



Process Monitoring of Impacts

**Towards a new approach to
monitor the implementation of
Structural Fund Programmes**

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1. Introduction (why Process Monitoring of Impacts?)

1.1 The challenge: impact analysis of complex programmes / projects

Regional development today is increasingly characterised by the following features:

- *Openness*: At least in non-cohesion countries, regional policy is essentially dealing with open tasks, whose results cannot be known or forecast in advance. Improving competitiveness, promoting innovation etc. are open processes, where at the outset only general objectives can be defined, but concrete solutions and appropriate approaches will gradually emerge during implementation.
- *Recursiveness*: The success of regional policy depends on the interaction of economic, social, cultural and physical resources within a territory and on the quality of collaboration between key actors having access to or being responsible for these resources. These actors appear on the supply *and* on the demand side of regional policy (as suppliers they mobilise the resources, as project owners they want to tap added value from the co-ordinated use of these resources).
- *Unpredictability*: The key players in regional development processes (providers as well as recipients of support measures) are social actors (institutions, individuals). Their actions are not just the result of pre-defined and explicit objectives, but also of their (often hidden) specific motives and interests, as well as (organisational, social etc.) rules which determine their behaviour pattern.

Impacts of regional development projects / programmes are the product of internal as well as external factors and their interrelations. It is difficult to identify clear, obvious relationships, because impact chains emerge in a dense set of actors which can exert influence on its various elements - and are mutually influenced by them. In order to achieve expected impacts, it is crucial that involved actors keep focused on them and adequately adapt during implementation in order to take account of changing conditions.

Conventional approaches to impact analysis are not well suited for these complex and dynamic conditions, because they aim at identifying a “linear” progression of effects (e.g. output leading to results leading to impacts) which take place quasi-automatic, i.e. irrespective of the actors involved, their interests, resources and power. Or they attempt to isolate the effects of individual activities (e.g. a measure or programme), which becomes increasingly difficult (and costly) with dense and intertwined effect patterns.

Besides, it is very tempting to claim observable impacts, regardless whether the project / programme under question has actually contributed to their achievement. This is particularly tempting in the case of higher-level objectives, where contributions of single factors are easy to claim - but difficult to (dis)prove (i.e. the contribution of a training measure to increase employment in a given territory). Or in the case of long impact chains, where causes and effects are rather distant from each other, either in time or in functional relations.

Moreover, these types of impact assessment produce little information which is relevant for the management of on-going projects / programmes. On one hand, because the information arrives rather late, which is particularly true for assessments which rely on impact indicators, where information can only be produced once an indicator (and/or the respective quantitative target) has actually been met. On the other hand when - due to the “attribution gaps” - the actual contribution for the achievement of impacts remain unclear and does not provide clues on “whether things have been done right or the right things have been done” - which are the main sources for identifying areas of improvement!

1.2 The need to monitor processes

Management of regional development programmes can be regarded as steering of inter-linked processes. At the core are primary (“value creating”) processes, i.e. those activities which are directly responsible for producing desired outputs. In Structural Funds (SF) Programmes these primary processes usually consist of projects, which are implemented by (public or private) project owners for whom a programme provides resources.

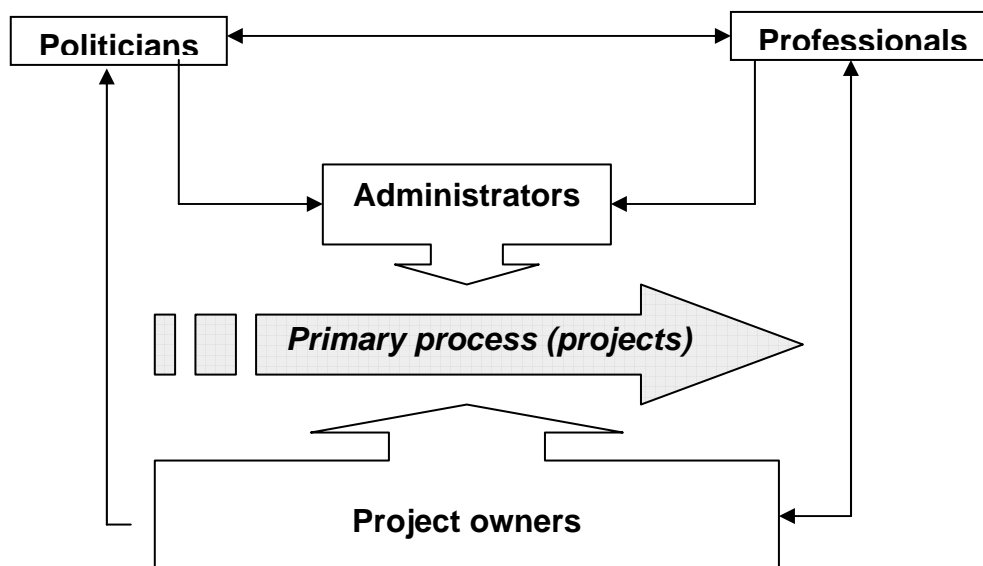
Basically the primary process of projects is carried out by the project owners. They develop ideas, define their specific project objectives, invest own resources and assure that internal and external conditions are met in order to achieve the desired effects. Their core value is performance, i.e. efficient production of outputs in given (and changing) circumstances and with minimum interference from outside.

In public programmes (e.g. SF) other social systems (administrators, politicians, professionals) are involved as well, who have their own objectives and values which determine their behaviour. They try to influence the projects and the behaviour of other actors (e.g. decision-making of administrators, support for project owners through lobbying or advice).

The influence of these other social systems differs between programmes: Some are strongly influenced by politicians (often with administrators as close collaborators), others are dominated by administrators and professionals. These then tend to be “technocratic” or can even lead to situations where the entire process is driven by administrators and/or consultants, looking for project promoters to carry out their ideas.

- In a more abstract form, projects in SF Programmes are the outcome of four interacting social systems with distinct objectives and values as well as multiple relationships:

Fig. 1 Social systems involved in SF - projects



These social sub-systems can be located at various levels (e.g. EU, national, regional). And they differ in their functions, objectives, information needs and time frames:

- *Political* subsystems: They assure a balance of interests to safeguard the acceptance of decisions, decide on the allocation of funds and define objectives in a rather simplified, often symbolic or even ambiguous manner. They require similar information that can be easily communicated, notably visible and tangible effects within rather short time frames.

- *Administrative* subsystems: They define the formal “rules of the game” during implementation and assure a stable regulatory framework for project owners, need to safeguard transparency and prevent irregularities. They require information which is controllable and unambiguous in order to fulfil reporting tasks towards the political system or the wider public. Thus they need quantifiable data within a given programme period.
- *Professional* subsystems in different domains with different degrees of involvement (consultants/evaluators with contractual interests, “observing” experts). They aim for sound interventions according to professional standards and solid operational targets which can be monitored along standards of validity and relevance, with less concern on constraints in terms of cost and time. They are interested to also look at invisible and intangible effects, or effects beyond the boundaries of a programme period.

