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NEWSLETTER

The biggest ideas that are changing everything

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How Do You Develop an Anticipatory Mindset?

By Daniel Burrus, CEO of Burrus Research

There will always be reactionary mindsets and practices in every industry, during positive upswings in the world and massive downturns, such as we've seen in the past year with COVID-19. Although it is wise to be two steps ahead, many businesses and organizations I work with view anticipation as being difficult or even impossible in our unpredictable world. They look at it as unthinkable to be able to foresee problems before they occur.

The past year certainly wasn't easy; I'm sure to many it makes the concept of accurate future predictions appear to be out of the question. How can we accurately predict what is to come when none of us have ever witnessed a global pandemic like this before?

In many ways, the circumstances we face are really nothing new. Sure, we may have never experienced this level of uncertainty before, but being ahead of the curve by way of anticipation and understanding what we can be certain about using my Hard Trend Methodology has proved to be the only option some have in many other instances.

> " *We all set out to be someone great, or to do something great for the world.*

With that said, it is vital for businesses to implement my Anticipatory Organization Model to see incoming disruptions, pre-solve the problems that they bring along with them, and take advantage of these circumstances. It just takes some understanding that is applicable to the ever-evolving world around us, which might seem drastic during this past year but is a fact in all industries, COVID-19 or not.

Where Do We Even Begin?
We all set out to be someone great, or to do something great for the world. Many dive into starting their business or perhaps their career at an organization looking to change the world or their industry but have no idea where to start.

Having helped organizations with future planning and innovation for several decades, I applied personal experience and extensive research to develop a methodology for separating Hard Trends, which are future certainties that will happen, from Soft Trends, or future possibilities that are open to influence. These two types of trends are where every Anticipatory Leader begins, as it is a process of understanding what you have the power to change right now.

In the way of my methodology, I note that Hard Trends cannot be changed, while Soft Trends can. Understanding this allows you to see problems before they occur and actually pre-solve them rather than just waiting for them to happen – a knee-jerk, reactionary behavior most are accustomed to.

Conversely, just because Soft Trends may or may not happen does not mean that they won't happen; they are just not future facts, like the Hard Trend that this pandemic will be over eventually.

Knowing the difference between Hard

TECHNOLOGY NEWS HIGHLIGHTS

Virtual Power Plants

As the demand for a more resilient power infrastructure increases, technology for on-site storage of sustainably generated electricity is gaining momentum for commercial as well as residential applications.

For example, a new 600-unit apartment complex in Salt Lake City is installing a battery storage unit (called ecoLinx) in every unit. The batteries are charged by rooftop solar panels and can provide up to 12.6 megawatts of backup power for the building, while saving residents 30 to 40 percent on their energy bills. Other companies in the U.S. are also looking at home virtual power plants to supplement the grid and reduce power interruptions by smoothing out surges in power usage throughout the day.

While the demand for renewable energy is steadily on the rise, the cost of battery storage has decreased by nearly 80 percent in the last decade. In the U.S. alone, 476 megawatts of storage capacity was added in the third quarter of last year. However, it has been estimated that in order to reach a 90 percent level of clean energy, it will require at least 150 gigawatts of storage – an increase of 300 times.

A series of pilot programs is also being launched to assess whether the technology is viable for older buildings to achieve similar cost savings. Virtual power plants will be an important aspect of meeting renewable energy goals.

For information: Sonnen, Inc., Innovation Hub, 1578 Litton Drive, Stone Mountain, GA 30083; phone: 310-853-2404; Web site:
ecoLinx | sonnen (sonnenusa.com)

Bringing Photos to Life

NASA's Electric Plane

A revolutionary new technology called Deep Nostalgia™ allows users to animate old family photos and create realistic videos of ancestors they have never even met. Licensed by MyHeritage, the platform combines deep learning and advanced image processing to make people in still pictures smile, blink, and move their heads – bringing portraits to life.

Deep Nostalgia uses a series of drivers, each of which creates a fixed sequence of gestures. A default sequence is automatically selected by the system; however, users can change the sequence from a number of available "Animation" options. The feature requires high-resolution images, so historical photos are first enhanced using their PhotoEnhancing feature.

Animation typically takes about 10 to 20 seconds and the output video can be saved and shared. The service is free for an unlimited number of photos with a "Complete" membership to MyHeritage; other members and non-subscribers can use Deep Nostalgia on a limited basis.

For the first time in 20 years, NASA is about to launch a test flight of a new, crewed experimental aircraft – and it runs solely on electric power.
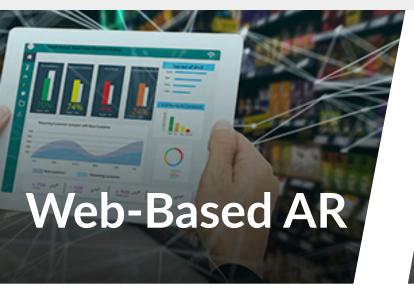
Known as the X-57 Maxwell, the plane has 14 motors – six smaller ones along each wing and one larger one at each wing tip – a design that would have been difficult to achieve with traditional gas-powered engines. But the X-57 runs on two lithium-ion battery packs located in the cabin, fundamentally changing the design of the propulsion system.

