

The ConnectedEconomy™

Monthly Report

The ConnectedEconomy™ Monthly Report benchmarks the digital transformation of consumers across the 10 activities that represent their day-to-day lives. Each month, PYMNTS surveys a population-based sample of roughly 2,500 U.S. consumers to measure the use and adoption of digital tools for how they live, work, shop, eat (how and where they buy food), travel, bank, communicate, stay well, have fun and pay/are paid. This work builds on 15 studies and the more than 21,000 consumers PYMNTS has surveyed since March 6, 2020, and represents the largest and most consistent data set tracking the digital shift accelerated by the pandemic.

PYMNTS
WHAT'S NEXT
IN PAYMENTS: **THE**
CONNECTED
ECONOMY™

PYMNTS is where the best minds and the best content meet on the web to learn about “What’s Next” in payments and commerce. Our interactive platform is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of this dynamic sector and make news. Our data and analytics team includes economists, data scientists and industry analysts who work with companies to measure and quantify the innovation that is at the cutting edge of this new world.



THE
EMPLOYMENT
EFFECT

INTRODUCTION

TABLE OF CONTENTS

INTRODUCTION	03
PART I:	08
Employment drives digital activity	
PART II:	14
Connected home improvement	
METHODOLOGY	24

Employment is a hot topic in the United States. Headlines from nearly every news outlet proclaim the country to be in the midst of a labor shortage in September, with businesses large and small struggling to fill their job openings.

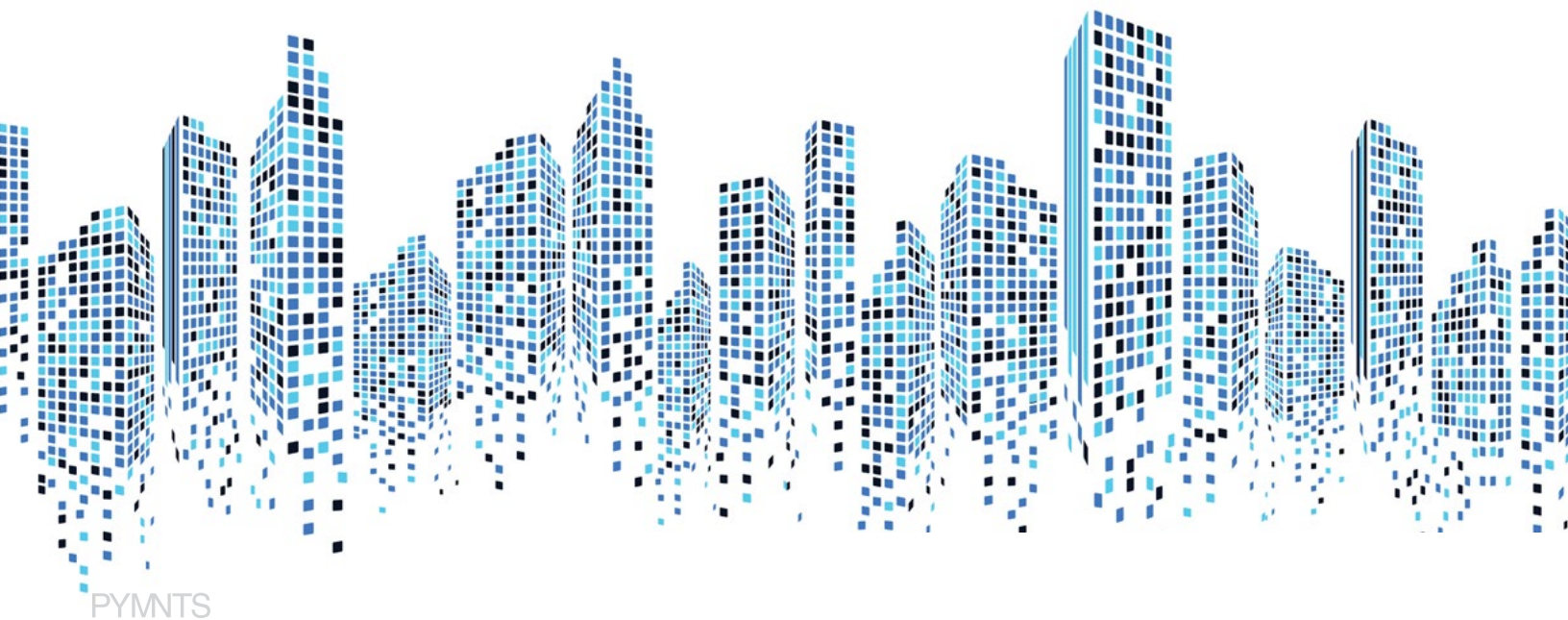
It's a given that having more consumers with paying jobs makes the economy stronger. Now, PYMNTS has uncovered evidence that employment may also be key to driving the economy's digital transformation.

PYMNTS has been observing the growth of the digital economy in the U.S. every month since November 2021. Not only has consumers' participation increased by 14% in that time, but our latest research shows that since November 2021, that growth has been driven almost exclusively by employed consumers, whose use of digital technologies has increased by 16%. Meanwhile, unemployed consumers' use of the very same technologies has grown by less than half as much in the same timeframe. The greatest increase has been consumers' use of connected home technologies.

