Empowering designers to Build a Greener & more Sustainable Data Center





Simplifying maintenance

The development of a **proactive** and safe **preventive maintenance** programme is vital to ensure the availability of today's critical infrastructure

Reduce the need for reactive and **urgent interventions** with an optimized, **connected and remote approach** to maintenance

- **Eliminate** human error
- **Avoid** costly downtime
- **Reduce** risk to critical loads



Simplifying maintenance

Leverage IoT to maximize asset uptime and achieve low-carbon service



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Leader - Service



Leveraging IoT to maximise asset Uptime and Low-Carbon Service

Uptime	Lifecycle
ASSESS AND PREDICT AN ANOMALY	USE AN EFFICIENT APPROACH TO EXPERTISE & PREVENTIVE MAINT.

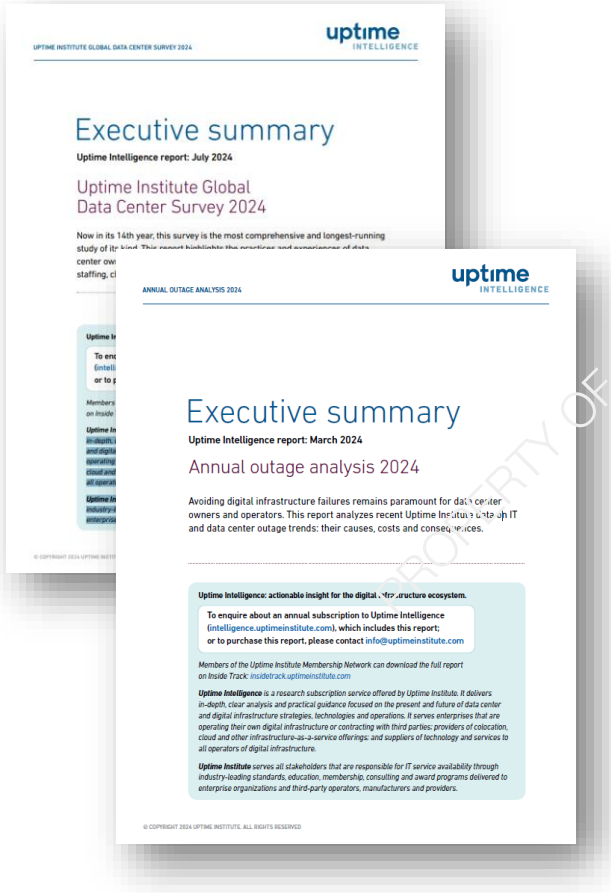
→ Critical power systems play a vital role
→ Sustainability (economically sustainable) is a must

HOW ? …data driven & predictive maintenance!
The game changers with dual benefit!

✓Maximizing asset uptime & performances
✓Achieving low-carbon service toward greener DC

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Uptime Institute 2024 DTC reports



Resiliency and outage

- Although advances in IT, and software-based distributed resiliency, have offered the potential for operators to de-emphasize site-level resiliency, this has not happened.
- The need to avoid outages at a site level and maintain IT service, despite the high cost, remains a critical issue for operators in 2024.
- Uptime's surveys are showing gradual yet significant improvements in resiliency. This is partly due to improving management and processes; partly due to better maintained and monitored equipment; and partly due to consistent investment in facility resiliency, including redundancy.

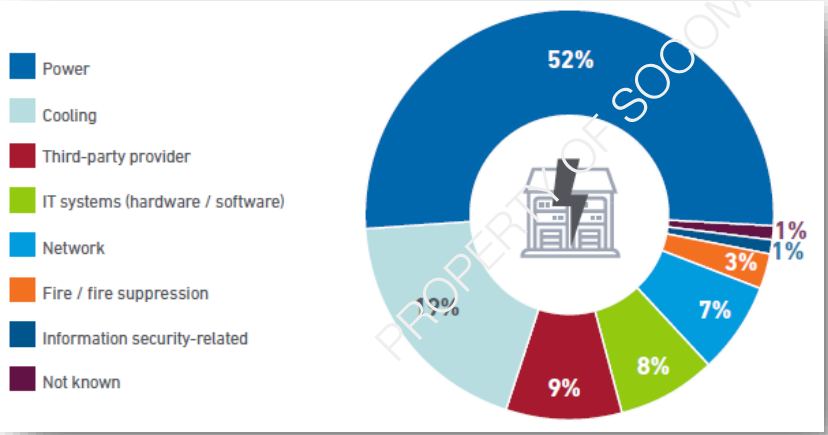
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Source: Uptime institute 2024 DTC survey

