Kintarra Tech

The Future of TPM

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Arguments for TPM

Environmental responsibility

Customers want to see technology companies becoming more environmentally sustainable. In fact, only 21% of people said that technology companies have done enough to minimize environmental impact, and 20% said that social media companies have done enough. This represents a dismal record only above financial services and airlines. Combined with the necessity of reducing e-waste and emissions highlighted above, we can see how important it is for companies to cut back on server replacement. Beyond a certain point, the only option to do so is TPM.

Allows companies to save for innovation

As illustrated above, using a TPM allows companies to reduce their capital expenditures on existing IT, allowing them to buy the GPUs critical to AI and the additional servers and storage for data.

Favorable regulations

Recent regulations aim to force OEMs to provide TPMs with the “tools and information” to repair their devices. More and more legislatures around the world are enacting these laws with the environment in mind.

Space to grow

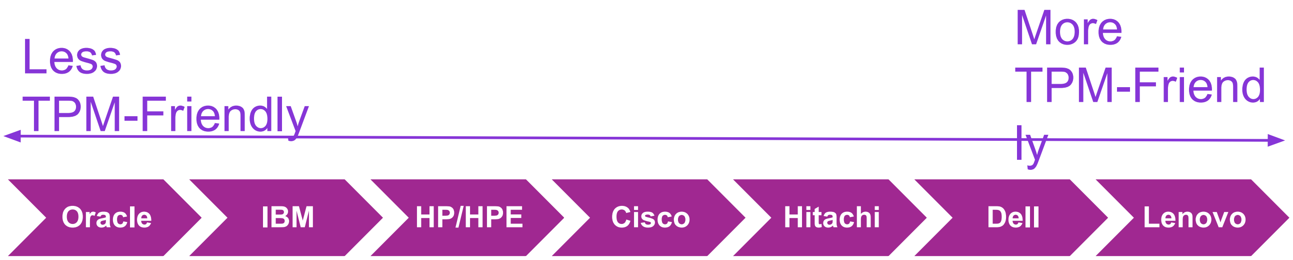
The TPM market was only $1.2 billion in 2019 and $2.1 billion by 2022, whereas total data center and network maintenance was over $65 billion already in 2019, so there is plenty of room to grow.

Diversification

If refresh cycles increase, TPM market growth increases and ITAD market growth decreases and vice versa. TPM thus serves as a good buffer to the impact of refresh cycles.

Arguments Against TPM

OEMs may oppose TPMs as they reduce demand for new devices and cut into revenue. OEMs may consider TPM “unauthorized maintenance” as they are direct competitors. To discourage usage of TPMs, they may impose damages and/or recertification fees for returning to OEM maintenance. However, not every OEM has equally stringent anti-TPM policies.



Companies may be worried to use TPM for fear of not being able to access “microcode upgrades”. However, according to Park Place Technologies’ company Curvature, almost all such upgrades occur in the first three years.

Businesses in TPM have extensive capital expenditures to set up warehouses for tools and replacement parts. This serves as a challenge to smaller players and reinforces economies of scale.

The TPM industry is extremely concentrated. We would be up against companies like Park Place and Service Express that have strong economies of scale in knowledge and the number of brands they are able to serve.

Breakthroughs in energy efficiency like in AMD Genoa/4th Generation Epyc chips could offer a viable substitute and challenge the TPM market – though the TPM market will remain competitive.

