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Annual Reflection 2019

Contents

Mesopartner Profile

Mesopartner is a knowledge firm that specialises in economic development, competitiveness and innovation. Our strategic intent is to be globally acknowledged as an innovator in economic development practice. Combining theory, practice and reflection, we enable clients to explore options and support decision-making processes. We collaborate with strategic partners to create knowledge on contextually sound economic development.

We operate as advisers and service providers to development organisations (development agencies, ODA (Official Development Assistance) donors, development banks, NGOs, cluster networks and others, to decision makers in the private and public sector and to consultants and consulting firms. Since 2003, the knowledge that we have shared and the tools that we have developed have helped development organisations and stakeholders in many developing and transformation countries to conduct territorial and sectoral development in a more effective and efficient way.

Mesopartner offers the knowledge that local actors need to address the challenge of innovation and change in a systemic and complexity sensitive way. We develop innovative tools based on local and regional economic development, cluster and value chain promotion, market systems development, strengthening of local innovation systems and related topics. We coach and equip development practitioners to design interventions in socio-economic systems, and conduct leading-edge learning events for practitioners. We facilitate development processes and give policy advice.

Foreword

2019 has been a year of anniversaries for Mesopartner, some enjoyable and others sad. Twenty years ago, our late partner, Dr Joerg Meyer-Stamer designed and applied an early version of the rapid participatory approach entitled *Participatory Appraisal of Competitive Advantage (PACA)* in a region in southern Brazil. PACA essentially helped Mesopartner to start up and grow. Fifteen years ago we founded Mesopartner, and in the same year, 2004, we published our first Annual Report (which has now become the Annual Reflection). Ten years ago, sadly our co-founder and partner Joerg passed away suddenly.

We have commemorated these anniversaries in different ways. In memory of the 10th anniversary of Joerg's passing away we decided to organise a joint reflection lab at the end of June 2019 in Duisburg, a place that attracted Joerg and shaped his thinking. Duisburg was and still remains a symbol of structural change and transformation. For this event, we invited a number of Joerg's former colleagues and young researchers to reflect about future development requirements and our ways ahead.

The twenty-years anniversary of PACA encouraged us to start rethinking the methodology and consider how to

reshape it in a way that will make it more sustainable, resilient and complexity sensitive, while still remaining hands-on and easy to train and apply in the field (see Article 5, *Twenty years of PACA*). The intention to renew PACA is additionally motivated by a re-emerging demand for this approach.

Particularly during the last ten years, our thinking was challenged by different views on economic development, which includes a more systemic and complexity-informed view, a focus on resilience instead of growth (see Article 2, *Target resilience, not growth*), and the view on working towards a new set of sustainable development goals (SDGs), not only on the multi-national and national levels, but also on the local level (see Article 12, *SDGs: Requirements for a more innovative and interdisciplinary promotion approach at the local level*). Other trends which started shaping development and which need our attention are urbanisation and digitisation and their possible combination (see Article 8, *Smart cities and smart rural areas: Digitisation is not the first priority*).

Mesopartner has always promoted an approach that is sensitive to the context and to stakeholder capabilities, and which is able to incorporate learning, adapting and continuously improving. The Adaptive Management approach, which is now extremely popular, is fully in line with this thinking, and is considered common sense by many seasoned project managers. It is useful to de-mystify this approach and highlight important elements which an adaptive management strategy should ideally include (see Article 3, *Adaptive management*).

Another important article in this Annual Reflection is Article 1, *A process of search and discovery*. It presents the systemic insight process logic, which, as a process management approach, offers an alternative to linear processes of planning and implementation. It is able to respond to the uncertainty and complexity of systems in which a project tries to intervene. Most importantly, it abolishes the notion of sequential steps and instead adopts elements that can be addressed in parallel, iterative or even sometimes sequential ways, depending on the context.

We have observed that various projects have started to combine the perspectives of two or more development approaches to gain more systemic insight into a context. This includes the combination of Local Economic Development (LED) and Market System Development (MSD) (see Article 4, *LED and MSD: Differences and complementarities*). As the key features of both approaches (principles, questions, tools) strongly overlap, the combination of both approaches in a single locality or project would appear to make sense. Mesopartner advises

project managers on how to combine these approaches, and we have designed and started conducting combined LED and MSD training events.

Moreover, we believe that the value chain concept could benefit from a circular, environmentally friendly vision, whereas the circular economy discussion could engage more strongly with development aspects, such as distributive justice, equality and inclusion. Article 6, *The beauty of circular value chains*, discusses how the linear value chain logic could be transformed into a circle, re-integrating consumed final products into an upstream linkage of a new production process. Among others, this integration could improve the sustainability concept in the CALIDENA approach, a rapid, participatory methodology to stimulate quality in value chains, which has been co-developed by Mesopartner.

In Article 7, *Responding to the geography of discontent*, we discuss the correlation between electoral behaviour and the economic development of territories in developed and developing countries. A key question here is: can the rise of populism, extremist parties and autocratic leaders be curbed by smart local and regional economic development?

Finally, we include a few articles on technological change, skills upgrading and strengthening technological capabilities. These articles discuss the following key questions:

- What are the key pillars of technological capabilities? (Article 9)

- How are the meso organisations that strengthen technological capability identified? (Article 10)

- How does one respond to technological change by promoting learning and skills upgrading in the economy? (Article 11)

We hope that the Annual Reflection 2019 is a worthy publication in a year of both sad and enjoyable anniversaries and that it properly reflects our current way of embracing economic development. We learned from development practitioners around the world that our Annual Reflections in recent years have helped them to better understand and address economic development issues in a different way. We hope that this year's publication will achieve the same result.

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01

A process of search and discovery

on principles and ideas of intervening in complex systems. It embraces the paradigm of complexity thinking and human sense-making.

One output of Mesopartner's work in bringing theory and practice around complexity and development together is the Systemic Insight process logic. It presents an outline of a process of continuous discovery and learning that can be applied in a great variety of settings – from individuals to teams to whole organisations exploring ways to achieve change in a complex setting. The process presents an alternative to linear processes of planning and execution, which are not able to respond to the uncertainty and complexity that many teams and organisations face nowadays. The process is based
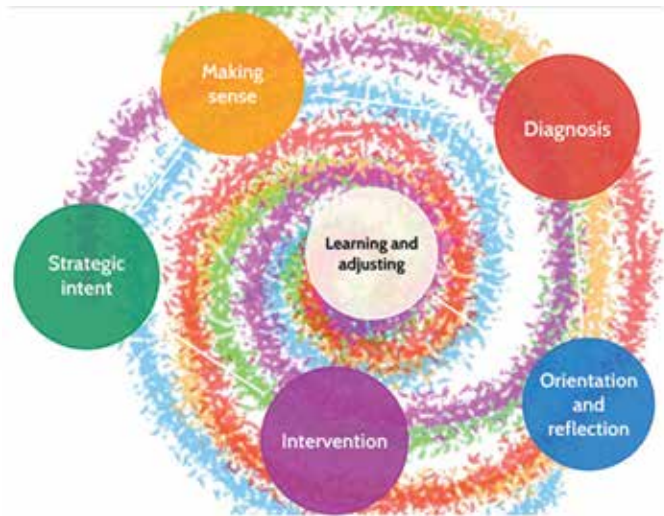

Figure 1: Overview of the process of continuous search and discovery

The process proposes five elements (see Figure 1). We have chosen the term "elements" to highlight the fact that these different points in the model signify a change of emphasis, a change of intensity or perhaps a different mode of working, in contrast to a progression of distinct steps or phases. The sequence we propose is merely a way to explain our logic, as language is by nature sequential. In reality, however, many things happen at the same time, and thus our work needs to be adapted and be done in sequential, parallel or iterative ways, depending on the context. Activities in a complex system cannot follow a predetermined sequence, but need to answer to the dynamics in the team and the context. Flexibility is needed to adapt every element to the realities in and around the project. Nevertheless, the suggested process guides a team in their work as it outlines the important questions one needs to be constantly aware of.

In the following, we describe the different elements from the view of an individual team. The logic should, however, also be applied when working with possible partners and the key influencers.

Orientation and reflection

Orientation and reflection are important elements as they sensitise the team working on complex change to their own bias and to different perspectives. Beyond the team, it is crucial to understand the different perspectives of predominant stakeholders, as they will shape how the stakeholders react to interventions. There is, however, no need for alignment of perspectives within the team or among stakeholders. On the contrary, it is beneficial to find a diversity of views on the situation as this potentially leads to greater variation in the design of interventions. The team needs to find a way to handle divergent perspectives in a constructive way.

Diagnosis

Diagnosis is not a delimited step in a process, but an on-going sensing of what is happening in the system. There are aspects of the system a team needs to understand: who the main actors are and how their relationships are, what are opportunities and constraints, and importantly, what the dynamics of the system are, i.e. the predominant patterns of behaviour. To collect relevant data, several analytical instruments can be used. Each analytical instrument draws on different theories and knowledge bases, all of which have their own biases or perspectives. Therefore, combining different analytical instruments provides a greater in-depth diagnosis that allows teams to consider how factors affect each other.

It is important to be aware that it is impossible to form a complete picture of what exactly is going on through extensive analysis.

Making sense

As described above, a team needs to continuously be sensing what is going on in the system using a variety of different instruments. However, we found that continuous diagnosis alone does not guarantee that the systemic patterns are well grasped. Indeed, analytical approaches often focus on individual parts of the system, such as a value chain, a sub-sector or a specific group of people. This ignores the interaction of the parts and teams struggle to find overarching and repeating patterns. An effort is necessary to make sense of the relationships between the elements and the system and the interactions between the elements.

Care must be taken not to get stuck in an endless loop between diagnosis and making sense. While we must endeavour to gain an in-depth understanding of the system, complex systems can only really be understood when one interacts with them.

Strategic intent

In a traditional approach to strategy, an idealised future state is developed and the gap between the current situation and the future state is then closed by implementing a detailed plan that requires full alignment of all stakeholders. There is wide appreciation, however, that we cannot grasp what an ideal future would look like in a complex adaptive system. Rather than developing a detailed ideal future and planning how to get there, our process suggests that we focus on changing the evolutionary path of the system by managing the present.

To do that, a coherent response of the stakeholders to the current situation is necessary. Consequently, the aim of the strategic intent is to give the actors involved a sense of direction. It is not the intention to get everybody to implement the same activities, which would make success less likely and make the system less resilient. Rather, the strategic intent should allow for diversity and a variety of responses, while ensuring that everybody is in broad agreement as to whether a path taken will contribute to an improved situation.

Intervention

Complex situations are marked by a high degree of uncertainty about how the situation can evolve over time and what forces are predominantly shaping the system. No single actor in the system has the capacity to change the

overall patterns. Coordinated action is needed. There are different ways to intervene in complex situations, and we propose three types of intervention:

1. *Incremental* interventions start a process of changing the behaviour of actors in the system by taking small, simple-to-implement steps using resources over which the stakeholders have control. The activities should be visible and easy to communicate. The activities should start soon after planning them. These interventions are sometimes also called "quick wins".

2. *Safe-to-fail* experiments lay the foundation of an evolutionary intervention design. Experiments can lead to a better understanding of what works and inform the selection or adaptation of interventions down the line. Experiments need to be designed in a way that allows them to fail safely, i.e. without risking the health of the whole endeavour or harming the actors involved. The experiments therefore need to be small, but still large enough to have a meaningful effect.

3. *Failsafe* interventions aim to change tangible constraints in the system, and thus potentially have a large-scale impact. These types of intervention need bigger budgets and take a longer time. They require a project structure and management. It is important that this approach should be used for interventions that can indeed be planned and managed, such as establishing physical infrastructure.

The mix of interventions is likely to change and evolve over time based on what works in the real world and how it works. It is important to test various diverging hypotheses that have been collected within the team or the larger group of stakeholders by using safe-to-fail experiments.

In situations where it is not feasible to achieve change, a graceful exit is advisable. If we see that we cannot change anything in the strategy of the organisations we work with, we should exit gracefully to avoid the complete failure of our initiative by focusing on other routes for change.

Learning and adjusting

Learning and adjusting is a continuous mode of operation. Learning provides the insights that lead a team to change emphasis and adapt. As complex systems cannot be understood by analysing them but only when interacting with them, the intervention phase is the most important phase in which to learn about how the system works. Hence, interventions need to be designed in such a way that their effects can be observed.

Short learning loops lead to immediate adjustment of emphasis, while longer cycles of learning can inform the intervention portfolio and the strategic intent. Learning is the glue that binds all the activities and the generated knowledge together (red lines in Figure 1).

The process of exploration requires creativity in responding to the context. The team must be creative in drawing heterogeneous stakeholders into the diagnosis and the strategy. Not all stakeholders will understand or appreciate the necessity of drawing in dissenting views and contrary ideas, as stakeholders often value conformity and coordination more than experimentation and alternative approaches. To overcome this is the task of the process facilitator.