Uptime Institute 2024 DTC report highlight

… Outages are costly so how can we prevent and reduce the risks

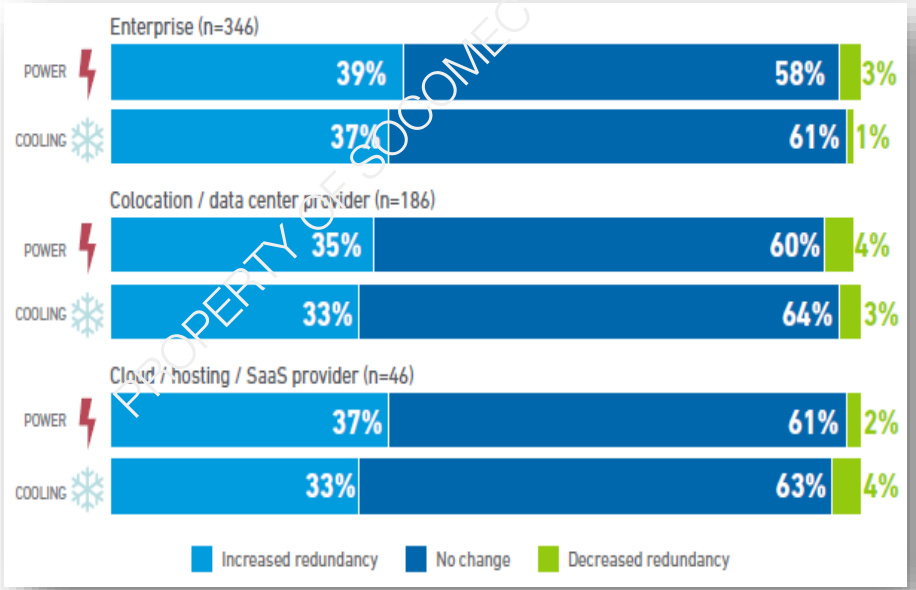
Power remains the number one root cause of outages



Outages are costly**. More than half (54%) of the respondents to the 2023 Uptime Institute data center survey say their most recent significant, serious or severe outage costs more than **$100,000**, with 16% saying that their most recent outage cost **more than $1 million.

Source: Uptime institute 2024 DTC survey

Physical site redundancy is still increasing



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Product+service: combined value to address uptime+sustainability

Delivering a VP to customers that helps them achieve their expected outcome

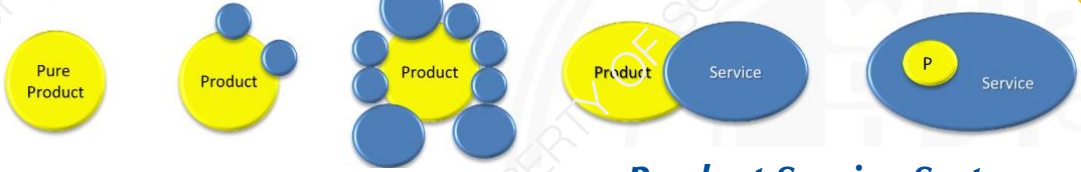


Asset Management →

SMART Product Service System

IoT Enabled Services → Data Driven Services

SERVITIZATION path



Product = value
Service = cost

Product = core value
Service = differentiation

Product Service System

Product+Service = unique value

SUSTAINABLE Product Service System

Lifecycle extension → Circularity

Source: Tim Baines, professor of operations strategy and executive director of the Advanced Services Group at Aston Business School.