Projection of TPM Usage

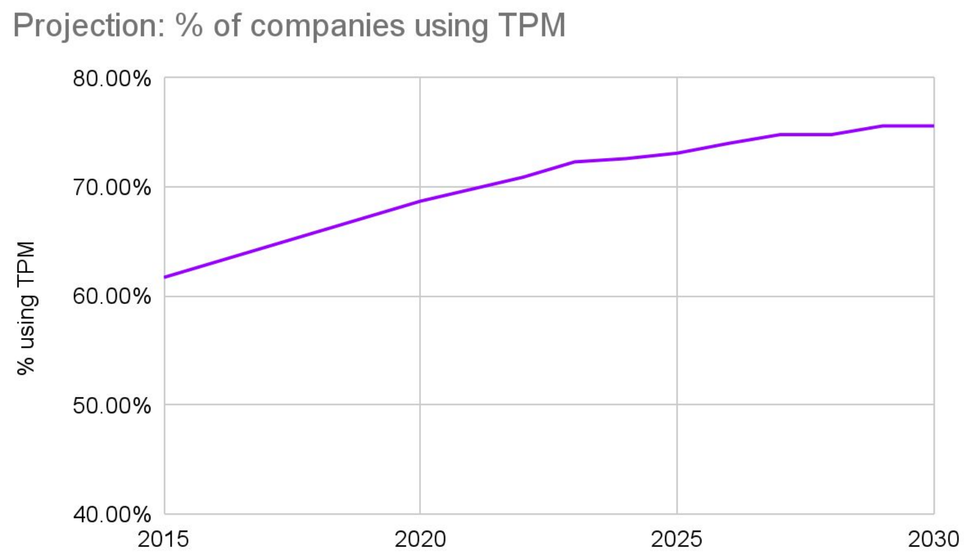
We conducted research on the past numbers of servers with a certain number of years. According to Horizon Technology, the distribution of average refresh cycles among companies was as follows:

	1-2 yr	3 yr	4 yr	5yr	>5yr
2015	9%	37%	20%	20%	14%
2020	9%	26%	15%	31%	19%
2022	7%	25%	15%	33%	19%

Based on these numbers, and assuming TPM usage proportions by company increases against average server age as follows:

1-2 yr	3 yr	4 yr	5 yr	>5 yr
10%	40%	70%	90%	100%

We constructed a sum-product model, which indicates that 70% of companies used TPM in 2022, matching the percentage previously cited, and 75% of companies will do so by 2030. We have attached a graph of the projected percentage of companies using TPM.



Conclusion

The future of Third-Party Maintenance (TPM) is promising with an expected 14.5% yearly growth until 2030 and is poised to become increasingly mission-critical for several reasons. The surge in demand for GPUs and AI technologies compels companies to save funds for the requisite capital expenditures. To stay competitive, they must find a way to reduce spending on other IT infrastructure, requiring them to extend IT refresh cycles beyond the limits imposed by OEMs. Consequently, TPM services will become indispensable in ensuring the longevity and reliability of IT assets, thereby reducing environmental impact while empowering the rise of AI.

Titans such as Park Place Technologies stand to monopolize the TPM industry for multiple decades. With enormous capital expenditures needed to forge vast networks, the path to dominance seems ominously clear. Park Place Technologies, with its 18 acquisitions, and Blackstone's hefty investment in the company, cast long, unsettling shadows over the market with its 28% market share. Blackstone also owns QTS, which has 36 data center properties scattered across the United States and Europe. With their $2 billion investment in Park Place Technologies one can easily infer that Blackstone is trying to create an all-in-one data center lifecycle (IT Installation, IT Maintenance, and IT Deinstallation). Blackstone's investment in Park Place Technologies, alongside Carlyle and 3i's backing of Evernex, underlines their recognition of the critical role TPM services play in supporting the technological and environmental ambitions of modern enterprises. We see a growth in the number of financial institutions building large players to wring value out of this crucial industry going forward.

As the world wakes up to the nightmarish reality of e-waste and the staggering carbon footprint of manufacturing new hardware, TPM services can save us from this impending catastrophe by lengthening the lifespan of existing equipment. Yet the impending oligopoly in the industry foreshadows high prices, which could hinder the transition to a sustainable economy. Thus, regulations like Right to Repair will gain traction, forcing OEMs to arm third-party maintainers with the tools and knowledge they need. As a side product, this will tear down barriers for smaller TPM providers to challenge the reign of Park Place and Evernex.

TPM will become mission-critical and environmentally vital in the coming years. As the world moves from a dispose-and-refresh model to a continuous maintenance model, TPM will rapidly become a leading substitute for IT Installation and Deinstallation. Thus, TPM is the market to hedge the risks of ITAD investment in an age of longer refresh cycles. Finally, investing in smaller TPM companies will not only deliver hefty returns, but also liberate technology companies from the scourge of unbearable prices as they seek to transition into this new era.