence, impact on financial results
2	**Mid-level Managers** Investment planning, risk management, budgeting
3	**Maintenance Engineers** Assessment methodologies, monitoring tools, action strategies
4	**Operators** Recognizing signals, reporting problems, basics of obsolescence

Communication and Reporting

Monthly Reports

Status of critical equipment, new threats, actions taken

Quarterly Reviews

Analysis of KPIs focused on early signs of critical machine aging

Annual Strategy

Long-term modernization plan, resource allocation, goals for the next year

Interdepartmental Collaboration

Obsolescence is not just a maintenance problem. It also concerns the purchasing department (parts sourcing), IT (system compatibility), quality (compliance with standards), finance (investment budgeting), and HR (employee competencies). Effective management requires collaboration across all departments.

Operivo helps organizations build this culture of awareness through training, workshops, and mentoring programs. Our goal is not just to solve current problems, but to equip clients with the knowledge and tools that will allow them to independently manage obsolescence in the future.

> ⊘ **Signs of a Mature Obsolescence Culture:**
>
> - Regular discussions about obsolescence at board meetings
> - Modernization budget planned several years in advance
> - Employees actively report potential threats
> - Investment decisions consider the obsolescence horizon

Chapter 7. Obsolescence Audit

You have read about the risks, mechanisms, and consequences of machine obsolescence. You have learned about strategies and tools that can help your company avoid an obsolescence catastrophe. Now it's time for action. And every effective action begins with one thing: a thorough diagnosis of the current state.

What is an obsolescence audit?

An obsolescence audit is a systematic analysis, first of your process, and then of your entire machinery park, for obsolescence risk. This is not a technical review in the classical sense – we are not looking for mechanical failures or maintenance problems. We are looking for invisible threats that can paralyze production at the least expected moment.

During the machine audit, we analyze each device against five key dimensions: manufacturer support, parts availability, regulatory compliance, digital compatibility, and competence availability. The result is a risk map that clearly indicates where the biggest threats lie.

How does an Operivo audit proceed?

01

Machinery Park Inventory

We catalog all devices, collect technical documentation, identify key components and control systems.

02

Support Status Analysis

We check with manufacturers for the support status of each device, the availability of spare parts, and planned end-of-life dates.

03

Business Criticality Assessment

Together with your team, we assess which machines are most critical for production continuity and achieving business objectives.

04

Risk Analysis

We combine the obsolescence assessment with the criticality assessment, creating a risk map that indicates action priorities.

05

Recommendations and Action Plan

We present concrete recommendations: which devices require immediate attention, what strategies to apply, how much it will cost, and in what order to act.

What do you get after the audit?

Documents and analyses:

- Full report with assessment of each device
- Obsolescence risk map
- Action plan for the next 3-5 years
- Cost-benefit analysis of various strategies

Business value:

- Awareness of the actual condition of the machine park
- Arguments for investment budget planning
- Reduction of unforeseen downtime risks

Why start today?

Aging doesn't wait. Every day of delay is a day when the risk grows. Manufacturers end support for successive products, regulations change, competent employees retire. The sooner you act, the more options you will have and the lower the costs will be.

An obsolescence audit is an investment that pays off many times over. The cost of an audit is a fraction of the cost of one serious failure caused by aging. And the benefits – peace of mind, security, control over the future – are priceless.

> **"The best time to plant a tree was 20 years ago. The second best time is today."**
>
> The same applies to managing machine obsolescence. It would have been best to start years ago. But since you didn't, start today.

⊘ **Benefits of an obsolescence audit:**

- Full awareness of risks in the machine park
- Concrete action plan for the coming years
- Arguments for discussions with management about the budget
- Reduction of unforeseen downtime risks
- Peace of mind and control over the future

Summary. Your Next Step

You have reached the end of this e-book. You've learned about the mechanisms of machine obsolescence, understood why most companies fail to recognize this problem, and discovered the potential consequences of ignoring it. You have the knowledge. Now you need the courage to act on it.

Moment of Truth

At this moment, you face a choice. You can close this e-book and return to your daily duties, hoping your machines will 'make it' for a few more years. You can convince yourself that your situation is different, that your equipment is exceptionally reliable, that you have time to deal with this 'sometime later'.