Data analytics needs and roles all over the lifecycle

Targeted data-driven approach



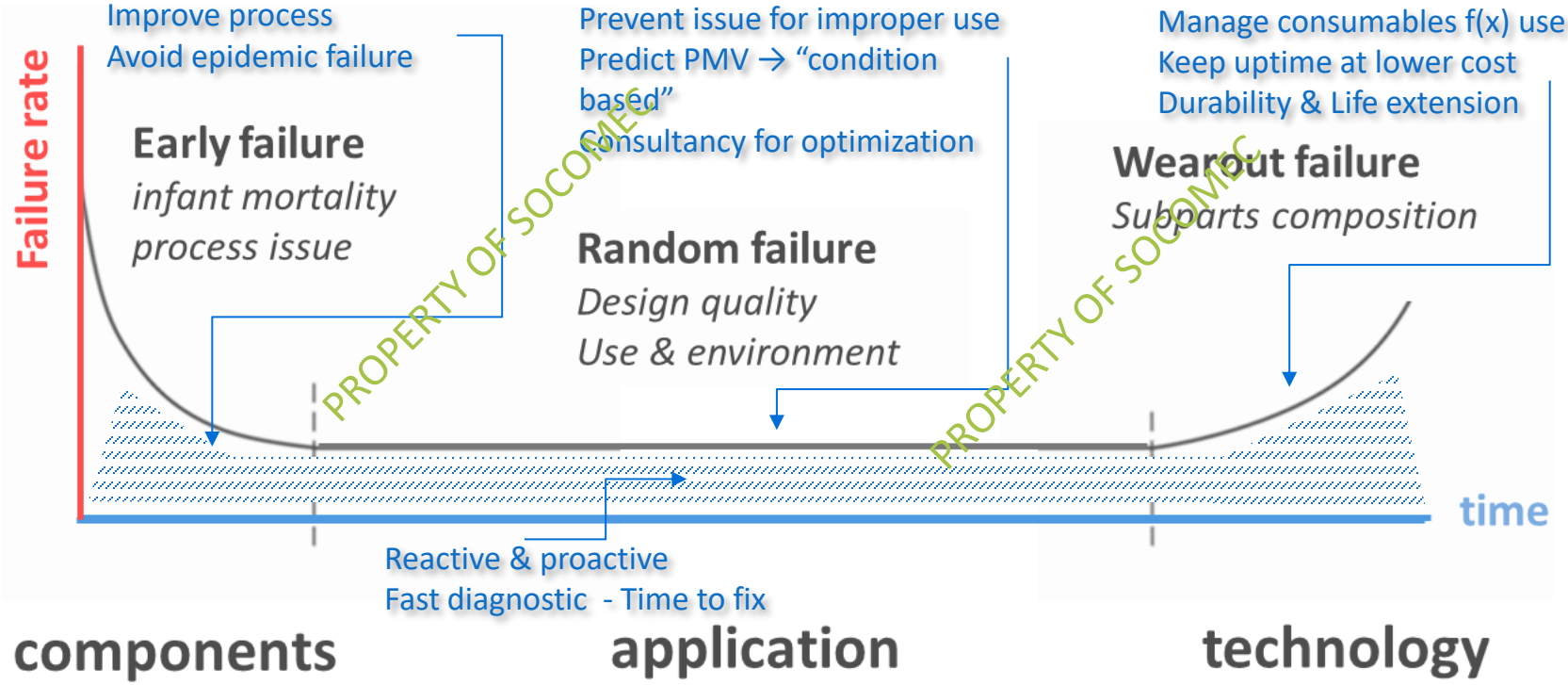
components **application** **technology**

Only with a targeted data-driven approach…
it is possible to make a significant leap for asset management and service performance.

