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Daniel Burrus'

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# TECHNOTRENDS® NEWSLETTER

*The biggest ideas that are  
changing everything*

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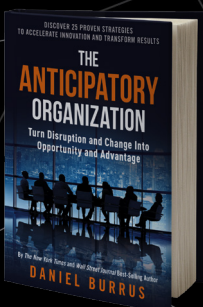
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# Avoiding Organizational Complacency

By Daniel Burrus, CEO of Burrus Research

On the surface, complacency seems like a wonderful state of mind. After all, complacency suggests that you've made it. You and your organization have achieved the success you sought. Now it's time to sit back, relax and savor the sweet satisfaction of a job well done.

That apparently happy picture carries far more pitfalls than many of us imagine. Despite an appearance that suggests an enviable situation, complacency can be very dangerous. That's particularly true in the environment in which we live today, one dominated by exponential, digital transformation of all sorts.

In that kind of environment, resting on your laurels can carry significant consequences. Further, the dangers of complacency can impact most any sort of organization.

*Complacency is dangerous because, at first glance, it's completely appealing.*

Complacency may have an appealing siren's song, but it's essential to look past the history and immediate glow of success with both an anticipatory mind-set and a willingness to act on the abundant opportunities you can see.

## What Makes Complacency So Dangerous?

The answer to the above question is simple. Complacency is dangerous because, at first glance, it's completely appealing.

As I mentioned earlier, complacency only follows a certain level of success—after all, you and your organization aren't going to slide into complacency right after you just fell on your faces! That state of mind only comes when you have experienced a long history of success and are in the wake of positive news—goals reached, benchmarks achieved and other means of measuring success.

That reality underscores complacency's role as something of an underachieving villain when compared with the other problems that an organization may have to deal with. Financial issues, personnel matters, product recalls and other snafus make no effort to hide the fact that they're bona fide problems. On the other hand, complacency connotes a sense of well-deserved satisfaction. After all, you and your people worked hard to get to the level of success you have. It's worth celebrating, and you should celebrate it—but it can blind you to disruptions that are about to happen and to the necessity of starting to build tomorrow's success today.

Complacency can also feel very comfortable. For instance, on an organization-wide level, you're just as busy as you ever have been. Things are just as they always have been, and that's good. The question is: What are you busy doing?

Complacency can also have more individual effects. For instance, employees who have only a few years before retirement may have been very successful by doing what they've always done. With the finish line approaching, why take the time to learn new things? The same can hold true for people at every level

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## TECHNOLOGY NEWS HIGHLIGHTS

# New State of Matter

Classical liquid crystals are a cross between a liquid and a solid in that molecules flow freely (as in a liquid) but maintain their directional orientation (as in a solid).

In quantum liquid crystals, electrons behave like the molecules in a standard liquid crystal, giving them some unique properties, such as superconductivity.

When quantum liquid crystals were discovered in 1999, they were two-dimensional; that is, the electrons were confined to a single plane inside a host material. But researchers recently discovered the first three-dimensional quantum liquid crystal in which electrons are free to orient themselves in three axes.

Each axis gives the material different magnetic

properties, and depending on the direction of the current flow, the magnetic strength and orientation changes.

The discovery will play a significant role in the field of spintronics in creating more efficient computer chips.

It may also eventually be the key to building quantum computers by providing a rationale for the development of topological superconductors – a special type of superconductor that is robust enough to maintain quantum properties in spite of environmental interactions or material impurities.

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# Pollinator Drones

As we continue to struggle with the dwindling populations of natural pollinators all over the globe, scientists are looking to robotics for potential solutions. One idea that has received a lot of attention is the use of drones to supplement the role of bees, and the development of a novel adhesive gel could be a step toward making drone pollinators a practical reality.

The new goo is designed to collect pollen grains and redeposit them on contact. Although it sounds simple, several factors need to be considered. First of all, the gel has to be water resistant and durable but soft enough to avoid damaging tender blossoms. It must be tacky enough to pick up the fine pollen grains but not so sticky that it can't easily release them. And, finally, it needs to be biodegradable.

