



# **SNS COLLEGE OF TECHNOLOGY**

## **(AN AUTONOMOUS INSTITUTION)**

Approved by AICTE & Affiliated to Anna University  
Accredited by NBA & Accredited by NAAC with 'A++' Grade,  
Recognized by UGC Saravanampatti (post), Coimbatore-641035.



## **Department of Biomedical Engineering**

**Course Name: 19BM0302 & WEARABLE TECHNOLOGIES**

**Topic :Technical Challenges**

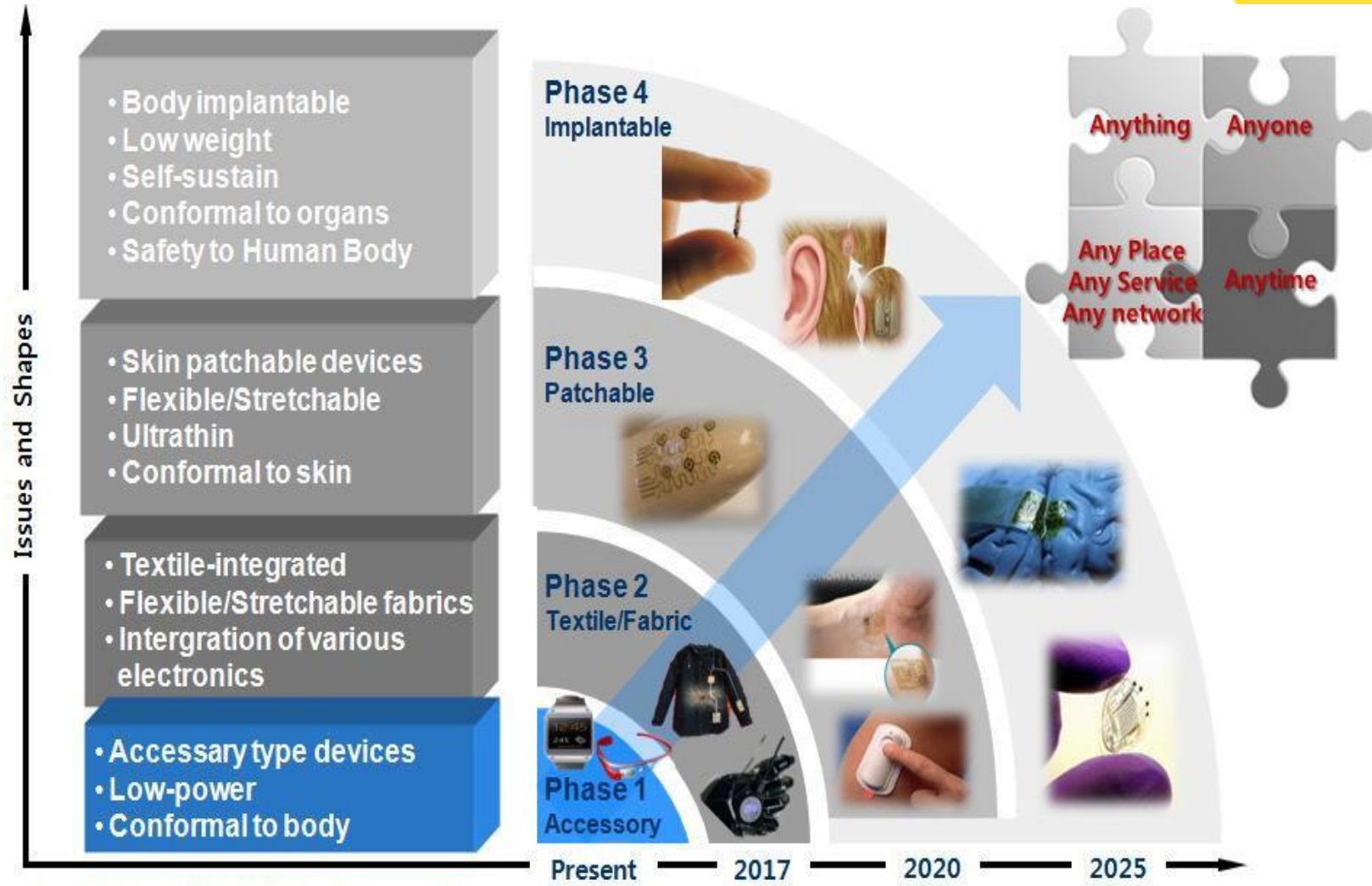
**Semester :6**

19BM0302/ **Technical Challenges**

Dr.S.Prince Samuel /AP/BME



# INTRODUCTION



source : Ministry of Trade, Industry & Energy of Korea

19BM0302/ **Technical Challenges**

Dr.S.Prince Samuel /AP/BME



# MEDICAL ELECTRONICS



## ➤ **Wearable Smart Devices:**

- electronic devices and components intended to be located near, on or in an organism that have intelligent functionality and/or may be a part of an intelligent system via connectivity

