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"Glocal" Governance: Mitigating Local-Global Tensions in Digital Transformation Programs

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Abstract

In contrast to most innovation projects, digital transformation programs aim at achieving benefits not only on the level of one or more processes, markets or functions (local benefits), but also on the enterprise or even business ecosystem level (global benefits). Although balancing local and global objectives (e.g., differentiation vs. coherency) is being recognized as a key lever for transformation success, program governance knowledge and practice usually rely on a top-down approach, often leading to tensions between global and local stakeholders. Informed by tension theory and based on engaged scholarship in four large digital transformation programs, we propose six validated design principles and eight projectable design features for tension-aware "glocal" transformation program governance. Evidence from the conducted programs is presented showing that, by following these design principles and implementing contextualized design features, not only competing local and global objectives can be balanced but also effective collaboration in tension-prone settings can be facilitated.

KEYWORDS

digital transformation; decentral organizations; program governance; global/local tensions; design principles

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1. How Local-Global Tensions Challenge Transformation Programs

Innovations enable changes that affect one or more business processes, markets or products. In contrast to such local changes which are usually implemented in the form of projects, enterprise-level transformation affects large portions of the enterprise or even a business ecosystem so that it is normally implemented as a program – i.e., a bundle of coordinated projects. In contrast to projects, programs not only tend to be less specific regarding their outcome from the outset (Pellegrinelli, 2011; Turner & Müller, 2003) but also need to ensure the realization of both local and enterprise-wide (global) benefits (Lycett et al., 2004; Turner & Müller, 2003). Typical global transformation benefits are consistency of local changes, increased agility of the "system of systems" or restored competitiveness of the enterprise as a whole. Only focusing on global benefits can impede local differentiation, reducing benefits realization for local organizational units. At the same time, focusing on local differentiation of changes will maximize local benefits, but erases the global value potential of the introduced solutions and changes (Ross et al., 2019).

A healthy balance between local and global benefits is crucial to achieve long-term change success (Gaim & Wåhlin, 2016; Lewis et al., 2014; Martin, 2007). This means however that neither global nor local stakeholders can maximize their benefits, creating tensions between stakeholders about who gains most from the transformation effort. Through a responsive approach towards such tensions, associated challenges can be addressed, and the tensions can even serve as a lever to achieve a better outcome (Kiselev et al., 2020; Smith & Lewis, 2011). However, this is particularly difficult for large, enterprise-wide programs in organizations which are characterized not only by a plurality of stakeholders (Boonstra et al., 2017; Gregory et al., 2015; Thiry, 2002), but also by the development of decentralized organizational structure with local autonomy (e.g., in multinational corporations). For such organizations, not only the different local stakeholders (i.e., heads of local businesses or IT units) but also global stakeholders (i.e., corporate management) are used to primarily considering their (local or global) concerns (Ross et al., 2019).

Consequently, transformation program governance needs to be designed in such a way that competing stakeholder goals are disclosed and a healthy balance between the opposing local and global interests is found and maintained. Particularly, the tension between local differentiation and global consistency needs to be addressed (Weill & Ross, 2004). We use the term glocal to designate such a balance.

In the context of this research, governance is understood as the means to ensure the advancement of joint objectives through direction, coordination and control within organizations, whether temporary or permanent (Crawford et al., 2008; Imperial, 2005). Existing research and practitioner literature on program governance often relies on top-down approaches and deterministic logics (Boonstra et al., 2017). Such approaches emphasize clear-cut either-or decisions and black-and-white thinking, which are hardly appropriate for the needed complementary and balancing approach in the presence of tensions (Farjoun, 2010). It can thus be claimed that program governance needs to be re-thought and re-designed in order to not only prevent tension challenges, such as collaboration problems or goal conflicts (Engeström & Sannino, 2011), but also to balance local and global interests. In line with Simons (1995) and Wareham et al. (2014), we understand this shortage as a design problem, where specific governance interventions are expected to direct local/global tensions within programs "toward a sustainable equilibrium" (Wareham et al., 2014, p. 1196). Our research question thus is:

> *How should program governance be designed so that it effectively balances local change differentiation and global change consistency in tension-prone digital transformation programs?*

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The results presented in this paper emerged from

- developing glocal program governance interventions in three Action Design Research (ADR) projects conducted by the authors together with the teams of three Digital Transformation Programs (DTPs), each embedded in a different large company over a period of 20 months, and
- validating the developed design principles and design features in a DTP embedded in a fourth large company afterwards.

Based on the concurrent synthesis of these context-sensitive real-life interventions and informed by governance and tension theory, six design principles (DPs) and eight projectable design features (DFs) were derived, validated and evaluated.

Besides beneficial outputs for the four case DTPs, this study contributes to both practice and research:

For practice, the problem-class level artefacts (DPs and DFs) promise to offer valuable guidance for executives seeking to enhance their existing program governance structures and processes to better fit the pluralistic and contradictory reality of digital transformation in large, often decentralized enterprises. While having been developed in primarily national, less regulated industries, the interventions have been designed to also be adaptable to smaller (decentralized) organizations, regulated businesses and international businesses. While being concrete enough to be validated and evaluated in the fourth DTP case (a globally active industrial services firm) without major changes, the generic nature of the proposed governance interventions also supports their adaptation to more specific sub-types of tension-prone digital transformations such as enterprise level AI adoption.

For researchers, this article offers not only valuable first-hand insights on how to conduct a complex ADR project with multiple case organizations. Our methodological contribution is that we understand DPs as abstract composites linking problem-class level design requirements to problem-level DFs. The bi-directional relationship between DPs on the one side and DFs and design requirements on the other further elaborates the conceptualization of DP construction in Design Science Research which is often too much biased towards design requirements alone.

With its potential to solve a real-life problem and its clear and rigorous methodical process, ADR appeals to both researchers and practitioners. ADR recognizes close and direct collaboration with practitioners as a valuable possibility to both learn and theorize from a specific intervention in an organizational context to improve existing solutions (Jöhnk et al., 2019). It allows for the development of working problem solutions, which are iteratively "shaped by the organizational context during development and use" (Sein et al., 2011, p. 37) and at the same time facilitates generating design knowledge as a continuous reflective process. A detailed description of the generic ADR process can be found in the Appendix.

We followed the ADR approach to co-create solution artefacts (governance interventions) in three different DTPs with three large companies, including an ERP transition, the development of an enterprise-level merchandise system and the development of an omni-channel platform. The three partner companies were considered suitable in terms of similar life cycle and (at least fundamentally) context similarities to generating DPs based on the situated design and implementation of tension-aware governance interventions. This inductive approach is common for ADR studies (Möller et al., 2020). In parallel to practice collaboration for contextualized solution development in these DTPs, the

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authors abstracted problem and solution spaces to derive and refine problem class-level requirements, DPs and DFs. The proposed glocal program governance approach was later applied in a fourth practice DTP for validation and to identify limitations and needs for refinement and extensions. The research methodology along the ADR stages is described in detail in Appendix 1.

The paper is structured as follows. In Section 2, existing knowledge about programs, DTP, program governance, and tensions is reviewed. The three DTP programs and the development of six DPs and eight DFs for glocal governance are presented in Section 3. Section 4 documents what we learned from evaluating glocal governance in a fourth transformation program. The paper closes with a discussion of insights and suggestions for future research in Section 5.

