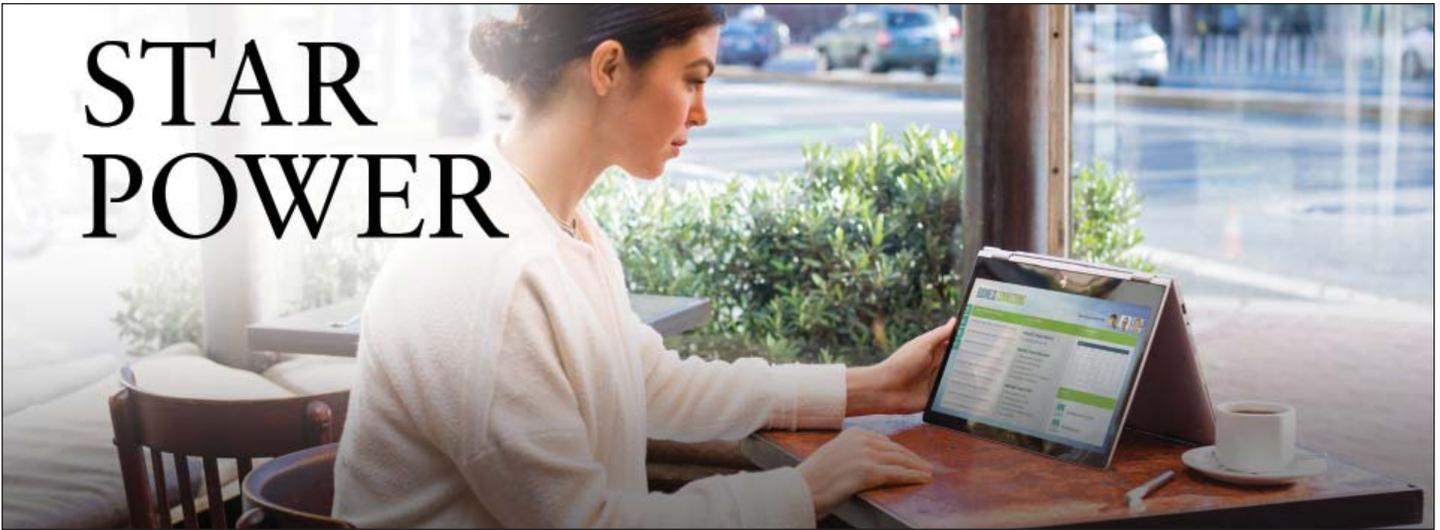


Tech Outlook

July 2017

PROSYS
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STAR POWER



Sleek new HP EliteBook x360 convertible laptop is ready for the spotlight.

Versatile, powerful, thin, rugged and handsome. While these might be desirable characteristics for a Hollywood leading man, they're also the qualities you might look for in a business-grade laptop device.

HP's new EliteBook x360 convertible laptop has all the makings of a star.

In a world of uninspiring, cookie-cutter design, the EliteBook cuts a dashing profile with diamond-cut accents on a sleek, silver aluminum unibody. Weighing in at just 2.8 pounds, it is a mere 0.59 inches thick with a 13.3-inch, 1080p touch screen. Its 360-degree hinges allow it to be used in several modes such as laptop mode for emails and word processing, tablet mode for taking notes, tent mode for

a video conference or media mode for watching streaming videos.

The EliteBook's beauty isn't just skin deep, however. For all its design aesthetics, the machine was built to stand the test of the most demanding power user.

"HP didn't cut corners on either form or function," said Allan Doe- hler, Business Development Manager, ProSys. "The EliteBook 360 is among the best-built notebooks on the market. It's tough, powerful and versatile, it has amazing battery life, and it's packed with security features. It has everything you want in a business-grade laptop."

HP readily acknowledges that the machine's sleek and showy chassis is aimed at consumers. But this is no consumer-grade laptop.

continued on page 2

TECH OUTLOOK

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Tough Enough

Consumer-grade laptops available from big-box retailers may look nearly identical to business-grade machines. There are substantial differences, however. Tradeoffs in performance, reliability and features mean off-the-shelf laptops are rarely suitable for any type of serious business purpose.

First and foremost, business-grade machines are built to higher standards of quality and durability. Consumer devices are less expensive because they use cheap components. That \$300 brand-name laptop for sale at the supercenter will almost certainly have an all-plastic chassis and an inexpensive hard drive. A business-grade machine will not only have a solid metal chassis, but the hard drive will be built for faster data access and retrieval. Increasingly, high-end laptops such as the EliteBook x360 come equipped with solid-state drives.