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02

Target resilience, not growth

Many international donor programmes have growth and employment as their prime objectives and performance targets. Impact-level indicators usually cover the number of full-time equivalent jobs created and net-attributable income change. As these programmes are about reducing poverty and inequality, this is certainly right. Or is it?

The answer to this is not a simple "yes" or "no", but a more complex "it depends". Many programme designers, implementers and donor staff realise that. This is why more and more often, some qualitative indicators are added on the impact level, usually connected to the decency of jobs as well as the inclusivity of income

growth. But the quantitative targets remain in the logframes, and as Donella Meadows, a famous systems thinker, said: a system – in this case a project – will be shaped by its purpose (i.e. the targets it is supposed to achieve) and self-organise in a way to do it justice. Simply realising that the economy is complex and dynamic, and that sustainability and inclusiveness require more than a short-term boost in the creation of jobs and income, is not enough to prevent this. When push comes to shove and reviews or external evaluations are scheduled, all that such projects generally care about is to achieve those numbers.

Meadows also tells us that optimising a part of the system generally has unintended and often negative consequences on other parts of the system as well as on the whole system. Hence, while income and employment are certainly characteristics of a healthy and resilient economy, optimising the economy to deliver these elements might have adverse effects on other elements or on the effectiveness of the whole.

But what if we did not treat these measures as sole objectives, as overarching impact targets, but rather look at the overall health of the system as an indicator of a successful intervention? Resilience, defined as having the capacity to persist in the face of change, to continue to develop with ever-changing environments (Folke, 2016), is one way of looking at the health of the system. Economic development that builds resilience establishes long-term capabilities and sustainability. This way of looking at resilience is less about managing shocks or stresses and more about managing continuous change and development. It means focusing less on project activities when measuring performance and more on emphasising the dynamic capability of actors in the system to collaborate, share information, develop distributed insight and take collective action.
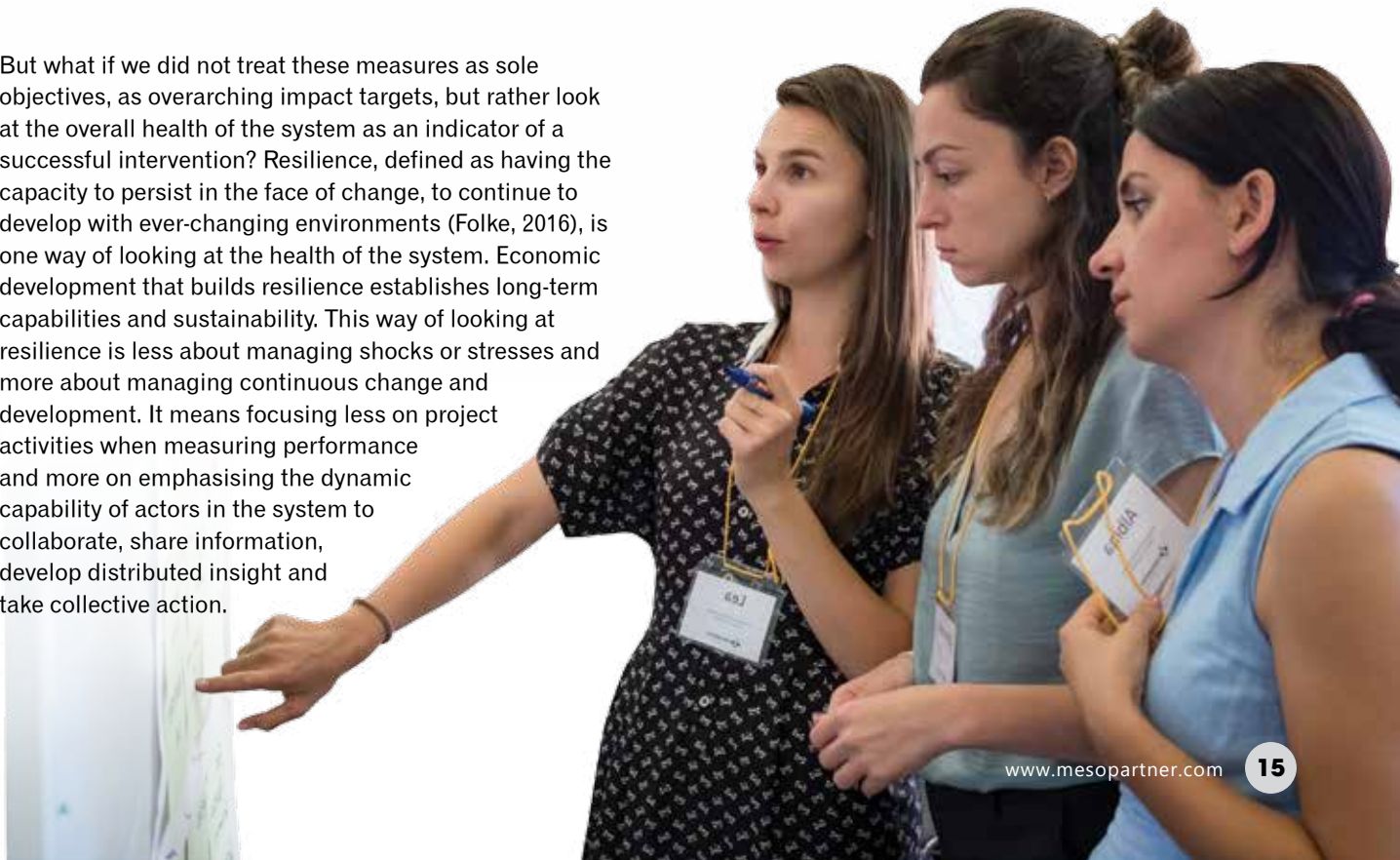
What is contained in this capacity to persist in the face of change, to continue to develop with ever-changing environments? Resilience thinkers have come up with seven principles to enhance resilience in a social-ecological system (Biggs et al., 2015; Biggs et al., 2012). Without going into the detailed meaning of each of these, which is a topic of continuous research and debate, in this article we will show how Mesopartner's approach to economic development – and Territorial Economic Development (TED) in particular – can contribute to resilience by embodying these principles.

Principle 1: Maintain diversity and redundancy. From an evolutionary economics perspective, maintaining diversity is paramount for enabling technological development in an economy. Economic development should encourage actors to try new things and enable a territory to enhance self-discovery within and between economic actors by strengthening its meso space with policies and organisations that enable companies to experiment and explore what is possible and that bring in relevant and appropriate knowledge and technologies from outside.

Principle 2: Manage connectivity.
Mesopartner's approach to economic development, embodied in our work in TED, is about bringing people together and establishing connections among actors in an economic system. Building social capital and trust is central to building both strong and resilient economies. Systems that are resilient depend on other systems. In many developing contexts a key problem is that systems that should be connected are isolated and disconnected. Conversely, too much interdependence is also not healthy, as a failure of one element can quickly spread if tightly coupled to others. Too much interdependence could occur, for instance, if there is too strong a top-down strategic direction, meaning that all actors follow the same priorities.
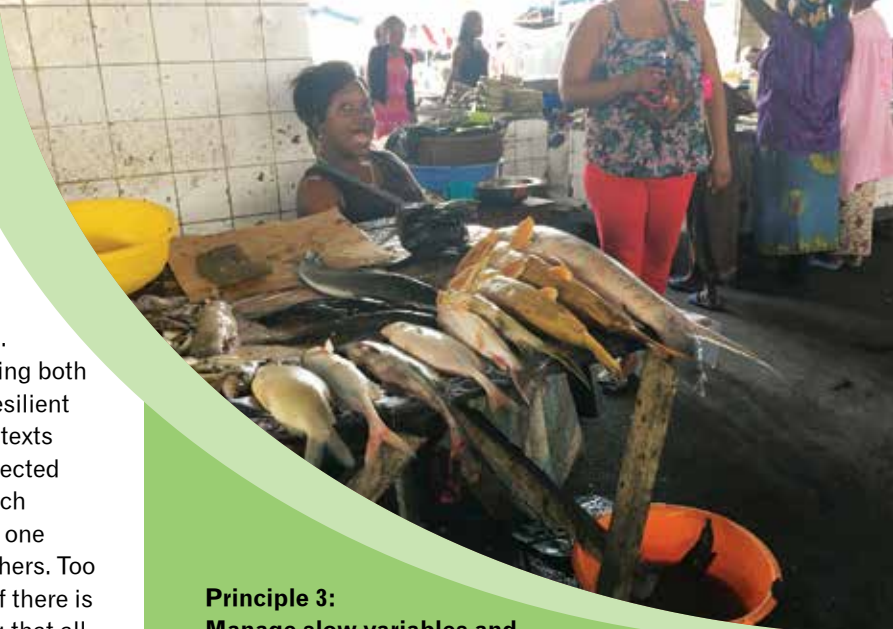
Principle 3: Manage slow variables and feedbacks. This is the most challenging principle to grasp for economic actors. Policy makers need to be aware of and bring in a long-term perspective which requires economic actors to manage slow variables such as general education levels in a society or technological capabilities in an economy. Also, within companies, slow variables such as learning or a quality culture are important determinants of success.

Principle 4: Foster an understanding of complex adaptive systems. This has been at the heart of Mesopartner's approach to economic development. Understanding complexity and complex dynamics and translating this in a way that our clients and partners are able to grasp these ideas in a practical way is central to our work and is reflected in many of our frameworks and methods that we bring into economic development initiatives. This understanding needs to spread beyond development initiatives and reach all the diverse actors engaged in economic development and societal change.

Principle 5: Encourage learning and experimentation. Learning and experimentation are again central to how Mesopartner approaches economic development processes (see Article 3, *Adaptive management*). Learning and adjustment are at the core of our Systemic Insight process logic. Enabling economic actors to experiment and learn is core to our mission.

Principle 6: Broaden participation. Mesopartner has always promoted participatory approaches such as the Participatory Appraisal of Competitive Advantages (PACA) approach. Also economic theory supports the view that if economic processes are more participatory, weaker and more marginalised groups in society can bring in their needs and visions, which leads to more inclusive economic change.

Principle 7: Promote polycentric governance systems. In our work in TED we have designed programmes that work with a multitude of public and private governance actors, from central government, provincial authorities to, most importantly, local governments on the one hand, and business associations and chambers on the other hand. Governance structures are different in every context, but working with and strengthening different capacities at different levels of government and business remain vital for TED.

What if strengthening resilience in itself were the central performance measure of economic development initiatives, instead of the creation of jobs and growth of income? It is our belief that such initiatives would be released from the pressure to deliver superficial numbers and could rather focus on changing the economic system's structures to make it more able to change in a long-term, positive way. Whether these seven principles are the best guide to achieving resilience and how exactly one would measure a programme's performance is work

in progress. This is not easy, but it is an exciting task, and solving it would bring economic development efforts a huge step forward.

