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R. Sommer · S. Linder · H. Ziemainz · P. Gelius

Department for Sports Science and Sport, Friedrich-Alexander University of Erlangen-Nuremberg, Erlangen, Germany

Key performance indicators of cooperative planning processes: Case study results from German sport science and physical activity promotion projects

Supplementary Information

The online version of this article (<https://doi.org/10.1007/s12662-021-00745-3>) contains supplementary material, which is available to authorized users.

Introduction

Physical inactivity has become an urgent public health issue (Guthold et al., 2018), with increasing calls to promote suitable, effective physical activity (PA) programs to change the population's behaviour using concepts that address close collaboration between science, practice, and policy while including the population group (World Health Organisation [WHO], 2018). Therefore, participatory intervention strategies have become increasingly popular in health promotion and particularly in PA promotion, and their benefits and challenges are a frequent subject of academic debate (see Wright et al., 2018; Williams et al., 2020).

Participatory approaches create a dynamic social space for a mutual learning process (Potvin et al., 2003): Population group representatives are empow-

Availability of data and material

A list of all documents included for the analysis as well as the interview guide used for this paper are available upon request. The dataset is deposited on a nonproprietary server, belonging to the university.

Code availability

Not applicable.

ered through their roles as equal partners (Frahsa et al., 2012), and stakeholders' capabilities are strengthened (Clark et al., 2019). Furthermore, participatory interventions promise to match the demands within different settings (Jagosh et al., 2012; Leask et al., 2019), to increase program fit within real-life contexts (Bisset & Potvin, 2007), and to enable sustainable implementation (Cornwall & Jewkes, 1995). However, on the other hand, collaborative models have been considered unpredictable and time-consuming, as well as requiring extensive costs (Oliver et al., 2019) and efforts to manage participants' various agendas, demands, and expectations (Baum et al., 2006; Flinders et al., 2016).

There are several ways in which community members, stakeholders and researchers can interact (Fransman, 2018), and many endeavours have employed effective knowledge-exchange tools that promote mutual learning (Minkler et al., 2003). One mechanism that empirical studies in German sports science and PA promotion have frequently used over the past two decades is the "cooperative planning process" (CPP) (see Eckl, 2007; Frahsa et al., 2012; Gelius et al., 2020; Loss et al., 2020).

By definition, the CPP is a participatory intervention strategy, which brings together members of the target audience, stakeholders, and researchers in an equal decision-making process to plan, develop, and implement programs that

match the population group's demands and needs. The CPP addresses essential tenets for successful interventions, such as the multidimensionality of interventions, context-specific interventions, and mutual adjustments to science and practice (Rütten, 1997).

The CPP has been suggested as having several pitfalls (e.g., lack of political mandate, lack of focus on implementation, and complex structure of moderation in relation to attributed resources), but several studies have also outlined its positive effects, such as the empowerment of disadvantaged women (Frahsa et al., 2012) and increased capacities (Gelius et al., 2020; Loss et al., 2020). As with all participatory methods, CPP is not a one-size-fits-all approach. Those considering adopting the participatory approach should bear in mind the limitations and successes, as there are other methods with similar constructs, such as the PROCEED planning model, with its focus on a detailed needs assessment or implementation (McKenzie et al., 2017), compared to CPP, which emphasises designing or developing the intervention.

To understand how and why a participation-based intervention works, we need to take a deeper look into its implementation process (Thorogood & Coombes, 2010). As there are no simple and overarching approaches to conduct a full process evaluation, Steckler and Linnan (2002) highlighted several aspects (e.g., recruitment, fidelity, sat-

isfaction, dose delivered, dose received, and maintenance) to be investigated, as well as the contextual factors that may hamper or enhance the implementation of health promotion interventions.

Since participatory processes are complex, the most comprehensive efforts to assess them within research projects originate from sustainability science. Blackstock, Kelly, and Horsey (2007) emphasised a set of criteria: namely, *champion/leadership*, *communication*, *conflict resolution*, *influence on the process*, and *representation* to evaluate the process as such, and *emergent knowledge*, *social learning*, and *transparency* for evaluating the context of the process. Particularly for the CPP, Breuer and colleagues (2010) indicated three parameters that define the efficacy and efficiency of such processes. Other potential prerequisites for conducting the CPP have been outlined elsewhere (Eckl, 2007), also in the form of an implementation manual (Rütten & Wolff, 2018). Ideally, the evaluation of a participatory process should be prospectively planned and should use both formative and summative types of assessments. However, if not feasible due to limited resources (i.e., time or manpower) within a scientific project, such evaluations can be narrow focused and done retrospectively.

Previous research has tended to evaluate the process (Rütten, 2001; Rütten et al., 2006; Eckl, 2007; Breuer et al., 2010) or its emerging costs (Wolfenstetter et al., 2012; Gelius et al., to be published), and outcomes (Rütten et al., 2008; Röger et al., 2011). Others have focused on the perspectives of other CPP-participant groups (i.e., for population group and stakeholders, see Frahsa et al., 2012). However, with CPP being a rather research-driven process (Rütten & Gelius, 2014), which places its organisation and execution into the hands of researchers, it is important to examine their perceived barriers and facilitators to its implementation. One problem is that inside knowledge about developing, implementing, or controlling strategies or decision processes is of particular interest (Mayring & Fenzl, 2019), which cannot be reported within a classic process evaluation. The literature gap on researchers' perspectives

calls for a rapid, systematic and retrospective exploration of facilitators and barriers when implementing the CPP. The narrowed group of researchers responsible for putting CPP into practice represent experts with intimate knowledge about the process, and this should become the focus of research. Gläser and Laudel (2004) define them as “carriers” of a particular type of action (i.e., research), certain perspectives (i.e., evidence-based) and “insiders” of a specific knowledge-system (i.e., academic). In comparison with other group of CPP actors, they do not provide only that one side of a story, but they share their special know-how which would assist the ongoing refinement of the approach and guide other researchers when implementing the CPP in sports and physical activity promotion.

To our knowledge, no studies have performed a systematic in-depth investigation of researchers' perspectives across several sports and PA-promoting projects, regarding the indicators associated with implementing CPP. Since our research does not focus on intervention fidelity (defined by Thorogood and Coombes [2010] as the extent to which the process was delivered as originally planned) or on scores indicating the extent to which the implementation plan was followed, we do not intend to provide a comprehensive systematic process evaluation based on theoretical frameworks as in Steckler and Linnan, (2002) or the RE-AIM of Glasgow et al., (1999). Rather, our study seeks to picture an initial overview of issues enhancing and constraining the implementation of a specific participatory method from the perspectives of implementing researchers.

