EUROPEAN MICROSYSTEM & MICRO-NANOTECHNOLOGY NETWORK

ΣMINENT

EUROPEAN B2B ACCELERATOR FOR M@NT SMES
IST-2001-38176

Deliverable for WP 3.1.4.

Identification and Dissemination of Financing Routes for M@NT SMEs

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Date: 12 December 2002

ΣMINENT is an EU funded IST-2001-38176 Thematic Network project with IVAM as Contractor and nucleus members ADEMIS (France), APTE (Switzerland), MINAC (Netherlands), MINT (Belgium) and OGMS (Austria) for business generation in the nano and micro(system) technology field.

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1 Introduction

Funding in the area of M@NT SMEs faces specific challenges beyond the (normal) actual downturn in the market for early stage and concept financing. Long development times for new inventions and products and therefore expanded investment horizons let the majority of potential investors refrain from this segment. Additionally there is a high level of uncertainty due to the above mentioned development times but, even more, due to the immature stage of the industry and the big share of greenfield research activities. There is a big variety of promising technologies and products in the market – partially the specific business sense of these developments is not yet identified.
But even in the case of clear business visions and commercialization ideas, most developments in the area of M@NT demand for very expensive prototyping and production sites – a fact that sets barriers to those which are expected to finance the trial of a market proof. The situation seems to even worsen for the area of nanotechnology: The lack of market proven applications makes it very difficult to make any forecasts about business realisation. This circumstance makes it quite impossible for venture capitalists to evaluate risks and chances of technologies and potential start-up.

Moreover it is difficult for M@NT SMEs to identify and contact the appropriate investment companies due to the present intransparency of the market. There are initiatives ongoing to structure and towards documentations of the environment e.g. within CORDIS. However, these developments are far from finalization and it seems suggestible to focus on consolidation of ongoing initiatives in the further process in order to gain pace and avoid redundancies.

2 Objectives and Scope

It is aimed to create a clear roadmap of which financing sources are available for European M@NT SMEs. Beyond the general market situation and prospective developments, in the further process measures should be drafted in order to generate a transparent financing map for both investors and capital seeking companies. Moreover, the alignment of existing funding possibilities should help to channel the financial effort more efficiently to the most promising ideas.

3 Discussion Framework and Definitions

We distinguish between national/governmental, EU level and “private” (means commercial investors’) activities. The overview of this three layers should bring up

the possibility to better combine national and ”private” activities with the EU development programs. A selection of successful investment cases should give examples of critical success factors for capital seeking companies.

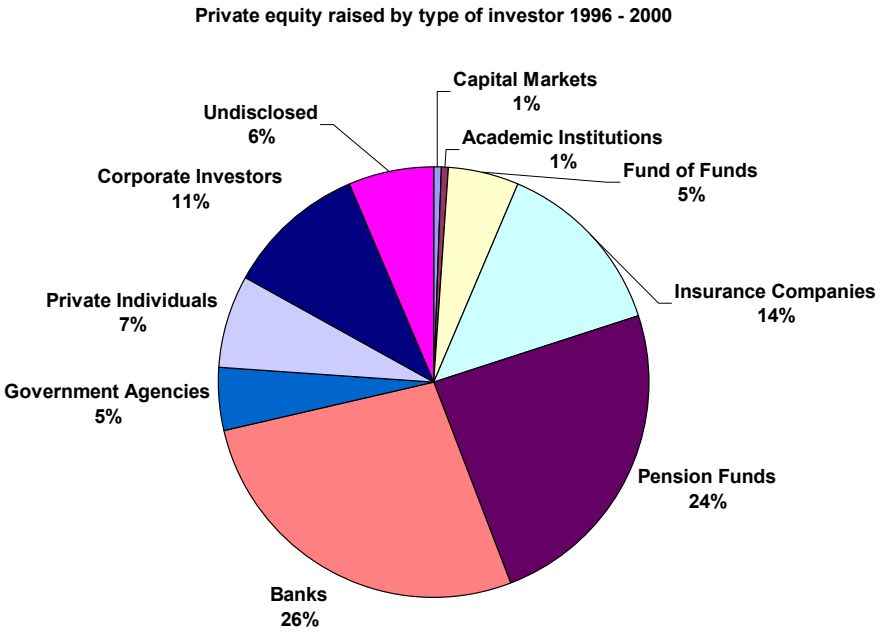
4 Financing Routes

4.1 Investment Landscape

A glance at current developments within the funding of innovative businesses will give a closer image of possible financing routes. Special emphasis should be laid on the perspectives of SME, since smaller entities have to tackle particular issues in the allocation of first- or additional-round financing.