What Japanese researchers came up with is an ionic liquid gel, which was deployed by spreading it on animal hair glued to the bottom of a two-inch F-Force PXY CAM drone with remote control. In preliminary testing, it was shown to effectively collect and release pollen from flowers simply by bumping into them. The next step is to make the mechanical pollinators autonomous.

Skeptics point out that this solution is specifically targeted toward honeybees, which

represent only one of 200,000 species of pollinators that support our food supply. They also argue that it may be more cost effective in the long run to seek out better ways of preserving the pollinator population than to plan for its demise. Food for thought...

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# WindTree

According to the U.S. Department of Energy, wind is one of the cheapest sources of renewable power, averaging only about two cents per kilowatt hour. Now an innovative new wind turbine is designed to augment conventional energy systems with locally generated wind power.

The WindTree is a 30-foot-tall metal structure that supports 54 individual turbines on a network of "branches." Called AeroLeaves, the three-foot-long turbines are similar in shape to large ears of corn, each with its own microprocessor that adjusts the rotation to maximize the amount of kinetic energy it can capture. At wind speeds of four to 36 miles per hour, a single WindTree will produce between 1,000 and 3,500 kilowatts of power per year – a substantial portion of the typical home's annual electricity needs.

At a price of about £70,000 (about US\$90,000) installed, the system will appeal mainly to businesses and governmental agencies. However, the company anticipates that the cost will be lower by the time the product is introduced in North America later this year.

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## Cooling Film

A new plastic film has been developed that can cool buildings without the need for refrigerants – and without using power – even in direct sunlight. Best of all, it can be manufactured using standard roll-to-roll methods for about 50 cents per square meter.

The material exploits an “infrared window” in the Earth’s atmosphere that allows certain wavelengths of heat-carrying infrared radiation to pass into space. As objects shed heat through passive radiative cooling, the source of that heat will remain cool. The trick was to convert the heat from a building to the proper wavelength so that it can escape without any bounce-back effect from the atmosphere. This was done by embedding tiny glass beads into a commercially available transparent plastic to create a film that’s about 50 microns thick (slightly thicker than aluminum foil). The diameter of the beads

– in this case, about eight microns – determines the wavelength of the radiation emitted. In addition, the back of the film is coated with silver to reflect incident sunlight and further reduce heat buildup.

The net effect is 93 watts per square meter of cooling when exposed to direct sunlight, and even better at night. According to estimates, 20 square meters of the film placed on the roof of an average home would be adequate to maintain an inside temperature of 68 degrees Fahrenheit (20 degrees Celsius) on a typical hot summer day.

Besides cooling homes and other buildings, the film could provide supplementary cooling for thermoelectric power plants, where large amounts of water and electricity are needed to maintain equipment temperatures within a certain range. It may also be used to improve the efficiency of solar panels, which can overheat, reducing their generating capacity. The developers plan to build a 200-square meter prototype “cooling farm” this year to further evaluate the commercial applications.

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## Artificial Eye

Researchers are looking to the human eye to



address some of the drawbacks of existing imaging systems.

By mimicking the way in which mammals process visual information, they have developed a new class of devices, known as neuromorphic sensors, that can dramatically reduce the power demands and processing needs of cameras for surveillance and other uses.

Conventional cameras capture video by storing a series of frames. Whether the scene is relatively static or dynamically changing, the same amount of data is collected.

Neuromorphic sensors, on the other hand, sample different parts of the scene at different rates depending on changes in light conditions and are not restricted to a fixed frame rate.

This frees up processing power and allows the fastest-moving sections to be captured in greater detail.

The reduced energy required to run such sensors will make them useful for applications where it's impractical to recharge a battery, including surveillance drones and retinal implants.

Future research will focus on how the dynamic visual sensors could be used to share high-quality images between machines or upload them to the cloud.

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# Headset-Free Augmented Reality

A new projector that superimposes images and animations onto actual objects allows viewers to experience augmented reality (AR) without the need for bulky glasses. Called Lightform, it combines a camera, computer and video projector with a technique called projection mapping to turn any surface into a projection screen.

Using depth sensors, the surface is scanned to map its shape, then the lighting effects are tailored to fit. The control app also periodically rescans the projection area and recalibrates the graphics if anything has moved. The system can be used with existing projectors of any size depending on the application. And since no headset is required, several people can share the AR experience simultaneously.