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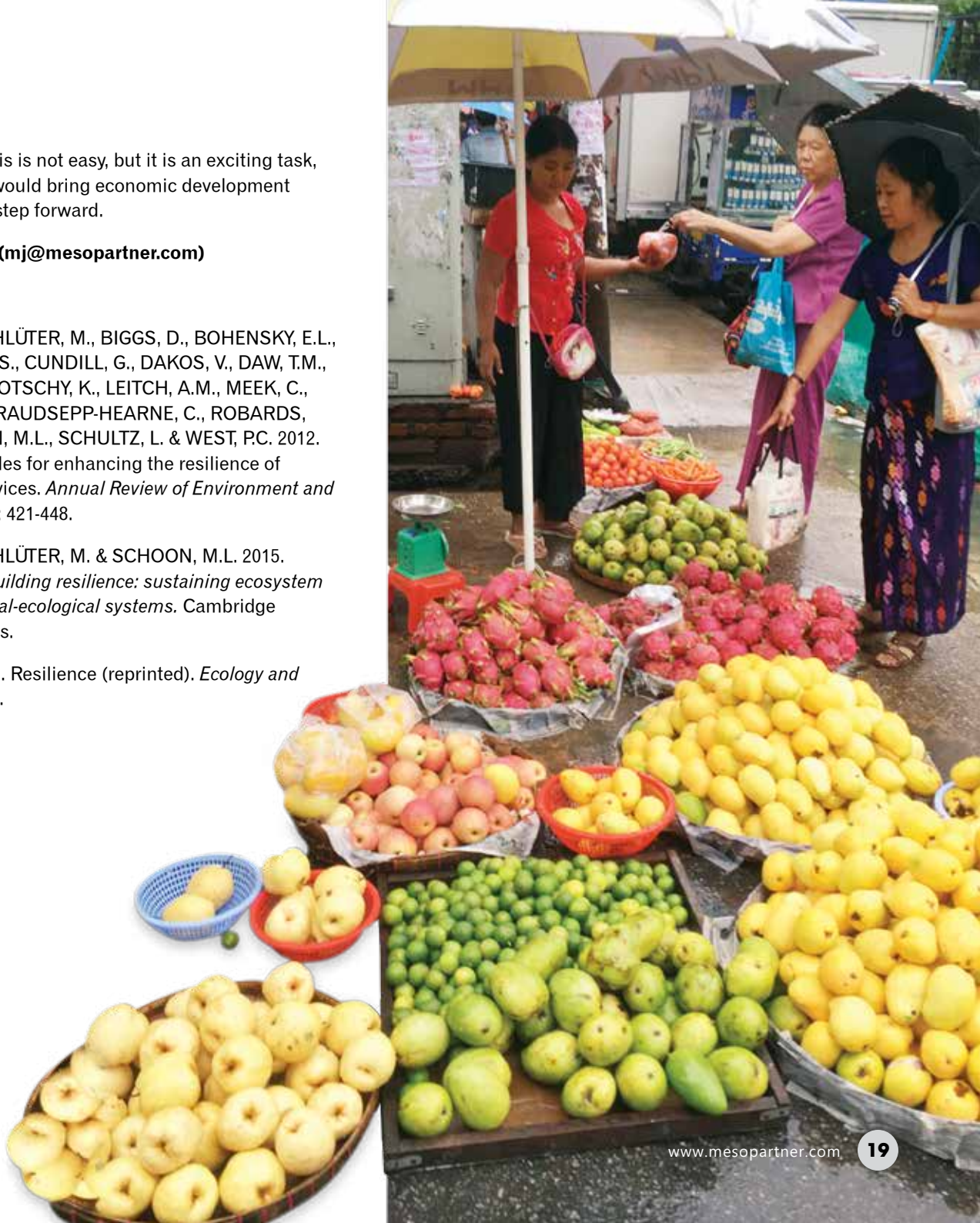
03

Adaptive management

Adaptive management has caused quite a buzz in development. At the same time, many practitioners, particularly those who have been around for a while, see it more as common sense than as something completely new. Mesopartner has always promoted an approach that is sensitive to the context and to stakeholder capabilities, and is able to incorporate learning over time, adapting and continuously improving.

Adaptive management is not a prescriptive recipe but a collection of principles, recognising that certain situations are not amenable to conventional planning and management approaches. In many situations a

conventional planning approach is not optimal for two main reasons. Firstly, we might not completely understand what is going on and more analysis does not help us to clarify the situation. Secondly the context shifts, both through our interventions and through other factors, and our responses will need to adapt to these shifts over time.

In this article we describe a number of elements that are important to integrate into an adaptive management strategy.

Manage the complicated and explore the complex

Complicated and complex situations need to be approached differently. Complicated situations can be managed. Traditional output-oriented project management techniques work well – progress can be accurately measured and risks can be managed. This works well, for example when distributing vaccines. Complex situations need to be explored because outcomes are not predictable. Incentive schemes, for example, might lead to perverse behaviours by actors trying to game the system.

Create and maintain situation awareness

It is critical for actors engaged in complex change to be aware of what is happening around them. Being situation aware requires us to construct and maintain a map that allows us to integrate diverse inputs and observations into a current understanding of the situation shared among the team. This map can, for example, be built on a framework such as Systemic Competitiveness (see Article 1 in Annual Reflection 2017, *Meso level, meso space and the relation to territories*).

Create a process to systematically develop interventions

Learning and adjusting should not happen in an ad hoc manner. An adaptively managed project should have a structured process that describes how new ideas are turned into interventions, how these interventions are planned, implemented and monitored, and how the individual interventions as well as the overall intervention portfolio are reviewed and updated.

The process of developing interventions often starts with a concept note that gives some detail to an idea, which is then discussed among the team. Once the concept note is approved, a more detailed intervention plan is developed. The overall project logic on how interventions are developed and reviewed should be informed by the Systemic Insight logic described in Article 1, *A process of search and discovery.*

Adapt the monitoring and review activities to the pace of change

In the intervention plan described above, the project needs to describe what changes are expected in the short, medium and long term. This way of documenting expected changes has three implications for monitoring:

• Firstly, the monitoring methods and tools need to be adapted to capture the changes described.

• Secondly, the monitoring plan needs to be adapted to measure the changes when they are expected to happen.

• Thirdly, the monitoring reach should be adapted to the expected outreach of the intervention.

An additional implication of the approach to adaptive management described is that not all baseline data can be captured before the project starts. In addition to some high-level baseline data captured in the beginning, the relevant baseline data needs to be captured for each intervention individually before the start of that intervention.

Regularly review interventions and the intervention portfolio

Adaptive management requires us to regularly review our interventions, our intervention portfolio, and the overall Theory of Change of the project. These reviews are done at different frequencies. Day-to-day activity plans should be reviewed frequently, and larger activities can be followed up with an After-Action Review. Reviews of individual interventions are done more often than the review of the intervention portfolio, which happens more frequently than the review of the overall project Theory of Change and the context.

Not only team members should be involved in these reviews, but depending on the level of review, it should also involve project partners, other stakeholders and the donor. Some organisations also involve team members from other projects in larger reviews (e.g. portfolio or Theory of Change reviews) in order to strengthen project-to-project learning.

Integrate learning, strategy and theory

Strategic learning has three elements (Lynn, 2012: 2):

1. Learning: The systematic use of data for continuous improvement and the collective interpretation of new information.

2. Being strategic: Applying the collective interpretation of information to strategy.

3. Utilising theory and research to ground both strategy *and* learning in the broader context of what is known about the world.

Often only the first two elements are taken into account, and the third is disregarded, which is critical if the learning is to move from the intuitive to the strategic. This learning is only built on previous experiences, not taking into account the vast body of accumulated knowledge in theory. To be able to do this, however, requires the ability to

understand abstract concepts and apply them to one's own context.

Devolve decision-making and disintermediate information

Decisions should be made by the people with the most appropriate levels of information and the experience to make the decision. Managers who are responsible for implementing projects, such as team leaders or project directors, often do not have the bandwidth to read and engage with all the information that is necessary to understand the need for adaptations. Furthermore, they are not in the field enough to capture the tacit aspects of change and the weak signals that allow the staff closer to the action to make more informed calls. At the same time, the people who are close to the action are often more junior staff who lack the experience to make important decisions with consequences for the project implementation.

Consequently, there needs to be a balance of devolving decision-making to the field staff, while making sure that more senior management staff are able to engage with relevant data and effectively oversee what decisions are taken and why. For that to work, all levels of staff in a project should be able to access the basic elements of data collected, not only the condensed conclusions and recommendations based on that data, as these most certainly contain an interpretation bias. This is what we call disintermediation.

Enabling environment and learning culture

Adaptive management needs a positive enabling environment – including tools and methods, structures and processes, leadership and management, and culture and mindsets. There is also a need for funders to become more flexible in their funding strategies with a greater emphasis on trusting relationships instead of command and control. There are no easy recipes on how to achieve this. Relationships, processes and trust evolve over time; this process is itself a process of exploration and learning.

In the project team itself, it is important to cultivate a culture of curiosity, enquiry, collaboration and learning. There needs to be an appetite to explore new ideas and an acceptance of failure as a source of learning. Team leadership must be able to balance what is needed in

the context with what is possible based on available funding, resources and stakeholder capability. Building this culture needs to start when recruiting team members as the ability of new members to integrate into a learning team depends on their mentality and previous experiences. The team members need to be able to think critically, understand abstract concepts and use them to develop ideas for change initiatives.

These elements are not necessarily new or original, but reflect our current thinking. Doing adaptive management well is in itself a process of exploration and learning as there is not a single right way of doing it. Hence a review cycle in addition to the cycles described above should cover the questions of how we learn and how we can learn better. Many questions remain. For example, many projects struggle with the question of when and how to drop interventions. Moreover, an important open question is how adaptive a project can be in an environment where there is a lot of rigid and detailed long-term planning.

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04

LED and MSD: Differences and complementarities

In recent editions of the Annual Reflection, particularly in the 2015 Annual Reflection, we discussed Local Economic Development (LED) intensively. We have also occasionally discussed Market System Development (MSD). For instance, in the 2018 Annual Reflection we deliberated on the difference between MSD and Making Markets Work for the Poor (M4P). So far, however, we have not discussed the differences and complementarities of these two approaches. Project reality, however, shows that a combination of LED and MSD takes places quite frequently. Therefore this article explores how both approaches can be combined and why this makes sense.

Many development projects understand that they can benefit from combining different analysis frameworks, such as value chains, clusters, innovation systems, quality infrastructure systems, etc., in order to generate a more systemic understanding of what is going on in an economic system and to extend the portfolio of possible interventions. A combination of at least two such frameworks reflects the reality of most projects. This can increase the effectiveness of analysing and promoting more complex economic systems. MSD and LED each provide the logic and perspective that combine some of these frameworks with an overarching theory of change and a number of principles. However, the analysis frameworks used by each approach overlap. We have concluded that it also makes sense to combine the perspectives of the two approaches to gain more systemic insight into a context.

We understand LED as a participatory, territorial approach to improve the competitiveness of a given territory, ultimately aiming at inclusive growth. MSD – according to our understanding – is an effort to transform the supporting and institutional setting around a market in a way that the market system becomes more effective and more inclusive. This transformation occurs on different levels: public and private service provision, market and non-market support systems, formal and informal institutions, and cultural norms and values.

Both approaches, LED or MSD, attempt to intervene in an existing complex adaptive system, whether it is called a local economy or a market system, and try to influence its evolutionary trajectory in a positive way. Essentially, however, the two approaches provide two different lenses on the same economy, drawing the boundaries of what is looked at and prioritised in different ways. In both cases we need to have a deep understanding of the economic system concerned: diagnosis of the system is vital to understanding the patterns of
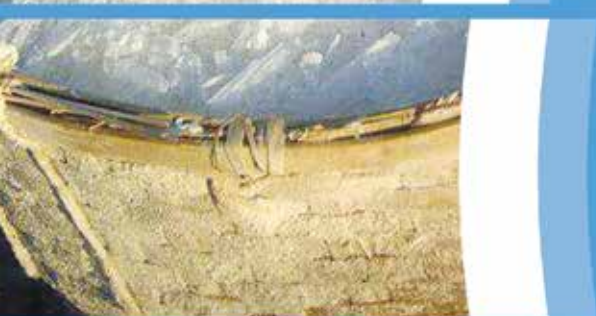
persistent underperformance and binding constraints in the system and in guiding partners towards achieving sustainable change. The focus of the diagnosis is different depending on what approach we select. In either case, however, we need to recognise that in systems as complex and dynamic as local economies or markets not all knowledge can be generated through analysis and research. Understanding of what is currently going on in a system, what has happened there in the past and envisioning what might happen in the future, helps us to design interventions that are systemic and that introduce opportunities with the potential to move the system in a positive direction that will continue beyond the project's life.

In both approaches, systemic insight as a process management logic works perfectly as it is based on a universally relevant logic and relevant key principles. Article 1, *A process of search and discovery* in this Annual Reflection discusses the systemic insight process logic.

In LED, a key question that needs to be answered is: *what do we need to get right in order to strengthen a local economy?* In the 2015 Annual Reflection we discussed the essential sub-questions that need to be answered along the way of an LED process, which are:

- What is our own bias? What do we want to achieve?

- What are the key characteristics and structures in the local economy?

- Who are the key actors in the local economy?

- What are the competitive advantages and disadvantages of the local economy?

- What is the locality's trajectory?

- What strategic interventions would help to upgrade the local economy?

In MSD, the key questions to be answered are strikingly similar, showing only a few variations:

- What is our own bias? What is our strategic intent? What direction of change does the programme want to contribute to?

- What market systems or sectors should the programme work in?

- What are the structures in the selected market systems or sectors? What structures in the wider economy are relevant?

- Who are the key actors?

- What are the competitive advantages and disadvantages of the sector?

- What is the market system's or sector's trajectory?

- What are the system-level constraints that prevent the market system from working effectively? Which constraints should be explored first?

- What interventions could the programme explore to advance in the strategic direction? How feasible is it to induce system-level change?

When comparing the principles adopted by both approaches a strong, although not complete, overlap is shown. Both LED and MSD are about economic development and thus aim at a few overarching goals, such as creating inclusive job and business opportunities, and increasing income (in Article 2, *Targeting resilience, not growth,* we argue, however, that a focus on a wider goal such as strengthening the economy's resilience might be more beneficial). LED and MSD abide by a few universal economic development principles, such as market and opportunity orientation, inclusiveness, facilitation, adaptability, and sustainability. However, both approaches are characterised additionally by their own unique set of principles. In the case of LED, this would be a territorial focus, local ownership, transparency of the LED process, local capacity

scalable change. When we take a closer look at these unique principles, however, we could argue that applying them would make sense whatever lens one uses.