What is it about employment that tends to drive consumers to engage in more digital activities? Is it having a steady source of income and the ability to purchase and use connected devices? Or is it that employed consumers with busy schedules are more eager to use those devices to better manage their time, money and calendars?

In the October edition of The ConnectedEconomy™ Monthly report, PYMNTS goes back to the field to gain firsthand insight into how consumers across the country integrate digital tools into their everyday lives as employment levels rise. We surveyed a census-balanced panel of 3,212 consumers to find out how this increase coincides with a surge in digital healthcare technology and connected home devices, including voice assistants and automated environmental controls.

This is what we learned.

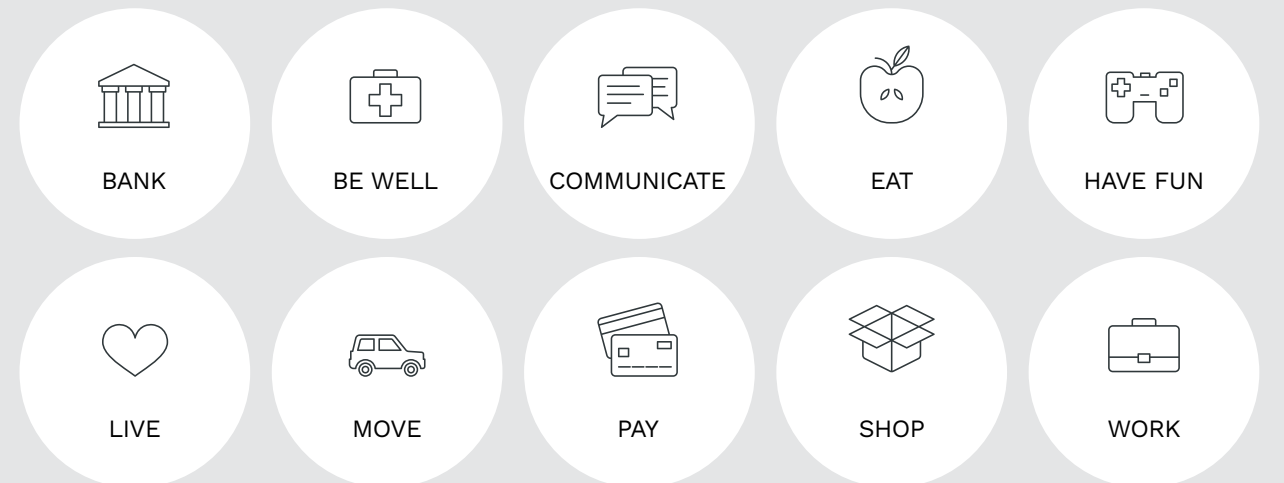


THE 10 PILLARS

of the ConnectedEconomy™

Benchmarking consumers' digital behaviors and new routines has been a consistent part of PYMNTS' research since 2016 — well before the pandemic accelerated the shift to digital — but the transition from an app-based world to an ecosystem-driven one was abundantly clear.

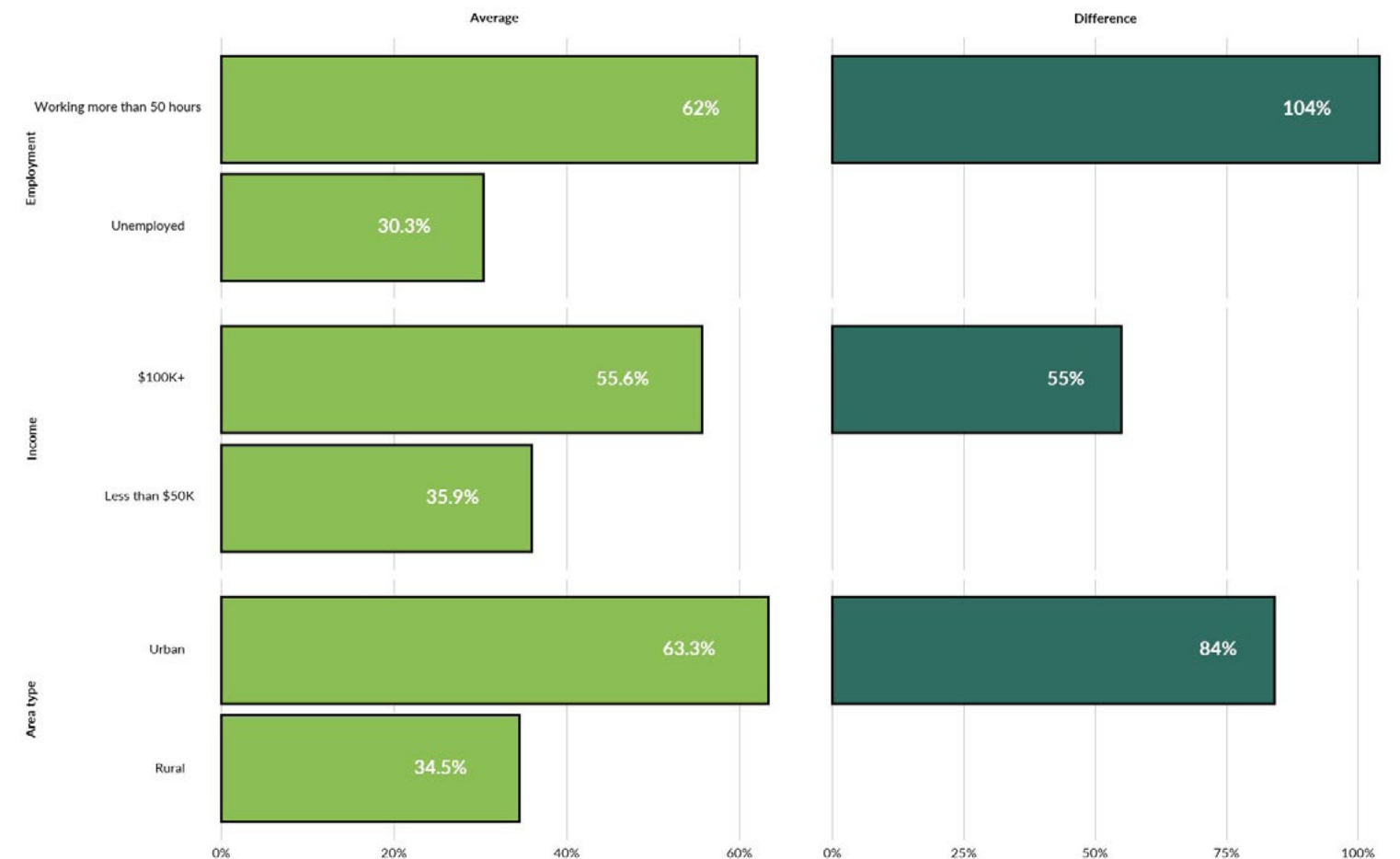
PYMNTS accelerated its research efforts in early March 2020, and it now has more observations documenting the shift to digital since the start of the pandemic. PYMNTS' landmark study of 15,000 U.S. consumers, published in June 2021, was intended to further document consumers' digital habits and routines as well as their interest in participating in connected ecosystems to streamline the management of their digital lives.



