



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

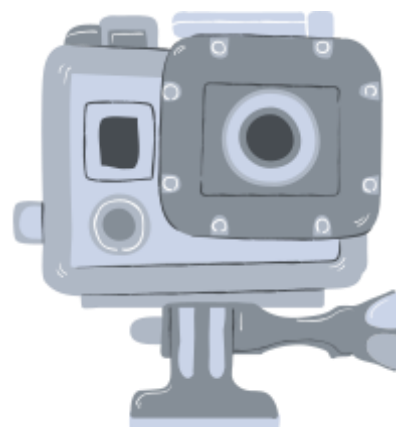
**Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

UNIT I

Conventional Grid vs Smart Grid

19EEE308 – SMART GRIDS
III year / VI Semester



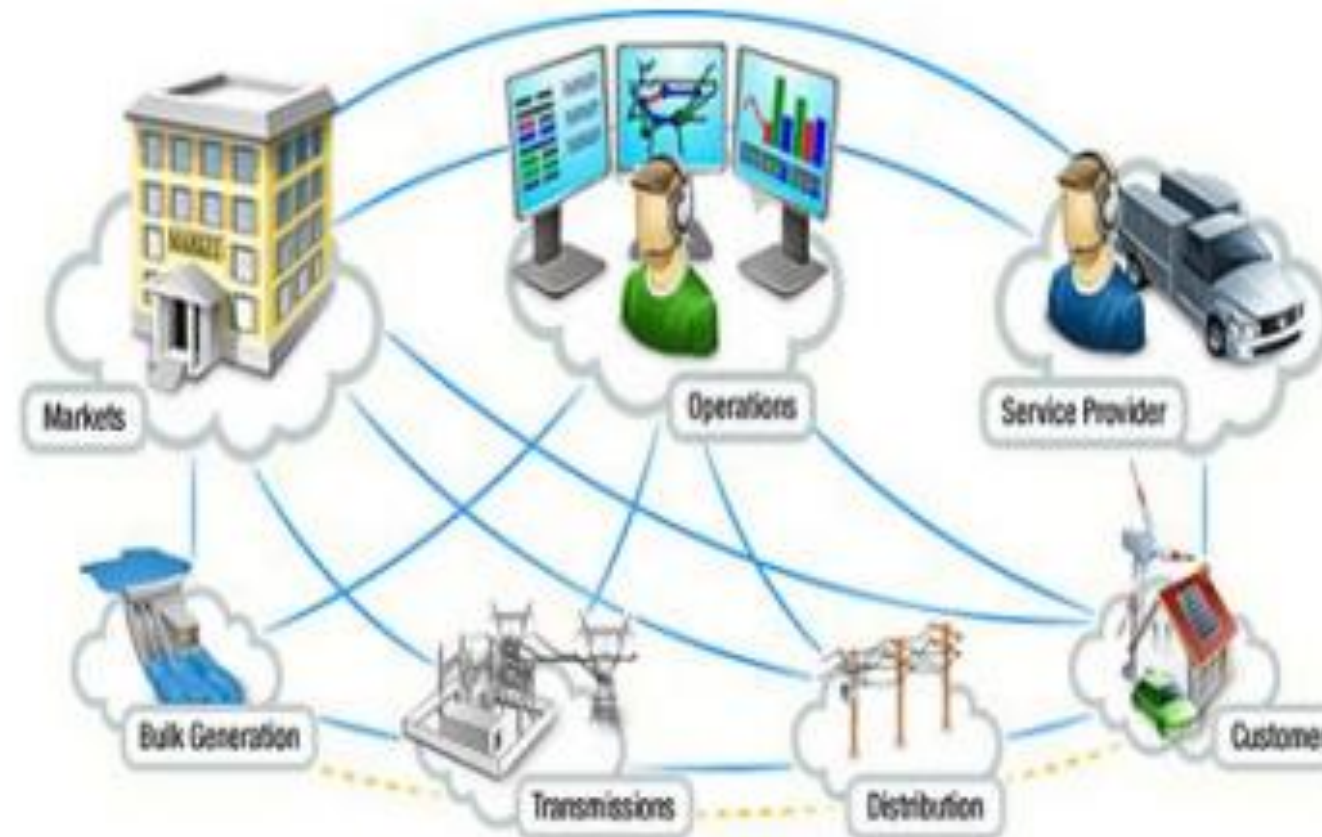


What is smart grid?