In conclusion, improving the performance of an economic system can take different routes. A local or regional economy, or only specific market systems or sectors within this economy, or a combination of both can be targeted. For these purposes, the lenses of LED and MSD could be applied, each being equipped with a set of principles, a sequence of questions to be answered and a respective toolbox for developing and implementing interventions. As the key features of both approaches (principles, questions, tools) strongly overlap, the combination of both approaches in a single locality or project makes sense. The following points summarise the complementarity of LED and MSD:

- MSD and LED share facilitation as the main intervention strategy, and projects avoid taking up functions that need to remain locally implemented.

- Local ownership is central to both MSD and LED

- MSD looks beyond administrative or territorial boundaries and includes national and even international stakeholders.

- LED anchors interventions in a locality and makes the results more visible.

- LED provides entry points based on local priorities.

- LED widens the sector-focused lens to better understand the institutional, political, social and cultural context in a locality that shapes economic development.

building, participation, and subsidiary. MSD, on the other hand, looks at a few additional principles, such as taking a system orientation, understanding and building on genuine incentives and the capabilities of permanent market players, sensitivity towards the complexity of market systems, and promoting a clear vision for

- LED focuses on establishing problem-solving processes rather than solving problems by removing constraints for markets to work, improving the resilience of the economy.

LED and MSD can complement each other as distinctive approaches or can be used as different lenses in one approach in a project that combines a territorial with a sectoral logic. A good example is a project of the Swiss Agency for Development and Cooperation (SDC) started in Moldova in November 2018. The project was implemented by the Chamber of Commerce and Industry of the Republic of Moldova, Helvetas Swiss Intercooperation (a Swiss NGO) and Mesopartner. It employs an MSD logic, working in two selected sectors, while featuring a strong focus on strengthening selected economic regions in the country following LED principles. An understanding of the selected sectors of high-value agri-business and information and communication technologies (ICT) enables the project to support businesses to grow and create employment, while a territorial lens allows it to draw on the comparative advantages of selected economic regions and build coordination and collaboration of economic actors to strengthen the enabling environment and the region's competitiveness. At the same time, the dual focus allows the project to identify synergies like the ability of the ICT sector to attract higher-skilled workers into a region, thereby strengthening its general skills base and purchasing power and create a more sophisticated demand for other businesses to respond to.

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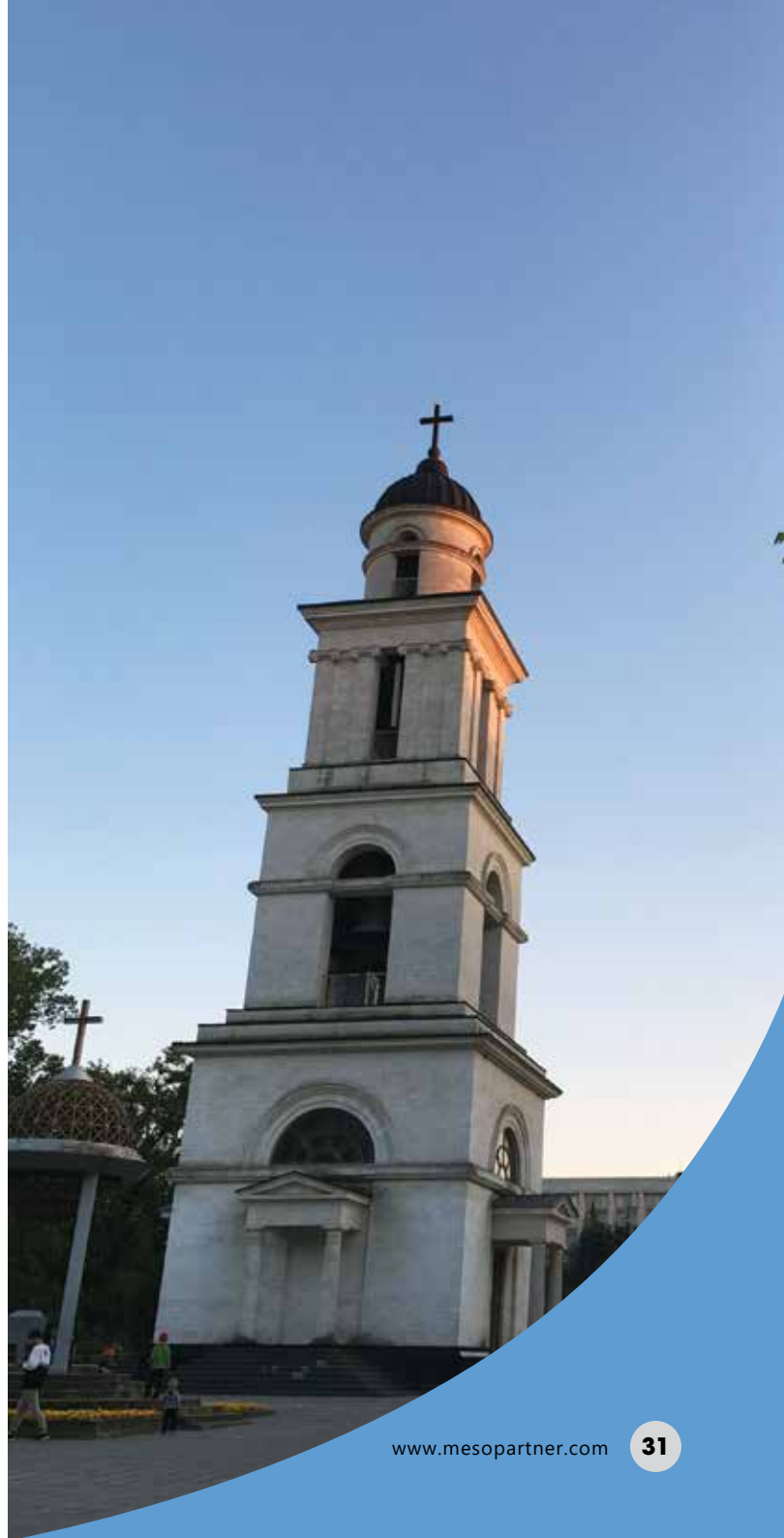
05 Twenty years of PACA – Retrospective reflections and opportunities for renewal

Twenty years ago, Dr Joerg Meyer-Stamer started writing the zero-draft manual of the rapid participatory approach under the title of *Participatory Appraisal of Competitive Advantage (PACA)* at an airport in southern Brazil. Some days earlier, he had designed and facilitated the first application of the method in the state of Rio Grande do Sul. Soon PACA spread to countless cities, local economies and regions of the Global South. With the support of PACA, local stakeholders identified and implemented important and sustainable impulses for *bottom-up development.*

At that time, PACA was very innovative in terms of combining common tools, frameworks and development principles in a new and different way, with the ultimate aim of identifying the potentials, shortcomings and solutions of local economies in a rapid and highly participatory way.

An additional and indirect contribution of PACA to supporting developing and emerging countries has been made through the training of development practitioners. Even years after attending their first PACA trainings, our colleagues have confirmed that the PACA approach and method had a decisive influence on their *capacity building* and determined the way they tend to approach economic development.

The year 2019 also marks the tenth anniversary of the untimely passing of our friend, co-founder of Mesopartner and author of the PACA methodology. By introducing PACA, Joerg laid the foundation for the start-up and successful development of our consulting firm, Mesopartner. During the first few years of the company's life, PACA was our flagship product, for which there was enormous demand, and which was applied in more than forty countries. Many development practitioners were trained in PACA and became enthusiastic about this pragmatic and participatory approach. Its systemic view, its creation

of motivation among local actors, its activation of momentum via quick wins and its emphasis on using locally available resources have become good practice in international economic development.

For a considerable time, PACA and related instruments like the Hexagon of LED or the Compass of Competitiveness were dominant methodologies used by GTZ (now GIZ). They significantly inspired the approaches to local economic development, value chain development and cluster promotion of the International Labour Organization (ILO), the Inter-American Development Bank (IDB) and the Donor Committee for Enterprise Development (DCED). Following the same logic, Mesopartner has developed similar methodologies such as RALIS (Rapid Appraisal for Local Innovation Systems) and, jointly with the International Cooperation Department of the Physikalisch-Technische Bundesanstalt (PTB), CALIDENA, a methodology to promote quality infrastructure for value chains.

During recent years, Mesopartner has adjusted its strategy and started focusing more strongly on enabling development organisations and practitioners to understand and solve their problems without referring to a specific process design and toolbox. The company's new strapline became "connect the dots", and with a process logic such as "systemic insight", we have started integrating complexity thinking in our approach. Nevertheless, even today we still refer to the key concepts and development logic of PACA and the Systemic Competitiveness framework, which we still continuously use in our practical consultancy and facilitation work. We have learned that it is a question of perspective and of trying to understand local realities when it comes to designing development processes, and not insistence on applying specific tools or methodologies.

Although Mesopartner has intentionally rejected the marketing of PACA in recent years, there is still a significant demand for the method. Mesopartner and associates have also explored ways of applying PACA to new thematic areas, such as the Pro-Poor PACA approach, the merger of PACA and Market System Development (both by Christian Schoen), the application of PACA in the context of refugees and in regions of failed states by Doug Hinson, or the gender-sensitive value chain promotion by Valerie Hindson and Frank Wältring. We frequently learn from PACA practitioners that they continue to work successfully with the method. Américo Herrera recently shared with us the finding that the method has been used in Mexico in over a hundred (!) agro-industrial areas. We are always keen to find out which lessons have been learned in recent exercises and what changes have been made to the methodology. This will allow us to update, adjust and renew the approach.

Given the success and lasting popularity of PACA, we and other PACA practitioners have begun to wonder whether we should fundamentally revise and update PACA. There are several reasons for this consideration:

- PACA is committed to *competitive advantage,* even in its name. Today, however, development has shifted towards *sustainable development* in a wider sense, which must also be reflected in the local development agenda.

- One methodological strength of PACA is its *systemic approach.* When it was being designed, PACA was ahead of its time in terms of criticising linear strategic planning. However, there is more potential for strengthening systemic thinking and stronger consideration of uncertainty and complexity in development. One way to do this could be to integrate ideas from systemic insight into the PACA method.

- When looking for local solutions, PACA targets quick wins and more ambitious catalytic activities, but does not look at the overall health of an economic system. The *resilience* discussion, which is gaining increasing momentum in economic development, focuses on making systems such as local economies stronger, healthier, more robust and ready to overcome external shocks (see Article 2, *Targeting resilience, not growth* in this AR). It is worthwhile considering building resilience ideas into the PACA method.

However, the question remains whether to leave PACA untouched the way it was originally designed, and in parallel create a new methodology with a different name, or to redesign the PACA method comprehensively under its original name. At this point we purposefully leave this question open for discussion and invite interested practitioners and clients to submit their views and comments. In 2019 we decided to create various opportunities to discuss the relevance and possible renewal of PACA. Like the methodology itself, we consider this discussion a participative process.

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06

The beauty of circular value chains

Both the value chain and the circular economy concept have their unique attractiveness. In the 2016 Annual Reflection we published the article *From value chains to circular economic systems* (Cunningham, Jenal & Harmes-Liedtke, 2016), where we argue that value chains often optimise efficiency at the product level but fail to provide resource efficiency at an overall system level. As an example, we referred to food waste in economic systems based on highly optimised value chains.

In this article we focus on the practical aspects merging both approaches for our work in development. We believe the value chain concept could benefit from a circular, environmentally friendly vision, whereas the

circular economy discussion could engage more strongly with development aspects, such as distributive justice, equality and inclusion.

The value chain concept, originating in business management (Porter & Advantage, 1985), is frequently applied by international development agencies (see http://www.value-chains.org). The basic idea goes back to the combination of different links in the production of a product, such as in food production from cultivation, processing and distribution to the purchase by the end customer in a supermarket. In each link, values are created that accumulate with each value chain actor transforming the product on its way downstream to final consumption.