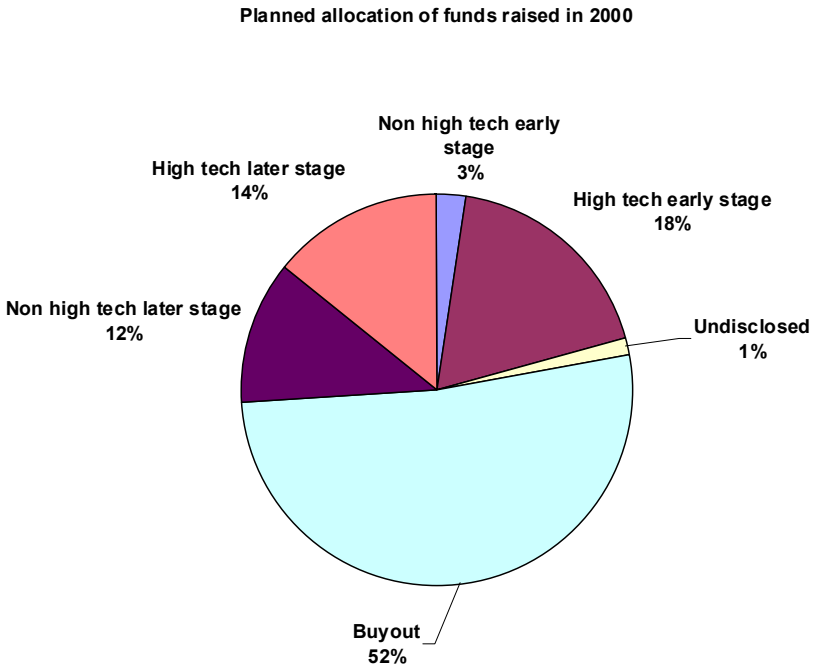
4.1.1 Private Equity Landscape

The type of private equity investor conditions its presumable asset allocation since each investor category has its own specific requests. While academic or governmental institutions focus on sponsoring and development, e.g. professional funds of funds have to aim at outstanding profitability within restricted time frames or the huge group of pension funds, banks and insurances has actually to focus on liquidity and risk means – resulting in a possible no-go for those investors in highly experimental ventures.



