

Ex Post -Evaluation in Germany: Experiences and Conclusions

PIANIST Workshop
Paris – 13.12.2005
Jan Wessels, VDI/VDE-IT

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VDI/VDE-IT: General characterisation

- Evaluation activities since about 15 years
- Focus: technology and innovation policy / structural and organisational change
- Evaluations on national (state, federal) and EU-level
- Analysis is combined with policy recommendations in general
- Various types of evaluation activities and roles

VDI/VDE-IT works as evaluator – in innovation and technology policy

- Technology transfer and diffusion in new German federal states
- “Navigation and marine technology” (BMBF)
- MEDEA-Evaluation (European microelectronics programme)
- Evaluation GROWTH (European Commission)

VDI/VDE-IT as agency responsible for programme management - integration of monitoring and evaluation in funding programs

- Framework program “Microsystems” (Federal Ministry of Education and Research)
- Bavarian Microsystems technology programme

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Some assumptions on ex post impact assessment

Ex post impact assessment:

...has no significant impact itself...	..if it is not accompanied by ex ante evaluation and programme monitoring
...will produce worthless data...	...if the data is not interpreted in context with qualitative information
...will not work properly...	..if it is not implemented in close cooperation with the programme agency
...can not fulfil all expectations...	...but give important information on funding programmes

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1. Combination of ex post and ex ante evaluation: The case of the MST 2000+ Programme (I)

Ex-post Analysis

- Status of technology
- Technology diffusion
- Results of funded projects (prototypes, patents, new products,..)
- Qualification
- Competitiveness
- Employment
- Networks
- Quality of funding instruments
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Ex-ante Analysis

- New topics in basic research
- Technology development (e.g. micro-, nano-, biotechnology)
- Initiatives in industry - barriers for innovation
- Future character of MST
- SWOT-Analysis for Germany

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1. Combination of ex post and ex ante evaluation: The case of the MST 200+ Programme (II)

Implementation

- Postal survey: 707 MST-actors (497 funded in the MST-programme; 210 not-funded in the programme)
- About 200 Personal interviews with experts from industry and research (world-wide)
- Workshops with MST-experts for validation of results and identification of future developments

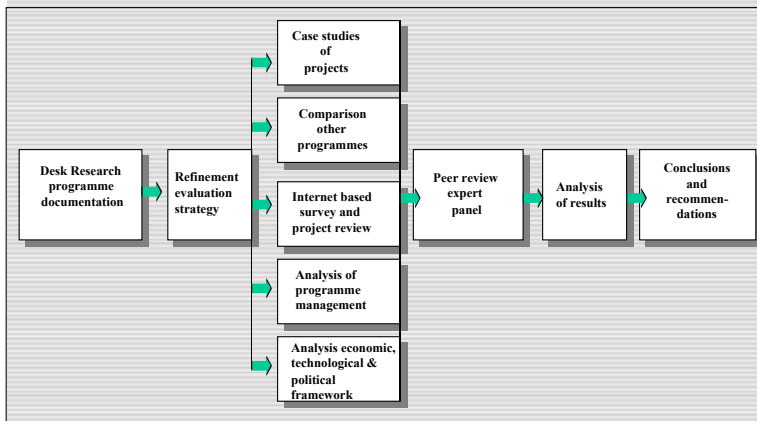
Results

- Programme was successful
- Problems that ask for more action: MST-production; Reaching the market
- New technologies create technology dynamics in MST: Definition of 10 „Future fields of MST“
- More clustering and interaction between projects: e.g. roadmaps to identify fields of action)

-> MST-Strategy of VDI/VDE-IT/ BMBF

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2. Combination of quantitative and qualitative data: The case of MEDEA+ -Evaluation



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3. Cooperation with the programme agency: The case of the German „Mikrosysteme“ - Programme

- Relevant **Questions** for the external evaluation may be identified in advance and included in the description of the external evaluation call
- External evaluation is able to use **Data and Analysis** of the internal monitoring process, this may reduce cost and time
- Own design of evaluation and data access is important to prove **Independence** of the external evaluation
- External evaluation may lead to higher degree of **Objectivity** of the internal monitoring process, **Chances and Risks** for the programme are identified by more transparency
- **New tasks** may be: External evaluation analyzes instruments and design of the internal monitoring and improves its reliability

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4. Evaluation results and Consequences: The case of GROWTH – Evaluation (I)

Bottom-up approach:

- Qualitative judgement of success/failure by the expert evaluator
- Based on her/his overall impression of their projects after having carried out the complete project evaluation (comparison to their other projects)

Top-down approach:

- Hypothesis-based statistical analyses are necessary to assure a sufficient level of confidence in the findings
- Comparison of „input data“ with „output data“ in order to find relations, also to be used for future ‚prediction‘ of project success
- Interpretation of significant relations

Comparison of both approaches:

- Identification of very clear successes/failures where both approaches lead to the same results

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4. Evaluation results and Consequences: The case of GROWTH – Evaluation (II)

1	Value chain integrated projects are more successful.	Not confirmed
2	Pre-existing management experiences in international projects lead to successful projects	Clearly confirmed
3	Projects which are not based on already existing and well-implemented cooperation relations are not successful.	Not tested
4	The more nations are participating in a project, the success of the project is decreasing.	Not confirmed
5	Too ambitious objectives of a project lead to failure.	Not confirmed
6	Very broad defined project objectives lead to failure.	Not confirmed
7	Very specialized and narrow project objectives lead to project success	Not confirmed
8	If the coordinator is coming from the main industrial and/or main exploitation partner, projects lead to success	Only some aspects confirmed
9	If the coordinator is coming from an institution carrying out technical consultancy services beside to other business, a good diffusion of the results to the broad industry is given	Not yet tested
10	Large consortia lead to management problems.	Not confirmed