The global value chain approach puts the concept in the context of globalisation and trade (Gereffi, 2018). Here a particular focus is on questions of power and distribution. Mostly the producers of raw materials and agricultural products receive only a small share upstream of the value chain, whereas links closer to

consumers manage to generate comparatively high profits with add-on services such as branding and marketing. This is all the more important, as upstream links tend to be in developing countries, whereas downstream links are often located in industrialised countries. Global buyers in industrial countries manage whole value chains and thus determine the rules of the game to their advantage. From a development policy perspective, the global value chain approach aims at, among others, increasing value creation in upstream links of value chains, thus enhancing production, processing and related services in developing countries and ultimately generating job and income opportunities in the developing world.
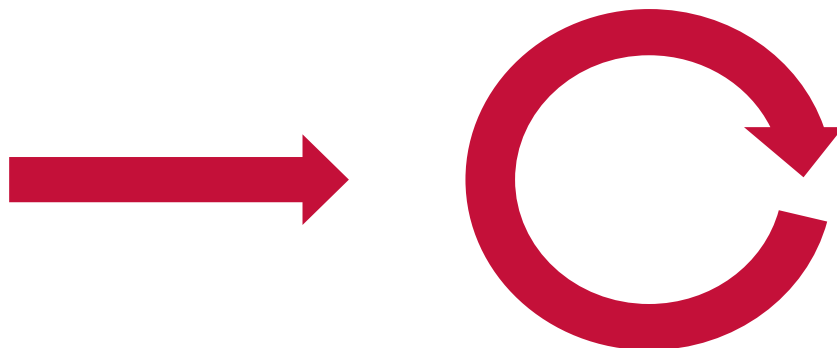
A more recent concept is the circular economy (MacArthur, 2013). It is based on an ecological idea aimed at avoiding waste in the production process. Similar to the cycle in a natural ecosystem, such as a forest, there is no beginning and no end, but a permanent process of growing, thriving and decaying, in which the residues of a previous process are the fertilisers for new growth. Nature does not know any waste; all substances are continuously reused. Ideally, production and consumption should follow the idea "from cradle to cradle" (McDonough & Braungart, 2002) as opposed to "from cradle to grave". In this respect, the circular economy is not only environmentally friendly, but also economically effective and profitable.

From a methodological viewpoint, it does not seem difficult to transform the linear value chain logic into a circle. Researchers even esteem the "beauty of the circularity of the value chain" (Shaharia, 2018). The chain does not end with consumption but re-integrates the consumed end-product into an upstream linkage of a new production process of the same or even a different product.

In several of our activities and tools, we tend to use the value chain logic. Therefore we are now facing the question of whether and how we should integrate the logic of circularity in our work related to value chains. For instance, this is relevant for a stronger consideration of the sustainability concept in the CALIDENA approach (www.calidena.org), a rapid, participatory methodology to stimulate quality in value chains, which was developed jointly by the German Metrology Institute PTB and Mesopartner.

Initial ideas on how to answer this question include:

- Adding circularity and sustainability criteria to the list of product selection criteria in CALIDENA

- Greater consideration of sustainable forms of production and of compliance with sustainability standards

- Stronger emphasis on recycling in value chain work from the outset, and consistent consideration of the ideas of the 5 Rs (Reuse, Reduce, Recycle, Repair and Recover)

- Widening the range of stakeholders to include the recycling industry and environmental regulators

- Systematic reference to sustainability standards, such as the British Standard BS 8001, which helps to implement the principles of the circular economy in organisations, or ISO standards on circular economy, eco-design and life cycle assessment

- Broadening the quality concept in CALIDENA to include quality aspects such as sustainability, reusability and recyclability of products and the avoidance of negative externalities on the environment and climate in the production process.

- Explore how a circular economy could be achieved more easily and rapidly through digitalisation in terms of material flow between companies, resource conservation, durability of products, ease of repair, recycling etc.

The following diagram shows how the idea of circular economy can be integrated into a traditional value chain mapping (see Figure 2). Circularity is taken into account by various feedback loops along the value chain (Preston & Lehne, 2017). Innovations can occur all the way from the material input stage to the "end-of-first-life" stage.
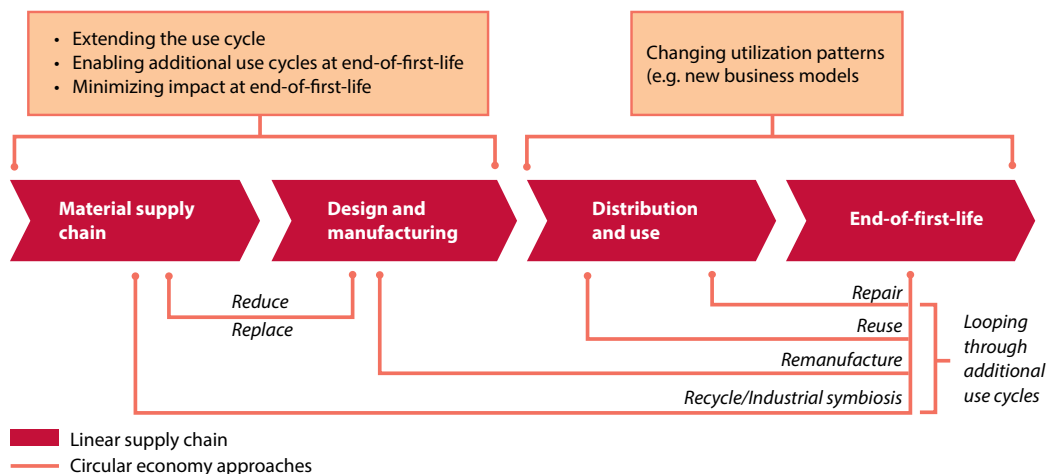

Figure 2: Integrating ideas of circular economy into traditional value chain mapping
Source: Preston & Lehne, 2017

This allows questions of ecological sustainability to be systematically taken into account within the framework of value chain analysis.

The analysis helps to make the value chain more efficient and opens up additional opportunities for value creation. The four principles of the circular economy outline the specific potential of value creation (MacArthur, 2013):

1. The power of the inner circle, which refers to tighter feedback loops in the different steps of production and leads to higher energy and resource efficiency.

2. The power of circling longer relates to longer product life cycles and more durable use.

3. The power of cascadic use describes the opportunity after using a material in one product to reuse it as a substitute for a virgin input in another product.

4. The power of pure, non-toxic, or at least easier-to-separate inputs and design, which facilitate repeated use and extend the use cycle.

These principles also extend the idea of value creation beyond its economic origin and recognise its ecological value.

What is now the particular advantage of the circular value chain for developing countries? Developing countries often tend to use resources less efficiently, so that we recognise particular opportunities for

promoting resource efficiency and eco-based value creation in those countries. This is first and foremost about avoiding losses, e.g. in agricultural production that suffers from post-harvest losses to the extent of half of the production (Guillou & Matheron, 2014). This also applies to the processing industry, where the consideration of resource efficiency is a key factor in becoming internationally competitive.

In developing countries in particular, a throwaway mentality is pervasive, and in most cases formal recycling systems are still not in place. The consequences are the wasting of scarce resources and the pollution of the environment. In addition, industrialised countries are used to exporting selected waste to developing countries, thus exacerbating the problem for the local population and the environment. Against this background, strengthening circular value chains and making a circular economy a reality needs to address all the above issues in parallel. This would ultimately contribute significantly to the achievement of the Sustainable Development Goals, especially to SDG goal 12, to promote more responsible production and consumption.

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07

Responding to the geography of discontent

Andrés Rodríguez-Pose, Professor of Regional Planning at the London School of Economics (LSE), has recently contributed to the public debate on the connection between populism and regions (Rodríguez-Pose, 2018). His studies show a strong correlation between electoral behaviour and the economic development of territories in Europe. According to his analysis, extremist parties achieve particularly high election results in places left behind. He interprets such an election outcome as a protest by a population seeing itself as a loser of globalisation and technological development.

We can confirm his findings using the example of a comparative study of two German regions (Harmes-Liedtke & Wältring, 2018): Lausitz, in the east of the country, is currently going through structural change in the wake of the cessation of lignite mining. This region experienced radical structural change in the course of reunification in the 1990s and is now facing a new and profound socioeconomic transformation. The current situation is characterised by job losses, emigration and a general fear of the future. In Lausitz, right-wing political parties achieve the highest results. By contrast, Münsterland, an economically strong rural region in West Germany, successfully mastered the structural change of the 1980s. Today the city of Münster can be considered a success model of a prospering service centre and a university city. Here extremist parties are inconsequential.

The "geography of discontent" can be also observed in the USA (Hendrickson, Muro & Galston, 2018). The 2016 presidential election revealed an extremely strong divide between thriving metropolitan regions and places that had been left behind in a changing economy. Growing territorial disparities are closely related to the globalisation and deregulation of recent decades. Metropolises benefit

from this trend, as they offer particularly good conditions for investment and innovation. They attract the "creative class", whereas the peripheral regions suffer from a brain drain (Florida, 2017). The consequences are unemployment, income losses and frustration in remote areas, which can easily be abused politically.

In developing countries, the problem of regions that are left behind is also known, but manifests less in election results. Mobile and flexible citizens migrate to larger cities or even abroad. The voices of those who remain are mostly unheard. This is particularly true in areas where the state has lost control, such as the guerrilla and paramilitary-dominated areas of Colombia or the Boko Haram sphere of influence in north-eastern Nigeria. But even in less violent contexts, the question of regional development remains unanswered. Despite different realities, the structural problems in regions left behind are quite similar in developing and industrialised countries.

The neo-liberal answer to these problems is "place-neutral policies", that is trusting the mechanisms of the market. This approach offers migration to urban agglomerations as the obvious solution. But this creates new problems in reality, because the less mobile population remains behind in the peripheral areas. A "place-neutral policy" leads to exponential growth of megacities and significant territorial imbalances and will be unsustainable in the long run. At the same time, rural areas offer natural beauty and small community attraction that provide economic opportunities as well.

But also the opposite "place-based policy" strategy, which aims for equity and regional redistribution, has not been able to overcome the backwardness and discontent of peripheral areas in the past. Neither the Mezzogiorno policy in Italy nor the "joint programme for improving regional economic structures" (Gemeinschaftsaufgabe Verbesserung der regionalen Wirtschaftsstruktur, GRW) in Germany or comparable policies in other EU countries were able to ensure even living conditions. Even European structural policy failed to achieve regional cohesion.

As a third way, regional researchers propose "place-sensitive distributed development policies" (Iammarino, Rodríguez-Pose & Storper, 2018). This approach goes beyond the divide between "place neutral" and "place based". "It is place sensitive, rather than place based, in the sense that the specific starting point and mix of instruments needed to distribute development will be different for each group of economies" (Iammarino, Rodríguez-Pose & Storper, 2018).

These policies must be geared more closely to the specific situation and opportunities of the various types of region. In low-income regions, the main objective is to retain young people and top performers, whereas in traditional industrial regions structural change towards new economic sectors and skills needs to be accelerated (see also Article 10, *Responding to technological change by promoting learning and skills upgrading in the economy*). In emergent regions the aim is to consolidate the positive development trend by expanding the institutions. Even prospering areas will remain open to change in order to be able to adapt to new developments.

Apart from the above reflections, the question of what the geography of discontent means for practical work in local and regional economic development (LRED) remains. There are three relevant answers:

1. **There is a need for the adaptation of LRED instruments** for marginalised regions. The geography of discontent demonstrates that traditional LRED instruments miss achieving inclusiveness and trickle-down effects. It requires an adaptation of LRED instruments for specific target groups. Here important considerations are entrepreneurship, employability skills, an increase of knowledge-intensive fields of work and applied innovation promotion.

2. **New ways of combining relevant knowledge.** In regions with long-declining development paths, LRED needs to be supplemented by psychological work, utilising outside ideas, and the creation of social, ecological or cultural innovation networks.

3. **Integrating public debate and social approaches in LRED.** Apart from targeting enterprises, LRED is also about creating a communicative living environment in which the community gets into contact, develops a culture of discussion and feels integrated into the development process of their locality.

In summary, place-sensitive policies and innovative LRED activities will raise opportunities for all types of regions and help structurally weak regions to utilise their full potential. Key fields of intervention are regionalised education and labour market policies. In addition, strengthening local
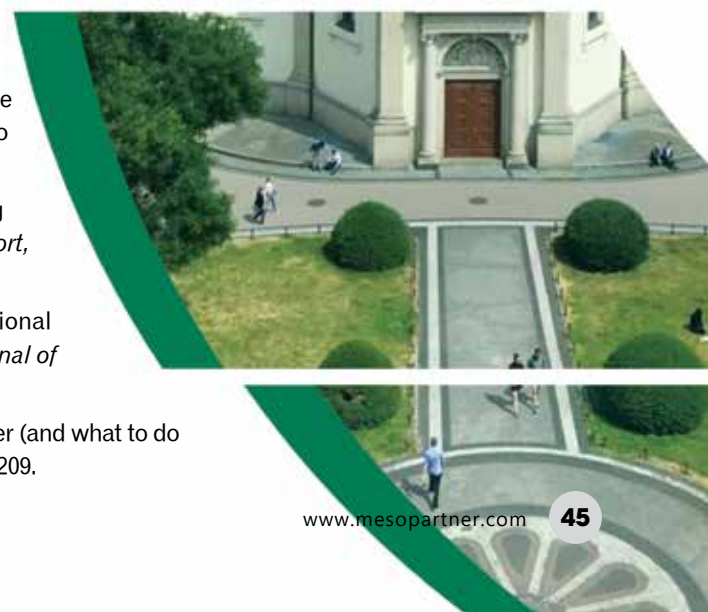
institutions and governance is seen as particularly important. It is crucial to upgrade infrastructure within and between structurally weak areas. The aim is to optimally adapt the mix of instruments to the unique features of each region. If successful, such policies can lead to a large number of competitive regions which overcome regional imbalances and enable inclusive and sustainable development.