2. Conceptual Foundations: Tensions and Governance of Large-Scale Transformations

2.1 Governance Challenges in a Tension-Prone Setting

Program governance entails measures of direction, coordination, and control through which joint objectives of stakeholders with diverse degrees of autonomy are set (e.g., decision-making) and attained (e.g., monitoring) (Crawford et al., 2008; Imperial, 2005; Turner & Müller, 2003). In line with governance research in the IT management and project management domains, effective governance is understood as a set of measures that ensure that the "right things are done" (i.e., effective program management in terms of achieving program goals) and that "things are done right" (i.e., efficient program management in terms of program processes and structures) (Jöhnk et al., 2019; Pemsel & Müller, 2012; Williams & Karahanna, 2013).

Our research is aimed at designing program governance interventions that lead to an appropriate balance between the opposing underlying local and global interests, referring to both program goals and the applied program processes and structures (Weill & Ross, 2004). Underlying tension dimensions need to be considered. A tension is typically decomposed into various competing demands or opposing elements in different dimensions or levels (e.g., standard vs. variety of output; control vs. autonomy of actors; collective vs. individual identification) (Smith & Lewis, 2011; Wareham et al., 2014). Taking up this decomposition approach, four opposing elements were identified and structured along the dimensions of (1) program goals and (2) program organization and collaboration.

Relating to (1) program goals (i.e., technological and organizational goals), there are the tensions of system customization vs. standardization (Boonstra et al., 2017; Gregory et al., 2015; Rolland & Monteiro, 2002) and organizational differentiation vs. integration (Boonstra et al., 2017; Ross et al., 2019). Both tensions in this dimension are highly interrelated (Boonstra et al., 2017).

Tensions regarding (2) program organization and collaboration refer to contrasting processes and structures in pursuit of the desired outcome (Smith & Lewis, 2011). Relevant tensions are the top-down vs. bottom-up approach (Boonstra et al., 2017; Gregory et al., 2015) and collective vs. individual identity (DeFillippi & Sydow, 2016; Smith & Lewis, 2011; Wareham et al., 2014).

Local-global tensions are especially pronounced in traditional organizations as they are characterized by so-called silo structures that have more or less deliberately been created and which guide operations

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for many years (Ross et al., 2019). In programs, representatives of the different local stakeholders (i.e., heads of local business or IT units) and global stakeholders (i.e., corporate management) become actors of the program. Actors coming from this decentralized organizational context are often unaccustomed to considering global concerns (Ross et al., 2019). Hence, ensuring collaboration, reducing conflicts, and finding a balance between global change consistency and local change differentiation becomes even more challenging.

Moreover, from a timing perspective, it is expected that the pre-implementation phase is especially critical in paving the way for the success of the program, which is anchored within the parent organization (Miller & Hobbs, 2005). In this phase, the different local and global actors with their conflicting interests come together to make commitments regarding program goals (i.e., what should be achieved) and processes (i.e., how the goals should be achieved).

2.2 Tension-Aware Program Governance

Following the argumentation that program governance should enable a balance between local and global demands regarding program goals, organization, and collaboration, a solution is needed that enables simultaneously meeting competing demands. Tension theory could inform that design because it offers insights into how organizations can respond to tensions through balancing approaches rather than resolution efforts (Jarzabkowski et al., 2013; Smith & Lewis, 2011). Acceptance, confrontation, and transcendence are active responses presented by Jarzabkowski et al. (2013), which aim at balancing competing demands.

Acceptance refers to identifying tensions and establishing willingness among actors to find a balance between competing demands (Lewis, 2000; Poole & van de Ven, 1989). Confrontation refers to directly working through a tension's source by, for instance, discussions among actors (Lewis, 2000; Poole & van de Ven, 1989). Finally, transcendence refers to reframing the relationship between competing interests from being contradictory to being complementary (Lewis, 2000; Poole & van de Ven, 1989; Smith & Lewis, 2011). Existing research suggests a mix of active responses to balance tensions (Lüscher & Lewis, 2008; Smith & Lewis, 2011).

Undermining the initial findings of organizational studies, both IS and project management scholars have shown that finding an active approach towards tensions and seeking a balance between opposing demands regarding change is a promising strategy (Boonstra et al., 2017; Gregory et al., 2015; Svahn et al., 2017; Wareham et al., 2014). However, with a few exceptions in domains such as platform ecosystems (Staub, 2023; Wareham et al., 2014), governance design has mostly neglected to consult tension theory so far.

Summarizing the preliminary analysis of the problem and solution space, the conceptual model of enhancing program governance in tension-prone settings is based on the idea that the program's context can lead to four local/global tensions challenging governance when trying to adhere to the imperative of local change differentiation and global change consistency. The arising tension challenges can be prevented or mitigated through tension-aware governance measures. Based on tension theory, tension awareness can be achieved through governance measures that allow active responses (i.e., acceptance, confrontation, and/or transcendence).

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		ERP Transition @ManufacturingCo	Merchandise System @RetailCo	Omni-Channel Platform @InsuranceCo
Parent Organization	Industry	Manufacturing	Retail	Insurance
	# Employees	<10,000	>100,000	<10,000
	Organizational form	Subsidiaries	Functional	Product-based
	Autonomy of business units	High	High	High
	Autonomy of IT units	High	Low	Low
Digital Transformation Program	Aims	Improve customer service; improve innovation capability; increase efficiency and quality; enable synergies	Accelerate demand realization; increase efficiency; reduce compliance risks	Improve experience at B2E, B2B, and B2C interface; increase efficiency and integration capability; scalability of platform
	Aspired changes	Technology: Implementation of standard ERP solution Business: Harmonization; new collaboration model	Technology: Implementation of in-house merchandize system Business: Renew business logic (end-to-end integration)	Technology: Implementation of interaction services Business: Uniform digital and physical processes
	Local level actors	4 Subsidiaries / production sites (company I, company II, company III, company IV each with its designated IT unit)	5 Business units (Procurement, Logistics, Sales, Finance & Controlling each with its designated IT support)	3 Business units (Sales, Professional Pension, Non-Life Insurance each with its designated IT support)
	Global level actors	Company management Shared service unit (incl. Corporate IT)	Company management Company-wide IT	Company management Company-wide IT
	Program management maturity	High	High	High
	Actors' experience with DTP	Low	High	Medium
	Duration	~6 years	~7 years	~6 years
	Budget (in Million USD)	~150	~150	~100

Table 1. Case Programs

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3. Investigated Cases and Findings

3.1 Case Presentation

The partners of the ADR project were a very large, international retail company ("RetailCo") headquartered in Germany, a large national insurance company ("InsuranceCo") in Switzerland and an international building supplier ("ManufacturingCo") headquartered in Switzerland. For each company, an ADR sub-project was launched. The collaboration with the three companies lasted for 20 months in total. All three case companies were among the largest in their market and exhibited a high degree of business unit autonomy.

The three case DTPs shared many similarities but also exhibited certain differences. The commonalities especially lay in their program characteristics: All three programs were initiated from the top management level as strategic top-down initiatives. They all sought to contribute to the corresponding parent company's digital transformation through realizing specific technological and business changes within a timespan of six to seven years and a budget of US$100 to 150 million. All three cases engaged a professional program management team. Regarding the DTP context, all case programs were embedded within large, traditional organizations with historically grown silo structures and high local autonomy.

