Large-scale program management in multi-level systems

Robert Lorenz Stemmler
Hertie School of Governance
Foreword

This contribution to the Hertie School Working Paper Series was submitted as master thesis for the Executive Master of Public Management program and successfully defended by Robert Stemmler in August 2010. It perfectly reflects the aspirations of this newly established academic program at the Hertie School of Governance by integrating an understanding of governance in a multi-actor and multi-level setting with management knowledge and applying it to a current policy issue of high practical relevance.

Robert Stemmler uses the implementation of the Future Investments Act (ZuInvG) program of the German fiscal stimulus package as case study to explore large-scale program management practice in Germany. The paper’s specific focus is to explore the potential of project and performance management in a multi-level context where the state governments are responsible for the design and delivery of investment programs within an overall federal framework.

The working paper integrates key lessons from the performance and program management literature – often with a strong Anglo-Saxon bias – and applies these findings to the German federal system. Based on a reference program management framework drawing upon academic and professional program management standards and implementation research findings, Robert Stemmler focuses on the question of how the German government, at both federal and state level, is managing a key program of the fiscal stimulus packages for effectiveness and efficiency. Drawing from in-depth interviews with practitioners and experts that implement the ZuInvG at all levels of government and other key stakeholders, he analyses both formal and informal approval, steering and controlling means of the program management to develop a set of recommendations for German practitioners involved in multi-level, large-scale program management.

The working paper successfully manages to link managerial and project management literature on the one hand and policy analysis on the other, and is characterized by a clear and interesting research question, a high stringency of argumentation and an impressive analytical rigour (e.g. the program implementation typology presented in chapter 2.2.).

Parts of this work also have been published in the German journal “Verwaltung & Management” as well as the Behörden Spiegel, clearly reflecting the high quality and relevance of this research by Robert Stemmler as part of his EMPM master thesis.

Gerhard Hammerschmid
Professor of Public and Financial Management
Thesis supervisor
Large-scale program management in a multi-level system

Evidences of performance-based management of the fiscal stimulus program "Zukunftsinvestitions gesetz" in Germany

Hertie School of Governance/ Universität Potsdam
EMPM promotion 2008/10
Executive Master Thesis
Mentor: Prof. Dr. Gerhard Hammerschmid
Paper submitted by Robert Lorenz Stemmler, McKinsey & Company, August 2010
EXECUTIVE SUMMARY .............................................................................................................................................. 3

INTRODUCTION .................................................................................................................................................................. 4

1. PERFORMANCE-BASED IMPLEMENTATION OF POLICY PROGRAMS IN A MULTI-LEVEL SYSTEM .......................................................................................................................................................................................... 10

1.1 PROGRAM MANAGEMENT IN A POLITICAL CONTEXT .......................................................................................................................... 11

1.1.1 Program management as multi-project management .......................................................................................................................................................................................... 12

1.1.2 A reference program management framework .......................................................................................................................................................................................... 15

1.2 PERFORMANCE-BASED PROGRAM MANAGEMENT .......................................................................................................................................................................................... 21

1.2.1 Performance information and performance management – definition and purpose .......................................................................................................................................................................................... 22

1.2.2 Performance in public investment programs: bottom-line and success criteria .......................................................................................................................................................................................... 25

1.2.3 Management reporting and controlling as a key enabler of program management .......................................................................................................................................................................................... 27

1.3 MULTI-LEVEL POLICY IMPLEMENTATION IN GERMANY .......................................................................................................................................................................................... 31

1.3.1 Multi-level governance in the German system .......................................................................................................................................................................................... 31

1.3.2 Program implementation from a high-level perspective .......................................................................................................................................................................................... 34

1.4 RESEARCH DESIGN AND STRUCTURE .......................................................................................................................................................................................... 35

2. IMPLEMENTATION OF THE ZUINVG INVESTMENT PROGRAM .......................................................................................................................... 41

2.1 OUTLINE OF THE ZUINVG INVESTMENT PROGRAM .......................................................................................................................................................................................... 41

2.1.1 The ZuInvG program in the German economic recovery effort .......................................................................................................................................................................................... 41

2.1.2 The federal program implementation framework .......................................................................................................................................................................................... 43

2.2 PROGRAM IMPLEMENTATION TYPOLOGY .......................................................................................................................................................................................... 47

2.3 STATE IMPLEMENTATION MODELS .......................................................................................................................................................................................... 49

2.3.1 The devolved implementation model .......................................................................................................................................................................................... 50

2.3.2 The fragmented implementation model .......................................................................................................................................................................................... 53

2.3.3 The integrated implementation model .......................................................................................................................................................................................... 56

2.4 MULTI-LEVEL PROGRAM COORDINATION & CONTROLLING MECHANISM .......................................................................................................................................................................................... 60

2.4.1 An interrelated, duplicated two level coordination effort .......................................................................................................................................................................................... 61

2.4.2 An ex-post oriented reporting system with informal performance steering focus .......................................................................................................................................................................................... 63

3. MANAGEABILITY OF THE ZUINVG PROGRAM? .......................................................................................................................................................................................... 66

3.1 PERFORMANCE MANAGEMENT FOR EFFECTIVENESS AND EFFICIENCY – TARGET SYSTEM .......................................................................................................................................................................................... 68

3.2 PROGRAM FRAMEWORK AND COMPONENTS - CONTRIBUTIONS TO EFFECTIVENESS AND EFFICIENCY .......................................................................................................................................................................................... 74

3.2.1 Federation-state coordination framework .......................................................................................................................................................................................... 74

3.2.2 Lean implementation models in the states .......................................................................................................................................................................................... 77

3.2.3 IT systems transforming multi-level governance .......................................................................................................................................................................................... 81

CONCLUSION .......................................................................................................................................................................................... 83

BIBLIOGRAPHY .......................................................................................................................................................................................... 90

APPENDIX .......................................................................................................................................................................................... 97
Executive Summary

The present study analyses program management practices of German federal and state governments in place to deliver effective and efficient investment programs. Focus is to exploring the potential of performance management in the context of a multi-level playing ground where the state governments are responsible for design and delivery of investment programs within an overall federal framework. In a first step, we outline a state of the art framework reflecting academic and practitioner insights on good program management. Then, we develop a typology reflecting three main program management models of the “Zukunftsinvestitionsgesetz” (ZuInvG program) deployed in German practice. In a last step, we assess the adequacy of these management models to deliver effective and efficient outcomes against the political objectives of the ZuInvG. We conclude with a set of recommendations for improving the manageability of (investment) program management in the German multi-level system.
Introduction

The current financial crisis has abruptly finished an economic boom phase and led to the largest output reduction since the Great Depression. The unexpected destabilization of the financial markets with serious repercussions for the real economy and labor markets forced governments around the globe to develop large-scale fiscal stimulus packages. The German government was facing difficult trade-offs: on the one hand, severe time pressure for a resolute reaction to calm the markets; on the other hand the high level of incertitude about the actual nature and importance of crisis and the appropriate instruments to counter their effects. In spite of the fact that a structural imbalance and an accumulated deficit of EUR 1.5 trillion, has already reduced the government's fiscal margin of maneuver significantly, the government has resolutely reacted, enacting a EUR 500 bn. protection shield for the financial industry and two fiscal stimulus packages totaling EUR 115 bn. for 2009-11 (Bundesregierung:2009). Fiscal sustainability, claiming a thoroughly targeted use of taxpayer's money, seems a particularly critical mission in order to create legitimacy for large public deficit spending. (Pfreundschuh:2006)

For this reason we inquire in the present paper how the German government is managing a key program of the fiscal stimulus packages for effectiveness and efficiency. The ZuInvG program of the fiscal stimulus package II seems to us an interesting case to explore large-scale program management practice in the German context. We want to elude this from an academic lens, mainly from a public management and implementation research theory perspective but have the aspiration to develop actionable recommendation for German practitioners involved in large scale program management across levels of government. The ZuInvG case indeed is still a moving target. Nevertheless, given that academia and practice provide widely recognized standards of

---

1 For the macroeconomic mechanisms and effects of fiscal stimulus packages, cf. IMF (2008)
successful large-scale program management, program architecture, management model as well as controlling and reporting merit a mid-term assessment before termination in 2011. We believe that the link between managerial and project management literature on the one hand and policy analysis more sensitive to political reality on the other hand may enable practitioners to improve effectiveness and efficiency of policy program implementation. The aim is to integrate key lessons from the performance and program management literature and customize these findings to the Germany federal system with self-determined players of three levels of government being involved in implementation. Our research intention is not to promote transplanting an isomorphic Anglo-Saxon management model to the German public sector. We want to address in a specific policy-making context how the benefits of a performance-based program management approach can help to enhance the ability of German federal and state governments to implement policy programs efficiently and effectively.

One of the core efforts to fostering economic recovery of the fiscal stimulus package II is the Zukunftsinvestitionsgesetz (ZuInvG), amounting to a EUR 13.3 bn. cash injection for the period of 2009-11. It is mainly a large scale municipal grant program for infrastructure green field and brown field investments. In size, scope, and content, the fiscal stimulus package has unique features compared to other fiscal stimuli and measures in German history, developed and implemented under significant time constraints. At the same time, it shows parallels with other investment programs of the legal "financial aid" scheme of 104b of the German constitution, a fiscal instrument through which the federal government allocates financial aid to states with a rather large investment degree of freedom for the beneficiary state. The ZuInvG has the objective to promote investment in projects that are "langfristig sinnvoll, kurzfristig umsetzbar und rasch wirksam"\(^2\) (Bundeskabinett:2009). In a joint policy-making mission, federal, state and local governments have the mandate to rapidly implement a large-scale investment program with ten thousands of single investment projects. The ambitious objective is that this

\(^2\)
program should set an effective fiscal stimulus to generate sustainable effects on the quality of infrastructure as well as to the economic growth potential in Germany.

Observations in the public debate and empirical academic research provide a first mosaic of evidence regarding the ability of the government to manage the ZuInvG program for effectiveness and efficiency.

On the part of the public, besides several press articles about anecdotic evidence for poor investment projects (WiWo:2009, FAZ:2009), practitioner recognition for the program from different angles is quite good. To give three reactions from different stakeholders: first of all, >90% of the German municipalities expect a positive stimulus to the local economy already in 2009, with increasing effect in 2010 (Ernst & Young:2009). Secondly, the municipal investment program has not been subject to larger criticism from the federal parliament budget commission (Bundeshaushaltsausschuss) and the opposition in federation and states and receives a substantially positive apprehension. Thirdly, the management consulting firm BCG (2009) ranks the German fiscal stimulus design approach first among ten leading countries world wide. Despite the poor methodological foundation of the BCG study, one can recognize with the authors that the German fiscal stimulus packages are maybe not the most ambitious ones in size but certainly among the more balanced and sustainability-oriented ones in the world; the German government opted for a balanced mix of consumption and investment stimuli that target the main economic risks and policy areas that suffered from budget constraints in the past years.

From an empirical academic research perspective appraising the impact of the current fiscal intervention in Germany, there are first attempts but unfortunately hardly any satisfying answers on fiscal stimulus package success, (yet). A main rationale for this is certainly the fact, that up to now, contributions rotate around policy design issues. Most prominently, this field in policy consulting is populated by macroeconomic analyses forecasting effects of the fiscal stimulus measures on public budgets, employment and growth. Theses analyses predict a quite promising stimulus effect and assess the program design rather positively (Barabas et al:2009), contrasted by criticism regarding the deployment of funds to "concrete instead of knowledge" (e.g. Pavel:2009; Ulbricht:2009).
Another rationale certainly is that the ZuInvG is a moving target. For the analytical assessments of the German program management model and practice, first insights are published in the specialized press. Applicable knowledge emerges most dominantly from practitioner knowledge but remains case-based, rather descriptive and anecdotic, (i.e. a monthly page in the Behördenspiegel), most comprehensive is Pavel (2009). The best analytical contribution to the management model is DStGB:2009, coming up with a "magic triangle" of objectives that the government must balance: timeliness of implementation, control, margin of judgment for the implementing actors and juridical security. This magic triangle is an interesting concept for policy design. However, the DStGB assessment does not explicitly deduct actionable recommendations on what this means for successful program management practices in Germany.

In total, it remains unclear from a scientific perspective what the essence of good fiscal stimulus program management for the German context consists of and to what extend reference models in the academic and "grey" literature are helpful to improve German large scale program management practice. We just feel that the implementation works currently quite smoothly.

When this rather positive picture of Germany's fiscal stimulus package is mirrored with international public management literature and practice of program management, there is an interesting dissonance. According to the credo of public management scholars and practitioners (e.g., Barber:2004, OECD:2005), feeling is good but measurement is better. Performance management is seen as a decisive means to increase efficiency and effectiveness of large-scale policy program implementation. Performance information allows for delivering against agreed objectives, thereby channeling the implementation efforts to pre-agreed priorities. In the current crisis, the US has for example set up a transparent process of spending public money for economic recovery. At www.recovery.org, a user-friendly map application of the US government indicates the use of taxpayer money for each state and public recipient of fiscal stimulus package based mainly upon the key performance indicators "money spent" and "jobs saved". The government plans to revise the key performance indicators scores over time according to improved information availability and refined methodological approaches based upon
real data and policy learning. Accountability through transparent program management is, so to speak, more than a buzz word in the Anglo-Saxon world. It has become a necessary condition of legitimizing the deployment of taxpayer money (MacDonald:2008, Barber:2004).

Accountability through transparency is not so much rooted in the German legal-focused administrative tradition (Hammerschmid/Meyer:2005) but the policy outcomes are nonetheless good! Notwithstanding the importance of policy design reflecting transparency requirements, at the end of the day, it seems that an intuitive statement holds: besides what you implement is of utmost importance how you implement it. The above said stresses an interesting question about the German program management practice: is the ZuInvG a good practice program implementation case, whereas the PR rhetoric is simply less "bold" than in public management front-running countries, such as US or UK? To put it less polemic: is Germany successfully managing this investment program for performance and if yes, how are the German governments doing so? (How) does the government operate the program? How does the government monitor and control the various implementing actors? How does the government see, control and "feel" how the EUR 13.3 bn. grant budget is invested in >40,000 investment projects? And in how far do the single investment projects contribute to meeting the program objectives?

The present ZuInvG program management case study intends to shed light on the management arrangements in place to secure effectiveness and efficiency of a large-scale investment program management implemented in Germany's federal system and to discuss the applicability of international good practices to the German context. The central question is: how is efficiency and effectiveness of program implementation ensured and what can we learn from the case study for successful management of other large-scale investment programs in Germany?

The first chapter elaborates a reference program management framework drawing upon academic and professional program management standards and implementation research findings. We will therewith lay the ground for an empirical analysis of the program framework and implementation model of the ZuInvG program, guided by key findings of
German program management practice as outlined in the academic and grey literature. The second chapter analyses the ZuInvG management practices in place. We discuss evidence for a rather important gap between the reference framework and practice, identifying the ZuInvG being a duplicated two level implementation effort between federal government, states and the municipal level with a dominance of informal steering mechanisms. The empirical evidence comes from a grey literature analysis of current ZuInvG management practice and key lessons drawn from an in-depths interview effort with practitioners and experts that implement the ZuInvG at all levels of government and with stakeholders who follow the program from an external expert perspective. A third chapter analyses the approval, steering and controlling means of the program management model focused on federation and states and provides recommendations how performance-oriented program management might help to improve the manageability of the program from a lead authority perspective. In the conclusion, we develop recommendations for efficient and effective large-scale program management in the German public sector.
1. Performance-based implementation of policy programs in a multi-level system

In the first chapter, we conceptualize a program management framework for the coherent implementation of complex political (investment) programs across multiple levels of government. The framework will guide our analysis of the program management model of federal government and the state. We will proceed in four steps, reflecting international good practice of both academic and grey literature.

The initial element of a reference program management model for analysis of a policy program is to define what the term "political program" means. For our purpose of a large-scale investment program, a program is a set of projects engaged to fulfill a set of predefined objectives. Based on this definition, project management literature stresses that coherent policy implementation of a political program can be conceived as multi-project management (Klimmer:2008, Hoch/Klimmer/Leukert:2007, Pfitzing/Rohde:2009, BMF/KPMG:2009, BMI:2009). An actionable framework for policy programs as a set of multiple projects has to be embedded into the policy-making process, here the policy cycle, if the framework claims practical value. Being aware of a fierce debate on the actual empirical value of the policy cycle for policy analysis (Jann/Wegrich:2003), we are among those scholars who consider that the cycle helps to control policy-making. Chapter 1.1 develops such a reference framework for the present study. According to public management literature and international performance management practices, i.e., in the Anglo-Saxon world, performance information-based management by objectives is a key enabler to implementing political (investment) programs successfully, meaning effectively and efficiently. Section 1.2 outlines the implications of a performance-based program management approach for the reference program management framework and shows empirical evidence from the "performance movement". The precondition for a performance-based program management framework for the German public sector resides in its thorough consideration of the federal structure of the political system.
German implementation research and the multi-level governance literature furnish insights that should avoid the conception of a "managerial" reference framework that ignores political realities. In section 1.3, we intend to reflect these political realities and embed the reference framework in the German political institutional setting, including the political culture. Finally, section 1.4 outlines a methodology that confronts our framework with a specific German reality, the implementation of the ZuInvG investment program.

