Welcome and Opening
Industry meets EuCARD²

Applications of Thermal Management Materials

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Introduction

- EuCARD-2 is a 4-year Integrating Activity Project for coordinated Research and Development on Particle Accelerators, running from 2013 till 2017.
- The project has 40 partners from 15 European countries, including 10 accelerator laboratories, 23 technology institutes/universities, 5 scientific research institutes and 2 industrial partners.
- The activities are divided over 13 Work Packages, covering various technical and networking activities.
- The objective of Work Package 2 is to ensure that technology developments inside EuCARD-2 are known and where possible, transferred to industry. This is done via joint project meetings with industry, Technology Transfer (TT) offices of each partner and workshops such as today.
CERN Knowledge Transfer

- Maximize the technological and knowledge return to the member states’ industry and society
- Promote CERN as a center of excellence for technology
Technology and Application domains
Open Source Software (OSS)

Software developed at CERN is often released as open source
CERN Open Hardware License

Legal framework

Electronic design community

Facilitate knowledge exchange
Knowledge Transfer through Procurement

Survey of companies involved in technology-intensive procurement contracts with CERN.
- 178 questionnaires analyzed
- 503 MCHF procurement budget

Results:
- 44% indicated technological learning
- 42% increased their international exposure
- 38% developed new products
- 36% indicated market learning
- 13% started new R&D teams
- 41% would have had poorer technological performance
- 52% would have had poorer sales performance without CERN
CERN and patents

Patents are taken when it:

- Increases the probability of having the technology transferred (justify development investments from industry)
- Significantly enhances the commercial value
- Is needed to ensure CERN's recognition as inventor
From high vacuum...

NEGs - Non-Evaporable Getter thin film coatings

Technology used to create and maintain ultra-high vacuum in the accelerator vacuum chambers.
... to solar energy collectors

The innovative technology within the collectors was developed at CERN and commercialized by the CERN spin-off company, SRB Energy.

Thermal solar collector panels on the roof of Geneva airport
From Physics to Medicine

From particle accelerators to cancer therapy

From particle detectors to medical imaging

From grid computing to medical data management and analysis
Knowledge Transfer | Accelerating Innovation

Hadron Therapy

Photons → Carbon → Protons

GSI