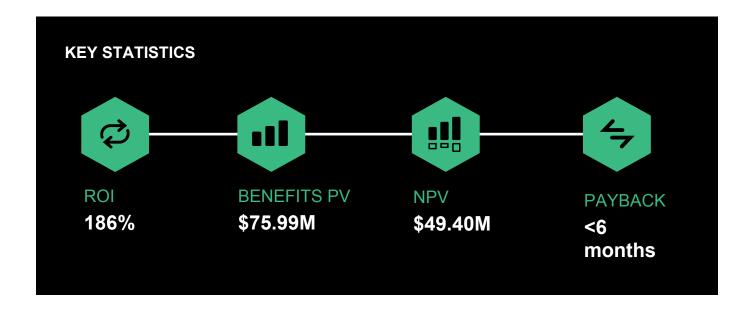
The Total Economic Impact[™] Of Mac In Enterprise



More often than ever before, today's organizations are prioritizing the improvement of their digital employee experiences (DEX) and end-user experiences. A strong DEX contributes to business outcomes such as employee retention, security, and customer satisfaction. By investing in Mac devices for enterprise, whether as a standard offering or as part of a choose-your-own-device (CYOD) program, an organization can improve its DEX while decreasing its total employee device costs and improving its security posture, IT efficiency, and employee productivity.

Apple commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Mac devices.¹ The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Mac devices on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed 11 decision-makers from nine organizations and surveyed 242 hardware decision-makers and 53 end users with experience using Mac devices at their organizations. For the purposes of this study, Forrester aggregated the experiences of the interviewees and survey respondents and combined the results into a single composite organization that is a global enterprise organization with more than 50,000 employees.

Interviewees said that prior to using Mac devices, their organizations struggled with inefficient device provisioning, suboptimal security posturing, and poor device user experiences. Multiple interviewees said small groups of employees at their organizations used Mac devices for work outside of the company's fully managed IT infrastructure. They said these employees were attracted to the performance of the devices and that they were often previously familiar



with the Mac operating system (OS). As the number of employees who wanted to use Mac devices grew, the organizations struggled with a lack of visibility into these unmanaged devices. Attracted to the improved performance and cost of the MacBook Air with Apple silicon, the organizations decided to officially offer Mac devices to employees to bring the Mac devices under management, standardize to a single device type, simplify device security, and/or improve their DEX.

Interviewees said that after their organizations invested in a device choice program that offered Mac devices, a considerable number of employees chose Mac devices. They explained that as a result, their organizations became more secure, and their IT teams became more efficient. At the same time, employees who switched to using Mac devices benefitted from increased performance, improved battery life, and more reliability. Interviewees said the benefits of Mac devices compounded with the number of Macs deployed.



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Quantified benefits. Five-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

costs by almost one-third. It's more efficient for the composite organization to provision and update Mac devices over other devices because Mac devices are cheaper to maintain and manage and experience fewer security incidents. With 60% fewer tickets filed per device per year and tickets that are cheaper to resolve, the composite spends less on support tickets per device with Macs. In addition, its IT employees spend less time on device management, and they manage twice as many devices per employee. With a cumulative 13,125 Mac devices deployed, the composite organization saves

- more than \$7.2 million in support and management costs over five years.
- Reduced and avoided hardware, software, and energy costs worth \$21.2 million. By purchasing Mac devices, the composite avoids the cost of PC devices it would have provided to employees along with the cost of all associated device software. Mac devices do not require the additional purchase of an OS license, and interviewees said they require fewer security applications to achieve higher levels of security. According to the interviewees and Forrester research, Macs consume 56% less energy than PCs.
- Apple's fundamental device architecture, automatic encryption, operating system design and automatic updates, and facilitation of threat detection improves the overall security of Mac devices, which helps the composite reduce its vulnerability to some types of data breaches.

 Usage of a Mac rather than a PC decreases the composite's level of risk exposure from a breach due to an external attack or internal incident by 15%, and it decreases its risk of exposure from a breach due to a lost or stolen asset by 90%. Over five years, the reduced risk of a data breach is worth \$530,000 to the composite organization.
- A 3.5% increase in employee productivity due to device performance and reliability.