Their differences mainly lay in contextual nuances (see Table 1). ManufacturingCo was a classic corporation. On a global level, the corporate center was involved in the DTP with its management responsible for typical corporate functions in finance, compliance, HR, strategy, and IT. On the local level, four highly autonomous subsidiaries (i.e., production companies) were participating. The subsidiaries produced similar products for different geographical markets and were highly autonomous in doing both business and IT. In contrast, RetailCo was not structured according to markets or products, but according to functional clusters. Within the program, the global level was represented by company management and corporate IT, while the local level was represented by four business units, procurement, logistics, sales, finance, and controlling. InsuranceCo was organized as a product-based matrix organization. From the local level of the company, three business units (sales, professional pension, and non-life insurance) were involved. Professional pension and non-life insurance units were particularly autonomous in doing business. The global level was represented in the program by the company management and by the corporate IT function.

Another difference lay in the stakeholder's experience. In RetailCo, local and global stakeholders already had experience with an enterprise-wide ERP program of a similar dimension, which had recently failed. The merchandise system was designated as successor program. In InsuranceCo, both local- and global-level stakeholders had gained some experience with smaller-scope DTP. ManufacturingCo had no experience with enterprise-wide DTP at all.

3.2 Development of Design Principles

DPs are not created in a certain discrete step of the research process, but rather emerge over the course of designing contextualized solutions to problems of a certain class (Gregor & Hevner, 2013; Sein et al., 2011). To make their development transparent, we first present intermediate results: Common issues and meta-requirements and design decisions (see Table 3).

Based on consolidating issues of the three DTPs to common issues, we derived so-called meta requirements (MRs, concrete problem requirements generalized to the problem class level). They

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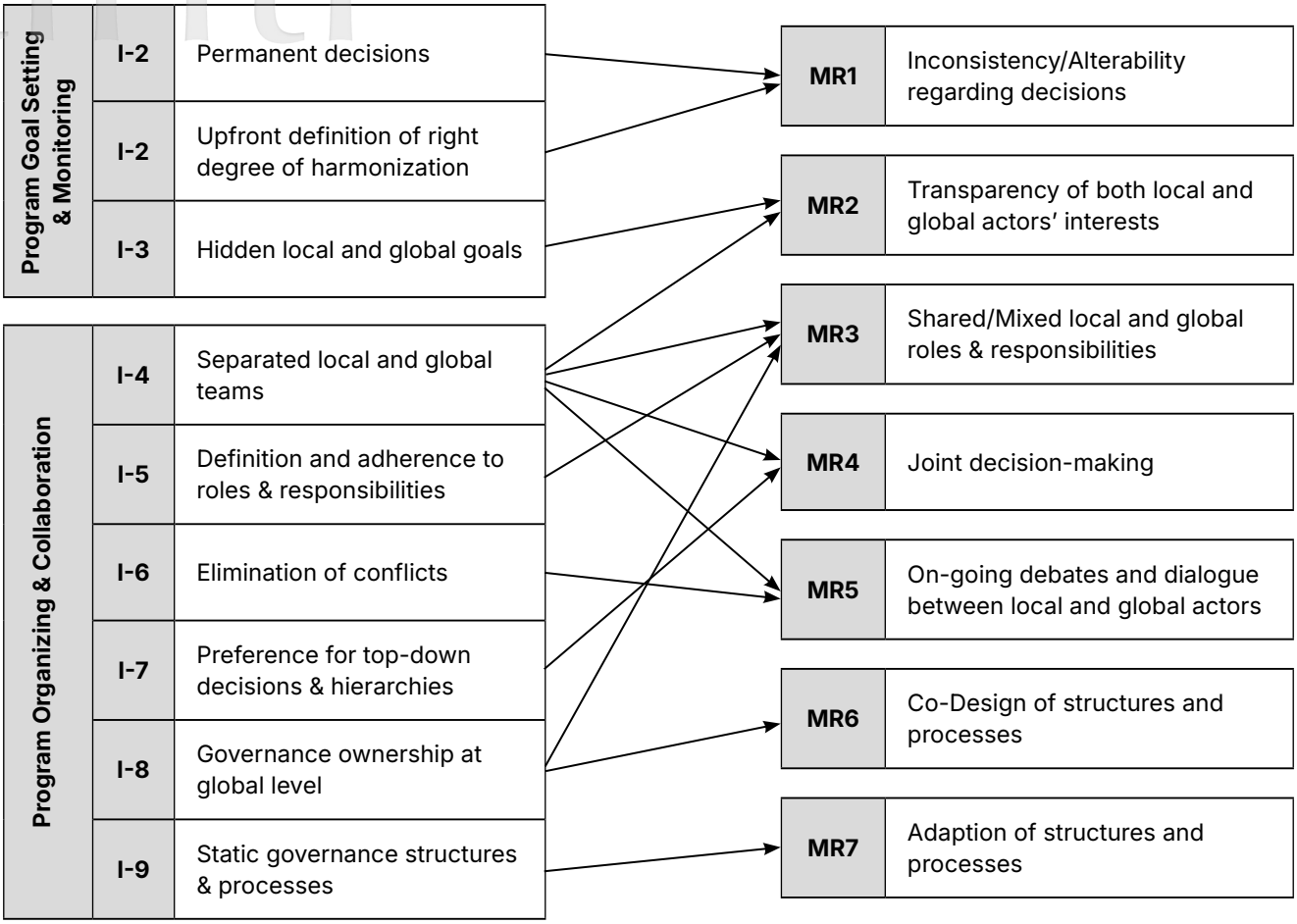

Figure 1. Common Issues and Meta-Requirements

represent a common understanding of what characteristics effective glocal governance in tension-prone settings should have. While the issues constitute the why and what needs to be done to enhance tension-aware governance, the MRs primarily refer to how it should be done. Common issues, MRs and their relationships are visualized in Figure 1.

Based on these problem-class level requirements, an initial set of six (requirements-biased) DPs was identified. They aim at facilitating alterability of decisions, transparency of both local and global actors' interests, shared or mixed local/global roles and responsibilities, joint decision-making, ongoing debates and dialogue between local and global actors, the co-design of structures and processes, and the adaptation of structures and processes which could be derived. The formulation of the DPs is based on Chandra et al. (2015) specifying the material property, the actions, and the boundary conditions. Table 2 lists the preliminary, requirements-biased DPs, their relationships to MRs and supporting literature for the respective principles.

To mitigate the requirements bias, in a next step the solution perspective was introduced. From the co-creation of glocal DTP governance in the three cases, we were able to identify at least two specific governance interventions that matched each DP candidate. Linking requirements to actual design decisions (i.e., contextualized solution components) facilitates reflecting completeness, usability and usefulness of the preliminary DPs. To illustrate that process, examples of contextualized governance interventions related to one exemplary DP (DP1: collective choice arrangement capability) are listed in Table 3.