For this purpose, this paper uses a qualitative approach to address the following questions:

1. How exactly is the CPP (as outlined by Rütten, 1997) embedded as a method in sports and PA promotion projects across settings and contexts?
2. What key performance indicators influence its implementation?

Accordingly, we first introduce the CPP and present four empirical projects as

case studies. Building on systematic document analysis and semi-structured interviews, we illustrate specific processes and summarise key indicators of employing the CPP in sports science or PA promotion. This paper concludes by highlighting these indicators' benefits, their potential, and directions for future research evaluating CPP processes in these fields.

The cooperative planning process

The CPP was introduced in Germany by Rütten and Wieland in the early 1990s as an approach integrating elements of (a) Suomi's *collaborative planning* concept in sports sociology (Suomi, 1991) and (b) the cooperative model for planning municipal development with locals (Hekler et al., 1976).

As discussed elsewhere in greater detail (Gelius et al., to be published), the approach can be conceptually positioned within the participatory research methodology, but also in the context of knowledge co-production or transdisciplinary research (Rütten et al., 2017), among network theories and political science (Wetterich, 2014), as well as in management theories (Holman et al., 2007).

The CPP was first implemented in a pilot project planning sports and recreation facilities (Wetterich & Klopfer, 1995) and later adopted by other local sports development projects. A regional WHO health promotion pilot project slightly adjusted the approach to meet “New Public Health” demands (Rütten, 1997).

The CPP focuses on different stakeholders' participation—notably, the target group, practitioners promoting sports, PA, or health, policymakers, and researchers. It aims to merge different perspectives and types of expertise into an interactive knowledge-to-action exchange process (Rütten & Gelius, 2014; Rütten et al., 2017). The process facilitates democratic decision-making by involving the target group as equal partners in developing a context-specific action plan, based on their needs and wants, which partners then seek to sustainably implement. The CPP involves a predefined sequence of three

phases (preparation, development, and implementation; see Rütten & Gelius, 2014). The development phase—also called the *planning phase*—constitutes the core process and is structured as follows: brainstorming, goal prioritisation, planning tailored measures, and adopting an action plan.

Rütten (1997) characterised the process as transparent, controlled by attendees and based on participants' mutual agreement regarding common solutions, arguably leading to better acceptance of possible risks—especially by people responsible for implementation. Eckl (2007) emphasised that participants' heterogeneity is essential in fostering mutual learning since stakeholders play specific roles and contribute distinct expertise.

Case study projects

For our empirical analysis, we selected four projects conducted between 2001 and 2020 at the Friedrich-Alexander University of Erlangen-Nürnberg (FAU), Germany. Instead of looking for cases that are most different, we looked for cases that were the most similar and followed the “most-similar cases method” by Mill (1872) to provide the basis for an intensive analysis (see Gerring & Cojocar, 2016). We considered only projects of a specific researcher working group, which shared similarities in implementation, but targeted different goals and process outcomes. The assumption is that indicators that come across these cases are likely to be representative for implementing the specific CPP-approach of Rütten (1997).

The CPP was a core element of each project and was used as a strategy to pursue various goals, address different target groups and their needs, develop concrete plans for sports and PA promotion, and produce different outputs and outcomes (see **Table 1** for additional details):

1. „Physical Activity as an Investment for Health“ (BIG) aimed to address social inequalities in health by improving access to sport and PA facilities for socially disadvantaged women. It used the CPP to empower its target group as coworkers in planning and

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Abstract

Objective. The aim of this study was to map the phases and individual steps of the cooperative planning process, a specific participatory approach frequently used in German sports and physical activity promotion, and to explore facilitators, barriers, and challenges experienced by those leading its implementation in selected projects.

Background. More than half of the global population is not physically active enough. Therefore, the demand for more effective physical activity programs is growing. Participatory-based interventions, using the cooperative planning process, offer the potential to plan new programs that match population group and setting characteristics. This approach was extensively applied in German sports and physical activity fields, serving as a mechanism to develop and implement specific measures to change the population's behaviour. We analysed four German empirical projects promoting sports and physical activity to identify how the approach was adapted to each project, which phases were considered, and which key performance indicators enhanced (facilitators), exacerbated (barriers), or challenged the process.

Methods. This study used a mixed-methods approach, including a systematic analysis

of documents ($n = 10$) and in-depth, semi-structured interviews ($n = 4$) with the empirical projects' scientific members.

Results. The cooperative planning process was shaped across its phases by several facilitators, challenges, and barriers. Diverse assessment procedures and recruitment tools can facilitate preparation of the process, while moderation requires particular attention during the development phase. Identifying a champion in the transition subphase and providing ongoing scientific counselling can assure the implementation of an action plan with tailored measures for sports and physical activity promotion.

Conclusions. This study contributes to a better understanding of the complexity of the cooperative planning approach and, therefore, flexibility in sports and physical activity promotion projects. Many preparation actions, several challenges in the planning process, and a critical transition in implementation responsibilities should be considered by future projects intending to adopt the approach.

Keywords

Participatory approach · Qualitative research · Participatory intervention method · Process evaluation · Collaborative models

developing PA offers that address their needs and wants, helping them overcome barriers to PA (see Frahsa et al., 2012).

2. „Integrated Sport Development Planning“ (ISEP) aimed to match sports and PA infrastructures to municipalities' demographics. The CPP allowed community governments to involve stakeholders and citizens in adapting infrastructures to the population's current and future leisure-time PA behaviour. Over the past 13 years, ISEP served 12 communities with population sizes ranging between 12,644 and 664,000 at the local level, and it served 4.4 million citizens at the regional level (see Rütten et al., 2003).
3. „Building Policy Capacities for Health Promotion through Physical Activity among Sedentary Older People“ (PASEO) aimed to implement PA programs for sedentary older people by improving policy capacities in 15 European countries. Using the CPP, the project focused on establishing regional and national alliances to foster intersectoral exchange and intraorganisational development promoting PA. In Germany, a CPP process was conducted in the state of Bavaria, involving regional government ministry and agency representatives, NGOs, and older people's associations (see Rütten & Gelius, 2014).