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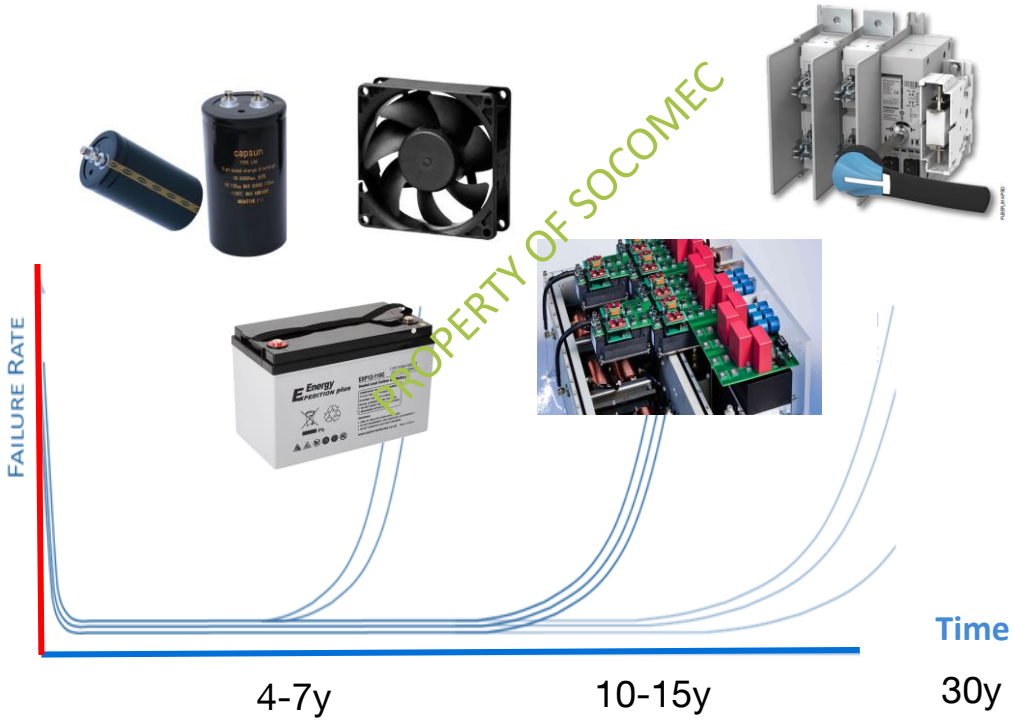
Transformative role of data analytics in asset lifecycle management

The data used to improve uptime can also help achieve sustainability goals !



Data analysis on consumable components optimize maintenance

When necessary, by modelling wear-out and ageing!



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Predictive Modelling

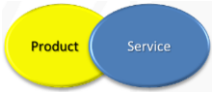
- Predictive models estimate the remaining useful life and therefore how to schedule preventive maintenance.
- Enhanced uptime by preventing unexpected failures.
- Contributes to sustainability by optimizing the use of resources and reducing waste.

Product+service: combined value to address uptime+sustainability

Delivering a VP to customers that helps them achieve their expected outcome

Product

Design & Manufacturing excellence



Service

Expertise, Connected Data driven

Reliability MTBF

Serviceability MTTR

Installation

Architecture

Application

Durability by design

Proper usage

Optimized usage

Uptime

Lifecycle > ROI

Yearly Preventive_M

On site Corrective M

Calendar Consumable M

Repairing & Spare availability

Optimized_M (Physical & Remote)

Immediate anomaly detection

Fast_diagnostic & Corrective_M

Usage profile predictive impact

Predictive Battery_M

Predictive Consumable_M

Asset lifetime extension

Proper usage advisory

Best consumable exploitation

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Our Next focus in VOC

Unlock the power of Connected Services

KEYS BENEFITS

- Less scheduling and travel constraints
- Enhanced UPS service performance
- Improved asset lifespan
- Optimal return on investment
- Cost savings
- Reduce CO2 emissions

Facilitate the day-to-day management of your UPS from anywhere, providing a new level of confidence and performance through…

…Real time monitoring and alerts

24/7 expert monitoring

Live monitoring app

…Quick anomaly analysis

Remote troubleshooting

& unleash your installation's full potential to make informed decisions and prioritise what truly matters through….

…Condition-base operations

Consumable predictive maintenance

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Connected Services

Connect your assets for efficient and low-carbon service



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24/7 monitoring by experts

By having a Socomec's expert always monitoring your UPS, you can prevent problems from occurring and saves downtime costs.