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Initial (Requirements-Biased) Design Principles		Meta-Requirement	Literature Validation
DP1	Provide governance with collective choice arrangement capability, so local and global actors can jointly participate in goal setting and decision-making, given that the local and global goals and decisions are of mutual concern.	**MR3, MR4**	Weill and Ross (2004); Lüscher and Lewis (2008); Ostrom (2015); Hall and Bonanomi (2021)
DP2	Provide governance with workable certainty capability, so the local and global goals are temporally fixed, given that local and global actors need temporary stability.	**MR1, MR2**	Poole and van de Ven (1989); Miller and Hobbs (2005); Smith et al. (2016)
DP3	Provide governance with formal interaction capability, so local and global actors can work together in fixed teams, given that local and global interests in a program topic or process are in conflict.	**MR2, MR3, MR5**	Poole and van de Ven (1989); Lewis (2000); Jarzabkowski et al. (2013); Boonstra et al. (2017); Lannon and Walsh (2020)
DP4	Provide governance with permeable boundary capability, so information and resources from local and global levels can cross boundaries, given that there are distinct local and global program teams.	**MR2, MR3**	Provan and Kenis (2008); Miterev et al. (2020); Henry et al. (2020)
DP5	Provide governance with transparent control and monitoring capability, so local and global actors can both comprehend current conflicting interests and the current weighting of interests, given that the provided information allows a conclusive assessment.	**MR2**	Jarzabkowski et al. (2013); Harmsen et al. (2009); Porter-O'Grady (2019); Lannon and Walsh (2020)
DP6	Provide governance with iterative, joint learning capability, so changing local and global interests are considered and continuously feed into ongoing adjustment, given that there are dynamic changes within the program and its context.	**MR1, MR6, MR7**	Turner and Keegan (2001); Weill and Ross (2004); Miller and Hobbs (2005); O'Leary and Williams (2013); Miterev et al. (2020)

Table 2. Initial Set of Design Principles

The resulting preliminary DPs were validated twice by means of semi-structured interviews conducted with the "implementers" of each case program. The first validation focused on capturing usability. Twelve months after the launch of the designed governance interventions within each case program, a second validation focused on usefulness – i.e., the balancing effect of tensions and effect on program governance effectiveness. Figure 2 depicts the summative results of the two validations across all three case programs as a matrix with the two orthogonal dimensions usability (ease of use) and usefulness (balancing effect). This helped to represent the overall relevance and practicability of each DP.

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DP1: Collective Choice Arrangement Capability		
ERP Transition	**Merchandise System**	**Omni-Channel Platform**
• Steering committee with 4 global and 4 local actors • Change board consisting of 2 global and 4 local representatives • Shared core business process ownership (3 process teams with local and global representatives in the lead) • Clearly defined role profiles with shared responsibilities	• Steering committee with 3 global and 5 local actors • Change board consisting of 2 global and 2 local representatives • Shared strategic topic lead (duo of 1 global and 1 local representative) • Rules/principles regarding topics that require both local and global actors to decide	• Steering committee with 4 global and 3 local actors • Change board consisting of 2 global and 3 local representatives • Program management team consisting of local and global shared decision-making rights for specific topics identified

Table 3. Design Decisions per Case (DP1)

The two validations provided input for revising and further refining the preliminary DPs:

- In DP3, informal interaction capabilities were considered in addition to formal interaction capabilities.
- For DP4, actors were considered as an additional boundary-crossing element because the people aspect was missing in the initial formulation.
- The co-learning focus of DP6 was broadened to co-adaptation to reflect that institutions and processes are actually changed (and not only insights are reflected) during the transformation.

In summary, not surprisingly joint understanding and joint institutions are key for DTP success. The resulting DPs operationalize this essence in the light of the necessity that implementing "jointness" in complex organizations and complex change endeavours requires context awareness, elaborate institutions, elaborate processes, boundary objects, adaptability, and monitoring. Figure 3 summarizes the refined DP proposal and Appendix 2 contains a detailed description of each DP.

3.3 Implementing Glocal Transformation Program Governance

While validated DPs promise to constitute a useful foundation to design glocal DTP governance interventions, the generic nature of DPs may be difficult to translate them into practical contexts of concrete transformation endeavours.

DFs are concrete instructions for the implementation of a DP (Gregor et al., 2020). In contrast to specific governance interventions that result from design decisions in context, DFs are described on a problem-class level. Based on the co-created design decisions in the three cases, we therefore generalized the co-created specific interventions for each DP, resulting in a set of abstract DFs for global transformation program governance. As an example, the seven co-created interventions from Table 3 (which all implement DP1) can be generalized to

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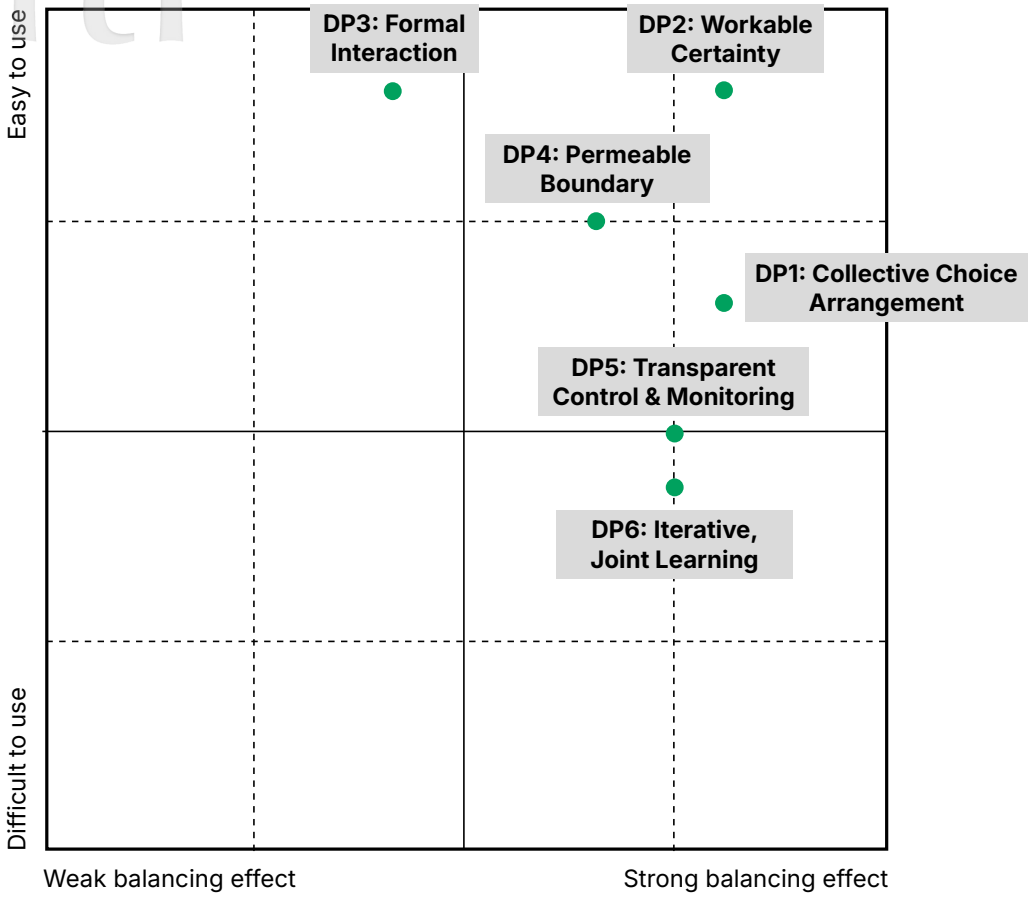

