Criterion	Competition Objective	Submission Requirements & Judging Process
Core Criteria		
Energy Efficiency and Greenhouse Gas (GHG) Emissions Reduction[1]	It is expected that entries have been designed to be energy efficient (use the least energy possible while providing the desired amenity). It is expected that entries have features and settings that can yield additional energy savings to the consumer and that entrants have taken actions to encourage the use of these features and settings. This can be through setting energy savings features as default operation as well as prominently labeling, displaying, or otherwise communicating their benefits.	Entrants must provide details about the energy efficiency of their connected devices based on industry standard test procedures and metrics. Entrants may also provide carbon or GHG emissions reduction values if they include this type of messaging in their product promotion. This includes both operational and behavioral savings.[2] Standby power will also be reported, as well as energy consumption of any associated bridges or hubs. Some entries may fall outside the scope of the ENERGY STAR® program criteria, but when applicable, products should meet or come close to the associated efficiency requirements. Judges will base their scoring on efficiency data, actual energy impacts of the system, standby power, energy consumption of hubs, and ENERGY STAR certification, in combination with their assessment of the energy savings features offered, how reasonable and compelling the use scenarios are, and their likelihood to yield energy savings and carbon or GHG emissions reduction.
Functionality	The Competition is interested in all functionalities enabled by connectivity and the value proposition they offer to consumers. Those that provide a greater value proposition will be awarded more points. Desired entries include those that offer multiple functionalities or sophistication and are particularly innovative. Functionalities desired include operational status reporting, energy consumption reporting, and the ability to self-diagnose problems.	Connected capabilities, both hardware and software (e.g., speakers, cameras, geo-sensing, infrared sensing, energy meters, algorithms, or machine learning), will be identified and documented by the entrant. Entrants will be asked to detail potential use cases for a device or system to demonstrate the value proposition for consumers and/or program administrators and utilities. Judges will consider the number and depth of functionalities provided to consumers as well as utilities and program administrators.
Load Management	Considerable weight will be given to entries that have considered load and energy management capabilities and the value proposition to consumers, utilities, and program administrators.	Generally, load management entails attempts to shift load from peak use periods to low use periods. Judges will look at how the product's functionality enables consumers and consumer authorized third parties to reduce, reshape, or redistribute energy loads to match available resources.

[1] Greenhouse gas emissions reduction in this context refers to the limiting of emissions due reduced energy use or a reduction in the rate of GHG emissions at the time of energy use (for example, by shifting product operation to off-peak times).

[2] Operational savings refers to energy savings resulting from the modification of product settings to reduce energy consumption without negatively affecting the quality and consumer amenity. Behavioral savings are energy savings that result from consumer behavior change.