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08

Smart cities and smart rural areas: Digitisation is not the first priority

What constitutes the "smart" element of a space or a place? We argue that "smart" does not equal digitisation. But if "smart" is not necessarily associated with digital solutions, what does it mean then?

At present, a large number of proposals for the sustainable and competitive future development of regions and locations seem to revolve around the "smart city" and "smart rural area" concepts. This reflection essentially refers to the application of digital solutions and the more efficient processing of data to improve economic, environmental and social development processes. In contrast, Mesopartner is promoting smart approaches that do not equate "smart" with "digital" only. The key criteria for spatial and economic development processes do not essentially lie in the technologies that are applied, but in the institutional structures and knowledge networks

created, where digital approaches become a means to an end (among others). We present three hypotheses that reflect our work and discussions on the topic.

1. Smart spaces are those that seek and find solutions to new challenges.

2. Smart cities and smart rural areas should not be considered separately but should complement each other through spatial approaches.

3. Truly smart spaces are those that experiment, allow diversity of ideas, and learn from and with each other. Here the terms "local ecosystem" or "innovation system" are often the buzzwords used.

Smart spaces are those that seek and find solutions to new challenges

Jane Jacobs was an urban planning expert who devoted herself to the question of understanding the development of places and cities. *"Dynamic places constantly reinvent themselves"* is one of her arguments. Moreover, she argues that every city was once small, but unlike places that remain small, growing places differ by developing new solutions for burgeoning problems. Jacobs had a very holistic understanding of development that included economic, social and environmental aspects. She emphasised the endogenous potentials that need to be strengthened in a location.

Our work experience confirms that strengthening endogenous development potentials essentially depends on past development experiences, institutional structures, values and norms associated with them in the development process. This includes the self-image of individuals and groups that influence organisations, policies and the socio-cultural system and behaviours. Moreover, local development is influenced by national and supra-regional structures. Weak structures at national level are often reflected at the local level through

the weak performance of the education system, the decentralised political and planning structures, the promotion of creative thinking, the knowledge and innovation-oriented organisations and networks. This reflects the complex and systemic interdependence between local and national structures and their actors. However, the local level still remains the place where local actors can make a significant difference to their own reality by networking with each other and trying to do things differently. The different dynamics of spaces and places in a country ultimately depend on the extent to which they are able to collectively develop uniquely creative approaches to problem solutions.

Smart cities and smart rural areas should not be viewed separately but together

Rural and urban areas differ in their critical size, their internal development dynamics and their possible development approaches. Rural and urban areas show different combinations of development potentials and challenges. Development is context specific. The discussion on "smart cities" is very dominant, and always emphasises the future concentration of large parts of the world population in cities. However, the need to promote creative development in rural areas remains an important task for opening up development potentials and finding new solutions for rural areas.

This will also help to overcome populist tendencies that are predominantly rooted in rural areas (see Article 7, *Responding to the geography of discontent*). Initial approaches to smart rural areas are piloted, which refers to the opportunities that digitisation provides for the attractiveness of "living and working in the countryside". Against this drive for digitisation, the need to strengthen innovative networks, educational approaches and explorative experiments in rural areas is receding into the background. At the same time, the opportunity to produce creative synergies between urban areas and their surrounding rural areas is overlooked. We have two views on this:

- Smart development approaches in urban and rural areas need to focus on learning from each other. Bringing urban experiences and creative solutions into rural areas (e.g. setting up innovation labs, co-working spaces, new business models, etc.) and rural concepts into the city (green spaces, recreation areas, urban gardening, etc.) enables the implementation of new creative and sustainable development initiatives and the strengthening of more "colourful" learning networks.

- Urban smart approaches often do not include the rural hinterland. Whether digital or not, spatial thinking that includes the city and its surroundings in the development strategy can also contribute towards reducing the urbanisation trend. "Smart" urban-rural concepts could offer the opportunity to better integrate different quality of life potentials and development approaches as well as to learn from each other faster and more effectively.

Truly smart spaces are not primarily based on digitisation, but on diverse and innovative structures

Mesopartner has been supporting actors who are keen on strengthening innovative structures and systems in local and regional areas. As we have been primarily working in developing countries, we have noticed the importance of considering evolutionary and complexity-sensitive endogenous development processes. The development discourse on "smart cities" and "smart rural areas" essentially emerged from the search for digital solutions and technologies for the development of metropolises. The search for solutions was driven by large companies such as IBM or by already innovative cities. In these metropolises, the digital strategy is based on essential innovation structures. Leading "smart cities" such as Singapore, Amsterdam or London are also positioned among the first 10 innovative cities in international rankings. They have managed to establish a highly interactive innovation system. Very innovative rural areas also tend to base their development on qualified people, and access to good qualification and innovative network arrangements. The digital aspect must therefore be seen as one element in a set of approaches implemented by those cities and spaces rather than as the sole driver of "smartness". The digital aspect is more an add-on to an intensive network of local knowledge transfer, general curiosity and a systemic relationship between people and organisations.

Many cities and rural areas in developing and industrialised countries lack institutional preconditions for innovative and creative structures. This not only refers to formal organisations such as R&D institutions or training and educational institutions, but also to informal learning and creativity networks. Development and funding approaches of donors need to be adapted more strongly to the absorption capacity and the technological capabilities of a space, its local actors and its meso organisations (see Article 10, *Identifying the meso organisations that strengthen technological capability*).

In conclusion, local development processes and the shaping of creative and innovative structures crucially depend on endogenous development conditions and efforts.

"Smart" does not mean "digital", but the ability to pursue own development efforts, build learning relationships, and support creative organisations and their relationships with each other. Mesopartner wishes to contribute to the "smart" development discussion by strengthening the relevance of systemic and institutional considerations in our work.

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09

Strengthening technological capability

This article is a summary of a research paper that Mesopartner was commissioned to write for Trade and Industry Policy Strategies (TIPS) on behalf of the Department of Trade and Industry in South Africa. It is about strengthening technological capability in developing countries like South Africa to prepare for the changing nature of work, production and trade.

The ability of a society to discover new knowledge, or to adapt, refine and synthesise what is sensed to be relevant is referred to as the technological capability of a society. This capability is a central topic in the promotion of innovation systems. However, the promotion of innovation systems often focuses too much on formal science, technology, engineering and research, while learning by doing, everyday innovation and problem solving by businesses, teams, communities and networks of actors are often neglected. Mesopartner uses the framework of promoting innovation systems and the framework of strengthening technological change together as this allows improvements in both innovation and learning networks, learning by doing, knowledge flows and more structured research and development to be accommodated.

As in innovation systems, the technological capability of a country is not only determined by enabling framework conditions and sufficient competition at the level of enterprises. Our late business partner, Joerg Meyer-Stamer, always reminded us that these are necessary but not sufficient. A diverse range of actors, publicly funded organisations, key suppliers, and demanding local and international buyers, all contribute to making this technological capability possible.

Hillebrand *et al.* (1994) argue that technological capability is built on four pillars:

1. The skill of the enterprises to imitate and innovate at product, process and business model levels. This is largely dependent on pressure to compete as well as pressure to collaborate with each other.

2. The economic, political, administrative and legal framework conditions determine whether there are incentives to develop technological capability. In the past, it was often not recognised that these incentives were lacking in many developing countries.

3. Direct support by technology-oriented state organisations or specific types of knowledge-intensive service companies, depending on the existing level of development, the competition situation, and the characteristics of a technology branch in the given country. These organisations disseminate technical and expert knowledge between different actors, knowledge domains and industries, and play a critical role in the use and application of tacit and explicit knowledge.

4. Indirect support by the public and private educational systems. In addition to a sound basic education, it is important that technical training of a suitable quantity and quality is available at secondary school level and in the universities. The private sector often plays a role in short-term training aimed at particular technology applications. Overall the education sector must be able to identify and respond to changes in the application, development and use of technology in society (see also Article 11, *Responding to technological change by promoting learning and skills upgrading in the economy*).

The close interaction and dynamic between these four pillars create technological capability. The third and fourth pillars are about the meso level and its ability to encourage or shape the innovative efforts of enterprises.

Table 1: Examples of functions performed by technological and educational institutions

Examples of functions performed by technological institutions	Examples of functions performed by educational institutions
• Provide technical infrastructure, such as promoting quality standards, measurement, and testing. • Quality assurance, certification, compliance. • Technology consulting and management consulting. • Technology and knowledge dissemination, technology demonstration. • Technology and manufacturing extension. • Research and development consultancies, centres and contract research organisations. • Intellectual property protection. • Research and development financing, venture capital. • Technology assessment. • Technological and trade journals focused on technology dissemination, evaluation and technical journalism. • Access to scarce or specialised equipment on a pay-per-use basis. • Technological or production technology trade fairs and exhibitions. • Prototyping, simulation and design services.	• A comprehensive primary education. • Appropriate technology-related secondary schooling. • Exposing children and youth to emerging technologies, scientific thinking, abstraction and logic. • Vocational skills training. • Higher education, especially: • Scientific, technology, innovation and engineering-related qualifications • Management, problem-solving, strategic leadership, technology and information management qualifications • Ongoing education, workforce development and retraining. • Academic research. • Providing interns, researchers and instruments to industry. • Developing, formalising and organising industry, domain, and specialised knowledge, pools of expertise, researchers and knowledge. • Attracting public and private funding to enable searching, deliberation and exploration of new topics, and the development of new forms of knowledge.

Of the technological institutions (the left column in the table), the easiest to find are the formal organisations that are established through public funding, or the organisations created or supported by industry as a means to enhance their competitiveness. Of particular interest for improving the technological capability of an industry or a region are those organisations that disseminate technological knowledge in the society and assist enterprises to solve problems, master new technologies, and make scarce or specialised knowledge and technology available to the society. They promote dissemination of ideas that will work within the context of the organisation seeking assistance. In general, they respond to temporary or persistent market failures by, for example, overcoming indivisibilities, reducing information asymmetry, reducing adverse selection, and overcoming barriers to entry. For instance, a technology extension service could offer access to scarce equipment and expertise, thus giving access to critical infrastructure that smaller enterprises could not afford by themselves.

While some services may be supply-push oriented (e.g. technical regulations, certification or technology demonstration), others may be more demand-oriented (e.g. technology and management consulting, technology extension services and contract research organisations). Many organisations may not even identify with the topic of technology dissemination, and may simply be fulfilling a regulatory requirement. The development or compliance assessment with standards is an example. Yet standards (or even patents) transmit valuable information about performance, processes, systems and performance requirements, and in this way play an important role in disseminating knowledge, technology and innovation in a country, region or industry.

What is often surprising is the importance of equipment suppliers and multinational buyers in disseminating new technology, knowledge and innovations. Equipment suppliers who provide technology demonstration, comparison or even trial use can be critical players in encouraging upgrading and reducing risks. Multinational clients can set private standards to performance criteria, or require specific process technologies, materials or other compliance that can play a significant role in upgrading their local supplier base.

The fourth group in the list above (right column in Table 1) is collectively referred to as the "education institutions". Again, formal organisations such as universities, colleges, schools or training centres are the easiest to identify and mainly disseminate formal knowledge to the economy in the form of education, courses and academic research. This group includes public as well as private organisations involved in education and schooling, as well as higher education and vocational training.