Consumer-grade machines don't get subjected to rigorous testing to ensure high durability and reliability. They are generally designed to operate efficiently for three years under typical home-use conditions.

"HP designed the EliteBook x360 to pass U.S. military standards for ruggedness and reliability," said Doehler. "The MIL-STD-810G suite of tests ensures these machines can withstand certain environmental stressors, such as drops, vibration, dust and temperature extremes. The touch-screen display is covered with Corning Gorilla Glass to resist scratches and cracks.

"This doesn't necessarily mean the EliteBook will stand up to combat conditions, but it certainly can handle some pretty rough usage from a typical business professional."

HP also designed the EliteBook x360 for endurance. HP claims a battery life of 16.5 hours — enough to last the duration of a flight from New York to Hong Kong. Additionally, Fast Charge technology allows users to power up to 50 percent capacity in as little as 30 minutes.

Virtuoso Performance

Consumer-grade PCs and laptops generally lack the computing power of a business-grade machine. Limitations in memory and processor speed often lead to performance issues. The EliteBook x360 is equipped with a 2.8GHz Intel Core i7 CPU, 16GB of RAM and a 512GB PCIe solid-state drive, providing plenty of horsepower for running multiple business applications simultaneously without slowdowns.

HP Velocity software boosts performance for remote desktop and virtualized applications by addressing common network bottlenecks such as packet loss, latency and Wi-Fi congestion. The client-side software is pre-installed on the EliteBook x360. Once the server-side software is installed within the data center, HP Velocity will begin optimizing application flows between points.

"The whole point of workplace mobility is to improve productivity and efficiency by allowing your employees to work from anywhere at any time," said Doehler. "The EliteBook enables this by giving people the processing power and connectivity they need to access key files and applications."

Unlike consumer-grade devices that come with consumer-grade software, HP EliteBook x360 comes standard with Windows 10 Pro. In addition to basic productivity, browsing and file management applications, Windows 10 Pro delivers important security, virtualization and policy management features.

The Strong, Silent Type

An array of built-in security features also put the EliteBook x360 in the spotlight.

HP's Sure Start Gen 3 is the world's only self-healing BIOS, automatically restoring the notebook's BIOS if it is attacked or corrupted. Runtime intrusion detection protects the critical and vulnerable BIOS firmware layer of the PC below the OS that advanced persistent cyberattacks target.

HP's new Client Security Suite combines hardened authentication such as fingerprints or PINs with soft factors such as passwords and facial recognition to boost end-user security. HP says these tools make it a million times more difficult to hack login passwords.

The HP Sure View privacy screen protects against "visual hacking," or unwanted shoulder surfing for those working in public places or open-concept offices. The world's only integrated privacy screen, HP Sure View reduces 95 percent of visibility when viewed at an angle.

Users who inadvertently leave an EliteBook up and running can lock it remotely with the HP WorkWise smartphone app, a first for enterprise PC management that protects PCs with Tamper Protection.

HP's new Sure Click technology provides hardware-enforced security for web browsers —preventing the spread of malware, ransomware and viruses. Each time a user visits a website, HP Sure Click creates a hardware-based isolated browsing session, which prevents a malicious site from infecting other tabs or the system itself.

"Mobile malware is growing in frequency and sophistication as cybercriminals look to capitalize on the mobile workforce," said Doehler. "HP understands that we can't depend entirely on end-users to implement device security. It's just too much to keep up with. With the EliteBook x360, HP is boosting security with built-in protections."

Most industry reviews note that the HP EliteBook x360 is one of the most attractive business laptops ever. However, it shouldn't be judged on looks alone. With a rugged chassis, business-class performance and an unprecedented collection of built-in security features, this beauty is also a beast.

News Briefs

Most Remain Wary of Self-Driving Autos

Consumers around the world remain skeptical about the safety of fully autonomous vehicles and hold widely divergent views on who they trust to bring autonomous vehicles to market, according to a recent study from Deloitte.

The study compares consumer attitudes from 17 countries on self-driving cars. Trust appears to be the biggest roadblock to selling the notion of self-driving cars in every country surveyed.

South Korea holds the highest number of people — 81 percent — who express safety concerns about fully autonomous vehicles. China shows the lowest at 62 percent. The U.S. falls roughly in the middle with 74 percent expressing concerns about safety.

More than two-thirds of Americans (68 percent) say they'll change their opinion with a proven track record for such vehicles. More than half of U.S. drivers (54 percent) say they would ride in an autonomous car if it was offered by a brand they trust.

"To win consumers' trust, automakers will need to integrate limited self-driving and advanced safety features into new product offerings steadily over time to introduce people to the technology, demonstrate the improvement in vehicle safety and develop a proven track record," said Craig Giffi, vice chairman and U.S. automotive industry leader, Deloitte LLP.