Programme management needs to reconcile the logics of these interdependent sub-systems, and to make sure that the information needs of all actors are met. This usually requires extracting information from project owners, who are well informed about their project, but need to be convinced (or obliged) that other actors, who are not involved as directly, also need / want to know about these activities.

However, conceiving management in this way also has consequences for monitoring practice and would in particular require a shift from the prevailing monitoring of indicators towards the monitoring of processes, essentially for the following reasons:

- Since the management focus is on processes, monitoring should do the same, if it is to provide meaningful information. Observation of a few isolated indicators (even if they are quantified) provides little information on the actual functioning of projects / programmes and the mechanisms which are crucial for producing desired effects.
- Indicators are not well suited for complex situations as they only capture a narrow part of reality, reflect isolated phenomena and lead to wide-spread preference for measurable data and short-term effects. Moreover, there is a risk that indicators are (mis)used as substitutes (and not as observation tools) for stated objectives.
- Attempts to monitoring programme implementation only via indicators lead to overly ambitious monitoring systems, which contain vast quantity of data, require advanced technical solutions which are often unstable and unreliable – and still lack many aspects which need to be understood in order to effectively steer the implementation process.

Overloaded monitoring systems are also the consequence of confusing the logics and information needs of the involved sub-systems: When administrators request data regardless of their availability or professional validity, when project owners are assumed to share programme objectives and thus provide information freely, when objectives stated at political level are mistaken as “professional” operational targets.

This mixture of logics is inherent in SF - Programmes: Whereas strategies and measures are defined from a professional point of view (within a context defined by administrators and politicians), monitoring systems and the corresponding indicators are established with the intention to provide data which satisfy administrative - and even political - information needs.

It is in the light of these problems and weaknesses, that the Austrian Federal Chancellery (Division for Co-ordination of Spatial and Regional Policies) has commissioned a research project to identify and test alternatives to current monitoring practice in Structural Funds.

This paper describes the approach which has been developed in the framework of this project (“Process Monitoring of Impacts”) as well as the applications undertaken so far, outlines the main lessons which can be drawn at present and possible implications for monitoring practice in the new programming period.

2. Summary description (what is Process Monitoring of Impacts?)

2.1 Rationale and origin

The roots of Process Monitoring are located in development aid, where in recent years continuous discussion has taken place about the lack of project impacts and the weaknesses of monitoring systems which essentially focus on inputs and outputs. Detailed planning of activities and monitoring progress of their implementation on the basis of predetermined indicators have proved highly insufficient to observe the actual achievement of objectives and impacts. On the contrary: because of the narrow focus on (short-term) activities and a few quantified indicators the (medium and long-term) processes which are needed in order to achieve objectives / impacts tend to be largely neglected.

As a reaction to these criticisms and shortcomings considerable attempts were made to develop new methods for impact analysis and monitoring, which do not observe whether implementation is in line with original plans, but rather assess performance under complex and dynamic circumstance. The two most important - and promising - approaches are:

- Impact - oriented Monitoring¹:

The aim of this approach is to steer the implementation of projects by continuously observing whether they are likely to achieve expected impacts. To this end monitoring is oriented on impacts throughout the entire implementation chain and therefore the likelihood of impacts can already be observed at early stages of implementation. A clear distinction is made between those components for which a project is directly responsible (= activities, outputs) and results or impacts, which take place because use is made of these outputs, for which causal or plausible connections can be identified.

- „Outcome Mapping“²:

The basic assumption of this approach is that implementation partners („boundary partners“) are the main actors responsible for achieving intended changes, supported by a project (e.g. through temporary access to resources, ideas). Partners are assessed in relation to their progress in achieving objectives and becoming more effective, but not with regard to the actual achievement of expected impacts. Emphasis is placed on those outcomes, which are decisive factors for the achievement of results and can be directly influenced by a project: The quality of activities, organisational procedures, changes in the behaviour of partners or target groups.

Process Monitoring of Impacts is a blend of these two approaches and adapts them to the needs for monitoring projects or programmes in regional / structural policy mentioned above:

- The primary process for achieving objectives is constituted by activities, behaviour or communication of actors (=implementation partners), who are supported through a project / programme with the purpose of producing intended effects.
- Assuming that projects / programmes are open, complex process, their effects cannot be determined in advance and are essentially shaped by the actors involved, their values, responsibilities, access to resources and power to influence others.
- Effects are also influenced by external factors, whose importance tends to increase with the distance to project activities and outputs (in terms of time and functional relation). Thus focus is placed on immediate impacts (=results), which are directly connected to the use of outputs.

¹ This approach is essentially used in German Development Aid, notably by Bundesministerium für Zusammenarbeit (BMZ) and Gesellschaft für Technische Zusammenarbeit (GTZ).

² This approach has originally been developed in Canada, notably by the International Development Research Centre (IDRC).

2.2 Brief description of the method

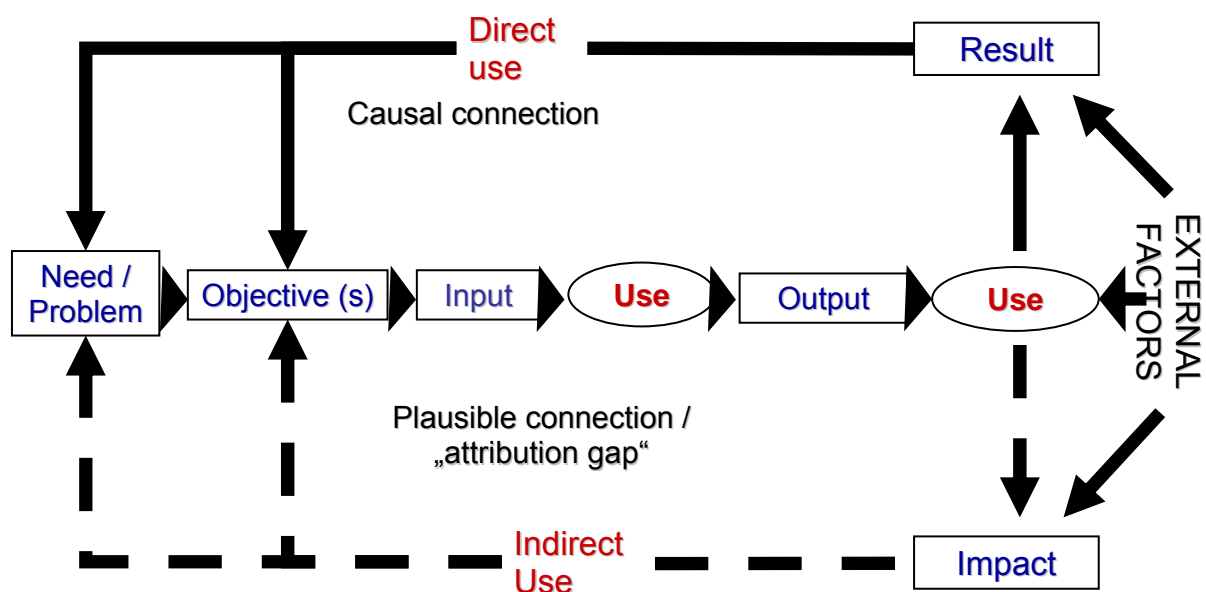
The method builds on the basic assumption that inputs as well as outputs have to be used by someone in order to produce desired effects. Thus focus is placed on the actual use of inputs or outputs by partners, project owners, target groups etc., which is considered decisive for the achievement of effects and can be influenced by the operators of a project / programme.

