



# Health Partnering Day 2016

## 7 July 2016, Brussels



Health-related topics: ICT, SSH, Food Security



### PREVEDYA

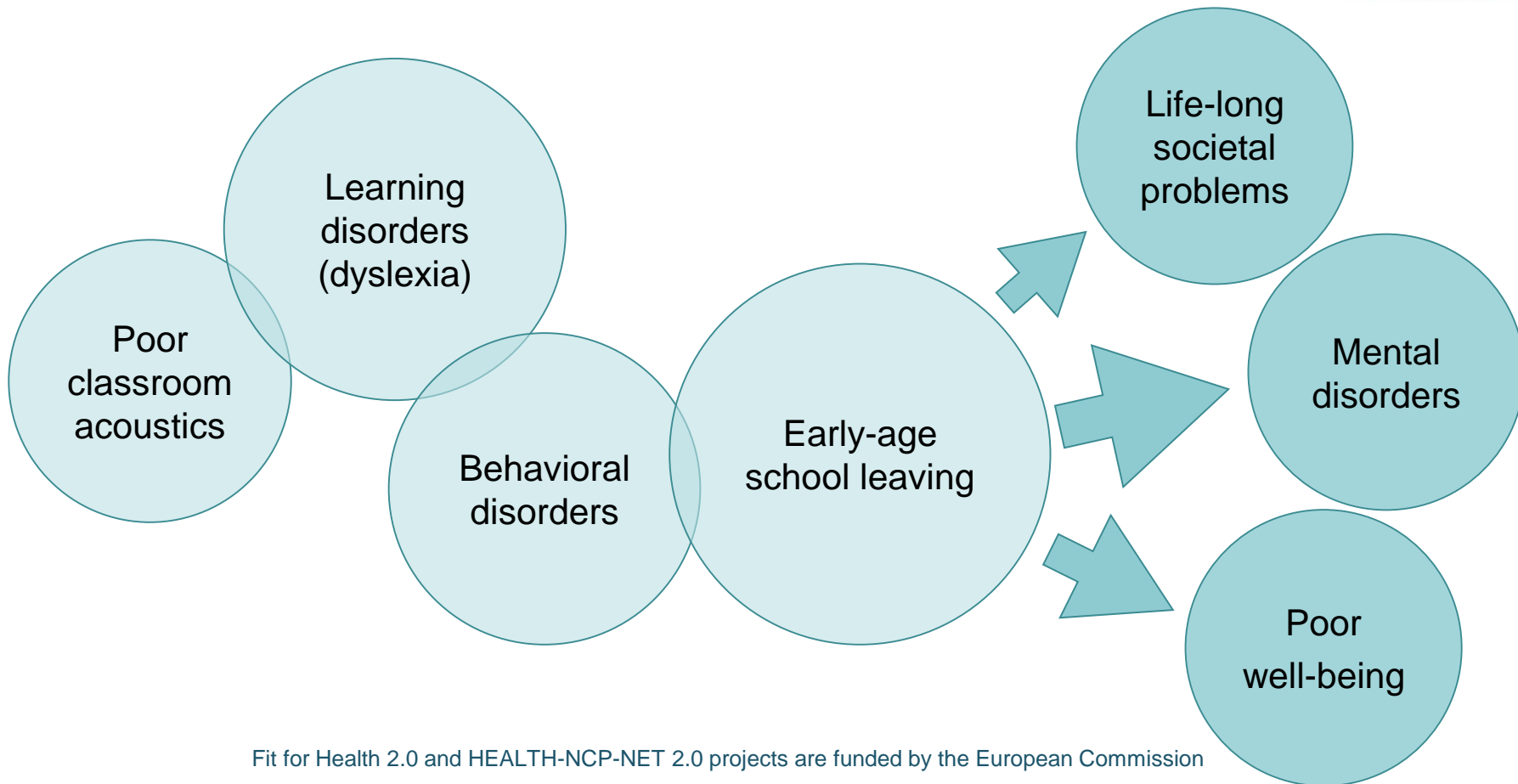
*PREVEntion of DYslexia through classroom  
Acoustics*

