

Web of Things mapping ideas based on gateway model

Panasonic Corporation

- 1. Introduction*
- 2. Web of Things mapping ideas*
- 3. Service examples of Web of Things in home*

1. Introduction

1-1. Aim of Web of Things

*“The Internet of Things is currently beset by product silos. To unlock the commercial potential there is a need for open ecosystems based upon open standards.” *1)*



*1) <http://www.w3.org/WoT/>

1-2. Introduction of Panasonic

- *Founded in 1918 by Konosuke Matsushita*
- *Sales: 7.7 trillion yen last year, 26%=CE products.*
- *Expanding B2B business based on CE technology*

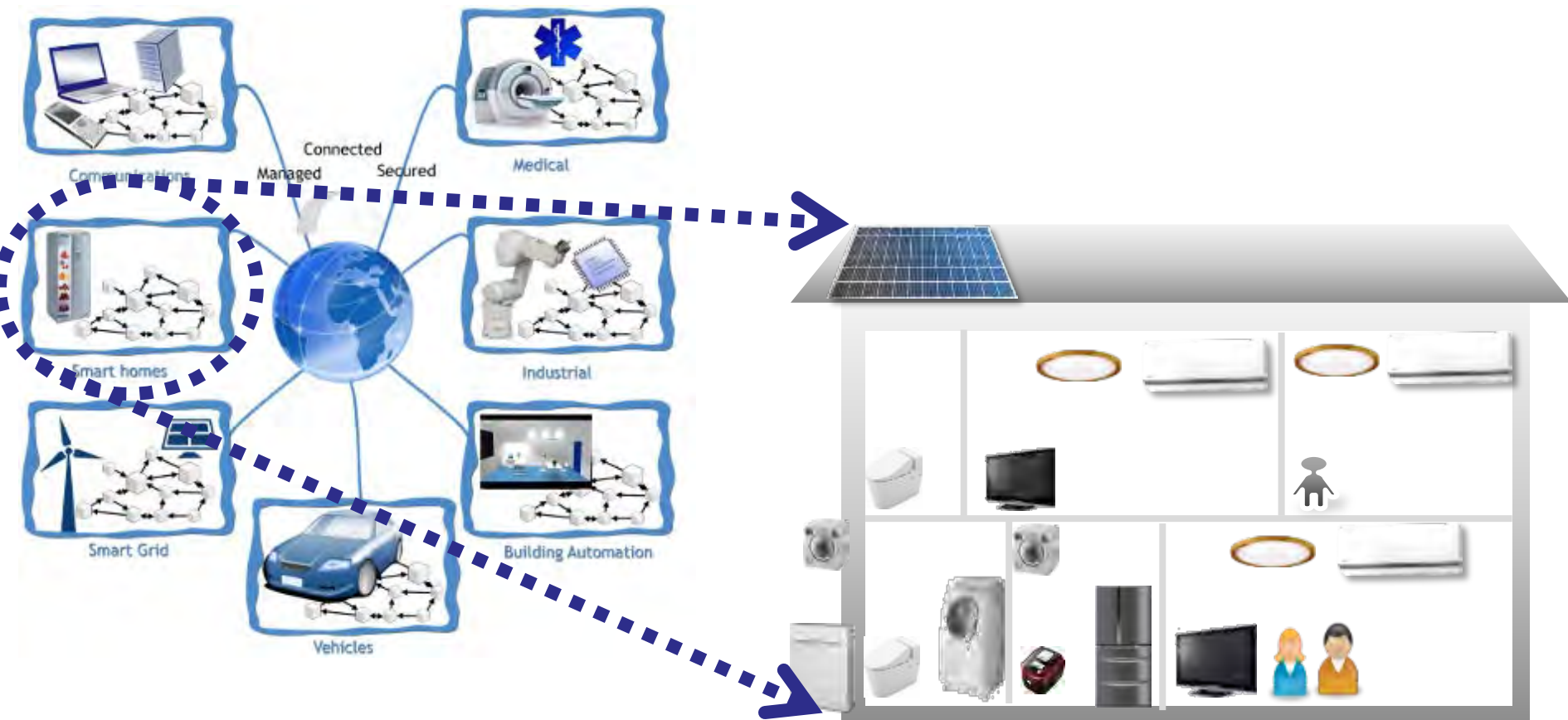
Panasonic

A Better Life, A Better World



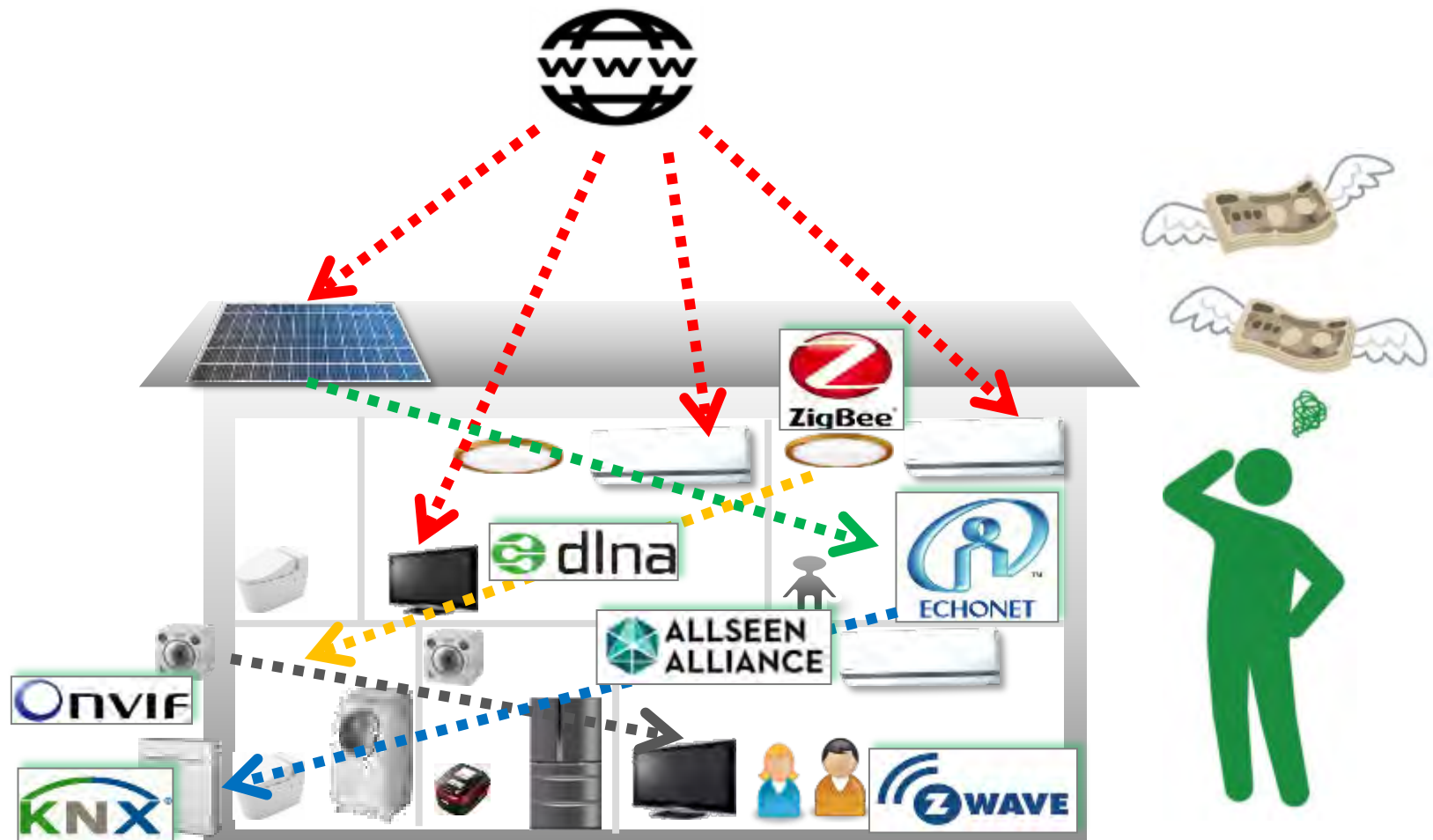
2. Web of Things mapping ideas

2-1. Requirements to Web of Things in home



