

UNIDO's public-private development partnership (PPDP) approach to vocational training

Authors:

Jelena Cerar, Vienna University of Economics and Business (WU Wien) Michael Friedl, University of Vienna Nora Gobel, Central European University (CEU) Agency: United Nations Industrial Development Organisation (UNIDO) Mentor: Mattias Larsen Counsels: Roman Hoffman and Billy Batware

Abstract

Turning the 2030 Agenda for Sustainable Development into action requires increased cooperation among sectors. In public-private development partnerships (PPDPs) the actors from both public and private sectors cooperate with the objective to improve people's lives and reduce poverty. As a development partner that brings the different parties together, United Nations Industrial Development Organization (UNIDO) has been engaged in several PPDP projects related to vocational training. These pilot projects have successfully reached their goals; however, they have rarely been implemented on a larger scale. For wider economic and social impact, the scale-up interventions require careful analysis; however, there has been no in-depth research in the field of PPDP in vocational trainings. To bridge this gap, we shed light on UNIDO's PPDP approach to vocational training and identify best practices, constraints, possible scenarios for scaling up these programs and solutions for the challenges that may occur on the way. Our analysis is based on the insights derived from the personal and online in-depth interviews conducted with UNIDO experts. We find that experts' main concerns include lack of knowledge sharing within the organization and across agencies, the need for local level planning, the question of integrating piloting into the entire project, as well as the independency of monitoring and evaluation. We identify unique challenges of PPDPs in vocational training as capital-intensity and time-consuming characteristics that call for different solutions compared to other fields. Based on in-depth literature analysis and the results of expert interviews, we develop an innovative model for scaling-up throughout the project phases, including different implementation strategies. Finally, we offer policy recommendations for UNIDO, such as better information sharing, continuous pre-planned monitoring and evaluation, local community involvement and closer connection between piloting and scaling up that could serve as a guideline in scale-up process for current and future PPDP projects in vocational training.

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Jelena Cerar, Michael Friedl & Nora Gobel

1 Introduction

United Nations Industrial Development Organization (UNIDO) has been involved in several public-private development partnership (PPDP) initiatives in different countries, many of them related to vocational training. As the development partner, the organization's main target has been developing vocational education and sectors such as heavy duty, industrial vehicles, forestry, and water management in Ethiopia, Zambia, Liberia, Morocco, South Africa, Iraq and Uruguay over the last decade. In these PPDP projects, UNIDO has been acting as a neutral facilitator that brings the different parties together, providing funding for development objectives and linkages to the government. Each UNIDO expert participating in this study, considers the pilot projects they were involved in successful; however, they have rarely been implemented on a larger scale. Even though, this model works on a small scale, the projects must be scaled-up to achieve larger impact on the economy and on society. Regardless the emerging need for rigorous assessment which explicitly evaluates PPDP policy, there is no in-depth independent evaluation of strengths and weaknesses of PPDP projects in vocational trainings. Our research in PPDP in vocational training can help UNIDO to identify the issues, understand challenges and derive possible scenarios in the scale-up process of pilot projects. For this purpose, the paper analyzes the results of six interviews the authors conducted with UNIDO experts on the subject.

The importance of the concept is shown by its alignment with the 2030 Agenda for Sustainable Development. Improving vocational training through PPDP projects correlates with SDG 17 – Partnerships for the Goals, as encouraging and promoting effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnership would help to tackle the issues regarding coordination failure. Focusing on vocational training is an efficient tool to improve the quality of training, the school-work transition and reduce unemployment which would accelerate the process towards achieving Quality Education (Goal 4), Decent Work and Economic Growth (Goal 8) and Industry, Innovation and Infrastructure (Goal 9). It also contributes to Gender Equality (Goal 5) and Reduced Inequalities (Goal 10) through including women and youth into the labor market and reducing gaps between skilled and unskilled workers. Moreover, the PPDP projects in vocational training contribute to No Poverty (Goal 1) and Zero Hunger (Goal 2) indirectly, by assuring higher standard of living deriving from higher efficiency at the workplace and increased income.

Due to the complexity of the topic, the division of the areas by research questions provides a better understanding of each approach. In order to understand what the key factors are in the scale-up process, the first research question is formed as the following: what are the best practices for scaling up vocational trainings and what can we learn from other successfully scaled PPDP programs from other disciplines? There are different possible ways of scalingup depending on the context. Our second research question, therefore, is what the possible scenarios and ways are for scaling up UNIDO's PPDP vocational training programs. Finally, the assessment of the actual impact of a program is inevitable so that the third research question is what the main challenges are on the way (with special focus on monitoring) and possible solutions. In the analysis, after identifying the unique characteristics of PPDP in vocational training projects, the authors describe their main findings on the importance of knowledge sharing, local context and monitoring and evaluation in the scaling-up process as well as different models for scale-up. The paper also introduces an innovative model for scaling-up developed by the authors as well as recommendations.

2 Literature Review

The persisting mismatch between labor supply and demand is one of the underlying reasons of high unemployment rates, especially in developing countries as the skills provided in the existing vocational training systems are often irrelevant or not sufficient (Langthaler, 2013). Education has proven to play a key role in introducing new technologies; therefore, vocational training is a mean for reducing unemployment and improve living conditions through minimizing the mismatches on the labor market (Todaro and Smith, 2011).

In some cases, when the public sector alone would not be able to provide and finance the skills required for a modern economy in underdeveloped countries, it can often be the private sector who fills the gap (Mouzakitis, 2010; Tansen, 2012). These alliances between public sector and private industry enable them to achieve common goals through creating important synergies by complementing each other. Therefore, the government can concentrate on its core competencies while the more productive utilization of assets, data and intellectual property can lead to substantial improvement in the quality of public facilities and services and enhance cooperation (Edkins and Smyth, 2006; Cumming et al, 2007). A further advantage is that the public and private sectors can share risks at different stages, as the risk of uncertainty is lower with a partner with complementary knowledge and skills (Li and Akintoye, 2003).

In PPDP, the joint investment in a project is implemented and coordinated by a third party, the development partner. The cooperative arrangement between public and private partners, funded by a donor and managed by a third-party development partner aims to deliver and fund public services with wider development impact (Sida, 2013).

Lessons are learned from successful PPDP projects around the world that can be incorporated as best practices. At any PPDP, the implementation on a pilot scale customized to the particular requirements in each country is recommended, and the know-how obtained from this experience should be applied to scale-up (Sharma, 2007). Furthermore, independent evaluation of strengths and weaknesses of PPDP in vocational trainings is essential for scaling them up, for which in-depth analysis is needed in each case.