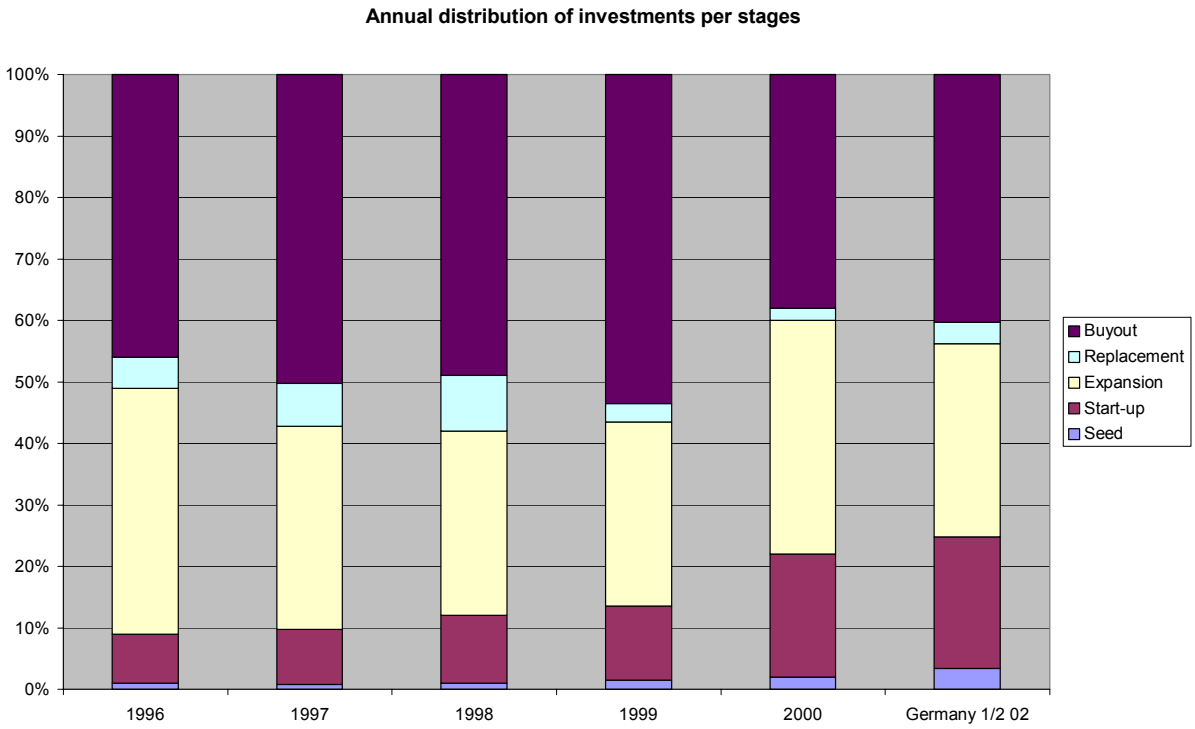
Source: EVCA

Planned uses of funds raised focus significantly on high tech early stage investments (beneath the by nature voluminous buy out segment), a fact that certainly changed due to recent developments.



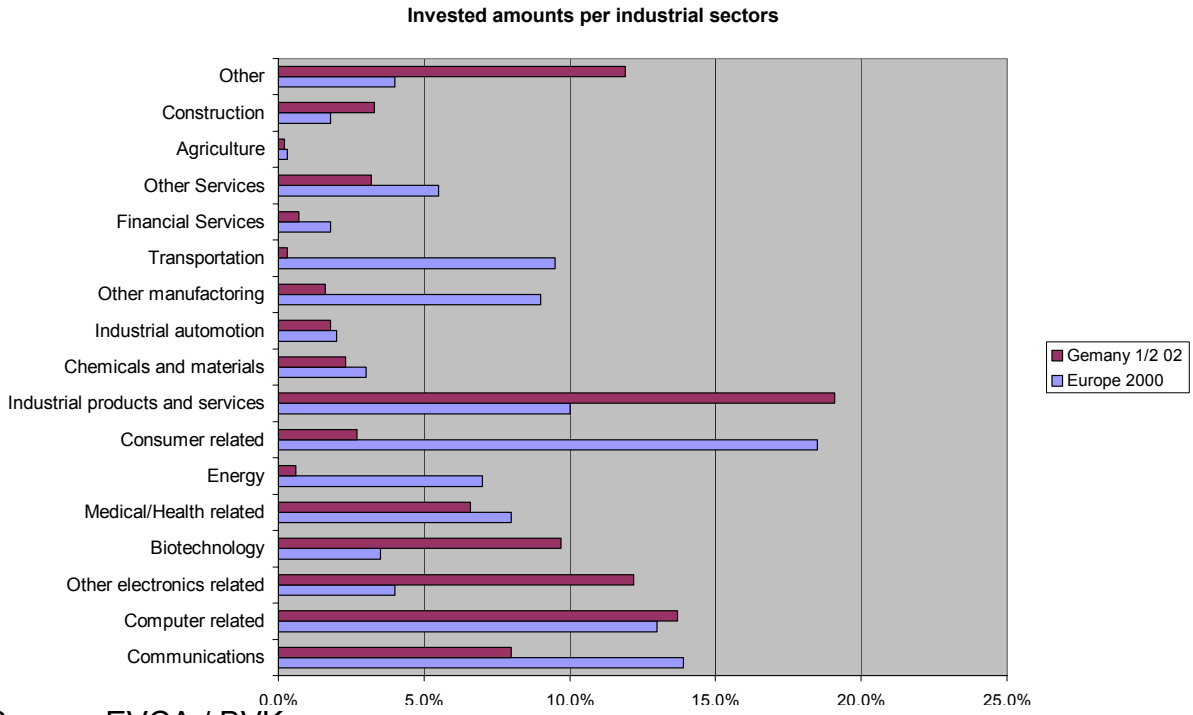
Source: EVCA

Nevertheless, historic an very recent data exhibits no serious shifts in the allocation when it comes to stages. Still early stage is well represented and seed even coming up again. The diminished expansion stage funding activity may result from lower allocation of second round funding and rather waiting for “proofed concepts” without further financial effort.



