

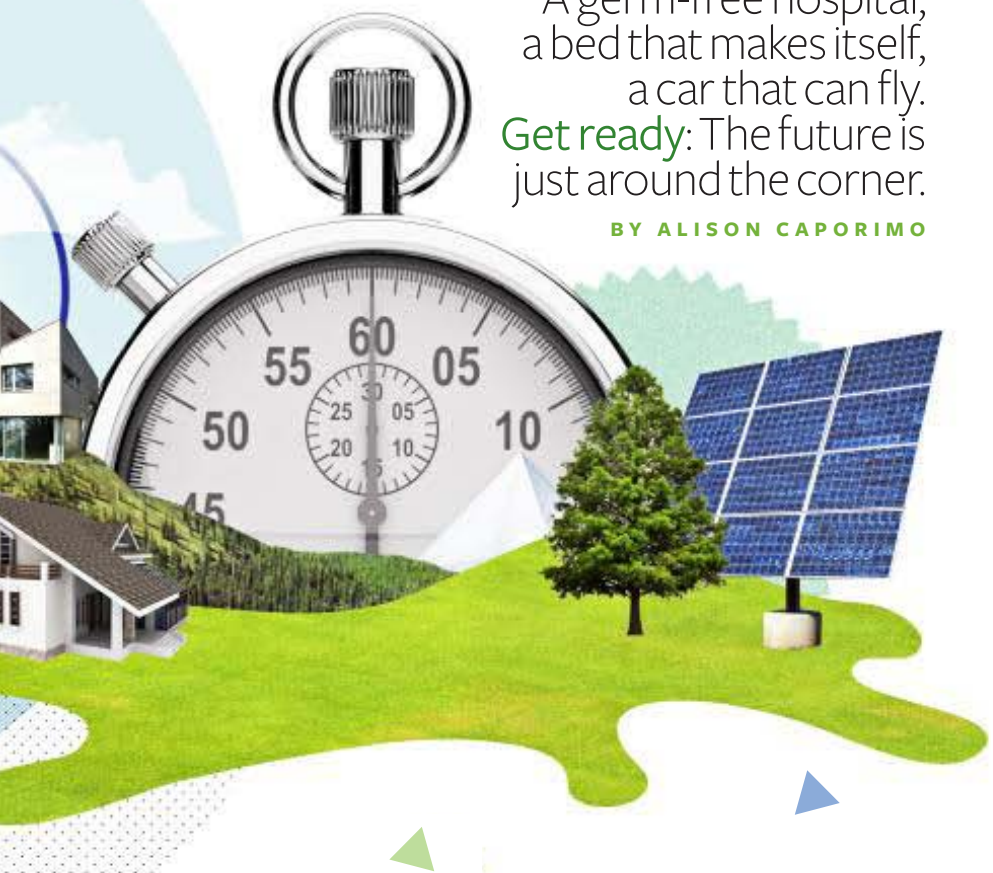
Innovation



TOMORROW TOWN

A germ-free hospital,
a bed that makes itself,
a car that can fly.
Get ready: The future is
just around the corner.

BY ALISON CAPORIMO



YOUR

NEIGH

Wherever you go, wonderful and wacky inventions will transform your everyday routine.

ON THE ROAD

Smart streets make your ride much easier, thanks to Dutch designer Daan Roosegaarde. Dynamic paint (that normally blends into the asphalt) signals road conditions by responding to temperature fluctuations: When a surface is cold and slippery, drivers see glowing images of ice crystals. And a solar-charged photoluminescent line paint glows in the dark at night.

AT THE MOVIES

The entertainment potential of 3-D experiences, like the recent virtual “performances” by the late Frank Sinatra and Tupac Shakur, inspired director Martin Scorsese to claim, “If everything moves along and there’s no major catastrophe, we’re headed toward holograms.” He described an experience during which 3-D images of actors would walk through the audience, transforming a theater into a live movie set.

OUT TO EAT

No more waiting for the waiter. The Presto tablet features animated touch screens that allow restaurant diners to browse the menu, learn about specials, order food, and pay the check.

IN THE DRIVEWAY

Taking flight in the sky near you, Terrafugia’s \$279,000 flying car reaches top speeds of 115 mph and features foldable wings, so the two-seater can fit in a garage. Over 100 people have put down \$10,000 to get on the waiting list for the sci-fi ride, which requires a pilot’s license to operate. (Terrafugia expects to start selling models in about a year.)