THE EMPLOYMENT EFFECT

Throughout the course of our research, we uncovered countless demographic and economic factors that predict consumers' level of participation in the connected economy, and employment is one of the most telling. In September 2022, employed consumers were 80% more likely than unemployed consumers to engage in any type of digital activity. This means employment is a strong indicator of digital engagement. It also means that as employment rates rise, so does consumers' propensity to browse, transact, pay and live online — which is what our data shows has been happening throughout the past four months.

FIGURE 1:
HOW EMPLOYMENT CORRELATES TO DIGITAL PARTICIPATION
 Average participation rates across activities in the ConnectedEconomy™, by employment status, income and population density, as well as the difference in participation between select population subsets



Source: PYMNTS
 The ConnectedEconomy™ Monthly Report, October 2022
 N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022

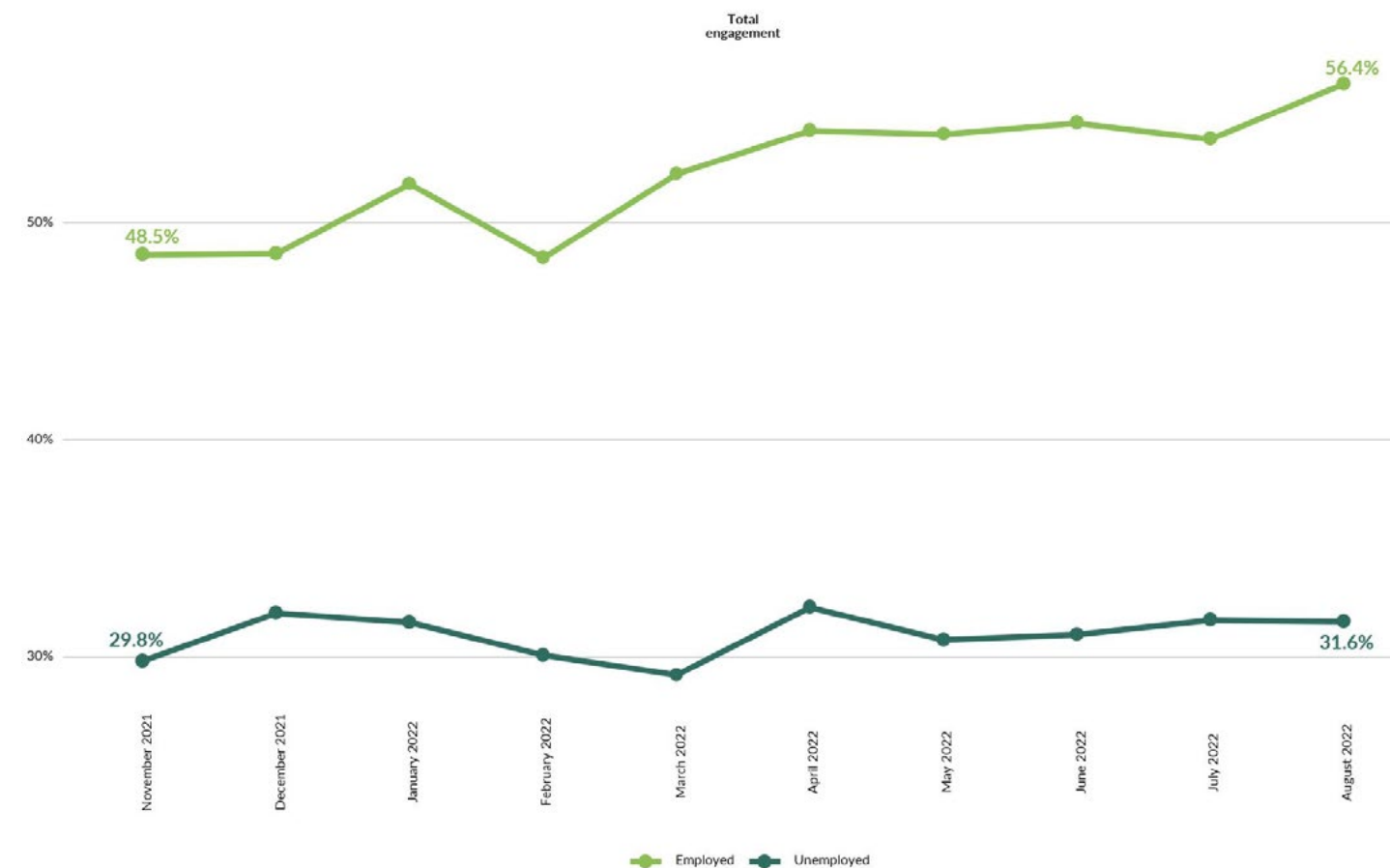
PART I:
Employment drives digital activity