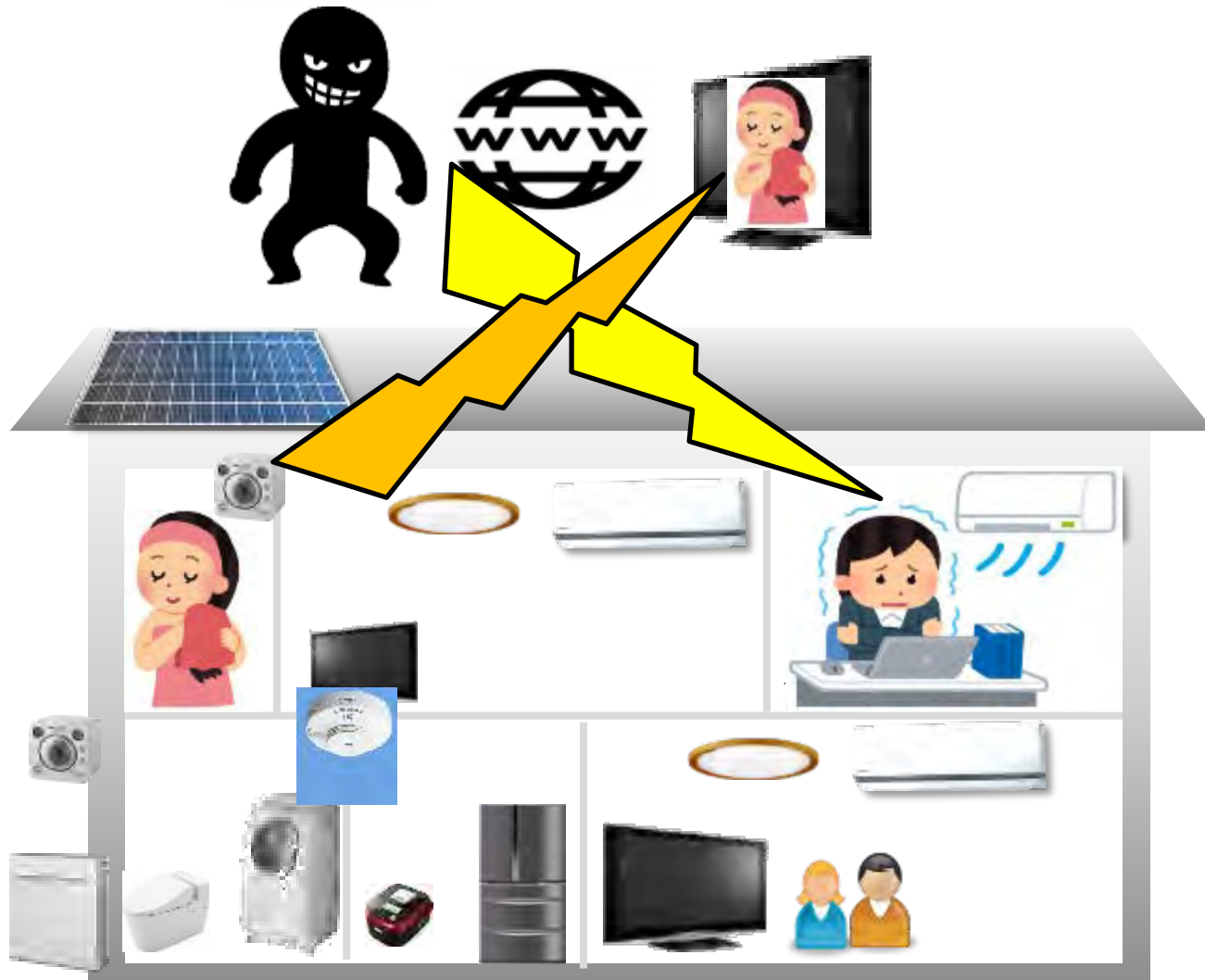
2-1-1. Requirement 1: Simplicity and Compatibility

- (1) Various products connected with several existing protocols
- (2) Limited capability: home product can't support multiple protocols



2-1-2. Requirement 2: Safety, Security and Robustness

- (1) *Prevent malicious attack or careless use from outside home*
– *Avoid privacy leakage and hazardous operation*



