

# Innovation driven research education: The PIEp IDRE project

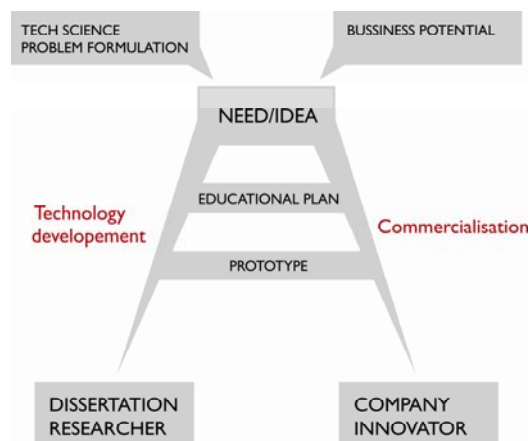
Postgraduate education is rigorously conducted and subject to both strict and efficient quality control processes, and obviously involves talented and creative people in a competitive environment. Still, the resulting level of innovation is not sufficient. Given this, PIEp hypothesizes that a change in the way engineering research education is initiated, planned and carried out will lead to substantially improved education system performance in terms of result utilization and innovation. Ultimately, the intrinsic curiosity and talent of the people involved should result in an increased number of patents, products and business.

In the PIEp IDRE project, five new research student projects are about to start following a brand new *Innovation Driven Research Education* process which puts equal priority on both science and innovation - hence a more demanding but also a more rewarding research education. The overall goals of the IDRE initiative over the lifetime of PIEp are to:

- create at least ten products and/or companies;
- develop and implement a new and sustainable research education concept; and
- apply innovation process research for monitoring, reflection, learning, improvement and validation of the IDRE concept.

The current IDRE projects, involving eight research students at four different PIEp nodes, are all related to technology for medical applications. The research and innovation topics include:

- haptic and VR surgery simulation aids;
- active balance prostheses;
- biomedical optics for human diagnostics;
- MEMS structures for biotech applications; and finally
- infrared based visions prostheses.



*Figure 2. The structure of IDRE.*