



Logistics Education –
Emerging & Developing Countries
LEED Program

The Kühne Foundation considers logistics competences belonging to the key triggers for economic development. Its objective is to provide the local labour markets with urgently needed logistics professionals.



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What is the Education Program?

Idea

Logistics Education - Emerging & Developing Countries (LEED) is a unit of the Kühne Foundation, based in Switzerland, which supports capacity building in logistics and supply chain management (LSCM) in developing countries. LEED targets regions in which public or private funding and local resources are not capable of delivering the necessary LSCM education and/or satisfy international quality standards.

LEED shares Kühne Foundation's vision that logistics and supply chain management is a core factor and backbone for global trade and economic development. We believe that performant logistics and supply chain management systems can be facilitated through high quality education. The development of such high quality education systems can be built through multilateral partnerships between top-ranked higher education institutions in industrialized countries and suitable universities in developing countries. The partnerships can be coordinated and facilitated using a sustainable approach based on mutual understanding, cooperation, and continuous learning and development.

Vision

We envision a world without talent shortages in logistics and supply chain management in order to enable global trade and resilient economies. By supporting higher education systems that create talent, LEED supports the creation of competitive and sustainable economies in developing countries. Excellence in logistics competences can lower trade costs, and help countries to become more resilient and remain competitive globally. Commercial logistics principles might therefore be transferred into public and private systems to provide the community with constant access to life-improving goods (e.g. pharmaceutical products and FMCGs), and ultimately foster continuous development across all economic sectors.

Mission

LEED provides local education opportunities in order to guarantee the consistent supply of graduates and experts for logistics and supply chain markets in developing and emerging countries. We focus on strengthening higher education at university level through the development of LSCM degrees, and believe that only local capacity building programs will be able to address specific country needs and requirements to facilitate international aid and economic development sustainably.

The Education Program

Program distinctness

Local capacity building

Sustainable impact

Progress and achievements

Tracking progress

Measuring success

LEED shares Kühne Foundation's vision that logistics and supply chain management is a key factor and backbone for global trade and economic development.



What makes the Education Program different and special?



- a) To connect the local markets to the global economy,
- b) To improve the living conditions of the populations also in rural areas,
- c) To increase efficiency in operations and improve the competitiveness of businesses, domestically, and internationally.

It can be concluded that besides e.g. health, finance and construction, LSCM has become a key sector that is essential for the economic development and eventually, for the development of living conditions of each individual. Without contemporary structures, processes, and knowledge, countries will hardly be capable of achieving their goal to progress further with their economy and to eventually overcome poverty.

Whereas logistics and supply chain management already play a critical role in the daily routines of distribution of food, goods, and healthcare products, its role will even be more exposed during recurrent crises (e.g. HIV epidemic, draughts) or sudden crises (e.g. COVID-19 epidemic, earthquake) that disrupt a nation's functioning. In alleviating such crises, effective logistics systems are even more needed to serve the population with life-essential goods, and to prevent economic recessions.

With regards to the international development community as well as the international aid community, a recurring pattern to improve LSCM performance transpired over the last couple of decades. Although vast sums of funding have been released for logistics capacity building, economic development as well as to respond to the overwhelming demand during crises, most of the funding has not been used efficiently and effectively due to lack of talent, expertise, and the incapacity of local stakeholders.

International organizations often decide to deploy foreign LSCM expertise and capacities to developing countries in order to address the identified gaps and needs. However, such a problem solving approach might not meet the requirements for sustainable improvements for businesses and beneficiaries. LEED, therefore prefers to dedicate more funding to local capacity building programs in order to achieve actual changes in LSCM operations. Such continuous improvements will then be based upon locally created expertise and driven by in-country educated professionals and academics. Disappointingly, funding for such kind of lasting and comprehensive education programs in LSCM is still sporadic and scarce.

Logistics and supply chain management has come more and more to the forefront of decision-makers in developing and emerging countries. It has well been established that economic development is tightly linked to the capabilities in the broader field of logistics. With regard to the Logistics Performance Index (LPI) by the World Bank, a general pattern can be observed that industrialized nations perform significantly better than developing and emerging countries. It can therefore be reasonably argued that improvements in the logistical sector can help to develop other economic sectors in poorly performing countries.