Depending on the degree of use and the connection with the project / programme under study, the actual (or expected) effects are classified as:

- *Outputs*: They are due to direct use of inputs by project owners, closely influenced by activities and implementation mechanisms of a project / programme.
- *Immediate impacts (= results)*: Due to direct use of outputs, which is clearly linked with the project / programme and thus can also be directly influenced (although other factors can be important as well). A result should also be closely related to specific objectives (ideally the two should be identical).
- *Impacts*: Due to indirect use of outputs, which cannot be causally linked with the project / programme (attribution gap), but can at least be made plausible. Impacts normally relate to higher level objectives and are much more influenced by external factors.

The core task is to identify the likely connections between inputs, outputs, results and impacts and to check during implementation whether these links remain valid and actually take place. The following figure constitutes the framework for Process Monitoring of Impacts and illustrates how the notion of “use” can be inserted into a logical diagram of impacts:

Fig. 2: Logical Diagram for Process Monitoring of Impacts



The degree of use is also closely related to the time dimension: outputs are by definition the first phenomena which can be observed as a consequence of programme / project inputs or activities, followed by results and impacts (although they can take place simultaneously, especially if their unintended aspects are also taken into account!).

On the other hand, there is usually a trade-off between the influence of a programme / project and external effects over time: external effects are least felt with outputs and are strongest with impacts, whereas the influence of a programme / project decreases over time. Thus it would be even paradox to make programme / projects accountable for impacts, on which they have the least influence!

It is proposed that Process Monitoring of Impacts consists of **four main steps**:

1. *Identify areas of intended effects* (results, impacts):

When Process Monitoring of Impacts is applied with on-going projects / programmes, most of this information can be obtained from existing documents (but sometimes the distinction between results and impacts needs to be refined based on the definitions given above).

Priority areas can be selected, which are considered crucial for successful implementation and where information from Process Monitoring of Impacts can be particularly useful (e.g. results which are particularly relevant, outputs whose actual use is crucial - or doubtful).

2. *Derive / agree on hypotheses for the achievement of effects*:

Make assumptions about how inputs / outputs are used and by whom in order to produce intended effects. These assumptions can be based upon past experience, logical connections or professional knowledge.

They should be described as processes (activities, behaviour or communication patterns of partners, target groups etc.) which constitute the links between the activities of a project / programme and intended results and impacts.

3. *Define areas of observation* to monitor these processes:

These hypotheses must be observed to test whether they actually take place during implementation. Important questions for this purpose are: who is expected to act or change? how much? until when?

Observation might require the definition of milestones or indicators. However, these indicators will mostly be qualitative and considered as a product of preceding processes.

4. *Data assembly and interpretation*: Process monitoring will most likely be a task distributed among several actors, thus responsibilities for the collection of data and information need to be defined. Procedures are influenced by the time requirements, available budget and work routines (can data collection be coupled with other activities?).

Care should also be taken to capture as much as possible the entire range of effects which can be observed (i.e. unintended or unexpected effects) and to regard deviations from intended routes not *a priori* as negative phenomena, but deal with them in a more differentiated manner. Because differences between plan and implementation as well as exceptions or unexpected effects are important sources of information for learning and improving implementation, as they can help to identify weaknesses, point at possible alternatives or lead to new solutions.

Important questions to be answered by data analysis: Are original assumptions about use of outputs still valid? What are specific problems or weaknesses in this respect? Should original assumptions or even intended results be modified? What can operators do to improve use of outputs? How can the behaviour of direct addressees be influenced more effectively in the intended directions? What can be done to curb unintended effects?

The figures on the following two pages contain the consolidated results of a **pilot application** for the INTERREG IIIB CADSES project TECPARCNET (Network of Technology Parks). They are presented in two figures, one page for Results and the other one for Impacts. The "use" column contains those processes which are assumed to be crucial for achieving expected results (arrows show the intended links). The impact page contains those assumptions which have been selected because they appear crucial for achieving expected impacts. They are identical to some of the assumptions on the "result page" or rather represent the final stages of some of the processes for using outputs.

