



## **The State of Smart Technology in the Multifamily Housing Industry**

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communities



## Introduction

Technology is transforming our world – most significantly in our home and personal lives. Streaming entertainment, connecting with friends and family, and remotely conducting work and school tasks have been top priorities for a few years now. Today, the latest emerging trend people are increasingly demanding is smart home technology, yet another innovation that requires strong network resources to operate properly and to handle multiple devices at any time.

Two years ago, we recognized that property managers, owners, builders and developers were focused on ensuring their residents had a high level of technology services. In fact, the *2017 Networking with Residents* survey from Xfinity Communities found WiFi access and high-speed Internet were more important than in-unit laundry! This year, the emphasis on network access remains, but it's smart home and smart building technologies that are emerging at the forefront of the multifamily psyche.

At Xfinity Communities, we interact daily with property managers, owners and developers to understand their unique needs in serving residents and to assist in their properties' technology evolutions. Our new survey, *The State of Smart Technology in the Multifamily Housing Industry*, clearly illustrates that smart technology is the next step in that growth, providing multifamily properties with a competitive advantage in filling units while simplifying the work life of managers and staff. This report provides an in-depth look into the state of smart technology in the multifamily industry, identifying the adoption challenges and the role of service providers in addressing these barriers.

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# Overview: The State of Smart Technology in the Multifamily Housing Industry

The adoption of smart home and smart building technology is rapidly expanding into the U.S. multidwelling (MDU) housing industry. Properties are upgrading their technology offerings to improve resident amenities, increase efficiency, and proactively embrace green practices. The days of smart technology as a “nice to have” in the multifamily industry are quickly coming to an end as residents increasingly expect it as a standard amenity.

The greatest value of smart home and building technology lies in its benefit to all parties associated with a property: residents, managers, developers and builders.

- Residents could see costs savings with smart thermostats and lighting, and greater convenience with the likes of smart locks, smart refrigerators, washers and dryers.
- Multifamily developers, builders and owners are able to attract residents while also proactively managing building maintenance.
- Property managers experience improved operational efficiencies from remote monitoring and control of various building infrastructure systems, such as plumbing and electric, which allows them to spend their time on value-add activities.

Despite these many incentives to adopt smart home and building technology, there are challenges. Multifamily owners are not immune to cost-related obstacles of adopting smart technology, including upgrading the Internet network infrastructure as needed, physically installing devices and maintaining the smart tech ecosystem. Some multifamily owners and managers also cite concerns around reliability issues and the required bandwidth on the existing network, the lack of budget allocated to tech implementation, and a scarcity of quality service providers to help integrate these systems. While more smart home technologies and partners are continually entering the market, it is critical that owners, developers, builders and managers find the right technology partner, one that is capable of providing both the network infrastructure and the smart technology expertise to support large deployments.

Smart technology is here to stay. For multifamily properties that wish to maintain a competitive edge and keep occupancy levels high, owners and managers must create a plan on how to address any challenges and begin full adoption of these technologies. Establishing and strengthening partnerships between the multifamily housing industry and technology service providers will reduce operating expenses, expedite the adoption of smart technologies, and ensure that all residents have access to the devices they demand and the networks to support them. The following report offers MDUs a look into the smart technology revolution taking place within their industry, provides critical insights into its driving forces and illustrates how they can better equip themselves to thrive in this new environment.

## About the Study

The State of Smart Technology in the Multifamily Housing Industry report is based on a survey conducted by the LEWIS Insight and Research Team to better understand the impact that the adoption of smart home and building technology has on the multifamily housing industry and its workers. The findings detailed in this report are based on data collected in the study which consisted of 200 total responses from property managers, developers, and owners who are employed at multifamily residences, from April 25th to May 1st, 2019 with a margin of error of +/- 5.8 percentage points.

## FAST FACTS

### Adopting Smart Home Technology in Multifamily Properties

The majority of property managers agree that smart technology is important, but that there are variety of drivers causing this increased adoption.

### Smart Technology's Impact on the Mixed-Use Sector

Four-in-five organizations believe that they are, at minimum, advanced in their adoption of smart technologies.

### Challenges to Adopting New Technologies

While budget for initial and maintenance costs is a key barrier to adopting new technologies at MDUs, it is not a unique challenge. As the industry matures, this barrier and others will fade away.