Logistics and supply chain management has begun to be understood as a leveraging factor:



- The Education Program
- Program distinctness
- Local capacity building
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LSCM programs are built in partnership with local universities that are viewed as partners instead of beneficiaries. With such in-country built expertise, local stakeholders shall be capable of delivering LSCM services meeting international standards in the future.

The legacy of the Education Program is to close this education gap by providing technical assistance and financial support for long-term higher education LSCM activities in vulnerable countries. We distinguish ourselves from similar initiatives by providing the required support directly in the impacted regions and with local ground staff. LSCM programs are built in partnership with local universities and are customized to their specific needs and requirements. Universities are taken as partners instead of beneficiaries. With such in-country built expertise, local stakeholders shall be capable of delivering LSCM services meeting international standards in the future. This approach will enable

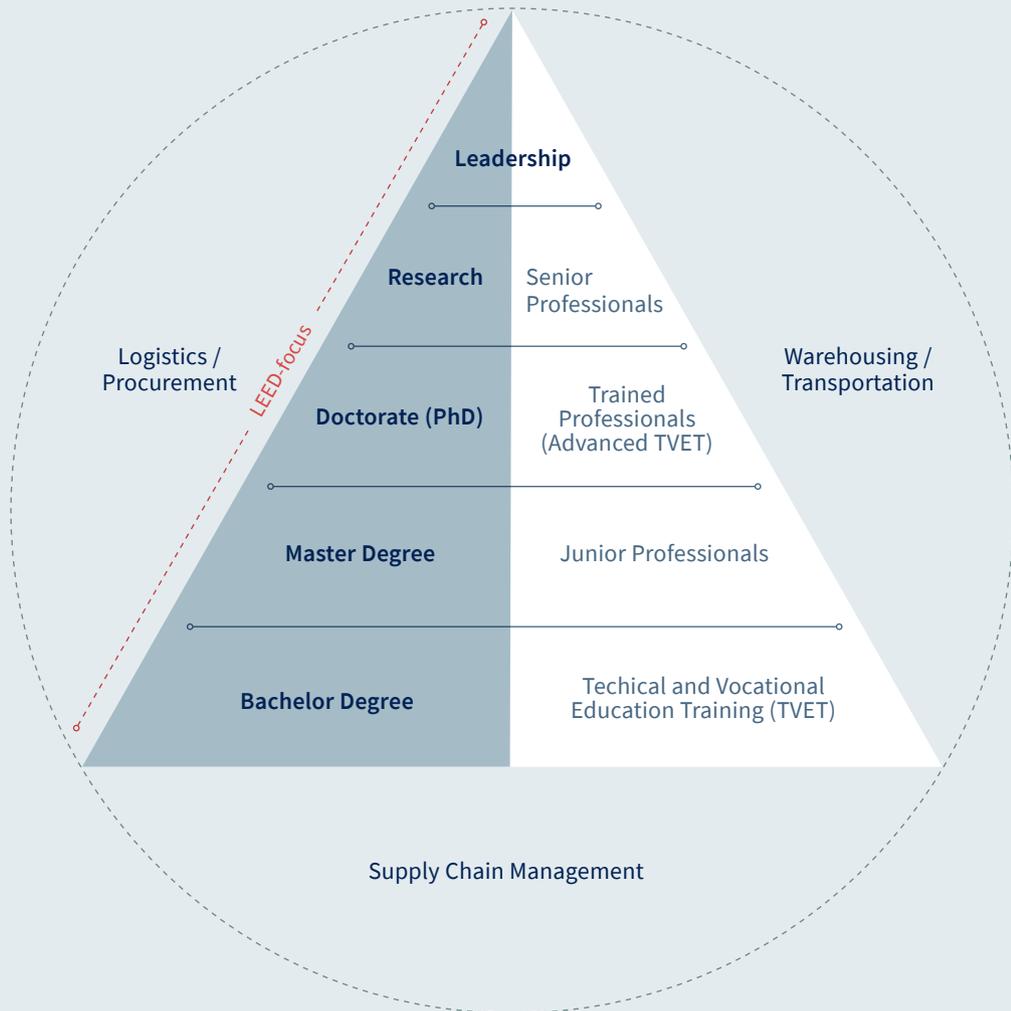
poor countries to become independent from international economic aid, and become more resilient and prepared to confront future setbacks. Capacity building in higher education might have a medium to long-term impact, but is the only approach to turn the current foreign resource dependency into local and domestic knowledge sourcing for an overall sustainable economic development. Local logistics and supply chain management graduate professionals will be the key to this success concept.

