

No.	Project	Partners	Work package	Call number	Project Leader person	Duration	Funding in EURO	Objectives and Strategic Deliverables
1	DfT for Biosensor and for Biosensor Interface	ULAN, LIRMM, MESA	1	2	Honguan Liu	Oct 04 – Jan 05	25,000	1) New collaboration aiming to build distributed critical mass of researchers in DfT integration in bio-chemical MEMS. 2) Proposal preparation for national / EU funding 3) Services for Virtual Lab in Test Engineering.
2	Quality Factor measurement and reliability for MEMS resonators	IEF, ULAN, QinetiQ	1	2	Hervé Mathias	Oct 04 – Jan 05	18,000	1) A study involving a new collaboration to deliver a key skill base for a DfMM methodology for resonance based MEMS
3	MEMS Testing through Bias Superposition PHASE 1	ULAN, LIRMM, QinetiQ, MESA,	1	2	Carl Jeffrey	Oct 04 – Jan 05	22,000	1) New collaboration into an interesting possibility for MEMS built-in-Test 2) Potential for a new distributed collaborative group 3) New proposal preparation 4) Initial joint publication
4	Benchmarks for MEMS testing	LIRMM	1	2	Laurent Latorre	Oct 04 – Dec 04	3,000	1) Travel grant to help partners to launch of common actions in 2005 2) Foundation for a service for the Virtual Lab in Test Engineering
5	MEMS testing through Bias Superposition PHASE 2	ULAN, LIRMM, QinetiQ	1	3	Carl Jeffrey	Mar 05 – Dec 05	27,800	1) Continuation of a collaboration into an interesting possibility for MEMS built-in-Test 2) Potential for a new distributed collaborative group 3) New proposal preparation 4) Joint publication
6	DfT for MEMS based DNA sensors	ULAN, MESA, LIRMM	1	3	Hongyuan Liu	Mar 05 – Sep 05	28,700	1) Collaboration aiming to build distributed critical mass of researchers in DfT integration in bio-chemical MEMS. 2) Proposal preparation for national / EU funding 3) Services for Virtual Lab in Test Engineering.
7	Develop test strategies for bio-MEMs platforms Vto detect key failure and degradation modes (phase 3)	ULAN, MESA, QinetiQ	1	4	Zhou Xu	Sep 05 - Jun 06	28,880	1) Develop test strategies for bio-mems platforms to detect key failure and degradation modes. Objective: New built in strategies for Bio-MEMS.
8	Motionless accelerometer testing	LIRMM, ULAN, QinetiQ, IEF	1	4	Pascal Nouet	Sep 05 - Dec 05	20,000	1) Production testing of low cost accelerometers using electrical only stimuli. Objective: The first phase of the project consists in reviewing available techniques and in making proposals for electrical only test solutions for all kinds of accelerometers.
9	Microchannel modelling, characterisation and fabrication (9)	HWU, CCLRC, BUTE, NMRC	2	1	Marc Desmulliez	Sep 04 – Jan 05	31,000	1) New collaboration aiming to build Distributed critical mass of researchers in thermal & uFluidic simulation technology 2) Capability for the Virtual Lab in Simulation & Modelling.