Students Prefer Digital Textbooks

An overwhelming majority of college students say they would prefer to use digital textbooks — but only if they can also be used offline. In a recent survey of 500 college students, Wakefield Research found that 87 percent believe they would get better grades with interactive textbooks, rather than traditional course materials. Additionally, 92 percent said they have had professors who recommend digital versions of texts and course materials in their classes.

Students said any digital textbook adopted by their school must be available in a multitude of ways to be truly useful. Twenty-nine percent read their books offline, 26 percent online and 45 percent online and offline equally. To that end, 87 percent feel that digital textbooks are not worth the money if they can't be viewed fully offline. These students feel the need to be able to study without an internet connection.

Students said there are numerous other reasons interactive textbooks would be helpful, citing improved abilities to take quizzes on information learned during studying (63 percent), to keep track of information learned during study sessions (57 percent), to take notes and highlight content in a digital textbook (55 percent), and to set study goals and track their progress (52 percent).

Affordability is another significant benefit, students said. Eighty-nine percent of the students said they have delayed buying textbooks because of costs, and 45 percent said these delays have negatively impacted their grades. Students said they can save up to 70 percent over traditional books when they buy or rent digital materials.

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Companies of all sizes are analyzing vast volumes of data to gain new insight and make better business decisions.

The Value of



The term “big data” has emerged in recent years to describe the vast amounts of information being generated by a wide range of systems and applications. All of that data is pouring in at an ever-faster rate, and smart organizations are mining it for business insight.

In retail and hospitality, for example, companies are analyzing sales transaction data to better understand and target their customers. Retailers are also using data from social media, web searches and other sources to predict product sales, which helps them

optimize their inventory and promotional campaigns.

However, big data isn’t just about increasing revenue. In fact, most organizations are using big data to cut costs, increase productivity, improve business processes, speed time-to-market and enhance customer service. According to a recent IDC report, the banking, manufacturing, federal government and professional services sectors will spend \$72.4 billion on big data analytics solutions this year. They will also be the largest spenders in 2020 when their total investment will be \$101.5 billion.

“The three industries that comprise the financial services sector — banking, insurance, and securities and invest-

Big Data

ment services — all show great promise for future spending on big data and business analytics. This technology can be applied across key use cases throughout these financial institutions, from fraud detection and risk management to enhancing and optimizing the customer's journey,” said IDC Program Director Jessica Goepfert.

“Outside of financial services, several other industries present compelling opportunities. Within telecommunications, for instance, big data and analytics are applied to help retain and gain new customers as well as for network capacity planning and optimization.”

All but two of the industries covered in IDC’s report plan to significantly increase their spending on big data through 2020. These organizations are betting on big data analytics to help them make better decisions by detecting patterns in real-time and historical data.

Beyond Business Intelligence

Crunching data to improve decision-making is hardly a new concept. For years, organizations have been capturing vast stores of transactional information in data warehouses and using business intelligence (BI) tools to slice and dice the data for strategic planning. The latest BI applications can even support real-time analysis, and be accessed by business users throughout the organization for spotting trends and predicting future performance.

Big data analytics goes beyond traditional BI, however. While BI tools are designed to answer predefined questions that are oriented to a consistent style of reporting, big data analytics offers a more ad-hoc approach. The focus is on enabling end-users to create on-the-fly searches to uncover new patterns and insights.

Another key difference is the ability to extract information from data that isn’t recorded in neat rows and columns in a database or spreadsheet. The vast majority of big data is unstructured and scattered across the web or stored in text

documents. Organizations are also using big data analytics to make sense of the huge volumes of data generated by sensors and other Internet of Things (IoT) devices.

A once-small, open-source project called Hadoop has become a leading platform for analyzing these large datasets. Hadoop is a storage technology that enables batch processing of unstructured and structured data across hundreds or thousands of computing nodes operating in parallel. As a result, Hadoop facilitates the rapid transfer of data between nodes, and enables the clustering of commodity servers to provide the processing power needed to handle big data analytics tasks.

A recent Forrester Research report found that almost 40 percent of firms were implementing or expanding big data technology in 2016, and another 30 percent planned to adopt big data in the next 12 months. Thirty percent of respondents had implemented Hadoop.

Not Just for Enterprises

Large and very large companies (those with more than 1,000 employees) will be responsible for more than 60 percent of big data analytics spending through 2020, according to IDC. However, the research firm says that small to midsize businesses (SMBs) will be significant contributors, with nearly a quarter of the worldwide revenues coming from companies with fewer than 500 employees.