Table 1 Overview projects: Comparison of settings, groups addressed, participants and outputs of the approach used				
Project	BIG	ISEP	PASEO	Talent Development in Bavaria
Abbreviation is short for	Physical Activity as an Investment for Health	Integrated Sport Development Planning	Building Policy Capacities for Health Promotion through Physical Activity among Sedentary Older People	–
Funder(s)	Health insurance Local authority	Local authority	European Commission	Federal Institute of Sport Science (BISp)
Project duration	2005–2020	2001–2014	2009–2011	2004–2005
Setting	Community	Community	Community	Sports associations and clubs Schools
Level	Local	Local/regional	Regional/national	Regional
Group(s) addressed	Women in difficult life situations	Local people Citizens	Sedentary older people	Athletes Coaches
Overall Goal	Tailored PA offers	Developing and improving a PA friendly infrastructure	Capacity building for health promotion by improving PA promotion	Developing and improving the quality of talent identification and promotion of young athletes
Participants in the process	Social disadvantaged women	Local citizens	–	Athletes (<i>n</i> = 2)
	Local policymakers	Policymakers	Policymakers and stakeholders (e.g., Ministry of Health, health promotion agency)	Policymakers and decision-makers (i.e., sports officials, local stakeholders) (<i>n</i> = 12)
	Professional and basis experts (e.g., local administration, representatives of social services, other relevant associations)	Professional and basis experts (e.g., local administration, sports association, schools)	Professionals (e.g., sports, health care sector)	Professional and basis experts (i.e., athletes' parents, coaches, and teachers) (<i>n</i> = 9)
Outputs	Scientists	Scientists	Scientists	Scientists (<i>n</i> = 4)
	Low-cost PA classes including childcare	<i>Examples from one community:</i>	International alliance for PA promotion of older people	Sports medical care
	Women-only swimming classes	– Construction of a multifunctional hall – Launching a bus line to the swimming facility – Setting up benches for older people – Establishment, and extension of bike paths to the neighbouring municipality	International alliance for PA promotion of older people PA activities for older adults Staff education/course development (one-day conference on PA promotion for older people)	Personal and team development strategies Local job position to coordinate the promotion of young athletes in Bavaria Counselling sessions Coaching

PA physical activity

4. „Talent Development in Bavaria“ aimed to identify quality deficits in promoting young athletes in Bavaria. The project implemented a quality management system and used the CPP to involve its target group and other relevant actors in promoting young athletes (see Rütten et al., 2006).

Methods

Methodological approach

For our empirical analysis, we used a multiple-case-study design, which is considered suitable for understanding

phenomena and their particularities in various contexts using triangulation of multiple sources of evidence (Yin, 2009). We relied on two data sources: (a) a systematic analysis of documents (Bowen, 2009) to describe how the CPP's central phases were embedded in each project and (b) expert interviews (Green & Thorogood, 2018) to learn more about indicators enhancing and hindering the implementation process. The semi-structured interviews were designed to explore information (i.e., personal insights, various perspectives at different points in time, and critiques) difficult to obtain when using other methods.

The advantage of using this mixed-methods approach is that it potentially boosts the richness of data by tapping into two different sources, and it helps increase comprehensiveness through a more reflexive interpretation of the data (Mays & Pope, 2000).

Recruitment

Researchers are responsible for conceptualising, planning and performing the CPP within a scientific project that potentially holds significant insights regarding indicators for implementing the approach. Consequently, this study aimed at recruiting project managers

Table 2 Implementation of CPP in case-study projects

Rütten (1997)	PASEO	BIG	ISEP	TALENT
1. Initial Phase	Team Building	Finding Phase	Team Building	Team Building
– Setting up the team	– Building scientific team	– Communities/organisations approach BIG Competence Center	– Building a local planning group between scientists, sports associations, policymakers, and representatives of local administration and social groups	– Building scientific team
– Recruiting relevant partners (e.g., policymakers, professionals)	– Finding project partners	– Reaching consensus between university and community		
– Preparing project work	– Conducting preparatory meetings (three pre-meetings)	– Setting up a steering group for coordination at site		
	Alliance building	Preparation phase	Preparation phase	Preparation phase
	– Building alliance between university, ministry of health and health promotion agency	– Defining the population group and long-term goals tailored to their needs	– Inventory of data (e.g., existing infrastructure and resources, population structure, density and sports-related behaviour)	– Identifying quality deficits in promoting young athletes (i.e., based on the findings of the project at the international level)
	– Establishing available resources (political support, scientific knowledge, project resources, PA promotion network in the state) via qualitative interviews	– Defining population group characteristics (e.g., living conditions, ways to approach them in the community)	– Needs assessment of PA areas	– Transferring insights from the previous project implemented at the international level
	– Assessing existing capacities for PA among the target group (i.e., one focus groups) and representatives of partnered organisations (i.e., interviews)	– Contacting relevant actors	– Conceptualising a layout plan for a friendly PA infrastructure	
		– Preparing CPP: planning the location, form of invitation, identifying barriers to participation and seeking strategies to overcome them (e.g., child-care services)		
2. Development Phase	Conducting the CPP (Four to five sessions; <i>n</i> = 22 participants)	Conducting the CPP (Six sessions)	Conducting the CPP (Six sessions)	Conducting the CPP (Five sessions; <i>n</i> = 27)
Introducing goals and status quo	– Brainstorming	– Brainstorming	– Brainstorming	– Brainstorming
Running the CPP:	– Goal prioritisation	– Goal prioritisation	– Goal prioritisation	– Goal prioritisation
– Brainstorming				
– Setting up priorities	– Planning tailored measures (<i>n</i> = 2)	– Planning tailored measures	– Planning tailored measures (<i>n</i> = 34–51)	– Planning tailored measures (<i>n</i> = 7)
– Planning measures				
– Defining action plan	– Finalising the action plan	– Finalising the action plan	– Finalising the action plan	– Finalising the action plan
	– Two workgroups preparing the implementation phase	– Preparing the implementation phase	– Four workgroups preparing the implementation phase	– Four workgroups preparing the implementation phase
3. Implementation Phase	Transition phase	Transition phase	Transition phase	Transition phase
– Action plan implementation in the setting	– Retreat of the scientific team	– Defining responsible persons for implementing developed measures	– Retreat of the scientific team	– Defining responsible persons for implementing developed measures
– Monitoring the implementation process by the scientific team	– Transferring responsibilities and activities to the regional health promotion agency		– Handing over the action plan to the community	

