Unlocking Potential

AI is reshaping office technology & industry dynamics

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Artificial intelligence (AI) is a transformative force with the potential to revolutionize industries across the board. Nowhere is this more evident than in the realm of office technology.

Since the transition from analog to digital, data has been essential to improving business outcomes. Whether as simple as collecting usage patterns for billing or as complex as understanding user data to predict opportunities for document process efficiency, office technology has delivered unstructured information into the hands of people and the systems they use to interpret it.

In recent years, traditional systems and people-driven processes have been augmented by basic automation but, increasingly, large sets of available data are now driving the need for AI to analyze and interpret. With incredible advancements in large language models (LLMs) and generative AI over the past 12 to 18 months, the industry is faced with answering the question: "How do we properly leverage these tools to do more?" In this early stage of AI's next evolution, customer expectations are clear: Proactively predict and act on the data, not report it.

Predictive Maintenance & Autonomous Device Management

MFPs and printers have long been capable of predictive maintenance and alerts. Even autoreplenishment of toner has been available for more than a decade. Now, interconnectivity between devices, systems and service providers is evolving, creating a more robust ecosystem of technology operating together.

By developing orchestration layers, device and print management tools that previously enabled specialists to manage large fleets have been unleashed to act autonomously to self-report and, often, self-remediate and repair. This is happening in real time, not through alerts to act, but actions that are then reported via alerts.

Consider firmware upgrades, a routine requirement of maintaining any office technology. Traditionally a human-intensive process, AI is now used to proactively monitor the status of devices and push upgrades without intervention, ensuring devices are running at optimal levels. AI's generative thinking is also expanding to manage optimal replenishment of supplies based on predictive use, vet service codes to remediate or dispatch service, and continuously optimize the flow of print jobs to the most logical devices instantaneously.

Driving Innovation

Manufacturers are poised to benefit from the massive computational power AI offers product development. Insights from billions of data points on customer usage will provide guidance to developers on what features and functions are needed to more efficiently manage innovation. AI will also expand developers' capacity by simulating millions of scenarios simultaneously, dramatically shortening time spent on product testing.

Similar to advancements in health-care diagnostics and civil engineering, office technology will progress to be more naturally integrated into how people work by quickly understanding patterns often missed by humans. Specialists will then use this new understanding to develop and implement new features, continuously improving user experiences.

Empowering Dealers

Some of the most compelling areas of AI where dealers can benefit greatly are in service. With data interpretation and predictive analytics, new AI solutions can drastically improve technical service operations for office technology dealers.

Through proactive device self-healing protocols, predictive alerts for upcoming service requirements and assisted end-user self-service for simple repairs, service calls can be significantly reduced while improving customer satisfaction. When service is needed, accessing millions of technical data pages through chatbots and AI-driven analytics of a device prior to dispatch will make service calls more productive and efficient. Dealers can also present customers with real-time dashboards and analytics that not only show data points, but interpret information into more meaningful business outcomes, building further value for customers.

Navigating Challenges & Setting Expectations

AI offers immense potential but comes with challenges. First, understanding data drives AI's learning, which is critical in identifying what the tools can be used for. Second, AI is only as valuable as the learning processes it experiences. Simply turning on ChatGPT or Microsoft Copilot and expecting it to immediately operate independently is a common mistake, due to enthusiasm for the technology.

Much like a personal assistant during a learning period, AI acts on specific tasks while it learns to deliver better outcomes.

A strong AI/machine learning operations (MLOps) practice will also ensure the data used for training continues to evolve with business needs. Third, AI use cases should be well thought out, based on the outcomes expected and then tested to ensure they meet expectations, as many projects have failed due to overly optimistic expectations that were not met from lack of training the tools and testing the output.

It is time to increase our technological understanding, embrace AI in business and begin leveraging its capabilities to enhance customer experiences.

Looking Ahead

Recent AI advancements are revolutionizing office technology, fueled by the shift from analog to digital. With data as its foundation, AI promises significant societal progress. Its potential will grow with the increasing volume of data and continuous learning from it, and early adoption of AI will give businesses a competitive edge, enabling swift and confident action.

Solutions delivered through office technology will continue to grow in value, based on integration of AI into standard processes. Dealers should expect manufacturers to act in partnership to access the data and tools available to implement new solutions more quickly, improving customer experiences and building further value.

AI's rapid progress rivals technological advancements of the past century, with new possibilities likely emerging between the writing and publishing of this article. It is time to increase our technological understanding, embrace AI in business and begin leveraging its capabilities to enhance customer experiences. ■

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