Arianna Astolfi

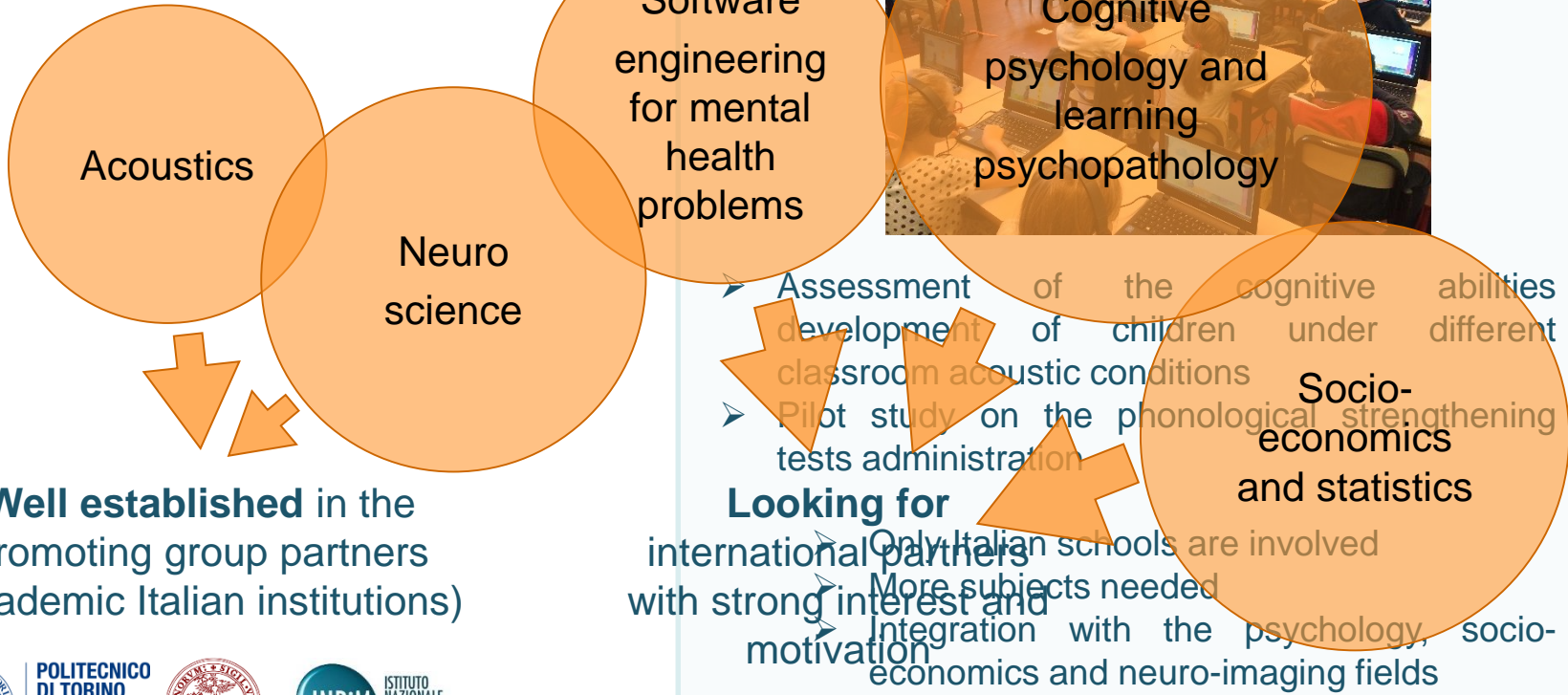
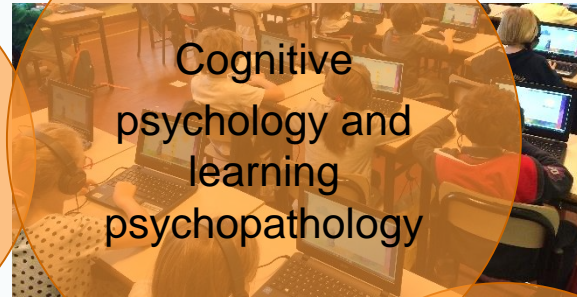
Department of Energy – Politecnico di Torino (IT)

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# Project idea



# Company expertise



POLITECNICO DI TORINO




ISTITUTO NAZIONALE DI RICERCA METROLOGICA

# Topic

## Main covered aspects

### Background in short:

- **Dyslexia** is highly prevalent in children  


These children are sensitive to various psychosocial stressors that make school environment unpleasant
- **Adolescents** with dyslexia have considerably worse mental health than others
- **Classroom acoustics** is pretty poor in a large part of Europe and contributes to auditory- and language-related developmental delays
- The **temporal window that allows the neuroplasticity** of the human brain in correspondence of the auditory cortex to be modified **tends to close at about 8 years**

**WHO**  
Children between 5-8 years and adolescents

**WHY**  
Biological issues

**WHAT**  
*Classroom acoustics* as a main factor that affects the cognitive development

**WHEN**  
Short- and long-term follow-up studies

## Main question:

Can we reduce the social impact of learning disorders at early ages?



Possible call: SC1-PM-07-2017, promoting mental health and well-being in the young

## Possible innovative strategies:

- Preventive acoustic design of classrooms (classroom of the future)
- Specific software for cognitive strengthening as didactic program for 5-8 years pupils
- Novel approach of neuro-imaging (e.g. fMRI) associated to learning task and intelligibility tests

## Keywords:

Classroom acoustic design - Learning disorders - School leaving - Primary prevention



# Contact details

## Thank you!

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