Connected Home Council (CHC) Webinar
Meeting will commence 12:05pm ET

November 29, 2023, 12 PM – 1:30 PM (ET)

CHC Chair: Ken Wacks (Ken Wacks Associates)
Vice-Chair: Charlie Derk (Legrand)

Connect to what’s next™
www.ashb.com
1. Agenda

Ken Wacks (Ken Wacks Associates)

1. Agenda
2. Call to Order, Welcome, Introductions, About the CHC
3. Appointment of New CHC Vice-Chair
4. Administrative
5. Research Update
6. Keynote: **Next Stage of Growth for Smart Homes: Consumer Buyer Journey** - Elizabeth Parks of *Parks Associates*
7. ASHB Journal
8. ASHB Podcast
9. New Business
10. Announcements
11. Adjournment
Established in 2004, the ASHB Connected Home Council initiates and reviews projects that relate to connected home and multiple dwelling unit technologies and applications. The Council also examines industry opportunities that can accelerate the adoption of new technologies, consumer electronics and broadband services within the burgeoning connected home market.

www.ashb.com/chc
3. Appointment of New CHC Vice-Chair
Ken Wacks (Ken Wacks Associates)

ASHB Welcomes Newly Appointed CHC Vice-Chair

Charlie Derk is the Vice President of Strategy for Legrand’s Building Controls Division. His responsibilities include mergers and acquisitions as well as focusing on the strategic direction for residential and commercial lighting control products including Wattstopper, Encelium and Vantage. Charlie has been working with lighting and shading control products for the past 25 years holding positions in engineering, product management, marketing and sales at Lutron and Crestron. Charlie holds a degree in Computer Science and is currently based in eastern Pennsylvania.

Charlie Derk
Vice President of Strategy
4. Administrative
Ken Wacks (Ken Wacks Associates)

4.1 Motion to approve past CHC Minutes July 25, 2023
www.ashb.com/chc

4.2 Call for CHC Vice Chairs
2023 CHC Landmark Research
Smart Home Technology & Market Trends

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6. Keynote
Charlie Derk (Legrand)

Next Stage of Growth for Smart Homes: The Consumer Buyer Journey

Elizabeth Parks
President & Chief Marketing Officer

PARKS ASSOCIATES

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Next Stage of Growth in the Smart Home
Next Stage of Growth in the Smart Home

Transformation Underway
- Services
- Device Adoption
- Home Security as a Driver
- Energy as a Driver

The Future
- Health
- Multifamily
- Tier 2 + 3 Broadband Markets
- SMB
About Parks Associates

Our long-term understanding and insights into the connected home markets provide meaningful analysis to the diffusion of new products and services.

Elizabeth Parks
President and CMO
Parks Associates

Computerizing all the comforts of home

By David Courney
Special for USA TODAY

DALLAS — The television set shows a picture of a car parked by the curb, a woman is walking into the house, and the front door is opened. The air conditioning setting is at 72 degrees, and the lights are on. The woman, who is the owner of the house, is a subscriber to a service that allows her to control her home from her computer.

“Thank you for your service,” she says, smiling. “I appreciate it.”

“Anytime,” the technician replies. “We’re here to help you.”

The service is one of many that are becoming more popular as consumers look for ways to make their homes more energy-efficient and convenient.

“People are looking for ways to save money and reduce their energy consumption,” says Tim Howard, president of the Home Automation Industry Association. “And they’re willing to pay for it.”

According to a recent survey by Parks Associates, 57% of American households have at least one home automation device. The most popular are thermostats, security systems, lighting controls, and smart thermostats.

“Home automation is a growing market,” says Howard. “And it’s not just about the convenience. It’s also about the energy savings.”

According to the survey, homeowners who use home automation systems save an average of $200 per year on energy costs.

“Home automation is a great way to reduce your energy bills,” says Howard. “And it’s also a great way to improve the comfort and convenience of your home.”

