

# **RobotDoc**

## **Robotics for Development of Cognition**

- **Aims**

*Establishment of open doctoral training network for research in developmental and cognitive robotics for humanoid platforms*

*Provide interdisciplinary training and research opportunities in the core disciplines involved in developmental robotics*

- **RobotDoc Collegium**

- Marie Curie: ITN Initial Training Network programme
- Coordinated by Plymouth University (Prof Cangelosi)
  - 6 UK and EU universities, 2 USA/Japan universities
  - 3 industrial partners
- Grant of €3.3 Million
  - To hire 13 PhD students and 3 junior postdocs (“Fellows”)
  - To organise six-monthly training workshops, summer school, and international “RobotDoc Conference”



# RobotDoc Partners



**University of Plymouth (UK)**  
Cangelosi, Belpaeme, Marocco, Dell'Aquila



**RIKEN Brain Science (JP)**  
Tani



**University of Zürich (CH)**  
Pfeifer, Aryananda, Lungarella



**Yale University (USA)**  
Scassellati



**Italian Institute of Technology (IT)**  
Metta, Sandini, Fadiga, Natale, Nori



**Skövde University (SE)**  
Ziemke, Lowe, Morse



**University of Bielefeld (D)**  
Sagerer, Rohlfing, Wrede, Kopp, Hanheide



**Uppsala University (SE)**  
von Hofsten, Rosander



**Sunderland University (UK)**  
Wermter, Burn, Panchev, Knowles

## INDUSTRIAL PARTNERS



**Telerobot SME (IT)**  
Becchi

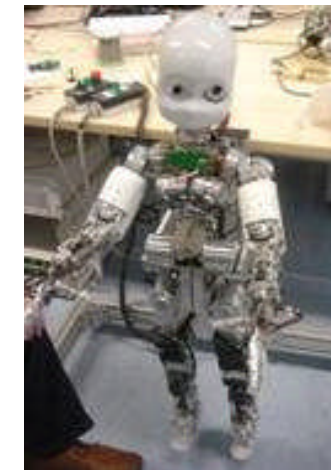
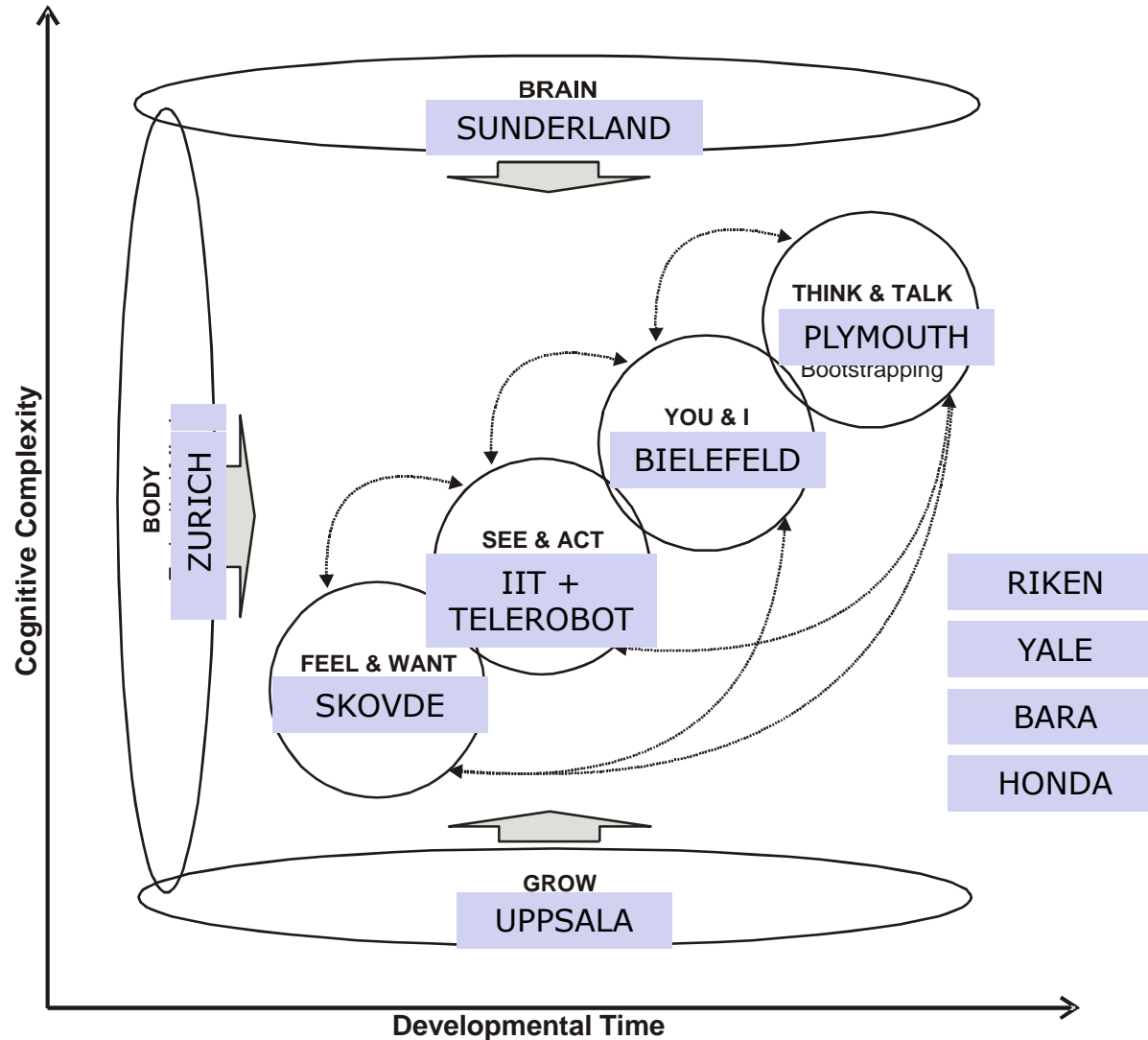