Source: EVCA / BVK

The analysis of investment directions by industry sectors brings up the dilemma of categorizing M@NT companies: They have no dedicated sector in most documentation and research activities. Likely they are spread over communications, computers, bio tech, med tech and at least additionally chemicals / materials.



Source: EVCA / BVK

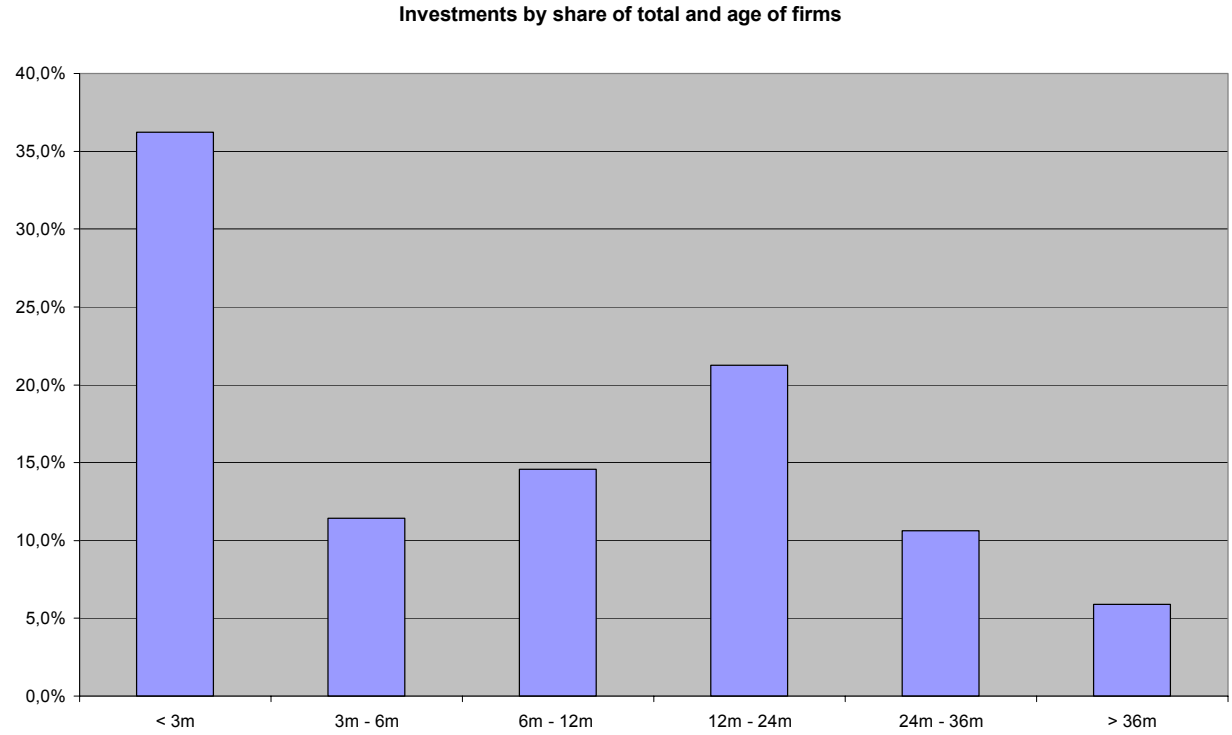
Market downturn seems not to hit certain industries extraordinary hard in terms of investment inflow. But it has to be pointed out that after 2000 investments decreased about threefold!

Since it turns out that there is poor top data available, a closer look should be taken at existing investment network targeting M@NT SMEs (any early stage investment should be close to SME) or at least high innovation / high technology sectors.

4.1.2 Private Equity and Technology Innovations

A known EC supported initiative is the I-TEC initiative, connected amongst others to www.gate2growth.com. This initiative bundles 24 mid-sized funds (13-130 EUR mn. of capitalization) in order to cover 13 EC states with innovation support. Targeted sectors are beneath telecom, IT, internet, software and hardware with about 70 % of allocated investments the sectors pharma, bio tech and medical which should include M@NT business (23 % of investments). The network has appr. 0,5 bn. EUR under management, having 66 % thereof already committed. Data of the network should be representative for the behavior of the European early stage and high tech financing community.

