



**A New Generation of Components and Systems:  
SSH/RRI in  
ICT 2: Smart System Integration  
ICT 1: Smart Cyber-Physical Systems**

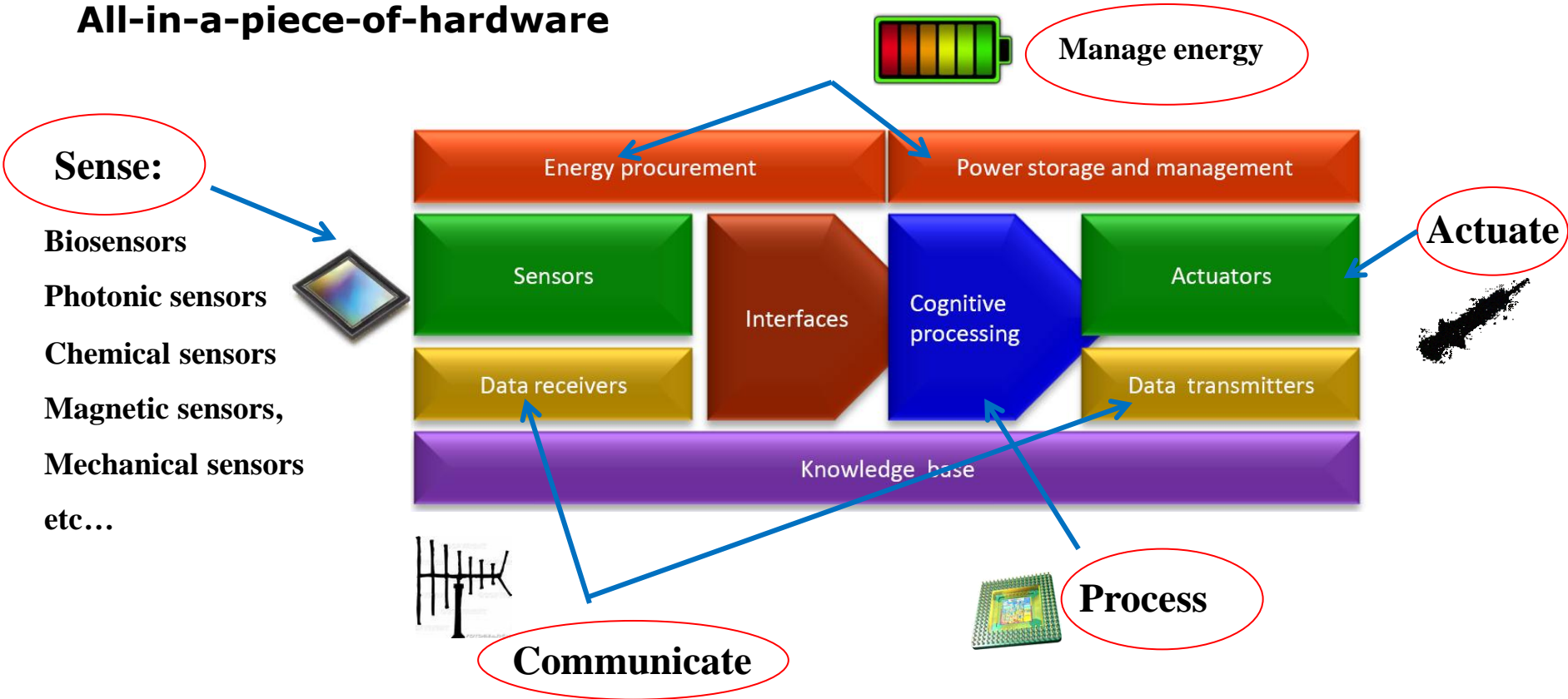
**- Henri Rajbenbach -  
DG CONNECT, A.4 Components**

# Outline

- |   |                 |
|---|-----------------|
| <b>1. What are Smart Systems ?</b>                                | <b>2 slides</b> |
| <b>2. What are Cyber-Physical Systems ?</b>                       | <b>1 slide</b>  |
| <b>3. Funding opportunities for SSH expertise and RRI actions</b> |                 |
| <b>ICT 2</b>  | <b>2 slides</b> |
| <b>ICT 1</b>  | <b>1 slide</b>  |
| <b>4. Want to know more ? Brokerage event 11-March BXL</b>        | <b>1 slide</b>  |

# What is a Smart System ?

All-in-a-piece-of-hardware



+ Small, Manufacturable, Cost-effective !