24/7 remote monitoring by experts

- Proactive alarm check to significantly reduce the MTTR
- Notification to the nearest Socomec Service Centre
- Improved first-time fix intervention rate

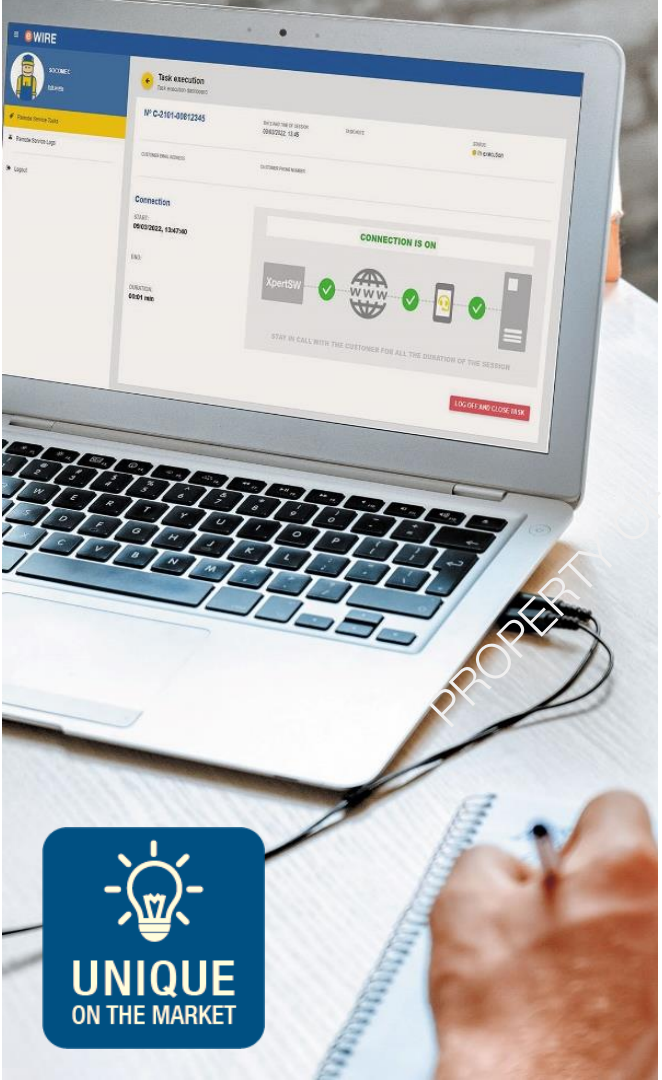
Improve future performance

- Interactive web dashboard
- Periodic UPS health-check report with statistics, trends analysis and technical recommendations

SOLIVE app: Detection is key to respond quickly to an anomaly! With SoLive, monitor your UPS wherever you are via your smartphone - by connecting your UPS to the Socomec IoT platform.



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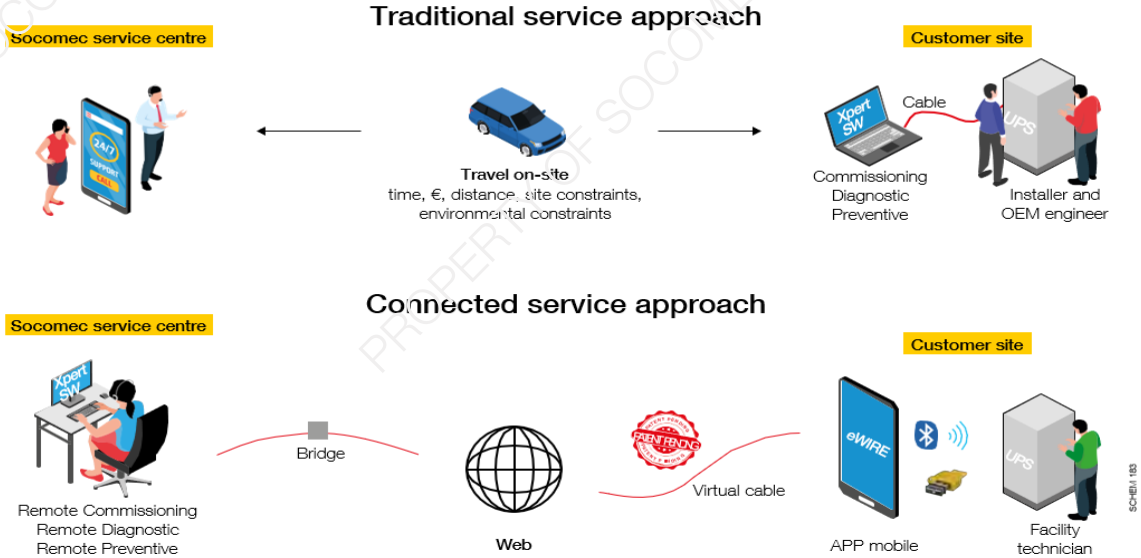


Remote diagnostic and troubleshooting

Restore your system in record time!

