

2025



PROACTIVE OBSOLESCENCE MANAGEMENT

Y-TO-EOL
RELIABILITY REPORT

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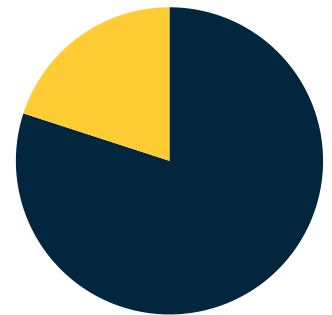
THE NEED FOR PROACTIVE OBSOLESCENCE MANAGEMENT

Electronic component obsolescence poses significant challenges to product design that are often costly. Managing the risks associated with component lifecycles and determining whether part numbers will last throughout a product's lifecycle is a complex task. Engineers must carefully balance product quality and functionality with regulatory requirements, specifications, and a comprehensive obsolescence strategy that addresses both immediate and long-term component end-of-life scenarios.

When parts become obsolete, companies frequently face high demand and limited market availability, creating costly bottlenecks. According to our 2024 Product Change Notice (PCN) report, 22.11% of PCNs involved part numbers with "immediate" last-time buy dates. This highlights the risk of relying on PCNs, as delays in action may result in costly redesigns.

End-of-life (EOL) forecasting data equips companies with the insights needed to mitigate risks during the initial component selection process. By leveraging this data, engineers can align component lifecycles with projected product lifecycles and proactively plan for alternative part numbers that maintain similar form, fit, and function.

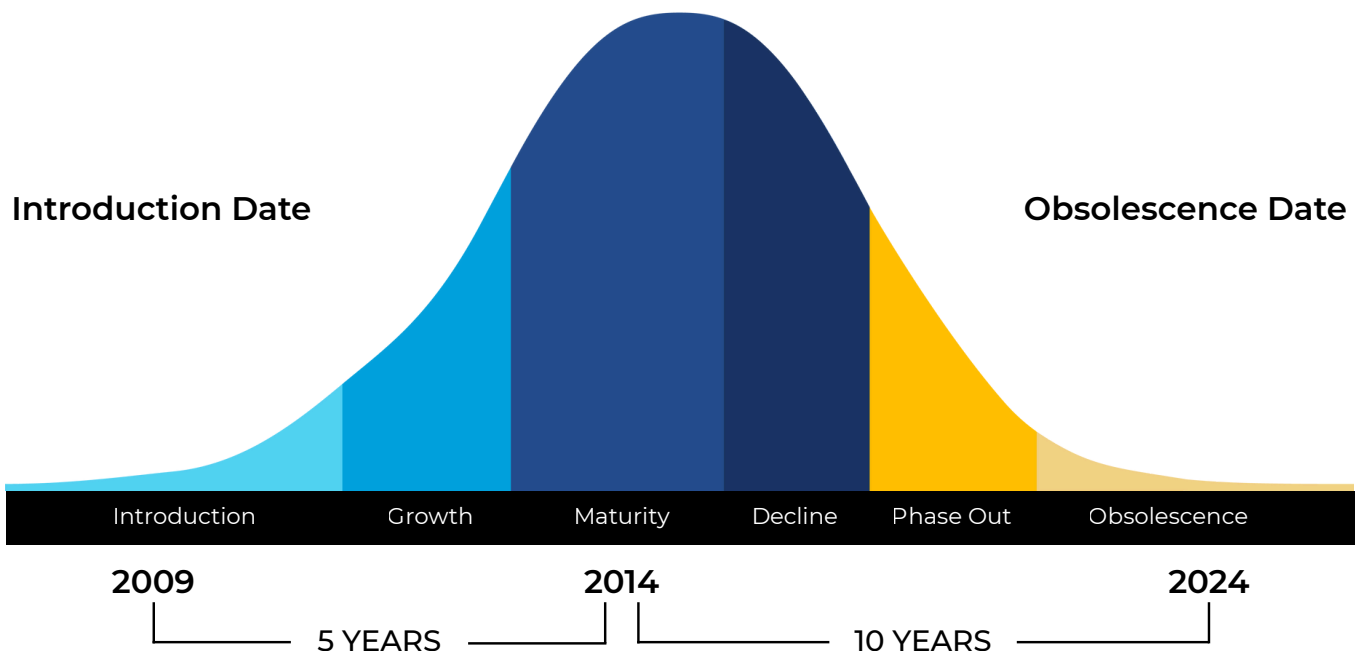
2024 PCN REPORT



22.11%
OF PART NUMBERS
HAD 'IMMEDIATE'
LAST-TIME
BUY DATES

FORECAST YEARS TO END OF LIFE

SiliconExpert offers estimated Years to End of Life (Y-to-EOL) as a critical data point within its comprehensive electronic component database. This estimation is powered by a sophisticated machine learning algorithm, designed to analyze historical trends and procurement patterns to predict the lifecycle of obsolete parts and provide estimated Y-to-EOL projections for active components.