The new aircraft addresses three key challenges of lowering emissions, reducing fuel consumption, and decreasing noise by combining new technology with advanced aerodynamics.

Further ground testing is aimed at evaluating how well the low-voltage and high-voltage systems work together across a broad power curve to optimize performance over all stages of flight including taxiing, takeoff, cruising, and landing. A crewed test flight is planned for later this year.

Web-Based AR

Holographic Meetings

Augmented reality (AR) is a powerful tool for many enterprises, but one that has not been practical for small and medium-sized businesses. Until now. Enter...Web-based AR coding systems that require no coding or 3D modeling expertise.

For example, WorkLink is designed to capture, share, and grow expertise within an organization for training, support, and maintenance in the framework of "learning by doing."

Their apps accept a broad range of CAD file formats and allow users to author mixed reality content regardless of coding and scripting experience level.

Another tool, known as Verge3D, is geared toward creating a new level of customer engagement through interactive Web marketing experiences.

Regardless of the application, this is a tool that is likely to transform AR and how it impacts our lives.

At their recent annual developer conference, Microsoft announced its plans to develop a mixed reality platform that allows users to interact with 3-D avatars in a virtual space.

Known as Mesh, the system also enables participants to "pass" objects to one another, making it ideal for businesses and organizations that deal with physical prototypes.

Rather than 3-D printing models and distributing them to a design team that then meets virtually on a video conference call, Mesh will enable team members to gather as avatars around a high-resolution image that can be modified dynamically. It will also offer users a way to attend virtual social gatherings, concerts, and sporting events and even dine with family and friends.

Like other collaborative virtual reality (VR) workspaces (like Spatial), the platform will be compatible with a variety of VR headsets. And while it's currently available as a preview, Mesh is still very much in the development phase.

Paper Bottles

As landfills and oceans become more and more polluted with plastic waste, it's becoming increasingly clear that we need to find alternatives.

While many plastic containers are able to be recycled, the actual rate of recycling varies greatly from country to country, with estimates as low as 30 percent in the U.S. And with more than one million plastic bottles being sold worldwide every minute, the problem is only getting worse.

One solution on the horizon is a 100 percent bio-based, recyclable paper bottle that is also biodegradable.

Based on nearly a decade of research and the collaborative efforts of experts in paper material development and bottle manufacturing, the company has come up with a proprietary pulp formula that can be used for everything from lotion to carbonated beverages.

In addition, the wood fibers are sustainably harvested; for every tree that is cut, three more are planted.

Coca-Cola will begin testing a prototype of the new bottle for their beverage AdeZ in Hungary this year. Absolut also

plans to test the new packaging for their beverage products in the U.K. and Sweden.

For information: Paboco, Paper Bottle Company A/S, Fabriksvangen 5, DK-3550 Slangerup, Denmark; phone: +45-4733-3830; Web site: Paboco | Changing the industry for good
Coca-Cola Europe; Web site: Coca-Cola in Europe takes its paper bottle prototype to trial in Hungary (coca-cola.eu)
Absolut; Web site: Absolut Paper Bottle – Absolut Vodka

Using Wind to Produce Hydrogen

Several global energy companies are looking at using offshore wind generators to produce hydrogen, a move that could help speed up the transition to zero-emissions vehicles and carbon-neutral power plants.

As the cost of installing wind turbines has dropped and the availability of large-scale electrolyzers has increased, utilizing excess wind power to generate hydrogen is a logical next step.

Companies like ERM, Siemens, and ITM are planning to equip floating wind turbines with desalination systems to convert saltwater into fresh water, and electrolyzers to split the water molecules into hydrogen and oxygen.

Other innovations in hydrogen production include converting a North Sea oil rig into a hydrogen plant and using piping that's currently transporting natural gas to transport hydrogen instead.

While it may take years of development for these technologies to have a real impact, they could all be vital steps along the path to sustainable energy.

See-Through Wood

Researchers have developed a new material that looks like glass but is actually made of wood. It's lighter, stronger, and more environmentally friendly than glass, and also has lower thermal conductivity, meaning that it could reduce heating and cooling costs when used as a building material.

Previous experiments with transparent wood involved the use of sodium chlorite to remove lignin, which is what gives the wood its structure.

This not only weakens the material but also generates harmful waste products. The new method uses hydrogen peroxide, which is brushed on the wood before exposing it to UV light. This only removes the portion of the lignin that gives the wood color, resulting in a material that's 50 percent stronger than earlier see-through wood products.

Compared with glass, transparent wood produces less glare and can even be used in load-bearing situations.

In addition to building applications, the new material is ideal for solar panels, electronics, and furniture.

How Do You Develop an Anticipatory Mindset?

Trends and Soft Trends is what facilitates the understanding of certainty in a seemingly uncertain world. By identifying future facts, you can redefine risk management and boldly innovate with relatively low risk, actively shaping the future of your industry or organization before someone else disrupts it.