Socomec's expert engineers are available through secure remote access to UPS to conduct diagnostics and root cause analysis.

UPS can be restored as per on-site visits.



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Consumables predictive maintenance

Optimize the lifespan of your investment



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Predictive maintenance of consumables

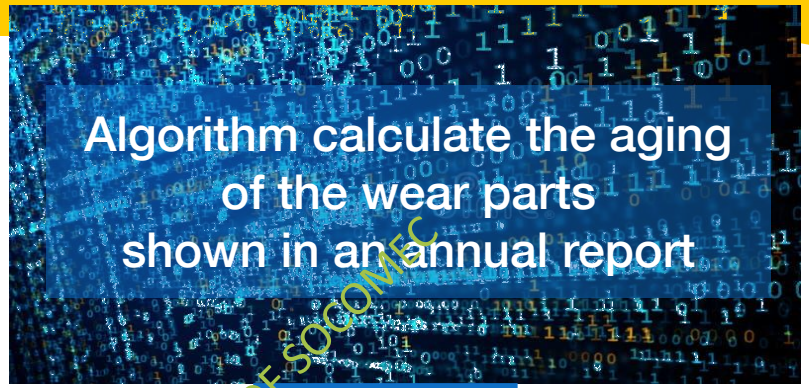
Algorithms do it better…

DELPHYS XL
MODULYS XL





Real UPS working conditions (data / measurements / states) are collected in our cloud

