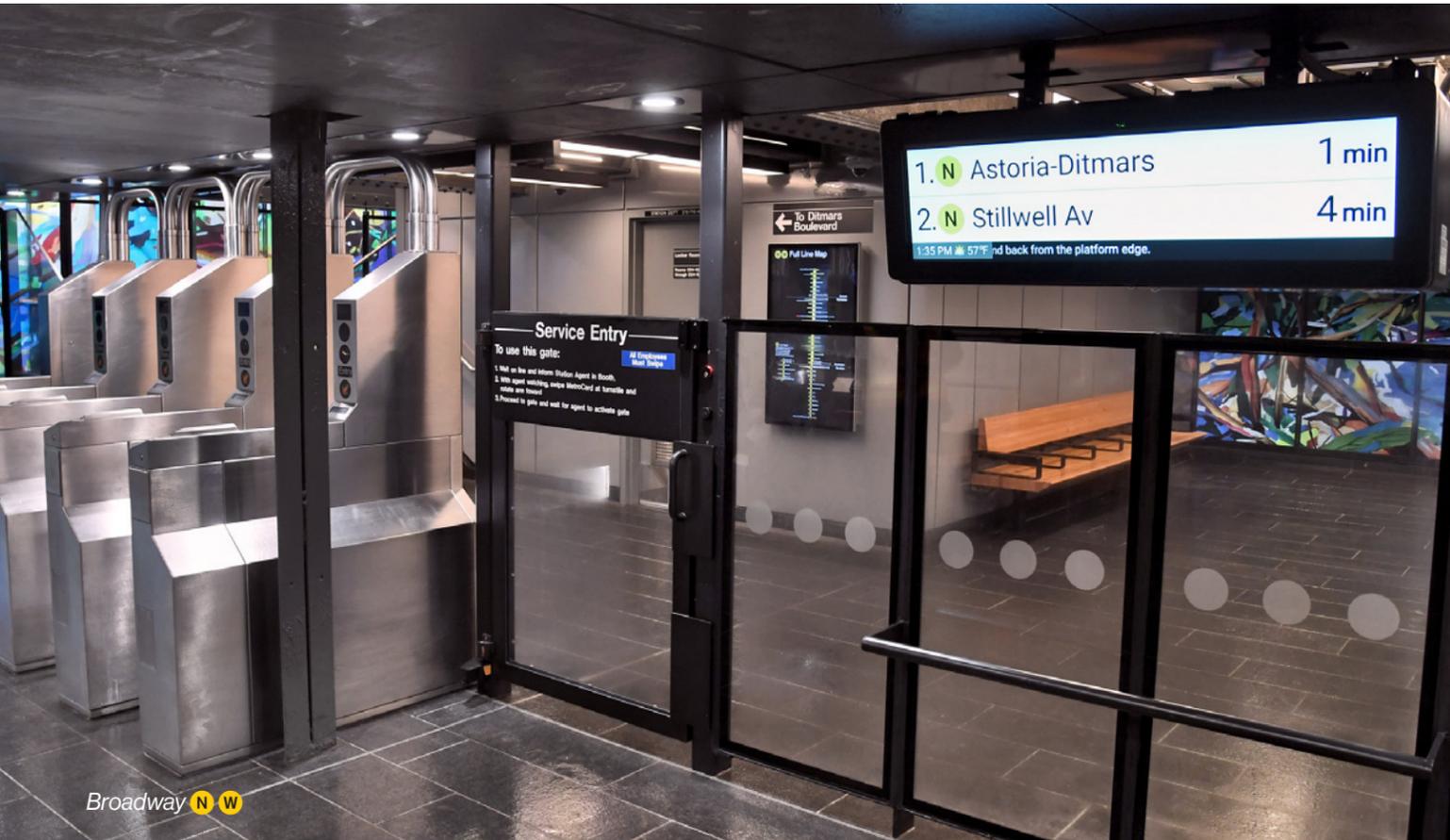


Public Address and Customer Information System Case Study

Broadway **N** **W**

As you're riding the subway, you've likely encountered a variety of speakers, signs, and screens in our stations and on our platforms. These components are part of our Public Address and Customer Information System (we call this PA/CIS), and they help our employees share important information with passengers on service changes and critical emergency instructions. They also help us provide riders with real-time train arrival and departure times and help passengers navigate the subway system and make informed decisions about their travel.