2.1 Typologies for scaling-up

According to a widely accepted definition by ExpandNet, a community in the global public health sector, scaling-up is the "deliberate efforts to increase the impact of successfully tested health innovations so as to benefit more people and to foster policy and program development on a lasting basis" (WHO, 2010). Others definition refers to it as "expanding, replicating, adapting and sustaining successful policies, programs or projects in geographic space and over time to reach a greater number of people." (Cooley and Linn, 2014). A difficulty with the topic is that the definition of the concept of scaling-up is not obvious, yet easy to grasp in principle. There is a variety of definitions in use for scaling-up. Even though, a desired wider impact is a common point in many of them, none covers the whole topic satisfyingly and the number of misconceptions is still high. The interest in scale-up interventions is growing among scholars working on development research. Three main typologies have been used for scaling up projects in previous researches in the healthcare sector. These are Yamey's categories of different components of the scale-up process (2011), Hanson and Colleagues' Typology of the constraints to scaling-up (2003), and finally, Simmons and Shiffman's "Elements of Scaling Up" (2007) (see Table 1 for more details).

Typology	6 categories of success factors in scaling-up	4 types of constraints to scaling-up	4 factors linked to innovations
Categories	 attributes of specific tool or service being scaled up attributes of the implementers chosen delivery strategy attributes of the "adopting" community socio-political context research context 	 community and household health services delivery health sector policy and strategic management public policies cutting across sectors environmental, contextual characteristics 	 resource team that promotes it user organization expected to adopt the innovation strategy to transfer it environment in which the transfer takes place
Author(s)	Yamey (2011)	Hanson et al. (2003)	Simmons and Shiffman (2007)

Table 1: Previous Typologies used for scaling-up

Simmons and Shiffman (2007) identify the four key dimensions of scale-up interventions as the resource team, user organization, a strategy and environment. According to Hanson and Colleagues' Typology of Constraints, the main constraints of scaling-up operate at five different levels in the health sector: (1) the community and household, (2) health services delivery, (3) health sector policy and strategic management, (4) public policies cutting across sectors, and (5) environmental and contextual characteristics. These typologies were reviewed by Yamey (2011) who derived insights from interviews with scale-up experts and incorporated themes emerging from the existing literature framework. While he focused primarily on health interventions, his findings also contribute to a suitable model for UNIDO. First and foremost, he acknowledges that there cannot be a rubber stamp plan for scale-up interventions. Every national, regional and maybe even local context has to be accounted in order to result in a successful project.

2.2 Best practices for scaling up of vocational trainings

The common way to achieve change on a large scale, is to conduct a pilot or experimental small-scale trial run of any planned intervention (Yamey, 2011; Simmons and Shiffmann, 2007). In this paper, the same concept is examined in light of PPDPs and vocational education. While the main focus of literature on scaling-up interventions lies on health and infrastructure projects, there is a gap to be observed concerning vocational education and training. Suitable and reliable role models or concepts for scaling-up have to be developed by looking at and analyzing the experiences made so far.

A significant amount of research has previously been done on the constraints of scaling-up in different fields. One of the most interesting factors is to assess constraints individually for each country, region, community and project (Hanson et al, 2003). A scale-up strategy for one country may very well be manifold in its approach to different regions or groups (Hanson et al, 2003). Three crucial underlying factors: proper measures, communication and sustainable financing can be distinguished according to UNDP's guidance note (2013). The first is to precisely tailor the measures taken to each individual affected community being either on global, national, regional or even local level. Another important factor, communication, is not only important with regards to the immediate project partners, but also with the members of the receiving community themselves. The third main criterion to be met for a successful scale-up is to secure long-term or at least medium-term financing. Without a reliable budget, most projects will fail to build up a sufficient momentum to move beyond the tipping point; the moment, when intermediate success of a measure take the lead and the amount of direct intervention from the outside can reduced gradually.

Regarding the steps of a scaling-up process, the scale-up framework by Management Systems International (MSI, 2012) puts most emphasis on the planning and design phase. In this phase, a thorough market and societal analysis is key to determine the potential and viability of the project. The second step for successful scaling-up is the preparation of the ground for change, where the building of a constituency and legitimization of change is essential. The third step in the scaling-up framework by MSI is the implementation of the plan which requires a perpetual critical analysis of the plan versus the facts on the ground.

2.3 Possible ways and scenarios for scaling-up

Instead of having a single one-fits-all model, which each pilot-project could use for scalingup, multiple possible scenarios and ways could exist. Empirical research helps to define which strategy is best suited to a particular field, challenge and setting. In some cases, when rapid scale-up is important, existing systems can be valuable while other cases require innovation in the system (Yamey, 2011). Evidence has shown that a comprehensive plan of action is needed in each case (Yamey, 2011). The problem is that "*scaling up is often attempted without proper guidance, preparation and tools, leading to a frustrating experience*" (Biswanger-Mkhize et al, 2009). This was the main reason for UNDP to develop the guidance note on scalingup processes that lays out three possible scenarios, how a scaling-up process may successfully come about (see Figure 1).

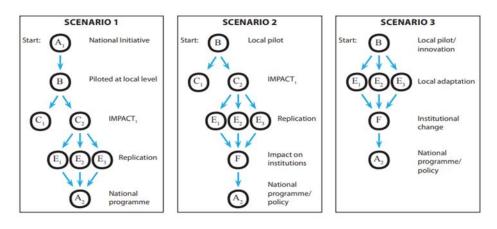


Figure 1: Possible scenarios for scaling-up developed by UNDP

Source: UNDP, Guidance Note for Scaling Up Development projects (2013)

The preexisting national awareness and policy have been addressed in the scenarios and have also been emphasized by other authors, demonstrating that political will is crucial for a scaleup. The acceptance and participation of the local community and organizations in the development and implementation of scaling-up programs have been shown to increase the probability of success of health interventions substantially (Binswanger, 2000; Yamey, 2011; Simmons and Shiffmann, 2007; Renju et al, 2010). Due to the specific conditions and issues that PPDP with focus on vocational training are faced with, more research is needed in this area.