10	Mechanisms of formation of preferential flow paths in microcirculation vessels for BIOMEMS ( C )	WUT, CCLRC	2	1	Krzysztof Cieslicki	Sep 04 – Jan 05	8,200	1) Visits from WUT to Daresbury to advance State-of-the-art
11	Review of optical simulation and modelling techniques for MOEMS/MEMS (D)	CSL, IMT, IZM	2	1	Jean Paul Collette	Sep 04 – Jan 05	13,000	1) Compilation of State-of-art in the field 2) Compilation of partner skills portfolio for Virtual Laboratory
12	Simulation of the stiction effect in the metal-to-metal resistive contact occurring in MEMS switches (E)	IMT, NMRC, HWU, WUT Phase 1	2	1	Catalin Tibeica	Sep 04 – Jan 05	21,000	1) Integration of partner skills 2) Advance in the field 3) Simulation service to industry (virtual lab)
13	Fault Modelling and System Simulation of Flow-FETs MEF Arrays (F)	MESA, CCLRC, IMT Phase 1	2	1	Hans Kerkhoff	Sep 04 – Jan 05	19,000	1) Joint FP6 / FP7 proposal 2) Joint publication 3) Web-site area 4) Collaborative service to the Virtual Laboratory – Simulation & Modelling

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14	Simulation of damping across the whole pressure range (1)	POLIMI, ULAN, CCLRC, Coventor	2	3	Attilio Frangi	Feb 05 – Dec 05	31,200	1) Integrating damping simulation into CAD tools Identification of best-practice technology for assessing gaseous and thermo-elastic damping in the whole working pressure range and creation of a relevant portfolio of services to be offered to industry through the Virtual Laboratory of Patent DfMM. 2) A joint publication containing a review of modelling techniques to enable simulation of damping 3) Preparation of a joint research proposal to be submitted to an appropriate funding agency
15	Investigation of the interaction of electromagnetic waves with micro and nanostructures (3)	IMT, CSL	2	3	Cristian Kusko	Feb 05 – Dec 05	9,500	1) To numerically investigate the nature and the magnitude of the photo induced interaction in different 2D and 3D systems using rigorous finite difference time domain software tools (OptiFDTD) and software developed at CSL. 2) The applicability of using these results in order to simulate the dynamics of a nanoparticle suspension using microfluidic packages like CONVENTORWARE or ANSYS will be assessed. 3) Closed form modelling of behaviour of thermal actuator for inclusion into VHDL-AMS code
16	Microchannel modelling characterisation and fabrication	HWU, BUTE, CCLRC, TYNDALL, WUT, ITEM, IZM Phase 2	2	3	Marc Desmulliez	Feb 05 – Dec 05	36,500	1) Manufacturing and characterisation of range of microchannel cooling plates 2) Simulation for prediction of fluidic flow and thermal performance within microchannels
17	Simulation of stiction effect in the metal to metal resistive contact occurring in MEMS switches	IMT, HWU, Tyndall, WUT Phase 2	2	3	Catalin Tibeica	Feb 05 – Dec 05	17,000	1) Manufacturing and characterisation of test structures 2) Simulation of surface topology of test structures 3) Commercialisation potential for software tool for accurate prediction of surface roughness
18	Continuation of project F fault modelling and systems simulation of FlowFet based MEF arrays (11)	MESA, CCLRC, IMT Phase 2	2	3	Hans Kerkhoff	Feb 05 – Dec 05	11,000	1) Simulation of fluidic behaviour for variety of fluids in array 2) Development of VHDL-AMS models of kernel array cells
19	Reliability of M(O)EMS in harsh conditions	IMS, BUT, IXL, IZMM, IMT, CSL, IEF	3	2	Hoc Khiem Trieu	Sep 04 – Mar 05	44,000	1) New application for funding 2) Critical distributed mass achieved in the field 3) Portfolio of services for the Virtual Laboratory in Reliability Engineering 4) Collection of data on reliability issues in harsh environments 5) Setup of test structures for harsh environment testing
20	Input for materials data bases (e)	IEF, all WP3 partners Phase 1	3	2	Alain Bosseboeuf	Sep 04 – Jan 05	45,500	1) Collection & integration of know-how for web-based database accessible through the Virtual Laboratory in Reliability Engineering
21	Failure mode database	HWU Phase 1	3	2	Marc Desmulliez	Sep 04 – Jan 05	9,500	1) Collection integration of data into a web-based data base to support the Virtual Laboratory portfolio in Reliability Engineering