Fig. 3: Pilot application for project TECPARCNET (INTERREG IIIB CADSES): Results

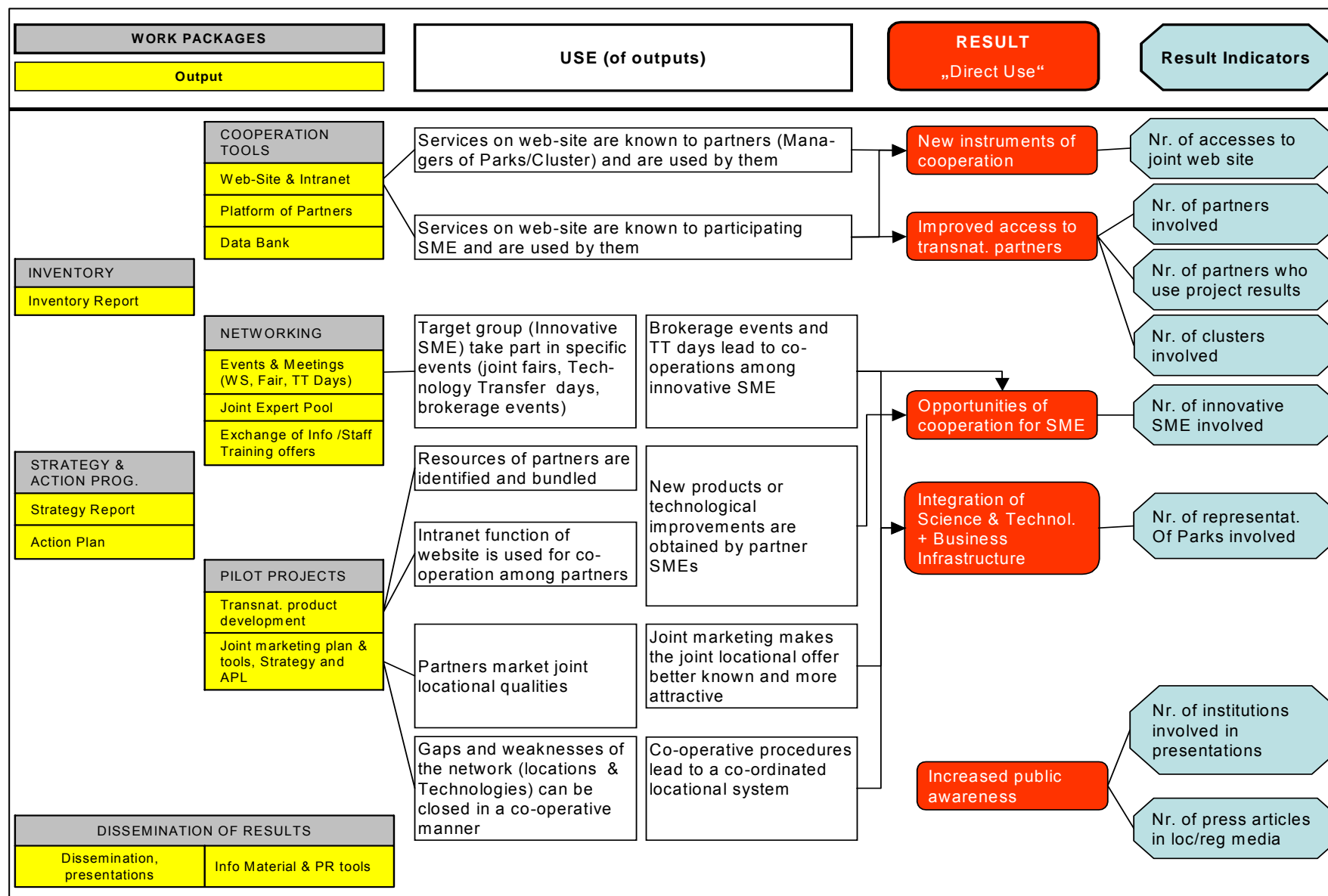
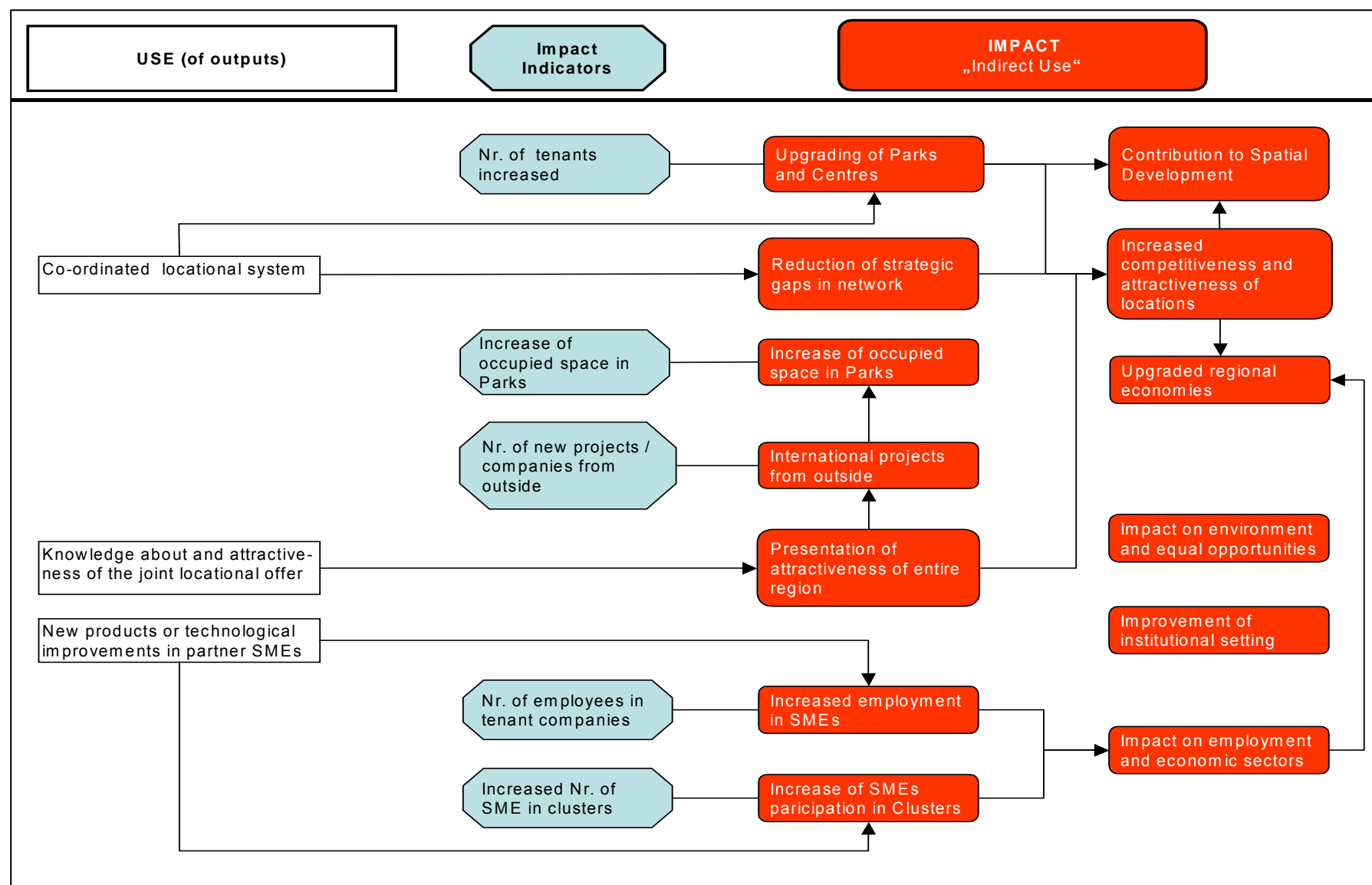


Fig. 4: Pilot application for project TECPARCNET (INTERREG IIIB CADSES): Impacts



Process Monitoring of Impacts can be carried out at various levels (e.g. individual projects, measures, priorities). Table 2 on the following page contains an example for an intervention “R&D support for firms” at the level of a measure, i.e. from the point of view of a funding authority, and at the level of a project supported by this measure. The grey rows contain assumptions about key processes contributing to the achievement of results/impacts, which would be the subject of Process Monitoring, the indicators in the right hand column (*written in italics*) are those which would be contained in the monitoring system of an SF - Programme.

This table illustrates how assumptions and indicators differ between project and measure level, but also where project level information can be used to produce information at measure level. The assumptions also show that much more information would be available at project level, but only part of it needs to be passed on (i.e. to satisfy other information needs).

As has been outlined in Chapter 1.2, SF- programmes operate in a multi-actor / multi – level context. The various social sub-systems which are involved in the implementation of SF- programmes not only have different functions, they also differ in the way they are affected by the achievement of effects (output, results or impact), which are closely related to their objectives - but often not stated explicitly. The following table contains some examples for objectives and expected effects for the key social sub-systems involved:

Table 1: Objectives and expected for different social systems

Sub-system	Objective	Expected Effect
Political	Produce media response that politicians have successfully contributed to project / programme	Good mass media visibility of supported project / programme, positive mention of political contribution
Administrative	Assure formal fulfilment of regulations, carry out political orders, assure transparency and avoid irregularities in use of public funds	Controllable proof of effects (e.g. report, payment documents in line with eligibility rules, confirmation of physical investment, jobs etc.)
Professional	<ul style="list-style-type: none"> – consultant: propose useful advise, obtain further contracts – “observing” expert: project is sound from a professional point of view 	<ul style="list-style-type: none"> – Advise given is well accepted by project owners or administrators – Project is implemented according to professional standards, effects are in line with professional logic

On the other hand, the objective of project owners is to carry out their project by using external inputs (e.g. financial support, media attention, expert information) with minimum additional requirements (applications, reports, justifications) or external interference through other interests. Whereas this objective of project owners can be obtained rather easily with smaller or less visible projects, it will be more difficult with larger projects, which are predominantly supported through “hard” measures. Because the interest – but also the influence – of the political sub-systems will increase with the visibility of a project and the amount of funding involved. And this increased attention of the political system will in turn have an influence on the behaviour and activities of administrators.