2.4 Main challenges with focus on monitoring

A variety of challenges related to the scale-up of projects have been identified by the literature. According to Brown (2016), these challenges are generally subsumed under the term "ecological validity" of projects, the extent to which the materials, methods and setting of a study approximate the actual conditions of a large-scale program. Furthermore, she states that it is necessary not to go from pilot to large scale project, but rather from pilot to

a better theory and only later a scale-up should be attempted. Therefore, a review process should be conducted of pilots and of scaled up projects as well, to assess the actual impact of a program. Additionally, the pilot program and the impact assessment shall be conducted in a setting that approximates the conditions of a large-scale project, encompassing a whole country or region (Brown, 2016). Evans (2016) heavily focuses on practical implementation of a specific education scale-up with a crucial conclusion for other interventions as well. Techniques of teaching, knowledge and materials will only have limited impact without accompanying institutional framework to sustain them (Evans, 2016).

As Duflo (2004) laid out, evaluation can bridge the gap between individual development projects by providing reliable experiences that can be adapted and recast into new theories. Furthermore, it could lead to a broad consensus in the international community for counteracting skepticism and building a sustainable supportive basis for global development as a whole (Duflo, 2004).

3 Research Design and Methods

The methodological focus of our paper is qualitative, which enables a deeper examination of the various factors that influence scale-up interventions. In this way, we are able to get a closer, in-depth picture, acknowledging the great complexity and context dependence of the topic. Since previous studies are limited and the literature is scarce, we find that it is better to start with qualitative methods that allow some flexibility throughout the research process, and thus, explore issues related to the phenomena. The framework of scaling-up is unstructured. Therefore, collecting primary data is an efficient way to address our research questions. Personal experiences provide a good foundation for understanding the underlying reasons behind the challenges and constraints of scale-up processes that we can extract from qualitative data. This way, we aim to contribute to the framework of scale-up and understand best practices and the nature of key issues that should be tackled to implement interventions on small-scale projects successfully.

The main sources of the data are expert interviews. The interviewees are UNIDO experts who were chosen based on their current and/or previous assignment to UNIDO projects in Africa and the Middle East. The selected professionals have field experience in developing countries, either with PPDP, vocational training or both; so that they are able to evaluate critically the projects they are/were involved. The new contacts we received during the interviews expanded the number of the experts in our research. We applied Snowball Sampling in order to identify the new potential interviewees since it is hard to locate the potential interviewees without having sufficient knowledge or experience with this specific field. The answers are anonymous, and a pseudonym is assigned to each interviewee.

We conducted six guided interviews either in person or through Skype. The guideline that includes the questions of the interviews is attached in the appendix (see Interview questions) as well as a brief summary of the results by questions (Brief summary of answers). The focus

of the interviews is to identify the characteristics of UNIDO PPDP projects in vocational trainings and the key factors of scaling-up according to our division of the topic. We applied mainly open-ended questions to gain valuable insights in areas that experts find relevant and important.

The interview consists of 20 questions regarding the current project that the interviewees were in charge of at the time, partnerships, monitoring and general experience with scale-up interventions. The questions are divided into three main categories that coincide with our three research questions. After the warm-up questions, the experts were asked questions about best practices for scaling up vocational trainings that mainly seek answer as to what extent they consider their respective pilot projects successful and the reasons behind, which helped us to identify best practices. This section is followed by questions about possible scenarios and ways for scaling-up that included questions about personal experiences and knowledge in the topic, through which we are aiming to categorize different paths for the interventions. The third section is focusing on the monitoring process, including questions about the expert's view on current the monitoring process and asks for the critical evaluation of it.

In our analysis, we follow the previously used typographies by Simmons and Shiffman (2007), Yamey (2011) and Hanson and Colleagues (2003). We reshape and extend these typographies with dimensions according to our research questions, so that it is a better fit to the public-private partnerships in the vocational training sector.

4 Results and Discussion

4.1 Unique challenges require unique answers

PPDP projects differ from regular development projects in many ways as the experience of the first, second and fifth interviews suggest (I1, I2, I5). In order to respond to the unique challenges, we analyze the unique characteristics of PPDP projects in vocational education and the involvement of different actors.

An important characteristic of PPDP approach to vocational training is that it targets a highly capital-intensive field, thus, the projects are dependent on the costly equipment that local schools typically do not have resources for and would not be able to find adequate funding on their own (I2, I6). These constrains can lead to a gap between the needs of the market for skilled labor and the graduates of the programs.

Vocational training projects generally take longer not only to plan, but to show results as well compared to other types of intervention (I1). For example, vaccination campaigns, handled by UNICEF and the WHO are short-term or medium-term projects. These projects provide a quick solution, whereas vocational training takes more time to plan and to conduct (I1). Because of these very features, it is comparatively easy to send in a vaccination team into one

area and then scale the project up by inserting the team into a new location. Furthermore, building a relationship with the teacher-trainers which plays key role in most projects also takes a long time. Apart from this, motivating a new local team and getting them out of the government mindset for more efficient cooperation is challenging (I1). Vocational training projects require a longer term to show results and is even more contingent on the altered circumstances of the region or country a successful pilot project is decided to be scaled up in. (I1, I3, I5)

Other sources of the time-consuming characteristic of the PPDP approach to vocational training are the specificities deriving from the involvement of the private partner. Experts (I3, I5) emphasize how the involvement of the private partner is crucial throughout the planning and implementation process, in order to get to a result that brings actual positive change and simultaneously satisfies the expectations of the private and public partners. Partnerships are aimed to be long-term cooperation from UNIDO's side; however, finding partners with matching interests (I6) and reaching agreement between actors is time-consuming due to different interests, roles and risks the parties bear.

Furthermore, the working culture differs to a large extent among different sectors which can lead to issues in long-term cooperation. For example, their financial proposals that can be vastly different tend to make the process longer (I4).

An advantage of PPDPs should be the shared risks at different stages according to Li and Akintoye, (2003), but in practice this does not seem to be the general case in the PPDP projects in vocational training. According to the interview responses (I2, I4) it is unclear whether the utilization of different parties' competences is maximized, and risks are shared properly in the PPDP projects. Typically, the private sector bears the main risks due to the high contribution according to the expert interviews. Being a subject of local level negotiations, the budget share varies by projects; hence, taking local context into consideration is vital (I3). The private sector's technical expertise and technical resources are the main contributions during the implementation phase, so that the recipient organization can integrate the technology needed in the industry (I2, I3, I5). Additionally, in the design phase, they ought to provide information for UNIDO about their demand and suggest adjustments if needed (I3, I6). Since it is donor driven, UNIDO needs to pinpoint the needs and possible options for intervention to the donors as well as the private partners in PPDP projects. Table 2 summarizes the key challenges UNIDO experts identified in the scaling-up process of PPDPs in vocational training.