The ability of individuals and organisations to learn difficult and abstract concepts is largely dependent on this group. These organisations often also encourage informal knowledge dissemination through social networks and personal relations. Through research, development, analysis and publications, these institutions also signal and disseminate information that enables better decision-making in the society. These organisations must be accessible, flexible and responsive to the ever-shifting needs of the society. However, it would be a mistake to focus only on these organisations, as they are mainly involved in structured learning and the dissemination of codified knowledge, whereas technological institutions are involved in the dissemination of codified and tacit knowledge that is often more context specific.
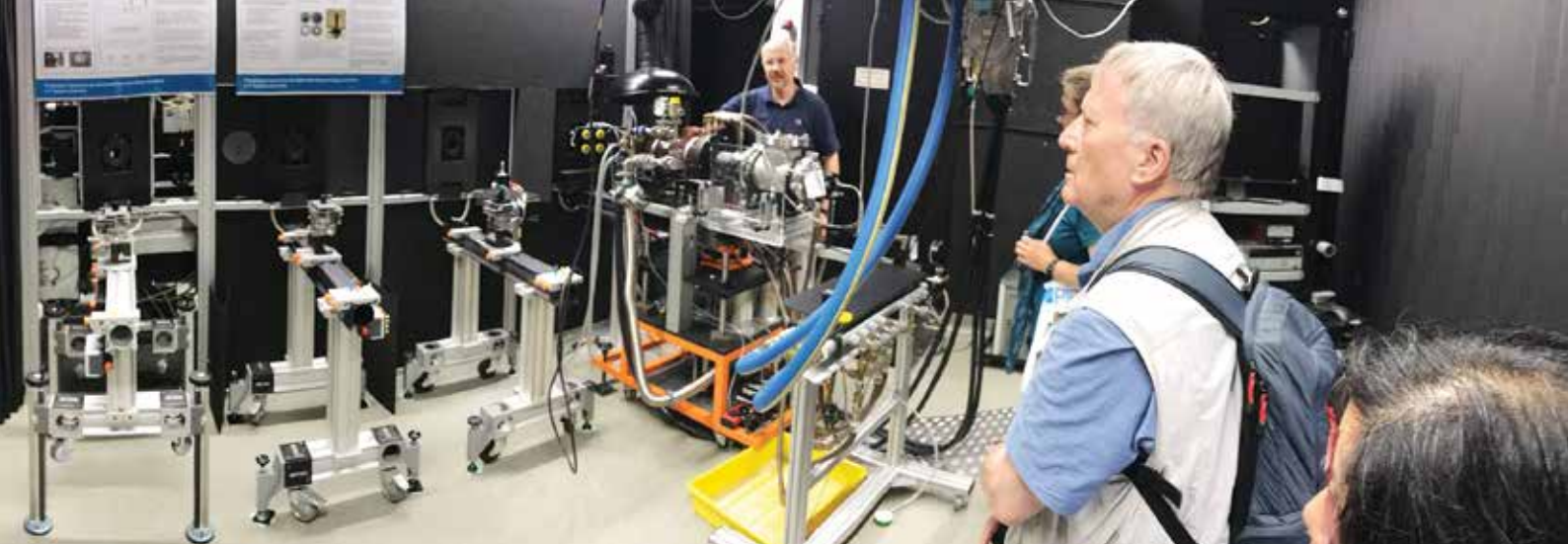
In conclusion, while national technological capability can be described in highly aggregated terms and measured with high-level indicators, it consists of many overlapping and complementary technological capabilities that exist in certain regions, around certain industries or are shaped around certain markets or technology domains.

Yet technological capability is neither about the existence of a particular organisation or programme nor about the performance of a handful of enterprises. Rather, it is about a dynamic relationship between policies, programmes, organisations and incumbent as well as emerging enterprises. This capability must also be able to adapt, new organisations must be created, redundancy must be addressed and performance must be measured and managed.

Lastly, meso organisations cannot only respond to what is expressed as a need by the private sector or to insights gained from analysing statistical data. The meso level also needs to be assessed on how well it is preparing the society and enterprises for the future. In this regard, the

ability of the educational institutions to lay a strong foundation and to enable individuals to further educate or diversify their qualifications is important, but the diversity, depth and responsiveness of the technological institutions are critical.

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10 Identifying the meso organisations that strengthen technological capability

During the past year, Mesopartner has been working with the Trade and Industrial Policy Strategies (TIPS) and the Department of Trade and Industry (the dti) in South Africa to develop a strategy to identify and respond to discontinuous technological change (see Article 11 in this Annual Reflection, *Responding to technological change by promoting learning and skills upgrading in the economy*). As part of this research, we developed an approach to map the technological landscape of meso organisations that can assist South African enterprises and government programmes to adapt to technological change.

First, we developed a framework to identify meso organisations and functions. Various typologies were evaluated that could be used to classify, measure and manage the performance of those organisations involved in technology dissemination or building technological capability. We started with four typologies of public technology diffusion proposed by the OECD (1997) that are based on operational focus:

- **Supply-driven:** programmes to transfer and commercialise technology from government research programmes to private enterprise, both high-tech and low-tech. It also involves education, skills development and standards.

- **Demand-driven:** these initiatives start with a diagnosis or the perspective of enterprises and aim to respond to the challenges or opportunities faced by private enterprises. These could be aimed at plugging specific performance, technology and capability gaps in the enterprises and are often focused on smaller businesses.

- **Network-based:** these are often sub-national or regional, and are aimed at creating or strengthening bridging effects, inter-firm partnerships in promoting information flows, and the diffusion of technology. Examples are cluster promotion, strengthening of industry or business associations, and fostering collaboration around skills development, research and development, or the development of shared infrastructure.

- **Technological capability dialogue, adaptation and socio-technical infrastructure building:** these intentional initiatives are aimed at working on a system-wide level to upgrade the technology diffusion capability of the national system of innovation within the context of global and regional economic and technological change and opportunities. This is often in the form of dialogue and reflection about why certain initiatives are not yielding the expected results, or why certain industries are not striving to increase their innovation, use of technology or competitiveness.

An example is the effort by several government departments to collaborate in a national digitalisation strategy, or the effort around the mining and ocean economy in South Africa in the past few years.

Some of these organisations are created to enable international trade. An example is the South African National Accreditation System (SANAS) and other organisations involved in South Africa's technical infrastructure. Other domestic organisations could be created to support a shift in the economy through a supply-side focus, such as the National Cleaner Production Centre, which provides technical support and training to the manufacturing sector. Programmes and functions established through industrial, innovation, education or technology policies should also be assessed as part of the framework.

As we started identifying and mapping the meso organisations, we realised that two critical types of actor were not captured by the typology we created:

- Private actors that provide public goods or mixed goods, such as technology demonstration, training and the provision of technology modules in open-source formats. For instance, Siemens in South Africa provides demonstration facilities and accredited technical training courses to the public.

- Intermediaries or facilitators in the system that broker relationships between different meso organisations and other actors. They may do this as part of another mandate, or they may be set up for this purpose. For instance, in South Africa there is a huge education and skills crisis. A range of non-governmental organisations have emerged that provide important services to the marketplace and the public sector. Many of these organisations conduct research, provide lecturer training, develop training content in open-source format, mobilise public and private stakeholders into collaborative projects and provide public information on shortcomings in the education system. These organisations are critical to overcome coordination failures and to strengthen information flows between different actors in different spheres of society. However, in a typical meso mapping exercise, these organisations could be overlooked or ignored because the public sector or development cooperation partners may see them as interfering in functions that should be provided by the public sector.

International organisations, consultancies and programmes should also be considered in this framework. For instance, as part of executing its commission with various clients, Mesopartner often plays an intermediary role connecting various meso organisations, policy makers, researchers and leading firms to strengthen dialogue or joint decision making, or supporting collaboration. Other organisations that advise industries and governments and create publicly accessible advisory content should also be included.

A challenge that many developing countries face is that meso organisations have to work hard at creating capabilities that should already have existed five years ago, while trying to keep abreast of new international and domestic shifts that require new management capabilities, human resources, technologies and strategies. Not only the private sector can be overwhelmed or paralysed by competing technological choices, but public sector management can suffer the same symptoms. This means that in the framework provision should be made to differentiate between basic (or fundamental) offerings and future-oriented or more advanced offerings. This is not an additional kind of organisation, but it could be different functions provided by the same organisations.

While some organisations may be more important for improving the productivity and competitiveness of incumbent firms, others may be more relevant for lowering entry barriers to new start-ups and investors. Even if new start-ups lack market access or technological experience, in a dynamic environment their different knowledge and unique technological capability may put them at less of a disadvantage than the incumbents.

Some meso organisations may be hard to classify because they offer diverse services to different beneficiaries. For instance, universities often play an essential role in lowering the costs of gaining access to new knowledge, codified knowledge and research. At the same time, a university may offer industry access to scarce equipment on a pay-per-use basis, while a university laboratory may offer certification or analytical services to another research group. Or a research programme based at a university may be a sophisticated client of a private enterprise that specialises in advanced equipment, while the same enterprise may be dependent on post-graduate students from the university. Some of these relationships and interdependencies are impossible to map without deep insight into how knowledge, technological ideas and people flow between organisations in the public and private sectors. Yet it is possible for the same organisation to show up in different typologies, in different markets served, or in multiple roles.

Next year we will have to try and figure out how to map these organisations without making it overly complicated and difficult to use, maintain and adapt.

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11 Responding to technological change by promoting learning and skills upgrading in the economy

knowledge in the economy, but offer different pathways for companies to upgrade. When considering how economies can learn to cope with or even make use of discontinuous technological change, the different roles of these two sub-systems are very important.

Two pathways for upgrading companies and industries

Education is important for individuals, and is a prerequisite in many occupations. There is a strong correlation between levels of education and the ability to learn more difficult material, also called the absorptive capacity of an individual. However, it not just the absorptive capacity of a person that is important, but also the authority and means to enact new knowledge. For instance, a well-educated person stuck at a level in an organisational hierarchy where they do not have the authority to act upon their insight may be powerless.

In Article 9 of this Annual Reflection, *Strengthening technological capability*, two important sub-systems at the meso level are mentioned. The two sub-systems are made up of the technological institutions that disseminate codified and tacit knowledge (through technological services) and the education institutions that mainly disseminate formal and structured knowledge in the form of teaching and research.

In our experience of diagnosing and improving innovation systems, both of these sub-systems are important in upgrading the skills and use of

The ability of an organisation to leverage the absorptive capacity of individuals can be seen as the absorptive capacity of the organisation. To come back to the example above, in the case of a person who cannot act on their insight, the absorptive capacity of the organisation undermines the absorptive capacity of the individual. This implies that if an organisational hierarchy is not able to draw on the expertise and insight of the workforce, then the capacity of the organisation to act on absorbed knowledge is limited, despite the presence of individuals or teams with high levels of absorptive capacity.

Hence a first pathway to change an organisation is for leadership to encourage individuals to act upon what they know or have learned. In this way, individuals change the organisation as they learn new things. This is how top-down change mandated by management and bottom-up change through individual learning can complement each other. Thus absorptive capacity in organisations is as much about culture and leadership capability as it is about the education of the workforce.

However, changing an organisation through educating the existing workforce can take a long time. A second pathway to upgrade organisations that usually happens faster lies in working with technological institutions that provide technological extension, knowledge-intensive services, etc. to companies. For instance, the implementation of a management system such as ISO 9001 will upgrade the many procedures and management systems in a company, regardless of the levels of education

of its workforce and the strategic abilities of its leaders. Pressure from a demanding client requesting a particular kind of certification, such as ISO 9001, can override the hesitations or inadequacies of management. This also applies to other kinds of knowledge-intensive support received from technological institutions. For instance, if the management of the organisation decides to approach a technology transfer or research centre for assistance with a technological problem, the advice, if accepted, will be implemented in a top-down way. This might

even happen if management does not fully u[...]
the technicalities or the science behind the s[...]
Besides upgrading systems and processes in t[...]
company, these changes also enhance the abso[...]
capacity of the organisation despite the levels of
education and capacity of the management not
changing.

These two pathways ideally happen in parallel and
complement each other. However, basic education, and
especially technical secondary schooling, is still very
important, as it lays the foundation for individuals to
absorb knowledge.

**When technological change requires fundamentally
new competences**

In Article 8 of the 2018 Annual Reflection, *Looking
at discontinuous change through a Systemic
Competitiveness lens*, two kinds of technological
change were identified:

- Competence-enhancing technological change.
  Current users of a particular technology are able
  to build on previous experience, qualifications and
  knowledge. The change could be incremental or
  radical, but the old technological domain and its
  know-how are not entirely lost but are sustained.

- Competence-destroying technological change. Here,
  past experience, qualifications and knowledge are
  made obsolete by new technologies that require a
  very different skill set and often mindset to operate.
  Furthermore, these technologies may be dependent
  on other sub-systems, meaning that this change
  may also have knock-on effects in other areas in the
  organisation or industry.

The importance of workplace learning and further education is especially important when disruptive technological change is competence enhancing, as individuals are able to master new technologies that complement or even leverage what they already know.

The story is different when technological change is competence destroying. In this case, the education and experience of the workforce does not prepare them for the future, either because they lack the right experience and knowledge, or because their jobs become completely redundant due to the change. In this case, the workers affected must quickly be retrained or replaced. This is not easy, because re-education is often hampered in many developing countries due to insufficient social security covering the time needed to re-train or a lack of flexible education

options. It takes years to get a new qualification, and often this path is chosen too late.

This kind of re-skilling often does not take place at workplaces, even when imminent technological change is evident. In South Africa, large corporates that retrench workers often send affected workers on entrepreneurship training, but this hardly results in the formation of successful new enterprises. It only adds to the numbers of self-employed or informal enterprises that are based on necessity and not choice.

This means that to prepare developing countries for disruptive technological change, attention must be given to both the absorptive capacity of individuals and organisations and to building the system for re-training and further education.

