

INNOVATION for EUROPE through TECHNOLOGY TRANSFER

“Technologies from Space Exploration”

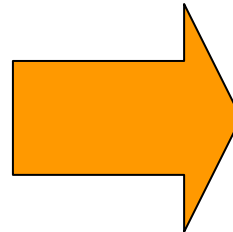
ALTEC – Torino

19/10/2011

Technology transfer: a buzzword often used, rarely understood

TECHNOLOGY TRANSFER

- Technology developed for an application and –with modification– applied to a completely different one (IPR may be involved)
- IPR is not worth a whole lot without expertise and experience of engineers



KNOWLEDGE TRANSFER

INVENTION

Novel composition, device or process

INNOVATION

Latin *innovare* to renew, to change

Innovation differs from Invention in that generally signifies a substantial positive change compared to incremental changes, e.g.:

- Space sensors are used in medicine
- Space-derived materials can be found in cars

Why Space technology?



SPACE TECHNOLOGY

ESA Space Technology programmes

Efficiency

Recycling (is it innovative?)

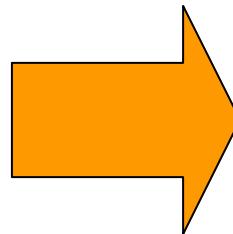
Think outside the box

TECHNOLOGY GENERAL CHARACTERISTICS

- low weight
- strength and durability
- efficiency and reliability
- compactness
- autoimmunisation
- temperature resistance
- radiation resistance
- corrosion resistance
- communication



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ENABLING TECHNOLOGY

ESA Technology Transfer Office



Transfer of Technology, Services and Applications

Support to SMEs

ESA's IP

Space Industry's IP

Business Incubation

Investment

Exploitation
of
ESA's IP
for
non-space
applications

Technology Transfer
Network (TTN)
Broker network
managed
by MST Aerospace
GmbH

- Germany
- France
- Italy
- UK
- Spain

National Technology
Transfer Initiatives
(NTTIs)

- The Netherlands
- Belgium
- Norway
- Poland
- Portugal
- Austria

Open Call for
Demonstrators

ESA BICs

- ESTEC (NL)
- ESOC (D)
- ESRIN (I)
- Oberpf.hofen (D)
- Harwell (UK)
- Belgium (W) (5.11)

OSTF-Open Sky
Technologies Fund

managed by
Triangle Venture

European Space
Incubators Network
(ESINET)
By EBN

ESA Investment
forum

Investment
Readiness Training

European Commission (ENCADRE, KIS4SAT, e.o.)
Enterprise Europe Network EEN (+250)
ESA Bidders: Large industry, SMEs & Universities(>13000)
National Space Agencies

European Satellite
Navigation
Competition (ESNC)

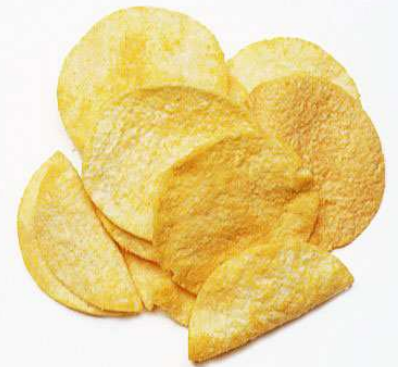
EVCA, EBAN

Three examples - 1



Landing ...

... crisp
potato



Three examples - 2



Zapping deadly bacteria using space technology

Three examples - 3



Carbon fibre stretches from comet to machine tools

... MORE (be pro-active)



Technology transfer has other less obvious benefits:

- ✚ ease the burden imposed on public resources
- ✚ maximise the return on investment in ESA's space research
- ✚ minimise the duplication
- ✚ provide cross-disciplinary opportunities
- ✚ provide economic potential and motivation for both technology donors and technology receivers

In addition, technology transfer brings economic benefits by increasing revenues for both technology donors and receivers.

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