Table 2: Main challenges in scaling up PPDP projects in vocational training as identified by UNIDO experts

Resource team	 Increased need and capacity problems Management in different locations at the same time Information gap between field and office Knowledge sharing among agencies Structured, strict system
User organization	 Process of building relationship with the teacher-trainers Motivation of a new team Vocational training is usually heavily equipped with high costs Schools are lacking equipment
Strategy	 Identifying demand Finding the right scale-up strategy Natural challenge: scaling up comes after the project Involving specific groups, such as women
Environment	 Adapting local context Different partners, resources, institutions, communities Market knowledge required Local institutions to ensure long term operation Unexpected events
PPDP Specifics	 Designing a PPDP takes more time than other development projects Commitment, the quality of the partners Different working culture in each sector Clearly defined roles are necessary Private sector partner's engagement is key Involvement level is important but it can change Different risks, mainly borne by private sector Reputational risk

4.2 Roles, involvement and risks in PPDP projects

Private sector

There are mainly two drivers for the private sector to engage in a development project (I1) – Corporate Social Responsibility (CSR) and commercial reasons. The purpose of CSR is to show the consumers and wilder audience that they care about burning issues and, thus, increase their reputation. Commercial reasons are also important, so that, companies are able to expand their sales and service network in the target countries.

A real problem can occur when partners feel that the project is not their own (I3). Hence, involvement, especially private-partner involvement is critical throughout the projects that should ideally begin as early as possible in the design phase. It is important to note that the

level of involvement can differ by projects, and partners can change over time making the process more complicated, but it is advised to get rid of the partners that are not engaged for successful project outcomes (I4). In the design phase, UNIDO expects that private sector actors would, just like the donors, tell exactly what they demand before the project and suggest adjustments if needed (I3, I6). At the implementation phase, their technical expertise and technical resources are their main contribution, so that the recipient organization can integrate the basic technology needed in the industry (I2, I3, I5). Apart from their expertise, another essential part of the private partners' contribution is the provision of or assistance with the creation of a curriculum that suits the local needs. In addition to that, in some cases they also set up an apprenticeship program for the students (I6).

One of the interviewees (I4) was involved in a PPDP project in South Africa with the idea of revitalizing vocational and trade-based skills in the forestry sector. However, due to the lack of incentives for the counterpart ministry to be engaged, they eventually gravitated towards the private sector as they were interested in building up the skills based of the low-and semi-skilled workforce and, therefore, improve their quality of work, productive capacity, and improve the vertical linkages within their operations (I4).

Donor

The contribution of the donor goes beyond a financial one. While they are acting as the main sponsors of the projects (I1, I2), they also take part of the substantive work on the projects (LKDF Website). The donors bear mainly a financial risk and play a role in the project to the extent that they want to (I1). Consequentially, the donor may just provide money to UNIDO without any strings attached or also earmark its donations for certain regions, purposes or projects. (I1) There is a certain reputational risk for the donor as well (I2). The satisfaction of the donor with a (pilot) project is crucial to ensure, but does not guarantee further support for the scaling-up process (I2). The PPDP framework provides an opportunity for the donor to share the risk with other partners than UNIDO as well. Therefore, it can make its participation in PPDP projects more appealing than within UNIDO's usual scheme, where only one donor and UNIDO are involved (I3). The inevitable disadvantage of the involvement of more partners in a program, is the risk of loss of control (I2) and the adjacent feeling of ownership of the project (I6). Furthermore, donors can also act as a monitoring or quality assurance body, if they are willing to do so (I1, I5, LKDF Website).

Development partner

UNIDO plays the coordinator role in the scale up as the literature suggests that aims to achieve higher development impact (Sida, 2013). It attempts to engage with the local governments for the other operational expenses in order to mitigate the high risk on the private sector (I2). UNIDO has no funds and no financial risks in PPDP projects. However, there is a significant reputational risk (I4, I5) which means UNIDO could lose funding in case of poor performance.

Public sector

The government is often one of the direct beneficiaries of the projects, bearing very limited or no risk (I1, I2, I4). The public sector mostly has political legitimacy, but often lacks the technical expertise or resources that the private sector has, which is in line with the observations of Mouzakitis (2010) and Tansen (2012). As Cumming et al (2007) discussed, the private rely on the competence of the private companies; however, according to the interview responses, it is unclear whether they maximize their own competences in the PPDP projects.

4.3 Lack of knowledge sharing as a reason to worry

A lot of research and knowledge sharing is a prerequisite to identify best practices. However, as of today, there is little collected and systematically analyzed experience with the scaling up of vocational training PPDP projects. Experts (I5, I6) pointed out that they consider knowledge sharing itself to be the best practice for scaling-up. One could also state that the knowledge sharing is the catalyst to discern best practices. Since the employment of PPDPs in vocational training is a relatively new approach, the lack of knowledge sharing can prove to be more detrimental than with established practices.

UNIDO, aware of the limited research on PPDP in vocational training, created the Learning and Knowledge Development Facility (LKDF), which functions as an umbrella facility for all of UNIDO's PPDP projects. As an open platform, it includes all available information regarding these projects. UNIDO's intention to create a network for better understanding and mutual assistance in projects, however, is only partially realized according to the interviews. The interviewees (I1, I5, I6) pointed out that there is some informal exchange at headquarters as well as an annual conference hosted by the LKDF.

Additionally, there is a persisting information gap between different organizational levels (I1). Transferring the higher management vision of scale-up to the practical steps on the ground that actually works is very difficult. In the headquarters, the management is not completely aware of the possible challenges that may arise on the field (I1). In addition to this, experts on the field often limit their scope only to their own issues and thus, work in a "bubble", unless there is someone to pass the information from the offices (I1). Furthermore, the staff working in the field seems to receive very little information about other projects and experiences (I3). Therefore, knowledge sharing within UNIDO has remained limited, indicating an issue that should be addressed.

Furthermore, the exchange with other UN agencies, funds and programs is even more limited, although valuable lessons could be learned from the previous scale-up experiences in other organizations such as UNDP, UNICEF or WHO (I1, I3). These projects have their own characteristics that do not allow to strictly follow any previous scale-up model, but lessons could be learned from outside the organization. However, it is important to note that the competitive environment for budget can create a barrier between UN agencies when it comes to cooperation and exchange (I3).