1.1 PROGRAM MANAGEMENT IN A POLITICAL CONTEXT

Project work has become an essential part of modern work organization. Due to various complex and changing requisites to public administrations (cf. Hagen:2009), project-based management of public programs has also become an essential task of public sector entities that is growing in volume (BMI:2001, 2009).

Program management in a political context differs from private sector program management in various important ways (Alison:1980). We see two main differences from a high-level perspective: with regard to policy formulation in the linkage of an administrative (management) cycle and the policy cycle of political decision-making. Concerning implementation, the critical difference lies in the ambitious rule-based prerogatives, which significantly augment formal pre-requisites to good public program management. The emphasis of these differences does not mean that there is a dichotomy between business and public program management. It means that there are somewhat more complex demands in the pre-requisites of large-scale program management design and operations.

1.1.1 Program management as multi-project management

A policy program is a comprehensive set of measures to achieve a policy objective, e.g. the modernization of the federal public administration E-Government 2.0, the credit and guarantee funds of the federal government 2009-10 or the ZuInvG for sustainable funding of state and municipal investment project. We define a program as a set of projects under a common management structure and present key features of program management from a design and implementation perspective: project architecture, specific management models for management control and a specific need to mobilize support compared to the management of regular tasks.

Technically, a policy program is composed of many separate components, so-called projects. Each project is divided into different phases along a mutual timeline and with mutual management and leadership setting. The project phases logically build upon and complement each other (Pfetzing/Rohde:2009; Hagen:2009). From a program management perspective of the responsible central entity, program management though can be defined as multi-project management. Multi-project management is "planning, comprehensive steering and monitoring of several (mutually dependent) projects (BMF/KPMG:2009) in order to produce outputs that are intended to foster an envisaged outcome. Starting point of a comprehensive program are clear political objectives, the design of a comprehensive program plan, including the scope, the various projects and a specification of the governance including roles of all key actors involved (BMWi:2006). Minimum reporting characteristics of a multi-project setting are a description of the project governance, the objectives, the financial and personnel resources, the total duration and key contacts of each component (BMI:2001, 2009). During implementation, multi-project management is the comprehensive planning, steering and monitoring of content and activities, i.e. regarding project progress" (BMF/KPMG:2009).

According to German federal government guidelines, there are three multi-project management models: a taskforce setting, a matrix-organization and an influence project organization (BMI:2001, 12) A "task force setting" is a pure project organization
independent from the line organization. In practice, this is notably the case with staff units or of single intra-ministerial projects involving one or few units. A "matrix-organization" is combining joint-decision-making about project objectives and milestones with project internal operational responsibilities. In practice, this often holds for horizontally managed cross-section or cross-departmental projects. Finally, in an "influence project-organization", the project responsibility of the project structure is, simplified spoken, reduced to coordination. The project leadership and implementation lies entirely in the responsibility of the line organization. As a consequence, the line organization entirely preserves its competences. This model is necessarily found in vertical multi-project governance settings across levels of government. We will discuss the strengths and weaknesses of these project models in chapter three.

Project management also differs from the management of regular tasks (McKinsey & Company:2009). The project organization is normally slimmer in resources, has a more informal decision system and is more diverse in intra-institutional framing, staff loyalty and influencing structures than a line organization for the management of regular tasks. The organization of large-scale programs is best established when a project management office (PMO)\(^3\) monitors project performance in a separate steering unit from the line organization (Worldbank:2007). For organization-internal projects, the PMO as the management center of gravity, disposes of own financial and personal resources. However, the unit is additionally using critical financial, personal and informational resources of the line organization. For external projects, the PMO also has to use the delivery structures and resources of external entities to accomplish the mission. If a PMO is established for the long-run or obtains a too broad independence in terms of mandate and resources, there is a risk that the project organization runs out of control. Especially in weakly institutionalized settings, the project structure may evolve into a quasi-autonomous governance body, a parallel line organization with the former PMO as newly

\(\text{\footnotesize 3 In the Worldbank, project management offices are called PIUs: project implementation units}\)

13
established center of command and control weakening the line organization (Worldbank:2005).

A project-based policy program defines and puts into practice a pre-defined set of political priorities in a limited period of time. Implementation of programs is more fragile than implementation of regular tasks in a line hierarchy. Given relatively weak institutional anchorage and potential conflicts with the line organization, leadership attention and accountability standards are indispensable. If leadership attention and accountability vanishes and the project setting loses legitimacy in the line-organization, the line-organization and delivery units may refuse to deliver the necessary support or the delivery units (agents) may turn the program to their own advantage, most likely detrimental to the program objectives (of the principal).

What do these design implications mean for program implementation? Generally spoken, implementation and management reporting must be more transparent and pragmatic compared to regular tasks: transparent in order to mobilize support and prevent rumors; pragmatic in order to deliver rapidly a visible return on investments that keeps the appetite of the line organization up to provide additional resources. This is even more crucial than for regular tasks for two reasons: the program plans for more rapid investment returns and the resources are rather easily available for reallocation to other projects if a promising investment opportunity erodes. This also means that a program setting has high demands to change management and must even more concisely take care of utility maximization of program implementation - "Nutzeninkasso" (McKinsey & Company:2009, Hoch/Klimmer/Leukert:2007). This requires a set of key program design and implementation features (cf. Klimmer:2008), including a top-level anchorage and support as well as management systems that enable coherent monitoring and controlling of program status, results and return on investment. The next section develops a reference framework that may enhance the ability of program lead authorities to manage for effectiveness and efficiency.
1.1.2 A reference program management framework

Assessing effectiveness and efficiency of programs as multi-project management is an empirical research topic dealt with by evaluation research (Mertens:2008, Flyvbjerg et al.: 2003, Worldbank:2004, Klakegg:2005, European Commission guidance available at www.evalsed.info). In spite of a dominance of practitioner knowledge, recent academic attempts in the evaluation literature to systematize design requirements for large public sector programs show common program patterns across investment purposes. In spite of differences regarding policy objectives, program operations and risk appraisal between investment programs in intangible assets, like large-scale IT programs or R&D, and investments in physical infrastructure like energy efficient building construction, one can see a set of common themes. We aim in this section to develop a framework for further outside-in-analysis and evaluation of large-scale programs merely based on practice that resonates with the above cited program evaluation literature.

Mertens (2008) pulls together eleven recommendations for good program design in the German context. This rather loose list tailored to large-scale IT programs mixes procurement, organization, mandate, policy and resources recommendations induced from case studies and 38 case-specific as well as general interviews. Similar to many other evaluation research findings (Worldbank:2007, Klakegg:2005, Rajaram et al:2007), the insights are often too focused on policy learning in specific areas of interest to be applicable in other contexts.

In contrast, BMF/KPMG (2009, 39f.) suggests seven key program design requirements as critical design elements for the modernization of the budget and accounting system of the federal government, a large multi-annual budget transformation program of the German federal level.

1. Leadership visibility and ongoing leadership attention

4 Modernes Haushalts- und Rechnungswesen des Bundes
2. A clear program mission with structured objectives and a clear description of actions to be undertaken

3. Appropriate financial, personal and technical resources

4. A central program management unit with excellent staff and technical expertise regarding monitoring of progress and ensuring of project benefits

5. Current and comprehensive project controlling

6. A clear division of tasks between both central program management units and subordinate units on the one hand; between line and project organization on the other hand

7. Capacity to achieve targeted and timely corrective action to planned progress

This is a state-of-the-art approach to indispensable criteria of intra-organizational program management. A lack of any of these points seriously jeopardizes program success. However, the analytical concept is weak in a twofold sense. First of all, in view of a rather unsystematic short list of criteria comprising organization, governance, management control system and resource endowments. Secondly, it focuses on horizontal project management diminishing the applicability to programs involving more than one level of government.

In contrast to the narrow program evaluations and tailored empirical-based program designs like BMF/KPMG (2009), we need a comprehensive framework that reflects key success criteria of large scale program management. In a recent Worldbank study, Myers/Laursen elaborate on determinants of good investment program management in old and new EU member states drawing upon experiences, i.e., from UK and Ireland (Worldbank:2008, Myers/Laursen:2008). Based upon field studies involving national experts, they extrapolate findings with a broader scope and higher abstraction-level that include all above exposed elements. Adapted to our own words, the key components are the following.

1. **Institutional framework**: making sure that there are clear and relevant policy objectives, which correspond to a clear legal base and mandate with actionable
responsibilities and accountability for objectives between lead authorities and involved implementation entities. Furthermore, making sure that the institutional framework reinforces cooperative behavior by the program stakeholder, particularly useful when program planning is linked to budget negotiations (cf also Flyvbjerg:2003, Pfetzing/Rohde:2009, Barber:2007).

2. **Systems**: making sure that the appropriate management control systems (controlling and reporting) are in place and support informed management decisions regarding a rational deployment and shift of resources (cf. also Horvath:2008, BMF/KPMG:2009).

3. **Processes**: making sure that the operations in place to fulfill the program management tasks are slim, efficient and meaningful, including quality assurance mechanisms (also cf Klakegg:2006, Samset/Berg/Klakegg:2006).

4. **People skills**: making sure that the involved people dispose of the right skills to fulfill their role appropriately so that they do not feel overstrained or abandoned (also cf. Klimmer:2008, Bhatia:2007)

5. **Culture** – making sure that the overall program governance framework is aligned to system-specific patterns of policy-making and the administrative culture of the civil service in charge of implementation. If the program management meets resistance for cultural reasons, i.e. isomorphic incentive structures are established; a program implementation needs to mobilize support from the people involved in implementation (for the German case, cf. also Budäus in Buschor:2007, Hammer-schmid/Geissler:Forthcoming).

The findings resonate with all program management contributions we have revisited above and seem to us relevant to various program contexts. According to the authors, six key learnings are to be considered when applying it e.g. to other political contexts:

1. A causal link and regular review of the program strategy, operationalized in the program design and aligned with as well as approved by parliament in the budget negotiation

2. Ensure multi-year funding upfront
3. Deploy cost-benefit analyses wherever appropriate to ensure return on investment

4. Imperatively consider success cases from past experiences and evaluations

5. Find effective and efficient auditing processes (transparency, openness for feedback, continuous improvement of decision-making)

6. Build people skills along relevant dimensions: project and people skills of public sector staff

The findings are sufficiently abstract to be customizable to various program contexts and comprehensive in covering the indispensible program management levers that matter. Very importantly, the framework also addresses organizational culture as a critical design determinant, since culture has been identified as a critical stumbling block to program management practices (as for Germany cf. Budäus in Buschor:2007,13). First results of Hammerschmid's recent data collection on public servant mindset with respect to public management seem to indicate that the German administration is open-minded to implement innovation that contributes to serving the common purpose but shows limited tolerance for isomorphic private sector concepts strange to the "Beamtenleitbild" (Hammerschmid:forthcoming). Therefore, a thorough anchorage of the framework into the case-specific legal and institutional configuration of the German political system is essential. Besides the administrative culture, this also includes a fit with the policy-making culture of the German policy cycle. Given that policy-making is a complex problem-solving process of constraint actors, with program architecture and policy content being an outcome of political negotiation and mediation processes, power games and ideology may matter in both policy design and use of judgment in policy implementation, i.e. for the approval of project proposals. Any managerial framework that ignores this political and administrative reality of the German rule-oriented and legislative administrative culture (Mayntz:1997) is doomed to failure. As a consequence, the framework also suggests a program design taking into consideration the policy cycle, focusing upon policy implementation but referring to policy formulation and decisions as well to understand the actual case-specific program architecture.
Exhibit 1 synthesizes the discussed elements into a reference framework. The reasoning is the following: program management is multi-project management in a program management framework that operationalizes clear objectives trickled-down to program components and projects. An information system generates project information for each program component and feeds the information into the program management cycle for problem-solving and timely corrective action if program status and performance derive from planning. Each program component consists of a set of projects managed along systems and processes in place that are appropriate to deliver against program objectives. People steering and implementing the projects and program components have appropriate program management skills to deliver expected outputs. Finally, the program management model is in line with the administrative culture and appropriately embedded into the existing political governance model – this administrative and political fit is what we mean by "culture". The framework enables to deliver against predefined policy objectives along a target system from the program to program component and project level. The information system processes performance information of projects and program components in a timely manner, allowing controlling the implementation status and engaging corrective action against unintended derogations from envisaged outputs and outcomes.
Exhibit 1 - A reference framework for performance-based program management

The application of this reference model meets several feasibility restrictions. From an analytical perspective, it is virtually impossible to evaluate all critical components together from outside-in. As our research design operationalizes a high-level program management perspective for comparing different state delivery models, it is more concretely not possible to generalize micro-level implementation practices of both the actual project level management and the actual capabilities of people involved in implementation at the front-line. First of all, a comprehensive appraisal of the contribution of single projects to program success is far too complex. Furthermore, the cross-cutting project success criteria are a black box for outside in analyses, more fruitfully applied in, e.g., focus group work shops with pivotal practitioners. Regarding skill assessments, the UK Capability Reviews (NAO:2009) in most central departments have taught us that evaluating skill levels is hard enough from insight an organization. From outside, we would not pretend being able to offer a reliable assessment.
In spite of these limits, the reference framework seems to us appropriate to shape our understanding of design, steering and controlling capabilities of program lead authorities in program planning and implementation. With this framework, we argue that the program management cycle must circulate around a core, consisting of an information system that generates a high-level understanding of the program performance. The information of program components also feed into the management cycle, thereby allowing for a coherent problem-solving and syndication of instructions as well as a comprehensive orchestration of objectives. A project-level standardization of critical design and implementation criteria enhances the front-line ability to deliver coherent and meaningful results that contribute to fulfilling program objectives (cf. quality at entry in 1.2.2).

To sum up, the reference framework will serve as starting point for the empirical study of the ZuInvG program management practice in place focusing on those components that can be more reliably analyzed from outside-in (chapter 1 and 3). These components are the program structure, the management model and the performance controlling and reporting system that holds the high-level program management capability together. Before we can apply the reference framework to the ZuInvG case study, two analytic elements are missing: given that we argue for the merits of performance controlling, we must conceptualize the reference framework mechanisms of performance management. Provided the framework should be applicable to a German context, we must also customize it to a multi-level system. We start with performance-based program management in the next section.

1.2 PERFORMANCE-BASED PROGRAM MANAGEMENT

Program management is good when it is successful. A program is successful when it is able to deliver against defined objectives (Baber: 2007, McKinsey:2009, Behn:2003). This is the mantra of the "performance movement" in the academic and grey public management literature. All approaches we have revisited stress the need of a targeted program implementation thanks to a dedicated program controlling system as a critical program success factor for effective and efficient program management. When dealing
with large-scale programs involving reporting requirements to administrative leadership and parliament, performance-based financial management and performance management become two sides of the same coin (Pollitt:2001). Without performance management based on relevant financial and non-financial performance information collected formally and/or informally and processed by a competent program controlling unit, it is virtually impossible to manage complex multi-project settings in a targeted way and to determine whether a program runs successfully during operations. First, we argue that performance information is necessary for coherent program management and present key performance dimensions of a managerial performance perspective. Second, we will present critical determinants of management reporting and controlling systems that generate performance information of steering purposes. Third, we will elaborate a perspective on management reporting mechanisms for performance-based program management.

1.2.1 Performance information and performance management – definition and purpose

Performance measurement and performance management are key features of a managerial perspective on good program implementation. Performance means "the yield or results of activities carried out in relation to the purposes being pursued. Its objective is to strengthen the degree to which governments achieve their purposes" (OECD:2005,54, Brüggemeier:2004). This section explains why we measure performance, what performance consists of and what it means for good program management.

Why do we measure performance? Performance measures provide information to determine whether organizations achieve their objectives as policies achieve their purposes (Behn:2003, Groot/Helden:2007). Already in 1990, the US Government Accounting and Standard Board argued in a set of guiding principles of the performance movement that performance measures help "to determine if [organizations (RS)] are making progress in achieving the established goals and objectives" (Hatry et al:1990, v). Performance information supports management in various regards. Behn's review of
performance information purposes suggests eight areas of deployment – to evaluate, control, budget, motivate, promote, celebrate, to learn and to improve. Improving performance is the ultimate purpose of all areas (Behn:2003) and the ability to improve is enhanced if there is transparency on what performance means and if accountability is established on requisite (measurable) performance levels (Barber:2004). In Germany, various performance management practices applied, e.g., (municipal level: During/Trépassé:2006, GTZ development aid outcome-oriented planning, an applied approach to performance management and evaluation: Reuber/Haas:2009 etc.)

What is measured and for whom? Talbot (2005, 494) distinguishes three streams of performance management analysis in the public sector: organizational performance, performance of policy programs and individual performance of public servants. Even if closely related, especially in private sector practice, only the first two types are addressed in the performance management literature (also cf. Jann:2008, 12ff.), whereas the third more autonomously coexists in the strategic human resource management literature (SHRM). Given that we are far away from SHRM performance management in the German core administration for legal and cultural reasons (OECD:2009), we will further explore the first two performance elements for our analytical purposes.