Employment is a major driver of digital activity in the U.S. Consumers who are employed are almost twice as likely as unemployed consumers to engage in any type of digital activity — regardless of whether or not they are transacting.

Employed consumers reported a 56% rate of participation in the ConnectedEconomy™ in September, while unemployed consumers were involved in just 32% of activities, on average. Moreover, the distance between these two engagement levels has been slowly but steadily increasing ever since November 2021. This signals not only that employed consumers are nearly twice as engaged in the ConnectedEconomy™ as unemployed consumers overall, but also that employment is becoming an even greater predictor of digital activity over time.

FIGURE 2:
PARTICIPATION IN THE CONNECTEDECONOMY™ AMONG EMPLOYED AND UNEMPLOYED CONSUMERS

Overall participation in the 10 pillars of the ConnectedEconomy™ over time, by employment status



Source: PYMNTS
 The ConnectedEconomy™ Monthly Report, October 2022
 N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022



PART I:

Employment drives digital activity

A strong labor market drove digital participation across the board.

Unemployment fell from 6.7% to 3.7% between November and August, coinciding with a 14% increase in overall digital engagement.

Consumers were involved in 45% of the activities of the ConnectedEconomy™ on average in August. This means the average consumer participated in nearly half of the 67 activities we track. This is the highest level of engagement we have seen since November 2021.

This spike in digital engagement — particularly between July and August 2022 — coincides with a massive uptick in employment levels. The share of employed consumers in the U.S. spiked in August, while engagement increased by 5%. This simultaneous uptick is not anomalous — levels of employment and digital engagement in the U.S. have been echoing each other ever since we began tracking them monthly in November 2021.

FIGURE 3:
THE EVOLUTION OF DIGITAL PARTICIPATION OVER TIME
Overall participation in the ConnectedEconomy™ over time



Source: PYMNTS
The ConnectedEconomy™ Monthly Report, October 2022
N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022

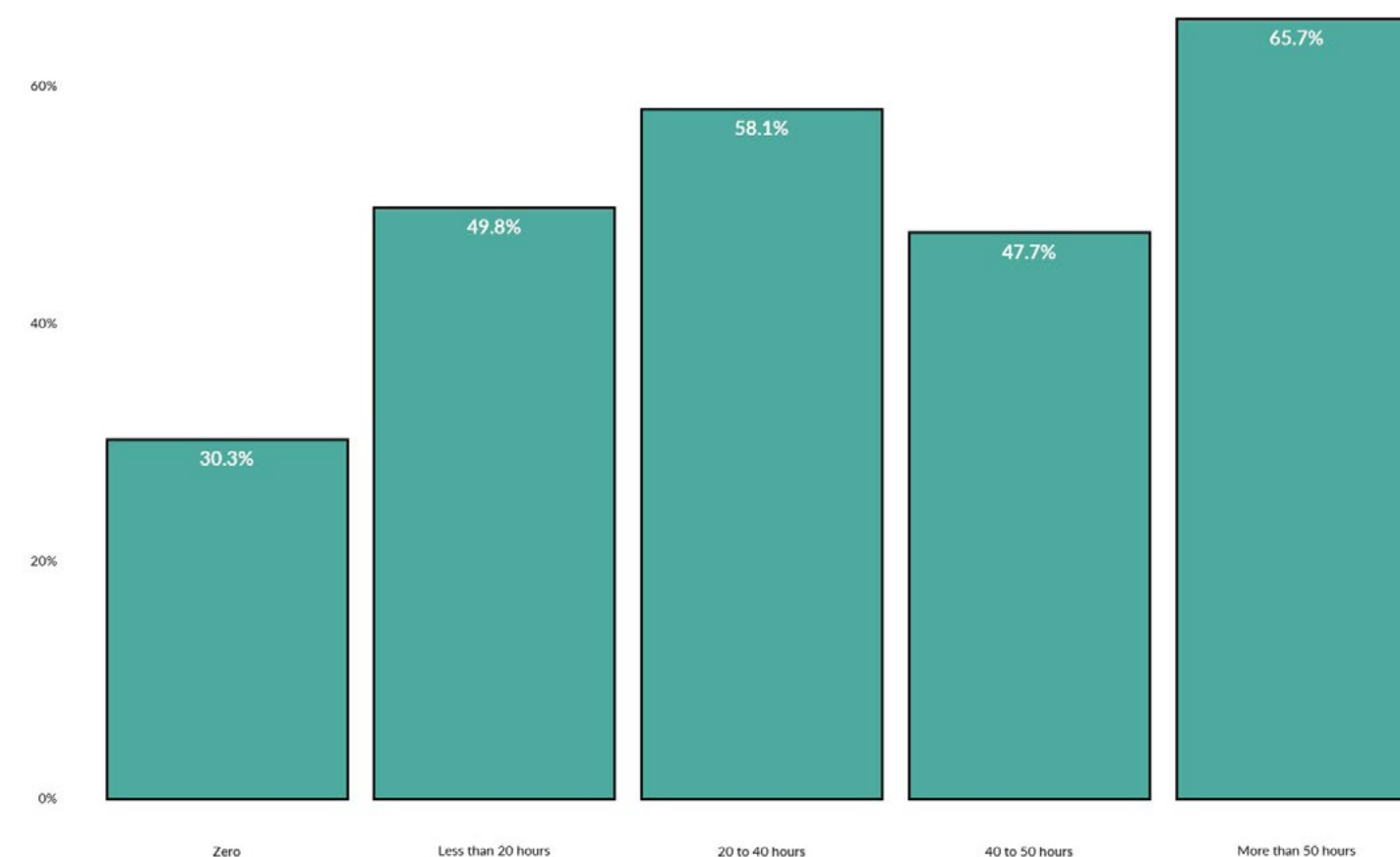
PART I:

Employment drives digital activity

The longer hours consumers work, the more engaged they are with the ConnectedEconomy™.

The consumers who work the most hours are also the most digitally engaged, suggesting that many workers may be using connected devices to better manage their busy schedules. Consumers who worked more than 50 hours per week during the month of August were the most digitally engaged, averaging 66% participation in the ConnectedEconomy™. This is far more than the 30% rate seen among unemployed consumers and considerably more than the 50% rate seen among consumers who worked less than 20 hours per week. Similarly, consumers who worked between 20 and 40 hours were 58% engaged in the ConnectedEconomy™. The only exception is consumers who work the traditional nine-to-five schedule; those who work between 40 and 50 hours per week evidence a 48% engagement rate.

FIGURE 4:
WORKING HOURS DRIVE ENGAGEMENT
Average participation in digital activities, by hours worked



Source: PYMNTS
The ConnectedEconomy™ Monthly Report, October 2022
N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022

PART II:

Connected home improvement

Back-to-school and work routines prompted U.S. consumers to invest in voice-activated devices to manage household chores in August.

Eight percent more consumers used some type of connected home device month over month.

Participation in digital activities related to home technology averaged 34% of consumers in August — by far the highest rate in our records. This is equivalent to roughly 88 million consumers across the country using some sort of connected device or application designed to automate their homes' environmental controls, security systems, chores or even their grocery shopping. This would make U.S. consumers 8% more engaged than they were just one month prior and 22% more engaged than in November 2021.

FIGURE 5:
THE EVOLUTION OF CONSUMERS' PARTICIPATION IN THE LIVE PILLAR
Average participation in connected home activities over time



Source: PYMNTS
The ConnectedEconomy™ Monthly Report, October 2022
N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022

PART II:

Connected home improvement

Urban households are twice as likely as rural households to use connected devices in the home.

Consumers living in urban areas — defined as a “densely populated city or large town” — reported participating in about 55% of connected home activities in August. This is far more than consumers living in either rural or suburban areas, who were involved in 26% and 20% of connected home activities, respectively.