Parks Associates
Providing Market Intelligence since 1986

www.parksassociates.com
# Market Research and Consulting for Emerging Technology

## Access & Entertainment
- Pay TV & Digital Media
- OTT Video
- Connected Media Devices

## Smart Home & Security
- Interactive Security
- Home Automation
- Smart Energy

## Business
- Small to Medium Business
- Multi-dwelling Units
- Commercial Buildings

## Technology Areas
- Fixed/Mobile Broadband
- Wi-Fi & Home Networking
- Media Content
- AR & VR
- Data Privacy & Security
- Insurance & Safety
- Connected Health
- Home Builders
- AI & Voice Platforms
- Managed Home Services
Services: Shaping the Future

$340 Billion Annual US Home Service Spending
across home phone, internet, mobile, security, and video, including pay TV and OTT
70% say it would be “very difficult” for me to be without home internet.
The Intersection of Service-Driven Economies

Energy
- Changing energy consumption habits
- Growing electricity demand
- Grid resilience
- Renewable energy
- Distributed energy generation
- Smart home opportunity

Home Security
- Choice in everything
- Demand to monitor beyond access points
- Value in the integration of systems + devices
- Lower price points driving interest
- Tech giants providing mass-market marketing
- Specialty services coming soon

Health
- Senior living devices and systems
- Home healthcare
- Environmental quality and safety
- At-home fitness and wellness
- Remote patient monitoring
- Professional monitoring

Broadband
- Consumer expectations have changed
- Focus on connectivity and speed
- New demand for remote work needs
- Reemergence of value-added services
- Role of the network is critical

Multifamily
- Bulk broadband
- Priority on network
- Resident experience
- Operational savings
- Investment management
- Energy as priority
- Safety as priority
- Access control services

SMB
- New tech requirements
- Every company is a tech company
- Network is key
- New services in demand
- Remote work
- Remote diagnostics
- Safety and security
- Access control services
Home Builders Differentiating through Technology

1. Stainless Steel Appliances
2. Granite or Quartz Countertops
3. Hardwood or Premium flooring
4. Smart Speakers with Personal Assistant
5. Outdoor Upgrades (kitchen, fireplace)
6. Integrated Smart Home and Entertainment Control System
7. Security Systems with Smart Home Control
8. Pre-wiring for Entertainment Equipment
9. Smart Lighting
10. Extra Storage
11. Stone or Premium Exterior Features
12. Smart Door Locks and Smart Garage Door Openings
13. Smart Appliances
14. Premium Cabinetry
15. Networked Cameras
16. Smart Thermostats
17. Whole Home Networking and Wi-Fi

Most Important Value-Added Feature by Price of Home Among Large-Scale Single-Family Builders

<table>
<thead>
<tr>
<th>Feature</th>
<th>Less than $500,000</th>
<th>$500,000 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive floor plans for flexible use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High energy efficiency features</td>
<td></td>
<td></td>
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<tr>
<td>Smart home technology</td>
<td></td>
<td></td>
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<tr>
<td>Walkable community amenities</td>
<td></td>
<td></td>
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<tr>
<td>Indoor air quality/healthy home features</td>
<td></td>
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<tr>
<td>Sustainable building materials</td>
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<tr>
<td>Smart Lighting</td>
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<tr>
<td>Smart Thermostats</td>
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<tr>
<td>Whole Home Networking and Wi-Fi</td>
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Device Adoption
Connected Devices in US Households

Average Number of Connected Devices Per US Internet Households

- **Total average # of connected devices per US HH**
- **Average # of connected health devices**
- **Average # of connected smart home devices**
- **Average # of connected CE devices, including computing, mobile, smart speaker, and entertainment devices to the internet**

Average Number of Connected Devices Over Time:

- **2015**: 8.4
- **2016**: 8.8
- **2017**: 9.2
- **2018**: 9.6
- **2019**: 10.0
- **2020**: 10.4
- **2021**: 10.8
- **2022**: 11.2
- **2023**: 11.6
42% own a Smart Home Device

- Smart Light Bulbs
- Smart Outdoor Lights With Video
- Smart IP Cameras
- Smart Door Locks
- Smart Video Doorbells
- Smart Water Shut-Off Valves
- Smart Thermostats
- Smart Water Leak Detectors
- Smart Smoke/CO Detectors
- Smart Lighting Control Systems
- Smart Appliances
- Smart Plugs/Adapters
- Smart Sprinkler Systems
- Smart Garage Door Openers
- Smart Outlets/Switches/Dimmers
Smart Home Reaches the Early Majority

Tech Affinity, by Smart Home Device Ownership

- Smart Home Device Owners
- Households with No Smart Home Devices
## Diffusion of Innovation: Meeting Customer Needs