### Smart Technology's Impact on the Multifamily Housing Industry's Workforce

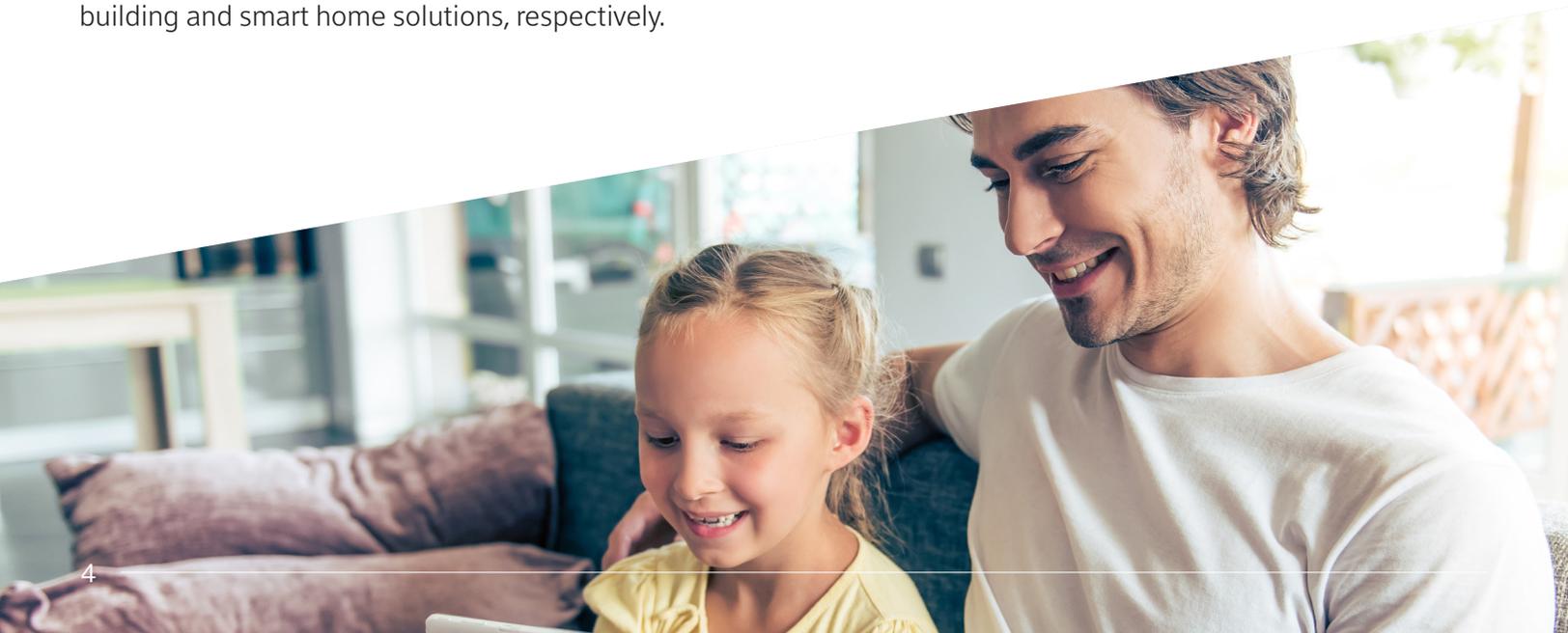
A majority of property managers state that knowledge of smart technologies is a consideration when hiring maintenance staff.

### Service Providers' Critical Role in Smart Technology Adoption

Many MDUs offer residents a choice in technology service providers; however, as more smart devices are implemented MDUs must ensure that they have the right technology partner to provide reliable high-quality network services.

# Adopting Smart Home Technology in Multifamily Properties

While adoption of smart technology has been slower in the MDU housing industry than in the single-family market, it's clear that it is starting to take hold. In fact, when organizations were asked approximately what percentage of the industry had begun to adopt smart home technology, those who claimed knowledge of the situation, on average, replied that about half (51%) had already begun adopting it. This is an increase from the 2017 Network with Residents survey in which just 49% and 48% of respondents even had a plan to implement smart building and smart home solutions, respectively.