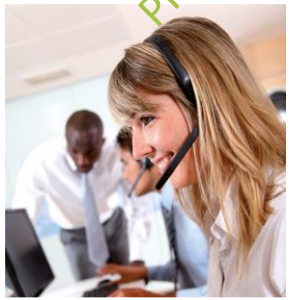






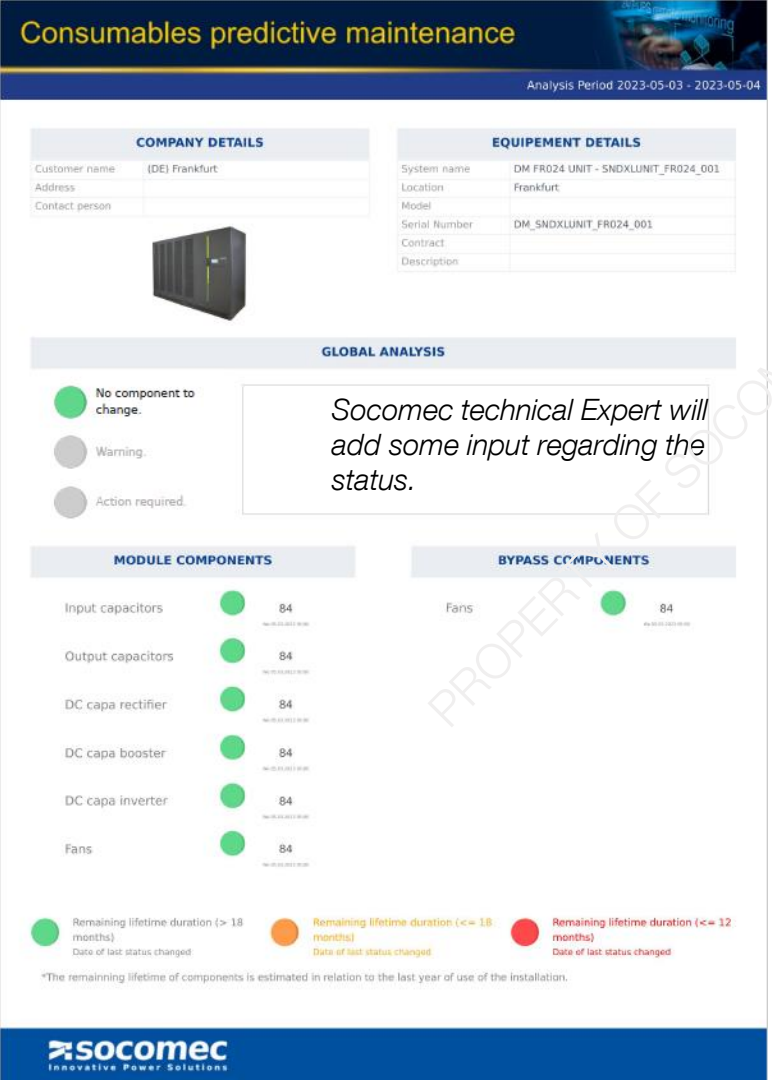
Normal situation

Status change: send a report with recommendation Minimum 18 months before remaining lifetime duration



Customer can call SOCOMEC to schedule the on-site intervention

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Predictive maintenance of consumables

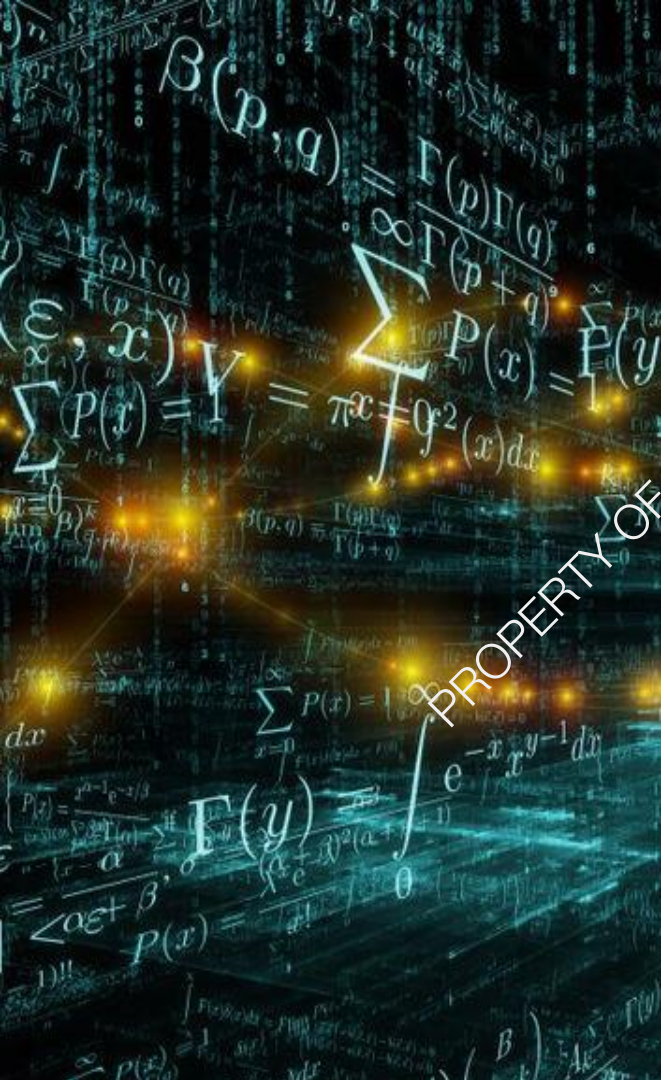
Customer Report

A concise report on the aging of the consumables, easy to interpret thanks to 3 color indicator.

In addition, an expert will add comments if required.

- Remaining lifetime > 18 months
- Remaining lifetime <= 18 months
- Remaining lifetime < 12 months

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Predictive maintenance of consumables

Maximize business continuity and safety, thanks to a real condition-based consumables replacement.

KEY BENEFITS

Improve business continuity
on-site intervention only when necessary

Optimization of on-site clearance
On-site visits for consumable replacement only when the consumable has to be replaced

Sustainable and Cost efficient
Optimization of consumables replacement
Just in time too!

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thank you SO much!