Announced in US by President Barack Obama on 8th January, 2009

Smarter

- Generation
- Transmission
- Distribution
- Customer participation
- Operations
- Markets
- Service Providers



Source: <http://smartgrid.ieee.org>

Overall objective:

Smart/best/optimal utilization of all the available resources.

Initial references:

1. DOE document at <http://www.oe.energy.gov/smartgrid>
2. EPRI document at <http://intelligrid.epri.com>



What is smart grid?...contd.

Definition by National Institute of Standards and Technology (NIST), USA:

A modernized grid that enables bidirectional flows of energy and uses two-way communication and control capabilities that will lead to an array of new functionalities and applications.

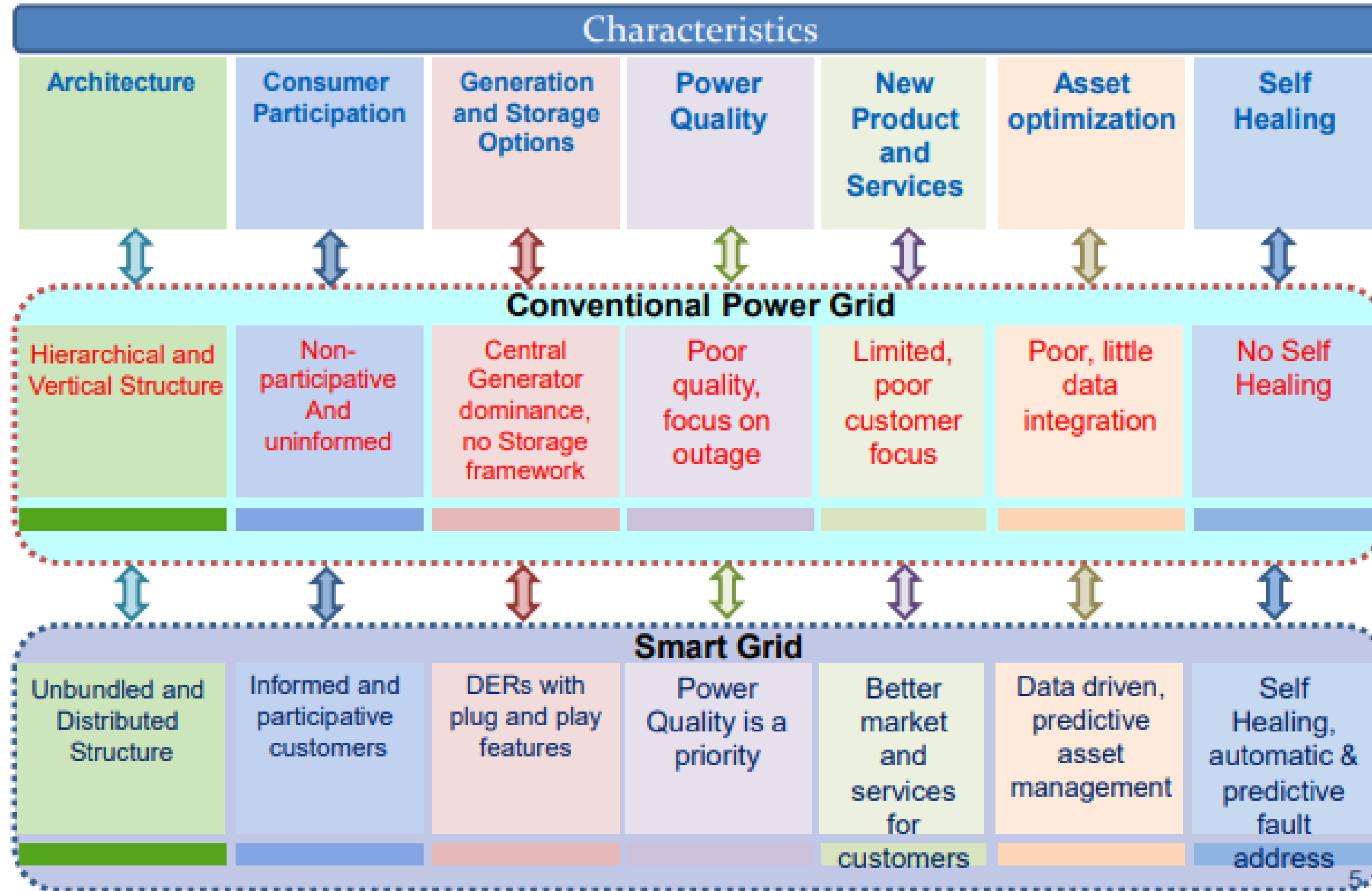
IEEE:

- ❑ *Smart grid is a large 'System of Systems', where each functional domain consists of three layers: (i) the power and energy layer, (ii) the communication layer, and (iii) the IT/computer layer.*
- ❑ Layers (ii) and (iii) above are the enabling infrastructure that makes the existing power and energy infrastructure 'smarter'.