**HONDA Research Institute (D)**  
Goerick



**British Automation  
and Robot Association (UK)**  
Robinson

# Themes and Training Nodes



# ***Role of BARA***

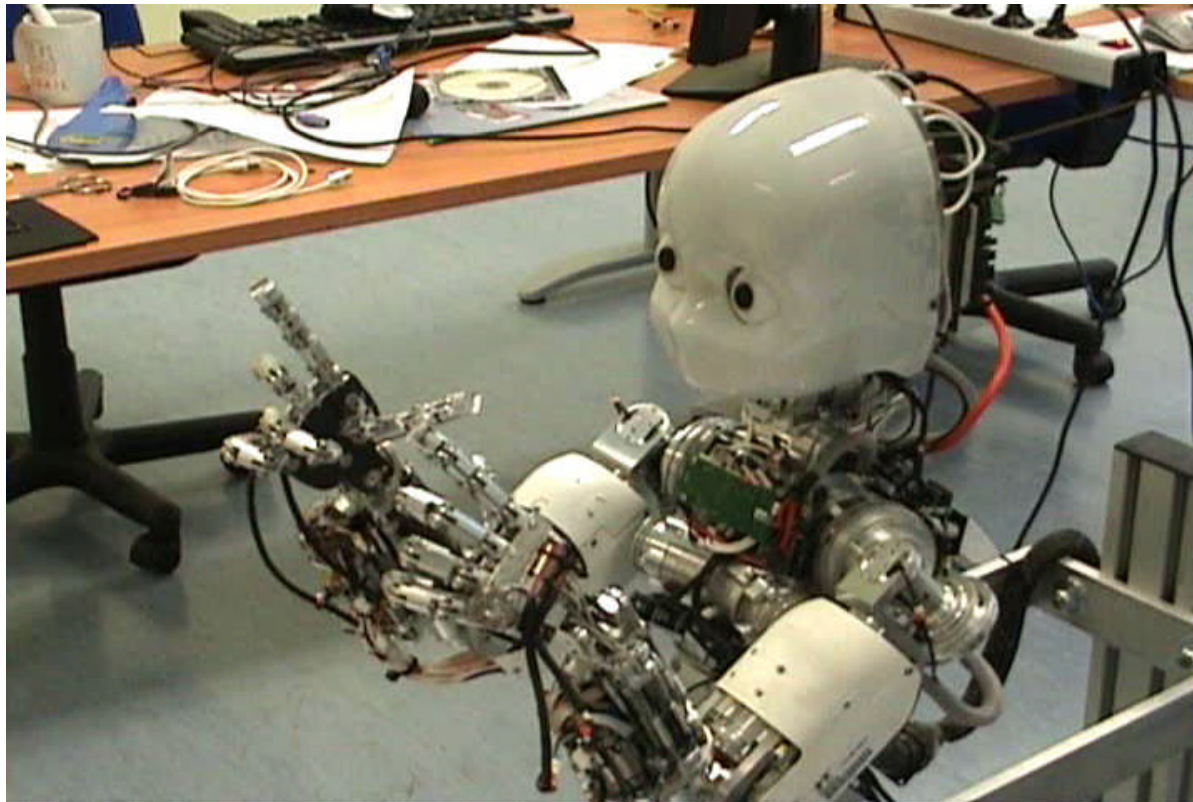
- **Level 3 (advisory) partnership**
  - Paul in Advisory Board; participates to network meetings (travel funded by grant)
  - BARA staff can give presentations (e.g. during Month 30 “Entrepreneurship Workshop”)
  - Act as liaison with industry
- **Benefits for BARA**
  - Give advice on skill set for next generation engineers and researchers
  - Critically evaluate PhD training programme
  - Offer individual BARA membership to Fellows
  - Invite Fellows to relevant BARA’s training seminars and exhibitions



# ***iCub & ITALK project***

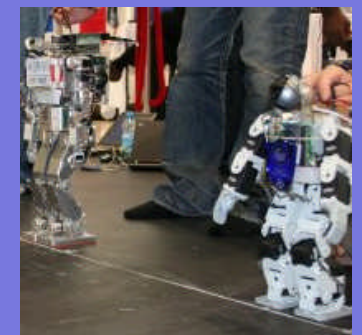
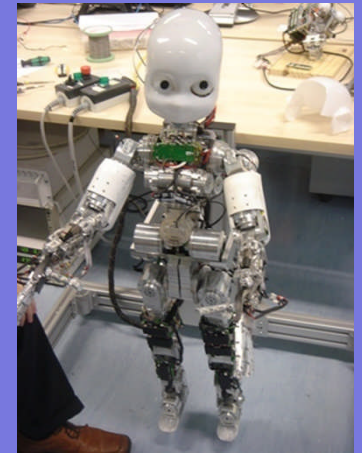


- ITALK: €6.25M project on action and language learning/integration with iCub robot
- iCub: First European humanoid robot (53 DoF)



# ***Research Projects***

- “ITALK” project (€6.25M, EU FP7)
- “VALUE” and “Concept” projects (£1M, EPSRC)
- Virtual Personal Robotics Centre (£150K, EPSRC)
- Learning from verbal instructions (£350K, EPSRC)
- Fabric manipulation (£50K, UoP)
- UAVs and Mars Rover (\$200K, USAF Lab)
- Marie Curie “RobotDoc Collegium” (€3.3M, EU FP7)
- Plymouth BunnyBot (£20K, UoP)
- Marine Robotics (£500K, EPSRC)



# ***Robotics Research @ Plymouth***

- UK and international support
  - UK Research Councils: EPSRC, BBSRC, ESRC
  - EU FP7
  - US Air Force Lab
  - Income of over £4 Million in last 5 years
  - Coordination of projects totalling over £12 Million
- RAE2008 results
  - Robotics part of Computer Science subject
  - 100% international-level research
  - 25% world-leading
  - Plymouth ranked 13 out of 81 !