## ➤ **Near-body electronics**

- electronic devices and components intended to be located near an organism where it does not contact the external surface of the organism directly

## ➤ **On-body electronics**

- electronic devices and components intended to be located on an organism where it contacts the external surface of the organism directly

## ➤ **In-body electronics**

- electronic devices and components intended to be located internal to an organism

## ➤ **Electronic Textiles**

- fabrics or textile-based electronic devices and components



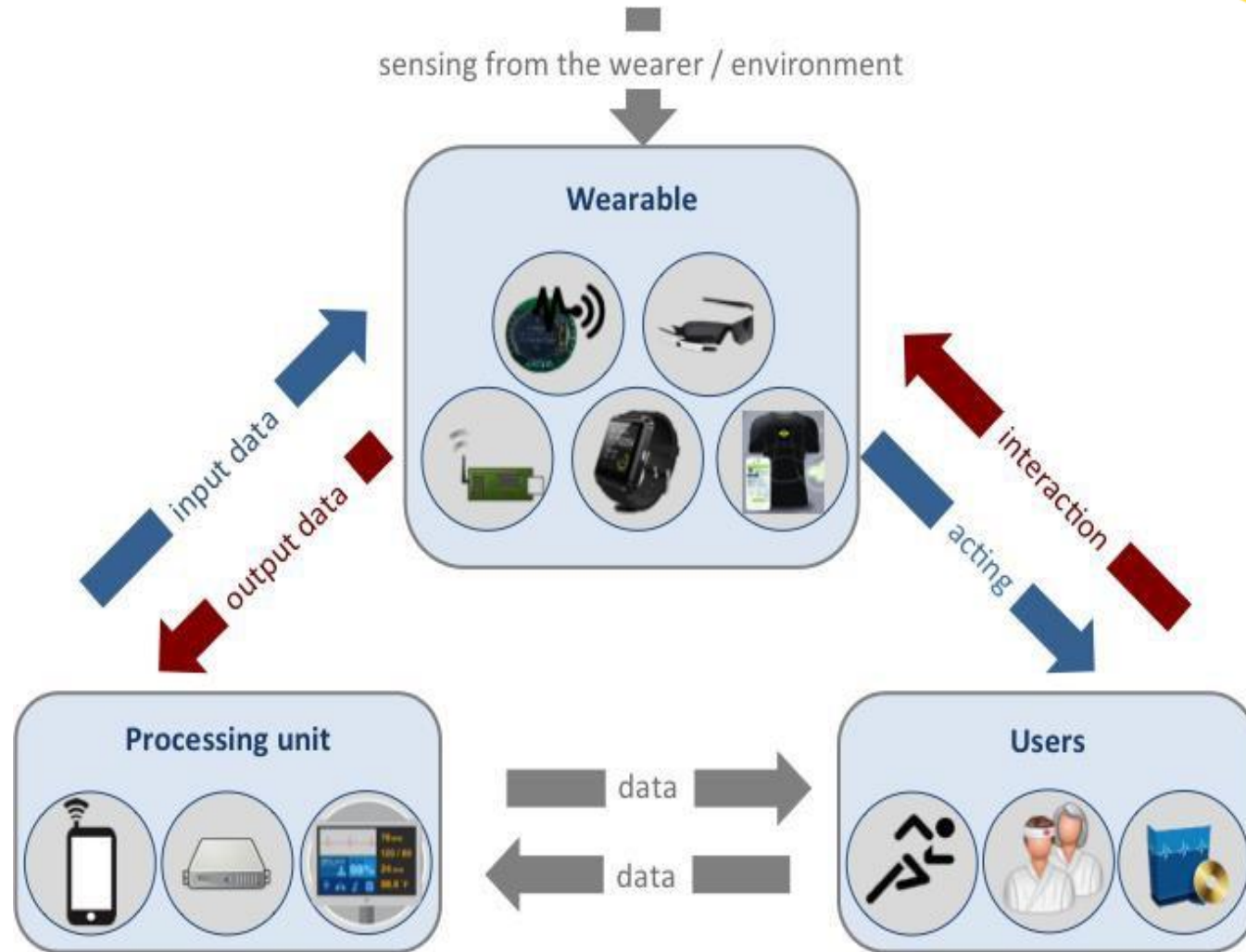
## DIFFERENT KINDS OF WEARABLES



- **Wearer:** any living organism that is sensed by a Wearable.
- **Wearable:** any thing that senses the Wearer; it may have control, communication, storage and actuation capabilities, and sense the Wearer environment.
- **Mwearable:** a Wearable having at least one of media communication or storage capabilities.
- **User:** any living organism, physical object or software interacting with and / or acted by a Wearable;