The ways to achieve this range from a centralized system, which systematically collects and analyses data and distributes its findings based on the experiences investigated, to informal exchange between colleagues. One interviewee (I5) suggests that the current horizontal network (LKDF), with the opportunity to ask for counsel and assistance and to share lessons learned is working. Another one also emphasizes the existing informal exchange between colleagues (I6). Sharing and considering experiences in the designing phase can prove to be fruitful in the form of preventing the repetition of previous mistakes.

4.4 Piloting is key

In some cases, scaling-up is already included in the initial project documents, which requires careful planning. It is important to interpret the pilot project as an integral part of the whole project in these cases instead of a separate section before the scale-up intervention (I6; MSI, 2012). Furthermore, adjustments may be necessary along the way according to the lessons learned from the pilot project. On the basis of the data collected throughout the pilot project, the framework and plan applied needs to be adapted and updated in advance and constantly along the way (I4, I6).

The safest way to prevent mistakes during the scaling-up process is to analyze the experiences from the pilot project (Sharma, 2007). After all, this is the experts' commonly accepted starting point and indeed the very characterization of something as a pilot project, implies that if successful, it shall be repeated and/or extended. Experts and literature, however, differ on whether scaling-up needs to be planned completely when planning the pilot project. While some of them see the need for this detailed planning in advance (I6), others prefer to test the pilot project first, while still keeping the possibility of scale-up in mind (I1, I4).

Utmost carefulness has to be exercised, when choosing the projects to be scaled up, as not every project is designed to be scaled-up. As Burns (2014) found, the general desire for evermore higher quantities, i.e. scaling-up, results in a significant disadvantage to valuable, yet dimensionally restricted projects. Even some UNIDO experts refuse to consider their own projects as suitable role models for scaling-up at times, since not every small project done for the first time is destined to be a pilot project (I1, I4, I5). A project may be successful in itself, yet unfit to be scaled up for various reasons. The constraints may be external, such as conflicts, disease outbreaks etc. or internal, such as problems with either one of the partners or lack of a scalable design (I2).

4.5 Local context matters and shapes sustainability

Some of the interviewees are confident that the organization is able to overcome regionspecific differences (I3, I6), while others believe it is still a real challenge (I5). As previous papers suggest (Hanson et al, 2003; Yamey, 2011), adapting to the local context is vital, the scale-up strategy for a region is dependent on regional characteristics. It can be extensively manifold in order to accustom all the affected communities individually within one larger framework. Requirements can vary by countries, so sufficient knowledge of the market, motivations of the government, training partners and the usage of local resources are essential.

The projects should be designed locally to fit into the specific local situation as much as possible and minimize difficulties resulting from the region-specific differences (I3). Scaleup is not likely to be successful if it is driven only for the sake of scaling up. Instead, UNIDO and its partners must show that their approach to vocational training is led by actual market demand (I1, I5). Important factors for adaption are a tailored plan, underpinned by a solid understanding of the local market situation as well as the usage of local resources. Furthermore, the motivation of governments and local partners needs to be scrutinized to prevent misconceptions (I1).

Communication is key when scaling up a PPDP project, not only with immediate project partners, but with the affected community as well, which needs to be involved in the planning of a project as closely as possible (I4). In this way, the particularities of the situation on the ground can be accounted for and the acceptance of the project rises within the local population. This is an important factor in terms of ownership of the project (I6), as was also found by Yamey (2011).

UNIDO promises donors to implement the projects successfully and in most of the cases this happens. However, in developing countries, experts have to deal with unexpected events, such as diseases or conflicts, which can also affect the outcome of projects. That unfortunately means that the gain of projects can sometimes be only short-term, and they can even end up being completely destroyed due to unpredictable circumstances (I4). In Liberia, for example, a UNIDO expert team had to be evacuated and suspend the project because of the Ebola outbreak (I2). It is also a crucial question whether there are local institutions in place that can ensure continued operation in the long run. If such institutions are not in place, the effects of the project are not likely to be sustainable.

4.6 No scaling-up without rigorous monitoring and evaluation

The interviews revealed a lack of structured assessment in UNIDO's PPDP projects. In addition to UNIDO's monitoring and evaluation department and external consultants, monitoring by permanent structured assessment conducted by the project staff, involving all essential stakeholders could be considered as suitable tools (I2, I4). These experiences support Duflo's (2004) point that evaluation is key in scale-up interventions due to its bridging role between individual development projects. Both UNIDO experts and previous findings from the literature identify evaluation as the final project stage.

UNIDO has an independent evaluation system with external assessors typically delivering a final evaluation and midterm review that some of the experts support (I2), while others are

more critical and question its independency (I1, I4). While the experts agree on the necessity of constant monitoring, they disagree on the precise details of it. Some experts (I4, I6) believe that evaluation, while also being a necessary part of improving a project along the way, should be mainly done at the end of a project. Others approve of a role for it alongside the implementation of the project to varying degrees (I2, I3, I5). One advantage of the latter would be the chance to communicate the state of the project better to the donors and private partners (I1). Problems may arise due to scarce resources. Typically, time or money is limited leading to the absence of proper evaluation.

4.7 Monitoring and evaluation by project phases

4.7.1 Design

In the best-case scenario, scaling-up is already anticipated from the initial design of a pilot project. A monitoring section is needed for a tailored monitoring plan for each project (I4). A research-based approach requires a baseline survey as well as well-defined targets and methods for monitoring and evaluation (I6). The design of the project may be influenced by the private partner as well as by the donor (I2, I3).

4.7.2 Implementation of pilot project

The monitoring process should be continuous throughout the project providing insights for the stakeholders and the project managers as well. In this phase, selecting the person of the evaluator is a central question. Assessor should be someone external that is able to see issues in the project that an internal person may ignore (I1). One responsible person would be able to commit completely to the specific project. For long term projects, to employ someone locally, who can continue to work on monitoring and evaluation for the vocational training center that the project is attached to, will be more cost-efficient. (I5). The assessor could even be a consulting firm working with independent professionals (I2).

Currently, project managers are required to deliver reports to the donors to keep them informed about the projects every three months. However, these reports are often biased and mostly show solely what the donors would like to see. This way, the reports do not provide adequate information for the management either about possibilities for improvement nor problems in implementation (I1).