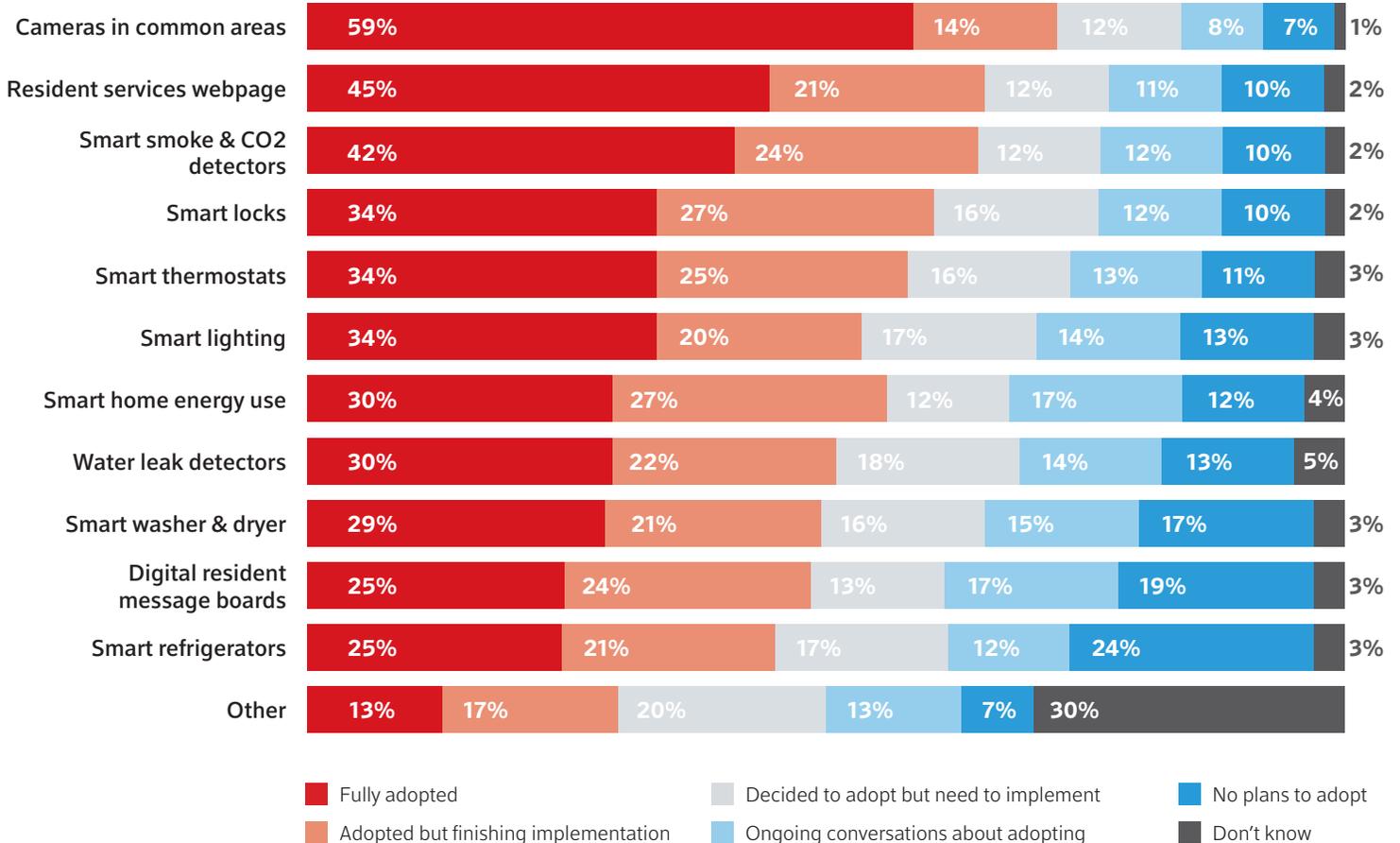


Respondents also overwhelmingly agreed with a number of statements as to why smart home technology is important and why they must implement it in a timely fashion.:

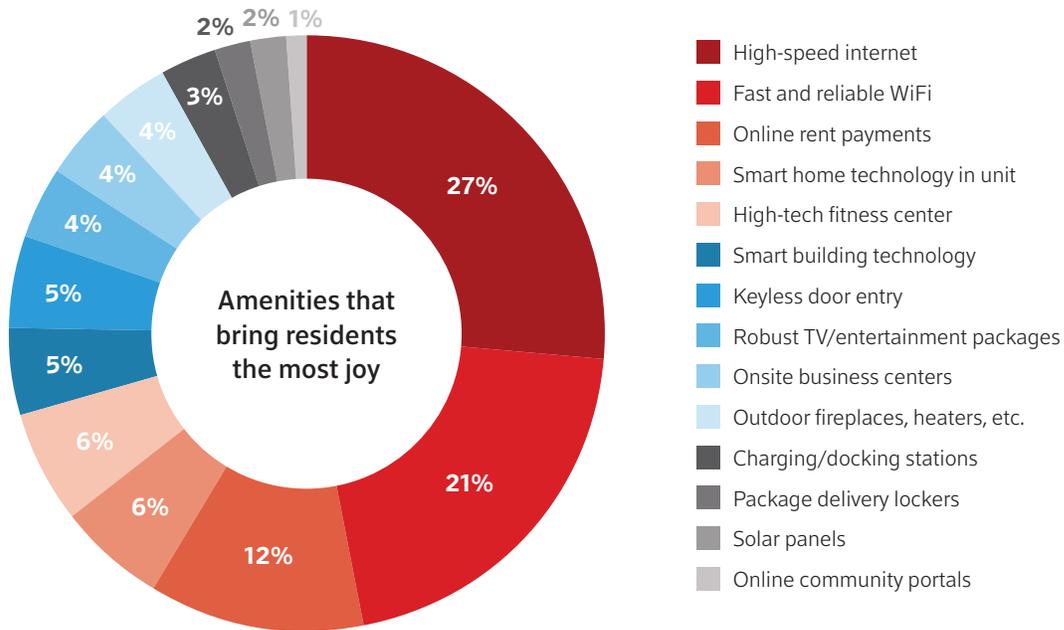
- Smart home technology is the way of the future, the sooner we have it the better – **74%**
- We believe that it is environmentally responsible to adopt smart home technology – **73%**
- Smart home technology is good for our bottom line – **72%**
- Our competitors do not offer smart home technology, so it gives us an advantage over them – **72%**
- Implementing smart home technology can help residents that have various disabilities and limitations – **70%**
- Smart home technology makes our organization’s job easier on a day-to-day basis – **70%**
- Our current and prospective residents have a strong desire to have access to smart home technology – **68%**

The agreement around this wide array of statements indicates that organizations aren’t focused on a single core motivation when adopting smart home technology, but rather see many drivers for increased adoption.

Cameras in common areas, resident service pages and smart smoke and CO2 detectors were the smart amenities most frequently cited as fully adopted by respondents’ MDUs with each scoring over 40 percent. Speaking to the fast-moving adoption of smart devices, however, at least 70 percent of respondents said their organization has adopted, plans to adopt or is in the process of implementing smart lighting, smart locks, smart thermostats and leak detection devices.



High-speed Internet and fast WiFi were named the tech amenities that respondents believe bring residents the most joy by a fairly wide margin. These findings corroborate the results of the *2017 Networking with Residents* report results in which 87 percent found that technology was extremely or very important in keeping residents satisfied. These technologies are essential to support the growth of smart home technology which ranked fourth at this time.



Overall, multifamily owners, developers and managers believe that the adoption of smart home technology is almost as important to keeping current residents satisfied as it is to attracting new residents. When asked how important the adoption of the latest technology is to keeping current residents satisfied, nearly four-in-five (78%) said it was important versus just 6% that said it was not. Likewise, when asked how important adoption was to attracting new residents, more than four-in-five (83%) said it was important.

## Smart Technology: Its Impact on the Mixed-Use Sector

Today’s MDU market is shifting as many developers are creating properties that are more than just a residential location, but also offer retail locations, office space and/or hospitality offerings. These mixed-use developments aim to create a more complete community and offer more amenities for residents. The research finds that this sub-set of MDUs also believes in the importance of smart technology adoption.

