

Department of Applied Social Sciences (DCSA)

## Social implications of robotics in industry

IET/CESNOVA



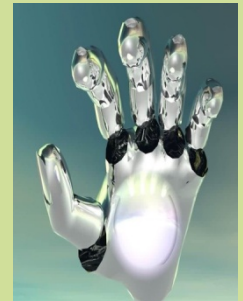
António B. Moniz

(Advisor)

- Professor of Industrial Sociology at FCT-UNL
- Invited scientist at ITAS- Karlsruhe Institute of Technology
- Coordinator of the PhD programme on Technology Assessment

## Objectives

The traditional idea that automation is a technological milestone with evident economic and unquestionable benefits is still an approach that ignores research on the relation of automation to work organization. The technocentric approaches aim to avoid the involvement of humans in the automated production systems. The project envisages to contribute for a national research network of social scientists in the field of industrial and professional robotics, and to identify insights gained from research on robotics in manufacturing industry with the purpose of transferring these insights into other working fields (e.g. service robotics in health care). Knowledge from those other fields can also be applied to industrial robotics and professional service robotics.



## Methodology

The social dimension derived from the worker-robot interaction possibilities in industry become a decisive aspect of the framework possibilities. This is a central motivation for a network. It started with an international workshop in 2012 where it was discussed, analysed and assessed the different technical options due to social features based on organisational strategies. The network covers the focus on participative organisational which include different learning processes, competence building and decentralised decision making. These are concepts with higher relevance in production environments which have been neglected in the last two decades.



## Expected Results

The project envisages to contribute to the development of working competences, of distributed decision making and task enrichment systems. It integrates the new industrial robotics developments in order to improve the quality of work life standard. Such options and challenges will be intensively debated and outcomes will be published. It will identify relevant research questions about the possibility of developing safer robot systems in closer human-machine interaction systems at the manufacturing shop floor level, and it will prepare the basis for a strategic research agenda in the field of social implications of robotics and autonomous systems.