The current midterm evaluation is essential, but calls for improvements. A transparent method like joint monitoring would involve the parties that are not involved directly in implementation, since their feedback and validation role is insightful, and they could also gain a better understanding of the project itself (I4). Instead of showing only what the client expects from the snapshot midterm evaluation, it should provide a better picture of actual challenges for the project management and the partners. This way, the necessary interventions or changes can take place and valuable lessons can be learned.

4.7.3 Final evaluation of pilot project

Evaluation plays a critical role in the life of a project, because the indicators show whether the project is successful or not. Even though, there is a wider impact of the pilot projects, experts believe the projects that meet the specified criteria are a better model for scale-up. At this part of evaluation, the beneficiaries' feedback should also be taken into account in order to improve the quality of the training program as a whole (I3).

4.7.4 Scaling-up

Measuring the process itself is difficult, but the evaluation should take place similarly to the second phase, the implementation of the pilot project. Experts did not emphasize any particular method for the scaling up-phase. In their (especially the experts with scaling up experience) recommendations, they emphasized the importance of improving transparency and independency in monitoring and evaluation that should cover all phases of process (I1, I4, I5).

4.7.5 Final Evaluation

The final evaluation is somewhat similar to the final evaluation of a pilot project in terms of defining the success of the scale-up process. According to the experts' responses, the whole scale-up process would only be considered successful if the targets met the goals during the final evaluation (I1, I6)

5 Have a Plan and Follow it: Innovative Model for Scaling-up

5.1 Models for scaling-up

Experts' approaches to scaling-up itself differed partially, which can be explained by the different contexts of their projects. There are different possible paths for projects to be scaled up, and the strategy for this kind of intervention also requires the expertise of the project leader. We differentiate five separate strategies in our Model for scaling up PPDP vocational trainings detailed in the next subsection: 1) replication: doing the same in a different location, but not increasing the project size; 2) adaption: alter the project according to another place's particularities (other partners, another state of the existing training center, different society); 3) diversification of activity: changing the criteria to include something new or innovative in the next pilot project; 4) Centralized scaling-up; 5) Using ad hoc created tools, templates and systems of assistance that the project manager designs without considering best practices of others.

Since there is not just one single way for scaling-up, research is required to assess which path could match the other factors the best. It is crucial to note that simple repetition and/or extension will not do the trick. Different factors and challenges may rise on the way so that the course of the scale-up process may differ as well.

After being involved in several PPDP projects over the last decade, an interviewee is confident that scaling-up should be adapting instead of simply copying and pasting a project because the circumstances differ by region (I3).

"Replicating doesn't mean copy pasting. We can't implement exactly the same project in another country simply because we would have other partners or the existing training center that we support would be different, with different people, different ways of thinking and the resources would most probably be different" (I3).

The statements by UNIDO experts with regards to the planning and design phase were in line with the findings of MSI (2012) highlighting the importance of market and societal analysis prior to the project. While our experts wholeheartedly agree on the prominence of the mobilization of resources, the building of a constituency and legitimization of change by convincing the receiving community have only been mentioned on a side note (I6). MSI's perpetual critical analysis of the plan versus the facts on the ground in the implementation phase is also in line with the UNIDO experts' view and seems to be clear.

Each expert pointed out various difficulties that can arise in the process of scaling-up, depending on the project they were involved in and their experience. All of these difficulties can be interpreted as potential threats to the ecological validity of projects. Resources are the main limiting factor, with human resources at the center. Not only increasing the size of the team, and their capacity, but the management of different locations, geographical areas are difficult tasks (I1, I4). When scaling up, it is essential to assess the similarity of the user organization in order to identify which resources, how much adaptation and capacity-building will be required. This assessment is very research intensive and specialized expert knowledge is needed.

5.2 Proposed model for scaling-up

Based on all our findings, we propose this innovative model for scaling-up, applicable to scale up educational interventions, including specifically UNIDO's PPDP projects. We found that choosing the right project structure and implementation strategy is both paramount for success as well as the issue of greatest differences in the assessment of our interviewed UNIDO experts. While the analysis above already demonstrates the potential to facilitate scale-up processes in the field of continuous monitoring and evaluation, we would like to emphasize our model as a circle of perpetual learning and knowledge development.

Project conceptualization phase

- a .Identifying demand to determine the initiative's relevance
- b. Evaluating pilot project's succes and impact

Knowledge-sharing

a. Sharing the main challenges and successful solution within the LKDF platform

Project level preparation

- a. Increasing team's capacity
- b. Mobilizing resources
- c. Planning and designing detailed
- Scaling-up model

Evaluation

- a. Final monitoring and in-depth evaluation of targets
- b. Analysis of the biggest challenges, successes and lessons learnd
- c. Final report for partners, donors and media

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Macro-level analysis

- a. Assessing market and societal analysis
- b. Building constituency and legitimization of change on a bigger scale
- c. Analyzing the difference between the plan and the actual factors on the ground

Implementation Strategy

- •Replication
- •Adaption
- •Diversification
- •Centralized Scaling-up
- •Using ad hoc created tools

Implementation

- a. Adaptation of the manual to the situation on the ground
- b. Structural assessment of all stakeholders
- c. Detailed monitoring through all implementation stages

Scaling-up strategy

a. Deciding on strategy for implementationb. Deciding on project's structure

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6 Conclusion and recommendation

All ways lead to Rome, just as there are several approaches to scale-up interventions generally and PPDPs on vocational training specifically. This paper's objectives are to point out some of the most common models for scaling-up, propose a role model and make recommendations for scaling-up of PPDP vocational training projects, drawn from the experiences of interviewed experts and literature alike. We identify best practices, constraints, possible scenarios and solutions for the challenges that may occur on this way. We find that experts are mainly concerned about the issues of knowledge sharing within the organization and across agencies, local level planning, integrating piloting into the entire project, and the independency of monitoring and evaluation. Additionally, as unique challenges of PPDPs in vocational training, we identify capital-intensity and time-consuming characteristics, calling for different solutions compared to other fields. Finally, we develop an innovative model for scaling-up throughout the project phases, including different implementation strategies, which could serve as a model to be followed when starting new PPDP vocational project.

This project has several contributions for our four key target groups. Academically, this paper fills the gap in the current state of the research about PPDP and vocational trainings by combining the effect of two approaches in order to improve capabilities and skills in the important sectors for developing countries.

For UNIDO, the main output of the study is an evaluation and benchmarking of their current PPDP vocational training projects. This enables us to identify capability gaps and to provide clear recommendations how they can improve current programs in the process of scaling-up. Additionally, the clear recommendations for changes and further steps could serve as a guideline in the scaling-up process of current and future projects.

