EXCITE

IEUVI Resist TWG

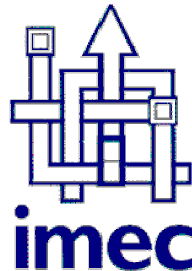
February 23 , 2006

Brief Regional Update: MEDEA Excite project

EXCITE

Extreme UV Consortium for Imaging Technology – MEDEA+ T406

ASML



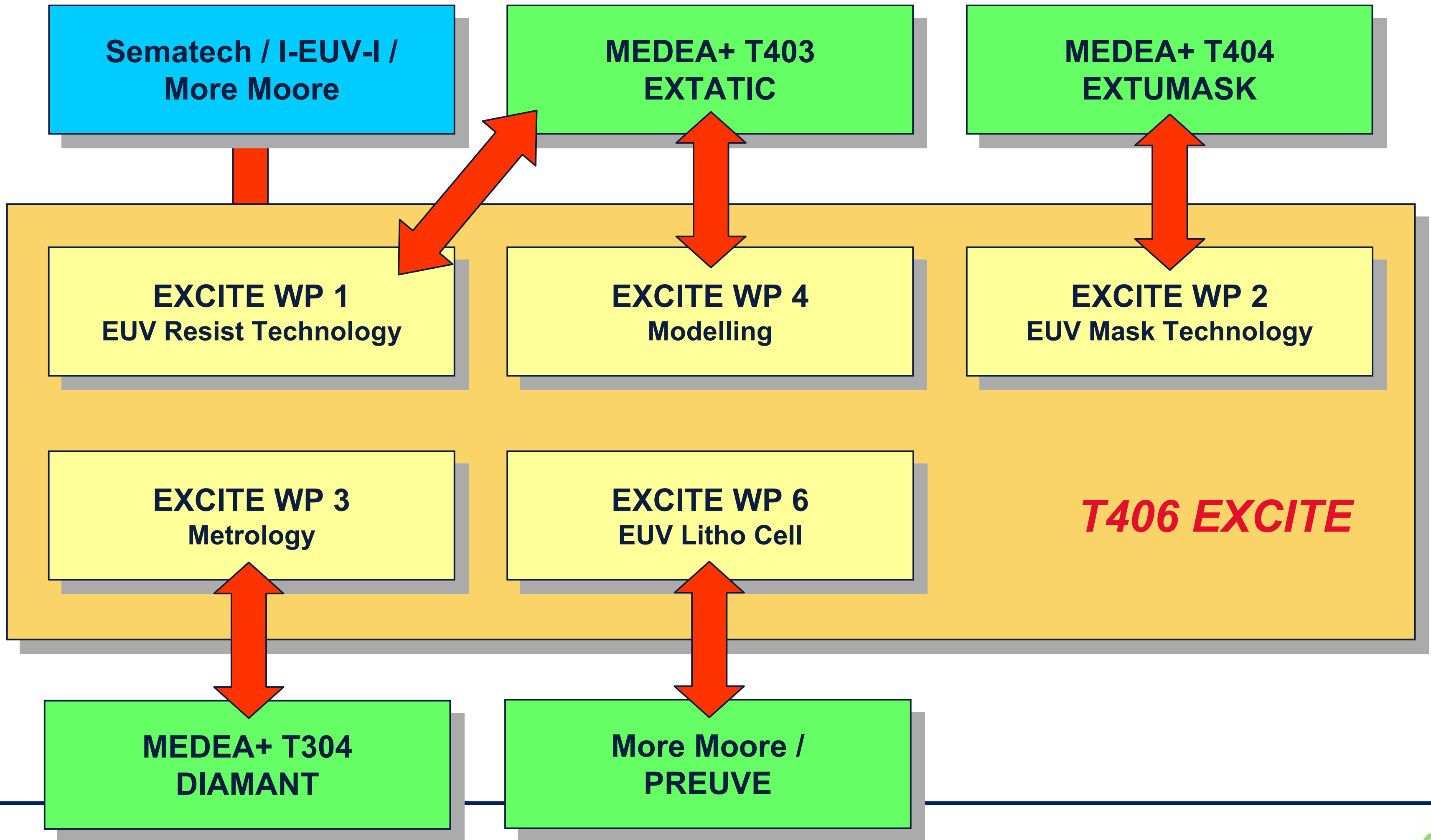
EXCITE

Extreme UV Consortium for Imaging Technology – MEDEA+ T406

- The EXCITE project aimed at developing Extreme Ultra-Violet (EUV) imaging capability for the **45nm technology node** and beyond
- Approach is to address **bottlenecks** related to EUV lithography *imaging* for implementing full-field patterning development
- Three year program, ending Dec 31, 2005

EXCITE

Extreme UV Consortium for Imaging Technology – MEDEA+ T406



Summary EXCITE

- EXCITE project (phase 1) closed December 2005
- Project approach (resist WP) was to address bottlenecks related to EUV imaging
  - investigate resist platforms on small field tools
  - investigate resist issues such as LER, diffusion, outgassing, ….
- WP1 highlights in 2005
  - Resist limits triangle (LER / dose / resolution trade-off) understood and quantified
  - Resists with acceptable outgassing levels available
  - ASML alpha demo tool resist selected from WP 1 screening data
  - The most important challenges of resist development for the 32 and 22nm node have been identified; this includes EUV specific and general CA-resist issues.

Outlook : Follow up project

- Successor project for EXCITE T406 was discussed
  - Focus on **32nm full-field process development**
  - IMEC will take the lead to prepare Project Outline to submit to Medea
  - ASML Alpha-Demo tool expected to be operational at IMEC late 06
  - Proposed Timing : 2007-2008 (2 year project)
  - Working title: “More EXCITE”
  - Key players in EXCITE are likely to become partners in More EXCITE
  - Alignment with other projects such as EAGLE and More Moore will take place