22	Reliability of MEMS basic movable structures (8)	IMT, POLIMI, IMS, BUTE, CEA-LETI, WUT, LAAS, IMEC, IEF	3	3	Marius Bazu	Sep 04 – Jan 05	31,500	1) Integration of teams 2) State-of-art review & publication 3) Service portfolio for the Virtual Laboratory in Reliability Engineering
23	Methodology and high level design of failure modes of MEMS	IMEC, HWU, LAAS, ULAN Phase 2	3	3	Marc Desmulliez	Sep 04 – Jan 05	22,500	1) Development of an FMEA service 2) Critical mass in field of industrial demand 3) Joint publication 4) Service portfolio development

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24	Database on properties of materials used in Microsystems (6)	IEF, IMS, CSL, BUTE, IXL, IZMM, IMT, LAAS, POLIMI, CEA-LETI, WUT, IMEC Phase 2	3	3	Alain Bosseboeuf	Jan 05 – Dec 05	53,000	1) Characterization of testing devices, Round robin test, Population of database
25	MEMS test structures for materials process and reliability characterization	IMT, IEF, CEA LETI, BUTE, POLIMI, IMS, HWU, QINETIQ, LAAS, WUT	3	4	Marius Bazu	Dec 05- Dec 06	100,000	1) Develop a portfolio of test structures and data extraction capability
26	Accelerated Testing of MEMS accelerometers to vibration at high temperature towards RELMETH	csl	3	6	Jerome Loicq	Oct- Nov06	5,750	Accelerated testing of MEMS accelerometers to vibration at high temperature. 2 tests on 10 samples of each item at 2 different temperatures
27	Failure mode database addition	HWU	3	6	Marc Desmulliez	Oct-Nov 06	6,000	Revise and update the existing MEMS failure modes database
28	MOEMS Packaging in harsh environment Phase 1 Study	CSL, BUTE	4	2	Jerome Loicq	Sep 04 – Jan 05	12,500	1) Development of a core skill for the Virtual lab in Package Engineering
29	FEA and modelling of IMS packaging structures using ANSYS	ULAN, IZM	4	2	Andrew Richardson	Sep 04 – Jan 05	12,400	1) Visits between the two institutes 2) Development of a core skill for the Virtual lab
30	Investigation of Laser Based Processes for MEMS Assembly and Packaging	HWU, IMEC, ULAN	4	2	Changhai Wang	Sep 04 – Jan 05	35,000	1) Development of a core skill for the Virtual Lab in Package Engineering 2) New collaborative team.
31	Inertial MEMS - Package Engineering data collection/ collation	QinetiQ, BUTE	4	2	Alan Brown	Nov 04 - Oct 06	13,000	Building/ capturing knowledge base towards virtual laboratory
32	Environmental MEMS - Package Engineering data collection/ collation	ULAN, BUTE	4	2	Andrew Richardson Marta Rencz	Nov 04 - Oct 06	10,000	Building/ capturing knowledge base towards virtual laboratory
33	RF MEMS - Package Engineering data collection/ collation	HWU	4	2	Changhai Wang	Nov 04 - Feb 05	9,000	Building/ capturing knowledge base towards virtual laboratory
34	MOEMS - Package Engineering data collection/ collation	CSL, IZM, BUTE	4	2	Jerome Loicq	Nov 04 - Feb 05	23,000	Building/ capturing knowledge base towards virtual laboratory
35	BioMEMS - Package Engineering data collection/ collation	Tyndall, KUL	4	2	John Barton	Nov 04 - Oct 06	4,000	Building/ capturing knowledge base towards virtual laboratory
36	Microfluidics - Package Engineering data collection/ collation	QinetiQ	4	2	Alan-Shaun Wilkinson	Nov 04 - Oct 06	14,000	Building/ capturing knowledge base towards virtual laboratory

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37	Packaging Material Parameter to be included in database	BUTE	4	2	Veronika Timár-Horváth	Sep 04 – Jan 05	2,000	1) Key resource for Virtual laboratory in Package Engineering
38	Database of test structures for Microsystems and Microsystems packaging	IMEC	4	2	Ingrid De Wolf	Sep 04 – Jan 05	8,500	1) Key resource for the Virtual lab.
39	Identification of assembly solutions for low cost packaging of MEMS components by assembly of bare micro systems dice directly onto substrates	HWU, BUTE, QINETIQ, IMS	4	3	Changhai Wang	Feb 05 – Sep 05	30,300	1) Investigate CoB assembly techniques applicable to MEMS
40	WP4 Database Activities	QinetiQ, HWU, IMT, IEF, IMEC, LIRMM	4	4	Alan Brown	Nov 05 - Apr 06	51,000	1) Objective - To establish on-line databases for Test structures for microsystems and microsystems packaging, Packaging capabilities, and Packaging solutions. In addition the WP3 databases on Materials and Failure Modes will be modified to allow packaging materials and package related failure modes to be included. The new databases will be constructed taking account of future integration/ inter-linking with WP3 databases on materials, instrumentation and failure modes.