Figure 2. Summative Validation Results

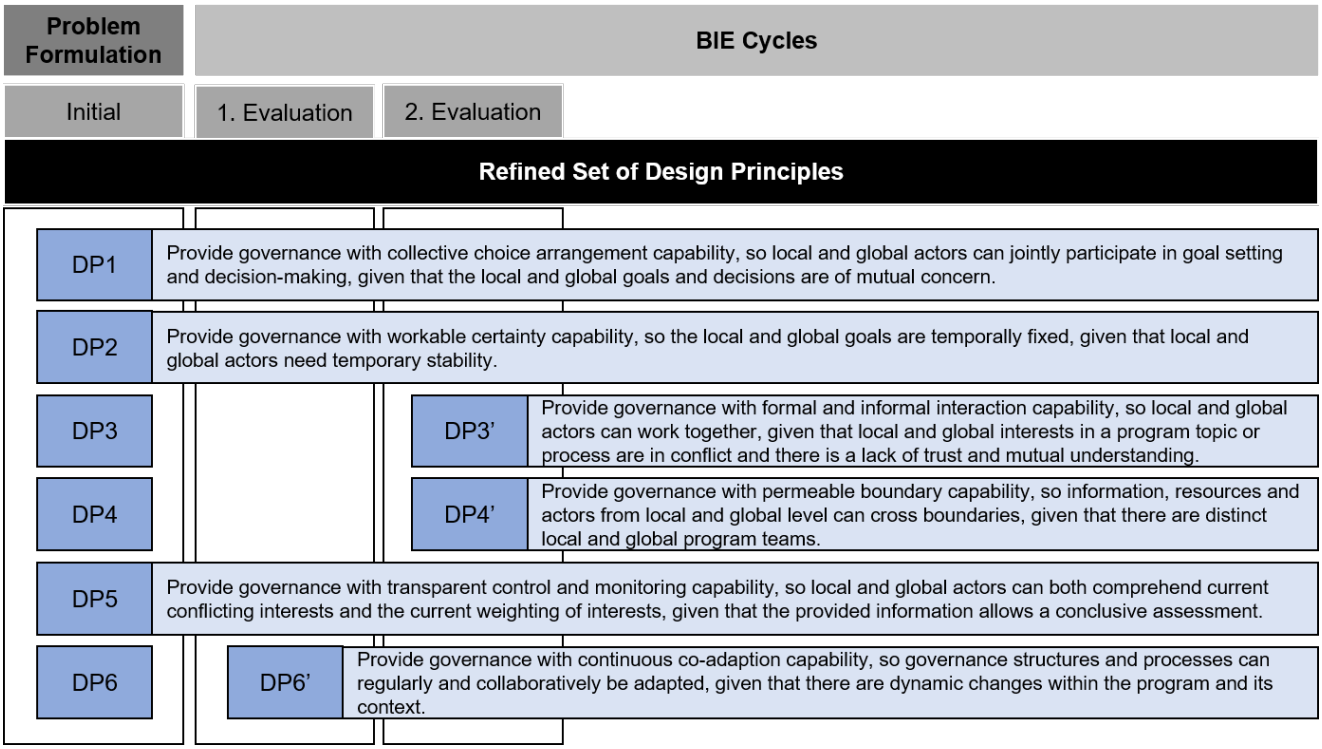

Figure 3. Evolution of Proposed Design Principles

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Design Features		Design Principles
DF1	Committees with steering and decision power are staffed with both local DP1, DP3 and global actors (structure)	**DP1, DP3**
DF2	Establishment of shared ownership and decision-making rights of possibly conflicting topics regarding strategy and processes between local and global actors (rules/principles)	**DP1, DP5**
DF3	Joint development (local and global actors) of "glocal" vision and regular DP2, DP5 adjustments and mapping of local and global goals (goals)	**DP2, DP5**
DF4	Definition of a matrix program organization with "glocal" teams (structure)	**DP1, DP3**
DF5	High decision-making frequency within the different committees DP3, DP2 (processes)	**DP3, DP2**
DF6	Regular joint (all program teams) prioritization of task, capacity DP2, DP3, DP4, DP5 planning and identification of tensions (e.g. PI Plannings) (processes)	**DP2, DP3, DP4, DP5**
DF7	Visualization and communication of local and global program progress, DP5, DP4 risks and tensions to local and global actors via reporting documents and/or meetings (processes)	**DP5, DP4**
DF8	Definition of a team that initially defines and adjusts the program's DP6 governance along the program phases according to learning and feedback from the involved local and global actors	**DP6**

Table 4. Generalized Design Features

- establish committees with steering and decision power staffed with both local and global actors
- assign shared ownership and shared decision-making rights of possibly conflicting topics between local and global actors
- create a matrix program organization with mixed local/global teams.

Certain DFs implement multiple DPs. The overall set of derived DFs is presented in Table 4. Usually, these DFs can be contextualized and implemented in concrete DTPs more easily than DPs because they are solution rather than requirements biased.

4. Evaluation: Applying Glocal Governance in a Real-Life Transformation Program

While based on DTP governance co-creation in three real-life DTPs and validated with stakeholders from case companies, the proposed MRs, DPs and DFs still represent design hypotheses rather than proven design knowledge. One co-author therefore collaborated with a large international infrastructure service provider carrying out a fourth DTP to evaluate the glocal program governance proposal.

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"IndustrialServicesCo" is headquartered in Switzerland and operates subsidiaries in 22 countries which are not only separate legal entities but also provide services which (while being fundamentally similar) are heavily adapted to national legal and business contexts. The company's DTP consists of two phases: The first phase intends to harmonize service production management across all 22 subsidiaries, thereby providing the foundation for a global ERP harmonization in a second phase. Together with the head of the first DTP phase, the co-author analyzed the applicability of the proposed glocal program governance, compared designed vs. implemented institutions and processes, identified extensions and modifications of DPs and DFs, and reflected the contextualization process of generic design guidance (Winter & Scholz, 2025).

Table 5 summarizes how the DPs were actually applied to govern the DTP at IndustrialServicesCo. While most principles were contextualized in a straightforward form, Workable Certainty Capability (DP2) appeared to be difficult to implement due to the dominance of day-to-day operations in capacity allocation, and Permeable Boundary Capability (DP4) created challenges as suitable global-local boundary objects hardly existed and most of them had to be developed from scratch.

Winter and Scholz (2025) discuss the insights from this real-life evaluation of glocal DTP governance as follows:

Collective Choice Arrangement (DP1) and Informal and Formal Interaction (DP3) capabilities are directly related in their application, i.e., they overlap in content, however lead to different solution components. Likewise, Workable Certainty (DP2), Permeable Boundary (DP4) and Transparent Control and Monitoring (DP5) capabilities overlap in ambition, but also lead to different solution components. While the glocal governance proposal is generally well aligned with the actual DTP governance implemented at InfrastructureServicesCo's, the specifics of DTP phase 1 (process harmonization) required some amendments. The reason is that the design proposal was developed in programs which addressed process and system changes in a highly integrated manner – the standard case in DTPs. For transformation endeavors in which these aspects are addressed in sequence (as was the case at InfrastructureServicesCo), the solution components should be differentiated according to whether they primarily relate to support (IT) systems, business processes or organization. This is particularly (but not exclusively) relevant for the boundary objects, as it would allow for a more precise identification and addressing of tensions.