When we installed the first public address systems in our stations in the early 20th century, they were rudimentary compared to today's

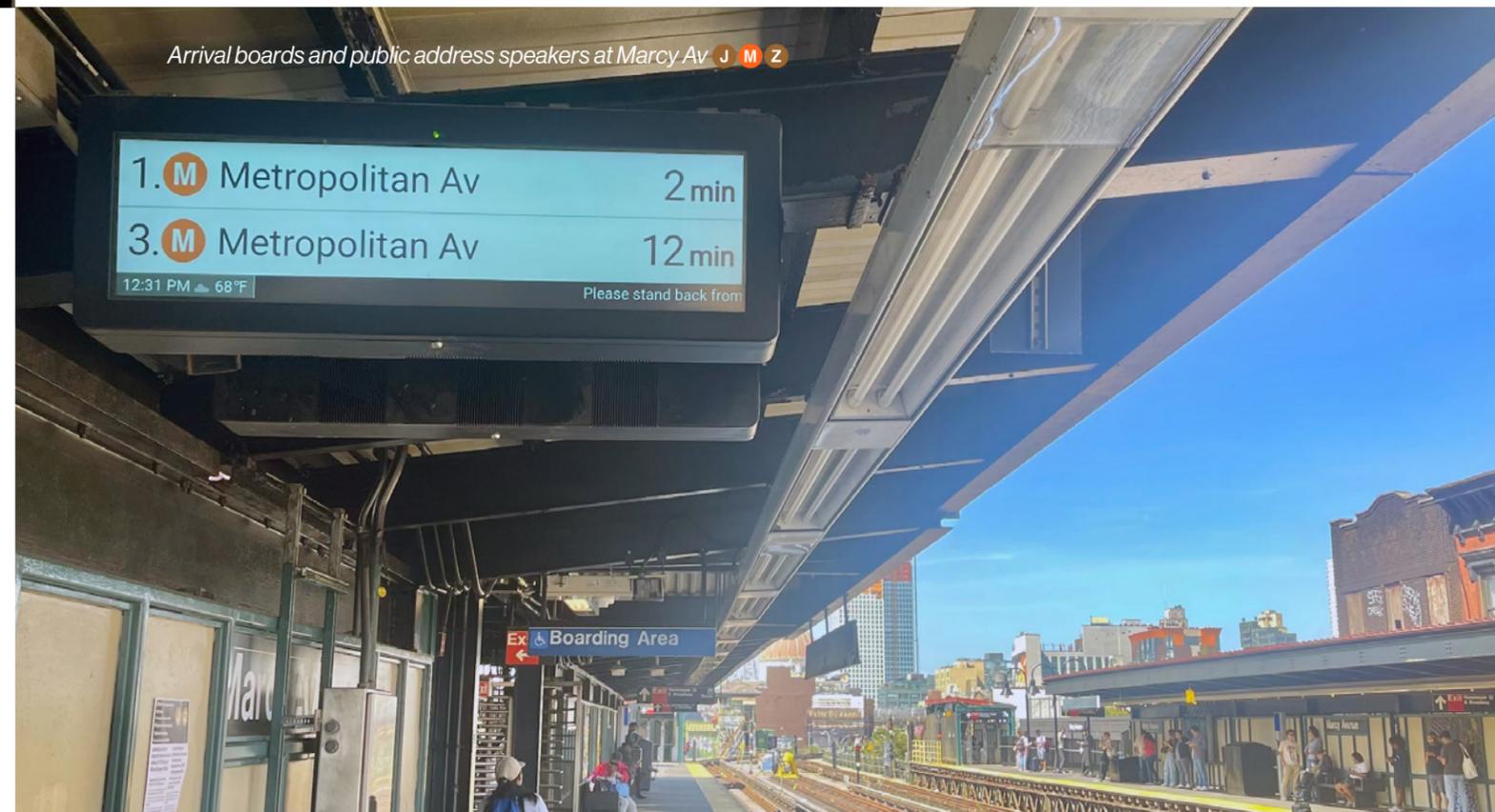
standards. The early systems relied on basic amplification and loudspeakers, offering limited clarity and range in announcements. Without digital displays, passengers depended solely on audible announcements, which posed challenges for those with hearing impairments or in noisy stations. Technology has changed a lot since then and we've made a lot of updates over the years but we haven't been updating our stations consistently. In some stations, we still operate technology that became obsolete decades ago, while others have more modern PA/CIS setups with advanced audio equipment for clearer announcements and digital displays for real-time updates and station navigation aids.

All of this information comes from what we call the Rail Control Center (RCC), a single location which serves as the central command for all trains. The RCC oversees operations of our trains and handles routing and dispatching, train tracking, and manages disruptions or delays that may occur. In emergencies or unexpected issues, they make quick decisions to maintain safety and efficiency. In an ideal scenario, The RCC would be able to quickly and automatically send information on service changes and disruptions to passengers waiting in stations, but this is not the case at a lot of our stations.

Right now, we're effectively operating at least three different generations of PA/CIS technology in our stations. 76 subway stations still rely on communications infrastructure that has not been updated in 40 years. These stations do not have a direct connection to the RCC and customers who use these stations receive announcements

from station agents or nearby announcers who receive their information second-hand through verbal contact with workers at the RCC. This game of telephone leads to poor and delayed information to our customers and worse, these announcements are not at all connected to any of the station countdown clocks or visual signage infrastructure, which can result in irrelevant or even conflicting information.

We're working to bring all of our stations up to the newest generation of PA/CIS so that riders at all stations can hear and see announcements directly from the RCC, ensuring all riders get the most up-to-date information from the source in real time.

Arrival boards and public address speakers at Marcy Av **J** **M** **Z**