Midmarket firms in particular have made big data analytics a top IT priority. According to research firm TechAisle, 77 percent of midmarket firms (those with 100 to 999 employees) have implemented big data analytics solutions, and 91 percent plan to do so at some point in the future. Although limited IT resources and poor data quality tend to inhibit big data initiatives, the availability of more cost-effective solutions and cloud-based analytics tools are helping to drive adoption in the midmarket.

As technologies such as cloud computing, social media and the IoT contribute to massive data growth, organizations need the ability to extract meaning from data to navigate shifting market conditions. Big data analytics tools are capturing the attention of organizations looking to gain deeper visibility into structured and unstructured data and improve decision-making processes. That’s why IDC forecasts worldwide revenues for big data analytics will grow from \$150.8 billion in 2017 to more than \$210 billion in 2020, a compound annual growth rate of 11.9 percent.

“After years of traversing the adoption S-curve, big data and business analytics solutions have finally hit mainstream,” said Dan Vesset, IDC group vice president, Analytics and Information Management. “Big data analytics as an enabler of decision support and decision automation is now firmly on the radar of top executives. This category of solutions is also one of the key pillars of enabling digital transformation efforts across industries and business processes globally.”

Artificial Intelligence

Transcending fantasy, AI concepts expanding into real-world usage.

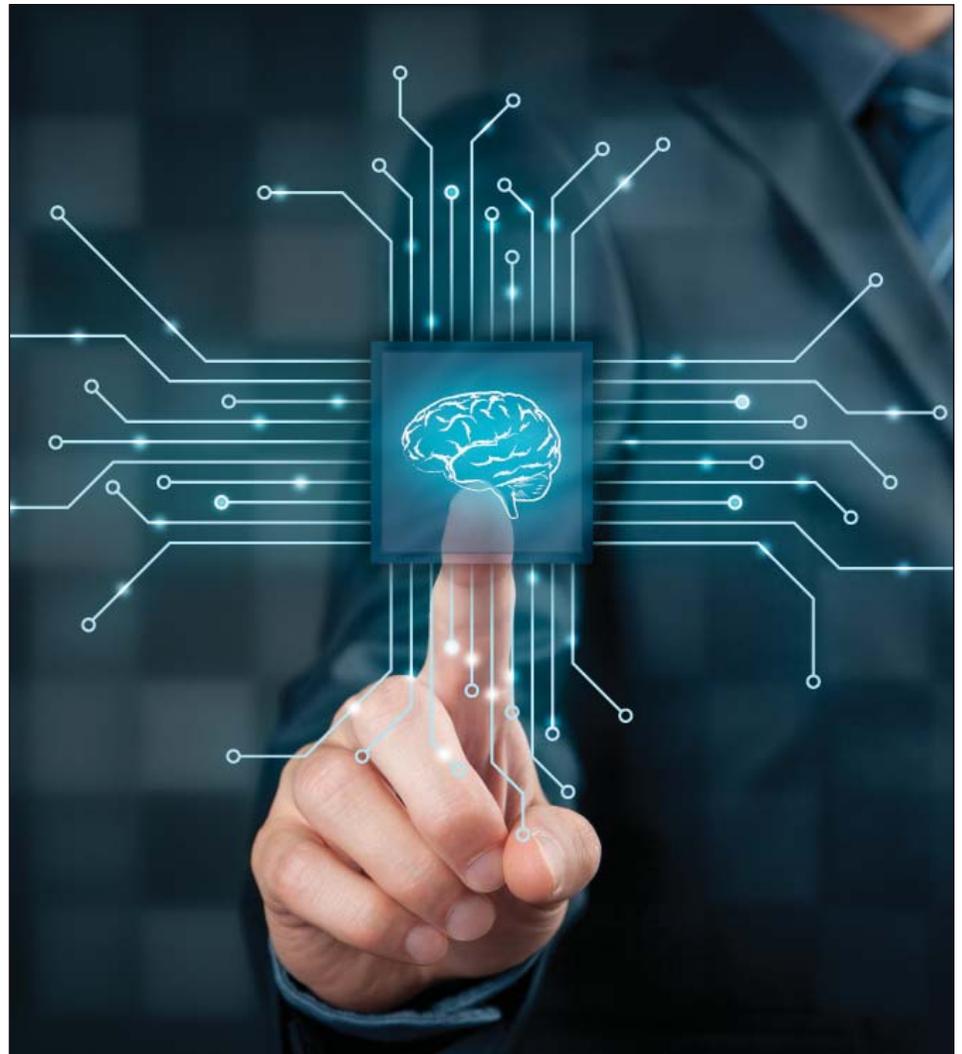
Long a favored science-fiction trope, artificial intelligence (AI) is a term usually associated with human-like computers such as Isaac Asimov's positronic robots and the Star Wars droids. In truth, AI has moved way beyond the realm of fantasy and into the mainstream through a range of new products, technologies and applications.