Current research shows that there is a lack of university programs offering LSCM studies in Africa. In sub-Saharan Africa, there is between a 20-30% LSCM skill deficit compared to high performing countries (e.g. Germany, USA) at all levels – operational, administrative, supervisory, and managerial.¹ Africa is particularly affected by the shortage of LSCM talent for managerial positions which will make a continuous economic development more challenging. Although, there is an increased demand for skilled LSCM professionals, there is still a lack of quantity and quality in higher Education-programs in LSCM.²

1 McKinnon, A., Flöthmann, C., Hoberg, K., & Busch, C. (2017). Logistics Competencies, Skills, and Training: A Global Overview. The World Bank.
2 Arvis, J.-F., Ojala, L., Wiederer, C., Shepherd, B., Raj, A., Dairabayeva, K., & Kiiski, T. (2018). Connecting to Compete 2018. In Connecting to Compete 2018. <https://doi.org/10.1596/29971>.

How does the program develop local education capacities?

Academic Pathway for LSCM excellence



- Academic Pathway for LSCM excellence (LEED-focus)
- Vocational pathway

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In order to fill the graduate gap, LEED addresses the academic career paths (see figure left), and partners closely with universities in developing countries. For the identified universities that obtain support by the Education Program, we offer guidance with the design, implementation, and eventually the delivery of study programs in logistics, supply chain management, and related fields of study.

With the key objective to strengthen the local capacities along the different higher education levels, LEED consistently does not follow a flying faculty concept, but implements activities such as:

- Curricula Consultancy (incl. review and development)
- Train-the-Trainer course (regionally and internationally)
- International co-supervision for locally enrolled PhD candidates
- International collaboration (participation in conferences, guest lecturing)
- Student support (field trips, summer schools)
- Support courses (English language, Job readiness)
- Domestic and international research opportunities
- Domestic seminars in LSCM for professionals

The aim is to help universities understanding the essential elements of internationally competitive academic education programs. The emphasize is not on the funding of activities only, but on the transformation of the concepts into learning experiences.

LEED comprises an international team stationed in Europe, and a regional team with respective nationals in the countries of operations. LEED has further built up a comprehensive network of international academics and universities that have been contributing to the capacity building activities over the past couple of years. Their wide range of expertise and specialization facilitates an optimal fit for capacity building between international and local university partners. Different universities have different needs, capabilities and interests (e.g. transportation, health supply chains, etc.), and the LEED network makes available a wide range of experts that can deliver specific topics that are relevant for each of the supported universities (i.e. their specific learning processes and interests). In addition, partner institutions in developing countries can also benefit from their regional interaction including collaborative research projects (e.g. joint postgraduate programs, regional guest lecturers, etc.).

LEED opted for the approach of decentralization when building capacities in developing countries. Depending on the geographical as well as population size of the country, LEED aims to involve a minimum of two or preferably even more universities rather than applying the concept of “Center of Excellence” in which all resources will be allocated to one single location or university. From a risk management perspective as well as considering the idea of reaching out to a wider target group of potential students and stakeholders, the selected decentralized approach is favorable over a single-university concept – particularly for geographically dispersed and high population countries such as Nigeria, for example.

What enables the program a sustainable impact?

Strategic fit

The Education Program fits strategically well into the complex world of other stakeholder's programs and activities in emerging countries. LEED unfolds effortlessly into the sector of "Development Projects" to support the sustainable improvement of living conditions as well as into the area of "Humanitarian Aid" to enhance logistics efficiency and effectiveness during disasters or long-term crises. In addition, the Education Program ties strongly to "Commercial

Businesses" by elevating the latest logistics concepts and technologies. LEED addresses all three areas by aiming to overcome the key bottleneck that is shortages of LSCM talents.

The clear focus enables donors to financially support an area in the development community that has long been disregarded as highly important, and that has long been underfinanced with the lack of a large-scale-approach.

Strategic fit of the Education Program





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LEED is based on the idea that progress in higher education capacity building will help to achieve also other stakeholder's objectives. Thus, LEED's objective is not to compete with other support programs, but to collaborate closely with any stakeholder, program, or project which has touchpoints with higher education and LSCM in developing countries. This may range from joint project agendas and aligned partnerships with mutual partners (i.e. universities) to the concept of co-funding and fund-matching projects in which Kühne Foundation and another party or other parties contribute financially to a mutual project.