Criterion	Competition Objective	Submission Requirements & Judging Process
Data Sharing	The Competition seeks entries that can successfully link their data sharing capabilities and policies with an enhanced consumer experience. In addition, utilities and program administrators have identified significant potential value streams from data – load management, verification of energy savings, supporting consumer behavior change, and providing customized energy recommendations to support the delivery of safe, reliable, and low-cost service to consumers. Therefore, entrants will also be scored on whether consumers can choose to share data with authorized third parties (utilities, aggregators, and contractors) as it is viewed as a pathway to enhance the consumer experience.	Entrants must indicate what data their device or system is able to generate, which data is shared with the consumer and how it is communicated, and how it ties to an enhanced consumer experience. Entrants must also indicate whether there is an opportunity for the consumer to share information with authorized third parties and whether open APIs are available to these third parties. The strategy behind what and how data is shared with the consumer will greatly inform the scoring of this criteria. Judges will provide a subjective assessment of the data sharing capabilities and policies and how well they are tied to an enhanced consumer experience.
Interoperability	The Competition is seeking entries that seamlessly operate with other connected devices, systems, and platforms within the home. In the absence of a single communication protocol or standard being adopted by industry, manufacturers and service providers have formed partnerships and often indicate that their offering "works with" other platforms. However, not all partnerships are equal and there are levels of integration with different depths of functionality. As a result, points will be awarded based on the number of platforms or ecosystems a device or system is compatible with and their market share, the number of other devices integrated with the ecosystem, and the ability to offer full functionality.	Entrants are required to detail how their entry interacts with other connected devices and platforms in a home. They will document which communication protocols they are using, which platforms and devices their entry is designed to be compatible with, what partnerships they have formed, and the degree of functionality offered by these partnerships. The existence of open APIs will also be considered for this criterion in order to assess how easy it would be to forge new partnerships. Judges will evaluate the number and market prevalence of protocols, compatible platforms, and partnerships, along with the depth of integration to provide generate an interoperability score.
Reliability	The Competition seeks highly reliable devices, systems, or platforms, defined as having the ability to maintain operation with the disruption of power or internet and on different versions of operating systems, as well as maintaining user settings and easily reconnecting after a disruption or installation of software updates. User interfaces like online portals or apps should be designed to operate on a variety of operating systems (versions and types). Products that lose substantial functionality with a loss of connection will be awarded fewer points. For example, devices that rely on only one protocol generally present a greater risk for customer dissatisfaction, particularly for consumers without reliable connection.[3]	Entrants will be asked to explain how the device and system design as well as connection channels they employ provide reliability to consumers and if applicable, authorized third parties. They will report which capabilities (e.g., responding to commands or setting and altering schedules) are controlled locally versus through a cloud. They will be required to provide information on if and how an entry reconnects to the connected ecosystem following a power or internet disruption or a software/firmware update. Judges will consider whether the entry offers more than one pathway for the consumer to connect as well as how software is maintained over time to ensure proper operation in a dynamic integrated home environment.

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[3] Pew Research Center, Internet/Broadband Fact Sheet; J.D. Power, Wireless Router Customer Satisfaction Declines in 2017 Due to Ineffective Customer Service, J.D. Power Finds.

Criterion	Competition Objective	Submission Requirements & Judging Process
Ease of Installation, Set up, and Use	To ensure a positive consumer experience, it is expected that entries will be easy to install, set up, and use. More points will be awarded for entries that offer simple installation instructions, low barriers to set up, and intuitive operation through multiple interfaces.	**Ease of installation** –entrants must indicate if this is a DIY installation or if a professional installer is required and provide all installation instructions and guidance. Scoring will be based on the complexity of the installation instructions, the tools and infrastructure required (e.g., C-wire), and consultation with UL staff who completed the installation, as applicable.

Ease of set-up – entrants will provide set-up instructions and guidance. Scoring will be based on the subjective evaluation of the on clarity of set up instructions, the number of steps required in the process, and potential barriers such as length and complexity of the set-up process.

Ease of use –judges will base scoring on the subjective evaluation of the simplicity and intuitive use of all available interfaces (e.g., embedded within the device, separate physical interface such a remote, and app). Any publicly available consumer ratings (e.g., app ratings) may also be considered. |
| **Consumer Value Proposition** | To support market adoption, entrants should clearly communicate their value proposition to the consumer, including both energy and non-energy benefits. The Competition seeks entrants that provide high value to the consumer. More points may be awarded to those entrants that effectively balance quality and amenity with price point, particularly for products that are considered price accessible, as many program administrators are seeking to make connected products affordable for all customer segments. It is expected that entries will have an appropriate form factor that is suitable for the intended application. Entries or components intended for display should have a desirable visual presentation and physical appearance. | Entrants will be asked to submit the MSRP, any subscription or monthly service fees, and provide details about materials and components used. Judges will consider price point of devices and services fees based on the amenity provided to consumers and assess whether the device is scalable for residential applications and determine its overall value proposition. Entrants may also provide consumer marketing materials. Judges may also review publicly available information (e.g., website or online retailers) to assess the clarity of the value proposition and each products' ability to meet a wide range of consumer needs and expectations. Evaluation of this criterion will be based on the data provided and the judging panel's subjective evaluation of the entry's value proposition. This includes form factor, design characteristics, aesthetic qualities, and any associated user interfaces (e.g., screens, remotes, or apps). |
| **Cybersecurity**[4] | It is expected that entrants will not present a cybersecurity risk to consumers. Entrants should highlight any explicit aspects or capabilities that enhance consumer data safety and deliver cybersecurity assurances. | Entrants will be asked whether the entry is compliant with any established industry standards (e.g., UL 2900, UL CAP, UL IoT Security Rating, CSA Cybersecurity Verification Program) and, if not, winners will be required to complete a checklist of cybersecurity steps they have taken to be graded Pass/Fail by UL Staff. |