41	Biocompatible packaging for implanted sensor system	KUL, QinetiQ, HWU, BUTE	4	4	Jeroen De Costa	Dec 05 - Nov 06	39,000	1) To devise a potential packaging sequence for hermetic and biocompatible coating of nacked electronic substrates and sensors
42	Chip Scale and Wafer Level Adhesive Bonding Processes for Low Temperature MEMS packaging	HWU, QinetiQ, IMEC	4	6	Changhai Wang	Jul 06 - Dec 06	30,000	This project will carry out a detailed study and identify viable adhesive based processes for MEMS and microsystem manufacture. The project aims 1) To develop chip scale adhesive bonding processes for low temperature MEMS packaging 2) To develop wafer level adhesive bonding processes for low temperature MEMS packaging 3) To identify key process parameters through reliability studies 4) To demonstrate low temperature 0-level packaging of MEMS devices (e.g. suspended microinductors)
43	On-going technology watch (and database population) activity on package engineering across the range of MEMS applications	QinetiQ, ULAN, HWU, CSL, Tyndall	4	6	Alan Brown	Jul 06 - Dec 06	24,000	Review status of package engineering for MEMS and to use the information to populate the range of PATENT DfMM databases as appropriate  Main objective to produce a series of reports
44	Course of MEMS Failure analysis	IMEC	5	2	Ingrid De Wolf	Nov 04 – Mar 05	6,000	1) Contribution to training portfolio
45	Course in MEMS Packaging, modelling & Analysis	IZM, IEF, ULAN, HWU, IMEC	5	2	Olaf Wittler	Nov 04 – Mar 05	34,000	1) Core material for CPD courses

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46	Course on Thermal Issues in MEMS	I2M, BUTE, Tyndall	5	2	Olaf Wittler	Nov 04 – Mar 05	19,000	1) Core material for CPD courses
47	Distance Learning Course in MEMS modelling	ULAN	5	4	Richard Rosing	Mar 05 – May 05	15,000	1) Remote access course
48	Micro and Nano Technology - Engineering, Business and Society	ULAN, 4M2C	5	4	Denis Koltsov	Oct 05 - Oct 06	22,000	1) Objective: To develop a cross-disciplinary course in MNT (DfMM, Business and Ethics). The course would cover: MNT Business, Marketing and Finance; Social, Ethical and
49	Development of a MEMS testing tutorial	LIRMM, ULAN, MESA	5	4	Pascal Nouet	Sept 06- Nov 06	6,000	1) Pull together MNT test material from 3 partners and turn it into a tutorial.
50	Erasmus Mundus MA course	Hwu, CSI, BUTE	5	6	R Dharixal	March- Oct08	41,000	Proposall to be submitted to EC in April 2007, syllabus and course content to be defined
51	To prepare a white paper on “Key issues for Vacuum packaging of Microsystems”	QinetiQ	6	4	Alan Brown	Nov 05 – Jan 06	3,000	1) For dissemination through WP4
52	MEMS testing by electro-thermal excitation	LIRMM, BUTE, MICRED	7	2	Pascal Nouet	Sep 04 – Jan 05	24,000	1) Support to the SME “MICRED” develop IPR that will be made available to the PATENT-DfMM NoE
53	Scoping study for future programme to “Demonstrate a methodology for reliable, packaged of Micro and Nanosystems”	QinetiQ, ULAN	7	2	Alan Brown	Sep 04 – Mar 05	18,000	1) Seed corn funding for the development of a new proposal for funding to demonstrate a DfMM methodology on a key product.
