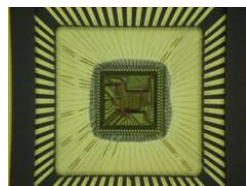


European Component Initiative

MNT Within the European Component Initiative



EPPL: 2007



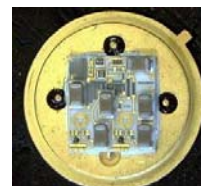
QPL: 2007



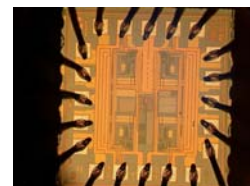
QPL: 2008



QPL: 2008



QPL: 2008



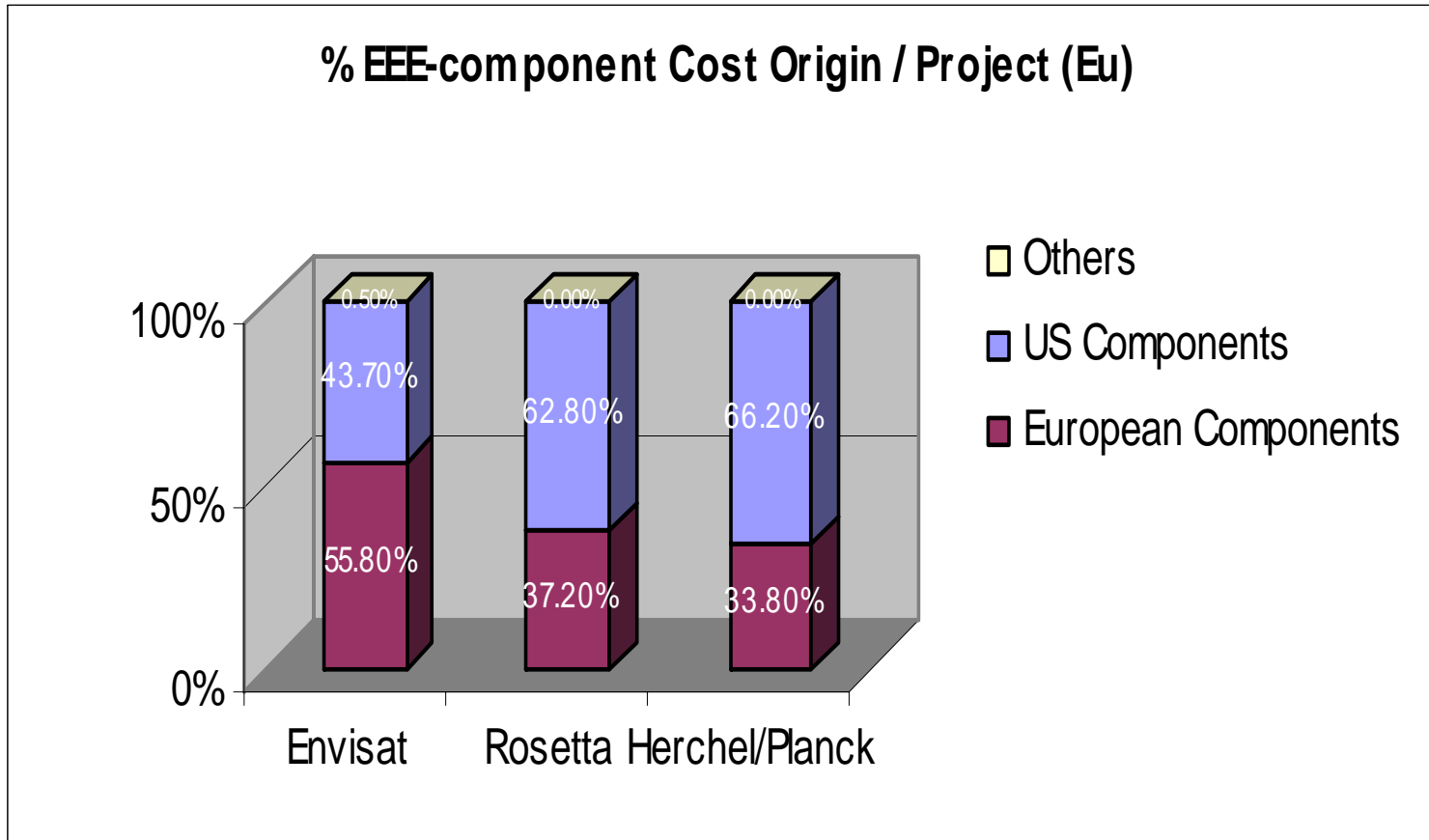
QPL: 2008



QPL: 2010?