Management information needs of different actors are not the same. Performance information serves different purposes in the policy and managerial cycle depending on the purposes and interests different actors pursue. The four main purposes are

¶ in managerial analysis, direction and control of public services;

¶ in budgetary analysis; deployment of scarce resources

¶ in fulfillment of parliamentary prerogatives, oversight of the executive branch;

¶ for public accountability aspirations, the general duty of governments to disclose and take responsibility for their decisions.

For our program management analysis, we opt for the managerial and budgetary performance management purposes because we consider that such a narrowed scope suits best an effectiveness- and efficiency-oriented program management scope for
practitioners implementing large-scale policy programs (cf. OECD:2005). The other dimensions matter more for stakeholder reporting, i.e., parliament and the public which have a role in the control of but not in actual operations of programs.

"In the context of the new performance trend [...] a stricter definition is a management cycle under which program performance objectives and targets are determined, managers have flexibility to achieve them, actual performance is measured and reported, and this information feeds into decisions about programme funding, design, operations and rewards or penalties." (OECD:2005)

This is what the reference program management framework illustrates with the interconnection of the high-level policy program management cycle with the program component-related project management along key standards and objectives.

In a managerial approach, what performance dimensions and target systems are actually measured? Talbot (2005) and Pollitt (2001) show that there are various performance management systems. Talbot distinguishes three relevant performance dimensions for program management in a managerial perspective; (i) performance as efficiency, (ii) performance as results/effectiveness and (iii) performance as (effective) resource allocation. The following distinction brings together Talbot's, Pollitt's and our own understanding of these three dimensions.

(i) In an efficiency perspective, the objective is to optimize the ability of an organization to turn inputs into outputs with least resource deployment. Performance management for efficiency sets incentives for optimizing resource use and trims operations to facilitate efficiency improvements. The efficiency perspective primarily is an intra-organizational perspective (also cf. Reichard:2007,4f).

(ii) In a result/effectiveness perspective, the objective is to optimize the effect of produced outputs. Performance management for effectiveness makes sure that the produced outputs achieve the envisaged outcomes. The effectiveness perspective is primarily a causal relation of intra-organizational resource production and their effects in its environment (also cf. Bouckaert/Halligan:2008; Reichard:2007,5).
(iii) In a resource allocation perspective, the objective is providing resources to enable external actors to produce outputs that achieve expected outcomes. Performance management of allocated resources resides in the selection of efficient delivery units and monitoring of effectiveness of the results they produce. The resource allocation perspective is a steering perspective of the effects of externalized production on the environment.

That said, in our view, excellence of the allocation perspective resides in an appropriate mix of management for efficient operations and effective delivery (compare also Pollitt:2001). Performance management of efficiency (as operational performance) and effectiveness (of outputs and outcomes) in a managerial perspective has to happen in a policy framework that sets the right incentives for the delivery units to provide appropriate outputs and to monitor that these outputs produce the right outcomes. With "right" incentives, we mean a customized incentivize structure to specific implementation contexts that minimize unintended effects, such as manipulation, distorted behaviours, exploding transaction costs etc. (Talbot:2005, OECD:2005). At a later stage, we will discuss what these performance perspectives may mean to lead actors of the ZuInvG program. For now, after having explored why measuring performance may be beneficial and presented key managerial performance dimensions, we turn now to identifying performance targets for good program management.

1.2.2 Performance in public investment programs: bottom-line and success criteria

Evaluations of several investment programs help us to understand what success of public investment programs may mean in different contexts and which metrics to measure this success. We will develop our understanding of successful programs from two perspectives. First of all by revising root cause analyses why programs fail – this will provide the bottom-line for successful program management. Secondly, by reflecting about conceptual key success drivers as recommended in large program evaluation efforts in practice; pinning-down potential aspiration levels.
In a large public investment program evaluation in Norway (Samset/Berg/Klakegg:2006) on the importance of ex-ante quality assurance, Klakegg (2005) defines four content variables for investment program delivery failure

- Delivery too late
- At higher costs than planned
- Below expected quality
- Without anticipated effects

Klakegg's failure criteria give a crisp balance to efficiency of operations and effectiveness of outputs and outcomes of investment projects. The use of this success definition inquires about a prior aspiration level in terms of quality standards and outcomes. Klakegg's success valuation approach improves the ex-ante control means of the public policy design and approval bodies through a thorough project approval scheme. It also improves awareness for success requirements for policy delivery and makes ex-post evaluations easier. In so far, it lays the ground for success already upfront and minimizes the risk of failure at later program stages. However, the study does not inform us about good management practices to ensure high quality of service delivery during implementation phase.

In contrast, Rajaram et al (2007) take a process-driven approach to categorize project failures from a value chain perspective

- Poor project selection
- Delay in design and completion
- Corruption (in procurement)
- Costs overrun
- Incompletion/termination
- Maintenance failure
Rajaram's approach provides a useful steering framework notably for the central authority responsible for the investment program. It defines pain points and potential delivery gaps across the fragmented delivery network of involved entities in program design and implementation. Given that the program accountability towards politicians and the public systematically belongs to the prerogatives of a central authority that does not implement the program itself, awareness about potential delivery gaps allows expectation-setting already in the policy design phase.

Klakegg and Rajaram et al both choose a bottom-up approach. Learning from case studies of project implementation failures, they try to prescribe risks to the success of the entire program. The findings create awareness on pitfalls to investment program management. However, their approaches are only initial templates that need to be weighted and tailored to specific program management contexts. To give an example, if timeliness is not crucial for the project, the stakeholders can still consider the project as successful as long as delay in design and completion does not lead to a disturbing cost overrun. In contrast, a fiscal stimulus program by nature will most probably prioritize timeliness of implementation over the level of sophistication of policy design and optimize turn around of project implementation correspondingly. The example illustrates that there are limits to what successful investment projects matter (most). We will discuss concrete performance metrics in chapter two and three. Before, let us turn to approaches showing how metrics enable successful investment program management from a strategic and operational perspective.

1.2.3 Management reporting and controlling as a key enabler of program management

Whereas good program design must establish clear achievable objectives and priorities and develop appropriate actionable measures to achieve these objectives, good program implementation must put these measures into practice in an efficient and effective way (Dooren:2008). The critical missing link between design and implementation is the ability to manage by objectives (McKinsey:2009, Barber:2004, Barber:2007). Enabling
management by objectives is what program controlling is aiming at. In the center of the policy management cycle of the reference framework is a reporting and controlling system, namely the "IS" - information system. Program controlling has the key coordination function in program management, ensuring efficient and effective planning, control and information flow through the organization to the key decision-makers (Horváth:2008, Gleich/Temmel:2008, Röhrig:2008, 51ff., Tauberger:2008). The IT revolution has boosted the ability to implement effective and efficient controlling systems (e.g., Vöhringer (2004, McKinsey:2008, Glück/ Mitwalli/Stemmler:2008) Program controlling provides the necessary information, identifies performance gaps and advises how to close them (Kley:2008). For evidence-based decision-making in large organizations, controlling units manage the information flow for management and leadership by identifying information needs, collecting, analyzing and processing the information, informing key decision-makers about key findings in an appropriate synthesized format and documenting the findings for further information needs (Ricken: 2008, 220). At least some kind of controlling is indispensable for an organization because there is a time lag between the emergence of information and the observation, processing and use of the information for strategic and operative purposes. Without a reporting mechanism to the need of the respective addressee, be it an operational manager, the leadership or external stakeholders, there is a risk of deadlock or inappropriate organizational behavior to changes inside the organization or to changes in the environment (Horvath:2008).

Performance measurement is mainly used in management reporting in a fourfold way: to check position, to communicate position, to confirm priorities and to compel progress (Neely, in Horváth:2008, 29). Project controlling becomes the warrant of success in a managerial program management perspective. The managerial mantra argues that it is hard to improve complex, fragmented programs without coherent and consistent performance information one can link to delivery achievements across delivery units (Barber: 2004, 2007). Compared to the large program management efforts prior to the IT-Revolution, information technologies are nowadays offering highly developed information-based decision support (Hoch/Leuckert/Klimmer:2007). Management information systems have become indispensable tools for evidence-based decision-
making in private sector companies. Thereby, IS dramatically increase effectiveness and
efficiency of management decisions thanks to integrated IT architectures providing
required information in real time from one integrated data warehouse, in a user friendly
way, in standardized formats and with standardized metrics from all locations, with
comparable data across locations and at various aggregation levels, customizable to the
organization's information needs (Ricken:2008, 221f). In public sector organizations,
information systems and even management information systems become increasingly
frequent decision tools as well, including for large-scale program controlling purposes
(Finkler:2008) – at least horizontally, within a level of government. IT-based reporting
mechanisms improve steering and performance assessment of large-scale programs, i.e.
when program components are designed, steered and implemented at a decentralized
level, as for example regional state aid (Finkler:2008 and Djordjevic:2009 for successful
EFRE cases).

In sum, state-of-the-art literature and practice defer two essential roles to controlling and
reporting in large-scale program management. On the one hand it informs the
organization's leadership if the project team is heading in the right direction. On the other
hand, it informs the operational management if the measures undertaken are on the right
track and the project team is navigating in the right direction. In the large scale program
management for the modern federal budgeting system (MHR), the project management
office supports for example project planning, formal and content approval of program
component proposals, establishment and coordination of a management reporting system,
regular checks of the status of program components, gap analysis, assessment of project
risks, coordination of quality assurance of all program components and coordination of
change management requirements (BMF/KPMG:2009, 49f).

We agree that these are essential roles of management reporting for the project phases
from design to implementation. However, this view to performance-based program
management stops when continuous operations start. With Hoch/Leuckert/Klimmer
(2007), we think that an extended controlling horizon, including "controlling of benefits"
in continuous operations, is necessary to guarantee return on investment of the program
in continuous operations. In a steering logic of, say, a ministry, it is a necessary condition
to know that subordinate units have used investment grants to finalize a project infrastructure. Therefore, a "classic" program controlling, along all the project steps, suffices. However, this does not inform the ministry if the project infrastructure achieves the expected outcomes in continuous operations. A "controlling of benefits" for continuous operations can serve as the sufficient component of a management reporting system that enables the ministry to control an effective use of taxpayer money - provided key pre-requisites of performance-based program management (Reichard:2007, Pröller:2006) have been met, namely: a comprehensive strategy and a concentration of performance management on a few key priorities (McKinsey:2006; McKinsey:2007, Barber:2004).

The academic and grey literature on program and performance management recommends performance-related program management architectures such as developed in our reference framework seems to improve efficiency and effectiveness of policy implementation. Practice from other countries, like the large performance transformation process of the state modernization in UK orchestrated by the Prime Minister's Delivery Unit or first successful pilot projects of the Revision des Politiques Publiques of the Sarkozy administration in France, as well as the output-oriented performance management phase in New Zealand in the 1990s show that it can lead to measurable performance improvements (cf, e.g., Woerth:2009, PMSU:2004).

However, various stumbling blocks exist. First of all, there are various perverse effects of performance measurement. Performance measurement sets incentives that may lead to counter-intended actor behavior that game the system or deploy so many resources to meet targets that their delivery system becomes unbalanced, just to name two potential excesses (Talbot:2005). It is also questionable whether highly specific information processing and problem-solving tasks can or should be measured. And the sense of establishing performance bureaucracies is also more than doubtful (cf. Bogumil:2007, KGSt:2007). Second, in federal systems notably, multi-level program implementation with various horizontal and vertical coordination requirements and negotiation processes add substantial complexity to managerial program management. We will dig deeper into
complications of multi-level governance for managerial program management in the next section, discussing what cross-level of government means for our reference framework.

1.3 MULTI-LEVEL POLICY IMPLEMENTATION IN GERMANY

Controlling and reporting systems have been subject to intense interest in the public management literature in the context of the guiding reform principle of the "Ensuring State" where policy networks get a crucial role in service provision (Schuppert:2005, Reichard:2007,9). The argument is that outsourcing of public services allows for efficiency improvements and service level enhancements if the contracting parties stipulate their expectation concretely into service level agreements. Given this recent interest, it is surprising, that public management scholars in the German context do scarcely empirically analyze mechanisms of good implementation by objectives. With few exceptions, performance-based program management is, relative to, i.e., the Anglo-Saxon world, a white spot in German policy analysis and practice (Bogumil et al:2007 a positive exception concerning experiences with the new steering model, NSM). A thorough empirical analysis must elude how policy program objectives are trickled-down to the front-line, be it informally, through ordinances or performance management systems, and how the front-line actually implements these objectives. Policy program implementation in Germany across three levels of government with legally autonomous status does not allow for a simple intra-organizational management approach. Therefore, we will discuss the implication of multi-level governance findings for our reference program management framework in the next section.

1.3.1 Multi-level governance in the German system

Effective and efficient implementation of programs across three levels of government is a challenge (Jeffery:2007, Kohler-Koch:2003). In an ideal, intra-organizational managerial world for New Public Management (cf. Schedler:2006), there is a clear decision center with a line of responsibility for the highest to the lowest level. A cascaded target system from the top to the front-line, including individual performance appraisals, monitors if targets are met. Notably in delivery networks, the subordinate entities would
have a clear mandate including agreement on objectives that are pinned-down in service
level agreements with the oversight body. Independent of the level of centralization of
those delivery networks, this would lead to transparency on objectives, mutually agreed
accountability, homogeneous service standards and incentives for compliance.

Implementation across levels of government in a federal system is divergent to the ideal
NPM world. German implementation research since the 1980s (Mayntz:1980; Mayntz:1983; Mayntz:1987; Benz:2009). Recent findings from the multi-level
governance literature and our daily practice show that the state and municipal decision
choices tend to be (i) rule and procedure-oriented, not performance-oriented, (ii) leave
state and municipal implementation choices a certain degree of freedom and (iii) state
governments and even municipalities rule-setting power.

In the German implementation federalism, the federal government only implements very
few policies within the stances of the federal administration. Within a federal regulatory
framework, the implementation work is ensured by the German states that dispose of
"state-status", including the constitutionally protected right to organize their
administration independently. For policies in state competency, the federation can even
influence policy-making only via (financial) incentives (Adam et al:2008). The
governance literature has come up with various implementation models and instruments
besides rule-making that public authorities at all levels of government can deploy to
influence policy implementation (Benz:2009).

The "state status" also constitutionally protects the German municipalities from direct
federal interference into their administrative structures, organized independently under
oversight of the state bureaucracies. As a consequence, an intra-administrative
performance management system under control of a central lead actor does simply not
meet the requirements of program management in Germany. Röhrig's (2008) attempt to
develop a comprehensive outcome controlling for the German politico-administrative
context is symptomatic for the responsibility sharing between federal and state level. His
study is constructively addressing mechanisms for improved administrative and political
rationality in a comprehensive outcome controlling approach. The outcome controlling
approach integrates state and municipal management structures in a management
information system that enables lead authorities to continuously steer implementation progress. Based on a EU cohesion policy case study from the Saarland, Röhrig demonstrates that performance management improves the Saarland's ability to steer the EFRE policy program better, thanks to improved performance information generated by a "government information system", as he names it. However, in Röhrig's 260 pages thesis, there is also an attempt to design a federal information system but not a single word how to manage by objectives across three levels of government.

Additionally, the decision center is shared between federation and states; states have veto power regarding all bills that interfere in their constitutional rights; in reality in more than half of all legislative processes (Sturm/Pehle:2005; Hesse/Ellwein:2004). Problem-solving in this institutional configuration must take into account regional interests and party politics. Political compromises for conflicting issues, i.e. allocation of financial resources, have a strong interest politics dimension that constrains the federal legislator to implement the federal policy agenda. In sum, the federal government has no sole responsibility for the formulation of policy objectives and especially no direct control over the operationalization of delivery targets (i.e., in laws and "Verwaltungsvereinbarungen"). The state and lower levels of government may have large margins of manoeuvre that increase their ability to adapt policy content to local needs but may also dilute intended objectives with regional and local policy objectives. As a result of the German multi-level policy-making configuration, the more time constrains meet complex decision on distribution and deployment of public funds, the less likely is a political decision with a high level of detail. Problem-solving may tend to find a framework agreement with somewhat vague political notions that will be further concretized in follow-up negotiations during implementation as soon as juridical insecurity in implementation appears. That is a main reason why the ZuInvG program has been drafted based on the legal basis of the financial-aid scheme. This scheme needs the least level of detail agreed upon upfront (more in chapter 2).
1.3.2 Program implementation from a high-level perspective

Implementing public policy is more than the transmission of a series of sequential actions. In a multi-level context, it is a process of interaction and negotiation between lead actors and actors upon whom action depends (Hogwood/Gunn:1984, 199). Program implementation in the German multi-level system is a highly complex interaction process across three levels of government. It involves various policy entities, none being able to comprehensively drive and enforce the program. No steering unit can demand perfect compliance, optimal horizontal and vertical coordination and an agreement among all participated units (Bach, Jann:2008). As a consequence, there is a risk of "organized irresponsibility" (KGSt:1993; KGSt:2007), a situation where so many actors are involved that nobody wants to drive a process which no one perfectly controls. It then becomes impossible to hold someone accountable and there is a tendency that each player navigates the system to minimize the risk in detriment to an optimum overall policy program result.