54	Solar	IMT	7	3	Marius Bazu	Phase 1: Jun 05 - Dec 05, Phase 2: Jan 06 – Dec 06	14,000	1) Internet based access tool for characterisation activities in WP3 – Virtual Tools – support for VL
55	Access service for MNT based sensors ( 2 phase)	QinetiQ, ULAN, 4M2C	7	3	Chris Pickering	Feb 06 – Jun 06	30,000	1) (Phase 1)Extend INTEGRAM service to DfMM and Packaging – prepare proposal to IST Call. 2) (Phase 2) To prepare a bid for submission against framework vI to establish such an access service
56	Industrial interface for WP3 VL	ULAN, LIRMM, MESA	7	3	Andrew Richardson	Mar 05 – Dec 05	8,000	1) Launch a NEXUS MIG that forms the core interface to WP3 and possibly WP1. Link with MIG
57	Creating an industrial interface for patent reliability engineering VL	ULAN, LIRMM, MESA	7	3	Andrew Richardson	Dec 05 - May 06	40,000	1) Set up an industrial methodology working group within NEXUS to act as an industry interface for WP1 & 3
58	MEMS for detecting wire failure	ULAN, HWU, QINETIQ, BCF DESIGN LTD	7	3	Georgopoulos Konstantino	Dec 05 - May 06	33,000	1) Prepare a new funding bid & feasibility study

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59	C E Alloys for MEMS packaging	ULAN, CDRM LTD	7	3	Stuart Taylor	May 05 - Aug 05	19,000	1) Push state of the arts in the field and support the SME Sadik Offrey
60	Proposal in support of an SME working in the field of Compound Semiconductor Technologies within the design and testing of a MOEMS.	HWU, CSL plus SME, Renishaw, CST	7	4	Marc Desmulliez John Carr	Dec 05 - Nov 06	20,000	1) To design, manufacture and test a fully integrated and packaged optical micro engineered encoder. This encoder is to form a prototype for the company Renishaw. Will be used as a case study
61	Compiling of Modos into SMASH	ITEM, Dolphin, IMS	7	4	Dagmar Peters	Apr 06 - Mar 07	22,200	1) A project with an objective to couple MODOS to SMASH and make available to the NoE
62	Damping phase 2 from Call 6	ULAN, CCLRC, POLIMI, IEF	9	7	Attilio Frangi	Jan07- Oct07	19,000	Hardware implementation of a proposed testing method for quality factor measurement; Design of the corresponding low-cost integrated architecture
63	Virtual lab for the simulation of damping in MEMS in the transition and near vacuum regimes	POLIMI, ULAN, CCLRC, IEF	1,2	6	Attilio Frangi & Herve Mathias	Jul 06 - Jun 07	52,000	QFM and modeling for resonators working in very low pressure environment by means of optical or electrical methods. Propose to implement a hardware version based on discrete electronics which will serve at least two purposes: it will allow performing measurements that are complementary to the optical techniques since they include the impact of the actuation and detection electronics on the MEMS
64	Methodology to assess the impact of packaging on MEMS components	QinetiQ, ULAN, NMRC, HWU, POLIMI, IZM, IZMM	1,2,3,4	3	Alan Brown	Sep 04 - Nov 06	124,000	1) Flagship project for year 1 2) Cross WP project 3)1st steps towards a new approach to design & network capability
65	MEMS Testing through Bias superposition III	ULAN, LIRMM, QinetiQ	1,7	6	XU Zhou and Norbert Dumas	Jul 06 - Dec 06	43,700	The project will target on the robustness of bias superposition and the test of the whole system including the electronics. To continue the research on two case study capacitive accelerometer which has high volume of commercial application and a compass which contains two MEMS magnetometer and dedicated electronic interface
66	Application of Statistical methods in MEMSyield modeling	Hwu, ITEM, LAAS	2&3	6	S Lavu	Oct-Dec 06 Jan-Sept 07	64,980	Follow up to "Methodology and high level design of failure modes. The aim of this proposal is the application of statistical methods such as the worst case methodologies in the design phase of MEMSto gain a better understanding on MEMS yield
67	Methodology and high level design of failure modes and effect analysis on thermal actuators	HWU, LAAS, ITEM, ISLI, IMEC	2,3	3	Marc Desmulliez	Feb 05 - Dec 05	11,500	1) FEM modelling of thermal actuators at extreme operating conditions Compare different FEM software tools (Marc, Ansys, Coventor) 2) FMEA modelling of failure modes of thermal actuators 3) Worst case modelling of failure of thermal actuators using ITEM methodology Maximum range operating conditions for a given number of cycles before failure will be modelled.