Supporting meso institutions

From a development perspective, focusing on strengthening the technological institutions in a developing country could provide a more leveraged approach

to upgrading industries and organisations despite education levels. It is thereby important to understand that these institutions themselves are structurally and economically challenged by discontinuous technological change. Increasingly, think tanks, intermediaries and NGOs are playing a role in helping the education system to respond to change, to prepare workers for new careers, or to assist the youth to figure out how to choose and pursue a particular path. Development programmes need to take this into account and work with all possible institutions that are in the system they work, rather than to work with the assumption that public organisations are the only ones that can deliver meso-level functions to support technological development.

At the same time, education still has a huge role to play. More system innovation is needed to detect competences that may be destroyed, or capabilities that must be further developed. Ways must be found to rapidly re-educate people who are trapped in occupations that may be threatened due to technological change. This education must be comprehensive, and entry requirements must be sufficiently low but of sufficient quality to ensure that people can master new skills, knowledge and worldview. It is also important that this education should be widely accessible, both in terms of course times but also geographically so that the rural unemployed can have access to alternative pathways.

This means that both kinds of institution, technological as well as educational, must receive attention. Ideally, a diverse range of pathways for individuals, teams and organisations should exist.

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12 SDGs: Requirements for a more innovative and interdisciplinary promotion approach at the local level

In 2016, all 193 UN member states signed the 17 Sustainable Development Goals (SDGs), also named "Transformation Agenda 2030". In contrast to its forerunner, the Millennium Development Goals (MDGs), the SDGs not only focus on providing targets for developing countries but also for industrialised countries. Without the support of the latter, the impact of the SDGs will be very low.

In general, we at Mesopartner regard the SDGs as having real potential to contribute to more innovative and balanced economic development locally and globally. But to make a real practical contribution, the SDGs need to be adjusted to the local circumstances. Promoting

SDGs in Germany as opposed to doing so in a developing country requires different parameters. However, in both cases they need to become part of key decision-making processes and analysis frameworks. This article reflects on the key challenges and requirements of the SDGs to make them truly relevant for practice in industrialised countries, taking some German experience as a reference point.

Germany´s reaction to the SDGs at first glance

At first glance, it appears that Germany has taken a practical approach to the SDGs. The National Sustainability Strategy, which was updated in 2018, provides concrete indicators for Germany to contribute to the SDGs. At the same time a Council for Sustainable Development was established with experts from science and civil society playing an advisory role to the German Chancellor. To ensure participation, the Council has created four NGO sustainability networks (called RENN) with 20 supporting NGOs in the whole of Germany to promote awareness events, information and sustainable

action at the regional and local levels (see https://www.renn-netzwerk.de). Most of these NGOs had already been involved in the UN Local Agenda 21 participatory process, which was inaugurated by the UN in 1992 with its renowned slogan "Think global, act local".

Looking at these German institutionalisation processes, many positive trends can be observed:

- The SDGs at the national level gain importance.

- A movement has emerged and has been strengthened.

- The process has gained relevance at the municipal level, becoming visible through the design of local sustainability strategies in some cities and the creation of a national sustainable city network.

Challenges to promoting the SDGs at the local level

However, there are challenges hindering the integration of the SDG perspective into good practice to use its

framework to initiate innovative processes. These challenges include:

- **SDG implementation requires more interdisciplinary knowledge sources.** The SDG implementation requires the integration and merging of different expertise. There are many trends at present contributing to reflections on sustainable municipal and regional solutions. These reflections are often covered by buzzwords such as "Smart City", "Sustainable City", "Intelligent City", "Resilient City" "Post-Growth City". They all entail very different perspectives on how to promote more sustainable and inclusive ways in spaces. The SDG debate in Germany does not tap into the richness of thinking in a more interdisciplinary way and is not sufficiently connected to the current ongoing search for innovative city solutions. Additionally, SDG work in practice seems to be mainly promoted by actors who were involved in the local agenda process in the 1990s, with a strong emphasis on raising social and

ecological values, but without considering digital and more knowledge and science-based approaches. What is needed is to strengthen the diversity of actors (see also Article 2, Targeting resilience, not growth) and to come up with a more innovation and creativity-driven orientation. This requires the promotion and linkage of more social, ecological and economic innovations in a proactive way. It also requires the involvement of knowledge organisations, applied science institutes as well as digital and innovation expertise.

- **The SDG implementation is caught in planning thinking and lacks real implementation orientation.** The different national and local sustainability strategies are all designed as planning documents. Although they are based on public debates with different stakeholders, they ultimately resemble strategy plans: "Once written with many others and published with great media acclaim, they are put to one side, never to be seen again." We know from our own practice that the implementation of ambitious strategies requires concrete incentives as well as group and network dynamics. Nonetheless, the strategies often lack feasible project design and concrete initiatives.

- **Insufficient thrust and experimentation focus in the search for innovative SDG solutions.** Germany is promoting the energy revolution with the objective of turning renewable energy into the main source of energy supply. Local SDG agenda activities seem to be playing a rather marginal role in contributing substantially to this debate. Instead, initiatives are focusing more on youth and public awareness events and less on continuous research and innovation development.

- **Lack of involvement of the private sector.** In Germany the process of strengthening sustainability strategies and action is promoted by the public sector or by social and environmental organisations.

The private sector is not strongly involved as a driving actor, although it has the potential to promote knowledge transfer, technological capabilities and more sustainable business models. Although the private sector is invited to participate in public reflections, companies and their associations have not become driving forces. Without getting the private sector on board to a greater extent, real transformation will be less of a driving force. We have published a discussion paper on this reflection (Wältring, F. & Cunningham, S. 2017. Germany´s potential contribution to knowledge and innovation transfer to developing countries. Bremen 2017, paper commissioned by the GIZ).

- **Lack of coordination and cooperation between ministries at the national level and municipality departments at the local level.** The 2018 National Sustainability Strategy emphasises the need for stronger coordination and cooperation between the ministries and more comprehensive efforts by each ministry to design their own sustainability criteria and actions. The same requirements are necessary at the local level. Attempts to define a local SDG strategy are often guided by the department of the environment, but coordination with the social and economic departments is lacking. Promoting more creative coordination at this level might open the door to cross-over innovations.

The need to promote interdisciplinary learning initiatives

From our professional LRED perspective, there is a strong need to make use of existing LRED and innovation system tools and the use of learning initiatives, and safe-to-fail experiments. This requires the promotion of ecological, social and economic innovations to strengthen SDG requirements at local, national and global level, otherwise the SDGs remain global goals without any actual local action.

We will continue to strive towards contributing to a more interdisciplinary and innovation-driven search for SDG learning initiatives in the coming years.

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Mesopartner's strategic clients (2018/2019)

Albert Luthuli Centre for Responsible Leadership, University of Pretoria, South Africa

Alvarium Consultancy Company, Armenia

Central University of Technology (CUT) and their Centre for Rapid Prototyping and Manufacturing (CRPM), Product Development Technology Station and other research and innovation units, South Africa

Climate Project Office Rheine, Germany

Compete Caribbean Partnership Facility (CCPF), Barbados

CROSQ - CARICOM Regional Organisation for Standards and Quality), Barbados

Dorf.Land.Zukunft Elte, Germany

Department of Trade and Industry, South Africa

Dexis Consulting Group, United States of America

EDA Development Agency Banja Luka, Bosnia and Herzegovina

Enhancing Youth Employment (EYE) Kosovo implemented by HELVETAS Swiss Intercooperation

GIZ Eschborn

GIZ Programme of Good Governance, Peru

GIZ Inclusive Development of the Economy (INCLUDE) Programme, Nepal

GIZ Open Regional Fund for Economic and (Youth) Employment in Central America (FACILIDAD)

GIZ Sector Project Sustainable Economic Policy and Private Sector Promotion, Bonn

GIZ Skills Market Systems Development in Eastern Sudan

GIZ Sustainable Economic Development Program Uzbekistan

GIZ project Social and Labour Standards in the Textile and Garment Sector in Asia (SLSG)

HELVETAS Swiss Intercooperation, Switzerland

International Labour Organization (ILO), Entrepreneurship and SME Support Programme, Myanmar

International Labour Organization (ILO), the LAB Project, Geneva

Jacobs-University Bremen

Metelen, German City Administration

Oxford Policy Management, United Kingdom

PTB, Physikalisch-Technische Bundesanstalt, National Metrology Institute, International Technical Cooperation, Germany

Swiss Agency for Development and Cooperation, Swiss Cooperation Office Dhaka, Bangladesh

Swiss Agency for Development and Cooperation, employment and income network, Bern, Switzerland

Trade and Industrial Policy Strategies (TIPS), South Africa

Tshwane University of Technology, Faculty of Engineering and the Built environment, South Africa

United Nations University Bonn, Institute for Environment and Human Security (UNU-EHS)

University of Leipzig, Germany

WEST GmbH-Wirtschaftsförderung Kreis Steinfurt

World Bank Group, Macroeconomics, Trade & Investment (MTI), Washington DC

We also provide a range of coaching, advisory and facilitation services to companies and other organisations directly that are not included in this list.

Countries in which Mesopartner is currently active (2018/2019)

Argentina
Bangladesh
Barbados
Belize
Bosnia and Herzegovina
Brazil
Cambodia
Canada
Democratic Republic of the Congo

Dominican Republic
Germany
Indonesia
Jamaica
Kosovo
Lebanon
Moldova
Myanmar
Nepal

Pakistan
Peru
Scotland
South Africa
Switzerland
Trinidad and Tobago
United Kingdom
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Main fields of expertise:

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- Advisory and coaching support to leaders in government, business and academia to make decisions despite complexity and uncertainty
- Enabling search, discovery, experimentation and innovation process facilitation
- Technological capability and modernisation through Science, Technology and Innovation systems promotion

Working experience:

Since 2008: Partner in Mesopartner

2015 - current: Part time Faculty Member (Innovation, Strategy & Technology Management), Stellenbosch Business School, Executive Education

2010 – current: Research Associate (Innovation Systems & Policy) at the Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa

2003 – 2007: Senior expert in the GTZ South Africa Local Economic Development and Business Development Services Programme

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1996 – 2001: Own business in the IT sector

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Main fields of expertise:

- Territorial economic development
- Cluster and value chain promotion
- Standards and quality infrastructure
- Industrial Policy
- Green Economy
- Coaching and methodology development

Working experience:

Founding partner of Mesopartner (2003)

1997 – 2002: ISA Consult GmbH, Bochum (Germany), senior consultant

1996 –1997: Foundation CIREM, Barcelona (Spain), junior consultant

1991 – 1994: University of Bremen, research project on regional development in Europe, researcher.

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Main fields of expertise:

- Continuous exploration and learning in teams and organisations
- Adaptive decision-making under conditions of uncertainty
- Monitoring and evaluation of systemic change initiatives
- Narrative and participatory sensemaking
- Market Systems Development
- Knowledge network and community of practice facilitation

Working experience:

Since 2015: Partner of Mesopartner

2014-2017: Lead, monitoring, impact evaluation and evidence, the BEAM Exchange

2011-present: Member of the backstopping team for the employment and income network of the Swiss Agency for Development and Cooperation (SDC).

2011-2015: Independent consultant in market systems development and systemic approaches

2009-2011: Programme officer at Intercooperation (now HELVETAS Swiss Intercooperation), Bangladesh

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Main fields of expertise:

- Local and regional economic development
- Value chain and cluster development
- Green economic development
- Market Systems Development
- Quality Infrastructure
- Business/investment climate surveys and competitiveness rankings
- Program and project evaluations

Working experience:

Founding partner of Mesopartner (2003)

2002 – 2003: Freelance consultant

2001 – 2002: Fraunhofer Gesellschaft e.V., Jakarta (Indonesia), PERISKOP project coordinator and senior consultant

1999 – 2000: Fraunhofer Management GmbH, Munich (Germany), senior consultant

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Main fields of expertise:

- Promotion of local innovation systems in rural and urban
- Promotion of smart city and smart rural area concepts involving digitalisation aspects
- Learning from and with Germany: Knowledge Transfer from insights of innovative approaches in the German eco-system via study tours, visits and research papers
- Local economic development
- Cluster and Value chain promotion
- Promotion of innovative support instruments like innovation hubs, coworking spaces and research labs

Working experience:

Since 2004: partner in Mesopartner

2016 to 2018: Lecturer at Jacobs-University Bremen on Development Economics and Innovation Economics

2007 – present: Lecturer at the SEPT Master Course from the University of Leipzig in Leipzig, Hanoi and Ho-Chi-Minh-City on the topic of Regional Competitiveness

2003 – 2004: Private sector development specialist at GTZ headquarters, special focus South-east Europe

2003 – 2018: Consultant on main fields of expertise in developing countries, EU and Germany

2001 – 2003: Junior professional in GTZ private sector development programme in Honduras

1999 – 2001: Researcher in joint INEF/IDS local cluster and global value chain project, Institute for Development and Peace, University of Duisburg.

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