Virtual assistants such as Siri, Google Now and Cortana are AI applications that are becoming commonplace. Many retailers are using AI predictive analytics to offer personalized advertising, coupons and discounts. Spotify, Pandora and Netflix use similar systems to recommend music and movies. Countless other organizations use basic AI apps to automate data entry, analyze contracts, manage investment portfolios, filter job applicants, and more.

AI is really an umbrella term for a number of technologies such as deep learning, machine learning, computer vision and natural language processing. All are aimed at embedding machines with the ability to analyze massive data sets, identify patterns and make autonomous decisions — eliminating the need for programmers to write code for every function.

While some technology futurists say AI will eventually reshape the business world in ways that rival the Industrial Revolution, its present-day uses are still evolving. Analysts say AI technologies have use cases and applications in almost every industry and promise to significantly change existing business models while simultaneously creating new ones.

Tractica, a research firm focused on the AI market, has identified nearly 200 real-world AI use cases across 27 industries. The firm forecasts that rev-



enue for enterprise AI applications will increase from \$358 million in 2016 to \$31.2 billion by 2025, representing a compound annual growth rate of 64.3 percent.

Powering Automation and Analytics

It's still very early in the AI game, and few organizations have fully developed plans for how to integrate AI into their operations. In a recent survey of 1,600 senior business decision-makers at large organizations across seven mar-

kets, Infosys found that big-data automation (65 percent) and predictive/prescriptive analytics (54 percent) are the primary AI applications in use today.

Those using AI technologies seem to experience immediate results. Infosys reports a clear link between an organization's revenue growth and its AI utilization. The companies with the most mature AI strategies reported faster revenue growth over the past three years.

Organizations that have already deployed or have plans to deploy AI technologies expect to see a 39-percent average increase in revenue by 2020,

alongside a 37-percent reduction in costs. On average, the companies surveyed have invested \$6.7 million in AI in the last year, and have been actively using AI for an average of two years. Three-fourths of the Infosys respondents said AI is pivotal to their continued success, and 64 percent said future growth is dependent on large-scale AI adoption.

“Artificial intelligence adoption is on the rise and we are excited to see the investments in AI that businesses are gradually making to derive meaningful and creative change,” said Infosys President Sandeep Dadlani. “The achievements are remarkable and the opportunities AI is bringing forth are vast.”

While 71 percent say the rise of AI in the workplace is inevitable, 88 percent also note adoption-related challenges. For most organizations — particularly smaller businesses — finding and hiring data scientists, AI experts or people with deep expertise in data analytics is nearly impossible.

Starting Small

Getting started with AI doesn't necessarily hinge on specialized staff, however. Smaller organizations can access a variety of online resources to get familiar with AI possibilities and explore ways to incorporate analytics and learning applications with heavy software coding. Stanford University and Columbia University offer AI-focused online courses, as does the online university Udacity. Tech incubators such as Techcode and Singularity University offer consulting services for organizations looking to incorporate AI tools.

Additionally, software developers are developing a growing array of apps to help smaller businesses incorporate AI tools into their operational processes and workflows. Quill, a natural language generation program from Narrative Science, weaves data into written documents to simplify report generation. SalesforceIQ combines data from email systems, smartphone calls and calendars to automate data entry for your customer relationship management platform.

Even the biggest players in the tech world understand the importance of making AI accessible to organizations of all sizes. IBM is working to bring the deep-learning and data analysis capabilities of its Watson AI platform to users through the cloud. Microsoft, meanwhile, is enabling users to run deep-learning training jobs, data rendering, real-time analytics and more accelerated tasks in its Azure cloud platform.

The cloud, in fact, represents a vital intersection for AI. Because deep learning involves analysis of large datasets, AI platforms need a cloud element for accessing cloud storage. The cloud allows to utilize compute-intensive jobs without implementing an AI framework onsite.

“We're working hard to empower every organization with AI, so that they can make smarter products and solve some of the world's most pressing problems,” said Harry Shum, executive vice president of the Artificial Intelligence and Research Group at Microsoft. “AI is now within reach of any business.”



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Write

This is where collaboration meets mobility — where beauty and durability take form in five versatile modes engineered into one Elite design. With 360 degrees of versatility, five modes, unmatched security features, and long battery life, the HP EliteBook x360 is perfect for highly mobile professionals, or anyone looking to step up their notebook game. **Contact ProSys to learn more.**