To ensure reliability and precision, SiliconExpert consistently evaluates and refines the accuracy of its End-of-Life algorithm, maintaining its commitment to delivering dependable lifecycle forecasting for informed decision-making.

TEST METHODOLOGY

SiliconExpert analyzed part numbers marked as End of Life (EOL), Last Time Buy (LTB), or Obsolete in 2024 using its Estimated Years to EOL algorithm, which identifies components in risky situations through predictive calculations. Integrated into the Lifecycle Risk framework, this algorithm provides early warnings for products nearing obsolescence or sudden discontinuation.

"Medium Risk" components are flagged as active by manufacturers but predicted to soon transition from maturity to decline or phase-out stages. Due to market factors like sales volume affecting availability, customers are advised to verify future availability with manufacturers, especially for new designs.

To evaluate the reliability of the Y-to-EOL predictions, SiliconExpert classified the 2024 obsolescent part numbers into two groups: 1) those that received a warning flag prior to the obsolescence notification and 2) those that did not. Based on this classification, predictions were categorized as follows:



ACCURATE PREDICTIONS

Components classified as obsolete, where the algorithm previously flagged them with a "Medium Risk" warning under the Lifecycle Risk category before the obsolescence notification.



INACCURATE PREDICTIONS

Components currently classified as obsolete, where the algorithm **did not** issue a prior warning and categorized them as "Low Risk" under the Lifecycle Risk category.

This methodology highlights SiliconExpert's commitment to refining predictive algorithms and improving the accuracy of lifecycle risk assessments to support customers in managing obsolescence challenges.

RELIABILITY RESULTS

In 2024, the overall accuracy of both correct and incorrect predictions improved, driven by the expansion of the SiliconExpert database and enhancements to the Y-to-EOL algorithm. SiliconExpert continuously enriches its database with additional part numbers, which strengthens the algorithm's ability to identify historical trends—particularly when obsolete part numbers are included.