However, the different interests, resources and powers of the involved sub-systems not only explain differences between “soft” and “hard” measures, they also have considerable influence on the achievement of effects in general. They can explain why effects do not take place in “linear” progression (output leading to results leading to impacts) and provide the rationale for interruptions or deviations of such an intended sequence.

Thus Process Monitoring of Impacts, by advocating a closer look at the linkages between inputs, outputs and impacts (i.e. their actual use) can integrate these different logics of involved actors in monitoring procedures. Because differences in use can be rooted in the behaviour or actions of the various sub-systems involved.

Table 2: Examples of Process Monitoring of Impacts at project and measure level

	R & D project	R & D Measure
Output (<i>indicator</i>)	– R& D activity carried out with public financial support	– <i>Nr. of firms (or SMEs) supported for R&D activities</i>
Direct use of output: assumptions about key processes for achieving results	<ul style="list-style-type: none"> – Firms will carry out preparatory work for new products / processes (e.g. market r. prototyping) – Firm invests own funds in R&D activities supported by programme and in preparatory work – Firm is informed about public sector support offered, finds it appropriate and makes use of it – Firm uses R&D activity to develop new products / processes, or abandons / modifies original plans 	<ul style="list-style-type: none"> – Firms will carry out preparatory work for new products / processes (e.g. market r. prototyping) – Firms supported will increase their investment in R & D activities supported by programme and in preparatory work – Firms are aware of public sector support offered in these domains and make use of it – Firms will be able to use supported R&D activities to develop new products / processes
Result (<i>indicators</i>): measure for achievement of specific objectives	<ul style="list-style-type: none"> – Investment by supported firm in R&D activity – New products / processes developed based on supported R&D activity (and other R&D activities) 	<ul style="list-style-type: none"> – <i>Increase of investment in R&D activities by firms supported through programme</i> – <i>Nr. of new products / processes developed</i>
Indirect use of output: assumptions about key processes for achieving impacts	<ul style="list-style-type: none"> – Firm carries out investments and assures human resources / qualifications needed to launch new products / services – Firm can fulfil legal requirements for new products / services (e.g. quality standards, patents, licenses) – Firm can successfully market new products / services and improve its position vis-à-vis competitors – Firm will create (or maintain) jobs, might reduce jobs to improve productivity and competitiveness 	<ul style="list-style-type: none"> – Firms supported will carry out investments and assure human resources / qualifications needed to launch new products / services, might make use of complimentary support offered by SF Programme/public sector in these domains – Firms supported can fulfil legal requirements and successfully market new products / services, might make use of complimentary support offered – Firms supported will create (or maintain) jobs due to new products / processes / market shares, might reduce jobs to improve productivity and competitiveness
Impact (<i>indicators</i>): measure for achievement of global objectives)	<ul style="list-style-type: none"> – New products / services marketed by firm based on supported R&D activity – Investments carried out for new products / processes – Employment created or safeguarded due to new products / processes 	<ul style="list-style-type: none"> – <i>Nr. of new products / services marketed by firms receiving financial support</i> – <i>Gross / net employment created or safeguarded after 2 years</i>

3. Austrian experience in applying “Process Monitoring of Impacts”

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The Austrian Federal Chancellery (Division for Co-ordination of Spatial and Regional Policies) has commissioned ÖAR-Regionalberatung with an action-research project to identify and test alternatives to current monitoring practice in Structural Funds.

The project started in October 2004 with the primary focus to test the applicability of „Process Monitoring of Impacts“ for trans-national co-operation projects. These projects, which are co-funded by INTERREG IIIB Programmes, are faced with specific complexities in their implementation as well as unsatisfactory and cumbersome requirements for monitoring and reporting. Based on these pilot-experiences, it was also intended to reflect on a more widespread application of „Process Monitoring of Impacts“ for SF-Programmes altogether.

Incidentally the author was also able to test the use of „Process Monitoring of Impacts“ in other evaluation assignments, notably the on-going evaluation of an Austrian Objective 2 Programme and INTERREG IIIA Programmes on Austria's borders with new Member States.

These pilot applications are briefly described below and their main conclusions are summarised in chapter 4. However, it must be noted that applications so far have been limited to “soft” measures and that findings are only preliminary at present, they will be up-dated and reviewed at the end of the project (June 2005).

3.1 Application with INTERREG IIIB Projects

Recent analysis of trans-national co-operation projects with Austrian participation has shown that their impact cannot be demonstrated in a satisfactory manner. There is a lack of sound methodological concepts as well as practical instruments for the assessment of impacts, in particular spatial impact³. Moreover, present monitoring and reporting are excessively focused on activities and outputs, which serves well to hold projects accountable to implement their original plans, but neglects the need to adapt to changing circumstance and to ultimately achieve project objectives and results.

This situation was the reason for choosing INTERREG IIIB projects as pilot applications of Result Monitoring. The main steps of this exercise are as follows:

- Development of a version of Process Monitoring of Impacts which can be used in on-going projects (incorporating existing objectives and indicator systems), a simple graphic tool (power-point or pin-board) as well as a Manual “Process Monitoring of Impacts”⁴
- A pilot test was carried out with one project and the method was presented at the Austrian Lead Partner Forum in Oct. 2004. After this presentation, several Lead Partners volunteered to test the method with their projects, assisted by the author. At present seven project holders use Result Monitoring.
- These experiences are also followed closely by the IIIB National Contact Point and the main findings of the pilot applications will be presented and discussed at a forthcoming Lead Partner Forum in May 2005.
- They will also be documented in an English summary paper, which will include the manual, examples from the pilot applications and proposals for applications at INTERREG IIIB project and programme level (June 2005).

³ ÖAR Regionalberatung/BKA: Systemische Analyse von Steuerung und Raumwirksamkeit transnationaler Kooperation, 2003

⁴ R. Hummelbrunner: Wirkungsmonitoring – Leitfaden für die Anwendung bei Programmen und Projekten, 2004

3.2 Application with INTERREG IIIA Programmes

In principle Process Monitoring of Impacts can also be applied in programmes for cross-border co-operation, both at project or at measure level. The author is responsible for the on-going evaluation of the INTERREG IIIA Programme Austria – Slovenia, where several case studies were carried out in the autumn of 2004 to assess the progress made by selected groups of projects towards achievement of results and impacts.