For the federal level the German implementation model faces a somewhat ambivalent situation. On the one hand, the federal government does not have full implementation responsibility and therefore does not want to take full implementation accountability. As the central level is an "orchestrator" rather than an "executor", their lead ministry is responsible and will take the blame for failure of federal programs whereas it has only a formal creative, influencing, incentivizing and control power over the state and municipal administrations. This is setting an incentive for risk adverse behavior to prioritize monitoring and control of formal compliance, if necessary also in case related matters detrimental to effective implementation, as long as a frugal program management is ensured. On the other hand, the federal government will be held accountable by federal parliament, media and the public for the entire federal program. The federal level therefore also has an incentive to show and promote that the policies it designs are not only correctly but also effectively implemented. As a side-effect, this may involve a good media promotion of impact but first of all the federal level must make sure a thorough control of the program that is frugal in administration costs, delivers error-free approval, is not completely off-track content-wise and is in line with existing legal and mutually
agreed norms and procedures. Given that outcomes are difficult to measure and as long as no formal performance measurement is in place, the effectiveness of a program is difficult to determine and plays a relatively minor role for the federal level; provided state government program management appears to contribute to political problem solving.

The institutional setting does however provide means to cope with this ambivalent role of the federal level. The executive federalism as laid down in the German constitution does indeed prevent the federal level from organizing the implementation of policy programs by state administration. At the same time, the federal government is indeed entitled to ensure a coherent implementation of the policy programs it is majorly financing ("connexity principle"). The federation can strongly use its control rights against the states, when confidence in compliance vanishes or accommodate and make state administration a lot easier as soon as confidence is established. To pin it down, the main implementation challenge of political and administrative leadership is to increase transparency of policies in a system of decentralized autonomy with important local implementation margins of judgment (Buschor:2007,16). In practice, trust and legitimacy are the main currency explaining actor behavior and transparency about the success contribution of each actor as a major pre-requisite of a federal lead ministry to both promoting program performance and avoiding reputational risks. We will see in the case study of the ZuInvG in chapter two that the executive federalism strongly influences the program management framework and implementation practices, leading to joint priority-setting arrangement between the federal and the state governments with substantially varying implementation models in the states.

1.4 RESEARCH DESIGN AND STRUCTURE

We have elaborated a public management inspired approach on the basis of performance management and policy analysis literature confronting rule-based program implementation practices in Germany. Against attempts to construct dichotomies, we are however also convinced that key program management elements matter in both the legal and the managerial approach: compliance with rules but also performance matters in both cases. In order to explore venues for cross-fruition, we will analyze in a case study the
implementation models of a German large-scale program and discuss strengths and improvement opportunities thanks to the reference framework developed based upon international public management literature and practice. According to its program management standards, the critical elements for successful implementation are the program and project management architecture, the implementation modus as well as controlling and reporting mechanisms that orchestrate coherent implementation with the program objectives. The governance literature underlines the importance of social and private sector stakeholders for policy outcomes but for the analytical lens of the reference framework, they are out of focus. We are aware of the explanatory limitation of the framework to understand policy outcome. However, with the policy cycle literature we argue that the involvement of actors that do not belong to the core of the political administrative system is restricted in the decision and implementation phases (Howlett/Ramesh/Pearl:2009, 12ff). In the present case, the spot light is on lead actors at federal and state level. As a result, we exclusively focus on the actors directly involved in implementation within the administrative system. We will analyze their legal and political mandates and how they use their margin of maneuver to implement the ZuInvG program.

A main area of interest for successful program implementation is matching policy outcome with predefined policy objectives. Regarding policy objectives, we strive to understand the target system of the ZuInvG program, how it triggers-down to the municipal level and how progress and outcomes are controlled. From the operations perspective leading to policy outcomes, we will elude how the implementation model across three levels of government work out, i.e., how each level of government deploys financial and political resources for ensuring a successful fulfillment of the political mandate they are liable and accountable for.

The data collection stems from two main sources: first of all a review of academic and grey literature on the ZuInvG. Secondly, a primary data collection via selected interviews. Under consideration of the focus of analysis, we identified suitable interviewees along two axes, level of government and practitioner profession (cf. exhibit 2 below.)
For each of the resulting clusters, we apprehended whether interviews or a literature review would be the appropriate data collection method. For the scientific contributions, we found enough insights in the literature. Certain sections are logically not applicable to our case. For example, no federal subordinate entity is leading the program management of the federation, the states are commissioned to do so. The central steering unit is a line organization within the Federal Ministry of Finances (BMF) and as the federation does not implement the ZuInvG program (cf. chapter 2), there is logically not such a unit involved.

In a first research design step, we reviewed primary sources, i.e., laws and regulations, press releases on the program by federation and selected states to understand the legal framework and political program objectives. We also did informal talks and analyzed expert contributions on the topic, increasing our awareness of current state and
discussions. As a result, we came up with a set of hypotheses on strength and improvement opportunities and an implementation typology to channel further analysis.

In a second step, we then tested our initial findings in a set of 9 structured interviews followed by 11 structured in-depth interviews (cf. interview guide in the appendix) with practitioners covering all levels of government, including lead ministries at federal and state level as well as representatives of municipalities, if appropriately equipped with program implementation competencies, as in the NRW case in chapter 2. We sent a letter to 19 practitioners that were declared responsible for ZuInvG program implementation in their organization (www.förderdatenbank.de). Against our intention to cross-check the program appraisal between different ministries within each selected state, we found out in discussions with the lead ministries that the co-responsible ministries left it exclusively to the lead ministry to provide insights for the respective level of government. The exception was Saxony-Anhalt, where the Economics was available for an in-depth interview reduced to a flagship project of Saxony-Anhalt under the Economics department's lead. At the local level, only the city of Düsseldorf invited us for an interview, the district of Berlin Kreuzberg-Neuköln and the city of Magdeburg not being willing to contribute. However, we also found out that the municipalities have the most prominent role in North-Rhine-Westfalia and therefore felt ourselves comfortable with rechanneling the municipal interview effort to the association of municipalities DStGB, most active in the ZuInvG discussions in the public and in publications around the topic.

Regarding the scientific assessment we found it enough to analyze the secondary sources on the ZuInvG, not expecting any further academic data pool for our case study. At the end, a set of 11 in-depth interviews with key practitioners, including the lead authorities of each analyzed case, gave a balanced picture to our paper thanks to the willingness of practitioners to invest up to 3 hours of face time for the present effort. The Federal Ministry of Finance even cross-checked a mature draft of the paper and gave additional valuable input on the legal framework and the consistency of my argument.

The interview guide operationalized our reference framework-based questions into four sections – overall assessment, program design and objectives, implementation model and the reporting and controlling system (cf. interview guide in annex 1). In order to explore
the actor priorities as thoroughly as possible and in the most consistent way, we exclusively asked open questions. We shared the complete interview guide with all interviewees but agreed in preparatory phone calls which sections they could best contribute to with first hand information and their own professional experiences. The agreed interview time was 60 minutes; many interviewees kindly took up to 180 minutes of their time. Concerning the trade-off between depths of insights collected in the interviews and reliability for the reader, we decided not to record and transcribe the interviews and to treat all contributions anonymously in order to maximize the readiness and ability of the interviewees to share their knowledge base. We also sacrifice reliability for the sake of fairness regarding the trustful and constructive relation the interviewees kindly engaged in with us. However, we commit to the highest standards of integrity concerning the use of the interviewee insights for our analysis and recommendations.

The results have been clustered in an inductive way, matched with the initial hypotheses and pressure-tested with experts, i.e. from Hertie School and practicing experts. Finally, we deducted improvement recommendations for future large-scale investment programs, within the solution space of the current investment program as well as out-of-the-box.

Our initial hypotheses based on outside-in information\(^5\) were that the German administration implements the ZuInvG program orderly and rather efficiently, including a thorough ex-ante and ex-post control of the rule-based use of resources. The ex-ante approval and ex-post control does however neither include a systematic ex-ante output and outcome forecasting nor a veritable formal performance controlling and reporting system for steering purposes during implementation. Given an expected large variety of state implementation modi, we strived to learn more about these differences to identify best practices of program design, program management and controlling.

The next chapter analyses the ZuInvG program before we appraise the program management practices in chapter three.

\(^5\) Cf. most important references in the primary sources section of the bibliography
2. Implementation of the ZuInvG investment program

This chapter outlines the program architecture of the ZuInvG. In a first step (2.1), we present the federal program implementation framework. Within this framework, the states set their political priorities and develop their implementation models at their discretion. The state implementation models follow specific patterns that can be subsumed under three types. We present this typology in section 2.2. To specify the modus operandi, we will analyze key features of one state case per implementation type in section 2.3. Section 2.4 finally analyses the program coordination and controlling mechanism within and across levels of government. The ZuInvG program shows evident dissonances to the reference program management framework from chapter 1. We will outline the critical modus operandi factors of the ZuInvG management model in view and preparation of a case-based program management appraisal in chapter 3.

2.1 OUTLINE OF THE ZUINVG INVESTMENT PROGRAM

2.1.1 The ZuInvG program in the German economic recovery effort

When the economic crisis hit Germany in the second term 2008, the federal government immediately reacted with a small fiscal stimulus package and affirmed to closely observe the macroeconomic developments in view of further need for action. Against rather limited resistance, a larger turn around commitment for the eroding economy was concluded so that early 2009, the federation and states agreed to engage in a more ambitious recovery policy. The fiscal stimulus packages are a policy instrument mix of consumption stimuli (incl. tax reliefs and household subsidies), credit and credit default measures, job protection (notably reduced-time employment subsidies - KuG) and infrastructure investment programs (cf. exhibit 3 below).
The municipal investment program, part of the fiscal stimulus package II, has come into force in March 2009 (BMF:2009). It is the largest investment program and among the largest and most ambitious programs of the German recovery effort. The political will is to grant additional money for public infrastructure investments to state and municipalities in 2009-2011 thus sustainably improving the German growth potential. Meanwhile, the program also aims at providing short-term business opportunities to companies that help to buffer crises-related income losses and to save jobs according to the credo: "langfristig sinnvoll, kurzfristig umsetzbar und rasch wirksam." (BMWI:2009). The
"Zukunftsinvestitions gesetz" (ZuInvG) has been the result of an extraordinary mobilization effort, given that the law had been drafted under severe time pressure. The federal bill drafting and coordination effort occurred within a single week!

The federation has chosen the "financial aid scheme" (Finanzhilfe of art. 104b GG) as a legal instrument of the municipal investment program. Programs based upon the financial aid scheme lay down main principles and guidelines for program implementation. The state governments obtain then a large margin of maneuver not only with regard to the setup of the implementation model but also to priority setting. In this section we present the implementation framework agreement between federation and states before we move to state implementation choices (in 2.2).

2.1.2 The federal program implementation framework

The municipal investment program amounts to EUR 13.3 bn. between 2009 and 2011, equally allocated among the German state governments. The major volume contribution comes from the federation, 75%, totaling EUR 10 bn. For the states and their municipalities, the program stipulates a co-funding requirement of 25% or EUR 3.3 bn (ZuInvG:2009, §6). Main allocation focus of the program is the municipal level, which is suffering from an important investment backlog of municipal infrastructure in present and the years to come (cf. Difu:2008). The ZuInvG disposes that the municipalities should receive the largest share of the investment volume for municipal infrastructure and that despite the co-founding requirement, financially weak municipalities are also to be targeted (ZuInvG:2009), §1).

The political objectives translate into a municipality-focused selection of promotion areas of government. The federal investment grants are divided into two main baskets: education infrastructure (65% of the program volume) and infrastructure (35% of the program volume). The education basket comprises infantile education investment, energy efficiency investment in schools, universities and further education entities and research infrastructure. The infrastructure basket comprises hospital investment, urban and rural infrastructure (excluding transportation and sewage disposal), municipal streets (only noise reduction measures), IT investment and other infrastructure (ZuInvG:2009, §3). In
terms of eligibility, the law states that municipalities should receive the largest share of
the investment grants and that not-for-profit providers ("freie Träger"), i.e. relevant in
education and social infrastructure, should be eligible as well.

Based on the very rough program outline in the ZuInvG, federation and states agreed on a
more concrete program framework in a mutual ordinance (Gemeinsame
Verwaltungsvereinbarung). The ordinance stipulates a harmonized implementation
according to six guiding principles.

¶ **Earmarked grants** for the two main investment baskets. Each state should
allocate 70% of the total investment volume to municipal investment projects.
The states shall use the remaining 30% for own projects, such as research
infrastructure investment grants. Until summer 2009, the legal basis of 104b
GG restricted the investment eligibility to areas of policy in legislative
competency of the federation. An amendment of the constitution eliminated
this additionally earmarking requirement, widening the investment portfolio
choice to any appropriate policy area in times of crisis.

¶ **Interdiction of double-promotion** with other programs, such as EU funds with
the sole exception of an investment credit funds of the largest public bank in
Germany (KfW). The co-funding of the federal investment grants must come
from own state and municipal budgets.

¶ **Supplementary** investment requirement measured through three formulae
comparing the state investment volume of 2009-10 to reference time periods of
the past. Unexpected effects are taken into consideration when federation and
State fix a binding aggregated investment volume threshold after the first year
of implementation. This principle leaves notable discretion for negotiation at
program mid-term.

---

6 The condition of supplement investment has been relaxed after a renegotiation of reporting conditions between
federation and states in 2010
Respect of fundamental budget management principles are expressly mentioned cross-cutting obligations for all actors involved, such as economic and frugal deployment of resources. However, the case based use of resources follows the fiscal and budget management rules of each state, as operationally, the state are allocating the investment grants from their current budgets.

Sustainable investments, a very abstract principle stressing that investment projects should lead to a long term improvement of infrastructure quality. We will discuss the interpretation of this principle in chapter 3.1.

An efficient implementation mode for the investment program, reducing the administrative burden between levels of government to external stakeholders to a necessary minimum.

The federation, represented by the Federal Ministry of Finance (BMF), is responsible for approving the adequate and orderly deployment of the municipal investment program grants. A project group anchored within a line section of the BMF and lead by the head of unit is centrally steering the program implementation by the state governments. The project group does not have to formally coordinate with other BMF units of other federal ministries. Formal horizontal coordination arrangements were under discussion initially but did not pass as this would have exponentially increased time investment and policy complexity.

The project group has a threefold mandate: first, the interpretation of the legal framework for the lower level of government beneficiaries; second, monitoring of the implementation, including collection, analysis and evaluation of formally reported and informal information; third, preparation and realization of the ex-post program approval, including the set-up of an appropriate approval procedure for finalized investment projects. Here, this procedure involves the establishment of an IT infrastructure in coordination with the state governments in terms of a central project database with adequate IT interfaces to the state systems. During 2009-11, the project group will have to approve an approximated 40.000 finalized investment projects from the 16 German state programs. The lead unit underlines the need of a thorough control of appropriate and
orderly program implementation by the project group with approval standards and quality assurance, i.e. use of the 4-eyes principle. The steering group can flexibly plan and deploy HR resources from the line unit staff pool, depending on the work load curve, especially regarding approval peaks. Before the first approval round starts in the first quarter 2010, the time intensity is difficult to estimate because this highly depends on consistency and comprehensiveness of the reported data sets and the derived need for follow-ups.

The BMF has program-related and project-related control rights. The program control rights are exerted before and after implementation, the project control rights apply only ex-post. On the program level, the federation comments requests regarding the implementation norms on a high-level of abstraction. It reviews each three months the program status in the state and the appropriate and orderly deployment of federal investment grants. Ex-post, the federation will also control the supplementary investment level based upon statistical means. On the project level, the federation controls eligibility of finalized investment projects. The federation is also entitled to follow-up project-wise by demanding more comprehensive information for single investment measures. The federation can exert this right at its discretion with sharp sanction competencies - as long as the thorough assessments remain proportional. If an investment project fails even after follow-ups and corrective measures to meet BMF approval, the concerned state gets a last chance to redeploy the federal grant for another investment measure provided it is realized within the time frame of the ZuInvG. As ultima ratio, if the endowed state or municipality fails to comply with the alternative investment project, the federation is entitled to ultimately demand the money back.

We will now describe how the state navigates these framework requirements. We will see that there are some common characteristics for implementation choice but that the actual implementation models vary significantly.
2.2 PROGRAM IMPLEMENTATION TYPOLOGY

The detailed ZuInvG program priority setting and grant criteria design, the approval of investment projects as well as the controlling of program status and outcomes are in the hands of the state. The Federal Chancellery points out that the political intention of the ZuInvG formulation is to leave the broadest range of discretion to the states that is legally feasible within the constitutional norm of the finance aid scheme of 104b GG (Der Neue Kämmerer:2009). As a consequence, the State governments are the strategy centers of the investment program. They formulate their own political priorities, manage for their regional objectives and operate at their political convenience within the general political mandate of investments, provided that they are "langfristig sinnvoll, kurzfristig umsetzbar und rasch wirksam", as well as within the still rather general implementation framework mutually agreed between federation and states.