IN THE HOSPITAL

Germs can’t make you sick if they don’t stick. A team of Harvard University researchers have created a liquid coating so slippery that bacteria slide right off. Covering catheters and other hospital equipment with the material could reduce the risk of infection.

ON YOUR LAWN

Who needs a green thumb? Toro’s wireless moisture sensors turn on your sprinkler system when they detect a dry lawn. An MIT lab is even making sensors that track insect infestations and mineral deficiencies in soil.

BORHOOD



YOUR HOME



The Jetsons' sci-fi pad comes up short when compared with your new high-tech home. **Radical upgrades** in every room will change how you live.

SELF-REPAIRING COMPUTER

Dropping a laptop doesn't have to be a disaster anymore. A new substance developed at the University of Illinois revives a dead circuit in less than a millisecond, even if it snaps in half. When a wire splits, tiny liquid-metal capsules break open and repair the damage. The result: a computer that can fix itself.

COLOR-CODED GRIME

Cleaning the bathroom is slightly more tolerable and almost interesting with an advanced household spray that turns germ-infested areas different colors depending on the type of grime. When the super spray hits a surface, it binds to the pathogens present, according to Harvard researchers. If the area turns orange, for example, your quarry is that nasty *E. coli*.

BED THAT MAKES ITSELF

Thanks to the Spanish furniture company OHEA, ten-year-olds will have to find a new way to earn their allowances. The smart bed is a lot like your average bed—until you tap a remote and mechanical arms straighten out sheets and pillows in less than a minute. To keep you safe as you sleep, a mechanism prevents the magical mattress from making itself while you're still in dreamland.

PALATABLE PACKAGES

Eat your candy, wrapper and all. Harvard bioengineer David Edwards is creating edible shell-like containers called Wikicells. In the works: yogurt encased in a strawberry pouch.

WATERLESS WASHING

You can't flood the laundry room if you clean your clothes sans H₂O. Conceived by industrial designer Elie Ahoivi, the waterless Orbit washing machine blasts clothing with dry ice to remove dirt and produce clean, dry clothes in a matter of minutes.

WEIGHT-WATCHING SILVERWARE

Dieting is easier when your fork is there for moral support. The HAPIfork monitors your food intake and vibrates to indicate that you should slow down or stop eating. The \$99 utensil also works with an app to document your healthy-eating progress.

YOU

Superhero status is just one step away when you enhance your mind and body with these cool breakthroughs.

VIRTUAL VISION

“Augmented reality” contact lenses are tiny computer screens that sit on your eyeballs and provide a media experience only you can see. Because they project images solely within your field of vision, these lenses allow you to play video games, watch 3-D movies, and catch up on TV news anywhere. Though you will have to wait until 2015 to get super sight, the U.S. military is already experimenting with Innovega’s iOptik lenses as a way for troops to browse data-rich maps and view attack plans in the blink of an eye.

SMART SKIN

Innovation goes skin-deep with epidermal electronics. These postage stamp-size swatches of epidermis-like synthetic material track heart and brain activity and can be applied like a temporary tattoo. Created by John Rogers of the University of Illinois, Urbana-Champaign, the “skin” can replace bulky heart monitors and record a person’s vital signs without uncomfortable gel and tape.





TRICKED-OUT TRAINERS

Run your shoes into the ground and your sports performance could fall flat. A new breed of footwear—which Apple is trying to patent—features sensors implanted in the heels to inform wearers that their gear needs replacing. When synced with a companion app, the footwear also monitors weight distribution and determines how light athletes are on their feet.

CAVITY COP

Skip your dentist appointment and your chompers will know. Scientists at Princeton and Tufts are working on a tiny tooth sensor that alerts your dentist when it detects plaque buildup, cavities, or infection. The sensor has even been able to identify bacteria in saliva linked to stomach ulcers and cancers.

FLEXIBLE PHONES

South Korean scientists are developing bendable lithium-ion batteries that eliminate the need for hard, breakable cases—so if you drop your phone, it will bounce instead of shatter.

EYEBALL ACCESS

Ditch your weak “1234” computer password: Oleg Komogortsev, a computer scientist at Texas State University–San Marcos, is creating a log-in system that identifies people by the way their eyes flicker while looking at a computer screen. His big discovery: No two people have the same gaze pattern. In other words, your stare could be your strongest security measure.