Sustainability Factors

A decisive factor for program funding is the aspect of sustainability and the program's projected output and outcomes. There are five main factors that make the LEED program long-term impact and replication possible.

Once universities have integrated the new capacities and knowledge in their functioning, the programs are maintained and funded fully locally.

First, the local ownership of the program: LSCM programs are built in partnership with local universities, and are customized to their specific needs and requirements. A mutual needs assessment determines the type of assistance required and a plan for implementation and follow-up. Once universities have integrated the new capacities and knowledge in their functioning, the programs are maintained and funded fully locally.³ The partnerships are coordinated and facilitated using a sustainable approach based on mutual understanding, equal involvement and continuous cooperation. This way, universities feel entitled to make critical decisions and consequently, develop ownership for their LSCM programs.

Second, the LEED program ensures sustainability, and stability by means of long-term partnerships. As opposed to one-time support or short term-projects, partners in developing countries are assisted through the years until successful implementation of the LSCM programs. Kühne Foundation is an operative organization which initiates and implements most of its projects itself. Once a partnership is established the foundation assures the minimum requirements for the implementation of the program and its continuity. This allows for commitment and a long-term focus, and ensures that the quality and the integrity of the LEED program is maintained over the years.

³ LEED does not pay or fund teaching staff to run the programs as the academic faculty will be paid and funded by the universities themselves.

What enables the program a sustainable impact?

Third, the program aims for systematic change in learning and knowledge creation. The program runs through higher education institutions, which are deeply rooted in the country's structure and functioning. Implementing LSCM degrees in higher education institutions ensures local validation and official recognition, and leads to a modern approach of systematic learning and knowledge creation. Such systematic change also includes the promotion of gender equality. Whereas women represent almost half of the world active population, they are underrepresented in the field of LSCM. As such, the Education program prioritizes and aims to increase the number of female lecturers, students, and eventually professionals in LSCM.

Fourth, the program strives for international standards of excellence that enable a sustainable impact. All university programs and their curricula are designed in accordance with international standards and regulations. Through curriculum design, LEED certifies compliance with high quality standards and international recognition of higher education degrees (e.g. equivalence of ECTS credit points). The implemented university degrees introduce main themes and current trends in LSCM higher education which are relevant for the industry and the society (e.g. global logistics, green logistics, digitalization in logistics, health supply chains, etc.). These practices will ensure the programs to remain relevant and competitive.

Fifth, the program establishes PhD LSCM programs to grant local expertise and independence. The external co-supervision for PhD candidates is our key strategy to ensure sustainability and long-term impact. As most universities in developing countries lack qualified academics

to supervise doctorate students, Kühne Foundation education pairs locally enrolled PhD candidates with an international professor to ensure international exposure, and the desired level of high quality research.

Once graduated, fresh PhD holders will initially satisfy the demand for teachers in the LSCM programs. Further, lecturers with a PhD in LSCM represent specialists in certain LSCM areas (e.g. maritime logistics, logistics controlling, etc.), and therefore, broaden the knowledge horizon of the universities. In the medium to long-term, and besides their teaching contribution, PhD holders will focus more intensely on research projects, and become qualified as local supervisor for the next generation of PhD candidates. This approach will allow the university to supervise local PhD candidates independently and increase the spillover effect of the program in the future. PhD holders can generate local research by identifying local needs, and providing practical solutions for policy makers and practitioners. Local research will also contribute to the university's visibility and international recognition.

Ultimately, the local PhD holders will be the proof of concept and will act as ambassadors representing success and promoting the independent continuation of the LEED program.

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Exit strategy

All LEED activities can only be successful if local universities in developing countries will acquire the skill-sets and know-how to deliver the LSCM programs independently from external third party support. The objective is to disconnect the LEED program from the university partners once the successful implementation of a stable operating degree program has been achieved. The time horizon from the initial contact to the exit point is anticipated to comprise about 6-10 years (might vary dependent on the entry level of the university and country). The exit strategy can reasonably be applied once the following key criteria have been fulfilled:

- The established study programs are operational and have been completed with at least one cohort, i.e. students have already graduated from the implemented LSCM program.
- Faculty members who teach the different modules have been trained and assessed concerning their contemporary teaching methodology and LSCM knowledge. LEED is confident that they possess the knowledge to run the degree program(s) independently at the desired level of quality.