But you can also make a decision that could save your company from disaster. You can choose to act before it's too late. You can choose to control your future instead of passively waiting for what fate brings.

What to do next?

If, after reading this e-book, you have even a shadow of a doubt about the condition of your machine park, if you cannot answer which devices no longer have manufacturer support, if you don't know whether you will be able to buy parts for critical lines in two years – it means you need an obsolescence audit.

1 Contact Operivo

Call, email, or fill out the form on our website operivo.com. Tell us about your situation, your concerns, your plans.

2 Schedule a free consultation

During a 60-minute conversation, we will discuss your situation, answer your questions, and show you what an audit might look like in your company.

3 Make an informed decision

Based on the consultation, you will decide whether you want to conduct a full obsolescence audit. No pressure, no obligations – only based on facts.

Why Operivo?

Because we have experience. We have seen dozens of companies that ignored obsolescence, and we have seen the consequences. We have also seen companies that acted preventively, and we know what a great advantage that provides.

Because we have a methodology. We don't operate intuitively – we have tools and processes that allow us to objectively assess risk and plan actions.

Because we understand business. We are not theorists – we are practitioners who know that the goal is not a perfect machine, but a profitable company.

Final word

Machine obsolescence is not a question of "if," but "when." You cannot stop it, but you can prepare for it. You can manage risk instead of being its victim. You can have a plan instead of panic.

The choice is yours. But remember: every day of delay is a day when risk increases. Every day without a plan is a day closer to disaster.

Don't wait for a breakdown. Don't wait for a crisis. Don't wait until it's too late.

Act today. Contact Operivo and start controlling your future.

Schedule a free consultation   Learn more about Operivo

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Appendix. Standards and Guidelines in Equipment Obsolescence Management

Obsolescence management is not a consultant's invention – it's an area that has for years found its place in international norms and standards. Companies that ignore these guidelines consciously cut themselves off from the knowledge and best practices applied globally in the aviation, space, energy, and manufacturing industries.

IEC 62402:2019 – Obsolescence management (Application guide)

This is the fundamental standard dedicated to obsolescence management. It defines processes for identifying, assessing, and mitigating risks associated with the aging of components, systems, and entire machines. It emphasizes that obsolescence is not a technical phenomenon but a managerial one, requiring a strategy covering the entire asset lifecycle.

Key elements:

- Methodology for identifying critical components
- Risk assessment related to loss of parts availability
- Strategies: last-time buy, warehousing, alternative sources, planned modernizations

Significance:

Incorporation of obsolescence management into investment planning as a key element of technical risk management.

IEC 60300-3-3:2017 – Dependability management – Application guide: Life cycle costing

The standard does not directly address obsolescence but indicates how to account for aging costs in the full lifecycle of machinery. It explains that the failure to include obsolescence in LCC analysis leads to serious errors in investment evaluation.

ISO 55000:2014 – Asset management – Overview, principles and terminology

The ISO 55000 family of standards is the foundation of asset management. It does not deal with obsolescence directly but emphasizes the need to consider risks throughout the asset lifecycle. In practice, this means that every organization should treat aging as an element of systemic asset risk management.

DEF STAN 00-600:2010

Integrated Logistic Support. Although it is a military document, it is one of the richest sources of knowledge about obsolescence. It indicates that managing the aging of electronic components and systems is a critical element of logistic support.

IEEE 1332:2012

IEEE Standard Reliability Program for the Development and Production of Electronic Systems and Equipment. An American standard, focused on the reliability of electronic systems. It contains provisions on the necessity of planning obsolescence management in reliability programs.

Why is this important for a manager?

The standards clearly indicate: obsolescence is a managerial process, not just a technical one. Ignoring it is acting contrary to global best practices.

- IEC 62402 explains how to conduct the process
- ISO 55000 requires it to be treated as an asset risk
- DEF STAN 00-600 shows that even armies and aviation build special plans
- IEC 60300-3-3 and IEEE 1332 prove that costs and reliability without considering obsolescence are a fiction

Operivo operates within these frameworks, adapting them to the realities of the food, energy, pharmaceutical, and automotive industries. This gives our clients confidence that their obsolescence management system is based not only on experience but also on global standards.