Based upon the federal framework, program implementation responsibility requires that the states find their context-specific answers to seven high-level organizational modeling questions.

¶ How does the government allocate ZuInvG investment grants?

¶ Which entity is responsible for program implementation, i.e., who is key contact vis-à-vis the federation?

¶ How is this entity anchored within the state government?

¶ How and with whom does this entity (have to) coordinate and cooperate for the overall program design and during implementation?

¶ Who is actually designing and implementing the concrete projects in the field?

¶ Who is formally approving the project eligibility (ex-ante) as well as appropriate and orderly project termination (ex-post) before a project is subject to approval by federation and responsible audit offices?

¶ Who is liable and accountable for the program success?
Our analysis of implementation models disaggregates the program management mandates of federation and state under particular consideration of the federal and state actor interplay. Based upon a literature review, (i.e., DStGB:2009; Pavel:2009), primary research and interviews with key actors in the implementation of the program, we identified three organizational implementation models, namely a fragmented, an integrated and a devolved implementation type. The main distinction between these types resides in the degree of autonomy lead authorities are leaving to the implementing entities with major repercussions on project application and approval schemes and the control of grant deployment.

The fragmented implementation type accentuates the application-based approval of investment grants by various rather autonomous state ministries. For each investment project, the implementation entity is required to apply for funding. The lead authority checks and approves project proposals according to their own approval criteria. The devolved implementation type allocates grants most prominently via lump sums to municipalities and other implementation entities. Selected distribution modes are pre-existing or newly customized distributions keys, generally composed of geo information data, such as population, target group size or financial power indicators. The lead ministries or subordinate units then only approve the single investment projects ex ante or ex-post, sometimes only by formal approval. In reality, all states have chosen mixed implementation models but they tend to prioritize one allocation and approval mechanism to the other, with NRW and Saxony-Anhalt being extreme cases on a continuum of devolved design and decision autonomy (NRW) versus a fragmented set of application, approval and control schemes (S-A). Between these two poles of large German states, the city state type is particular as there is no municipal level with self-autonomy below the state level. As a consequence, lead authorities play an integrated program management role in terms of application, approval and control of projects. Districts in Berlin, Bremen and Hamburg have a certain degree of autonomy but program design and implementation still remain in the same hand. Therefore, we call this implementation model the integrated type. Exhibit 4 presents a high-level perspective of the implementation models.
We will present a case for each implementation type in more detail in the next section.

### 2.3 STATE IMPLEMENTATION MODELS

This section analyses the three implementation models in more detail, focused on one typical state case. With NRW, we will illustrate the devolved type; with Saxony-Anhalt, we demonstrate the fragmented type; with the city state of Berlin, we outline the integrated type. We will selectively refer to additional state case examples as appropriate in the evaluation of chapter three. As the reader will see in this section, we confirm DStGB:2009 that the allocation and approval choices are essentially a function of political implementation priority-setting, between detailed compliance with program component requirements (S-A) and timeliness of implementation (NRW). These priorities of key decision-makers in politics and administration shape implementation...
models, systems and processes decisively. Additionally, our results indicate that priority-setting seems to be influenced by two side-conditions. (i) the political configuration within the state system (party politics and power distribution between the central state level and the municipalities), and (ii) the institutional culture (degree of departmental autonomy and openness of key responsible people in the civil service for managerial instruments). The analysis of the implementation models follows the seven guiding questions from section 2.2.

2.3.1 The devolved implementation model

North Rhine Westphalia opted for an implementation model characterized by simple allocation procedures based on lump-sums reflecting pre-existing distribution keys, local decision autonomy and devolved approval and audit mechanisms. The state minimizes application complexity for the municipal level and prevents time-consuming up-front allocation conflicts through the dominant use of preexisting, accepted grant distribution keys. Budgetary arrangements for 2009 further accommodate the speed of implementation, as the municipalities are allowed to treat the investment grants as extraordinary income and expenses approved by a city council conclusion, provided the budget has already entered into force.

The EUR 2.8 bn. investment program in North Rhine Westphalia has three components7: the largest share is a municipal lump-sum basket. Public hospitals receive a separate EUR 170 mn., deducted from the municipal lump sum with similar approval mechanism. These two funds compose the municipal investment share, summing up to 84% of the investment program grants and therewith largely above the 70% required in the federal framework. Universities obtain a separate EUR 464 mn., allocated in a separate grant-making scheme. Existing distribution keys allow for mediation and prevention of

7 The section draws from the following sources: NRW(2009), NRW (2009b), Emschermann (2009) and interviews of the authors
distribution conflicts. States and municipalities share the co-funding obligation equally; each party contributes 12.5%. The Ministry of Finance establishes a special reimbursement funds for the municipal share after program termination. In between, the state finances the municipal part as well. This funding solution gives access to the about 100 financially overburdened municipalities under budgetary oversight because they cannot even fulfill their operating budget obligations. Reimbursement from well established current municipal grant-making mechanisms after 2011 helps the municipalities meeting the supplementary requirement of the municipal investment program and imposes stronger reimbursement burdens upon the financially potent municipalities. NRW municipalities will implement an estimated 8,000 investment projects with the available EUR 2.8 bn. grants.

A slim project group in the Ministry of Interior is responsible for program steering, problem-solving and high-level corrective actions. The members are exempted from regular tasks and can fully commit their attention to the municipal investment program. The steering group leader, who has also drafted the implementation bill for NRW, dedicates a fixed 50% working time to the program during the implementation phase. The ministerial project group assumes the central interface to the actors involved. It manages an email hotline and publishes regular FAQ-guide updates. The steering group regularly reports to the departmental leadership, only the formal reporting to the federation in the requested rhythm is in the competency of the Ministry of Finance. In contrast to orchestration, the ministerial steering group does not operationally review and control project tasks. It delegates all case work to the subordinate level of the state administration.

The five Bezirksregierungen in NRW are responsible for formal project approval and operational questions from the 396 municipalities. Each Bezirksregierung disposes of the manpower of a roughly five full-time equivalents (FTE) strong project team, partly staffed with external hires, for the case work and personal problem-solving with municipal implementation units. In order to ensure a harmonized approval scheme, the steering groups in the Ministry of the Interior and in the Bezirksregierungen hold regular coordination meetings, involving the associations of municipalities. During the first couple of meetings, up to 40 operational problems have been solved per session, feeding
the FAQ guide that is put online and is regularly updated on the website of the Ministry of the Interior. With other NRW ministries, there are only informal touch points during implementation for expertise related matters. The steering group is in the lead without mandatory signature requirements from other departments. Within the Ministry of the Interior, the steering group proactively reports most current implementation status data (1-2 pages) to the state secretaries.

For the largest share of the investment volume, municipalities receive lump-sum grants. The lump-sum prominently takes into consideration pre-existing distribution keys, like the number of pupils for education investment or population (70%) and territory size (30%) for infrastructure investment grants. Project selection, design and implementation occur within the responsibility of the municipal administration. Within the earmarked funds, they also decide at their own discretion whether they consider a project eligible for funding. In case of doubt, their point of contact is the Bezirksregierung. Most municipalities are managing the projects with the existing manpower of their municipal departments. Some municipalities do additionally hire contractors at their own expenses; some also outsource project management to external providers. The city of Düsseldorf has for example decided to outsource the entire project management, including building construction planning, to an engineering service firm. The municipal department for building construction is steering almost the entire grant volume, a team in the financial office of the Mayor builds the link with the Bezirksregierung Düsseldorf and the political level of the city administration as one among other regular tasks. We could not identify any project management office with own resources and financial means at the local level.

When the investment project is finished, the municipal audit office checks and approves the orderly use of grants and signs an approval form. The municipal lead implementation unit is then forwarding the approval form to the Bezirksregierung, which formally controls the correctness of the project. Once the formal approval given and the voucher made available, the Bezirksregierung processes the payment to the municipality account. The ministerial steering group finally feeds the project data into a central federal project database via an IT interface that is under the single control of the ministerial steering group. The investment project processing is mainly an electronic process flow supported
by a dedicated database, eKopa, developed by the public IT provider of the state, IT.NRW. Sole paper based components are the processing of payments and the project termination approval decision.

The described allocation procedure varies notably for the university basket. These grants are also allocated based on an existing distribution key for public hospital endowment. In contrast to the municipal lump-sums, the university can apply directly for hospital investment grants in a central application scheme. The Ministry of Education manages the university investment grants through the ordinary annual ministerial budget. Regarding investment grant applications for hospitals, the Ministry of Health coordinates expertise related matters whereas the Bezirksamte are the competent approval entity.

Given the large autonomy that the lump sum process confers to the municipalities, the liability for appropriate and orderly implementation also lies with the municipality. This is a win-win deal that was pushed during policy formulation by the municipal associations, notably the Städte- und Gemeindebund NRW. From the state perspective, the Bezirksamte are required to minimize involvement in content-related project matters in order to avoid that municipal liability dilutes. As a consequence, in case of federal sanctions, the municipality will pay the bill. Accountability for each project is with the municipal lead implementation unit as well, but from a federation perspective, political accountability for the program success is with the Ministry of the Interior.

2.3.2 The fragmented implementation model

Saxony-Anhalt has designed an implementation model characterized by a high degree of fragmentation expressed by a large number and high division of program components across state ministries and diverse application and approval requirements under
departmental autonomy, with a rather passive overarching steering structure.\textsuperscript{8} The implementation is the most similar to ordinary investment grant structures, like EU funds administration. Case-based application and approval schemes for program components in line ministries are selected in the common administrative practice for close steering, especially for large complex investment projects, but also for smaller public investment promotion programs.

The infrastructure program has 30 components, amounting to EUR 474 mn. 25 of these components with 65% of the investment grant volume are central application procedure based, five components with approx. 35% of the investment grants are lump sum based, with two lump sum based programs, namely school infrastructure (EUR 150 mn.) and municipal infrastructure (EUR 50 mn.) components being >25% grant volume of the entire investment program. The other way round, this means that most of the program components are small, several have a size of EUR 10 mn. or even less. All ministries have their own investment grant budgets but the Ministry of Education manages half of the project volume. The lump sums are based on pre-established distribution keys, like the number of pupils for the education infrastructure lump sum and the population for infrastructure investments. With 73% of the investment grants allocated to municipalities, Saxony-Anhalt roughly sticks to the minimum requirement of the federation, on the lower level compared to other states. Same as in NRW, the state level in Saxony-Anhalt and the municipalities equally share the co-funding burden; each level of government contributes 12.5% of the total investment grant volume. Municipalities obtain low interest credit lines for the co-funding share from the state's investment bank (Investitionsbank Sachsen-Anhalt).

Saxony-Anhalt favors departmental autonomy between the ministries in procedure design, approval mechanisms and program controlling. The Ministry of Finance is the contact point for the BMF steering group but without any legal control basis. Saxony-Anhalt did neither draft an implementation bill that harmonizes the implementation of program

\textsuperscript{8} The section builds upon interviews, a presentation of the Gemeindebund Saxony Anhalt (2009) at the congress "Moderner Staat" in November 2009 and Ministerium der Finanzen Sachsen-Anhalt (2009)
components nor did it establish a strong political level steering board for problem- and conflict-solving or any similar overarching mechanism for cooperation, coordination and norm interpretation on the political level. At head of section level (Abteilungsleiter), there is indeed an inter-ministerial steering group under presidency of the Ministry of Finance. According to observations of practitioners, this unit does, however, seems to ensure a not much more than a minimum coordination effort. At the working level, a FAQ-team is providing guidance and assistance to the municipalities. A 200 page thick manual is the main output of this problem-solving effort for the municipalities. The dispersed management funds responsibilities with prominent respect of departmental borders minimize political and operative coordination requirements during program implementation. In the political culture of the state, the departmental autonomy is, according to interviewees outside the government, a crucial means and often used informal institution of conflict avoidance between departments and of coalition governments' party politics.

Actual project design is a municipal task. The lump sum program components that process automatic investment grant volumes to municipalities are administered by subordinate entities selected by the Ministry of the Interior. For the 25 funds with application-based promotion procedures, each ministry develops its own promotion guidelines and application procedures and nominates its subordinate application processing entities. The application procedures vary strongly in nature, structure and complexity. Given that a central interface is missing, promotion venue shopping is a responsibility of local administrations. The lead authorities delegate eligibility testing and project approval procedures most often to the subordinate state administration. Some program components are coordinated in the ministries directly. In spite of a variety of implementation solutions, the processing is much more consolidated than the program component design. The Investitionsbank Sachsen-Anhalt is key financial application authority for financially weak municipalities and the key payment processing authority for various programs whereas the Administration Office of the state is the key eligibility testing, application approval and project termination approval entity. In several program components, sustainability criteria are stipulated, such as a minimum use of school infrastructure that received funding for at least five years after implementation of the
measure. In sharp contrast to the NRW model, even for the lump sum program components, a project approval from the state's municipality supervisory authorities is required prior project start.

Saxony-Anhalt decided to reduce the state's implementation guidelines to a common ordinance of the Ministry of Finance and the State Chancellery prescribing main technical details and guidelines for derogations from other current administrative practice. The lack of an implementation bill makes it however time-consuming, i.e., for financially weak municipalities under budget supervision of the state, to apply for funds and investment credits. These financially weak municipalities need exemption certification from the state municipal supervisory authority; other municipalities must vote follow-up budgets where their municipal council has to approve significant supplementary investment projects or additional credit lines.

The liability and accountability is project-wise clearly divided. Hence, the comparatively high complexity in the lead actor landscape leaves overarching program responsibility open. A rather astonishing fact is that despite the municipal supervisory authority pre-approval scheme even for lump sum project components, ultimate reimbursement liability remains with the municipalities. Saxony-Anhalt does not compensate the municipalities for their time-consuming control prerogatives with the take-over of liability.

2.3.3 The integrated implementation model

The city state implementation type differs somewhat from that of the territory state like Sachsen-Anhalt and North Rhine Westphalia because the administrative level below the state administration, the district, has no legal self autonomy status. In all three German city states, Hamburg, Bremen and Berlin, the districts have a certain level of discretion that exceeds a pure 1:1 implementation mandate of city district in other large German cities without state quality. Among the city state, the districts of Berlin have the largest discretion. They may fiercely voice their interests given that their respective population
size is equal to other large German cities and a particular party politics structure in Berlin where all big German parties are represented in district councils, increasing informal and formal information flow and therewith transparency on administrative planning and action to virtually all five influential parties. As a result, the district level may involve in a venue for politization of state decisions of the Senate.

Under notable consideration of this institutional setting, Berlin has selected an implementation model characterized by a matrix program structure with large departmental independence in project prioritization and implementation and a political steering committee committed to fixing political program guidelines and ensuring high-level problem-solving, conflict-setting. A strong representation of the districts (Bezirke) in the steering committee coincides with the nomination of a strong leadership personality, the Mayor of Kreuzberg-Neukölln and leader of the finance committee of the Bezirke, as a representative for the districts to the steering committee. The state tries to reduce political distribution conflicts with and between the Bezirke by allocating a symbolic lump-sum investment grant of EUR 1 mn. for energy efficiency measures to each Bezirk for self-defined priority areas. An additional key feature of Berlin's implementation model is the Senate of Finance's use of additional performance information for program steering and controlling, at least for state level controlling (more in 2.4).

The EUR 632 mn. investment program in Berlin has 9 components. Each component translates into an investment portfolio under management of five lead authorities in total. Berlin will implement about 800 investment projects in total. The Senate of Education and Science manages four portfolios, namely "school", "child care", "institutions for higher education", "charité" (health research in the prominent university hospital in Berlin). The Senate of the Interior and of Sports is responsible for "swimming pools" and

---

9 This section builds upon interviews, Senat von Berlin (2009a) and Senat von Berlin (2009b)
10 In Berlin, Ministries are called Senate
11 The EUR 632 mn. program includes the federal grants including Berlin's 25% of co-funding. With an additional co-funding of EUR 35 mn. from eligible third parties, the total investment sum amounts to EUR 668 mn.
"IT infrastructure/ special car park". One policy area is under shared responsibility of two lead authorities: "energy efficient building construction". Whereas the Senate of Urban Affairs administers energy efficient building construction and noise protection, the Berlin Real Estate Management Agency (BIM), Berlin's shared service center for real estate management, is the only subordinate authority with lead responsibility for energy efficiency measures of the real estate property, it is managing for authorities in Berlin. An institutional rationale for the split is that only a part of the real estate property has been conferred to consolidated management of the BIM, (yet). The budgets of the Bezirke receive directly and indirectly 60% of the investment grant volume, the state manages the remaining 40% via the state budget.

A steering group in the Senate of Finances with four staff is program coordinator and key contact to the BMF. All four members are permanently working with the Senate of Finance, they are dedicated to the program with clear time commitment; three content-wise, one regarding the IT system. It is noticeable that all four are from the upper civil service, the highest skill category in German civil service.