In these case studies Process Monitoring of Impacts was used as analytical framework, and here as well maximum used was made of information contained in programme documents, project applications and reports. The main steps of this exercise were:

- Interviews with project holders – and partners on the other side of the border - to assess the (actual or likely) contribution towards measure level objectives, based on impact indicators defined in the Programme Complement. In addition, information was collected on results which have been obtained so far (expected/unexpected) or how outputs are/will be used to achieve impacts.
- Information gathered from all projects within a certain measure was aggregated to provide a comprehensive picture on the likeliness for achieving measure level objectives and to outline the main arguments which support this assessment.

Based on this analysis it was possible to identify the key processes (behaviour, activities) across projects which are responsible for achieving results. This information was presented to the Joint Steering Committee on Dec. 15 2004.

3.2 Application with Objective 2 Programmes

In a similar way Process Monitoring of Impacts can also be applied in other SF-Programmes, again at various levels (projects, measures, priorities). Since the author is carrying out the on-going evaluation of the Objective 2 Programme Styria, it was agreed with the Management Authority to test this approach with some of the impact assessments foreseen in the framework of this assignment.

The method used is very similar to the one applied with INTERREG IIIB projects, i.e. maximum used was made of information contained in programme documents and project applications, only adapted to some specificities of Objective 2 Programmes.

Five measures were chosen for this pilot application, which all have „soft“ characteristics and whose results are thus difficult to assess with conventional, quantified indicators (i.e. support for R& D activities, use of Information Technology, Networks, Advisory service). The main steps of this exercise are:

- Questionnaire survey of all projects supported within a given measure, to collect information on pre-defined indicators (outputs, results, impacts) and assess the likeliness of achieving measure level objectives. This survey will be carried out in April 2005.
- Interviews with selected projects holders, based on initial hypothesis drawn up with the help of the results of the questionnaire survey, with the aim to collect qualitative information and to identify key processes for achieving measure level results. These interviews will be conducted during May – June 2005.
- Based on this analysis it is hoped to identify the main patterns (behaviour, activities) across projects which are responsible for achieving results. This can provide important findings for preparing the new programme “Regional competitiveness”, where innovation and R&D measures will play an important role.

4. Preliminary assessment in relation to current monitoring practice

4.1 Monitoring of INTERREG III B Projects

The pilot experiences carried out so far with INTERREG IIIB projects have shown that

- The concept of Process Monitoring of Impacts is relatively easy understood by project holders, because the focus is on processes which they have to steer anyway and thus are paying attention to (at least implicitly);
- The approach can be applied without problems in on-going projects and grafted upon existing indicator systems, thus integrating - and not replacing – them;
- The time requirements are rather modest, on average steps 1 – 3 can be carried out within 4 hours and thus hardly take longer than designing a complete indicator system for a project;
- The concept can also be used without problems at measure level, providing adequate links between project outputs and their contribution to measure level objectives;
- It is advisable to use diagrams for the representation of key processes, in order to facilitate communication and joint reflection of involved actors. The graphic representation which has been developed within this project is rather simple, it can be used with computers (power-point) as well as with pin-boards (meta-plan technique). Therefore it is well suited for participatory processes (e.g. workshops with partners/stakeholders).

Present reporting in the IIIB Programmes (notably CADSES) is essentially based on the achievement of output and result indicators. The table below compares current practice and Process Monitoring of Impacts, based on the pilot application for the project TECPARCNET illustrated on pages 7 and 8.

Table 3: Comparison of Process Monitoring of Impacts with current practice in IIIB CADSES

Current Practice (Result indicators)	Process Monitoring of Impacts (Assumptions on key processes for using outputs)	Monitoring of as- sumptions
– Nr. of accesses to joint web site	<ul style="list-style-type: none"> – Services on web-site are known to partners (Managers of Parks/Cluster) and are used by them – Services on web-site are known to participating SME and are used by them 	<ul style="list-style-type: none"> – Self assessment of partners – Survey conducted with particip. SME (by partners)
– Nr. of innovative SME involved	<ul style="list-style-type: none"> – Target group (Innovative SME) take part in specific events (joint fairs, Technology Transfer days, brokerage events) – Brokerage events and TT days lead to co-operations among innovative SME 	<ul style="list-style-type: none"> – Lead partner in collaboration with partners – Questionnaires at the end, follow-up survey after events
– Nr. of partners who use project results	<ul style="list-style-type: none"> – Resources of partners are identified and bundled Intranet function of website is used for co-operation among partners New products or technological improvements are obtained by partner SME 	<ul style="list-style-type: none"> – Self assessment of partners – Survey conducted with partner SME

Comparing result indicators, listed in the left hand column, with the assumptions on use in the central column clearly illustrates the **differences** between the two approaches:

- Instead of counting the nr. of accesses to the joint web site it is specified who should access (e.g. partners, participating SME) and which functions should be used, in order to achieve the expected result (web-site as new instrument for co-operation);
- Instead of counting the nr. of SME involved, Process Monitoring of Impacts specifies which events SME should take part in and how these events (=project outputs) are used or combined with other outputs in order to achieve the expected result (=opportunities for co-operation for SME);
- Continuous monitoring of SME participation in these events can produce regular information on whether these events are actually used by - and useful for - the target group. Moreover, aggregating these findings will in this case also produce the required result indicator (=nr. of SME involved).

Stated in general terms, Process Monitoring of Impacts can provide project management at early stages with information on whether expected results will likely be achieved and what needs/could be done during implementation in order to improve the chances for their achievement.

The main challenge will be to limit the time or resources for the monitoring of assumptions. The right hand column outlines main activities in this respect and care should be taken to integrate them as much as possible into regular work routines (e.g. meetings between Lead partner and partners, meetings at partner Centres). Thus reflection on the likeliness of achieving objectives will form a continuous management task of project partners.

Compared to current monitoring practice in IIIB programmes (notably CADSES), several **advantages** could be noticed when applying this approach with trans-national projects:

- The information provided by Process Monitoring of Impacts responds much more to the information needs of project holders and is considered more relevant than reporting on the achievement of indicators, which primarily corresponds to the information needs of the Joint Technical Secretariat (however, little is known by project holders about the actual use of this information by the JTS!).
- Articulating key assumptions facilitates joint understanding among partners from different backgrounds on crucial features and qualities (not just the achievement of a target figure). Agreement on crucial processes helps to maintain joint focus on results among actors who are relatively autonomous in their behaviour and activities.
- In order to raise the awareness of implementing partners on intended uses and result, it is recommended to carry out the work as much as possible in collaboration with them. Moreover, they will also have an important role in monitoring processes and should equally be involved in the interpretation of data and information gathered.
- Placing emphasis on the use of outputs also helps to lay open differences in objectives among actors or between explicit and implicit objectives. The reason why specific outputs are not (or not enough) used by certain actors can be explained by their “hidden agendas”, which are otherwise difficult to identify and deal with.

4.2 Monitoring of SF-Programmes (e.g. Objective 2, INTERREG)

Process Monitoring of Impacts will also differ substantially when compared to current monitoring practice in SF-Programmes. This is shown in table 4, which compares current practice and Process Monitoring of Impacts, based on the example of a measure “support for R&D in firms”, which has been presented in table 2 above.