Table 2 (Continued)

Rütten (1997)	PASEO	BIG	ISEP	TALENT
– Identifying obstacles and planning strategies to overcome them	Implementation phase	Implementation phase	Implementation phase	Implementation phase
	– One-day conference – One health promotion agency and one healthcare NGO are in charge of grant application (of two measures of the action plan) (Partly) implementation of one measure	– The scientific team offers ongoing counselling	– Defining responsible for implementing measures (i.e., through a job creation scheme) Attending workgroups meetings	– Attending workgroups meetings – Implementing five measures (one only partly)

PA physical activity, CPP cooperative planning process

of CPP-based sports and PA promotion projects conducted within the same working group in the past few years. Using a purposive sampling strategy, we identified four former employees who possessed experience relevant to the phenomenon under study (Mays & Pope, 1995) and approached them via email. We provided information about the planned research and sent them a set of CPP-related questions to reflect on prior to conducting the interviews. Four respondents (one per project¹) were interested in the topic and agreed to be interviewed on behalf of their entire team.

Sampling

The interviewees (one male and three females) worked as researchers on the aforementioned projects and possessed intimate knowledge of the process's implementation decisions. Their role was adapting the CPP to the specific setting and coordinating its implementation. They were involved in all process stages, such as recruiting participants, moderating or supervising sessions, providing support, and counselling participants, as well as in some cases evaluating the intervention. All interviewees implemented the CPP in their respective project, being familiar with the theoretic

cal concepts underlying the CPP (Rütten, 1997) from the research group to which they belonged. In their current positions, the interviewees still used CPP as a method in both academic and non-academic projects (e.g., local administration projects), but worked outside the research group.

Data collection

We included three types of documents: final project reports ($n=2$), project manuals ($n=2$), and scientific publications ($n=6$). One researcher (RS) extracted data from final reports archived in the department's database. Manuals and scientific papers were identified on project websites and accessed via PubMed. Additional grey literature was extracted from one funding agency's online library (<https://www.bisp-surf.de>).

For the interviews, we developed a guide following the framework by Kallio and colleagues (2016) and considered aspects of Mayring and Fenzl's (2019) work to generate four overarching domains of interest (respondent's role in the CPP, the pre-CPP phase, the phase of running the CPP, and the post-CPP phase). Within each domain, we integrated the strengths, weaknesses, opportunities, and threats (SWOT) model, a planning methodology often used in health promotion practice, which fosters a rapid scan of different types of indicators (McKenzie et al., 2017). Separating in-

ternal (i.e., strengths, weaknesses) from external (i.e., opportunists, threats) factors according to the model has been often criticised (van Wijngaarden et al., 2012; Clardy, 2013), whereas those which are two-sided factors (i.e., both a strength and a weakness) are difficult to be addressed within the analysis (Queensland Government, 2017). Based on the current critique as well as on the lack of a uniform manner to perform the SWOT analysis, we reduced it to only two key concepts as to make it applicable for our research purpose.

Following, we formulated open-ended and follow-up questions to probe and broach into respondents' perspectives on implementing the CPP considering the two concepts. Probing question types were used before skipping to the next domain. Additional items from two validated questionnaires previously used to evaluate the CPP (see Rütten et al., 2006; Eckl, 2007) were also integrated into the guide, which was amended based on a pretest with two researchers familiar with the CPP. The final version (see Supplementary Material 1) addressed three main topics:

1. The CPP as a method, including (a) respondents' previous experience with the approach and (b) their project tasks and specific CPP roles;
2. The CPP's key performance indicators, including (a) elements ensuring target group participation, (b) facilitators and barriers in each process

¹ One interviewee is also a co-author of this paper.

- phase, (c) these facilitators and barriers' effects, and (d) changes proposed for future projects;
3. Respondents' attitudes toward (a) implementing the CPP in their project and (b) the CPP versus other participatory approaches.

Interviewees were assured anonymity and confidentiality in compliance with the FAU Data Protection Office, and written informed consent was obtained from all participants. One researcher (RS) conducted interviews sequentially—three by phone and one face-to-face—between November and December 2019. All interviews were conducted at participants' workplaces and lasted on average 1 h and 10 min.

Data analysis

The analysis was performed from an objective perspective, with the two researchers (RS and LB) collecting, analysing, and interpreting the data not being part of the scientific teams of the aforementioned projects. Standards for qualitative research as proposed by Pope, Ziebland, and Mays (2000) guided the analysis process. Our document analysis involved a multistage process, as Bowen (2009) described, and a subsequent summary of meaningful data related to the CPP, based on Yin's (2009) collection principles.

The conducting researcher (RS) audio-recorded the interviews while taking field notes, which were then transcribed verbatim by a second researcher (LB) using f4transcript software (<https://www.audiotranskription.de/en>) and assessed through qualitative content analysis (Mayring & Fenzl, 2019) using f4analyse software. Analysis started after the first interview and was based on the simplified SWOT model, which helped to build upon strengths and weaknesses at each CPP stage. The two terms were redefined as “facilitators” and “barriers”, which were more appropriate to describe indicators shaping the implementation of a process (i.e., enhancing and/or preventing). RS coded the transcript and created a codebook, refining it after each interview. RS discussed the codebook

with the transcriber (LB), who double-checked the codes. Interrater reliability was ensured via a constant comparison of codes between RS and LB. The saturation criterion (“the point during data analysis at which incoming data points produce little or no new useful information relative to the study objectives” (Guest et al., 2020)) was employed considering strategies as outlined in Low (2019). Due to the principle of “most-similar cases” (Mill, 1872) that we followed, theoretical saturation was reached even after a few interviews (see Morse, 1994).

For the analysis, RS extracted (a) themes, consisting mostly of the process's general stages (e.g., preparation), and (b) subthemes, representing specific actions within the process (e.g., recruiting stakeholders). Subthemes were further classified as “facilitators”, “barriers”, and a third category was inductively generated. “Challenges” were identified as those indicators that were not clearly linked to either good or poor CPP performance (in most cases, it could turn into either barriers or facilitators depending on how they are handled).

In a final step, the document analysis evidence was combined with the interview data to refine our general idea of the CPP and to obtain a deeper understanding of its central characteristics.