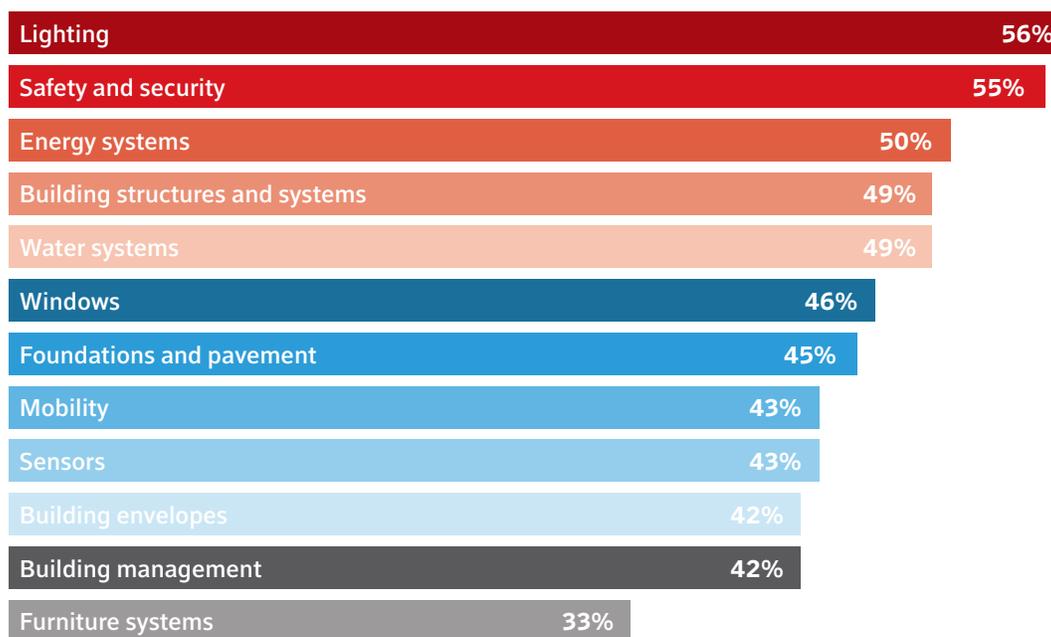
Among those surveyed, over half (53%) said that their organization currently operates mixed-use properties. Asked to describe the level of smart building adoption in their mixed-use properties, respondents were confident on where their organizations stood:

- We are advanced in our adoption of smart-building technologies – **41%**
- We are at the cutting-edge of smart building technology adoption – **39%**
- We have adopted some smart building technology but still have a way to go – **18%**
- We have not adopted any smart building technology but are planning to do so in the near future – **2%**
- We currently have no plans to adopt smart building technology – **1%**

From the research, four-in-five organizations believe that they are, at minimum, advanced in their adoption while less than 5% say that they have yet to begin any sort of adoption.

Mixed-use properties are indeed moving quickly to adopt. Smart lighting, smart safety and security, and smart energy systems have all been fully implemented in mixed-use properties by at least half of respondents that operate in this space.

### Smart systems that have been fully implemented

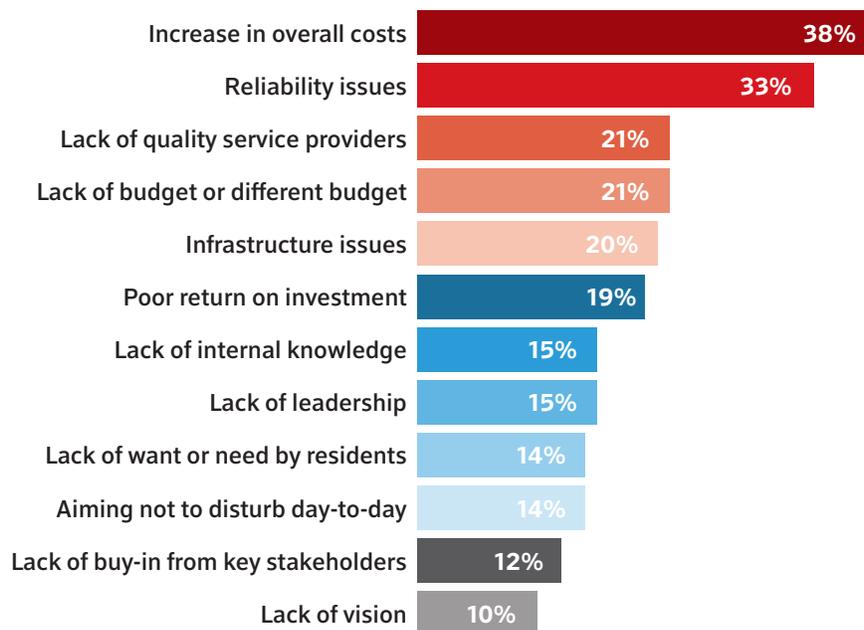


## Challenges to Adopting New Technologies

As multifamily organizations undertake efforts to adopt smart home and building technology, they are faced with implementation challenges. From the onset of a project, the purchase of smart technology devices plus any necessary infrastructure renovations could be a costly endeavor. Additionally, these technologies require training for property managers and maintenance staff on how to install, use, and maintain these systems. While this may equate to an upfront budget and time investment, it is a critical step for success. If these steps are not executed properly, the technology can be unreliable and add strain to an MDU’s network, both reducing effectiveness of smart devices and slowing residents’ Internet experience.