For private companies taking part in these programs, this study is relevant in analyzing the feasibility of scaling up programs where they already got engaged in, helping them to evaluate the level of their engagement in PPDP programs. Furthermore, it demonstrates the main challenges, problems, as well as best practices in scaling-up, giving the investors clear signals where they should raise their investment to increase the level of success of the program and lower their own risk in current and future projects.

Governments and the public sector are being encouraged to more openly welcome and support PPDP vocational training projects and to facilitate their success by decreasing administrative barriers and embarking on long term economic policies.

Donors are guided to the possible advantages of engaging in PPDP programs compared to the traditional scheme. While also pointing to the decrease of their control in these programs, which they have to accept in exchange.

A major constraint of this research is that the findings cannot be extended to different areas. We conducted interviews with a limited number of experts, in a limited geographic area. These results are applicable for UNIDO's PPDP projects in vocational training, but given the characteristics of the organization, the challenges in scaling-up might differ among different United Nations agencies and other organizations outside of the United Nations system as well. The goal is not to generalize but rather to provide a rich, contextualized understanding of the topic. In addition to this, our results depend on the interviewees' personal experiences; therefore, they may be biased to a certain extent.

Finally, based on our presented findings, as well as in-depth literature analysis, we recommend the following actions to UNIDO:

- Improve information sharing by
 - Restructuring LKDF platform by adding a clear and structured summary of the main facts in line with the management's area of interest (e.g. challenges other managers faced and solutions they found). This improvement could help managers to find quick inspiration in cases they face difficulties in their scaling-up processes;
 - Introducing LKDF meetings every 3 months to share new insights, challenges and lessons learned from the projects;
 - Filling in the information gap between the headquarters and field offices by more frequent Skype meetings;
 - Promoting learning from outside of the own organization and fostering knowledge sharing between UN agencies and other organizations (such as OEBS, WTO, EBRD).
- Improve monitoring by
 - Setting up a continuous monitoring process;
 - Preparing reports, independent from matching the donors expectations;
 - Allocating more time and resources on monitoring and evaluating in design phase;
 - Setting up a more research-based approach.
- Involve locals/affected community in order to rise the acceptance of the project by:
 - Asking for their inputs in the planning phase as much as possible;
 - Hiring a local person or a locally based consulting company to do monitoring starting from the pilot phase. They can afterwards continue to work on monitoring and evaluation for the vocational training center that the project is attached to and help in the scale-up process.
- Connect piloting and scaling-up closer by
 - Designing and keeping a scale-up plan in mind already when designing the initial small-scale project (but at the same time being ready for constant adaptation). It is important to keep in mind that not every project is designed to be scaled up and no project should be scaled up just for the sake of doing it.

These recommendations shall act as guiding norms for UNIDO and its partners in order to further improve the development of humankind. It is the intention of the authors that the hindering issues, highlighted in the present research paper, trigger change within UNIDO, in order to allow its dedicated employees and partners to make the most efficient and effective use of the resources at hand. We express our hope that by considering the recommendations proposed in this paper, we can assist UNIDO in living up to this responsibility embodied by its mandate, the Charter of the United Nations and the Sustainable Development Goals.

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Appendix

Interview Questions

А	Warm-up	Notes (3 min)
1	Could you please introduce yourself?	Personal information,
2	How long have you been employed at UNIDO and what is your current position?	position
3.	Which UNIDO vocational training project(s) are you responsible for? What is your role in the project?	

В	Planning a project and best practices	Notes (10 min)
	In order to achieve larger impact on the economy and the society, the projects that work on a small scale must be expanded to a larger scale. However, scaling up is a complex process and identifying which programs will work at large scale before investing the resources is a major issue in many program evaluations.	
1	Do you consider your project(s) successful?	
2	How did you assess whether the project was successful?	
3	Would you consider your project a suitable role model that could be implemented on a bigger scale? Why?	

С	Possible scenarios and ways for scaling up	Notes (18 min)
	For scaling up, a comprehensive plan of action, proper preparation and tools are needed. The	

	following questions will focus on the key factors for a scale-up process.
1	Do you have any experience with scaling up interventions?
1.2	Have you followed or are you familiar with any best practice in scaling up?
2	Please tell us about challenges that may have come up in the scaling up process, either based on your personal experience or the experience of your colleagues.
2.1	What would you consider the most critical of these challenges in the scaling-up process of such projects?
2.2	How do you perceive the role of the engagement of the private sector in the scaling up process?
2.3	How are the financial burdens and risk shared between the actors?
2.4	Scaling up may involve intervention to wider geographic area. How do you think UNIDO could overcome the region-specific differences that may arise in a scale up process?
2.5	How much are you aware of the other scaling up scenarios previously sketched out by other UN agencies?
3	Do you have in mind some way in which you would scale up the pilot project(s) you are currently managing?

D	Main challenges with focus on monitoring	Notes (10 min)	
	A review process should be conducted of pilots and of scaled-up projects as well, to assess the actual impact of a program and the success of a scaling up process		
1	When scaling up projects, how important do you see monitoring and how do you think it should it be ideally performed?		
2	Could you describe the current monitoring and evaluation practices at UNIDO?		
3	In your opinion, what could be improved in the evaluation and monitoring framework of UNIDO.		

Е	End	Notes (4 min)
1	If you could improve anything in the way projects are run at UNIDO (including scaling up and monitoring processes) what would that be?	
2	Is there anything you would like to add?	