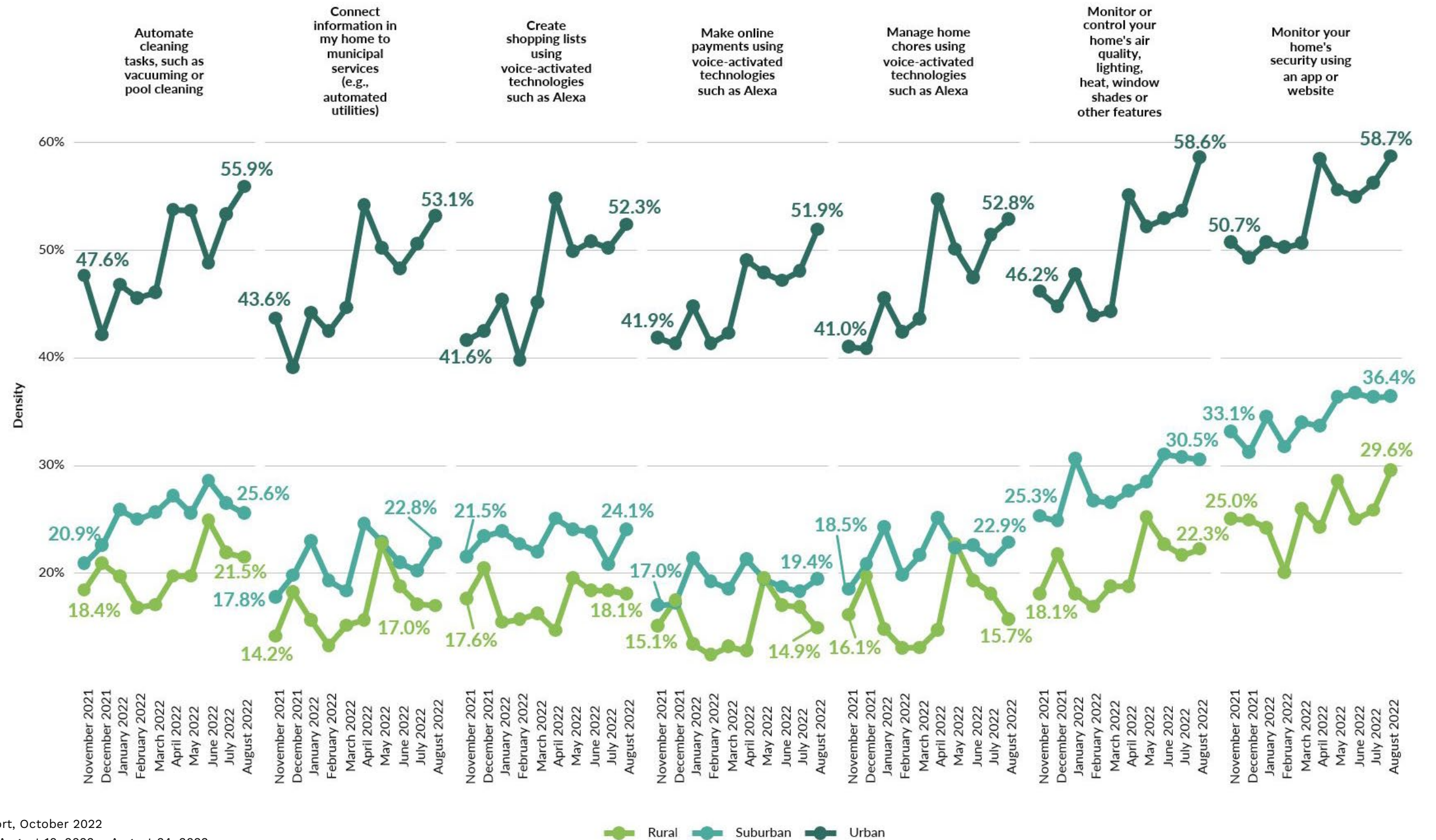
Automated environmental controls and security systems were the two most used connected home technologies among urban consumers and their suburban and rural counterparts. Fifty-nine percent of consumers living in urban areas reported using automated security systems, for example. Among suburban and rural consumers, 36% and 30% used such security systems, respectively.

Moreover, consumers living in urban areas have been steadily increasing their use of nearly every type of connected home technology since November 2021. The same cannot be said of suburban and rural consumers, whose use of connected home technologies like voice assistant-enabled payments and shopping lists has remained relatively stable over time.



FIGURE 6:
THE EVOLUTION OF CONSUMERS' PARTICIPATION IN LIVE PILLAR ACTIVITIES

Share of consumers participating in connected home activities over time, by population density



Source: PYMNTS
 The ConnectedEconomy™ Monthly Report, October 2022
 N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022

● Rural ● Suburban ● Urban

PART II:

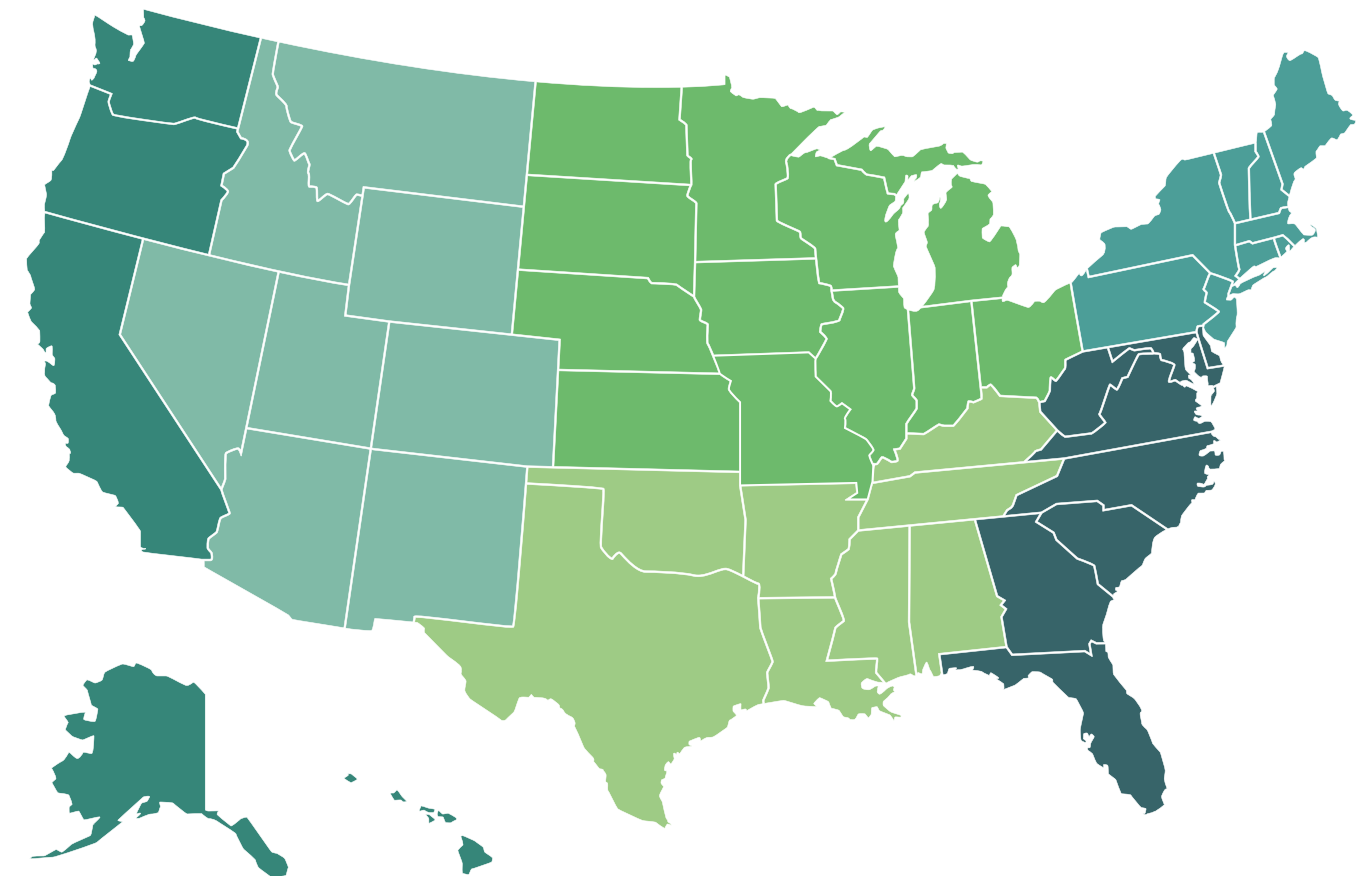
Connected home improvement

Managing energy costs in the homes of people living in the South was a key use case for connected devices.

These are the same regions that saw some of the hottest temperatures during the dog days of summer.

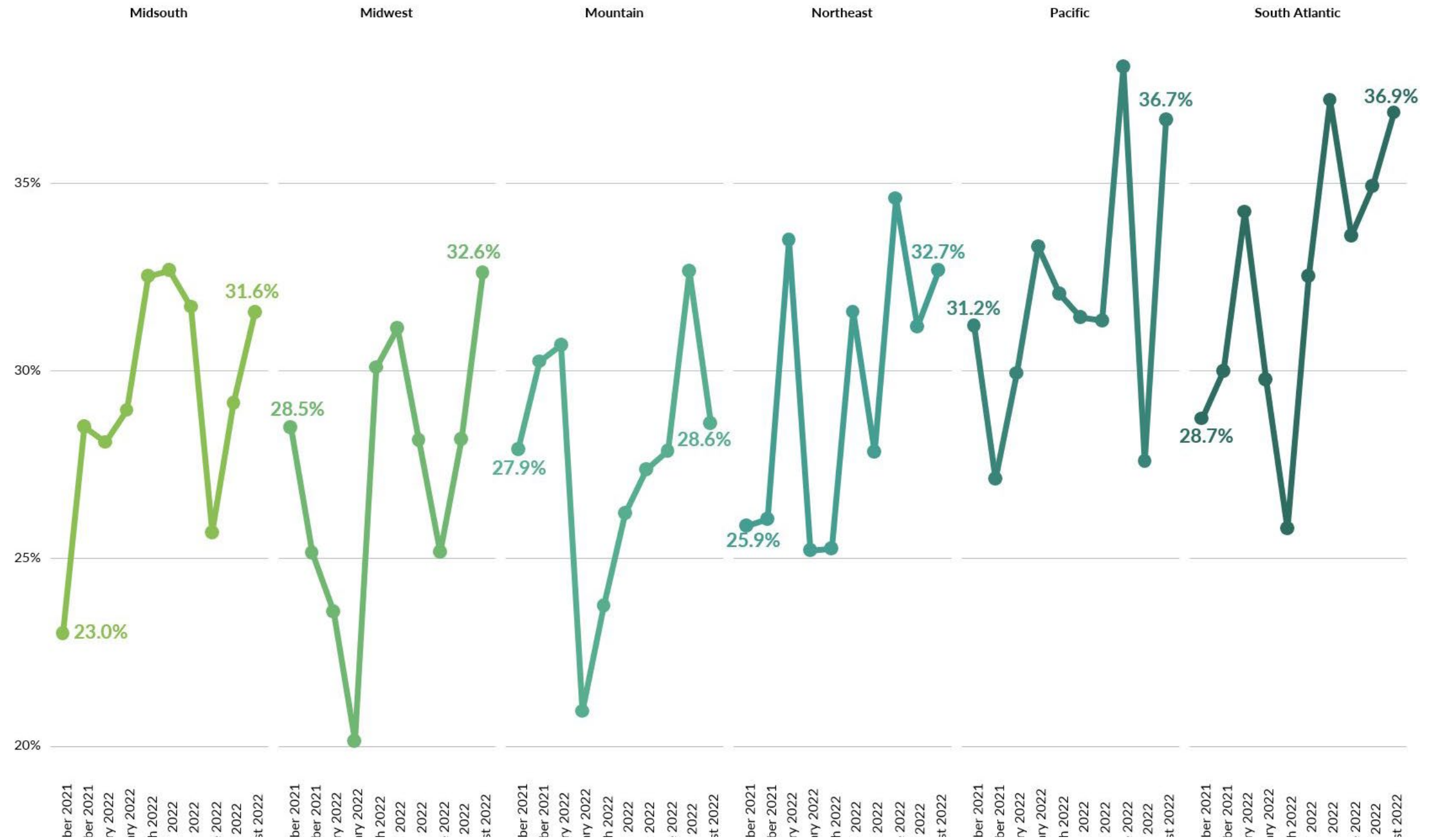
The summer of 2022 saw some of the hottest temperatures in recorded U.S. history, with 356 all-time heat records broken from coast to coast.¹ It is likely not a coincidence that the share of U.S. consumers leveraging automated climate controls also surged during that time. Our research shows that the Midsouth and the Midwest evidenced three consecutive months of increased automation of their homes' climate controls. Meanwhile, consumers' month-over-month use of climate controls spiked the most in the Pacific. All of these regions saw some of the hottest temperatures on record this past summer.