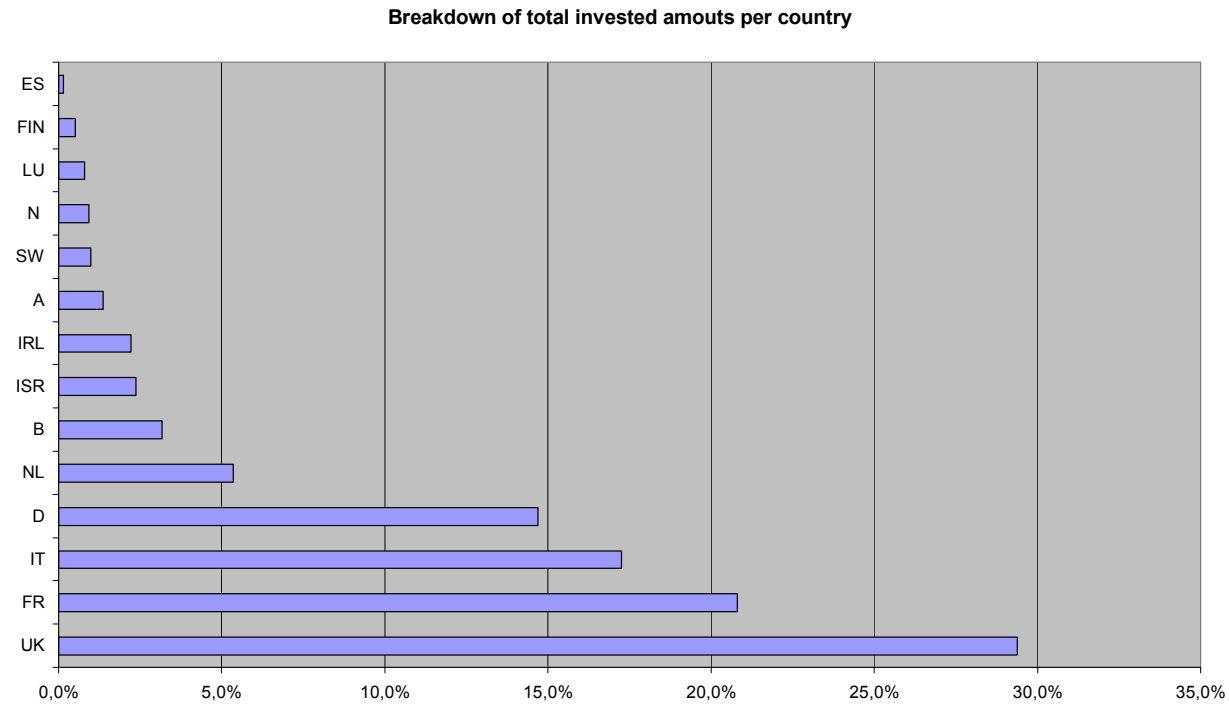
Following the industry trend, the initiative did seed and early stage on the one hand and classic second round financing for market penetration in 12-24 months mature companies.



Source: I-TEC (www.cordis.lu)

In terms of M@NT this could mean, that there is rather a chance to have participated in very early stages, because in one to two years normally this industry's companies are not yet ready for the second, market proved, round.

Another experience from this networks history is, that only 3 % of investment were cross border activities – most of the participating financers did their domestic business. For this reason the heavyweight on France, UK, Germany and Italy in terms of invested amounts (compiling appr. 80 % on their selves) might rather result from the higher participation of these nations' financers than from advances of these nations in development.



Source: I-TEC (www.cordis.lu)

4.1.3 Governmental / National Funding

There is not yet a centralized database of national and governmental funding activities, although initiatives to achieve this are ongoing on EU level (e.g. within CORDIS) or at national levels (e.g. IVAM Germany and other national programs). To steps forward in this issue, experiences of existing national programs should be compiled in order to identify best of breed measures.

A closer look should certainly be taken at Austria, in order to figure out how this network of funds works (Austrian Science Fund (FWF) - Nanotechnology, Microtechnology in Austria 2001 - 2003 and, Nanoscience and nanotechnology in Austria 2003 - 2011).

Furthermore the national initiatives of the Netherlands (www.stt.nl) and France (www.rmnt.org/EN/index.html) should be assessed to compare the advantages and shortcomings of both industrial and governmental initiated networks.

4.1.4 EU Funding

The lacking transparency in funding routes is set forth on a European level. A recent study of the European Nanobusiness Association (ENA) (www.nanoeurope.org) wraps up the situation for the nanotechnology sector of M@NT - which will be representative for the whole sector.