Results

Implementation of the CPP in sports science and PA promotion projects

■ **Table 2** illustrates how the CPP's three main phases were implemented and adapted in the projects, and it describes specific tasks performed at each stage. The projects tended to divide the *initial phase* into team building and preparation phases. The former was characterised by managing organisational tasks. In the latter, two projects focused on in-depth assessments within their respective settings, while the other two employed different recruiting procedures. One project performed additional preparation tasks for a vulnerable target group (e.g., planning childcare services for single parents). Another project fo-

cused on establishing and maintaining partnerships with other organisations, incorporating the target group's participation into the initial phase via focus groups.

The *development phase* largely followed the CPP's original description. It started with a kick-off meeting, where participants become familiar with each other and were informed about the CPP. After a brainstorming session, participants were divided into two to four workgroups to plan measures and integrate them into an action plan with a concrete timetable, individual roles and responsibilities, and required resources. Overall, projects took four to six sessions.

“Transition” was identified as a sub-step at the beginning of the *implementation phase*, characterised by the scientific team withdrawing as a main actor and handing over implementation responsibilities to the workgroups, a new leading organisation, or the community in general. In two projects, the scientific team completely withdrew from leadership, and the workgroup continued to meet and plan future steps. In another project, scientists continued to supervise implementation and provided support and counselling. When other stakeholders were unwilling or unable to take responsibility, researchers continued to perform organisational tasks for implementing certain measures.

Key performance indicators of the cooperative planning process

During the interviews, respondents discussed a wide diversity of indicators to assess the CPP's performance in different settings. As ■ **Table 3** shows, we first assigned indicators to the three phases and further labelled them as “facilitators” (f), “challenges” (c), or “barriers” (b).

Preparation phase

Facilitators

The interviews yielded many facilitators to prepare the CPP. Respondents stated that a pre-assessment procedure—for example, a matrix to identify project partners, context analysis with onsite fa-

Table 3 Key performance indicators (facilitators, challenges, and barriers) and suggested changes in each phase, subphase and/or task

CPP phases Rütten (1997)	Identified facilitators, barriers and challenges per task, phase, and subphase	Suggested changes and/or solutions
1. Initial phase	Team building/Finding phase	–
	–	–
	Preparation phase	
	Pre-assessment	Flexibility
	(f) Using diverse tools for assessing contexts, settings, site structures and/or characteristics (e.g., politics, culture, and philosophy)	If needed, consider mixing the CPP with other approaches
	(f) Applying instruments to identify population groups, their specific characteristics and assets, as well as their needs, wants and demands	Adjust the intervention level (“decrease” from national to regional, from regional to local)
	(f) Using tools (i.e., a matrix) to identify potential project partners and/or stakeholders	Consider continuously adapting the CPP to unexpected situations
	Recruitment	–
	(f) Identification of key actors (i.e., “Door-openers”, “bridge-builders”) as a connector to the population group (i.e., also community)	
	(f) Identification of key actors such as relevant decision-makers (i.e., local mayor), representatives of local administration or/and sports council	
	(f) Using diverse strategies in recruiting participants (e.g., the “snowball” procedure; a peer-to-peer approach; data from previous surveys; the contacts of so-called “bridge-builders”, “door-openers”; setting-up partnerships with other organisations or institutions)	
	(c) (Lack of) sufficient heterogeneity among participants	
	(b) The researcher team as a stand-alone recruiter for the process	
	(f) Recruiting participants by approaching them personally	
	(b) Contacting participants via invitation letters or emails	
	(f) Approaching participants by sending collective emails (i.e., a university and other institutions)	
	Pre-meetings	Plan concrete goals, rather than too general
	(f) The location chosen for pre-meetings is accessible by all participants	
	(f) Concrete goals are formulated prior to starting the process	
	(f) Common problem(s) is/are identified	
(f) Creating a shared vision		

miliarisation, assets analysis (see Rütten et al., 2009), or systematic needs assessment—helped reveal complexities in a setting’s structure, culture, and sport- or PA-related behaviour. These findings offered important insights on starting the process, which relied on these context-specific characteristics.

Interviewees also referred to several recruitment techniques, such as using their university network, a peer-to-peer approach, snowball sampling, or establishing a partnership with other institutions. The “door-opener” or “bridge-builder”—that is, identifying a key community member mediating contact between the target group and the project (see Rütten and Wolff, 2018)—was considered the strongest recruitment facilitator, especially in the cases where projects’ target group were hard-to-reach populations (i.e., socially disadvantaged women). As one interviewee stated, these individuals are key assets for the CPP:

Such a person has a good network in the setting and ... can help the scientific team a lot. (Respondent 3)

Another respondent suggested using survey data from previous scientific studies to identify and select physically inactive individuals for the project—a method that can foster the recruitment process. Furthermore, in the preparation phase, the project should conduct further assessments in determining specific characteristics of the population group (i.e., single parent, migrant background, and low-income status), as well as their needs, wants, and demands, and thus consider all those indicators within the process.

For pre-meetings, respondents advised choosing a location that was easily accessible for all participants. At this stage, they suggested that the project should focus on formulating common goals, identifying common problems for the CPP to address, and establishing a common vision for all participants to follow since these tasks foster participation:

[by enabling] partners to work better together, they are motivated to represent their group ... in the process. They wish to produce change. (Respondent 2)

Challenges

One respondent emphasised that the CPP was based on various actor groups’ participation. Without heterogeneity among actors, the process could still work, but it would not fulfill its intended purpose. Among these actors, the target group was identified as occupying the “hot seat” at the table, requiring the most support from scientists. If researchers did not maintain close contact with target group representatives, their continued participation could be at risk:

It is difficult to recruit inactive people. ... The target group requires a lot of support and counselling in order to succeed to have them until the end of the CPP. (Respondent 2)

Barriers

In the recruitment process, a university alone may not sufficiently convince regional- or national-level stakeholders to join a project. As a result, one project identified this barrier early in the process and adopted an additional recruitment strategy. The researcher team built a partnership with a “political” partner (i.e., the

Table 3 (Continued)

