



Point-One

Pole of innovation in advanced technologies

● nanoelectronics ● embedded systems ● mechatronics

Open Innovation to Industrialization Center (I2I)

A Follow Up for MEMSLand

Boschman Technologies, C2V, TU Delft, NXP Semiconductors

Frank Boschman (FBoschman@boschman.nl), Job Elders, G.Q. Zhang, Jan-Jaap Koning

Building on MEMSLand

Very promising business cases.
This demands an open technology center for industrialization
Need for Follow Up after MEMSLand

- Several SME (MKB), led by Boschman BV, have been taking actions
- NXP Nijmegen has the right infrastructure for heterogeneous integration and packaging, and now is open to the need for open innovation & industrialization

I2I: Closing the Gap

- Investment proposal I2I:
Open Innovation for Industrialization
- Joint effort from large companies, SME and academia, follow up of MEMSLand
 - Center for Heterogeneous Integration and Packaging (HIP)
 - Cleanroom facility needed to bridge gap to industrial fabrication and nano/micro technology
 - Incubator at NXP Nijmegen

Example Cases

- Advanced packaging of MEMS and sensors (Boschman) microphones, fluidic MEMS, automotive
 - Micro Gas Analyzer chip (C2V) breath analysis
 - Integrated MEMS (NXP) oscillator, gyroscope
 - Magnetic field sensor integration for automotive (NXP), car safety
 - Ambient Light sensor (AliS) (stopped at NXP, incubator?) handheld consumer devices
- Open center for other participants

Committed partners

Committed SME (MKB)

- Boschman Technologies
- C2V
- Alsi
- Sempro Technologies
- Maser Engineering
- Thomas Riesterer
- Bruco

Interested SME (MKB):

- Salland Engineering
- Epcos
- Physixfactor
- MEMS-TC

Large companies

- NXP
- Philips Applied Technology

Research institutions

- TNO
- EWI/TUD
- Stan Ackermans Institute
- Universities



Open I2I center: Connecting with Nano Science

Examples of possible topics:

- Nanoscale piezo-resistive effects in silicon
- Bio- and micro fluidic analysis
- New sensors for magnetic field sensing
- New devices such as Nano-feature silicon gyroscopes
- Micro-cavity design
- Properties of Nano-structured Materials

Framework

Nijmegen bidboek (incl. phase 2)

Size

Total funding 8 ME
starting 2009 - 2010

Private investment

Companies will cover same amount of cost as funding received

Regional impact

Eastern Netherlands, connection to Eindhoven region.
Short term 50-100 fte/yr
Long term > 500 fte/yr

Current status of the project

Detailed business plan will be ready in April.
Implementation can start from June 2009