"A figure against which nanotechnology funding is often benchmarked is the budget of the US National Nanotechnology Initiative. At first glance this appears to suggest that Europe's often quoted €1.3 billion over 4 years is tiny compared to the 2003 NNI budget of $710.2 million (€ 0.72 billion). Our analysis indicates that the top level figures do not reveal the whole story, that many of these headline figures are in fact misleading, and that European nanotechnology spending may in fact be significantly higher than that of the US." (ENA)

Funding activities are simply not structured and communicated – which certainly leads to inefficiencies and redundancies in the supported areas.

Commission's final budget June 2002 Final - EUR mn.

INTEGRATING AND STRENGTHENING THE ERA	
1. Focusing and integrating Community research	13.345
1.1 Thematic priorities	11.285
1.1.1 Life sciences, genomics and biotechnology for health	2.255
1.1.2 Information society technologies	3.625
1.1.3 Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices	1.300
1.1.4 Aeronautics and space	1.075
1.1.5 Food quality and safety	685
1.1.6 Sustainable development, global change and ecosystems	2.120
1.1.7 Citizens and governance in a knowledge-based society	225
1.2 Specific activities covering a wider field of research	1.300
Non-nuclear activities of the Joint Research Centre	760
2. Structuring the European Research Area	2.605
3. Strengthening the foundations of the European Research Area	320
SPECIFIC PROGRAMME NUCLEAR ENERGY	1.230
TOTAL	17.500

Source: ENA, CORDIS

The present budget reveals in its positions 1.1.6., 1.1.7. and 2. and 3. allocations to administrative initiatives of integration whilst the actual integration project is structured to thematic issues under point 1.. High attention should be paid on the set-up and alignment of the "thematic priorities" in order to create comparable and measurable project progresses and findings.

A comparism with the US situation reveals, that they already choose a further alternative of fund allocation: the self-administration of dedicated entities.

National Nanotechnology Initiative (NNI) Requested Budget 2003 - $ mn.

Department of Defense	201
Department of Energy	139
Department of Justice	1,4
Department of Transportation (FAA)	2
Environmental Protection Agency	5
National Aeronautics and Space Administration	51
National Institutes of Health	43,2
National Institute of Standards and Technology	43,8
National Science Foundation	221
US Department of Agriculture	2,5
TOTAL	701,2

Source: ENA, CORDIS

It is not yet proven, whether this "federal model" performs more successful than central administration – but Europe will have to decide on the one or other direction and then consequently implement its objectives.

"On balance, it looks as if Europe has a significant edge at the moment. However, it should be remembered that since discussions about FP6 started the US NNI budget has almost doubled. Once the economic benefits of US funding begin to be felt, whether in new company start-up activity, or progress towards military or social goals, US funding is expected to increase rapidly. In addition, the FP6 budget is now fixed until 2006, at which point the balance may have changed dramatically." (ENA)

A result from underdeveloped structure and documentation will be, that success and failures in funding cannot be tracked in a comprehensive way. This will lead to the inability to adapt funding routines to the most success promising routes and to deficits in argumentation in case funding has to be increased beyond budget in order to keep ahead or at least on track with the e.g. US, Japan and Korea.

4.2 Investment Activities

4.2.1 Investment Companies

The following list of VCs active in the area of M@NT is compiled in order to give guidance to presently capital seeking companies but also as base for further network funding activities. Research has been conducted for companies investing in biotechnology, health, gene, materials and chemicals in order to identify potentially M@NT interested companies. Surely research is again handicapped from the missing M@NT industry codes (or similar).