¹ Hickey, C. More than 300 all-time heat records were broken in the US this summer. See where it was the hottest. CNN. 2022. <https://www.cnn.com/2022/09/21/us/summer-heat-records-us-oregon-texas-california-dg/index.html>. Accessed September 2022.



Climate controls are far from the only connected home technology that consumers are using more over time. Each of the seven connected home technologies we track is being used more across every region now than in November 2022. This shows just how ubiquitous connected homes have become as the digital transformation of the U.S. economy progresses.

FIGURE 7:
THE EVOLUTION OF CONSUMERS' PARTICIPATION IN THE LIVE PILLAR ACTIVITIES
 Share of consumers participating in connected home activities over time, by region



Source: PYMNTS
 The ConnectedEconomy™ Monthly Report, October 2022
 N = 3,212: Complete responses, fielded August 10, 2022 – August 24, 2022



METHODOLOGY

The ConnectedEconomy™ Monthly Report is based on a survey of a census-balanced panel of 3,212 U.S. consumers conducted between August 10 and August 24 as a follow-up to a continuing series of studies examining consumers' shift to a more digital way of engaging in everyday activities. Respondents were 47 years old on average, and 52% were female. Thirty-two percent of respondents held college degrees. We also collected data from consumers in different income brackets: 36% of respondents declared annual incomes of more than \$100,000, 31% earned between \$50,000 and \$100,000 and 33% earned less than \$50,000. Additional proprietary data from PYMNTS was used for supplementary analysis.

DISCLAIMER

The ConnectedEconomy™ Monthly Report may be updated periodically. While reasonable efforts are made to keep the content accurate and up to date, PYMNTS MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, REGARDING THE CORRECTNESS, ACCURACY, COMPLETENESS, ADEQUACY, OR RELIABILITY OF OR THE USE OF OR RESULTS THAT MAY BE GENERATED FROM THE USE OF THE INFORMATION OR THAT THE CONTENT WILL SATISFY YOUR REQUIREMENTS OR EXPECTATIONS. THE CONTENT IS PROVIDED "AS IS" AND ON AN "AS AVAILABLE" BASIS. YOU EXPRESSLY AGREE THAT YOUR USE OF THE CONTENT IS AT YOUR SOLE RISK. PYMNTS SHALL HAVE NO LIABILITY FOR ANY INTERRUPTIONS IN THE CONTENT THAT IS PROVIDED AND DISCLAIMS ALL WARRANTIES WITH REGARD TO THE CONTENT, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT AND TITLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN WARRANTIES, AND, IN SUCH CASES, THE STATED EXCLUSIONS DO NOT APPLY. PYMNTS RESERVES THE RIGHT AND SHOULD NOT BE LIABLE SHOULD IT EXERCISE ITS RIGHT TO MODIFY, INTERRUPT, OR DISCONTINUE THE AVAILABILITY OF THE CONTENT OR ANY COMPONENT OF IT WITH OR WITHOUT NOTICE.

PYMNTS SHALL NOT BE LIABLE FOR ANY DAMAGES WHATSOEVER, AND, IN PARTICULAR, SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, OR DAMAGES FOR LOST PROFITS, LOSS OF REVENUE, OR LOSS OF USE, ARISING OUT OF OR RELATED TO THE CONTENT, WHETHER SUCH DAMAGES ARISE IN CONTRACT, NEGLIGENCE, TORT, UNDER STATUTE, IN EQUITY, AT LAW, OR OTHERWISE, EVEN IF PYMNTS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

SOME JURISDICTIONS DO NOT ALLOW FOR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, AND IN SUCH CASES SOME OF THE ABOVE LIMITATIONS DO NOT APPLY. THE ABOVE DISCLAIMERS AND LIMITATIONS ARE PROVIDED BY PYMNTS AND ITS PARENTS, AFFILIATED AND RELATED COMPANIES, CONTRACTORS, AND SPONSORS, AND EACH OF ITS RESPECTIVE DIRECTORS, OFFICERS, MEMBERS, EMPLOYEES, AGENTS, CONTENT COMPONENT PROVIDERS, LICENSORS, AND ADVISERS.

Components of the content original to and the compilation produced by PYMNTS is the property of PYMNTS and cannot be reproduced without its prior written permission.