2-1-2. Requirement 2: Safety, Security and Robustness

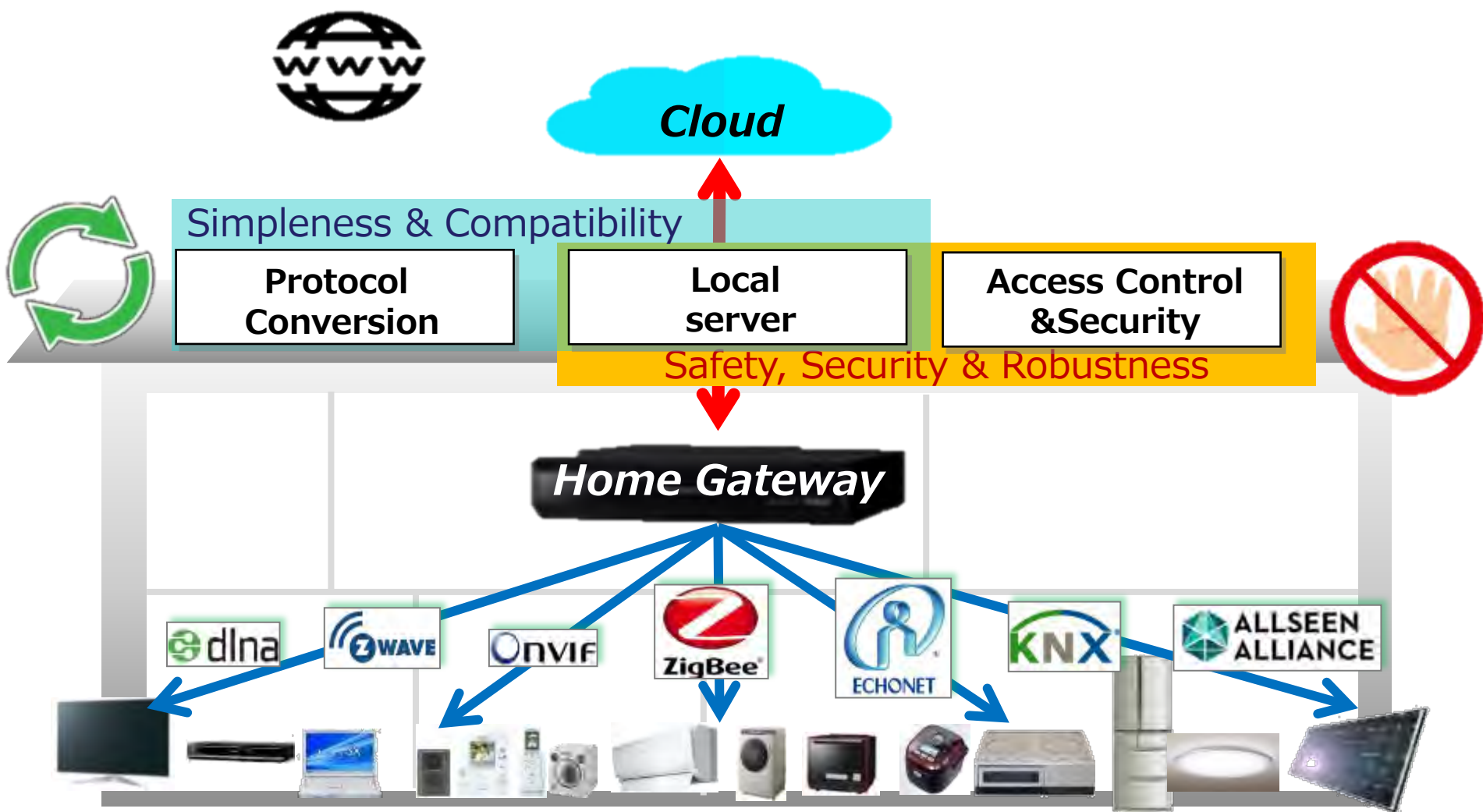
(2) *Enable emergency operation at disaster*