 Employees at the composite organization who choose Mac devices spend 45 fewer minutes per month waiting for their devices to start up or update and 55 fewer minutes per month on issue investigation and waiting for resolution. In addition, faster device-processing speeds, better application reliability and performance, a more intuitive user experience, and a longer battery life all contribute to improving overall employee engagement and productivity. Over five years, this improvement in employee productivity and

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- saved end-user time is worth \$46.4 million to the composite organization.
- Three times the device residual value after four years of use. The composite organization purchases its laptops outright and, after four years, it retires them to an asset recovery program that allows it to recover the residual value of each device. According to the interviewees and Forrester research, the average cost of an enterprise PC is \$1,100, and it maintains a 10% residual value after four years. The cost of an enterprise MacBook Air is \$1,299, and it maintains a 30% residual value after four years. In Year 5, when the composite retires 3,750 Mac devices, this increase in residual value is worth \$498,000 to the composite organization.

Unquantified benefits. Benefits that provide value for the composite organization but are not quantified for this study include:

- Extended device lifetime. The composite
 organization may get a longer usable lifespan
 from its Mac devices before retiring them due to
 build quality and durability and a slower degree of
 performance degradation. Survey respondents
 reported that their organization extended its
 device lifetime with Mac devices by more than 13
 months over previously used devices.
- Improved brand reputation and employee acquisition. In addition to enhancing employee productivity and engagement, offering Mac devices to employees can positively contribute to the composite organization's brand reputation, talent acquisition, and retention rates.
- Synergies with other Apple products. If the composite organization uses other Apple products in addition to Mac devices, Apple's device connectivity can enable a seamless transition between other devices (e.g., iPhones, iPads) to further increase employee productivity.

• Reduced emissions from lower energy usage. With environmental, social, and governance (ESG) goals becoming more common and the SEC setting a future mandate for climate-related investor disclosures, corporate tracking of energy usage and carbon footprints will accelerate in importance. According to the interviewees and Forrester research, Mac devices consume less than half the electricity of equivalent PC devices, and they generally contribute less carbon dioxide to the atmosphere. Extrapolated to thousands of devices at the composite organization, these savings would signify a notable ESG improvement.

"Support costs, operational costs, and longevity of [Mac devices] compared to [PC] devices are far greater. And when it comes to ease of use, it's a more flexible and secure platform than, say, our [PC] platform is today."

Director of mobile product and innovation, financial services

Costs. Five-year, risk-adjusted PV costs for the composite organization include:

Implementation and management labor costs
of \$1.1 million. The composite organization
dedicates four FTE resources to implementation
over about six months. They set up the
organization's device provisioning and
infrastructure, site-to-site authentication, and user
access, and they train frontline support teams on
Mac device management. Ongoing labor,
including managing the organization's MDM
solution, overseeing the Apple relationship,

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managing the employee device choice program and inventory, coordinating and testing device updates, managing device residual value programs, and decision-making on an ongoing basis consumes 1.5 FTE resources in Year 1 and two FTE resources from Year 2 onwards.

Hardware and software costs for 13,125 employees, amounting to \$25 million. With investment in a Mac choice program, the composite organization incurs the costs of the devices, AppleCare, an MDM solution, and the security software installed on the devices. The organization pays \$1,299 for each Mac and \$105 for AppleCare Enterprise up front at the time of device deployment, as well as \$10 per month per user for a third-party MDM solution and \$8 per month per user for a security application installed on all devices.

The financial analysis which is based on the decision-maker interviews and survey found that a composite organization experiences benefits of \$75.99 million over five years versus costs of \$26.59 million, adding up to a net present value (NPV) of \$49.40 million and an ROI of 186%.

"The benefits you're getting in terms of longevity and these [DEX] scores, like the [user] satisfaction, the battery life, zero-touch deployment, [and] all those things make [Mac devices] stand out."

Principal product manager, food and beverage

Benefits (Five-Year)



DISCLOSURES

The reader should be aware of the following:

- · The study is commissioned by Apple and delivered by Forrester Consulting. It is not meant to be a competitive analysis.
- Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises
 that readers use their own estimates within the framework provided in the report to determine the appropriateness of an
 investment in Mac in Enterprise.
- Apple reviewed and provided feedback to Forrester. Forrester maintains editorial control over the study and its findings
 and does not accept changes to the study that contradict Forrester's findings or obscure the meaning.
- Apple provided the customer names for the interviews but did not participate in the interviews.

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Appendix: Endnotes

¹ Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.