The steering group in the Senate of Finance is reporting to the ministry leadership and to a high-level steering committee. The steering committee met every six months during the hot implementation phase, six times in total until November 2009. The frequency has now been reduced because the implementation seems to run quite smoothly. The steering committee under presidency of the Senate of Finances consists of representatives from all lead authorities of the investment portfolios and a representative of the state chancellery as well as the president of the finance committee of the Bezirke, the Mayor of Kreuzberg-Neukölln, a strong lead person who has a high reputation for his expertise and integrity in the German municipality arena.

The steering committee integrates and solves political conflicts on a high-rank political level and strengthens the position at the working level for discretionary decisions that have been politically authorized. In addition to smoothing the coordination process for ongoing implementation decisions, the steering committee also allows each lead authority to implement the investment portfolios in greatest discretion and independency under consideration of the political lead decisions. This institutional arrangement decreases the
need and legitimacy of micro-interference in implementation decisions. It also decreases ongoing coordination and cooperation requirements at the working level, maintaining program coherence and working level conflict about program framework interpretation. In practice, the most contentious implementation actually is in the energy efficiency portfolio under shared lead responsibility. This observation seems to prove that the centralized high-level coordination accelerates and smoothes implementation without the disadvantage of incoherent implementation.

Design and implementation of investment projects is set up in application procedures, except the politically inspired symbolic lump-sum to the Bezirke that make only two percent of the investment volume. The portfolio allocation for the 98% investment grant volume in Berlin has been a three staged process.

First, there was a budgeting negotiation between the Senate of Finance and the other departments leading to a preliminary investment funds allocation to the nine program components. Second, after this preliminary negotiation based portfolio allocation to the lead authorities but prior to final budget decision, the Senate opened a call for proposal procedure ("Interessenbekundungsverfahren") for all portfolios in order to understand and size the respective demand. At the end of this call for project proposals, the initial portfolio measures were available in data sets ready for approval. For all portfolios, the demand exceeded available funding, in total by 67%. The degree of exceeding demand varied across portfolios but the relative demand supply imbalance did nonetheless not lead to portfolio shifts. Third, after the final decision, the lead authorities approved investment projects of their portfolio from the Bezirke and non-state delivery organizations based on their own decision criteria. For the child care portfolio for example, the criteria set includes conformity with joint implementation framework, energy efficiency contribution, geography balanced between the Bezirke and a distribution key reflecting the number of children enrolled in care in the applicant entity as a share of all children in care.

The overall portfolio allocation methodology was a function of program eligibility and political priority setting. The overall portfolio allocation occurred in a political decision according to a planning matrix of Bezirk balance lead authority influence. Within each
The lead authorities cut funding at the budget frontier of the portfolio. The steering committee agreed that the lead authorities might over plan the first portfolio by up to 20%. When investment projects meet delays or run out of budget in a refined planning stage, there is a safe buffer of alternatives ready for kick-off.

Project implementation is steered for each portfolio by the respective lead authority. This responsibility includes the approval of project eligibility, controlling of the full, timely, appropriate and orderly project implementation as well as the final project approval. The required project information is decentrally entered in a Berlin-wide project database by each lead authority with devolved data quality control responsibility. The steering group in the Senate of Finance is steering the program status, including some effectiveness indicators, for the city state's steering needs (more in 2.4). It also reports the required status reports and the data sets of finalized projects to the federation for approval. The Senate of Finance is also the coordination point for follow-up requests from the federation.

In the integrated implementation type, liability and accountability are both located within the Senate. Program accountability in Berlin is split between the lead authorities depending on the portfolio belonging to the investment project. However, the steering committee also creates a common political ownership for the program structure. The absence of a joint-program structure for energy efficiency might thereby explain the contentious implementation of the portfolio. A joint-silo structure does not seem appropriate given that other institutional choices are indeed possible in the integrated implementation model of Berlin.

2.4 MULTI-LEVEL PROGRAM COORDINATION & CONTROLLING MECHANISM

The current literature on policy-making in the German system oscillates around multi-level, more precisely three level policy-making whereas the internal program management literature recommends performance measurement and management for efficient and effective program implementation against agreed objectives. Our case study
suggests that this academic frame seems rather disconnected from a German practitioner's program implementation frame, at least for our case operating in the financial aid scheme.

2.4.1 An interrelated, duplicated two level coordination effort

*With regard to multi-level governance,* our analysis indicates that municipalities are neither directly concerned about federation priorities, nor is the federation mainly concerned about case-based municipal practice. In practice, the states mediate the upper and lower level spheres. The implementation arrangement of the ZuInvG is in practice not a three level coordination effort but an *interrelated duplicated two level implementation effort.* There are two parallel two-level interactions, between federation and states and between states and municipalities, mediated by the states providing contact points, anchorage points for interpretation of federal norms to their implementation model and strategy centers. The federation is not the ultimate priority leader but primus inter pares and watch dog at the same time, controlled by the Federal Audit Court and in continuous negotiation with the states that are endowed with veto powers.

In the federation-state interaction, one can distinguish a setup negotiation phase, a continuous implementation phase and a renegotiation based approval phase:

The largest in-person coordination investment occurred during the *framework setup negotiation* (policy formulation) phase. Two federation-state working groups worked out the program framework; one for the IT system, one for content/procedural matters. With the establishment of an integrated IT system, interoperable with corresponding state databases, the federation took the leadership and afforded the investment for an innovative policy solution that worked out well. The IT system is constructed defensibly for good reasons. Initial planning opted for a database of up to 250,000 investment project datasets to guarantee a smooth implementation under uncertain actual capacity needs, even if evidence shows now that a smaller solution would have sufficed. The IT working group had to incrementally incorporate portions of procedural agreement of the content-focused working group. Interestingly, it also pushed for and even served as a catalyst for consensus on a core of standard procedures for the other committees because
programming had to move on. The working groups met regularly; now infrequently as the implementation process has reached a continuous implementation stage.

During *continuous implementation*, the IT system is in the center of coordination between the BMF and key state contacts. A light system in the project database signals the coordination needs regarding single investment projects. A green light shows to the responsible state contacts that a project has met federal approval, a yellow light signals the demand of follow-up information, a red light will signal final disapproval. The light system has convincing conceptual value. In practice, the light system still has to prove its value of enabling an as smooth interaction with low transaction costs as aspired.

In-person coordination needs may increase again in the *renegotiation-based approval phase*, if the first approval round of the BMF turns out to be more problematic than currently expected. Eligibility of investment projects in priority areas, i.e. before constitutional revision of the financial aid scheme, and the statistical verification on the supplementary investment requirement as well as the vague sustainability criteria may become hot areas for potentially intense follow-up coordination and renegotiation.

A good practice interaction between state and municipal level consists of regular steering group meetings, problem-solving meetings with involvement of municipal associations, in-person coordination and an interactive clarification process. Key actors in NRW, including the Ministry of the Interior, the Bezirksregierungen and the Städte- und Gemeindebund NRW, found these monthly meetings helpful to foster legal security. A database application with interface to the IT system of the federation extends the dominant use of the IT system for continuous coordination needs. Depending on the implementation model, a various number of program managers have access to and insert project related data. Extended from the federation-state playing ground, the light system is also the priority coordination channel for the concrete lower level implementation effort, especially in the devolved implementation type. Informal coordination ways on this playing ground also consist of email, eventually also phone and email hotlines, letters and phone contacts. As compared to coordination intensity, the lower level coordination effort is definitely more intense than the upper level one. Operative, ongoing interpretation, administration and approval requirements have been increasing the
diversity and volume of questions, as the up to 200 pages implementation guides indicate, and procedurally mandatory touch points, i.e. for formal eligibility approval, document administration and payment processing as well. An additional source of coordination in the lower level effort is the approval of the investment volumes in the municipal budgets, be it for financially weak municipalities only, like in NRW, be it a formal requirement for all municipalities, like the municipal supervisory authority cross check of the orderly grand inclusion in the municipal budgets in Saxony-Anhalt.

2.4.2 An ex-post oriented reporting system with informal performance steering focus

*With regard to program based performance management*, the ZuInvG opts for a central reporting and controlling system that favors informal steering and ex-post control to performance measurement and management along the implementation process.

The dominance of ex-post control of management reporting and controlling is most obvious for the BMF. The BMF is selectively controlling the process at two stages, namely ex-ante the implementation models and ex-post the finalized projects. Informal information, including press and parliamentary discussion about state efficiency and effectiveness of resource deployment are additional information sources the federation is taking into consideration. The two functions of the BMF's formal reporting system during the implementation process are for external purposes. First of all, the reporting has a political legitimacy function. The quarterly status updates required by law inform the legislator, i.e., the federal parliament (Bundestag), about program progress. Second, the reporting system has an external PR function. The PR department of the chancellery collects and promotes the most ambitious and publicly presentable projects for public support generation, i.e. large high tech and cultural projects. Before the federal election in 2009 notably, the Federal Press Agency asked for a top ten promotable investment project list from all states. The Federal Press Agency used the best promotable cases for press releases and related PR work.

Given the more formal oversight needs of the federation versus the strategic and operational steering mandate of the states, the two levels of government have a diverging
reporting and controlling need. The federation is mainly concerned about ex-post control; the main concern regarding the reporting system is therefore end product consistency, i.e. user-friendly, self-explaining data sets for its approval requirements. For evaluation purposes, a thoroughly filled project documentation database will allow for a fact-based evaluation of different implementation models in terms of coherency of reporting as well as for nature and timeliness of grant deployment after program completion. It may also indicate most popular investment objects and innovative measures and provide information on frugal deployment of investment funds across states and municipalities for comparable projects, such as energy efficient renovation, unit price of noise protecting street construction etc. The BMF is open for an evaluation after the finalized implementation, in terms of an evaluation research piece. Ex-post policy learning, especially regarding efficient large-scale program management, seems to be realistic with the information collected in the program database. Given that there are no concrete plans in the states to systematically evaluate the program at the end, a commitment of the federation here would be wishful.

The formal federal reporting system, consisting of quarterly status reports from each state and the IT database with finalized investment projects forwarded to the BMF for approval is not designed to provide a direct steering value for the federation: the BMF is steering punctually during program implementation, including through mails, round letters for norm interpretation, touch points with the key program contacts in the state governments and a general sensitivity for "noise" in internal and external communication channels. In the policy formulation stage, federal attempts to collect additional performance information failed due to state resistance. For the time-pressured policy process, the state advanced two killer arguments against performance measurement: lack of time and money to establish measurement systems and incomparability and inconsistency of existing data in the heterogeneous landscape. Regarding the first argument, one can admit that the rapid finalization of the IT system would have been jeopardized by political conflict about concrete indicators and their effective contribution to steering needs. The lack of budget - and suscceptibly a fear of poor rankings in league tables – showcases an indirect expression of skepticism and low priority of performance measurement for at least a couple of states. In only a minority of the state implementation
models, the collection of complementary performance indicators to the federal framework requirements had been at least subject to discussion. The BMF had a closer look at some datasets and found them too inconsistent to provide additional steering value as well. From outside-in, it is impossible to judge whether the investment in reliable, value-add performance data would have paid off, i.e. by translating into increased top-down steering value for the ministerial level. Therefore, without final opinion on the usefulness of a formal performance management system, one identifies in the present implementation structure what scholars have called a "steering gap" (Bogumil et al:2007, KGSt:1993, 2008) and "application gap" (Hausmann:2007) of federal and state (effectiveness) performance-based program management.

In contrast to this more formal and facilitating implementation role of the federation in the financial aid scheme, with timely steering of investment project success, the states as strategy centers may have considered a much more exhaustive perspective on program performance during implementation. This is particularly valid for application procedure based implementation models. Berlin shows that this is possible, if the usage attributes of performance management suits the right purpose. Berlin is measuring three performance indicators where information is available: "CO2 abatement contribution" of energy efficiency measures, "energy efficiency premium", defined as energy cost-induced budget savings and "dissolution of investment backlog" under the condition that cost accounting systems provide this information for real estate property of Bezirke and state. Given an accrual and costing budgeting reform wave underway in German states and municipalities, such indicators might already now but will definitely in future allow measuring the positive outcome of investment programs, i.e. to enhance sustainability of investment. The Berlin performance measurement choice is pragmatic, as the state does not build up a measurement bureaucracy. It is also serving the right audience as the Senate of Finance measures these indicators for internal use only, not intending to feed it in the battle field of party politics. These and other observations show that the implementation systems actually use performance information, despite the absence of a formal performance management system.
3. Manageability of the ZuInvG program?

In this chapter we will appraise the ZuInvG program manageability based on the reference model of performance-based program management. In our reference model, we stress that an effective and efficient program management largely depends on the ability of the program management model to deliver against program priorities. The subject of this interim appraisal is the program management model itself, not the actually achieved outcome. More precisely: does the ZuInv program, i.e. program structure, implementation, monitoring and controlling system enable the lead authorities in a meaningful way to coherently manage for program objectives of the ZuInvG program.

Based on the case study in chapter two, we found out that the ZuInvG is a multi-level program management model with two interrelated levels operating in a common policy framework including a set of stipulated implementation procedures/processes and of high-level policy objectives. The reference framework must reflect the program management across levels of government. As shown in exhibit 5 below, we have customized the reference framework to the elaborated specificities.
The federation controls orderly implementation (BMF management cycle), the states are strategy centers for operating investment programs across several program components. The states share with the municipalities and other implementing entities (project level) the responsibility of implementing investment projects in an orderly and appropriate way, along state-specific implementation targets operationalized in program components and a set of state-specific systems and processes/procedures of implementation. The entire program management must reflect political culture (belief systems of the civil service and politics deciding on the program setup).

We will now analyze the reference framework elements for the ZuInvG program in more detail. Our three guiding questions are the following: are there clarity and coherency of program objectives to deliver against (3.1)? Are there meaningful program components, systems and processes, including informal arrangements, fostering coherent implementation? And what is meaningful practice that enhances the manageability of
effectiveness and efficiency (3.2)? The ultimate question: whether the ZuInvG actually achieves its outcome, must be left to an empirical ex-post evaluation because one cannot measure any outcome of this moving target, yet. We can only provide some hints for relevant ex-post evaluation analyses. To further elaborate on the manageability of the municipal investment program, we will also outline good practices identified in the existing implementation models.

3.1 PERFORMANCE MANAGEMENT FOR EFFECTIVENESS AND EFFICIENCY – TARGET SYSTEM

Manageable policy programs fulfill two pre-conditions: (i) implementing actors are clear about the objectives and (ii) it is coherent what each one is susceptible to contribute to program success. A target system operationalizes these pre-conditions. It fixes political priorities in a small set of objectives. The objectives originate from the political mandate and judgment of the lead authorities of implementation. The decision center trickles-down the objectives to the front-line for implementation, with appropriate margins of discretion of each intermediate level for identifying the best way to achieving the objectives in specific contexts. This is in line with the main rationale of the financial aid scheme supposing that besides the constitutional requirement, states and municipalities are better able to define actual investment needs in the field.

The ZuInvG has a rather vague target system. The political cabinet conclusion of the federal government states that the investment program is supposed to be "langfristig sinnvoll, kurzfristig umsetzbar und rasch wirksam." The vagueness has two reasons: first, with the financial aid scheme of art 104b GG, the federation intentionally opts in the ZuInvG bill for a set of program management procedures that delegate priority-setting largely to the states. Second, the states, conferred to build their target system, do not always put in practice the appropriate implementation structures and processes that would foster agreement upon common objectives and orchestration of coherency between the lead actors.
The exhibit below logically organizes all objectives the federation and state decision centers formulate for implementation of the ZuInvG\textsuperscript{12}. Elements that are explicitly regulated in the federal program framework are underlined in grey. The logic is the following: there are two main components in the target system of the federation. One element of the political mandate, namely "short-term readiness for implementation", is an efficiency objective. Time lags in implementation are to be minimized. Another criteria, "sustainable in the long run", is an effectiveness criterion. The third notion, "rapid effectiveness", contains both effectiveness and an efficiency dimension. The ZuinvG formulates this high-level political mandate in the ZuInvG bill, in the mutual ordinance of federation and states (c.f. chapter 2) and the states politically operationalize it further. As a result, the decentralization of target-setting formulation to the states leads to at least 17 targets in four main objectives. Exhibit 6 illustrates the target system components deducted from bills and primary sources.