- *Support time-critical operation and web-offline operation*



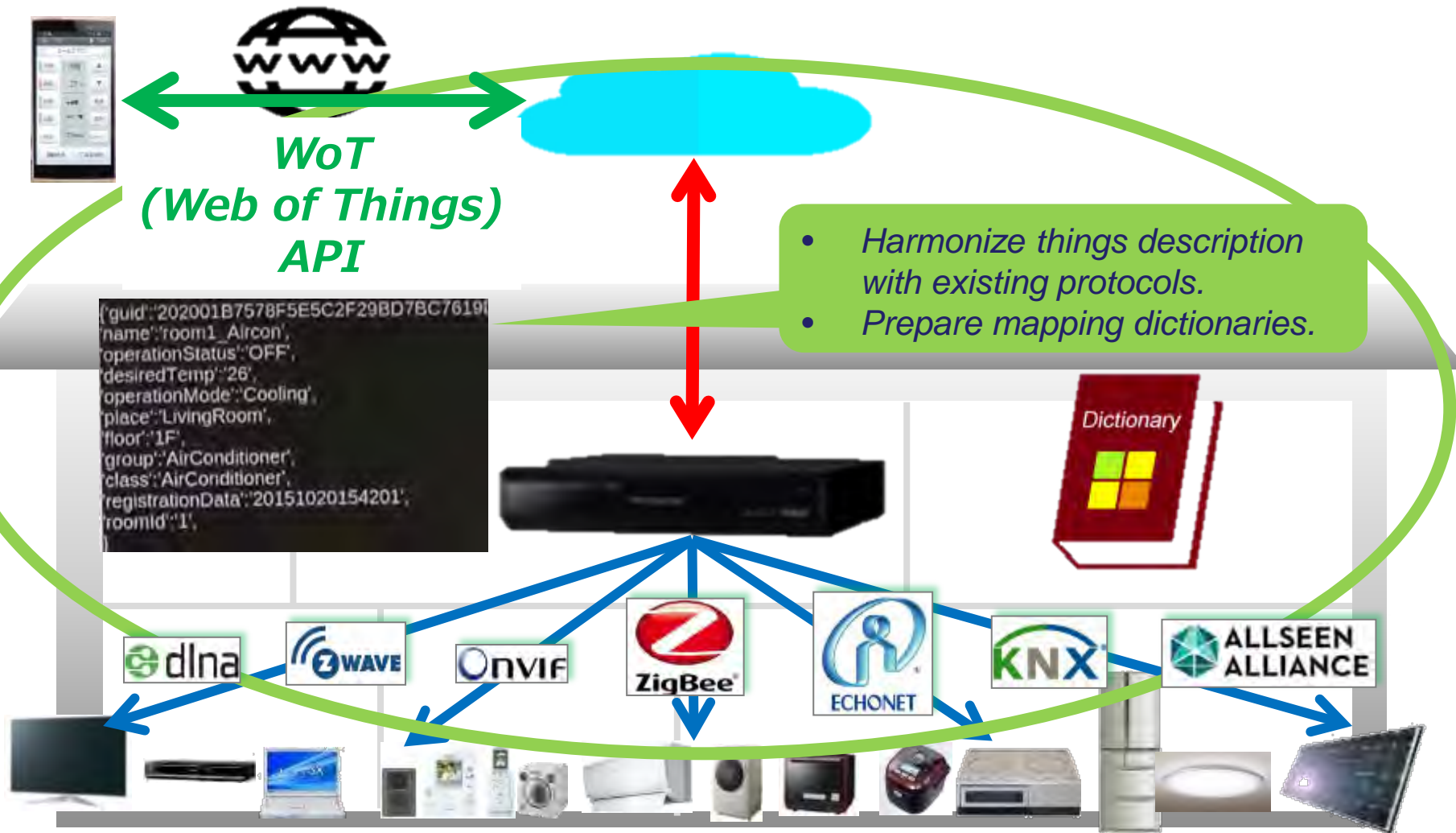
2-2. Solution 1: Gateway model

- Consider gateway model collaborating with cloud, as one of reference architectures