Henkel Venture Capital	www.henkel.com

Atlas Venture Ltd.	www.atlasventure.com
BASF Venture Capital Ltd.	www.BASF-vc.de
BC Brandenburg Capital Ltd.	www.bc-capital.de
BioMed Venture Plc.	www.biomed-venture.de
bmp Plc.	www.bmp.com
DaimlerChrysler Venture Ltd.	www.dc-venture.com
TechnoStart Beratungsgesellschaft für Beteiligungsfonds mbH	www.technostrat.com
UEG - Unabhängige Entwicklungsgesellschaft für Seed- u. Start up-Unternehmen mbH	www.ueg-group.de
VCI Technoinvest Ltd.	www.vci-technoinvest.de
West STEPlc. Partners Ltd.	www.weststeag.com
Accenture Technology Ventures	www.accenturetechventures.com
Apax Partners Beteiligungsberatung Ltd.	www.apax.com
Baring Private Equity Partners Ltd.	www.bpep.com
BioPlc.ency Plc.	www.bioagency.com
equinet Venture Partners Plc.	www.equinet-ag.de
High Tech Private Equity Ltd.	www.hightech-pe.com
Innovativ Capital Plc.	www.innovativcapital-ag.de
Life Science Partners	www.lsp,nl
Life Science Ventures Ltd. Global Equity Advisers	www-life-science-ventures.de
MC Munich Capital Consult Ltd.	www.munichcapital.de
Mediport VC ManPlc.ement Ltd.	www.mediport-venture.de
MPM Capital Ltd. Gesellschaft für Biotechnologie-Investitionen	www.mpmcapital.com
RWE Dynamics Venture Capital ManPlc.ement Ltd.	www.rwe-vc.com
Siemens Venture Capital Ltd.	www.siemensventurecapital.com
TecVenture Partners Ltd.	www.tec-venture.com
TVM Techno Venture ManPlc.ement Ltd.	www.tvmvc.com
Baytech Venture Capital Beratungs Ltd.	www.baytechventure.com
3i Gesellschaft für Industriebeteiligungen mbH	www.31-contry.com
Berlin Capital Fund Ltd.	www.berlin-capitalfund.de
Capital StPlc.e Plc.	www.capitalstage.com
E.ON Venture Partners Ltd.	www.eon-venturepartners.com
Allied Capital Beteiligungsberatung Ltd.	www.alliedcapital.com
MicroVenture Ltd. & Co. KGaA	www.microventure.de

Source: www.bvk-ev.de

4.2.2 Investment Stories (selected)

There are several cases of successful funding for relevant companies. The following case studies should give orientation and it will be considerably helpful to collect their been-there-experiences:

Company	Investors	Website	Activities
Capsulution NanoScience	Berlin Seed Capital Fund	www.capsulution.c	The company's aim is to introduce the patent protected encapsulation technology into a broad field of applications, with the focus on the development of advanced drug delivery systems.
Nanogate	3i London, Sal-Oppenheim, equinet Venture Partners	www.nanogate.com	The company develops working materials with new properties.
Nanomagnetics	IRRFC, Interregnum , Formula Ventures, Prelude Trust Plc., CRIL, Amadeus Capital Partners Limited, BankAtlantic Financial Ventures	www.nanomagnetics.com	Generates intellectual property related to functional particles of nano scaled size. In particular, the company is developing an information storage media. The facilities, located within Bristol University, are equipped for the development of a prototype high-density media to be demonstrated through commercial partnerships.
Nanotype	BioM Munich Biotech Development AG Capital Stage Biotech Funds, Landesbank Corporate Finance Holding, tbg Technologie-Beteiligungs-Gesellschaft mbH	www.nanotype.de	The biotechnology company has created a new interface between nanotechnology and biology. The company develops single-molecular interaction force assays for drug discovery and diagnostics.

Source: Tornado Insider

5 Conclusion

To the times being it is considerably hard to gather finance for early stage or small market players. The more it would be helpful to have all potential sources at hand.

The business model of venture capital companies reflects the changed market circumstances what leads to a further barrier: Since exit possibilities diminished dramatically (and are not likely to gain again the level of the “new economy era”), investments are taken on a very careful way (it cannot be calculated anymore on 2-3 successful exits compensating failures of several other investments). The effortful procedure of selection and valuation of investment opportunities just does not amortize for small investment amounts. As a consequence, many partnerships do generally refrain from smaller and early stage rounds.

6 Recommendation and next steps

6.1 Areas of potential Improvements

A solution of this complexity lays in the improvement of both identification of investors and support to the investors’ decision. The first step is a documentation and centralization issue. The second step could be solved by providing an experienced and trustworthy “filter” to channel investment requests.

6.2 Suggested Measures

At least the participants of EMINENT should agree on a common kind of documentation and come to use a joint database. This requires the compilation of existing databases in a new structure and the allocation of responsibility for both delivery of new input and maintenance of the database. New participants could be acquired with the installed showpiece.

Leading investors should be contacted to discuss the advantages and potential acceptance of an centralized pre-decision board of M@NT experts. This board would kind of certify sustainable investment request and channel the applications in order to contact suitable investors and enhance cross border activities and syndications.