Downward Trend of the European Space EEE-Component Industry

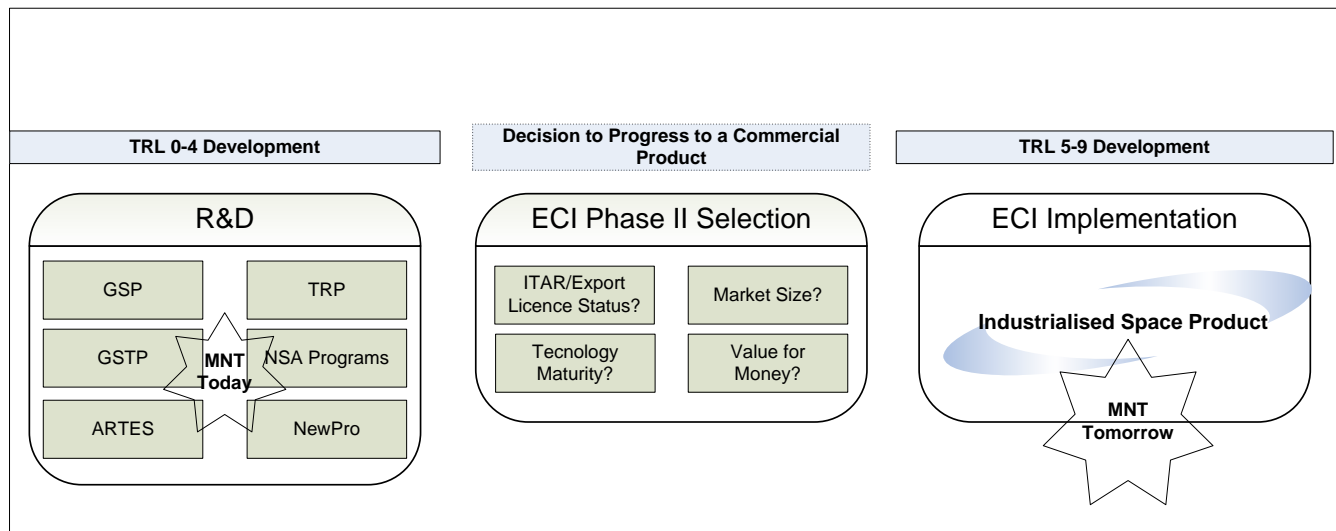


ECI Objectives

- **Non-dependence:** Increase the number of non-export licensed EEE-components by establishing qualified manufacturing capabilities and extending technology partnerships with non-space and non-European component suppliers. **Target by 2011: Average >50% in European spacecraft in terms of the value of EEE component procurement secured by European or ECI global partnership sources.**
- **Market penetration:** Increase the market share of European space component by investing in component development which has (a) commercially viable market and (b) high potential in terms of price, performance and timing. **Target: >50% European market share of each ECI developed component three years after the qualification.**
- **Diversity:** Lower the barriers of entry to space market by funding the component suppliers in the space evaluation and qualification process. **Target: 10% annual growth of ESCC qualified manufacturers during the next five years.**

ECI in the Context of R&D Programs

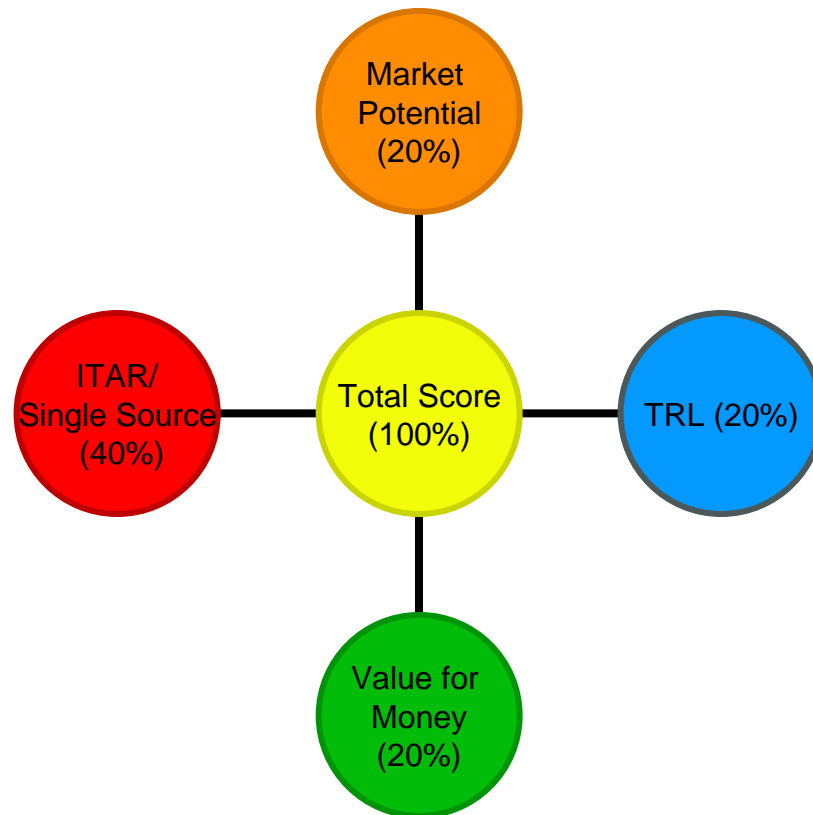
- ECI framework covers activities required to Evaluate and Qualify EEE-components for Space use.
- R&D related to the candidate technology is either from ESA/NSA Technology Programs or spin-in from terrestrial R&D.
- Evaluation of the technology @ TRL 4.
- Coordinated activity with CNES, DLR and ESA.



ECI Workplan Process

- Collaboration between R&D, component industry and end-users key in successful workplan; CTB with the working groups key inputs to the workplan:
 - CTB WGs propose activities to the workplan.
 - Weighting of the proposals against the ECI matrix.
 - CTB endorses the update.
 - Agreement with the NSAs and ESA to fund the activities.
 - Funding decision.
- ECI matrix gives guidance / decisions and is mainly suited to “classical” line item cases.
- Efficient market entry of **innovative and enabling technologies** requires a view for each line which clearly identifies the full life cycle with financial envelope and timeline from R&D to market entry.

ECI Matrix



Potential MNT for Market Entry

- **European RF MEMS embedded MMIC Process 2008-2010**
(Only US technology exists today with limited access, considered high priority by MNT and microwave CTBs, process enabling followed by space evaluation)
- **European MEMS shutter matrix for spectroscopy**
(European Independence, US techno (JWST) only today, Process consolidation and space qualification)
- **MEMS tilting mirrors arrays for spectroscopy and switching**
(Process consolidation to increase the size of the array and space qualification)
- **MEMS flux meters for launcher application**
(European Independence, US techno only today, European techno required)