During the DTP prototype phase, all DPs were observed, and corresponding solution components formally existed – however, some were not regularly used. For instance, local stakeholders from the prototype country were not always present at meetings of the global expert groups and were therefore unable to represent their interests.

Regarding Permeable Boundary Capability (DP4) in particular, it became apparent that business processes were insufficiently documented, resulting in a lack of a shared understanding across the organization. This led to significant challenges during live testing and the go-live. The creation and provision of boundary objects (in this case in the form of process documentation for the legacy system and the target system) as well as participation in globally and locally staffed workshops improved significantly in the second phase of the DTP, so that InfrastructureServicesCo is confident that it can successfully implement the DTP even with very high heterogeneity among the national subsidiaries. In summary, the evaluative evidence supports the applicability and usefulness claims of the proposed glocal DTP governance design. While in many regards (e.g., target system, decision-making body) the subject matter was clear, the DP formulation was very open for Permeable Boundary Capability

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Principle	Contextualization
DP1: Collective Choice Arrangement Capability	The top-level steering committee of the transformation program includes representatives of global interests (program management, centers of excellence) as well as representatives from the divisions. In addition, steering committees in individual divisions are established, which also include representatives from the various national subsidiaries. Furthermore, technical decision-making bodies are established in which individuals from national subsidiaries assume the role of company-wide (global) process owners. A divisional steering committee exists to coordinate goals, decisions, and implementation. This committee includes the CFO of the Service Division, divisional IT representatives, and representatives from the project countries. Finally, each national subsidiary should have local steering committees – e.g., for the implementation of core processes.
DP2: Workable Certainty Capability	Despite a general guideline from top management regarding the equal importance of transformation and day-to-day operations, resolving the tensions arising from capacity constraints poses a challenge for middle management. Such a target system has not yet been defined in the preliminary process harmonization. The plan is to develop it gradually, i.e., to successively integrate change objectives into existing, day-to-day-focused target systems.
DP3: Informal and Formal Interaction Capability	Weekly synchronization meetings between program management and project management. Bi-weekly and monthly review meetings within the global expert groups, the service division, and country subsidiaries, as well as monthly steering committees at the country and division levels.
DP4: Permeable Boundary Capability	In the enterprise-level transformation program, all (process) documentation is maintained in Jira and is therefore accessible to all project and program participants. For process harmonization, detailed process descriptions exist that describe not only the respective process but also its context and illustrate it with diagrams. The target audience for these process descriptions is the local stakeholders. Process models and descriptions are created by the global process team and serve as boundary objects.
DP5: Transparent Control and Monitoring Capability	Performance reports on the progress of DTP are cascaded through the steering committees at various levels and discussed globally in the program steering committee. Performance measurement is based on data from the project management system (Jira) and internal time tracking. The development and rollout progress of the preceding process harmonization is based on qualitative milestone tracking by the process owners at the division level.
DP6: Continuous Co-Adaptation Capability	The DTP sponsors have requested a review of the program charter (established at the program's launch) to adequately incorporate the findings from the first program phase. The preparatory process harmonization is closely aligned with the group-wide ERP transformation program to ensure data consistency.

Table 5. Contextualization of Glocal Governance Design Principles at InfrastructureServicesCo (Winter & Scholz, 2025)

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(DP4). To simplify implementation and facilitate more focused discussions, practitioners recommended expanding the design principles (especially DP4) to differentiate between support (IT) systems, business processes and organization, aiming at increasing granularity to focus governance and improve project management. This design principle appeared to be generally perceived as particularly important–effective management of global-local tensions is difficult without suitable and differentiated boundary objects.

In contrast, the Definition of a Matrix Organization (DF4) does not appear to be mandatory in every situation. A matrix organization is often useful but not always considered to be necessary for the meaningful coordination of global and local stakeholders in DTPs. Navigating such a complex program organizational structure, while simultaneously managing day-to-day operations, could become unnecessarily complex for participants.

5. Conclusions and Takeaways

To answer the research question of how program governance should be designed to effectively balance local differentiation and global change consistency in tension-prone transformation programs, we constructed, validated and evaluated six DPs and eight DFs. Beyond constituting generic transformation governance design guidance for large, decentralized companies, our experience with four large DTPs also has implications for the contextualization process of generic design guidance. According to the program management team in InfrastructureServicesCo, their deep program knowledge enabled them to adapt the generic guidelines (principles, solution components) for their enterprise-wide DTP and to align the guidance with the chosen implementations (Winter & Scholz, 2025, see preceding section for a notable exception). Naturally, challenges may arise which result from the generic nature of the proposed guidance. In our evaluation case, one example was that strong emphasis was placed on systems and processes so that organizational change aspects are not covered to the extent that a specific DTP requires.

When applying glocal program governance in concrete DTPs, another insight was that additional institutions (e.g., committees) and processes should only be established whose tasks cannot be adequately addressed in another regular meeting or by an existing body/process (Winter & Scholz, 2025). Smaller organizations or companies in highly regulated industries may either have suitable bodies already in place or re-use existing bodies for a larger range of tasks.

Specific types of DTPs such as enterprise-level AI adoption may lead to a larger need for amending glocal governance design guidance because centralized systems and harmonized processes may be less dominant (Winter & Bender, 2026) so that enhanced, context specific governance control and auditing aspects become more important.

Besides its tangible recommendations for the practice of transformation management, this study also offers contributions to researchers. First, with a few exceptions, there is hardly any scholarship based on ADR studies with more than one partner organization. Appendix 1 documents how an evolutionary DP/DF development can be conducted in parallel action design projects with different yet (problem-wise) comparably companies, thereby enhancing the empirical foundation and allowing cross-organizational generalization (Winter & Albani, 2025). Second, many DP proposing studies suffer from being requirements biased because researchers had not been able to cover implementation and/or evaluation to the extent they conducted problem analysis and solution prototype construction. Since we

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co-created glocal governance in DTPs with real outcomes, real stakes and working governance bodies, we were able to (i) formulate DPs which cover the problem dimension (why to achieve what) as much as the solutions dimension (how to achieve it). In addition, we do not only propose DPs, but also DFs as their actionable, solution-oriented counterpart. As a complement to generic DPs, projectable DFs not only translate DPs into solution components, but also have a different, application-oriented structure.

This study is not without limitations, which can be seen as areas of possible future research. Despite our work with four DTPs, scientific generalizability and comprehensiveness of the DPs and DFs cannot be claimed. Further research should investigate (i) if the DPs/DFs are also valid for a broader range of programs, (ii) if an addition of further DPs/DFs is needed or (iii) how the DPs/DFs need to be reformulated to increase their usefulness. The evaluation of our proposal identified some initial steps in this direction. To better understand and support the systematic contextualization of governance guidance, we also encourage researchers to develop a governance-oriented typology of DTPs on which future contextualization support can be based.

