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Artificial intelligence, machine learning, and cognitive computing in audit and tax are the top trends that will impact the accounting and finance world over the next three years, according to research conducted by the Maryland Association of CPAs, ...

Jul. 05, 2018

By Daniel Burrus, Ceo Of Burrus Research, And Tom Hood, CEO Of The Maryland Association Of CPAs And The Business Learning Institute.

Artificial intelligence, machine learning, and cognitive computing in audit and tax are the top trends that will impact the accounting and finance world over the next three years, according to research conducted by the Maryland Association of CPAs, the Business Learning Institute, and world-renowned futurist Daniel Burrus. Using Burrus' annual research list as a starting point, Tom Hood, CEO Of The Maryland Association Of CPAs And The Business Learning Institute, asked more than 1,000 CPAs and finance and accounting professionals which of those trends will have the greatest impact on the profession over the next three years.

In Part 1 of this article, we covered the first 10 trends ranked in order from our surveys and research. Here are the next 10 most referenced trends,

# 1. Augmented reality and virtual reality apps and devices

Augmented reality (AR) will quickly become more common by adding just- in-time information to our physical world. Simply aim your smartphone camera at a crowded street to find the stores that have the exact products you're looking for. Better yet, we will soon be using conventional-looking glasses that allow wearers to overlay data on their fields of vision, providing useful information about what

they're looking at. By contrast, virtual reality (VR) — using oversized headsets to

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#### 2. Smart virtual e-assistants and voice-enabled devices

The use of smart e-assistants is accelerating, offering what is rapidly becoming a mobile electronic concierge available on any smart device, including phones, tablets, televisions, and cars. Stand-alone audio assistants such as Amazon Echo and Google Home will expand rapidly into business and governmental applications. Soon retailers will have a Siri-like sales assistant, and soon many of us will be using an e-personal health assistant that taps into the real- time health data from a smart watch to predict potential problems and offer suggestions.

### 3. IoT becomes increasingly intelligent

Machine-to-machine communications using chips, microsensors, and both wired and wireless networks will join networked sensors to create a rapidly growing IoT, sharing real-time data, performing diagnostics, and making virtual repairs, all without human intervention. By 2020, there will be well over 50 billion "things" talking to each other, performing tasks, and making decisions based on predefined guidelines using A.I. Not all data need to come back to the mothership to create high value. Edge computing will increasingly be used to tame the massive amounts of data IoT will create.

# 4. 3D printing (additive manufacturing) of finished goods

Personalized manufacturing of finished goods using 3D printing will grow exponentially. 3D printers build things by depositing material, typically plastic or metal, layer by layer, until the product is finished. Originally designed to print prototypes, they are increasingly being used to print final products, such as jewelry, iPhone cases, shoes, car dashboards, parts for jet engines, prosthetic limbs, human jaw bones, blood vessels, organs, and much more. This allows companies to

manufacture one-of-a-kind or small runs of items quickly, locally, and with far fewer

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### 6. Wearables and applications

Wearables increasingly will be used for both personal and business applications. Apple, with its smartwatch fitted with health sensors and software, joins Google, Samsung, Microsoft, and others in a battle for market share. More complex software and applications will drive further innovation and sales in other wearable technology. One example is a patch that can be attached to the skin for remote disease management, diagnostics, and general health via wireless transfer.

#### 7. Visual communication for business

Visual communication takes video conferencing to a new level thanks to free programs like Skype, FaceTime, Zoom, and others for video communication on phones, tablets, and home televisions. Businesses of all sizes are rapidly embracing this as a primary relationship-building and communications tool.

#### 8. Enhanced location awareness for retail

Location awareness using in-building systems allows customers with smartphones to navigate stores and quickly find what they are looking for. This, combined with geo-social marketing and AR, will drive the creation of more business-to-consumer apps. In addition, geospatial visualization combines geographic information systems (GIS) with location-aware data, radio-frequency identification (RFID), and other location-aware sensors (including identifying the current location of users from the use of their mobile devices) to create new insights and competitive advantage.

## 9. Drones reach a new height adding A.I.

The number of applications for drones will continue to expand rapidly.

Drones have already proven to be of high value for search and rescue, and they are

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their smart battery systems (SBS) to businesses and homes that generate some of their own power using solar, wind, or other systems. In addition, as first- generation hybrid vehicles get too old for the marketplace, there will be millions of batteries that will still hold enough of a charge to be repurposed into inexpensive energy storage systems. This will enable a national network of smaller and more secure smart microgrids.

Ready to see the future and plan with greater confidence? Have a look at the **Anticipatory Organization**<sup>TM</sup>: **Accounting and Finance Edition** at www.blionline.org/ao.

Daniel Burrus is considered one of the world's leading technology futurists on global trends and innovation. He is the founder and CEO of Burrus Research, a research and consulting firm that monitors global advancements in technology-driven trends to help clients understand how technological, social, and business forces are converging to create enormous untapped opportunities. He is the author of seven books, including the newest, The Anticipatory Organization: Turn Disruption and Change Into Opportunity and Advantage. Burrus also is the creator of The Anticipatory Organization<sup>TM</sup> Learning System—named a Top 10 Product of 2016.

Tom Hood, CPA, CITP, CGMA, is considered one of the most influential thinkers in the CPA profession. He was named to the Accounting Hall of Fame by CPA Practice Advisor, and for the past five years has been named the second most influential person in accounting by Accounting Today Magazine. He is the CEO of the Maryland Association of CPAs (MACPA) and the Business Learning Institute, the innovation, strategy, and learning affiliate of the

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