\textsuperscript{12} The bibliography contains a selection of the most relevant primary documents we reviewed in order to sharpen our understanding for political objectives of the ZuInvG
Efficient operations mainly translate into a frugal delivery model and the frugal deployment of funds as well as a high consistency of reported investment projects data sets that reduce the share of follow-up questions of the federation's final approval and control loop. The planning, approval and control procedures as well as the implementation of investment projects are efficient when these operations meet the criterion of timely implementation. Collected performance indicators for efficiency are, for example, the share of grant volume allocated to projects – status date. Another indicator is the turn around time from project approval to actual payment. In an ex-post evaluation one could, e.g., also compare the thoroughness of implementation, measured by the share of projects passed without any follow-up requests of the federation. Effective program implementation means that the investment program intends to foster economic stabilization and the investment grants have a long-term (economic) impact, e.g., use of modernized school buildings for a fixed number of years amortizing investment through rental costs and reduced heating costs (by increased comfort for pupils and teachers).
Among the high-level targets, the federal implementation framework fixes two more concrete objectives: for timeliness, the requirement of a 50% funds deployment in 2009 and a flexibilization of tender procedures until end of 2010 to allow for more rapid public procurement for implementation purposes; for sustainability, the earmarking of 65% of the grants to research and education with particular consideration of energy efficient building construction. Regarding the two other objectives, the federation intentionally remains imprecise: in the economic stabilization priority, the federation only requires that states do not substitute investment (supplementary investment principle) and share ownership by contribution from their own funds (interdiction of double-promotion). Last but not least, frugality is simple stated as a principle but entirely conferred to state discretion. Exception is the informally communicated requirement that the reported project data sets must be consistent and complete in order to minimize resource-consuming follow-up approval loops. In sum, the federation formulates rather clear conditions for efficient funds deployment, abstract guidelines for effectiveness, i.e. sustainability, virtually no criteria for efficient organization-related criteria of operations, the yield, or ultimate target function being economic recovery with sustainability-enhancement of the German economy as defined by the federal bill.

The states largely set up meaningful implementation solutions for efficiency. In the states, the larger the number of funds and lead authorities, the less is an overall perspective on performance anchored in the respective implementation model. At least for the own funds, we could not find indications that lead authorities opt for a laissez-faire steering style of the projects they promote. All implementation models reflect an awareness of urgency by reacting to the need of simplified application and approval structures (to a varying extend) and an effective flexibilization of state tender laws for public purchases made in 2009-10. In contrast, most states lack clear overall priorities for effectiveness. In particular, the sustainability dimension remains rather flaw, Berlin being rather the exception than the rule. In NRW, Niedersachsen and Sachsen-Anhalt for example effectiveness measurement and management was not a key subject for discussions in the policy-making process. The collected data on investment projects under the ZuInvG for controlling purposes do not exceed reporting requirements from the federation. Nonetheless, for single investment projects, the lead authorities may nonetheless indeed
collect and use performance data for steering and controlling purposes. The innovative power-trains "flagship project" of the Ministry of Economics in Saxony-Anhalt will for example closely monitor the yield of a high tech R&D facility for modern power trains for engineering research and the automotive industry in Saxony-Anhalt. Input indicators like budget and time invested, output indicators like the number of students trained, number of research papers published, number of BA, MA and PhD thesis presented, usage by SME for applied R&D, fees generated as well as outcome indicators like jobs generated in Saxony-Anhalt will be constitutional elements of the program controlling that a mixed stakeholder supervisory board regularly considers.

NRW's delivery model gravitates around efficiency with timeliness information from the federal reporting system being the key performance indicator and a high level of trust that the municipalities will effectively deploy the money as political currency. A benchmarking for pure information purposes between all five NRW Bezirksregierungen helps their district's steering groups to check position, to communicate position and to compel progress compared to peers. The benchmarking was interestingly an initiative from the Bezirke who wanted to learn from each other. The ministry steering group was pleased and administrated this approach. All these systems do, however, not confirm priorities but only orderliness. Sustainability-related performance is only formally approved in the state project approval criteria check-list; there is no indication required that single investment projects actually create a sustainability yield and how large this yield actually is. The same is true for economic stabilization. The performance reporting indicates efficiency, i.e. timeliness of grant deployment, frugality is subject to ex-ante approval and ex-post control. This orderly funds deployment is likely to impact on economic stabilization but it cannot quantify how much and which kinds of projects are likely to have a higher impact on effectiveness objectives than others. For the intermediate state administration in the district authorities, there is even a disincentive to check project effectiveness in depths, because that would make them co-reliable and co-accountable for federal orderliness and appropriateness control. Although they received the instruction from the government to reduce approval to formalities provided no obvious violation is visible.
In Berlin, there are more comprehensive attempts at a veritable performance management system for at least two dimensions: timeliness and sustainability.

* The Senate of Finance's steering group in Berlin steers the timely implementation based on three status indicators: besides (i) share of investment volume translated into approved projects and (ii) grant volume with final payment transaction processed as required by the ZuInvG reporting system, the Senate politically defined (iii) grant volume contracted as targeted steering indicator for timely implementation. In a political agreement the steering group prioritizes grant volume contracted because in the Senate opinion, entrepreneurial security of having enough contracts in the books assured best the economic recovery purpose.

* For sustainability, the Senate of Finance operationalized the investment yield according to available information from existing management control systems. The systems generate meaningful information for steering purposes. The tested appraised indicators are "budget consolidation prime" "CO2 abatement contribution", "dissolution of investment backlog". For the first and second indicator of energy efficiency projects, approximation can come from the energy saving ordinances and saving experience from former energy efficiency measures. The third indicator can calculate an infrastructure maintenance prime compared to more costly renovation work required when investment is postponed. The data collection is pragmatic, not providing the full picture but an empiric snapshot for performance appraisal. The Senate of Finance's project group is quite positive about the indications these indicators provide, in terms of a continuously updated high level understanding of the program's contribution to sustainability.

An ex-post evaluation will allow for an empirical appraisal of efficiency. Effectiveness yields will remain a rather anecdotic or solid case based evaluation topic in most implementation models. However, there are good reasons to look carefully at the yield of the performance management attempts of the city state Berlin. If the steering value of Berlin's performance information actually enabled the Senate to undertake timely
corrective action for a better orchestration of project-based performance contributions, it might be worth to consider the measurement of and management by effectiveness information as a policy innovation for future large-scale investment programs.

3.2 PROGRAM FRAMEWORK AND COMPONENTS - CONTRIBUTIONS TO EFFECTIVENESS AND EFFICIENCY

As per our findings, the ZuInvG program management is an interrelated, duplicated two-level coordination effort. The ability to deliver effectiveness and efficiency depends on both the program governance between federation-state and state-municipalities. In the ZuInvG program management model, we found three elements that seem most critical to efficiency and effectiveness in the sequences of political action across levels of government. For federation-state coordination, an appropriate program framework for federation-state coordination matters most (3.2.1). Regarding state-municipality implementation, systems and processes fostering continuous status, output and outcome steering by lead authorities and lean implementation sequences of action matter most, including smart implementation choices (3.2.2). For the overall coordination architecture of this interrelated effort, the use of IT for implementation seems to be the most critical efficiency element besides informal steering and problem-solving (3.2.3).

3.2.1 Federation-state coordination framework

In the federation-state coordination of the ZuInvG, the program framework had to pass two indispensable obstacles under the condition of severe time pressures: the states insist on decision room of appropriate implementation design to ensure an efficient and effective deployment of funds. For the federation, the system had to confer enough margin of maneuver for effective and efficient implementation whereas ensuring state compliance with program objectives and reliable program and project documentation for coherent and uniform control of lower level grant deployment. Under the condition of time-pressure, the financial-aid scheme is a good legal basis for timely implementation
because it is avoiding time-consuming political allocation conflicts between federation and states. These conflicts are more likely to become intense as the states want to have a say when they co-fund a federal program. The financial-aid scheme has not only alleviated political distribution conflicts but has also helped to stipulate the state co-funding requirement of 25% as an indispensable financial incentive to ensure compliance with political priorities of the federation. Shared funding does lead to a more thorough selection of investment projects of states and municipalities while leveraging their valuable local expertise. In the same way, the avoidance of investment substitution reflected in the federal policy framework is an important financial design criterion for the overall objective of the fiscal stimulus package to generate additional demand.

Policy field-wise, the earmarking of funds to education infrastructure with a clear focus on energy efficiency was an appropriate policy choice. Energy efficiency projects contribute to sustainability of grant deployment, saving energy and fostering CO2 abatement. It also contributes to economic stabilization because public purchasing benefits the building construction industry and its suppliers, the latter having a high SME share. As a positive side-effect, energy efficiency projects are decreasing also energy costs for future public budgets; even financially weak municipalities can easily explain to the supervisory authorities why they spend money for energy efficiency projects. More rapid approval from the supervisory authorities has again a positive effect on the timeliness of implementation in financially weak municipalities.

The rapid amendment of article 104b GG is a great example for policy learning with the determination of federation and states to realize an effective and efficient program. The extension of eligible policy areas to municipal investments in times of crisis has improved the potential of effective and efficient deployment of investment grants at the local level, notably in the infrastructure basket. To give an example: due to constitutional constraints, areas of state competency, like school infrastructure, were out of eligibility before the amendment. The states were not allowed to deploy grants to these infrastructures outside energy efficiency measures even if this was a priority of a state or municipality. A comprehensive modernization of energy efficient windows could, e.g., not be accompanied by painting of class rooms in old school buildings. Thanks to the
amendment, these requirements are relaxed in times of crisis, making most needed construction choices possible. Thereby the amendment is eventually increasing the options of frugal grant deployment of the local level.

The liquidity management arrangements between federation and states are also seen as beneficial at the state and especially at the local level. The cash flow from the federal budget to municipalities is approved once the state administration has approved a project, even if the final federal approval comes several months later. The pre-funding reduces a payment backlog at the local level in detriment to companies that should timely receive liquidity and avoid that municipalities have to bear an additional financial burden for bridging loans of their outstanding receivables.

Additional factors, such as the political will of all actors to find a beneficial agreement to the whole country in the crisis and technical changes, like increase of federation-wide temporary tender law flexibility, further fostered timely implementation. In terms of efficient program management, the first implementation phase already shows that informal problem-solving and steering mechanisms have allowed to take important corrective actions, like the constitutional amendment.

As effectiveness is concerned, one can not go below anecdotic evidence up to now. The actors involved in program management expect a positive economic stabilization already in 2009. Reported numbers tell that a significantly lower share of money than 50% has actually reached companies in 2009 but it may create positive business expectations and market confidence that the overwhelming share of available funding has been allotted to concrete projects. A fact-based appraisal of effectiveness is to be left to an ex-post evaluation as appropriate data is not available, yet. What one can say up to now is that the effectiveness contribution of projects is substantially subject to ex-ante assessment of states and municipalities and ex-post control from the federation. A formal controlling link of federation and state level is missing during project implementation. This reduces our ability to give a qualified quantitative judgment of the actual ZuInvG program effectiveness during implementation and leaves meaningful corrective action, such as the constitutional amendment, rather reactive. Our guess is that performance management has a potential to close the manageability gap. Performance management would also
allow closing another steering gap, appearing after program termination. The program reporting and controlling system does not allow to follow up on the actual benefits realized by the investment projects. A benefit controlling ("Nutzeninkasso") for key program objectives, such as the sustainable use of building construction, i.e., percentage of modernized property under operations after a fixed number of years and energy savings in CO2/EUR/megajoule would shed light upon the actual impact of the investments. Pragmatic benefit controlling might significantly augment transparency for federation and states improving the opportunity for policy learning as well.

### 3.2.2 Lean implementation models in the states

In the state-municipality implementation effort, continuously steered lean implementation sequences of action seem to matter most. The key determinants are a centralized governance structure assembling the political level of the lead actors, a limited number of lead actors implementing a limited set of program components and management instruments for continuous steering.

In the state program governance, we find evidence that a high-level steering group or a high-profile steering committee that ensures consistency and coherency of implementation with program objectives are appropriate steering structures. If there is one main lead actor, like the Ministry of the Interior in NRW that balances the political interests between a secretary of state from both government coalition partners, this is the easiest design option. In Berlin, there is a much more difficult political influence matrix between party politics and Senate and Bezirke where a high-level steering committee, including the strongest Bezirks-Mayor, coordinate coherency and consistency between the program portfolios. Especially the local level benefits from a single point of contact for ZuInvG investment grants, be it a hotline in the lead ministry, be it a simple and consistent design of the state program elements. We are therefore convinced that, in the BMI terminology, the task force program management structure or matrix organizations with a high-profile steering group that possesses dedicated staff and other project resources, including high-level political attention, are critical factors to program success.
An influencing organization is rather suboptimal governance setting for fiscal stimulus measures as per our analysis.

We also found the attempt of side-payments to special political conflict lines to each state. In Berlin, this is the lump-sum to the state, in Saxony-Anhalt with an administrative culture of strong interpretation of the departmental principle, this is a division of funds between all ministries. In NRW, the mixed party leadership composition in the Ministry of the Interior did not require a shared resource allocation to various ministries. Instead of resource based conflict mediation we found an internal conflict-solving within the Ministry of the Interior. For the Christian-democratic party, this reflects in a strong subsidiary focus of the devolved program implementation. For the liberal party profile, we found a particularly lean ministerial program infrastructure, limited to orchestration and with all case-based steering delegated to the Bezirksregierungen.

In the various program architectures of the implementation types, we found a high diversity of program components. The breadths of program components varied between three in NRW and 29 in Saxony-Anhalt. The same holds for the number of lead actors, between one program and two subject-related lead actors in NRW, five in Berlin and all departments in Saxony-Anhalt. We indeed found one of the most ambitious single projects in Saxony-Anhalt, the power train R&D facility in the Ministry of Economics, that showed a convincing sustainability focus: as investment in R&D instead of concrete for regional R&D investment of automotive SMEs and excellent applied university research, demand-oriented, with a steering board including all relevant stakeholders and with performance controlling, including effectiveness and efficiency performance indicators. This finding is consistent with the DStGB conclusion that, at least in a rule-based policy framework, close steering of the lead authority is better achievable with application-based program architectures than with lump-sum grant allocation (DStGB:2009). We share however the strong feeling with various stakeholders that a fiscal stimulus policy program should better neither fragment resources and responsibilities between lead actors too much nor stipulate too extensive guidelines and application requirements. The fragmentation reduces awareness of the target groups for the available programs, blows-up transaction costs for search, understanding and
application at the local level and, this is at least our strong hypothesis, decelerates speed of implementation. The latter point should be subject to the ex-post program evaluation that might improve our knowledge for design choices under time constraints in the future. We leave open to this ex-post evaluation whether this timely backlog pays-off in terms of better effectiveness of outcomes. From the interviews we had, we would rather doubt it for the volume of projects, even if we found evidence that the superior steering potential turns out into great single flagship projects.

Last but not least, the use of steering instruments, in the financial-aid scheme may make a difference, at least with regard to efficiency. We found, i.e., a status and approval benchmark in NRW, between the five Bezirksregierungen, that provide the steering groups with weekly updates on the approval performance versus the other Bezirke and helps them to report to the Ministry of the Interior the consistency of NRW program implementation with the federal program framework. This benchmark does not collect additional data to the required federal reporting system but uses them as a controlling system for timely steering purposes. According to the Bezirksregierungen, this instrument is a valuable steering aid on the job. It may also make a difference in terms of both efficiency and effectiveness. Berlin's light version of a performance-based program management indicates that such a practice is feasible within the German rule-based implementation style and congruent with its administrative culture. In the efficiency dimension, the Senate concretized the timeliness reporting requirements from the federation for their steering purposes. They formulated an implementation status indicator with a pragmatic but ambitious timeline and pragmatic fulfillment targets. For effectiveness, the Senate is experimenting with three performance indicators collected from other management control systems that shed light on the relative contribution of several program components (portfolios) to sustainability. We found the steering value of the Berlin model most convincing and see it being an embryo of a pragmatic performance-based program framework that fits the German implementation specifics, including its institutional pre-requirements and its administrative culture.

Besides these key features we found some smart implementation choices that are both pragmatic and innovative, showing that the ZuInvG lives also to a large extend from the
creativity of implementing actors. For example, the association of cities and municipalities in NRW organized a virtual exchange platform in NRW, where municipalities could change earmarked investment lump-sums. The state accommodated the initiative as it helped municipalities to address their local needs more effectively while keeping conformity with overall earmarked grant baskets. This initiative was really easy to implement: the association agreed to pool and match demands, an email-address, an excel list and some communication sufficed to reallocate 50 measures with EUR >10 mn. between municipalities. Another example are regularly updated FAQ-lists from the lead ministries in various states. Far from being perfect because excessive in size and volume, the lists provided a certain degree of juridical security to the municipalities, that their projects would most likely pass the control of the federation. An email-hotline goes in the same direction; direct access to the steering group that provides a written statement, which increases juridical security to the municipal implementation authorities.

To conclude, on both the federation-state coordination effort and the state-municipality sequence, there are critical implementation factors including structure and processes, including informal arrangements beneficial to efficient implementation. To us, the largest improvement opportunity consists to us of a clearer mission to deliver effectiveness.