CPP phases Rütten (1997)	Identified facilitators, barriers and challenges per task, phase, and subphase	Suggested changes and/or solutions
2. Planning phase	Development phase	
	<i>The kick-off event</i>	<i>Flexibility</i>
	(c) The research team predominantly uses scientific jargon (versus everyday speech) during the event	Integrate new topics or even new goals that come along the process and are wished by the target group (i.e., not PA-related topics)
	(c) All present participants are informed about the character of the CPP and its relevance for the project	
	(c) The length of such an event	
	<i>Moderation</i>	<i>Moderation</i>
	(f) Moderators completed moderation training prior to the process	Provide moderation training for representatives of the target group
	(f) Moderators have a neutral function in the process	Social ability of moderators to handle and dissolve other conflicts during the sessions (i.e., religion-related topics, traditions, conflicts between different groups)
	(f) Moderation is performed by a tandem team (a team of a researcher and a representative of a population group is preferred)	Social ability of moderators to solve any small situation related to the target group (i.e., childcare)
	(c) (Lack of) sufficient moderation skills and experience for the moderators	External moderation during working groups
	(c) Moderators perform a dual role function in the process (i.e., scientific expertise and a session moderator)	Less agenda-oriented sessions, more flexible content to allow participants to fill it with their topics
	(c) Moderators predominantly use scientific jargon during the process	Less plenary session and more participant oriented (similar to a focus group)
	(b) The moderation has a dominant character	
	(b) The workgroup sessions are moderated by a representative of the group (i.e., internal moderation type)	
	(b) The moderators provide (in)sufficient information about the character of the CPP and its aim in the project	
	<i>Brainstorming</i>	–
	(f) In the first session participants are informed about relevant collaboration and communication rules to follow during the process	
	(f) Participants are informed about the principles of the CPP and its purpose for the project	
	<i>Prioritisation of ideas</i>	
	(f) Specific tools and/or strategies are used to prioritise ideas (i.e., rating technique)	
	<i>Action plan</i>	
	(f) Existing demands for specific measures are included in the action plan	
	<i>Participants</i>	<i>Flexibility</i>
	(c) Certain participants (i.e. stakeholders) are delegated to participate in the process	Reconsider adding participants to the process if needed (i.e., when the interaction does not work as wished)
	(c) Certain participants (i.e., stakeholders) are politically compelled from an upper level of their institution level to participate in the process	Adopt strategies within the process to increase willingness, and readiness of participants
	(b) Participants have a low level of readiness at this stage	
	(b) Participants intend to control and/or slow down the process (i.e., when outputs are not representing their interests)	
(b) Participants have low levels of acceptance for the action plan when measures do not meet the philosophy, and interests of their representing organisation		
<i>Resources</i>	<i>Resources</i>	
(c) A municipal creation scheme for PA promotion is established within the municipality	Plan additional resources (i.e. time) in case other unexpected societal conflicts, problems appear during the CPP	
(c) (Lack of) sufficient time for scientists to ensure permanent communication participants (especially with target group representatives) between sessions	Plan and allocate additional resources (i.e. time) to intensify contact with the target group during and in between CPP sessions (especially when the target group is a hard-to-reach or/and vulnerable population group)	
(c) Summer puts the process into a stand-by phase		
(c) Participants' individual capabilities (e.g., financial and personnel resources of decision-makers; time resources and PA competences of PA trainers) are leveraged in the process		
3. Implementing phase	Transition	
	<i>Key actions</i>	<i>Resources</i>
	(f) One or several "champion(s)" are willing to take leadership for implementation	Allocate additional resources (i.e., time) for the transition subphase
	(b) The scientists' withdrawal completely from the leadership	
	(c) Scientists handle champion(s) over a set of complex responsibilities	
	Implementation	
	<i>Involvement of scientists</i>	–
	(f) Scientists provide ongoing scientific counselling and support	
	<i>Measures</i>	–
	(c) Implementing PA measures that require structural change	
(c) Administrating financial resources for implementation		

(f) Facilitators, (b) Barriers, (c) Challenges (indicators that shape the process's performance, but could not be clearly related to facilitators or barriers)
PA physical activity, CPP cooperative planning process

regional ministry of health), which provided contact with the regional health promotion agency. Due to this newly formed collaboration, the project succeeded in convincing 13 other potential organisations from sports and healthcare sectors to join the process.

It is challenging to approach organisations at the regional level or even at the national level since most of them may not join the project just because a local university invites them. (Respondent 1)

Another respondent advised against contacting partners through emails or invitation letters, rather than by phone or in person.

Development phase

Facilitators

Neutral moderation was recognised as a core pillar at this stage, guiding the process by activating all attendees' competences and resources in a balanced manner. Moreover, a moderation tandem with additional training can facilitate effective group dynamics during sessions. Providing sufficient information on communication and collaboration rules, as well as the rationale for using the participatory approach in the project, is mandatory for the brainstorming session. This provision facilitates process transparency and can stimulate active participation—especially by representatives of vulnerable population groups. As a tool to prioritise ideas in a short period, projects successfully used a rating technique. One interviewee described the procedure:

To prioritise ideas [that] emerged from the brainstorming process, participants had to choose a maximum of three and attach school grades next to their favourites. (Respondent 2)

Target groups proposing measures that they had already attempted to implement may have facilitated the process because such measures were based on target groups' strong demand and substantial needs.

Challenges

Challenges related to kick-off meetings included: planning adequate event duration (from several hours to a one-day event) and finding a balanced mix of scientific and everyday German language that was easy to understand by all participants, whether laypersons or professionals. Moderation of the CPP also posed several challenges. First, it required specific skills and a certain experience level. Second, the research team's dual role (as moderators and scientific experts) caused tensions with other participants, who tended to believe that scientists used their moderator roles to favour their own expertise.

Interviewees shared a perception that resources played a pivotal role throughout the process—especially in terms of the available time, capabilities, and capacities to coordinate PA promotion onsite (i.e., via a job creation scheme). Importantly, a job creation scheme should be identified or created before a project, rather than resulting from the action plan. Another challenging resource concerned the research team, whose coordination role and continuous communication with participants required significant time. If the team could not invest these resources, the quality of the process could be negatively affected. Furthermore, importantly, summer holidays could temporarily stall the CPP. Besides attending the process and providing input on the themes discussed, participants also had to be willing to contribute other resources to the CPP, based on their specific capabilities (e.g., decision-makers' financial and personnel resources and time and trainers' sport or PA competencies). Unfortunately, "instructed" participation could obstruct people's readiness to invest resources in the process:

When actors are instructed from a higher level to join the project, you work with representatives of institutions that participate just because they are politically compelled to do so. (Respondent 1)

Barriers

A major barrier in one project was participants not being fully informed about

the cooperative procedure, especially scientists' withdrawal from their leadership roles during the implementation phase. Such a lack of information created tensions within projects. As one respondent stated,

They [participants] were shocked later on. (Respondent 2)

Particular types of moderators may become barriers to CPP. A dominant moderator could inhibit attendees' active participation, whereas an "internal" moderation of workgroup sessions (i.e., led by a stakeholder or group representative) could impede the equal consideration of all interests and perspectives with a risk of excessive subjectivity.