Table 4: Comparison of Process Monitoring of Impacts with current SF Monitoring practice

	Current Practice (Quantitative indicators)	Process Monitoring of Impacts (Assumptions on key processes for using outputs)	Monitoring of assumptions
Result	<ul style="list-style-type: none"> – Increase of investment in R&D activities by firms supported through programme – Nr. of new products / processes developed 	<ul style="list-style-type: none"> – Firms supported will increase their investment in R & D activities due to public support received – Firms will be able to use supported R&D activities to develop new products / processes 	<ul style="list-style-type: none"> – Firms state intended R&D investment in application form, inform on actual investment in report – Firms state in application form which new products / processes will likely result from the R&D activity, provide up-date information in report – Evaluators analyse information provided in application forms and reports, investigate in more depth on specific aspects (e.g. obstacles in transferring R&D results into new products)
Impact	<ul style="list-style-type: none"> – Nr. of new products / processes marketed by firms receiving financial support – Gross / net employment created or safeguarded after 2 years 	<ul style="list-style-type: none"> – Firms supported will carry out investments and assure human resources / qualifications needed to launch new products / processes, might make use of complimentary support offered by SF Programme/public sector in these domains – Firms supported can fulfil legal requirements and successfully market new products / processes, might make use of complimentary support offered by SF Programme/public sector in these domains – Firms supported will create (or maintain) jobs due to new products / processes / market shares, might reduce jobs to improve productivity and competitiveness 	<ul style="list-style-type: none"> – Firms state in report what are the requirements in terms of investment or qualifications to introduce new product / process – Firms state in report if there are specific legal requirements to introduce new product / process – Firms state in application form which will be the likely employment impact, provide up-date information in report – Evaluators check on actual fulfilment of information provided in application forms or reports, using initial assumptions as process indicators – Evaluators investigate in more depth on specific aspects (e.g. obstacles in transferring R&D results into new products) – Funding authority cross-checks use of complimentary support by firms in the respective domains (by SF Programme or public sector)

The assumptions for the achievements of effects contained in the central column can be monitored by the funding authority during implementation in several ways (see right hand column):

- Some assumptions can already be checked at the application stage (e.g. which new products will likely result from the R&D activity, are there specific legal requirements, qualification needs to introduce them? What will be the likely employment impact?).
- The supported firm can provide some information in their reports to the funding authority (e.g. new products / processes to be developed based on the R&D activity, specific legal requirements to introduce new product / process? requirements in terms of investment or qualifications? Expected employment impact of the new product / process).
- The likely or actual achievement of assumptions can be assessed during programme evaluation, the assumptions will serve as process indicators to be validated by evaluation tools (e.g. case studies, surveys of supported firms).
- Reports as well as evaluation work should attempt to capture the entire range of effects which can be observed and should specifically ask for unintended or unexpected effects which have occurred in connection with the supported activity.

Compared to current monitoring practice in SF-Programmes, Process Monitoring of Impacts offers several **advantages**:

- Present monitoring systems respond to the information needs of input-driven implementation, essentially observe the implementation of activities and produce information on input (financial resources) and output. Process Monitoring of Impacts would respond to the information needs of impact-led management, observe the achievement of objectives and produce information needed to understand impact creating processes.
- Because the focus is on links and relationships, Process Monitoring of Impacts allows to identify behaviour or interaction patterns which are crucial for achieving effects. Their observation can be carried out in collaborative forms and need not demand more time from programme implementers than current monitoring practice.
- Present monitoring systems rarely contain data on result- and impact indicators which must be collected separately (e.g. through surveys, evaluators). Thus Process Monitoring of Impacts does not necessarily require more time and resources, as most of the information needed to fill in monitoring indicators can be collected in the process.
- Process Monitoring of Impacts orients the observation of programme authorities towards the achievement of objectives. By demanding corresponding information from project owners, they can also raise their awareness in the same direction, focusing attention on results and impacts can influence their behaviour in the desired direction.
- Indicators can also be used in this approach, but they are not regarded as isolated phenomena, but as products of preceding processes. Instead of treating indicators as objective “data” which have identical meaning irrespective of context, their interpretation is always based on relevant context information and the interpretations of different actors.
- Present monitoring systems usually provide data on results and impacts at very late stages (if at all). But with Process Monitoring of Impacts one does not need to wait to assess results until a chosen indicator is met, but understanding and observing the underlying processes can provide timely and early information if a project / programme is on the right track – or risks to miss desired results.
- Because Process Monitoring of Impacts does not assess the actual achievement of effects, but contributions towards desired changes, it is particularly suited for projects / programmes which act in an indirect way through partners. And because it is based on the observation of processes, it is well suited to monitor “soft” measures, who deal with open tasks, whose crucial qualitative features are difficult to capture by quantitative indicators.

4.3 Other uses and applications

As was described above, the applications of Process Monitoring of Impacts in Austria so far have on one hand been limited to soft measures / projects which mainly produce intangible results difficult to capture by quantitative indicators. On the other hand, these applications were made at rather late stages in implementation, where impacts can already be observed or at least their likeliness can be assessed on rather concrete terms.

But Process Monitoring of Impacts can also be applied during **early stages** in implementation, whereby the focus of attention can shift from the use of outputs to the use of inputs. Referring to the example of the R&D measure quoted above, assumptions which can be made by a funding authority include:

- Firms are aware of the need and interest of increasing their R&D activities
- Firms are able to identify suitable project ideas and are capable to prepare applications in required time and quality
- Firms / target groups are sufficiently informed about the support scheme and the modalities for submitting applications (e.g. deadlines of call for proposals)
- The support scheme is in line with business needs and the funding conditions can be met by the target groups (e.g. co-financing requirements)

By observing these assumptions, funding authorities can already identify at very early stages whether the proposed support scheme will likely lead to the desired outputs (= nr. of projects by target group) and can take steps to improve the conditions for the use of inputs (e.g. awareness campaign, technical assistance, promotional efforts, modification of procedures).

Process Monitoring of Impacts can also be applied with **“hard” measures/projects** (e.g. infrastructure, tangible investments) which can normally be captured quite well by quantitative indicators. But a major inconvenience is often that information for result / impact indicators arrives too late and is therefore not suitable as a management tool. Here Process Monitoring can produce relevant informant rather early and signal areas of improvement to management. In the case of a road construction project, assumptions which can be made on the use of inputs include:

- Feasibility study has been carried out, demonstrating the need for the road and providing an overall positive assessment of the proposed project
- Land use permits have been obtained and environmental assessments are concluded
- Objections by concerned citizens can be overcome in due time and satisfactory manner
- Co-financing has been assured and public tenders have been concluded.

The favourable preliminary assessment stated above is made from a professional point of view and highlights the advantages of Process Monitoring of Impacts in relation to current monitoring procedures. Although this approach would predominantly mean an improvement of monitoring practice at the level of professionals, it can also make important contributions to other groups: It can assist administrators by providing a sounder understanding of expected effects, or politicians by providing early information whether impacts will be achieved.