- The faculty comprises enough academics with a PhD in the area of logistics and supply chain management who will eventually be eligible to supervise their own PhD-candidates, i.e. external co-supervision for LSCM-related PhDs will not be required any longer.

Those three minimum criteria ensure a sustainable impact, and to implement a solid foundation for locally educated LSCM professionals at international standards. Particularly, the number of PhD holders in LSCM must be increased significantly to achieve the desired change of self-sustaining LSCM faculties, and for the local universities to acquire equal recognition within the global LSCM university community.

For LEED, the approach of the “Exit”-strategy means to remain in a continuing relationship with the previously supported universities, e.g. guest lectures, collaborative events, part of the same network, etc. Yet, the financial support will be cut back to a minimum or even become nil.

Program progress and achievements 2016-2022

During the period from 2016 to 2022, the Education Program has been established the target to increase the number of implemented and reviewed programs from 13 to over 30 degree programs. As illustrated in the right figure, each of the supported countries in East- and West-Africa has been equipped with degree programs at undergraduate and postgraduate levels. The Education Program also ensures that each supported university has access to a local PhD program in LSCM. Whereas the majority of programs have been running after its new creation or annual revision, some programs are currently under review and shall be operational latest in 2021 or Q1 2022.

Legacy of the Education Program – Number of LSCM Degree Programs at international standards



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How does the program track progress towards goals?

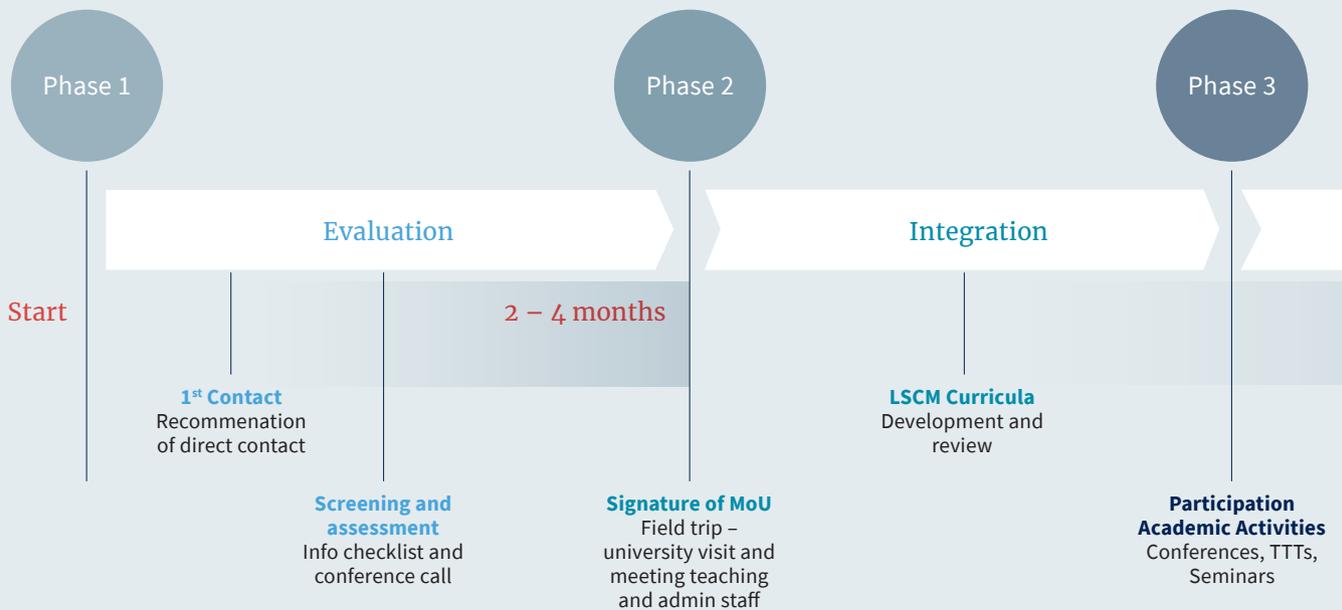
The Education Program uses performance monitoring to track progress towards its goals. We established two elements that help us to ensure that we are on the right track.

First, for every new partner university there is an approximate timeline to follow as well as a roadmap towards the

development of LSCM higher education programs. The roadmap helps us to identify the development stage of our partners and to determine whether we are on track or behind schedule.