But there are some drawbacks to not having a headset. For example, there is no haptic feedback or motion tracking to give the illusion of being able to touch and manipulate the environment. It can be difficult to view in bright lighting conditions, and if anything comes between the projector and the projection surface, it will create shadows. But at a price that's similar to that of a standard laptop, there will undoubtedly be many applications for the immersive technology, from art to entertainment to education to everyday living.

*For information: Lightform, 1177 Howard Street, San Francisco, CA 94103; email: [hello@lightform.com](mailto:hello@lightform.com); website: <https://lightform.com/>*



# Electronic Tattoos

Imagine being able to control your smartphone simply by touching your skin. That's the idea behind temporary electronic tattoos that can turn body features into touch-sensitive buttons.

A team of researchers developed the innovative controls by printing electrodes and wires on paper using conductive ink, then transferring them onto the skin with water. Push on a freckle and your phone turns on, or swipe a finger across your knuckles to adjust the volume.

The tattoos will also respond to changes in skin elasticity, as occurs with bending or stretching, so one button may perform several different functions depending on whether your fingers are extended or curled up.

The addition of electroluminescent pigments even allows the ink to glow when current passes through it, enabling your app icons to light up when you receive a call or notification.

So far, the tattoos have only been tested connected to a computer, but the team plans to link them with an Android smartphone in the near future.

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# Virtual-Style Assistant

Since Amazon released its intelligent personal assistant voice service – Alexa – and companion Echo devices, nearly 5,000 apps have become available, allowing users to listen to music, check on the weather, review their to-do lists, control their smart home or perform a whole array of functions that help people manage their everyday lives.

Now, a new version of Echo has been developed that will help you look your best.

Hands-free, voice-activated “Echo Look” lets you take full-length, 360-degree photos or short videos of your daily wardrobe to create your own personal “lookbook.” Built-in LED lighting and a depth-sensing camera allow you to blur backgrounds and highlight your garments, and “Style Check” service offers expert advice based on machine-learning algorithms, fit, color, style and current trends.

Like Alexa, Echo Look is a cloud-based system that gets smarter with time, so it can even recommend new brands and styles based on your fashion preferences. It is currently available by invitation only.

For information: Amazon; website: [https://www.amazon.com/dp/B0186JAEWK?tag=mh0b-20&hvadid=77790466584871&hvqmt=e&hvbmt=be&hvdev=c&ref=pd\\_sl\\_iwlt1gvek\\_e](https://www.amazon.com/dp/B0186JAEWK?tag=mh0b-20&hvadid=77790466584871&hvqmt=e&hvbmt=be&hvdev=c&ref=pd_sl_iwlt1gvek_e)

# Avoiding Organizational Complacency

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in an organization and in every function, including sales. You've always made your sales goals by sticking with what works. Changing that may seem like a risky proposition.

## Complacency's Problems

One of the most immediate problems with complacency is that it can give competitors the opportunity to either catch up or jump ahead of you. The skills you've used so far may have allowed you to leap far ahead of others in the products and services you offer, but that environment is anything but static. Sit on your hands, and you're opening a window for both old and new competitors to leap ahead of you, and in this new world of inexpensive disruptive technology, that is getting easier to do every day.

There are other significant pitfalls to complacency, as this article details. They include:

- **Unpredictability.** Complacency can cause you to hesitate. The more you or your organization hesitates, the more you compromise your capacity to influence your environment. This correlates with my principle regarding disruption—either you are the force causing disruption or you're the one being impacted by it, often beyond any sort of control on your part. In effect, that can place your future in someone else's hands.
- **Reactive thinking.** Rather than thinking and acting in an anticipatory manner, complacency lures you into a feeling of being ahead when actually, you're falling behind faster. That, in turn, keeps you locked into a reactive mode. As I point out in my Anticipatory Organization Model, agility and the ability to react are important attributes, but the more you're forced to react to accelerating change, the more you're forced to *continue* to react.

To take this discussion a bit further, one of the cornerstones of my Anticipatory Organization Model is what I identify as the Three Digital Accelerators—computing power, bandwidth and digital storage. These three change accelerators have been experiencing exponential growth for decades and are now at a unique tipping point that is driving true transformational change. They have brought us, in effect, to a tipping point that will redefine and reinvent products, services, processes and organizational models. And if your organization is complacent and looking at the future with what amounts to a rearview mirror perspective, you're going to be left behind.

