



**BEYOND**  
SMART CITIES

**TECHNOLOGY FOR SUSTAINABLE  
DEVELOPMENT  
REFRESHER TRAINING COURSE**

**KRISHNAJI PAWAR**, LEED AP BD+C, GSAS CGP, ISO 14001:2015, GCP



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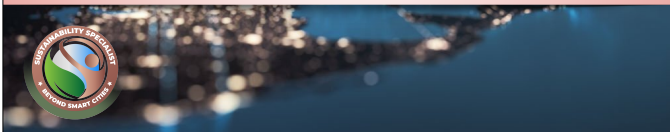
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**BEYOND**  
SMART CITIES

**THE USE OF SMART APPLIANCES  
FOR BUILDING SCIENCE PROFESSIONALS**

**KRISHNAJI PAWAR**, LEED AP BD+C, GSAS CGP, ISO 14001:2015, GCP  
BUILDING SCIENCE SPECIALIST CURRICULUM



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**WHAT SHOULD YOU LEARN**



**What is a Smart Appliance**

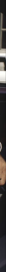
**What are smart appliances for?**

**Consumer Benefits of smart appliances**

**Smart Products and Services**

**Why manufacturers creating Smart products ?**

**Smart Pro Rating System for Products and Services**



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## WHAT IS A SMART APPLIANCE



An appliance becomes a smart appliance when it is connected to a central system and able to be programmed or controlled remotely or operate autonomously, based on input from sensors detecting things like temperature, light levels, or activity.

Smart appliances are typically designed to interoperate with other smart devices, ideally as part of an overall smart home.

Why create smart appliances? For consumers, they offer benefits such as better energy management and greater convenience, comfort, and security.



## WHAT IS A SMART APPLIANCE +



For manufacturers, smart appliances can increase profits—not only by delivering products that consumers want to buy and use, but also through new revenue streams based on things like automated consumables replacements or efficiencies of development, manufacturing, deployment, and maintenance.

Examples of Smart Appliances : Refrigerators, Ovens, Microwaves, Coffee makers, Blenders, Light bulbs, Outlets, Plugs, Lighting kits, Heaters, Air Conditioners, Thermostats, Ceiling fans, Energy control systems, Leak detectors Smart Security Locks, Security systems, Cameras, Smoke and carbon monoxide detectors, Smart sleep systems, Infant monitors, Air care systems, Weather systems



## WHAT ARE SMART APPLIANCES FOR?



When people tell you that the Internet of Things (IoT) is all the rage, it's hard to know what they're talking about. The answer is not so complicated: among other things, they are talking about smart appliances that can make your life easier.

Now, household appliances are connected to the internet: you can communicate with them remotely, from anywhere with a connection (your mobile, a computer, etc). They will tell you how they are working and you can give them orders.

Now, appliances are anticipating your needs: it is no longer about something boring (for example: doing laundry) that can be done faster. That phase is over. Now it's about the washing machine detecting the texture and colors of your laundry and choosing the best washing programme without you having to worry about a thing.



## CONSUMER BENEFITS OF SMART APPLIANCES

- ✓ Convenience and ease of use, making home life easier and more comfortable through the automation of everyday tasks.
- ✓ Energy efficiency by monitoring and adjusting their own energy levels, based on actual usage and through coordination with other sensor-based devices in the home, such as thermostats or motion detectors.
- ✓ Energy efficiency by monitoring and adjusting their own energy levels, based on actual usage and through coordination with other sensor-based devices in the home, such as thermostats or motion detectors. Security for people's homes and families with connected security systems that alert to problems, even if residents are out of town.



## WHY MANUFACTURERS ARE CREATING SMART APPLIANCES

Manufacturers have the most to gain from smart appliances— tapping into the data they generate to save maintenance costs, iterate and improve their products, provide customers with better service, and create new revenue streams through add-on features and value-added services.



## Smart<sup>Pro</sup> Products & Services

The Beyond Smart Cities the Smart<sup>Pro</sup> Products Program in 2020. This program is designed to clarify environmental standards for products and promote environmentally friendly products. A Smart<sup>Pro</sup> Eco-Label is affixed to those products meeting our environmental standards, thus certifying them as Smart<sup>Pro</sup> Eco-Products.

Our objective is to provide straightforward information on the environmental considerations incorporated into products to assist customers in the decision-making process when selecting a product.

Smart<sup>Pro</sup> encourages the product manufacturer to implement green measures at every stages of product life cycle including product design, product performance during use, raw materials, manufacturing process, recycling/disposal, etc.

### Green Business Means Good Business!

With greener products and services on the market, we all stand to benefit: consumers, businesses and the environment.