2-2. Solution 2: WoT API mapping

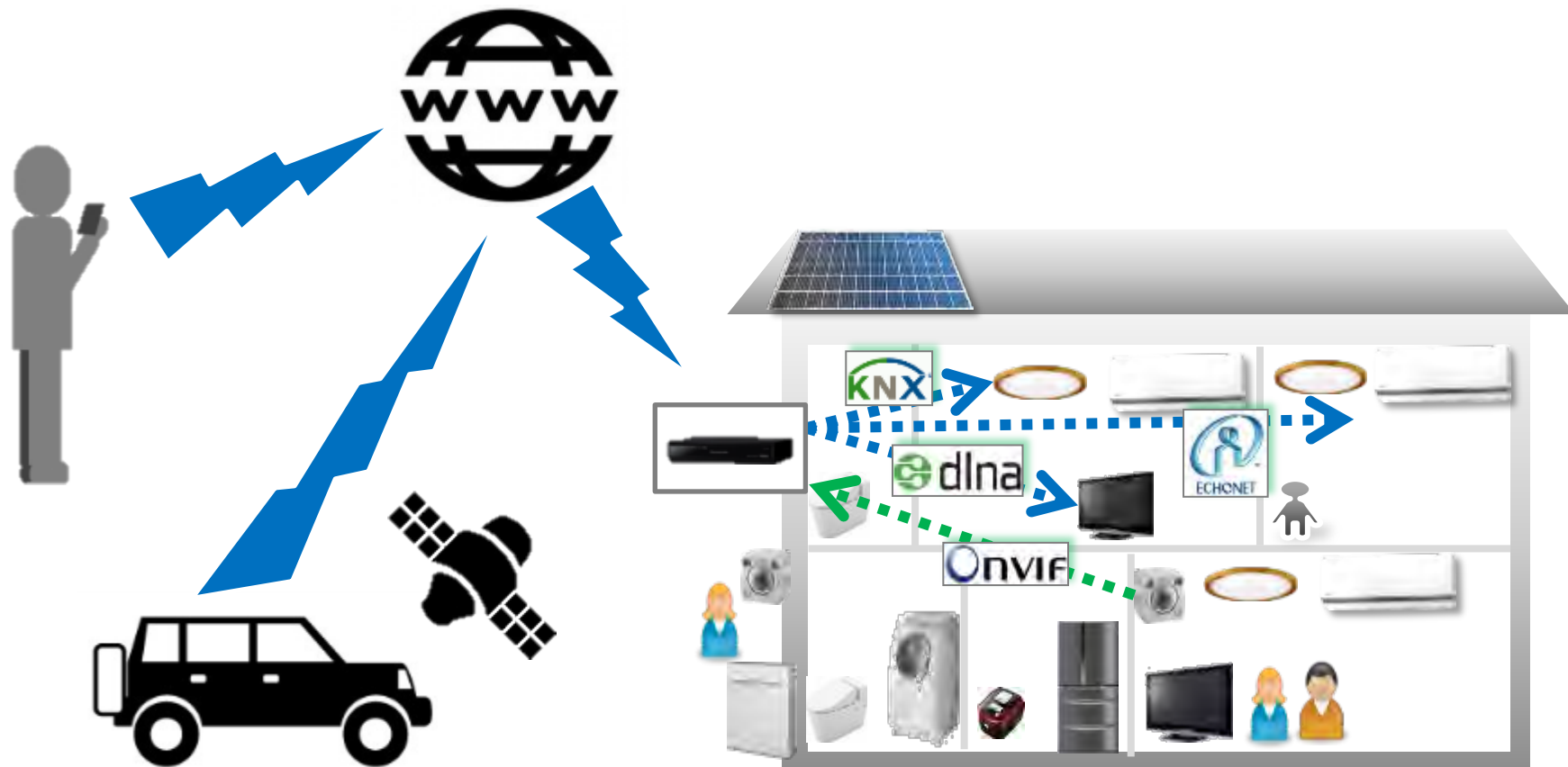
- Define WoT API absorbing the differences among existing protocols in home