- **Processing Unit:** a unit or a set of units, some of which can reside in a local client and/or in a remote server that intelligently processes the information received from and provides the results to the Wearable and/or the Wearer.



# COMMUNICATION METHODS

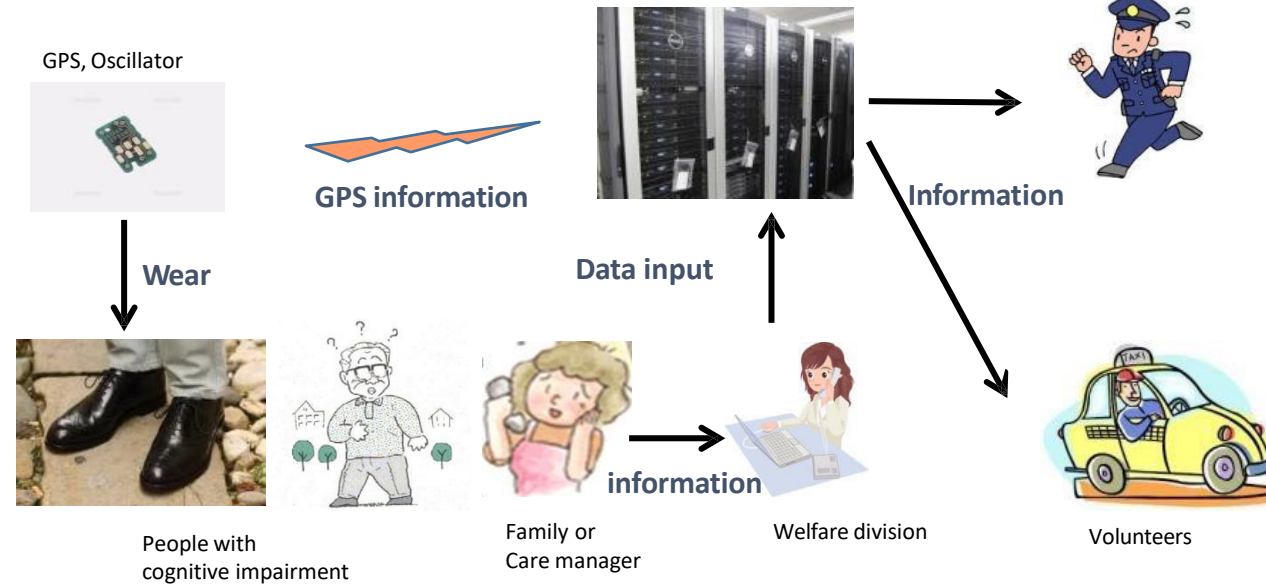


sion Title 3



# On-body electronics: A searching system for people with cognitive impairment

- To find patients in early stage with secure data management system
- Secure personal information system
- Registration of patient and quick information delivery of lost patient
- GPS and oscillator worn by patient – GPS in shoes because lost patient at least wears shoes.





A top-down photograph of a white card with the words "Thank you" written in purple cursive. The card is placed on a light-colored marble surface. To the left of the card is a bouquet of small purple flowers with green leaves. To the right of the card is a black pen with a white polka-dot grip. Further to the right is a small gift wrapped in white paper with a grey polka-dot pattern, tied with a red and white striped string. A spool of this same string is visible in the top right corner.

Thank  
you