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68	Die attach adhesives for packaging/ CoB assembly of stress sensitive MEMS devices (linked to the WP2 round robin modelling activity)	QinetiQ, Tyndall, IZM, CSL, ULAN	2,4	3	Alan Brown	Nov 05 - Apr 06	62,200	1) To investigate and model the key trade-offs relevant to die attach adhesives for packaging/ CoB assembly of stress sensitive MEMS devices
69	Modelling and simulation of non-Newtonian fluids for specific MEMS packaging applications	HWU, IZM, CCLRC, WUT, IMT	2,4	3	Marc Desmulliez	Mar 05- Aug 05	3,000	1) Small workshop activity to seek funding source for work on this topic  1.5k WP4 & 1.5 WP2
70	Round Robin Modelling Study (linked to WP4 study die attach adhesives for packaging/ CoB assembly)	Tyndall, QinetiQ, ULAN, IZM, POLIMI, IMT, HWU, CSL	2,4	4	Orla Slattery	Nov 05 - Apr 06	94,300	1) Objective: To investigate and model the key trade-offs relevant to die attach adhesives for packaging/ CoB assembly of stress sensitive MEMS devices. Specifically the trade-off between CTE, stiffness (modulus) and thickness, on package induced thermomechanical stress. Physical measurements will be taken using stress sensitive devices and test structures. The various device, adhesive and package/ substrate assemblies will be modelled. The project seeks to develop benchmarked and validated models for MEMS packaging, including poorly matched assemblies.
71	Measurement, Modelling and Simulation of Mechanical Properties of MEMs (7)	Tyndall, WUT, BUTE	2,7	3	Conor O'Mahony	Feb 05 – Dec 05	13,000	1) Validated behavioural models of a range of MEMS test structures
72	Technology Roadmapping for the identification of opportunities for the Virtual Laboratory	HMU, QINETIQ, IZM 4M2C	4,7	4	Fabian Holler	Nov 05 - Apr 06	31,700	1) Objective: Two dedicated workshops will be held at Heriot Watt University Edinburgh and Fraunhofer IZM Berlin to identify and understand present and future industry requirements. The information gathered will be used to determine how the Package Engineering should best target its efforts in terms of both technical focus and timescales. The workshops are open to interested participants external to the project.
73	Course in MEMS damping	POLIMI, ULAN, IEF, CCLRC	5,6	4	Attilio Frangi	Nov 05 - Nov 06	16,000	A technical course in MEMS Damping
74	Development of a concept on how to integrate WP1-4 results into DfMM flow respectively DFMM CAD tools in order to support PATENT's Self Sustainability	ITEM, 4M2C, ULAN, BUTE	7, covering results from 1,2,3,4	6	Dagmar Peters Patric Salomon	Aug 06 - Dec 06	58,800	Project to bring together the results in WP1-4 in modelling and simulation work looking at the results from projects, what could be offered and what industry Design houses or MNT Designers within manufacturing/systems companies and CAD tool suppliers require

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75	Biodrop (phase 1 & 2)	MESA , ULAN , LIRMM , QinetiQ , CCLRC , IMT	WP X.1 flagship	5	Hans Kerkhoff	Mar 06 - Jun 07	157,000	Objective of this project is to develop a digital microfluidic platform (using so-called droplets) which is suitable for electrical analysis of biological material, as well as a production platform for peptides. Three European companies are included, two of which are SMEs, who are involved in these two application areas in which the digital droplet platform can be used. A microelectrode Array (MEA) for analysing cell material is already available. Within BioDrop, the latter will be extended with a droplet transport/delivery system.
76	HUMMS (phase 1 & 2)	HWU, ULAN, LIRMM, ISLI, BUTE	WP X.1 flagship	5	Marc Desmulliez	Mar 06 - Jun 07	113,000	This project focuses on the design, manufacture, package and test for reliability of a series of sensors aimed at monitoring the health and use of operation of larger systems as prescribed by two external industrial partners MBDA and BCF Designs Ltd. The main aim of the project is not to develop new sensors but to use existing ones and integrate them in such a way that they complement each other by their ability to measure more than one measurand, albeit in a non standard mode.
77	Reliability VIBSHOCT (phase 1 & 2)	IMEC, IMS, CSL, POLIMI, Tyndall, BUTE, HWU, WUT, IMT, IZM	WP X.1 flagship	5	Ingrid De Wolf Hoc Khiem Trieu	Mar 06 - Jun 07	148,000	This project will focus on package engineering including the modelling of package effects on MEMS device (e.g. development of a package model of the device under test, investigation of packaging materials like die attach etc. in use, ...), multi-domain failure mode modelling and definition of new test methodologies (i.e. investigation of failure modes of the package and of the MEMS device and their cross-link resulting in a better insight of the failure mechanism allowing for the definition of a new test methodology in harsh condition). It will also set up test equipments for reliability testing under harsh conditions and conduction of test (e.g. temperature cycling with temperature up to 350 °C, strong vibration, impacts, simulation of space conditions,...).