Respondents stated that participants could join the CPP with hidden agendas. They experienced actors endeavouring to control or slow down the process when certain measures might eventually favour a competing interest or organisation, or generally low levels of acceptance for implementation when the chosen measures did not match the philosophy of the organisations represented by participants. Interviewees indicated that excessively diverse participant interests, as well as low levels of engagement and readiness, could negatively influence the CPP.

Implementation phase

Facilitators

The presence of a "champion" was perhaps considered the most important facilitator—that is, an individual among the stakeholders who took over responsibility from scientists to implement measure(s) of the action plan. Respondents agreed that this role was a must-have for all projects:

A champion is a vital element for the process. (Respondent 3)

Interview data indicated that providing scientific counselling represented an appropriate tool for keeping actors motivated during this phase. Support was instrumental in empowering actors to take over responsibilities and implement the action plan.

Challenges

The transition subphase posed particular challenges for the above-mentioned champions because it involved a complex set of responsibilities and tasks handed over from the scientific team:

Responsibilities imply a contact with the target group, motivating them ... finding financial resources. The responsibilities of a champion are complex and imply much more than just the implementation of a measure. (Respondent 3)

One respondent identified measures targeting structural change as the most challenging to implementation.

Barriers

The complete withdrawal of scientists was a major barrier during implementation. In interviewees' experience, this phase required intensive support from scientific teams since other actors were often not ready to take over responsibilities or since projects lacked a champion. These indicators risked the failure of measures—especially long-term measures. Two interviewees agreed that this barrier was highly unfavourable for the process.

For this action, it needs two to five years of being present in the process, then handing over responsibilities to someone who can take the leadership. But in most cases, this happens too soon, and participants are not ready to do so. (Respondent 3)

Overall most projects reported performing the CPP strictly according to Rütten (1997) without deviating from the initial implementation plan. In this case, respondents proposed several changes for the implementation process and solutions (i.e., adjusting intervention level, refining goals, integrating non-PA topics, and adapting strategies to increase participants readiness) to outweigh possible shortcomings. In general, respondents requested a higher degree of flexibility within the process. This consequently implies flexibility within the project, which may allow planning additional resources (i.e., time and manpower) to deal with unexpected events or topics (also acute non-PA issues) that appear during CPP. In spite of this shortcoming,

participants still identified the CPP as an appropriate intervention method for the project to achieve its goals (i.e., promoting target-group specific sports or PA measures). Considering this common affirmation, respondents did not expand the discussion to other approaches, nor did they compare the CPP to other similar ones.

Nevertheless, several important indicators that enable the participation of population group representatives along the CPP were identified. First, certain key persons can act as “ambassadors” between the project and the people within the real-world setting. “Bridge-builders” or/and “door-openers” provide access to the population group, facilitating the recruitment process in this manner. In most cases, there is a pre-existing working relationship between such key individuals and the target group, which can enhance the population group's commitment to the project. Secondly, including their demands for specific measures into the action plan, as well as a clear pledge concerning their important role and perspectives, may foster their active participation in the process. By contrast, a CPP dominated by scientific language prevents the population group from building common ground with the other participants (e.g., city mayor or policymaker) or developing a sense of belonging for the whole group, and process, respectively. Furthermore, researchers' lack of continuous contact with the population group between meetings may decrease their interest in the process and hamper their participation.

Discussion

This article has explored how the CPP was implemented in sports and PA promotion projects as well as resulting lessons for future projects. It provides an understanding of how projects adapted the process, based on Rütten's (1997) theoretical concept, to develop and implement measures meeting setting and target group characteristics. Our case studies highlighted the CPP's complexity, illustrated its main phases and their typical activities, and described several indicators that shaped its performance.

One noteworthy result is that the CPP requires intensive preparation, focusing on assessment and participant recruitment. This finding aligns with other studies that have highlighted the importance of analysing a setting at an early stage (Popp et al., 2020) to determine how cooperation can best address a community's needs (Butterfoss, 2007). Although many research projects face recruitment difficulties, such difficulties are particularly challenging for CPP projects, whose approach encourages participant heterogeneity, while representatives of some population groups can be hard to reach (Shaghghi et al., 2011). Furthermore, key actors (i.e., “bridge-builders”, “door-openers”, and decision-makers) are facilitators that should be identified in the preparation phase, whereas target group representatives require intensive support from a project—a participation challenge that the literature has already addressed (see Rütten et al., 2017).

Moreover, moderation was identified as the development phase's central component, with its role in promoting attendees' active participation and fostering a democratic decision-making process. A tandem team, represented by a researcher and a target group member, can function well as a mechanism for neutral moderation since a scientific moderator can assure sessions' relevance to research purposes, while community-member moderation might evoke more compelling discussion (Williams et al., 2009) and provide a less threatening atmosphere than purely academic-led sessions. Furthermore, tandems may strengthen community-academia collaboration, increase trust, and offer research a more effective means of data collection than traditional forms of moderation (Amico et al., 2011).

The high number of challenges within the CPP's development phase confirms that using stakeholder collaboration to plan measures poses several difficulties (see Rütten and Gelius, 2014). Furthermore, the phase is subject to participants' varying interest levels in PA as a topic, their readiness to leverage their resources in the process, and their acceptance of planned measures. A review by Lasker, Weiss, and Miller (2001) emphasised that

partnerships offer great potential for different stakeholders to support each other by combining their complementary resources—but also that paying attention to how those resources are processed into products (i.e., an action plan with PA measures) is most important.

Finally, champions were perceived as a key component for the CPP's success during the implementation phase. Projects with a champion had better chances of putting developed PA measures into practice. Our findings add to the existing literature, which states that champions are a prerequisite for project institutionalization (Goodman & Steckler, 1989) and can positively influence implementation effectiveness (Miech et al., 2018).