# A smart system example: Medical capsule



## The smart capsule

Wireless therapy



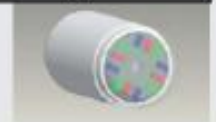
Enhanced optical system



Active locomotion



Enhanced diagnostics



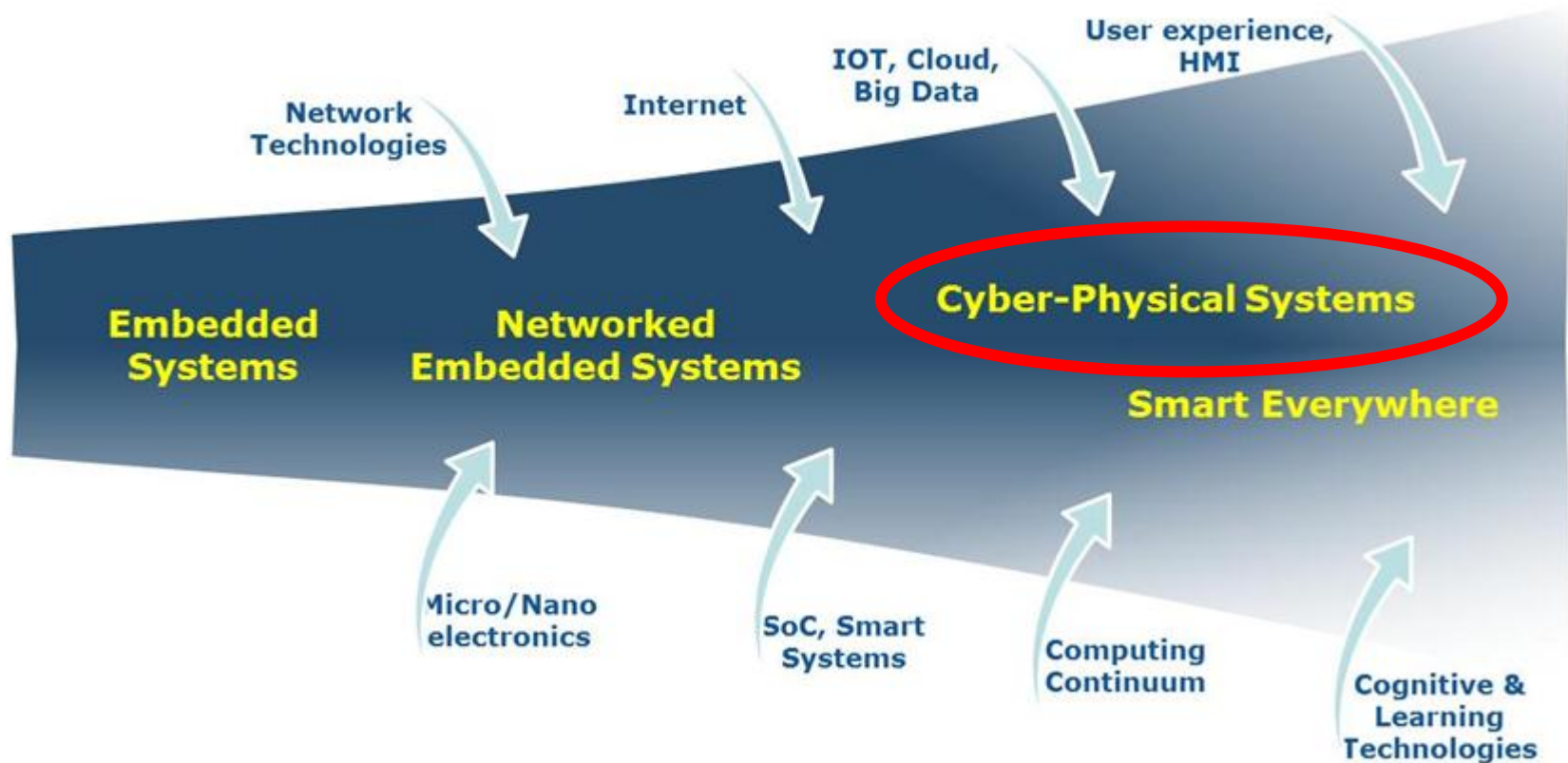
Electronics integration

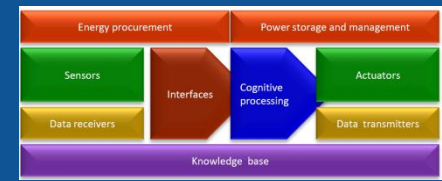


Colonoscopy, Tumour recognition and Therapy

Coord: Novineon, GmbH (D)

# What is a Cyber-Physical System?





## ICT2 – Smart Systems: Funding opportunities for SSH expertise and RRI actions ?

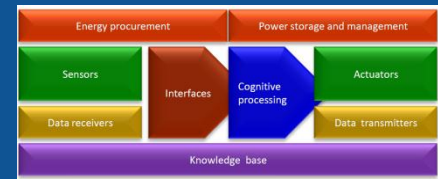
Research & Innovation

ICT2.a. Application specific smart systems

"Address the synergy between biotech and nanoelectronics"

- Health / well-being applications of smart systems
  - Addressing issues of **end-of-life, recyclability**
  - **Ethics issues** addressed in individual R&I projects
- Expected Impact: will address opportunity in addressing **societal challenges** also in **Environment, Food/beverage quality** and **Safety**
- **Public/citizen engagement is expected**

SSH/RRI embedded



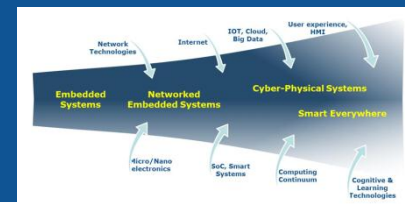
## Funding opportunities for SSH expertise and RRI actions ?

Coordination and Support Actions

ICT2.d. CSAs expected on:

- Networking / clustering / roadmaps
- - **Surveying and coordinating the consideration of societal issues and users' requirements across projects**
- Training / Conferences

SSH/RRI embedded



## ICT1 – Cyber-Physical Systems: Funding opportunities for SSH expertise and RRI actions ?

### Innovation actions

ICT1.b.: Towards a "Smart everywhere" society

Scope calls for :

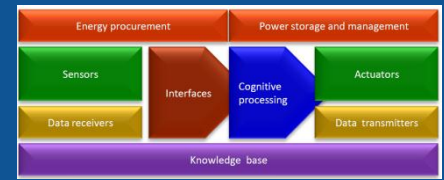
New paradigms, concepts, platforms for Cyber-Physical systems –

→ It includes:

→ **Social Sciences and Humanities** activities

SSH/RRI embedded





Want to know more on ICT2 ?

# Come to the Brokerage Event Brussels

**Tuesday, 11 March 2014  
10h00 to 16h00**

<https://ec.europa.eu/digital-agenda/en/news/brokerage-event-area-smart-systems-integration>