<table>
<thead>
<tr>
<th>Innovator</th>
<th>Early Adopter</th>
<th>Early Majority</th>
<th>Late Majority</th>
<th>Laggard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>• Techies</td>
<td>• Quick to see benefits of new technology</td>
<td>• Can relate to technology</td>
<td>• Not comfortable with technology</td>
</tr>
<tr>
<td></td>
<td>• Looking for latest and greatest</td>
<td>• Visionaries</td>
<td>• Practical, pragmatists</td>
<td>• Conservatives</td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td>• Practitioners, innovators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>• Looking for latest and greatest</td>
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<td>• Conservatives</td>
</tr>
<tr>
<td><strong>Pricing</strong></td>
<td>• Low cost</td>
<td>• Least price sensitive</td>
<td>• Need ROI based on lower value expectations</td>
<td>• Need low marginal cost for new capabilities</td>
</tr>
<tr>
<td></td>
<td>• Beta testers</td>
<td></td>
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<tr>
<td><strong>Marketing</strong></td>
<td>• They find you</td>
<td>• Show compelling applications</td>
<td>• Need proof of value</td>
<td>• Need proof of limited risk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Easy to sell</td>
<td>• Loyal, hard to win</td>
<td>• Loyal, hard to win</td>
</tr>
</tbody>
</table>
Video Doorbells at 20% Adoption in US Households

#1 Smart Video Doorbell

#2 Smart Camera

#3 Smart Thermostat

#4 Smart Lightbulb

#5 Robotic Vacuum Cleaner

+ 50% of Smart Home Devices Bought at Retail
Households Building Their Smart Home

Number of Smart Home Devices

- Super Power Users (10+ devices)
- Power Users (5-9 devices)
- Players (3-4 devices)
- Newbies (1-2 devices)
- Non-owners

Q4/2017
Q4/2018
Q4/2019
Q4/2020
Q4/2021
Q4/2022
Q2/2023

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Home Security and Smart Home
~41% of US Households Own a Security Solution

- **30%** of US internet households own a security system

- **11%** security device with no system

- **~1 in 5** internet households pay for professional monitoring of a security system
Smart Home Devices Drive the Security Dealer Market

**Business Driver for Security Dealers**

- **Customer desire for smart home products like cameras and video doorbells**
- **Increasing rates of crime or fear of crime**
- **Households moving from one home to another existing home**
- **Households moving into new builds**
- **The purchasing of additional/second homes**
- **More MDU renters and owners opting for unit security**
- **Partnering with solar panel installers**

**2021**

- 80%
- 60%
- 40%
- 20%
- 0%

**2022**

- 80%
- 60%
- 40%
- 20%
- 0%

**2023**

- 80%
- 60%
- 40%
- 20%
- 0%
$13 Billion in Annual Revenues by 2025 - Parks Associates Forecast
Energy as a Driver for the Smart Home
Consumers are Willing to Invest

Agreement with Statements

Costs are not high enough to make me worry

I would like to use less energy, but do not invest much time into it

I would like to use less energy, but do not know how

I actively work to reduce energy consumption at home 47%

Smart Thermostats, Energy Monitoring, Residential Solar
Smart Thermostat Perceptions of Savings

16% of internet households own or use a smart thermostat

Most smart thermostat owners give favorable reviews of the savings:

- More than expected
- As much as expected
- Less than expected
- 13%
Willingness to Pay for Services

Appealing Home Energy Management Services

- Whole home energy usage in real-time
- Energy usage by device
- Energy bill tracking throughout the month
- Alerts when tracking over-budget
- Alerts on poorly performing appliances that need repair
Growth
Health
Multifamily
Rural
SMB
New Healthcare Solutions Enabled by Devices and Services

**Senior Living**
- General home & personal technology
- Smart home & home automation tech
- Home sensor solutions
- PERS

**Environmental Quality & Safety**
- Detect CO, smoke, radon, gas, water pollutants, leaks
- Purify air — remove germs, dust, allergens; purify water
- Circulate air throughout home

**Home Healthcare**
- Telehealth
- Remote patient monitoring
- Home health & private duty services
- Care provider house call services

**At-Home Fitness/Wellness**
- Home exercise equipment
- Wearables, health devices, & apps
- Access to outdoor spaces
Reduce Cost and Increase Rent

Vast majority say smart home devices can increase rental fees by 5% - 30%
Rural / Tier 2 and Tier 3 Broadband Areas