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Appendix 1: Research Methodology

ADR Process and Data Collection

The ADR method differentiates four stages – (1) problem formulation, (2) building, intervention and evaluation (BIE), (3) reflection and learning, as well as (4) formalization of learning – and follows seven principles (Sein et al., 2011). The reflection and learning stage is a continuous stage and runs in parallel to the first two stages. Important for the ADR process is the composition of the ADR team consisting of researchers and practitioners. The end users, however, play a relevant role in the evaluation of the designed artefacts. Figure A1 provides an overview of the research process including the single steps as has been followed in the presented case. As can be seen, two subsequent BIE iterations have been executed (1. BIE cycle and 2. BIE cycle) to further improve the results gained in the preliminary stages.

Problem Formulation Stage

Relevant steps in this stage include the articulation and exploration of the yet fuzzy problems, the planning of the project while deciding on roles and responsibilities of the participating practitioners and researchers, as well as the formulation of the research question.

The data was gathered by means of practitioner workshops, interviews and literature research. The fuzzy set of problems, articulated by the case companies, was used as input for the interviews. A total of 26 interviews lasting 60 minutes on average were conducted. The interviewee sample consisted of representatives from different levels (i.e., local and global) and roles (e.g., business and IT) within the program and the parent organizations. Nine representatives of the ERP Transition case, nine representatives of the Merchandise System case and eight representatives of the Omni-Channel Platform case were interviewed. To triangulate the data, available program documents from each case were taken into consideration.

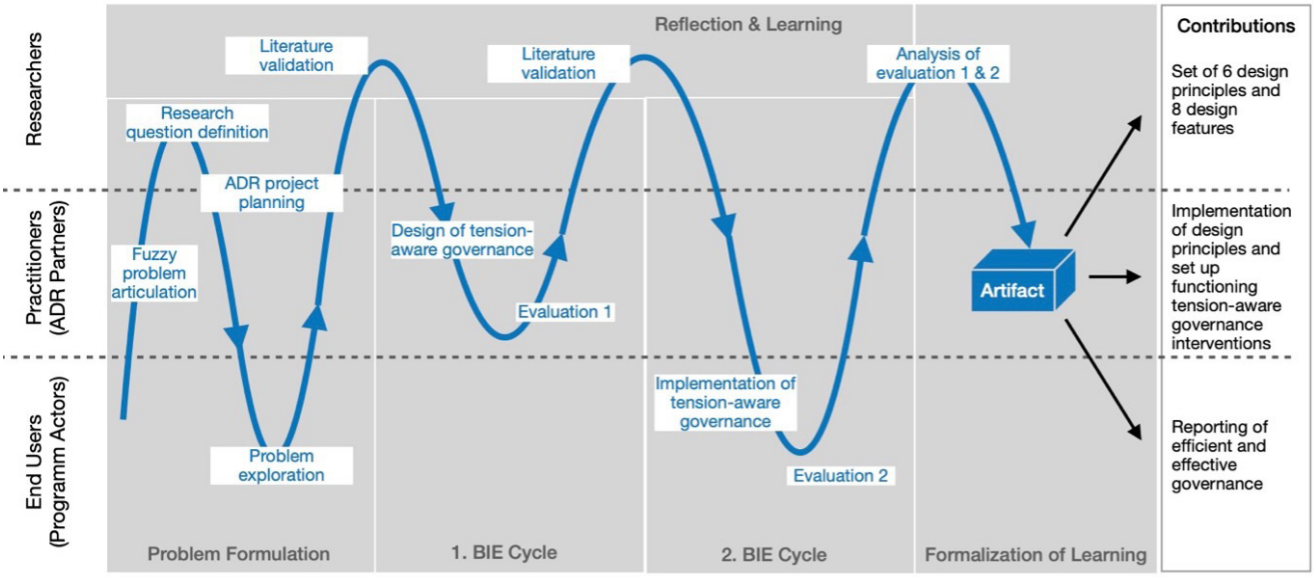

Figure A1. ADR Process

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Input	Method				Output
Fuzzy set of problems articulated by case companies	***Triple Case Study***				Nine common issues across cases
		ERP Transition	Merchandise System	Omni-Channel Platform	
	Interviews	ADR Core Team Corporate Management Member Head Corporate IT Business Managers Subsidiary I-IV IT Managers Subsidiary I-III *(9 interviews; 60 min each)*	ADR Core Team Head PMO Head Company IT Head of Procurement Head of Logistics Head of Sales Head Controlling *(9 interviews; 60 min each)*	ADR Core Team Head PMO Head Company IT Head of Sales Head of Pension Provision Head of Non-Life Insurance *(8 interviews; 60 min each)*	
	Documents	Program Proposals Corporate and Project Governance Guidelines Organigrams			
Concurrent Reflection and Learning					
Case study outputs	Literature research and validation				Seven meta-requirements Initial set of six design principles

Figure A2. Problem Formulation and Reflection and Learning

Nine common issues that practitioners were facing across the cases could be identified as case study outputs. Those issues were matched with the preliminary literature research, allowing the linking of practical problems to a research gap and to inform the problem understanding through existing theory on governance and tensions (Hevner et al., 2004).

Based on the findings of this stage, seven meta-requirements (MRs) and an initial set of six DPs were formulated, which are the results of the problem formulation stage (see Figure A2).

During the first stage, the focus was on the practitioners' perspectives on program governance and therefore the first ADR principle of "praxis-inspired research" (Sein et al., 2011) was complied with. Additionally, the linkage of the practical problems to theoretical problem formulation and solution possibilities ensured the adherence to the second ADR principle of "theory-ingrained artefact" (Sein et al., 2011).

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Input	Method			Output
1. BIE Cycle				
Seven meta-requirements Initial set of six design principles	Workshop with each ADR partner			Three separate designs of tension-aware governance based on initial set of design principles Design decisions/ case
	ERP Transition	Merchandise System	Omni-Channel Platform	
	ADR Core Team *(3 participants; 6h)*	ADR Core Team; Head PMO *(4 participants; 6h)*	ADR Core Team; Head PMO *(4 participants; 6h)*	
Three separate designs of tension-aware governance based on initial set of design principles Design decisions/ case	Semi-structured interviews			Feedback focusing on usability of design principles
	ADR Core Team	ADR Core Team; Head PMO	ADR Core Team; Head PMO	
2. BIE Cycle				
Implementation of respective tension-aware governance design within each case program	Semi-structured interviews			Feedback focusing on usefulness of design principles
	ERP Transition	Merchandise System	Omni-Channel Platform	
	ADR Core Team; Corporate Management Member; Head Corporate IT; Business Managers Subsidiary I-II; IT Managers Subsidiary I-IV. *(10 participants; 60 min each)*	ADR Core Team; Head PMO; Head Company IT; Head of Procurement; Head of Logistics; Head of Sales; Head Controlling *(9 participants; 60 min each)*	ADR Core Team; Head PMO; Head Company IT; Head of Sales; Head of Pension Provision; Head of Non-Life Insurance *(8 participants; 60 min each)*	
Concurrent Reflection and Learning				
Feedback 1. and 2. BIE Cycle	Literature research and validation; Integration of learnings from literature and practice			Six refined design principles and eight design features

Figure A3. BIE and Reflection and Learning

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Building, Intervention, and Evaluation (BIE) Stage

The second stage of ADR consists of building, intervention, and evaluation activities. As the initially identified problems all clearly referred to organizational processes and structures, the aim of the second stage was on the enhancement of existing program governance, and therefore on the development of innovative organizational interventions. Thus, an organization-dominant BIE approach was followed "where[in] the primary source of innovation is organizational intervention" (Sein et al., 2011, p. 42).

