

Enhancing Independence at Home through Technology

Madeline Laquer, M.Ed., ATP, Sr. Assistive Technology Manager, DATI
David Miller, Philadelphia Independence Network

Objectives



Define smart home technology



Identify examples of smart home devices



Develop an understanding of smart home skills



Review a real-life example of smart home technology use

What is Smart Home Technology?

Smart Home Technology provides automation to control or monitor areas of your home. Automation allows the user to adjust lighting, climate, appliances, entertainment systems, etc. Devices can include smart speakers, cameras, sensors, and more.



Amazon Alexa

- Echo Dot Smart Speaker
- Echo Show 5, 8, 10, and 15
- Ecobee Thermostat
- Amazon Smart Plug
- Smart Sensors
- Fire TV



Google

- Nest Thermostat
- Nest Protect (Smoke and Carbon Monoxide Detector)
- Nest Cam (Outdoor)
- Nest Mini
- Nest Hub
- Nest Hub Max



Tips for Getting Started

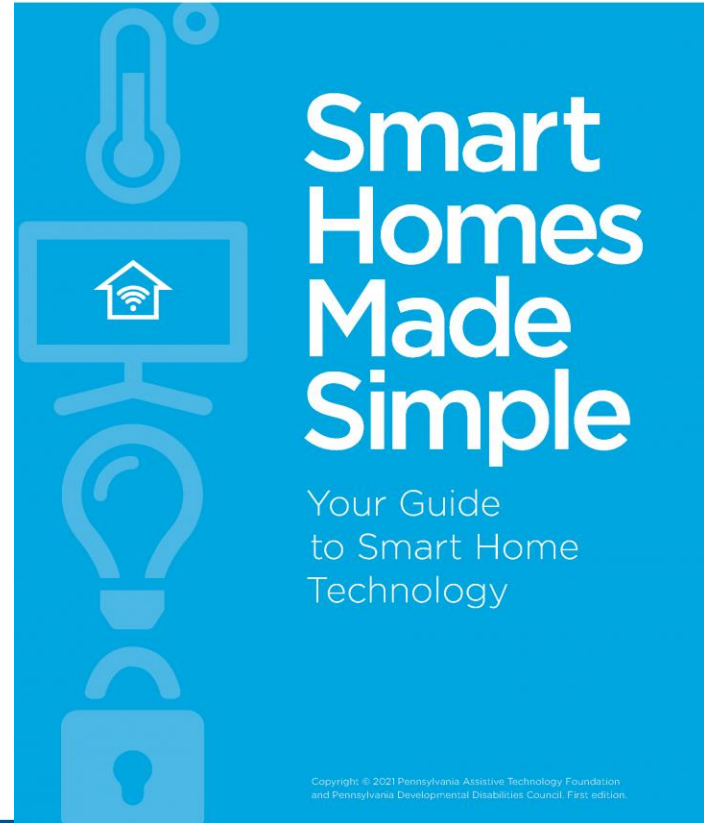
- Identify a goal or function
- Strong and reliable Wi-Fi connection
- Start small
- Consider placement of the smart device
- Use a checklist to identify areas of your home
- Invite a family member or support person to training



Using a Checklist

Pennsylvania Assistive Technology
Foundation (PATF)

1. Smart Homes Made Simple: Your
Guide to Smart Home Technology
2. Smart Homes Made Simple Self-
Assessment Tool



PATF Smart Homes Made Simple Self Assessment Tool



Smart Homes Made Simple Self-Assessment Tool

This is all about you! Answering the following questions is a good first step as you consider what kind of smart home technology you would like. Use your answers as a guide when consulting with support team members and professionals to help steer the planning of your smart home.

1. Daily or Routine Activities at Home

Select the activities below where you need or want support. Use the blank spaces to add activities that aren't already listed. This is meant to be a starting point for discussion with your team and to direct your research on what smart home technology might work for you. Keep in mind, there are a variety of ways to accomplish many of the items listed below, including using your voice, a motion sensor, using an app on a phone (locally and also remotely), or setting up automations where the action is triggered by another event.