Domain of Smart Grid spans over Generation, Transmission, Distribution till Customer Devices

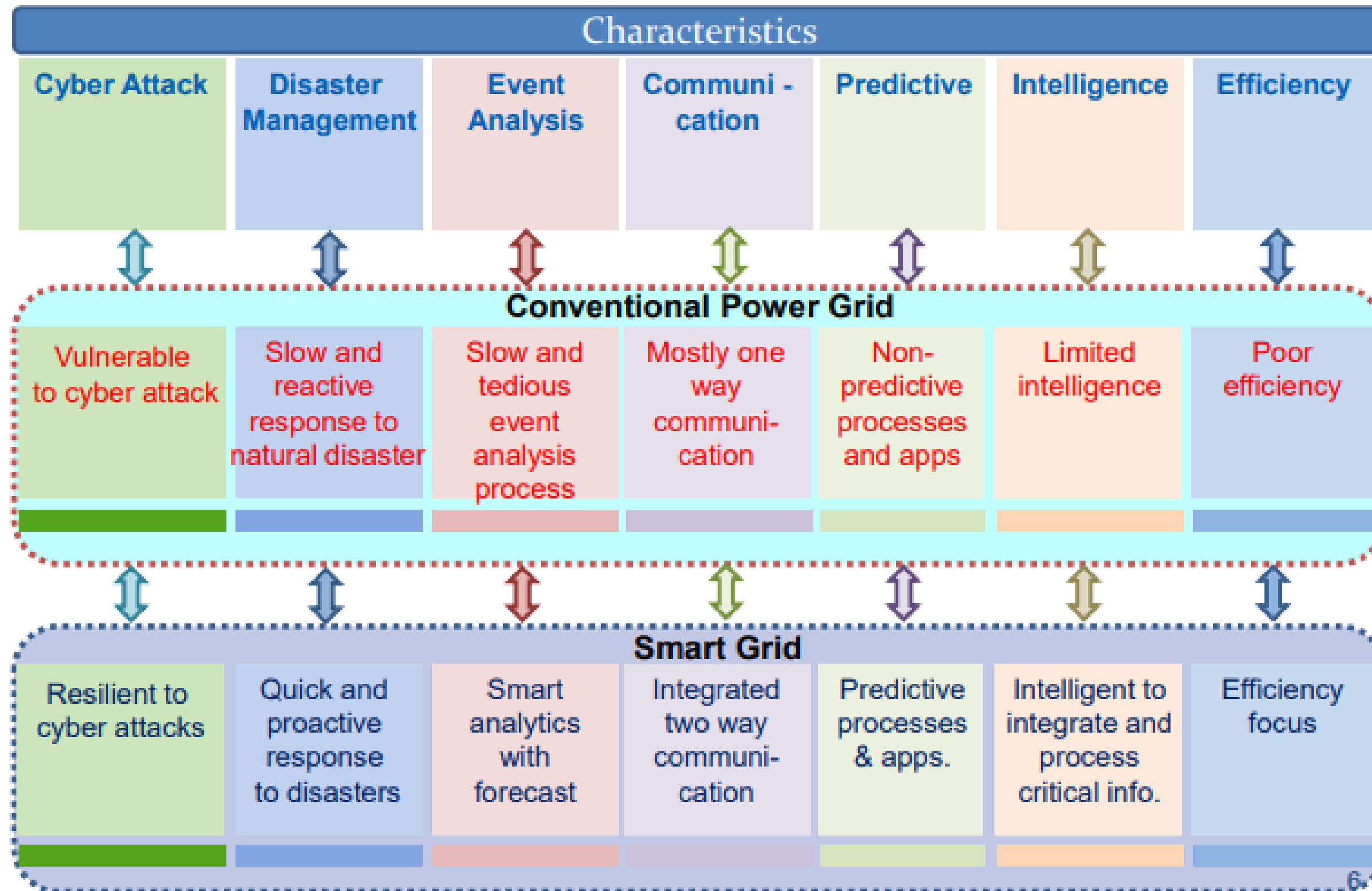


Conventional Grid Vs. Smart Grid





Conventional Grid Vs. Smart Grid ..Contdc





Summary



Activity



**KEEP
LEARNING..
Thank u**

SEE YOU IN NEXT CLASS