However, a major challenge of this (and any other) monitoring approach will be to limit the work load of administrators. Time or resources for the monitoring of assumptions can be kept low by integrating this work as much as possible with other activities (e.g. project applications, assessment and selection procedures, reports, evaluations). Identifying the most appropriate forms is an important task of the funding authority, which should be undertaken at rather early stages, possibly with external assistance. And there will certainly be limits in applying this approach (e.g. handling large quantities of information or projects).

5. Applicability with Structural Funds in the new programme period⁵

5.1 General considerations

Based on the experience gained so far in Austria, Process Monitoring of Impacts appears well suited to be applied in monitoring SF-Programmes.

- It is a very appropriate approach to address the challenges posed by the new objectives, in particular those which will be relevant for Austria (“Regional Competitiveness” and “Territorial Co-operation”). The content of these programmes will mainly consist of soft measures and “open” tasks, whose crucial processes are difficult to be covered by present Monitoring Systems which are solely based on indicators.
- As it orients the observation of programme authorities and other involved actors (project owners, implementing partners) towards the achievement of objectives, it can complement present input driven Monitoring Systems with an impact-led approach. This is in line with Commission proposals to reorient the entire SF programming system towards impact.
- It can lead to a clearer distinction of monitoring activities in line with the logics and information needs of the actors involved:
 - The electronic Monitoring System will contain controllable and quantifiable data which is formally required by programme administrators at higher levels (managing authority, EU Commission) and for reporting to the political level or a wider public.
 - Process Monitoring of Impacts will provide qualitative and quantitative information for implementing agents (within or outside the public administration) and for professionals. These activities take place outside the formally required Monitoring System, provide feed-back and facilitate learning in order to improve implementation.

However, in order to be applied most effectively there needs to be a shift in resources and attention on several aspects:

- From planning to reflected management of implementation: This is in line with Commission proposals to simplify programming and provide utmost flexibility for evaluation. But the Commission services as well as programme authorities in Member States must consciously decide to spend less time and resources for preparing programmes and more on monitoring and evaluation during the implementation process. Process Monitoring of Impacts will best be carried out if embedded in a framework of on-going evaluation, which has already been introduced in Austria in the present period.
- From monitoring of (quantifiable) indicators to monitoring of processes: Differentiating monitoring activities as proposed above should lead to a substantial reduction of data in the electronic Monitoring System. This will in turn reduce the workload of administrators to fulfil formal requirements and should allow to spend more time and resources to monitor processes and establish a learning system based on Process Monitoring of Impacts.
- From quantifying data to identifying crucial processes: Defining the core impact assumptions helps to clarify the intervention logic and provides orientation for a series of implementation issues (e.g. assessing and selecting project proposals, identifying information needs). It is also the basis for any sound quantification and thus it should be given priority. Whether quantifications take place (and are even useful) is a secondary issue and will depend on many other factors, e.g. nature of the intervention, availability of valid, meaningful and relevant data, experience of implementing agents.

⁵ This Chapter takes into account recent proposals by the EU Commission for the new programming period 2007-2013, notably the issue paper on indicators and first ideas on ex-ante evaluation

5.2 Programmes for the Objective “Regional competitiveness”

In line and in addition to what has been said above, the following recommendations can be made in order to facilitate the application of Process Monitoring of Impacts:

- Planning:
 - Be precise in defining measure level objectives. They should either correspond to results or outputs, depending on the nature of the projects/measure, the timeframe, the competence or responsibilities of implementing agents and intended beneficiaries.
 - Formulate key assumptions for the process of achievement of effects at measure level in OPs (primarily for results, but if considered useful also for output or impact). This can either be done as part of the programming process or (preferably) in the framework of the ex-ante evaluation.
 - Such assumptions can also be made for the National Strategic Framework, as they will be well suited for monitoring the type of higher level objectives which will be contained in these documents.
- Monitoring System:
 - Outputs: They should thoroughly be monitored via indicators, as they provide baseline information for Process Monitoring. Thus the Monitoring System will to a large part consist of output indicators, which can be collected quite easily.
 - Results: Only a very limited number of “core” indicators should be contained, which clearly are in line with the information and reporting needs of programme administrators at higher levels (managing authority, EU Commission).
 - Impacts: If impact indicators are formulated, they should not be contained in the Monitoring System, but treated as evaluation indicators, to be dealt with by evaluators. Thus it is not necessary to continuously obtain information on them.
 - Quantification: should be restricted to output indicators only, because they offer an adequate basis for sound predictions and quantified data are readily obtainable by administrators. Whether quantifications take place - and are even useful - for other levels should be decided on a case-by-case basis.
- Evaluation:
 - Focus evaluation on joint learning: Process Monitoring of Impacts will be most effective if done in a climate of partnership, mutual respect and trust. Therefore evaluation designs should focus on joint reflection and learning, based on these qualities.
 - On-going evaluation: Process Monitoring of Impacts is best done in a framework of on-going evaluation, which is build around the information needs (and evaluation questions) of programme administrators anyway and whose timeframe is sufficiently flexible. Evaluation should be based on quantified indicators contained in the “formal” monitoring system and qualitative evaluation indicators (e.g. impacts assumptions)
 - Focus impact analysis: Impacts should be assessed as specific as possible (e.g. for a group of projects, a measure/priority, a sector or a territory). In this way, the complexity of interventions can best be taken into account (incl. spill-over, synergy and displacement effects) and the information is most likely to correspond with the needs of implementing agents.

5.3 Programmes / projects for the Objective “Territorial Co-operation”

At programme level, all of what has been said above is also valid for these types of programmes. In addition, the following would facilitate Process Monitoring of Impacts in **cross-border** programmes:

- Monitoring System:
 - Co-operation indicators: They should be used to assess projects and regularly monitored to mirror progress in co-operation during implementation.
 - Process Monitoring could build on this base-line data and provide additional qualitative information.
- Evaluation:
 - Evaluations should be done jointly with partner countries and work carried out as simultaneously as possible on both sides.

For **trans-national** programmes, Process Monitoring of Impacts would require quite substantial changes in procedures. But on the other hand, this would greatly alleviate the workload of project owners (especially Lead Partners), respond to many of the current issues of discontent – whilst providing much better insights into the operation and likely effects of projects.

The main modifications would be:

- Streamlined project applications: They basically should include a description of the objectives and the main processes needed to achieve them. Specific (project level) objectives should be formulated in correspondence with outputs and general objectives in line with measure level objectives.
- Shift in accountability: Project owners should be accountable to achieve their specific objectives - and not the implementation of original work plans. To this end they need to obtain flexibility in modifying inputs or activities, but they have the responsibility to signal to the JTS the need for major adaptations (and make proposals for them), if the achievement of objectives is at risk.
- JTS should shift from the monitoring of indicators to the monitoring of core processes as defined in the application. Reporting should be modified accordingly and mainly focus on progress towards in achieving outputs.
- The proposals made above mainly relate to “soft” projects. It is advisable to differentiate these modifications further according to the types of projects (e.g. strategic projects, infrastructure projects, networks and institution building), as they will have different characteristics, time frames and management needs.