The BIE stage was split into two cycles. In the first cycle, the initial set of DPs was used by the core team (i.e., implementers) of all three ADR partners to design a governance intervention for their respective DTP. In the second ADR cycle, the interventions were implemented in the respective DTP and used or experienced by the program actors (i.e., end users). Both cycles were directly followed by an evaluation.

The first evaluation was based on the conceptual design and the reported usability (i.e., ease of use) of the DPs by the implementers. The second evaluation was based on the implementation of the governance interventions and the reported usefulness (i.e., effect on balancing local change differentiation and global change consistency) of the end user of each ADR partner organization. This distinction between end users and implementers as the target group of DPs has been claimed to be of high importance, as it is vital to developing guidance for implementers that consider a real practical impact (Gregor et al., 2020; Seidel et al., 2018). Data for both evaluations was gathered through interviews with the involved implementers and end users, which was based on their real-life application experience (see Figure A3).

The data was concurrently reflected via literature validation. The deduced insights were not only used as a basis to refine the initial set of DPs and (re)formulate them in a way that both implementers and users can understand (Gregor et al., 2020), but also to derive eight DFs from the design decisions in the three case programs. With this highly participative BIE process, the ADR principles of "mutually influential roles" and "reciprocal shaping" (Sein et al., 2011) were complied with. Moreover, through direct evaluation of the design and the implementation, the principle of "authentic and concurrent evaluation" outlined by Sein et al. (2011) was also adhered to.

Reflection and Learning Stage

The reflection and learning stage was conducted in parallel to the problem formulation and BIE stages. It started at the end of the problem formulation stage with the reflection on the problems and possible solutions identified in both literature and practice, which resulted in the derivation of seven MRs and an initial set of six DPs. During the BIE stage, the concurrent reflection and learning on the design (1st BIE cycle) and implementation (2nd BIE cycle) of the governance interventions within the three case programs was completed through integrating additional insights from literature and practice. This yielded learnings that allowed the development of the six initial DPs and design decisions into six refined DPs and eight DFs, which together represent generalizable design knowledge for a class of problems (i.e., tension-aware program governance) (Hevner et al., 2004). Involving three different case programs as active ADR program partners, in contrast to many other ADR studies that only collaborate with one practice partner, was especially valuable to reach this goal.

Adhering to Sein et al.'s (2011) principle of "guided emergence," after having defined the vision and preliminary design through an initial set of DPs in the problem formulation space, numerous adjustments based on reflection and learning during organizational intervention were allowed.

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Formalization of Learning Stage

The fourth stage of the ADR process aimed to formalize the learnings (Sein et al., 2011). Based on the learnings made during our tripartite ADR project, not only a solution for three problems in their unique organizational contexts but also a more generic and abstract understanding of the problem and concept of the solution could be presented. Working with three companies strengthened this generalization. Thereby, the last ADR principle of producing a "generalized outcome" (Sein et al., 2011) was complied with. The developed and refined DPs and DFs are valuable for both researchers and practitioners.

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Appendix 2: Detailed Description of Proposed Design Principles

DP1: Collective Choice Arrangement Capability

Shared responsibility between local and global actors and joint decision-making processes are valuable governance means for finding a balance regarding topics that are of mutual concern and, by extension, balancing local and global goals. Coming together in governance bodies, such as steering committees or change boards, allows joint preliminary debates and evaluation of local and global consequences of decisions (Boonstra et al., 2017; Smith & Lewis, 2011). It also helps create a feel for the symbiotic interrelation between local and global interests and establish joint commitment (Weill & Ross, 2004). Moreover, it allows for the establishment of a boundary-spanning perspective (Henry et al., 2020). As such, adhering to this DP fosters acceptance, confrontation, and transcendence as responses towards local/global tensions (Lüscher & Lewis, 2008).

DP2: Workable Certainty Capability

Striving for workable certainty means that local and global goals are temporally fixed. This allows a compromise between the existing governance's urge for permanent, up-front decisions and goal setting and needed alterability of goals in the long run (Smith et al., 2016) with the associated risk of swinging between alternatives if there is no fixed target (Dodd & Favaro, 2007). Interventions such as designing a "glocal" vision and the joint definition of temporary local and global goals enable temporary balances and stability for the program.

DP3: Informal and Formal Interaction Capability

Adhering to this DP allows local and global actors to come together and interact to jointly solve problems and work on issues that are in conflict. Interaction allows ongoing debate and dialogue, which are prerequisites to acceptance and confrontation of tensions (Jarzabkowski et al., 2013; Lewis, 2000; Poole & van de Ven, 1989). Based on the evaluation result, formal interaction was complemented by informal interaction. This means that formally set-up teams and groups in which interaction between local and global actors take place should be supplemented by meetings or other possibilities that allow local and global actors to informally (i.e., spontaneously and voluntarily) come together. This is considered especially valuable if trust and mutual understanding still need to be built so that local and global actors are willing to openly share their interests and find a balance regarding their local and global identities (Boonstra et al., 2017).

DP4: Permeable Boundary Capability

Permeable boundary capability refers to the sharing of information, resources, and actors from the local and global level across distinct local and global teams. In certain situations, not all teams can and should boast a local/global mix of actors. This is why we added "actors" as an object to the initial DP. Permeable boundaries offer the opportunity to counteract the isolation of local and global teams and promote boundary-spanning information, resources, and actors if needed to find a balance between conflicting interests (Henry et al., 2020).

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DP5: Transparent Control and Monitoring Capability

Actors' transparency regarding their respective local and global interests is a key prerequisite for tension awareness (Lannon & Walsh, 2020; Porter-O'Grady, 2019). On the other hand, being transparent about the current conflicting interests and the current weighting of interests towards all program actors is also vital to being able to continuously identify and then confront competing demands (Jarzabkowski et al., 2013). Hence, if information about the actual status of conflicting interests can be gathered and conclusively assessed, governance interventions, such as reports outlining tensions, should be realized.

DP6: Continuous Co-Adaptation Capability

Adherence to this DP allows continuous improvement of governance through joint learning and reflection. As not all interests are known from the outset (Miller & Hobbs, 2005; Pellegrinelli et al., 2015) and tensions evolve over time (Boonstra et al., 2017), static governance structures and processes should be avoided. The established mix of governance measures should regularly be adapted to contextual and program changes (O'Leary & Williams, 2013; Turner & Keegan, 2001). Furthermore, both local- and global-level representatives should be involved in this adaptation process. Co-design can increase program actors' confidence in the effectiveness (i.e., balancing power) of the governance framework (Miller & Hobbs, 2005; Weill & Ross, 2004). This collaborative governance design approach facilitates building up the needed commitment of all affected actors towards active governance measures. With respect to the findings of the evaluation, this DP was reformulated to add clarity to what should be done.

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Bios

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