78	Reliability RELMETH (phase 1 & 2)	IMT, HWU, LIRMM, QinetiQ , POLIMI, BUTE, CSL, IMS, ULAN	WP X.1 flagship	5	Marius Bazu Changhai Wang	Mar 06 - Jun 07	91,000	RELMETH intends to identify and remove the failure risks induced by the two main elements of MEMS: die and package (with a special emphasis on ageing and degradation behaviour of moving mechanics). In this respect, the investigations will be performed on three types of bare dies and on these dies encapsulated in one type of package.
79	Reliability HERMETICITY (phase 1 & 2)	Tyndall, IEF, IXL, BUTE, QinetiQ, IMT, POLIMI, CEA, IMEC	WP X.1 flagship	5	Orla Slattery	Mar 06 - Jun 07	177,000	This project proposes to use a humidity microsensor as a device to demonstrate DfMM; i.e. the design, fabrication, test, characterisation, simulation and packaging of MEMS. The microsensor will electrically detect traces of humidity within a package and is intended for in-situ investigation of packaging hermeticity. Packaging hermeticity is a common and well-known reliability issue of packaging technologies. This microsensor is based on nanoporous silicon with a high specific surface. It is primarily intended for wafer-level packaging technologies but will also be able to be used for other packages used in this flagship project.
80	Reliability ACCELEROMETER Demonstrator project (phase 1 & 2)	QinetiQ, IMT, Tyndall, IMS, BUTE, LIRMM	WP X.1 flagship	5	Alan Brown	Mar 06 - Nov 06	36,000	Funding to develop a proposal for 2007 including workshops and collaboration with the Relmeth project. The proposed activity would be to demonstrate a testable, reliable, packaged accelerometer, possibly with a number of packaging variants including conventional packaging, chip on board and possibly wafer level packaging. The idea is that rather than starting from scratch, the activity would build on a lot of the previous/ current activities in the technical workpackages, such as a number of activities based around the QinetiQ SOI process and in particular an accelerometer and associated electronics. The idea is basically to join up activities in wp1-4
81	Reliability Co ordination	IMEC, IMS, IMT, POLIMI, QinetiQ, IXL, Tyndall	WP X.1 flagship	5	Ingrid de Wolf, Hoc Khiem Trieu, Marius Bazu, Alberto Corigliano, Alan Brown, Claude Pellet and Orla Slattery	Mar 06 - Jun 07	40,000	Organising meetings, finances, travel, results, deliverables and the business development activity

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82	MEF service Cluster	Internal PATENT partner: CCLRC C3M (UK), IMT Bucharest (RO), QinetiQ (UK), UT-CTIT & MESA+ (NL), ULAN (UK), LIRMM (F) External Partners: C2V (NL), PamGene (NL)	X.1	7	Hans Kerkhoff	Jan-June 07	20,000	Business plan and market test
83	Wafer level packaging SC	Internal PATENT partner: QinetiQ (UK), Tyndall (Ireland), IMEC (Belgium), Fraunhofer IZM (Ger), HWU (UK), ULAN/the Packaging Centre (UK) External Partners: AML - Applied Microengineering Limited (UK)	X.1	7	Alan Brown	Jan-June 07	20,000	Business plan and market test
84	Embedded Test SC	Internal PATENT partner: ULAN (UK), QinetiQ (UK), IEF (F), UTwente (Belgium), ISLI (UK), U. Oulu (Fin)	X.1	7	Pascal Nouet	Jan-June 07	20,000	Business plan and market test
85	EUMIREL SC	Internal PATENT partner: IMEC (Belgium), IMT (Ger), Fraunhofer IMS (Ger), POLIMI (IT), CSL (Belgium), TYNDALL (Ireland), BUTE (Hungary), ULAN (UK), WUT (PL), Fraunhofer IZM (Ger), HWU (UK)	X.1	7	Marius Bazu, Ingrid De Wolf	Jan-June 07	20,000	Business plan and market test
	Total projects funded						2,816,610	