Or, as I put it, you can only coast uphill so far before gravity takes over.

## Combat Complacency: Start With Futureview

How do you work to counter the dangers of complacency? Start by returning your attention to tomorrow. After all, that is where you will spend the rest of your future.

A key concept of my Anticipatory Organization Model is a principle I refer to as Futureview®. In essence, this is how you and your organization see the future. Is it a positive one ripe with opportunities or a future merely characterized by disruption and frustrating missteps? Is your Futureview one of lamenting the good old days that are behind you or one where wonderful possibilities and opportunities are ahead of you?

Further, is your view of the future of one that's likely to occur or one teetering on extinction?

That's more than just an attitude—it's a very real dynamic that, to a large degree, defines the future you're going to experience. Phrased another way, your Futureview will define the future you. It starts now: if your Futureview is based on the forces that are shaping the future and the abundant opportunities they represent, it will tend to be upbeat and optimistic, and your actions in the present will reflect that outlook. That also connects with my principle of Hard Trends—those events in the future we know are going to take place.



An anticipatory organization that has a positive Futureview that derives from the confidence of knowing the Hard Trends that will happen and can see the related opportunities they represent will be far less likely to slip into complacency.

Just as valuable, a positive Futureview can be very pervasive. If an organization's leaders have a positive Futureview, that naturally spreads to others around them. They also see a bright future and want to come along for the ride. They're more excited and, as a result, less complacent.

Moreover, a positive Futureview impacts clients and customers with whom you work outside of your organization. Their view of doing business with you now and in the future is positive. Encouraged by an optimistic attitude that can spur innovations at all levels, your products and services also reflect an upbeat focus on tomorrow—again, the stark opposite of complacency.

The sort of people who make up your organization can also be pivotal in the fight against complacency. For one thing, if yours is an organization characterized by an anticipatory mind-set, you've likely hired people who share—or are willing to adopt—that attitude and approach. Those aren't the sorts of people who are particularly vulnerable to settling for complacency. They know that, once you adopt an anticipatory mind-set, you're well aware of the dangers of failing to act on new opportunities as they appear.

That said, encourage your people to foster a commitment to innovation at every level and feel comfortable in expressing their concern about a feeling of complacency—or, for that matter, any way of thinking or acting that is focused on protecting and defending the status quo. After all, the new status quo is rapid change.

### **To Fight Complacency, Reward The Right Behavior**

One common stumbling block I see in the companies and organizations with which I work is a system of rewards and compensation that keeps behaviors locked in the past. For instance, a

company may wish to shift from selling things to solving customer problems as a trusted advisor, but if it is still rewarding the old behaviors, nothing will change.

The same sort of disconnect can lead to complacency. For example, you may wish to encourage employees to actively watch for predictable problems and solve them before they arise—is there a program in place to reward those who eliminate problems, as well as their cost in both time and money, before they occur? By offering attractive rewards and benefits for efforts that combat complacency—in this case, presolving predictable problems—you're naturally boosting your company's ability to resist complacency.

Benchmarks can also be another form of misdirected behavior in a world driven by exponential change. By setting a best practice benchmark with regard to a certain product or process goal, you're saying, in effect, "Copying the leader is good enough." Unfortunately, you also risk falling further behind, as the company or organization you used in setting the best proactive benchmark has already moved on. Far better to benchmark the future best practice so you can jump ahead before it does.

Additionally, don't overlook the value of investing in the people within your organization. By that, I mean providing training and education opportunities with which employees can further both their personal and professional growth. That can also better the odds against falling into a sense of complacency, as motivated employees who take the time and effort to better themselves in a variety of ways aren't likely to settle for the status quo—they'll want to keep themselves and your organization moving forward.

All things considered, complacency isn't the worst of all organizational sins. But it is still a very real danger. Maintaining an anticipatory mind-set—and encouraging those around you to do the same—can head off the kind of complacency that takes hold and affords your competitors the opportunity to bolt past you into the future.

# Burrus Research®

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