A final remark concerns skill levels, being an integral success factor that was not subject of our outside-in appraisal. We were pleased to see that policy design and high-level steering are ensured by formally qualified and experienced personnel, i.e. from the higher civil service supported by experienced upper-level civil service. Contractors with financial management track record in the private sector as well as specialized project management companies at local levels supplemented skill mix required to manage an ambitious large-scale program for effectiveness and efficiency. Nonetheless, we also found anecdotic evidence that few trainings in latest thinking and practice of managerial steering instruments, such as in project and financial management skills, were given prior to the implementation start. We argue therefore that people skills are most probably also an improvement leaver for even more efficient program management in the German system, being of crucial importance, i.e., when an ambitious EUR 10+ bn. investment program is implemented.
3.2.3 IT systems transforming multi-level governance

The use of IT turns out to be a critical efficiency driver for the duplicated two level implementation efforts. The readiness of the federation to invest into an IT project database facilitates the coordination needs across levels of government. The IT system has turned into the core tool of continuous operations of the ZuInvG program. It enables a rapid and transparent implementation of an approximately 40,000 investment grants in 16 states and more than 12,000 municipalities. The project database has predefined interfaces to state databases. In practice the state adopted this system for their relations to municipalities so that a three level virtual exchange took place with the states remaining key contacts to their municipalities. A traffic light system created transparency to all levels of government about potential pain points and follow-up needs for final federal approval. This light system does not only rapidly and efficiently inform about implementation problems. Ex-post, a light status indicator will be an important criterion to appraise the quality of implementation of the different states and municipalities, a high direct approval level being the aspiration of efficient program management.

Operationally, the project database financed by the federation has defined interfaces to state databases developed at state discretion. Practically, the states are entitled and free to specify their project database customized to their own organizational and functional needs. Here lies a key opportunity to transform the implementation relations to the implementing units. The project database could be developed into a state-level management information system for output and outcome controlling and close therewith the manageability gap at state level. If negotiated with the federation in future multi-level large-scale programs, even the federation could be involved in joint quality at entry and steering efforts to boost performance.

In addition to the efficiency improvement, the use of IT had an interesting side-effect. It helped in the policy negotiations to push for agreement as it created additional time pressure to content-related federation-state committees responsible for negotiating the program framework and fixing administrative procedures. The programming timeline created a sense of urgency in the IT working group that successfully presented trade-offs based on the IT architecture. The IT working group narrowed down the feasible solution
space of the content-related inter-ministerial working group in the latter stage of negotiation. In the early stage, the incremental work style of the federation-state negotiation system had been a source of inefficiency and frustration to the IT working group. They had to engage in resource-consuming adaptations of scope several times. According to the interviews it would be worth to better understand how to raise synergies between parallel IT and content-related working groups. This would benefit in an important way the preparation of future large-scale program implementation negotiations.

The IT seems to us a central element of the program framework that fostered timely and frugal implementation, especially in the relation of the lower levels of government with the federation. Unfortunately, very little sophistication effort was made of this reporting database for steering and project management purposes at state level. We are convinced that IT significantly enables the vertical coordination potential between the levels of government and it is a decisive success factor of the ZuInvG program that an integrated IT solution could be established under severe time pressures. For future large-scale investment programs, our main improvement suggestion consists of a more sophisticated use of the IT potential for controlling, steering and documentation purposes as well as potential outcome controlling: in fact better performance management, management controlling and reporting…thanks to IT.
Conclusion

The present study strived to analyze success factors of the fiscal stimulus package in Germany, widely considered as international good practice in the current financial crisis. With the ZuInvG program, we have appraised an ambitious fiscal stimulus program in size and scope under the side conditions of time pressure in the crisis and the legal basis of the financial aid scheme that offers the largest margin of maneuver to the state level for priority-setting and implementation. We focused on determinants to successful program implementation that can be best appraised based upon outside-in research and be made subject to an interim appraisal of the moving target: concerning both program management framework and state implementation choices fostering envisaged policy outcomes. According to the literature, this means - on a strategic level - the formulation of unambiguous and actionable target systems as well as the design of implementation models that allow implementing units to fulfill their objectives. On an operational level, this requires that the states deploy financial and political resources appropriate for ensuring a successful fulfillment of the political mandate they are liable and at least partly accountable for.

As a result of our case study we have found evidence that the states use their margin of maneuver in various ways but that four sets of variables shape implementation in all systems with different importance: (i) clearness of program and program component objectives to deliver against, including an information system for controlling purposes of orderly and appropriate implementation, implementation status and eventually program outputs and outcomes (ii) the state implementation systems (most detailed compliance with concrete central priorities versus timely implementation), NRW and Saxony-Anhalt being two extreme poles of a steering philosophy, (iii) the processes in place for appropriate approval, control and federal follow-up requests, including quality of entry checks, i.e. at the state level and (iv) the use of IT to feed and operate appropriate management control systems, i.e., using the project database and an eventually additional
automated generation of performance indicators in order to manage for efficiency and effectiveness. Crucial side-conditions proved to be factors of administrative and political culture, namely (i) the political configuration within the state systems (party politics and power distribution between the central state level and the municipalities influencing the program architecture); and (ii) the administrative culture, such as the degree of departmental autonomy in political practice and openness to performance management of the civil servants in the lead authorities. These two sets of side-conditions remarkably influenced policy implementation choices in the different states with most likely repercussions towards performance. Thus, to be empirically reliable, only a quantitative ex-post evaluation of success patterns based upon the project data set of the BMF might verify or refute this strong hypothesis generated in the case study.

As a general key finding, we acknowledge that the ZuInvG program has established a meaningful rule-based policy framework that pulls appropriate efficiency levers. Notwithstanding the likelihood that performance levels will vary according to implementation choices, the financial-aid mechanism and the design principles will trigger additional investment in policy areas suffering from an important investment backlog. In contrast to some press articles, the volume of measures is addressing the right targets and pragmatism with regard to what investment is sustainable helps at least in a certain amount of cases. To become really concrete: from an economic standpoint it is discussable whether investing in baby's changing tables benefits long-term growth – the effect chain would probably be at least quite indirect and from a book-keeping standpoint, it is certainly not an investment but minor assets. However, if, i.e., the purchase of diaper changing tables in the context of an investment in municipal early child care infrastructure is frugal, it is probably a pragmatic choice to approve it, provided the entire investment project meets program objectives.

That said, we see, however, the main improvement opportunity a ZuInvG-like investment program in a more consistent and ambitious promotion notably of effectiveness criteria enabled through existing IT systems. For efficiency as well, we consider that a more timely use of the IT database potential would improve frugal program operations upfront
and close the steering gap of the largest share of investment projects during project implementation.

The ZuInvG reporting system is in fact developed with federal money and suits first of all the federation's ex-post control purposes. However, our reference framework as well as empirical hints from Berlin and NRW do shows us that the potential of the IT reporting system exceeds by far the reporting purposes for ex-post control of the BMF and public relations purposes of the federal chancellery. NRW and Berlin show us that the requested project database has not only a documentation value. For the states, being strategy centers in the financial-aid scheme, already the required data sets contain performance indicators with important steering value for efficiency and indirect steering value for the economic stabilization dimension of effectiveness. The reporting system, contrary to the wording of the federal bill, is rather blank in the sustainability dimension of effectiveness. Berlin and NRW both use the IT database in an extended version to manage for efficiency and Berlin is experimenting with management for effectiveness. If dissolution of investment in EUR backlog, CO2 abatement in tons and budget consolidation prime in EUR, pragmatically generated from existing management information systems and modestly enhanced with additional data collection investment gave a more concrete meaning to sustainability, it would be feasible to manage for improved sustainability and also sell success in a more haptic way to public, parliament and other stakeholders. The federation would be able to timely steer effectiveness as well, communicating what outcome mix it concretely prefers to achieve and negotiate politically desired outcome levels with the states. In this supplementary vision to rule-based program management one could even go a step further and alleviate earmarking of investment grant volumes when outputs with an alternative project mix decided at the state level delivers superior returns - although this might conflict with regulation as well as administrative culture in Germany and therefore would need very careful pressure-testing.

Besides this more radical alternative to the existing policy framework, one can add two timing suggestions regarding the process sequencing. First, the federation has started the first final approval round in early 2010 only. A more timely control of finalized investment projects by the federation might have helped to identify pain points upfront
and diminish the follow-up rate. This hypothesis is more speculative but based upon other operations we would recommend to test a learning curve after the first approval round once a robust data sample is available. Second, an earlier and more transparent communication of new interpretations, i.e. revisions in FAQ-lists, were not always communicated clearly, leaving in these cases unnecessary juridical insecurity and raising transaction costs to municipalities.

Last but not least, clearer political targets, such as the fund deployment rate target of 50% in 2009 might have helped to align priorities across implementation models stronger. This would have been a challenge under the time constrains of the ZuInvG program but favorable to implementation coherency, i.e. with regards to the readiness of states to actually define and manage their priorities. A specific focus in an ex-post evaluation of the state implementation models should be the performance of lump-sum grant allocation mechanisms. For such a large project volume, municipalities as in NRW, but also in Niedersachsen and other states benefitted from an unusual degree of freedom of project design and management competences. The actual effectiveness of this rapid allocation mechanism that reduces political distribution conflict remains open until an ex-post evaluation.

In the variety of program management models at state level analyzed based on our reference framework, we identified six elements that seem driving effective and efficient program delivery.

1. **Clear policy objectives and priority-setting**: the urgent need for political action and the therefore chosen legal base of the financial-aid scheme left priorities at least partly ambiguous. The magic triangle of the German association of municipalities constructs a trade-off between timeliness of implementation, margin of maneuver to municipalities and juridical security in local implementation. This is certainly one side of the coin. Across three levels of government, there is also a trade-off between congruent implementation of objectives and timely implementation of rather fuzzy objectives. To be more precise, we collected 17 implementation targets that co-exist in the ZuInvG program management practice. The program framework is clear in the efficiency dimensions, namely frugality and timeliness in resource deployment. It is less explicit in
the effectiveness dimension, i.e. the sustainability objective is not clearly defined. In state practice, most states do not beef the effectiveness dimension up in a way that provides clear messages to the local implementing units. NRW does not by purpose, due to a decisive prioritization of timeliness of implementation. Berlin tries to further operationalize sustainability; others prefer ambiguity or prefer departmental priority-setting to overarching congruent objectives. It certainly contributes to program effectiveness if political expectations to the administration are the least ambiguous.

2. A centralized program management office embedded in a taskforce or matrix organization with own political resources, i.e. dedicated personnel, problem-solving capacity and leadership attention. In harmony with revised literature, our interview results indicate that program steering groups organized as taskforces or matrix-organizations work better to navigate the storm under time pressures. For operations, the interviewees found it helpful to reduce internal coordination efforts during implementation. An upfront investment in a concerted mandate and a high-level steering committee that bridges and mediates conflict seems the most appropriate program management setup. An internal leadership structure that balances political conflict, as in NRW, is an interesting alternative but the institutional pre-conditions scarcely exist in Germany, where ministries are normally in the hand of a single coalition partner.

3. Coherent implementation models – program management responsibility should be least subject to the kind of political compromise that is detrimental to efficient coordination and effective resource deployment. Lump-sum and application-based allocation procedures may both work well providing the disadvantages for program coherency are minimized. NRW delegates for example the largest part of autonomy with project responsibility and liability to municipalities. The state only bears formal accountability. For fostering efficiency, i.e., a benchmarking between the main state approval entities, the Bezirksregierungen, enhances formal approval coherency. In contrast we would expect from application-based models that they accept time lags in order to improve the lead authorities' steering ability, enhancing management for effectiveness and juridical security to the local level.
4. **Management reporting and controlling for steering purposes.** We consider it of utmost importance to use the potential of IT to set up management reporting and controlling structures for actual steering purposes. In political implementation models with decentralized responsibility, this is mainly a strategic and operative task of the state governments. Hence, it also helps the federation to look clearer and orchestrate concerted implementation because concertation upfront exponentially diminishes the implementation noise afterwards. As a pre-requisite to a pragmatic performance-based program management, management reporting and controlling enable lead implementation authorities to discover effectiveness and efficiency improvement needs and opportunities for program implementation in a timely manner and to engage into corrective action. It also enables implementing units to engage into evidence-based negotiation on project objectives and trade-offs.

5. **IT driving efficient vertical coordination** smoothes operations within and between levels of government. It has also a potential to increase steering for effectiveness provided the actors agree to and are able to pragmatically collect and process a meaningful set of performance indicators. Leveraging IT enhances the use of comprehensive performance information of various management control systems for management purposes, i.e. also to managing for effectiveness. This holds under the condition that data protection rights keep untouched.

6. **Leadership attention to accommodating the creativity of people** at all levels of government. There are smart implementation choices that do not cost much time and money but lead to better results. The status lights in the IT system, the exchange platform for earmarked investment grants, a performance-managing flagship project on power-train technology research and dissemination in Sachsen-Anhalt and the benchmarking mechanism in NRW have all been ideas of creative people in the civil service that need political accommodation to become practice and make a difference.

As a final remark, key stakeholders turned out to be curious how effective and efficient the lump-sum grant allocation approach is in practice. The key pattern of lump-sum grant schemes and its likely positive impact on timeliness of implementation and (an interest-driven) local margin of maneuver for effective grant deployment were also brought into
discussion by the "magic triangle" of implementation DSTGB (2009). Fact is that the lump-sum grant allocation of the ZuInvG is exceptional for German large-scale investment program management practice regarding volume and for the devolved implementation type also regarding the devolved margin of maneuver and control. It may certainly be worth in 2011/-12 to engage an in-depth benchmarking of ZuInvG program implementation efficiency across the 16 German states using the BMF project database and key stakeholder's experiences. Based on our observation points, we would expect that the six key success factors presented above would be necessary side-conditions to efficiency. Even if the ZuInvG reporting system hardly collects any quantitative evidence on effectiveness, i.e., not on sustainability, we would see an even higher potential of a pragmatic performance-approach including effectiveness indicators to future less time-constraint large-scale investment programs that involve multiple stakeholders at several levels of government. As a first indication, a closer look to Berlin's fragmentary experiences and a root cause analysis of barriers to consistency of other performance indicators that had been initially discussed in the BMF, might be elusive.
Bibliography

Scientific and grey literature


Dooren, Wouter van (2008): Performance Information in the Public Sector. How it is used, o.O.


Hesse/Ellwein (2004): Das Regierungssystem der Bundesrepublik Deutschland, Wiesbaden.


Kohler-Koch, Beate (Ed.): Linking EU and National Governance, Oxford.


Worldbank (2005): PIUs


Primary documents


European Commission: Documents on evaluation methodology, at www.evalsed.info.

Gemeindebund Saxony Anhalt (2009): Presentation without title [Presentation of the implementation of the ZuInvG in Saxony Anhalt at the congress Moderner Staat in Berlin], November 24, kindly shared by the Städte- und Gemeindebund Sachsen-Anhalt.


Appendix

1. Request for interviews
2. Interview guide
Interviewleitfaden

Effektive und effiziente Umsetzung des kommunalen Investitionsprogramms 2009-11

Gesprächspartner: ___________________
Datum: __________
Steuerungstyp: ____________________
Kategorie: □ B □ L □ K □ Ext


I Überblick

¶ Wie beurteilen Sie die Umsetzung des kommunalen Investitionsprogramms aus Sicht Ihres Hauses?

II Programmziele und -inhalte

¶ Was sind aus Sicht Ihres Hauses die wesentlichen Umsetzungsziele des kommunalen Investitionsprogramms?

¶ Gibt es klare allgemeine Prioritäten? Wenn ja, welche?

¶ Welche eigenen Prioritäten für Projektbewilligung und -umsetzung haben Sie zusätzlich formuliert?

¶ Anhand welcher Kriterien bewerten Sie den Erfolg des kommunalen Investitionsprogramms?
III Management Kontext und Steuerungsmodell

- Wie ist Ihre Einheit beim Vollzug des kommunalen Investitionsprogramms verankert?

- Wie ist die Umsetzung in Ihrem Haus verankert? Verfügen Sie über eine eigene Programminfrastruktur mit eigenen finanziellen und personellen Ressourcen (PMO/Gremien/LAs/AGs)?

- Wie verläuft die horizontale Koordination mit anderen Fachabteilungen Ihres Ressorts und anderen involvierten Ressorts? Gibt es klare Abstimmungswege und sind diese für Ihre Arbeit geeignet?

- Wie gestaltet sich die (vertikale) Koordination zwischen den gebietskörperschaftlichen Ebenen?
  - Stellt Sie der Programmvollzug über drei gebietskörperschaftliche Ebenen vor besondere Herausforderungen?
  - Welche Instrumente besitzen Sie, Vollzugsprobleme zeitnah zu entdecken und Gegenmaßnahmen zu ergreifen?
  - Ist eine Evaluation der Ergebnisse beschlossen? Wenn ja, wie?

IV Berichtswesen

- Wie beurteilen Sie den Steuerungsnutzen des Berichtswesens?

- Werden zusätzliche Informationen zu der gemeinsamen Verwaltungsvereinbarung erhoben? (z.B. Projektdauer und Meilensteine, Prozessindikatoren, Leistungsindikatoren etc.)? Wie aufwendig ist die Berichterstattung?

- Existiert ein Führungsinformationssystem, das die Berichtsinformationen konsolidiert? Wenn ja, wie soll es genutzt werden?

- Wie sehen die Berichte aus?

V Sonstiges

- Weitere Anregungen/Erfahrungen/Kritik

- Weitere Ansprechpartner

Herzlichen Dank für Ihre Unterstützung