3. Service examples of Web of Things in home

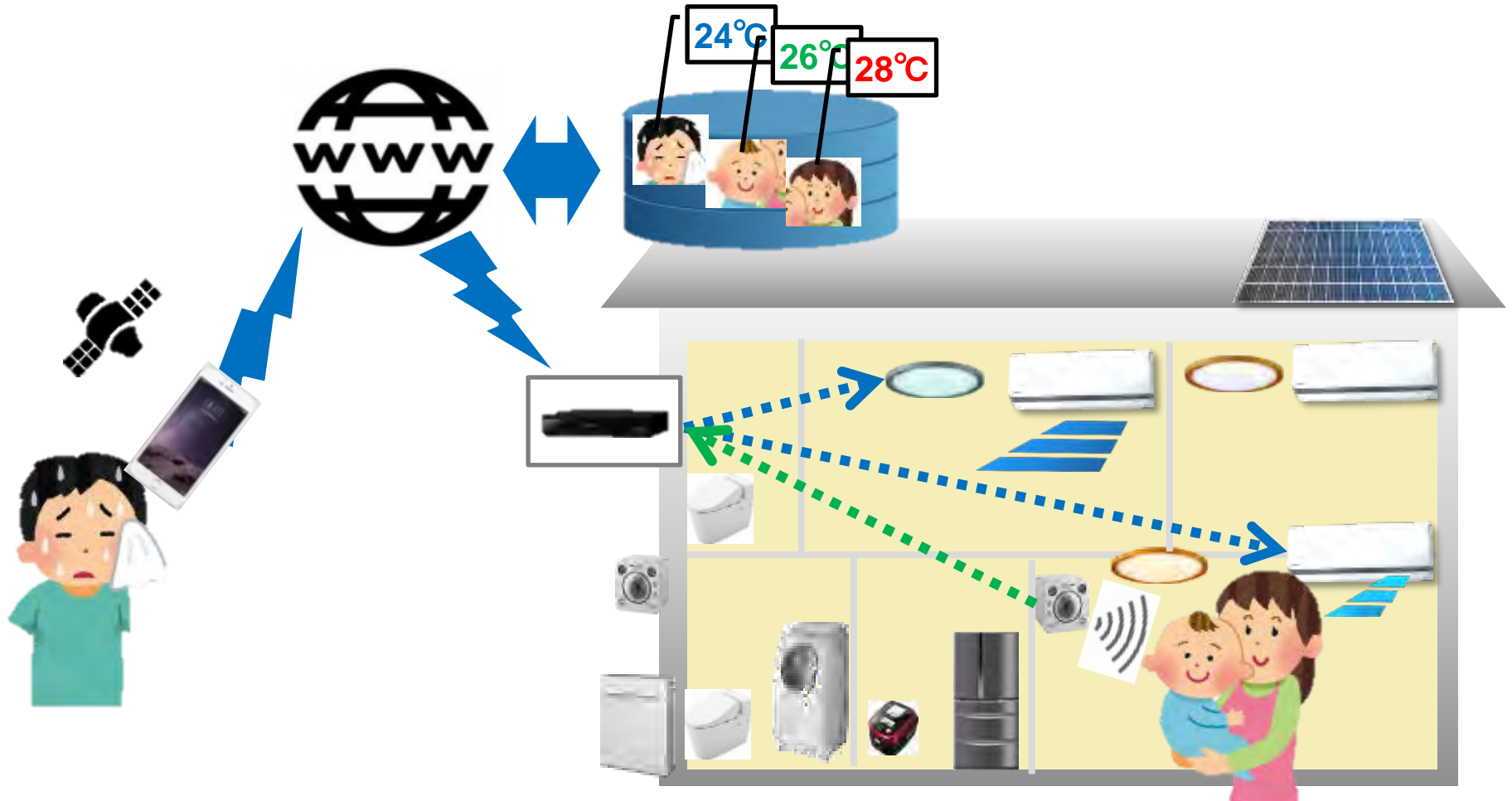
3-1. Immediately control any device from anywhere

- *Turn off all TVs, air conditioners and lightings in home from office at once.*
- *Check status of family in home through camera, then remote control air conditioner and lighting appropriately.*
- *Automatically turn on air conditioner when approaching home.*



3-2. Automatically adjust comfort settings for who's in the house

- *Automatically choose and prepare low temperature and cool lighting for father coming back.*
- *Automatically choose moderate temperature and warm lighting for mother and baby staying home.*



4. Conclusion

- *We can realize several attractive web services interacting with home products, by defining a Web of Things API that is aligned with existing protocols.*
- *We can make such services safe, secure & robust, by introducing the gateway model.*
- *Therefore, Panasonic will contribute to developing Web of Things standard, to help establishing the environment for creating such services.*

*Let's work together toward
"A Better Life, A Better World" !*

Panasonic

**A Better Life,
A Better World**