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Many of us spend several hours of the day face-down into our laptops. We navigate our cities and communities from the control panels of our smartphones. And at the end of the day, we cozy up with our flat screens or e-readers.

Although some people fight mankind’s preoccupation with and dependency on screen technology, it’s safe to say, the jig is up. We’re hooked.

And today’s major cities have begun not only to accept our gadget obsession, but to encourage it.

It doesn’t matter where you travel, these days. Where there’s electricity, there will be screens — waiting, encouraging and urging your interaction. Head out on the highway (so to speak) and you’ll encounter digital billboards, perfectly alternating advertisements to the flow of traffic. Take a brave trip to New York City’s Times Square, where you can interact with 40-foot-tall augmented reality LED displays. Hop in a TV-outfitted taxi and head out shopping, where store clerks await with mobile credit card readers attached to their iPads.

In fact, digital marketing strategies prove so successful that cities are integrating like-minded technology into their very infrastructures, whether through information services, artistic programs or transportation improvements.

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No matter how long you’ve lived in a community, it’s next to impossible to memorize every bus route, subway stop and train schedule. And let’s not even get started on traffic detours.

Companies like Urbanscale aim to seamlessly integrate city services and information into interactive displays throughout cities. In partnership with Nordkapp, Urbanscale developed the concept for Urbanflow touchscreen stations, which appear like giant smartphones and beckon city dwellers and tourists with targeted city maps. But they’re far from limited to walking directions alone; the stations share hyperlocal services and ambient data.
such as traffic density and air quality reports. Local experts can even contribute their own input and knowledge of the surrounding area, making for a rich digital stockpile of up-to-date information.

While solutions like Urbanflow provide information for a wide range of location-specific issues, many cities have opted for a more targeted approach, specifically, for improvements in transportation.

Developed by MIT SENSEable City Lab, EyeStop represents the cutting edge in “smart urban furniture.” The concept looks like a futuristic bus stop, complete with efficient and easy to read e-ink message boards, weather alerts and even email access. Powered by sunlight, the unit’s environmental sensors would also detect air pollutants and weather changes. Plus, the EyeStop glows at different intensities as nearby buses approach.

Prudence Robinson, partner strategist and research fellow at SENSEable City Lab, explains why the team chose certain design features for the EyeStop. “Parametric design has been foreseen so that every shelter perfectly fits its site,” she says, “maximizing sunlight exposure for photovoltaic cells and providing adequate shading to the users.”

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While some cities are implementing completely new and innovative systems, others are looking to upgrade to intuitive tablet technology already ubiquitous in everyday life. New York City launched a pilot program to replace 250 nearly obsolete pay phones with tablet screens that provide information on local attractions, city maps, public transit updates and even Wi-Fi.
And mobile credit card payment service Square proposed that the New York City Taxi & Limousine Commission embed iPads into 30 of its cabs. Not surprisingly, the tablets would also be equipped with Square technology, which would enable passengers to pay with credit card, sign the screen with their fingers and even email the receipt to themselves.

But screen technology doesn’t always necessitate strict utility. A huge priority for many cities is public art that demonstrates aestheticism and usefulness.

Take MIT’s Light Bridge Project, composed of Panasonic Electric Works’ NaPiOn infrared motion/proximity sensors. The sensors activate colorful LED lights that interact with pedestrian movement. Depending on the type and amount of traffic, the lights alternate between different programs of patterns and colors, using proximity sensors, cameras, buttons, microphones and mobile phones. The project’s aim is to marry traditional lighting concepts with reactive urban screen solutions.

Increasingly, artists are also finding inspiration in digital. At this year’s Philadelphia International Flower Show, creative media agency Klip Collective partnered with GMR Design to design and build an ethereal “wave wall,” essentially a giant sloping dome of screens. On it, they projected a “calming display of undulating projection waves of sea creatures and flower blossoms.” Nearby, a Hawaiian temple featured multidimensional video-mapped animations that taught curious visitors about Pele, Hawaii’s female fire god.
But what happens when an artist requires a colossal canvas? (No, we’re not talking murals.) Increasingly, multimedia artists are turning to available city infrastructure to project their visions. And they’re not thinking small, that’s for sure.

In New York City, artists are using video mapping technology to project multidimensional scenes and characters onto skyscrapers, often using nothing more than a laptop, a portable generator and a projector. When passers-by spot giant dancing monkeys on the side of a wall, they instantly react — and sometimes interact, mimicking the animated movements. Furthermore, the contours and crannies of a building are far from a hindrance — they actually contribute to the 3D effect, as if an image were leaping off the “screen.”

Video mapping and projection technology are mobilizing large groups of people to get to know their surroundings. Some installations even encourage spectators to interact with these large-scale screens as if they were games. People in Lyon, France, celebrate the Festival of Lights with an installation called “The Urban Flipper,” a type of digital graffiti, which when projected on the side of a theater, creates a giant, interactive game of pinball.
In the Netherlands, 3D mapping company NuFormer debuted what it calls “mocapping,” a combination of 3D video mapping projection and live motion capture technology. It projects animated light onto a rectangular building, effectively transforming the structure into a futuristic spaceship-like scene. What’s more, the character in the scene asked questions of and responded to spectators. Thus, each performance was different.

Some video mapping art even seeks to change the perception of architecture itself, as if a building were made of hundreds of moving television screens. The following video shows how design collective URBANSCREEN created optical illusions in the “sails” of the Sydney Opera House. Motion graphics are projected onto the white surfaces, which dimple with movement like actual sails. It’s the festival’s most public event, inspiring attendees and visitors citywide.
Whether to inspire or educate, cities around the world are implementing smart screens for tech-eager residents. Hopefully, they’ll encourage us to take a breather from our self-isolating smartphones and tablets for a moment to interact with the communities and residents around us.

Have you encountered public screens, whether introduced by city governments or artists? How is your city welcoming the latest in responsive screen technology?

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