Brief Summary of Answers

	B1	B2	B3	
	Do you consider your project(s) successful?	How did you assess whether the project was successful?	Would you consider your project a suitable role model that could be implemented on a bigger scale?	
I1	Yes and no Successful in wider	Main indicator: Students placed in employment	1. Yes, the first project is a sure model with this requirement to scale up after it ends	
	perspective but unable to achieve the project goals		2. Yes, certain extent, but very human resource intensive	
			3. No , this project is more dependent on the location and, driven by the donor's requirement	
			Scale up means replication, mirroring, doing the same in different stages in different locations, instead of doing more	
I2	Yes considering both systemic change and skill / personality side	Main indicator: number of applicants	Yes, UNIDO offered the exact help, what they were needing; assets, capital relevant to the field, in order to reduce the gap between the actual industry and the schools.	
I3	Yes, sustainable system	Reaching indicator target	Yes, they follow the PPDP model. Identifying the skills niches, and finds clear demand by the industry and clear training options is the entry point for UNIDO and its partners.	
I 4	Yes, but only short term gains in conflict zones	Indicators	No, because of the partner . Big firms as partners are more suitable role models for scaling-up than projects with small or medium enterprises	
15	Yes, UNIDO is the intermediary to tackle industrial skill gaps	Monitoring, Baseline-end questionnairesevaluation, line	No, ideally it should be a network of separate individual sectors where information is exchanged instead of top-down integrated system	
I 6	Yes	Terminal evaluation . whether the students get a job, feedback from partners, stakeholders	Yes, it is designed in a way to be scaled up	

	C1 Do you have any experience with scaling up?	C1.1 Are you familiar with any best practice in scaling up?	C2 Please tell us about challenges that may have come up in the scaling up process.	C2.1 What would you consider the most critical of these challenges in the scaling-up process of such projects?
I1	Experience with replication	Careful panning of stages - assess the potential for implementation; increase the team's capacity; increase resources • Identify demand – skills needed on labor market	 Sustainability Gaps between top level and field office level Increased human resources Time to build relationship with the teacher-trainers 	Human factor - to build a relationship with the teacher- trainers , it takes a lot of time to motivate new department, new team and to get them out of the government mindset that they have

		 diversification of activity: changing the criteria to include something new at UNIDO and LKDF they always talk about lessons learned adapting to super-local contexts is important 	• it takes a lot of time to motivate the new department, new team, to get them out of the government mindset	
I2	No practical experience, but generally lots of experience on field	Best practice: work with a centralized agency train the staff on how to use these assets repeatedly	asset part and finance part expert knowledge needed and it is very research intensive	asset and finance
13	Not with PPDPs, but with synergies between projects	 Keep the project structure Assessment needed Private sector involvement, from the very beginning 	 Local context Designing a PPDP is different, takes more time than a normal development project Financing – commitment takes time Agreement between actors -different way of working 	Private partner involvement- from the beginning, during the design phase as well
I4	Involved in lots of scaling- up	No best practice - especially in youth employment -it's very specific field. Own tools, templates and systems of assistance	• The quality of the	small service providers/suppliers
15	Currently looking into scaling-up the H2O Maghreb	Projects under the LKDF are taken into account. Incorporated best practices from the projects that started earlier into new proposals	 Finding suitable resources whether there are institutions in place to ensure continued operation long term Private sector engagement 	Institutions
16	Yes	Looked into how other organizations have done it		natural challenge

	C2.2	C2.3	C2.4	C2.5	C3
	How do you perceive	How are the financial	How do you think	How much are	Do you have in
	the role of the	burdens and risk	UNIDO could	you aware of the	mind some way
	engagement of the	shared between the			
	private sector in the	actors?			would scale up
	scaling up process?		differences that		
				sketched out by	project(s) you are

			may arise in a scale up process?		currently managing?
11	Private sector: very personal connection how much they get involved Motivations: CSR or commercial reasons (expand their sales and service network)	 little risk financial burden: private sector 	 need to use local resources knowledge of the market, motivations of 	interventionsvocation training: for a	Target is to reach a wider audience, but the process is slower – "tortoise"
I2	Lobby to engage governmental sector for all the other expenses	ownership,	ironing across national borders, the requirements can vary by countries	0	ZAMITA: Government requested to expand the project into the trucking industry- plans in process with all the stakeholders. Plan is national impact
13	Design phase : suggest adjustments if needed Implementation phase : required technical expertise and technical resources Problem: partners feel the projects are not their own	in each project- it's a negotiation which might be led at the local	be designed locally, as much as	for projects.	Yes, AGEVEC. Not simply duplication, rather to do something
I4	high as 50 %	 by the private sector mostly government: no risk reputational risk, if it's not done properly linked with corruption risk that agencies that don't perform well, will not get funding as before 	expansion must be led by the government	Not really, focuses on the activities on field	up his program with a phase 2 initiative to other geographical, underserved areas midterm evaluation, terminal reporting and then try to identify and expand high returns - targeting certain beneficiary groups like women
15		 development partner 50% in cash. private s 50% in kind, UNIDO: small contribution – transparent UNIDO: reputational risk- quite big private s: broad risk public development partners: depends on the context- 	terms of the local	linked as closely as they could be	move forward with TIVOT a strong involvement from the private sector

		other risk: ppl not able to enter labor market - internal and external constraints.			
16	apprenticeshipaprogramaprivatesectortellsaexactlywhattheya	UNIDO has no funds - acquire funds from donors Organization that contributes has bigger risk	UNIDO, flexible organization.?: how you set up the projectProject should fit	look at what other organizations do and the documents they have published	workshopwithpeoplefromgovernmentandotherdifferent

	D1 When scaling up projects, how important monitoring is and how do you think it should it be ideally performed?	D2 Could you describe the current monitoring and evaluation practices at UNIDO?	what could be	E1 If you could improve anything in the way projects are run at UNIDO (including scaling up and monitoring processes) what would that be?
11	use someone externally to the project	 UNIDO has a monitoring and evaluation team and employs external assessors monitoring usually a final evaluation regular progress reports by the project managers every month or 3 months to keep the donors informed. Can be biased 	exactly happens • use more audits and more external	headquarters level, field is a bubble - knowledge sharing and knowing where to go and find it or who to ask, would have a positive effect
12	Monitoring should start before we even start the program - initial approach and objectives	 didn't do a midterm review, bc of delays, but they are trying to conduct impact study There is independent evaluation, - unsure whether internal or external -hire a consultant that stakeholders accept 	independent evaluator • engage consulting	limit the number of projects that the SAP support staff at UNIDO headquarters has to deal with. enable to get resources faster on the ground, as every request goes via the SAP person
13	way you can report on results and to identify problems or challenges and take creative measures	Essential step to create a monitoring and evaluation plan		bring new staff on board in a reasonably fast manner + concept of gender
I4	government and other parties.	 problem: not enough time spent with in the design phase not really a lot of money for evaluation 	should be a section on monitoring	a sit down session with the finance and the procurement migration to Europe need to create magnets of opportunity in these places

	Partners: important feedback role and also a validation role.			
15	one person per project, fulltime only M&E	questionnaire in order to gauge the effect of the	resources to assess the	organization's strategy
16	MISALE: setting up a more research based approach . have a baseline data, a representative sample	terminal evaluation.	 set up a baseline data that can be compared try to have a more experimental methodology could be better 	