

Working Group Outbrief

Ground System Architectures Workshop



Session 11B

Ground Space Technology Innovation
within Agencies, Universities and
Industry - Same purposes and
results?

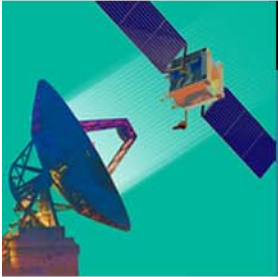
Nestor Peccia, European Space Agency/ESOC



Presenters/Panelists

- Innovation at NASA-JPL
 - Antonio Sanders
- Innovation at ESA
 - Nestor Peccia
- Innovation at ORACLE
 - John Hax
- Innovation at GMV Space
 - Gonzalo Garcia
- 18 participants

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Key Points

- Space sector is not the best environment for innovation
 - Risk averse
 - If the risk averse in 1492 would have been the one of today in the space sector, America would have never been discovered by Columbus
- When is Innovation possible in the space sector?
 - only if low risk, right price
 - via Evolution, not revolution
 - If flight proven
 - Done as piece-part
- Which are the Innovation difficulties ?
 - Only proven technologies
 - Risky business
 - TCO (Total Cost of Ownership)
 - ROI small ?
 - Small customer base

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Key Points

- Innovation by itself is the goal for Institutions not for COTS vendors
- Need to look at the whole market (from cube-sats to constellations)
- Different kinds of innovation
 - Forced by vendors
 - Coming from good ideas (Institutions, Universities)
- Typical Innovation in Ground Systems
 - Reuse of common infrastructure services
 - Interoperability + Standards
- Time-to-market (=speed) are not recognized in “Business-plans”
- Long time to deploy technology in Ground System (7 years average at ESA)
- Fast prototyping and deployment as prototypes not Products