

Project information Smart Mix

The seven awardees of the Smart Mix programm (2007) are:

- MEMPHIS: Merging Electronics and Micro & nano PHotonics in Integrated Systems
- Braingain: Brain-computer and computer-brain interfaces
- SMART systems based on integrated PIEzo (SMARTPIE)
- NIMIC: Nano IMaging under Industrial Conditions
- A new generation of high-efficiency screens for drugs against major human illnesses
- TeRM Translational excellence in Regenerative Medicine
- CATCHBIO - CATalysis for sustainable CHEmicals from BIOmass

MEMPHIS: Merging Electronics and Micro & nano PHotonics in Integrated Systems

Memphis supports the merging of electronics and photonics in which new advanced building blocks arise for a large quantity of different devices. These building blocks need to be increasingly smaller with increasing controllability and be made suitable for use in the medical industry, communication devices, displays and lighting.

Estimated subsidy: € 18 million

Estimated total budget: € 35 million

Partners

LioniX b.v. - Dr. H.H. van den Vlekkert. Consortium partners include: Delft University of Technology, Eindhoven University of Technology, University of Twente, Amsterdam University Medical Centre, Vrije Universiteit Amsterdam, Erasmus University Rotterdam, Philips, ASML, FEI, Tempres, Imec, PhoeniX, Genexis.

Braingain: Brain-computer and computer-brain interfaces

The consortium will consolidate efforts in the area of Brain-Computer and Computer-Brain Interfacing. The aim is to apply recent developments in the area of analysing and influencing brain activity to improving the quality of life and performance of both patients and healthy individuals.

Estimated subsidy: € 14.6 million

Estimated total budget: € 24 million

Partners

Main applicant: Radboud University Nijmegen - Dr. ir. P.W.M. Desain Consortium partners include: Radboud University Nijmegen Institute of Cognition and Information (NICI), Radboud University Institute for Computing and Information Sciences (ICIS), F.C. Donders Center for Neuroimaging (FCDC), Max Planck Institute for Psycholinguistics (MPI), University of Twente Human Media Interaction (HMI), University of Twente Institute for Biomedical Technology (BMTI), University of Maastricht Cognitive Neuroscience, Radboud University Nijmegen Medical Centre Neurology/ Clinical Neurophysiology, Radboud University Nijmegen Medical Centre Psychiatry, Radboud University Nijmegen Medical Centre Neurosurgery, University of Maastricht Neurosurgery, Sint Maartenskliniek, TNO Human Factors, Technology Foundation STW, Dialogic, Philips, Siemens, Artinis Medical Systems, TMS international, Gewa Nederland, Revalidatietechniek Het Dorp (RTD), Parkinson Patient Associations, ALS Foundation, Epilepsie Vereniging.

SMART systems based on integrated PIEzo SMARTPIE

SMARTPIE will make excellent piezo technology available to Dutch industry by making design rules for piezo sensors and piezo actuators for consumers and develop professional new material combinations of piezo with MEMS and polymers.

Estimated subsidy: € 7.1 million

Estimated total budget: € 12 million

Partners

Main applicant: Stichting Applied Piezo - Jan. Peters Consortium partners include: Aemics, C2V, d-Switch, imotec, Océ-Technologies, TNO, Delft University of Technology (FAM), Eindhoven University of Technology (ST-SMG), Universiteit Twente (CTW, EWI/CE, IMS and EWI/TST).

NIMIC: Nano IMaging under Industrial Conditions

The aim of NIMIC is to visualise a range of physical, chemical and biological processes that take place at the scale of atoms and molecules. The powerful new microscopes being developed by NIMIC will be used, for example, for catalysis, breast cancer research and nanotechnology.

Estimated subsidy: € 14 million

Estimated total budget: € 24.1 million

Partners

Main applicant: Delft University of Technology - Prof. dr. H.W.M. Salemink Consortium partners include: Delft University of Technology, Leiden University, FEI Company, Leiden Probe Microscopy BV, Albemarle Catalysts Company BV, Leiden University Medical Centre (LUMC), Netherlands Cancer Institute - Antoni van Leeuwenhoek Hospital (NKI/AvL), Shell Global Solutions International. Further partners are expected.

A new generation of high-efficiency screens for drugs against major human illnesses

The consortium will develop medicines against geriatric diseases of the bones and joints (osteoporosis, rheumatoid arthritis, osteoarthritis). New research models based on Zebra fishes will be used instead of the expensive mammalian models. In terms of bone and joint genes, Zebra fish have important equivalents with humans. The consortium will compete with foreign pharmaceutical giants.

Estimated subsidy: € 14 million

Estimated total budget: € 30 million

Partners

Leiden University - Prof. dr. M.K. Richardson Consortium partners include: Hubrecht Laboratory, Radboud University Nijmegen, SERPO Reptilenzoo Delft; Vrije Universiteit Amsterdam Medical Centre (VUmc); Galapagos BV; ArthroGen BV; Progentix BV; Glaxo Smith Kline Ltd.; SERONO; ZFScreens BV; Leiden University; Leiden University Medical Centre (LUMC); Agendia BV; University of Amsterdam Medical Centre (AMC).

TeRM Translational excellence in Regenerative Medicine

TeRM brings technology to the clinic. Regenerative medicine focuses on the body restoring damaged tissues and organs. A lot of translational research is needed to apply this technology in patients. The TeRM programme focuses on bone, cartilage, heart and blood vessels. Positive results mean an enormous step forwards for hundreds of thousands of patients and the commercial prospects for a new knowledge-intensive economic sector in the Netherlands.

Estimated subsidy: € 15 million

Estimated total budget: €25 million

Partners

Main applicant: University of Twente (Institute for Biomedical Technology, BMTI) - Prof. dr. C.A. van Blitterswijk Consortium partners include: 2 technical universities, 6 university hospitals and 5 knowledge-intensive growing companies: University of Twente, Eindhoven University of Technology, University Medical Center Utrecht, Radboud University Nijmegen Medical Centre,

Leiden University Medical Center, University Medical Centre Groningen, CARIM - Cardiovascular Research Institute Maastricht, Erasmus University Medical Centre, Progentix, Signifix - Quality Consultants and Regulatory Affairs in Life Sciences, CellCoTec - Cartilage Repair Technology.

CATCHBIO - CATalysis for sustainable CHEMicals from BIOmass

Biomass is the sustainable alternative for fossil fuels. CatchBio will develop new energy-efficient catalysts and cleaner processes. This must result in a high-value conversion of biomass in cheap biofuels, chemicals and pharmaceuticals and a lower emission of greenhouse gasses.

Estimated subsidy: € 16.6 million

Estimated total budget: € 28.3 million

Partners

Main applicant: Netherlands Institute for Catalysis Research (NIOK) - Prof. dr. ir. B.M. Weckhuysen

Consortium partners include: Utrecht University, Universiteit van Amsterdam, Delft University of Technology, University of Twente, Leiden University, Radboud University Nijmegen, Eindhoven University of Technology, University of Groningen, Energy Research Centre of the Netherlands, Wageningen Agrotechnology and Food Innovations, Shell Global Solutions, DSM Research, Dow Benelux, BASF Nederland, Organon, Sasol Technology, Avantium, Albemarle Catalysts, BIOeCON, Hybrid Catalysis, Vibspec