When asked to name the top-three challenges related to pursuing any technology-related innovations at their properties, organizations most often cited increases in overall costs followed by reliability issues and a tie between lack of budget or different budgetary priorities and lack of quality service providers.

### Top challenges of technology adoption



When organizations specifically look to implement smart home technology, top challenges named include the following:

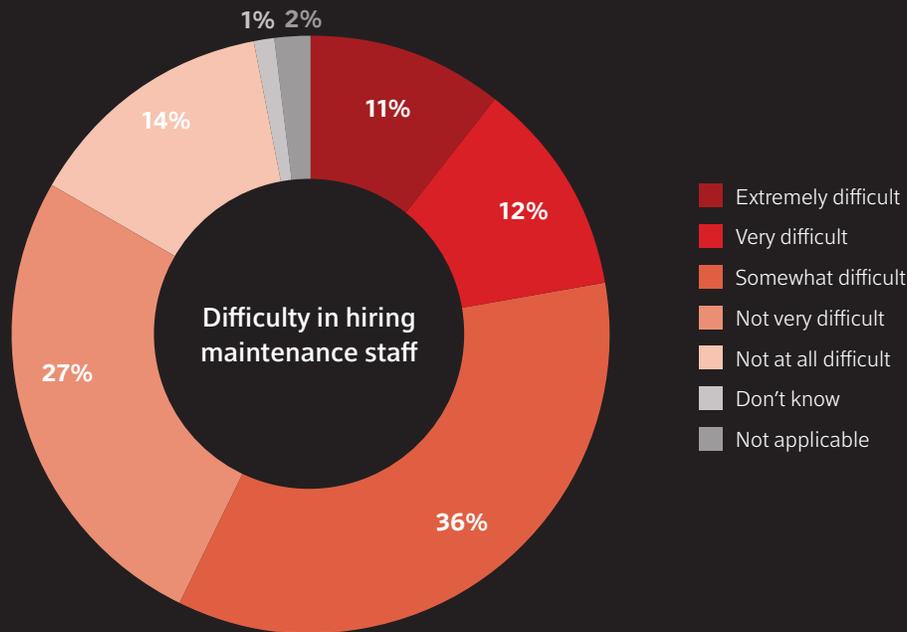
- High maintenance costs – **47%**
- High initial costs – **46%**
- Reliability of technology – **31%**
- Complexity of technology – **25%**
- Complexity of installation – **25%**
- Compatibility with supporting technology infrastructure – **22%**
- Lack of organizational knowledge – **18%**

Again, these responses are led by various potential increased costs and technology issues – similar challenges are felt across the entire housing industry, including by single family owners who are implementing this technology. Among those organizations that said that high initial costs were a top challenge for them, nearly six-in-ten (58%) said that it served as a significant barrier to entry in implementing smart home technology.

However, the challenges don't stop with the adoption and implementation of smart home technology. When asked if they believe the adoption of smart technology had reduced the speed of their properties' Internet bandwidth, more than half (51%) of organizations said that it had, compared to roughly a third (32%) who said it had no effect. Furthermore, about six-in-ten (58%) said that it had been at least somewhat difficult to find maintenance staff with the skills needed to attend to both traditional and smart home-related issues. As the smart home device and technology industry continues to mature, these challenges are expected to dissipate, especially as MDU technology service providers enhance their smart building solutions and offer specialized customer service. It is recommended that MDUs find a technology partner who can work with their staff to create cost-effective smart technology plans that include high-quality Internet services.

# Smart Technology's Impact on the Multifamily Housing Industry's Workforce

The influx of smart home and building technology is also having an influence on the MDU industry's workforce. With the adoption of new technology comes the need for different skills. The maintenance staff most often interacts with these new devices whether it be installing or maintaining these systems. As such, 59% of respondents expressed some level of concern about their organization's ability to fill positions with employees who can deal with both smart technology and traditional maintenance duties.