To the best of our knowledge, the current research is the first empirical study to investigate indicators that shape CPP performance as a participatory approach to sports and PA-promotion projects. Nevertheless, some potential limitations must be considered. First, our research focused on past projects, and respondents found recalling all CPP actions—and delineating them from project evaluation research—challenging. Given that many scientific projects require considerable initial organisational arrangements, project managerial workloads may have biased interviewees' recollections. This possibility suggests that even researchers face particular difficulty in identifying the CPP's limits and boundaries within a project—a challenge reported in a study investigating the approach's health-economic value (Gelius et al., to be published).

Another limitation related to the generalisability of our results. The CPP was adapted to each project, based on its goals, context, or population group addressed, and yet all four projects followed a common pattern on how to conduct the process (i.e., the CPP adapted by Rütten, 1997). Still, some performance indicators could not be attributed to all projects; for example, a challenge (i.e., researchers' dual role as scientific experts and moderators) may have negatively influenced one project without posing risk to another project. Given the small sample of projects (and the fact that they all come

from the same workgroup), caution must be taken on how those indicators should be considered by future projects. Our findings might not represent all projects implementing the CPP; nonetheless, it helps to understand researchers' experiences, which can be used to advance the quality of such processes.

In addition, another limitation was the reliance on perspectives from only one group of representatives in the CPP (i.e., the scientific group). Those in other roles (e.g., stakeholders, population group members) may have different perspectives and experiences related to the CPP. This topic is worth being examined in future research, as to establish if researchers' self-reported facilitators and barriers are actually enhancing or constraining the process.

A further shortcoming of our study relates to the standards of good practice in qualitative research. We conducted and reported our research, guided by the consolidated criteria proposed by Tong, Sainsbury, and Craig (2007), some of which were not fulfilled. The transcripts and our results were not returned to participants due to constrained resources, missing a chance to further improve the data or refine our interpretation. However, against the ongoing debate on quality of quantitative research, Mays and Pope (2000) highlight that such type of research should not be judged by a set of conventional guidelines (e.g., validity, generalisability), but mostly by its relevance to the existing knowledge state.

Finally, our work clearly indicates several limitations of the CPP itself. One likely outstanding result of our analysis is the lack of focus on the implementation phase. Respondents reported only three performance indicators. Thus, an additional subphase of transition where researchers withdraw from the leadership was identified as crucial for CPP. The findings mark (1) the stage in the process where researchers end their task, (2) the point when the action plan becomes the responsibility of community members (i.e., champion), and, most importantly (3) that implementation is hardly the main subject of the CPP.

Furthermore, it has been suggested that one of the main flaws of the CPP is

its lack of political mandate, which makes it difficult for the results of the CPP to enter the political decision-making process and become relevant in terms of action and implementation (Breuer et al., 2010). This seems to be a well-founded and true acknowledgement, which can represent a central problem for some projects. However, Frahsa et al. (2012) and the sports department of the city of Erlangen (Amt für Sport und Gesundheitsförderung—Bewegung tut gut, n.d.) appear to disagree with this assumption, suggesting that the CPP can achieve political commitment can create legitimacy and resources (i.e., new local policy regulations and municipal job positions for PA promotion at site) despite political resistance or budget constraints. Our study identified several indicators that, if considered at an early stage in the process, may lead to CPP results matching the local (or municipal) political situation. In this context, specific tools to assess the context, its structure, culture politics or even philosophy, as well as identifying key actors (i.e., local decision-makers, representatives of local administration, sports council) should be considered when preparing the process.

Breuer et al. (2010) highlighted that the CPP was not "efficient" regarding the extent of effort it required. This statement was underscored by further interview insights, indicating that respondents desired additional resources (especially time) to ensure better process quality and better transition towards measure implementation. Until now, less attention has been paid to moderation, which is considered too complex against the constrained level of resources available to the process. Because it is a social, interactive process, several other factors (e.g., knowledge-based logic, logic of trust, loyalty and commitment, and logic of compensation or harmonisation of divergent perspectives or interests within the process) should be further explored regarding the performance of the CPP.

Finally, in light of its elaborated shortcomings, when comparing the CPP with other methods, such as the PROCEDURE and PRECEDE planning methods (McKenzie et al., 2017), it becomes apparent that the focus of

the CPP lies on co-designing and co-developing intervention with all its aspects. PROCEDE and PRECEDE are systematic, with PROCEDE's emphasising assessment and the latter evaluation. The CPP, by contrast, is dynamic, goal-oriented and measures favoured by the community can be incorporated into the action plan, whereas the other models develop interventions based strictly on the results of the assessments. CPP is less time-consuming and its assessment implies smaller amounts of data compared to PROCEDE.

The bulk of advantages and limitations highlighted across our study should lead future projects to decide for themselves which approach is most appropriate to apply concerning the focus of their project.

Conclusions

Our investigation of the CPP has demonstrated that the approach can be highly suitable for producing context- and population group-sensitive measures to promote sports and PA in different settings, but it also underlined that the CPP entailed an intensive preparation phase, a challenging development phase, and a critical transition of responsibilities for an action plan's implementation. Overall, this study has highlighted that the CPP is appropriate for a broad spectrum of sports- and PA-related fields, as well as contexts requiring further development of specific measures.

Our research has helped enhance the understanding of the CPP's underlying constructs and the need to consider a variety of key indicators that shape its performance. We have provided an initial list of representative facilitators, barriers, and challenges for implementing the specific CPP approach by Rütten (1997), but researchers may want to develop this list into a full-fledged process evaluation framework to support a successful replication of the CPP in future projects. From an analytical perspective, including other CPP-based projects in future analysis, as well as expanding the focus beyond the field of sports and PA, may be interesting in terms of establishing common features with projects in other health promotion areas. Further research

should align identified facilitators, barriers, and challenges with the three criteria groups proposed by Breuer et al. (2010) in the attempt to make clear judgements on why and how the CPP is generally effective but less efficient regarding the implementation efforts it implies.

In all projects we studied, the CPP acted as a catalyst by bringing stakeholders, population groups, and researchers together, empowering them to create new programs that better fit setting demands and contributing a greater impact than the limited capacity of each actor alone. This finding suggests that the CPP is more effective than efforts planned and undertaken by a single stakeholder or organisation, underlining previous evidence that an interactive mechanism can improve community capacity to achieve better health (Kreuter et al., 2000; Strobl et al., 2020).

Corresponding address



R. Sommer

Department for Sports Science and Sport, Friedrich-Alexander University of Erlangen-Nuremberg Erlangen, Germany
raluca.sommer@fau.de

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Declarations

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