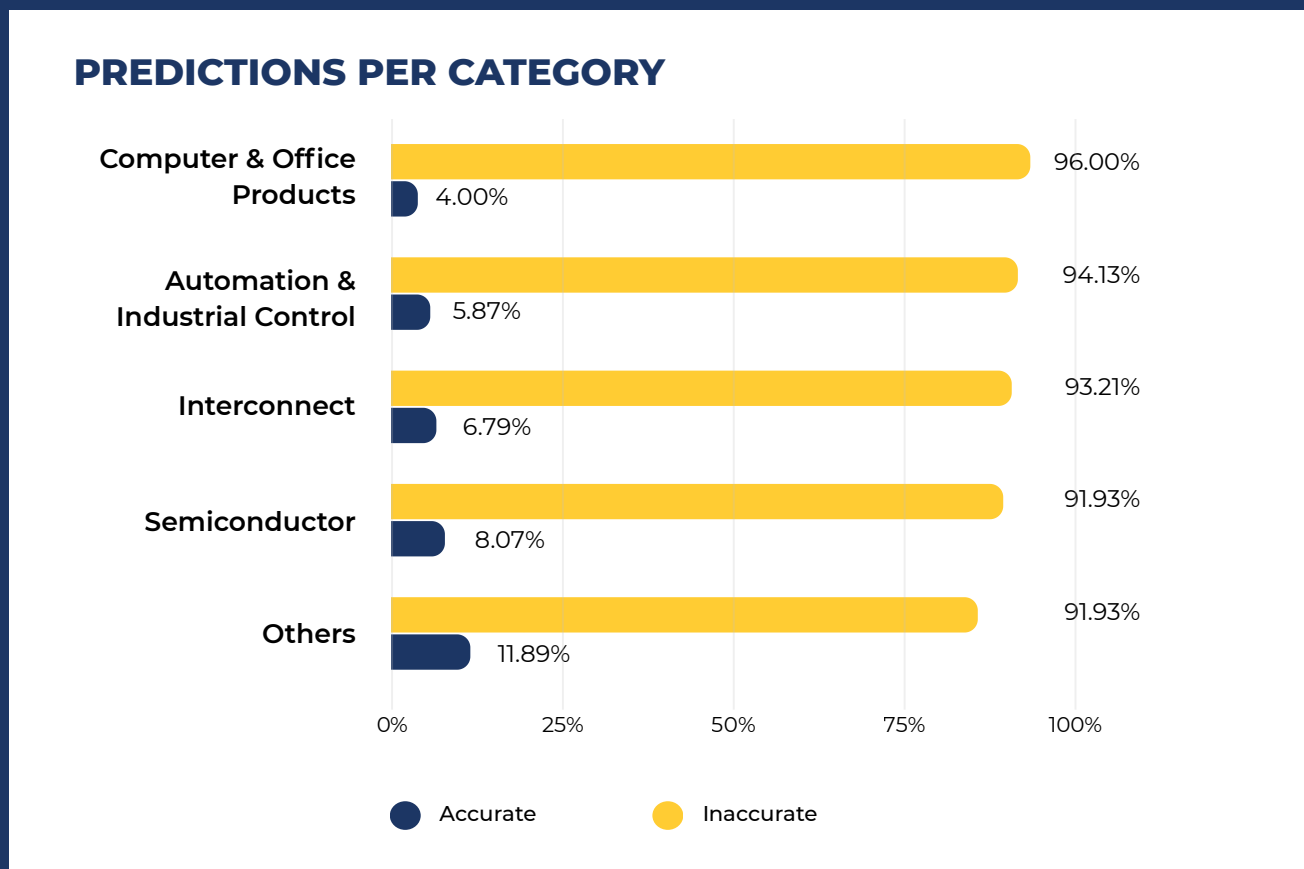
The overall accuracy of the SiliconExpert Y-to-EOL algorithm for 2024 is 92.99%.



Over the past two years, SiliconExpert has monitored the reliability of its algorithms, implementing refinements as needed to ensure the Y-to-EOL algorithm delivers reliable insights. This ongoing commitment provides customers with greater confidence in proactively mitigating risks associated with reactive obsolescence management.

ACCURATELY FORECAST END OF LIFE

Designing a new product only to discover that a critical component becomes obsolete shortly after launch can be a costly setback. Long product lifecycles demand heightened sensitivity to lifecycle changes and highlight the importance of a proactive approach to obsolescence management. Accurate End-of-Life (EOL) forecasting equips companies with the insights needed to mitigate risk during the initial component selection process. However, an unreliable predictive model can inadvertently introduce additional risk.



MANAGE OBSOLESCENCE WITH SILICONEXPERT

Selecting electronic components doesn't have to be a complex, time-intensive process fraught with risk. As a global leader in the discovery, selection, and management of electronic components, SiliconExpert offers a comprehensive 360° view of over one billion parts, empowering technology manufacturers to minimize risk, enhance certainty, and streamline their design processes. Our solutions extend beyond providing robust component data and insights, incorporating decades of supply chain expertise, workflow-optimized tools, and an unparalleled customer-first approach.

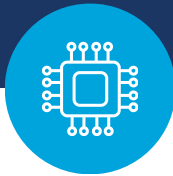
SiliconExpert's leadership in obsolescence management is driven by CALCE-supported predictive lifecycle algorithms, advanced BOM management tools, and in-depth risk analysis at both the part and BOM levels.

Discover more and request access to our Obsolescence Management solutions today.

REQUEST A FREE TRIAL



Since its inception in 2000, SiliconExpert has been a trusted partner in enabling better data-driven decisions through a human-driven experience. With a team of over 500 electrical, software, and data engineers, SiliconExpert meticulously curates a component database of more than one billion parts, offering the most comprehensive and up-to-date tools in the industry. Globally, customers rely on SiliconExpert's solutions to manage risks, prevent costly redesigns, and mitigate obsolescence across innovative sectors.



**1+ BILLION
PARTS**



**500+ DEDICATED
ENGINEERS**



**98% CUSTOMER
SATISFACTION**



**IN 95
COUNTRIES**