Despite the challenges, organizations are committed to hiring employees with the proper skills for a smart technology environment. When asked what best described their approach to hiring maintenance staff as it pertains to tending to smart home technology issues over the next three years, organizations were effusive in its importance:

- It will be an absolute requirement for them to be able to fix issues related to smart home technology moving forward – **31%**
- It will be a major consideration when it comes to hiring, but it is not the only determining factor – **35%**
- It is an important consideration but there are other factors that are of at least equal importance – **23%**
- It will only be a minor consideration as there are other factors that take much higher priority – **7%**
- It will not be considered at all – **2%**
- We plan on hiring separate staff for traditional building maintenance needs and smart home technology needs – **2%**
- Don't know – **2%**

The message is clear: nearly nine-in-ten (88%) said hiring maintenance staff with smart technology skills was at the very least an important consideration over the next few years, with almost two-in-three (65%) saying it is a major consideration.

Smart technology adoption has not only influenced the necessary skillset for maintenance workers, but has altered the work life of other staff, as well. Asked to what degree automation associated with the adoption of smart home technology has affected their day-to-day, there was a split between who said that it had decreased workload (28%), that workload was about the same (32%), or that it had increased workload (37%). Among those who said it spurred a decrease, respondents believe it made them more efficient, that it makes work faster and easier, and that it allows residents to be more independent.

### How smart technology adoption has affected day-to-day workloads



## Service Providers' Critical Role in Smart Technology Adoption

Key in the movement to adopt smart home and building technology successfully is having the right network providers in place. Internet bandwidth, reliability and speed are critical to hosting smart devices and MDUs must adopt the best versions of the networks available to them. Finding the right technology partner is critical to a MDU's success in offering high-quality Internet amenities.

As it currently stands, while providers offer gigabit speeds, they are not widely implemented across multifamily communities:

- Less than 10 Mbps – **3%**
- 10 to 99 Mbps – **16%**
- 100 to 299 Mbps – **18%**
- 300 to 499 Mbps – **22%**
- 500 Mbps to 999 Mbps – **17%**
- 1 Gbps or more – **15%**
- Don't know – **9%**

Despite this, more than four-in-five (84%) organizations agree that the Internet speed at their properties meets the expectations of residents, with about half (49%) strongly agreeing with the statement.

In terms of service providers, prospective residents are eager to know what companies/organizations/services are available when they move in. When asked approximately what percentage of potential residents inquire about what service providers would be available, respondents said approximately two-in-three (62%) had asked. This is slightly less than the 75 percent that said that majority of new and prospective residents ask about communication service in the *2017 Networking with Residents* survey. This difference may be attributed to residents' expectation that all buildings provide this as a base amenity.

As it stands now, an overwhelming majority of organizations currently offer more than one service provider, but there's some variation in the number of choices they are offering to residents:

- 1 provider – **15%**
- 2 to 3 providers – **48%**
- 4 to 5 providers – **28%**
- 6 or more providers – **9%**

While having more than one service provider on their property offers residents a choice, MDUs should do extensive research into the offerings of each provider to find the right technology partner that will provide reliable high-quality network services that can handle multiple devices per unit, as well as common area and smart home devices.

## Conclusion

Technology continues to be the amenity that residents request most often when securing a new residence. While technology amenities were more focused on entertainment, high-speed Internet and WiFi just a few years ago, there has been a shift. Today, residents are streaming content, have multiple devices on a network simultaneously and are implementing smart home technologies. As a result, there is a greater demand on the building and its network infrastructure.

As MDUs continue to adopt smart home and building technologies, they must also adapt to the changes brought on by these integrations. The benefits associated with adoption are clear for properties and their residents. The barriers related to costs, staff training, infrastructure and reliability of the technology will only continue to fade as the market matures. Smart technology is the direction of the future, and when asked what motivated them to adopt smart technology, it's clear why – respondents believe that:

- Smart home technology provides greater peace of mind for my organization – **78%**
- Smart home technology provides greater peace of mind for my residents – **78%**
- Technology infrastructure is the most important factor when it comes to my organization's ability to lease to those under 40 years of age – **74%**
- Technology infrastructure is the most important factor when it comes to my organization's ability to lease to those over 40 years of age – **64%**

It is critical for multifamily organizations to not just work in unison with their service provider, but to find a true tech partner, one that is willing to act as a guide and a teammate in handling the challenges of making properties smart. Together, MDUs and service providers must work together to come up with cost-effective, common sense solutions where all parties gain, and everyone has access to high-quality Internet service and the smart devices we'll soon consider standard.