- Remote and rural areas will increasingly have higher internet speeds, wider availability
- Smart home devices drive connectivity demands and so device landscape is important to help drive higher broadband speeds
39% of SMBs are Likely to Acquire Security/Safety Products

Top 5 Likely Security/Safety Related Purchases in next 6 Months

1. Monitoring Cameras
2. Professionally installed security System
3. Door locks
4. Smoke Detectors
5. Video Doorbells

Interest in Additional Technology Services

- Smart Wi-Fi
- Cyber Liability Insurance
- Energy Management System
- Wi-Fi Extended Outside the Business
- Video Services App for Guests

30.7M US small business
— Small Business Administration

99.9% of US business are small businesses
— Small Business Administration
Slow and Steady Growth
Catalysts for Growth for Services

Impact Of Tech Giants

Growth In Smart Home

Growth Of DIY Solutions

Advancements In Video Technology
Top Barriers to Adoption of Smart Home Devices

#1 Value Proposition

#2 Price

#3 Privacy & Security

Smart Home Device Affordable & Value Groups

- Both affordable and valuable
- Neither affordable nor valuable
- Valuable only
- Affordable only
Trust is Key

- Works with products and services
- Trust them to support the app
- App would likely be low cost or free
- I trust them with my data
- The app would be easier to use
- I have an established relationship with the company

Support and Integration Drive Trust

![Bar chart showing trust in different companies to access and manage app data](chart.png)

- Trustworthy Company to Access and Manage App Data
- US Broadband Households Interested in a Single Unified Smart Home Control App

Bar chart showing:
- A security system provider: 30%
- Your internet service provider: 35%
- Your smart phone operating system provider: 25%
- A smart speaker or smart display brand: 30%
- A manufacturer of smart home products: 25%

% Specifying “I trust them with my data”
Unlocking Billions in Savings: Devices, Systems & Services

SMB MARKET

30M SMBs in the US

RESIDENTIAL

Single Family  Rental Homes  Multi Dwelling

INSURANCE

Connectivity, Wi-Fi, and The Network
## JANUARY 9, 2024 | SESSIONS AND TIMES

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:00 AM PT</td>
<td>PropTech: Extending Value in Multifamily</td>
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<tr>
<td>10:00 AM PT</td>
<td>Enhancing Home Security: Protecting What Matters</td>
</tr>
<tr>
<td>11:00 AM PT</td>
<td>Energy Management: Sustainability and Efficiency</td>
</tr>
<tr>
<td>1:00 PM PT</td>
<td>Fireside Chat: Smart Home Innovations</td>
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<tr>
<td>2:00 PM PT</td>
<td>Building a Consumer IoT Business</td>
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<tr>
<td>3:00 PM PT</td>
<td>Privacy and Data Security in Smart Homes</td>
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<tr>
<td>4:00 PM PT</td>
<td>Smart Homes: Embracing New Users</td>
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<tr>
<td>5:30 PM PT</td>
<td>Networking Reception</td>
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</tbody>
</table>
The ASHB Journal aims to educate and inform the ASHB membership and industry at large on emerging research, issues, challenges, and opportunities in the intelligent buildings and/or connected home sectors.

New articles are posted to the ASHB website, included in the weekly NewsBrief, and circulated on Twitter and LinkedIn.

Send proposals to admin@ashb.com

Recent posts:
- Ken Wacks Perspectives: CES 2023: The Expansion of Consumer Electronics
- Ken Wacks Perspectives: CES 2023: A Sampling of Product Diversity
- Facilio: The Relevance of Decarbonizing Goals During the Downturn
Join industry experts and leaders from around the globe as they discuss everything smart home and intelligent buildings.

ASHB is looking for guests and hosts for future pre-recorded episodes. Contact admin@ashb.com for more information.
New CHC Business?
Upcoming Events

Smart Spaces (Parks Associates)
November 30 | Virtual

CES
January 9-12 | Las Vegas, NV

Connections Summit at CES (Parks Associates)
January 9 | Las Vegas NV

IoT Evolution Conference & Expo
February 13-15 | Ft. Lauderdale, FL
11. Adjournment
Ken Wacks (Ken Wacks Associates)

Next CHC Meeting: February 2024

Association for Smarter Homes & Buildings (ASHB)
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Connect to what’s next™