Should I Avoid Agility?

As previously mentioned, and as you may have actually witnessed firsthand during this pandemic, people have largely embraced an agile mindset alone to deal with the accelerating pace of exponential technological change or pandemic-level disruption.

What I teach and hope everyone understands as we move beyond COVID-19 is that there are two sides to the Anticipatory coin. You need both a good offense and defense to win a competitive game, and business is no exception, especially now. The playing field has been leveled for many thanks to the pandemic, and I believe most of us got quite comfortable in thinking the coin is only one sided: agility. But there is another side: anticipation.

Agility is playing defense, which is absolutely necessary. The faster you can react to change, the faster you know how to pivot in times like we have now witnessed, where none of us could have predicted a complete shutdown of the global economy. However, can you think of any championship sports team that literally won using only defense, where the offense never once took the field?

Absolutely not! Even the best competitors still had to score points by disrupting the opponent's defense, and that's what an Anticipatory mindset is all about! I do want you to be good at agility, as there is much

about this world we cannot fully predict, such as Soft Trends. But there are thousands of fully predictable occurrences you can see, which are only visible by identifying and understanding Hard Trends and using them to facilitate anticipation.

Categories of Hard Trends

Hard Trends are interlaced in all of our daily lives, business operations, and even our hobbies. That does sound overwhelming; however, if you break them down into three categories, they are even more predictable than you realize.

Here are the three categories of Hard Trends I have identified in my research:

1. Demographics

Over the years, I have mentioned the Hard Trend of our aging population of Baby Boomers in the United States, and the Soft Trend that they may take their knowledge with them. However, what many also consider is, conversely, the younger generations becoming parents and their children. The Hard Trend here is that said new children are born every day; no new children would mean the eventual end of the human race. That may happen in dystopian cinema but is unlikely in our lifetime. But a Soft Trend is how those children learn and play and what toys are engaging to them, while a Soft Trend of their parents is perhaps what type of food they choose to feed their children.

2. Technology

In the coronavirus pandemic, technology trends have accelerated by between five and ten years in just a matter of months. Cloud computing, e-commerce, and working remotely are just a few examples of this due to the fact that human beings, on a global level, were forced to change. If you are a bank, you now need the cloud and virtual private networks, as your employees are working from home. In total, the pandemic has accelerated sixteen technology trends I discuss with many organizations far beyond an exponential level, revealing an astounding

number of new opportunities for you to take hold of.

3. Regulation

Every country has government regulations. Predicting the future of all regulations is not likely, but you can predict several based on Hard Trends at play in several industries. Will we have more regulations around cybersecurity? Of course! Will many industries have more confusion because of changing regulations? Yes, so perhaps developing an artificial-intelligence-related mobile compliance app that lets you know the latest rules based on your GPS location for each task is an essential opportunity.

How Cyclical and Linear Change Applies
Having a solid understanding of how to implement my Hard Trend Methodology and separate future certainties from future possibilities, we then arrive at the concepts of change.

There are two different types of change in our world: cyclical change, which is more or less a future certainty, and linear change, which is a type of change that happens once and transforms the world in one direction. The stock market is extremely cyclical; when things go down, they are sure to go back up, whereas mobile devices of any kind are a linear change. Once we had the level of computing power we currently do in our front pocket, aside from a search for nostalgia, we are not going back to a landline phone with a cord.

In the way of cyclical change, there are over three hundred known cycles in our world, including but not limited to business, celestial, biological, sales, and more. I personally like to use cycles to my advantage because of their certain nature.

However, what I'm bringing to the table with my Anticipatory mindset is how to identify the other kind of change: linear change. Linear meaning that it is one way and only occurs once which creates a level of urgency and in many, fear. What if you miss it and suddenly you are disrupted?

The upside, thanks to my Anticipatory Organization Model, is when linear change becomes what I refer to as exponential. It is then driven by technology, making it ride a curve that's accelerating and, more importantly, predictable.

For example, first we had 1G, then 2G, and eventually all the way up to 5G! All of these were very predictable, and we can even know when they're going to happen and what benefits of connectivity we will receive from them. This gives us predictable opportunities as well as predictable problems that we can either let play out or pre-solve using, you guessed it, anticipation!

Additional to that concept, another important concept to note is that linear, exponential change can impact and even alter old cycles, making it important to understand both cyclical change and linear/exponential change to discover new, fully predictable opportunities.

Be Human in a Digital World
It is very important to understand our place in the world with technology, especially as we venture into the post-pandemic world ahead of us. Technology is not good or evil; it merely exists in a vacuum, so to speak. It is how we as humans apply it that defines the application of said technology.

One of the things that I'm urging people to do is to positively shape the future rather than passively receive it. Not only can you leverage exponential technological change to your advantage, but you can use it to better the human race and improve the lives of the young and old. By learning to be Anticipatory, understanding Hard Trends and Soft Trends, and how cyclical or linear changes apply, you can better become a positive disruptor and set the bar for your industry for years to come.

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