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[4] Cybersecurity is the art of protecting networks, devices, and data from unauthorized access or criminal use and the practice of ensuring confidentiality, integrity, and availability of information. (https://us-cert.cisa.gov/ncas/tips/ST04-001)

Criterion	Competition Objective	Submission Requirements & Judging Process
Quality of Design and Engineering	The Competition seeks devices and systems that provide superior quality in terms of design and engineering. Quality remains a critical factor for supporting customer adoption and satisfaction. As applicable, aesthetics may also be considered for categories where this plays a significant role in influencing consumer purchasing decisions.	Where appropriate test procedures and metrics are available, entrants will be asked to provide performance data. This information may vary between categories, for example: • Lighting entries will be evaluated based on their light distribution, lumen output, diffusion, glare, color temperature, color rendering, and flicker. • For all entries, judges may consider the materials used, durability, aesthetics, and engineering design characteristics. Judges will use provided data as an input when evaluating the in-person appearance of quality with respect to its intended application to inform their scoring.
Innovation	It is expected that entries will have unique or innovative elements. This may include design, engineering, or aesthetic factors.	As part of the submission process, entrants will be asked to indicate any particularly innovative features, including pending patents. Evaluation of this criterion will include the judging panel's subjective evaluation of the entry's design, engineering, or aesthetic qualities, as well as those of any associated user interfaces (e.g., screens, remotes, or apps).
Bonus Points		
Resiliency[5]	The rise in extreme weather and climate events in recent decades has spurred significant attention to the importance and potential consumer benefit of resiliency. The Competition seeks connected home devices, systems, and platforms that have been designed to be more rugged and with the ability to continue operating outside normal conditions.	As part of the submission process, entrants will be asked to indicate whether their entries incorporate any resilient and durable features or materials (e.g., battery and solar-powered operation, waterproof, shatter-proof, rust-proof components) to support recovery from adverse events. Points will be awarded for entries that have considered and incorporated resilient features.
Future Proofing	With such dynamic market conditions, it is essential that connected home devices, systems, and platforms continue to operate and deliver on their value proposition well into the future.	Entrants will be asked to demonstrate how their entry is "future-proof" by explaining any embedded capabilities for enabling updates over time (for example, over the air firmware and software updates), indicating which capabilities reside in the device and will still function if the cloud is no longer supported, as well as plans in place to address significant company changes (for example, releasing code to open source). Judges will award more points to those with well thought out plans and infrastructure to support such contingencies.

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[5] Resiliency is defined as the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.

Criterion	Competition Objective	Submission Requirements & Judging Process
Replaceability and Field Serviceability	The Competition seeks sustainable products, systems, or platforms. Entries that must be discarded upon failure of a single component will not be awarded points for this criterion. Field serviceability describes the ease with which the entry can be maintained and repaired at the point of use, either by the consumer or by a field technician.	Entrants will explain any sustainable aspects of their devices, systems, or platforms, in terms of materials used and ability to replace individual components. Entrants can also describe the process for field servicing and availability of technicians, if needed. Judges will provide subjective scoring of these capabilities.
Niche Applications	The Competition is interested in entrants that fill smaller or unique niche market roles (e.g., devices, systems, or platforms that are designed to serve the growing senior population and their unique needs).	Judges will determine bonus points ad hoc based on their subjective assessment of products and any information entrants submit outlining how their entry serves a special market need.