Communication

- Make calls (voice and/or video)
- Send messages (voice and/or text)
- Intercom between rooms
- Make announcements throughout home
- Send and receive email
- _____

Control of the Environment

- Turn on/off lights
- Turn on/off fan
- Make coffee
- Adjust thermostat
- Open/close exterior/interior doors
- Open/close blinds
- _____

Leisure

- Listen to podcasts, music, and/or audiobooks
- Get the news
- Hear jokes
- Watch cable TV
- Stream TV/movies/video content
- Play video games
- _____

Telehealth and Health Monitoring

- Make video/phone calls with your doctor
- Organize your medication
- Set reminders to take medication
- Monitor your vitals (weight, blood pressure, blood glucose level, etc.)
- _____

Personal Assistant / Organization / Productivity

- Find and follow recipes
- Make shopping lists
- Make to-do lists
- Order house supplies and/or groceries
- Create reminders
- Set alarms
- Manage your calendar
- Search the internet
- Manage your bank account
- Check the date/time
- Check the weather
- Check public transportation schedule
- _____

Remote Supports from a Caregiver

- Remote check-ins from family, friends, or caregivers
- Remote view of inside and outside the property
- Remote control of thermostat
- Remote control of door lock and creation of virtual "keys"
- Remote communication with visitors outside the door
- Remote monitoring of health vitals
- Remote alerts of intruders or hazards in the home (such as smoke, fire, carbon monoxide, water leaks, or stove left on)
- Remote alerts when medication is taken
- Remote alerts when you leave the property
- _____

Copyright © 2022 Pennsylvania Assistive Technology Foundation and Pennsylvania Developmental Disabilities Council. Second edition.

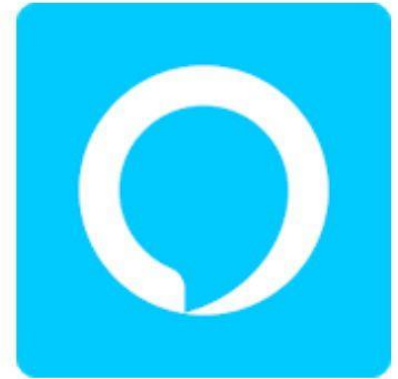
Examples of Smart Home Devices

1. Smart Speakers
2. Smart Thermostat
3. Video Doorbell and Cameras
4. Smart Bulbs, Plugs, and Switches
5. Smart Watch
6. Smart TV
7. Smart Appliances
8. Smart Locks
9. Robot Vacuums and Wet Mops
10. Sensors (Motion and Contact)
11. Smart Smoke and Carbon Monoxide Detectors



Let's Start with Alexa: What do I call her?

- Amazon's voice assistant: Alexa
- Triggered by a wake word: Alexa, Amazon, Computer, Echo, or Ziggy
- Smart Speakers: Echo Dot and Echo Show
- Alexa App is available through:
 - Google Play Store
 - Apple App Store
 - Amazon App Store








How Does it Work?

- When connected to your home Wi-Fi network, Alexa uses the internet to execute voice commands
- Common commands include:
 - “Alexa, what is the weather?”
 - “Alexa, set a timer for 20 minutes.”
 - “Alexa, add bananas to my shopping list.”
 - “Alexa, “what’s the question of the day?””
 - “Alexa, remind me to take my medication at 8:00 a.m.”



Common Skills and Functions

-  Control lights: turn on/off and dim
-  Make phone calls hands free
-  Create shopping lists
-  Medication reminders
-  Find recipes and learn new cooking skills
-  Listen to podcasts, music, or soothing sounds
-  Unlock smart locks
-  Develop routines based on a schedule

Accessibility Features with Alexa

- Adaptive Listening
- “Show and Tell” Skill
- Captioning
- Real Time Text (RTT)
 - Available on Echo Show devices and Alexa App
- Option to type commands
- Hands-free calling and texting



Further Considerations

- Including Smart Home Technology in a support plan:
 - Consider the individual's goal(s)
 - Determine who will be on the support team
 - Develop a plan for regular maintenance and support
 - Discuss security and privacy as a team



David's Story

David's Story

- Graduate of the Vocational Independence Program (VIP) at the New York Institute of Technology
- Founding member of the Philadelphia Independence Program (PIN)
- Special Olympics Athlete
- Disability Advocate



Philadelphia Independence Network (PIN)

- Supported independent living program for young adults with disabilities
- Members live in their own apartments while receiving support from staff
- 3 core components of the program:
 - Employment support
 - Independent living skills
 - Social activities and groups



Cooking with Alexa

- Weekly cooking nights
- Selected recipes in advance and created a shopping list
- Alexa provided step by step instructions with “how to” cooking videos
- Additional use of assistive technology tools
- Ongoing support and training



QUESTIONS?



Contact Information

Madeline Laquer, M.Ed., ATP
Sr. Assistive Technology Manager
Email: mlaquer@udel.edu
Phone: 302-831-6494