Second, in order to ensure the *strengthening of local LSCM higher education*, every year we formulate a list of key activities

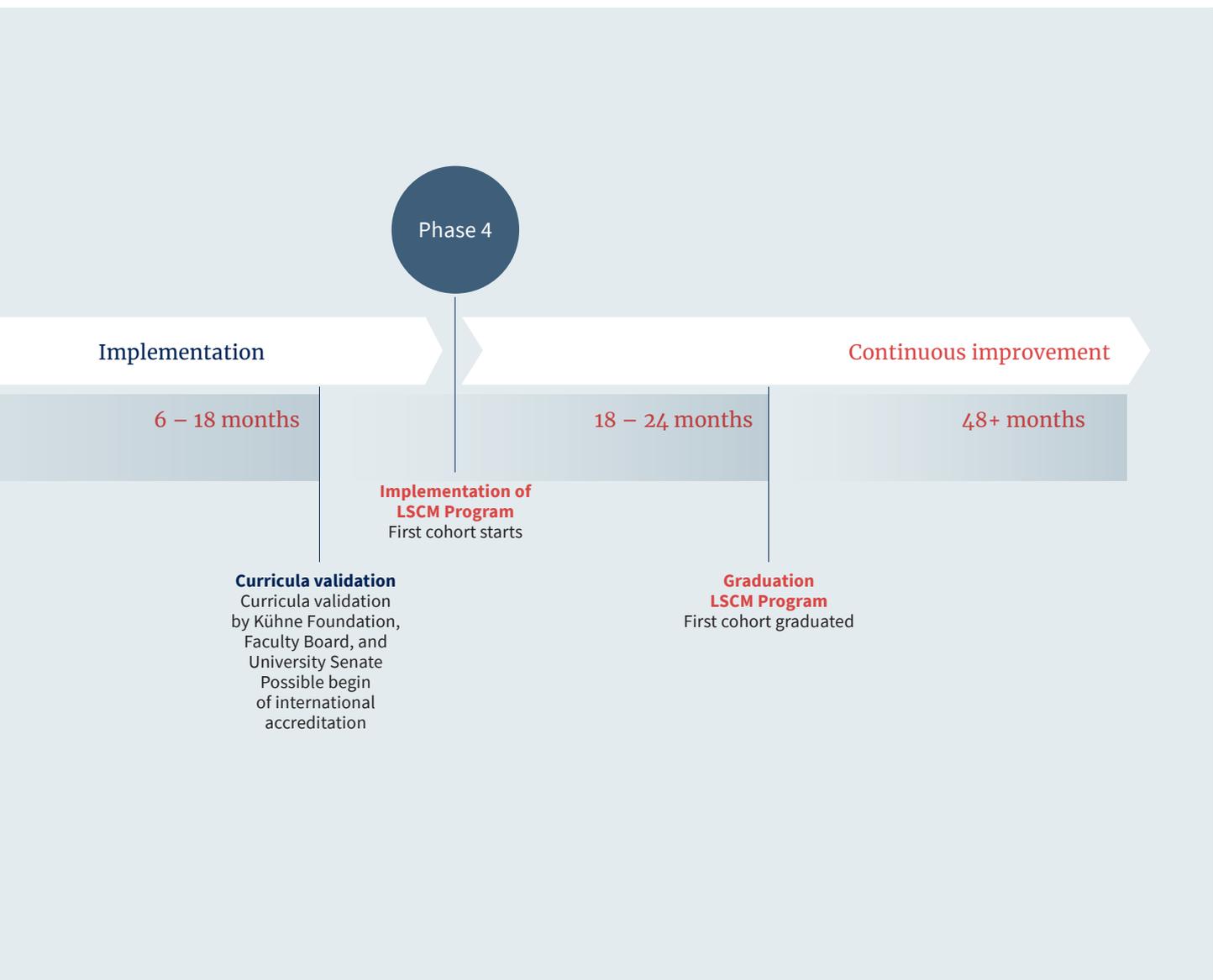
Program Framework: timeline and roadmap for development of LSCM higher Education - programs



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that must be completed. For example, we know before the start of the year that we need to implement two regional Train-the Trainer-courses (TTT), two international conferences, one international TTT for academics, one international student summer school, and one international professional summer school, and a minimum of one field trip

per semester and partner-university. We monitor our progress against these minimum requirements by frequently checking that we have satisfactorily completed the activities.

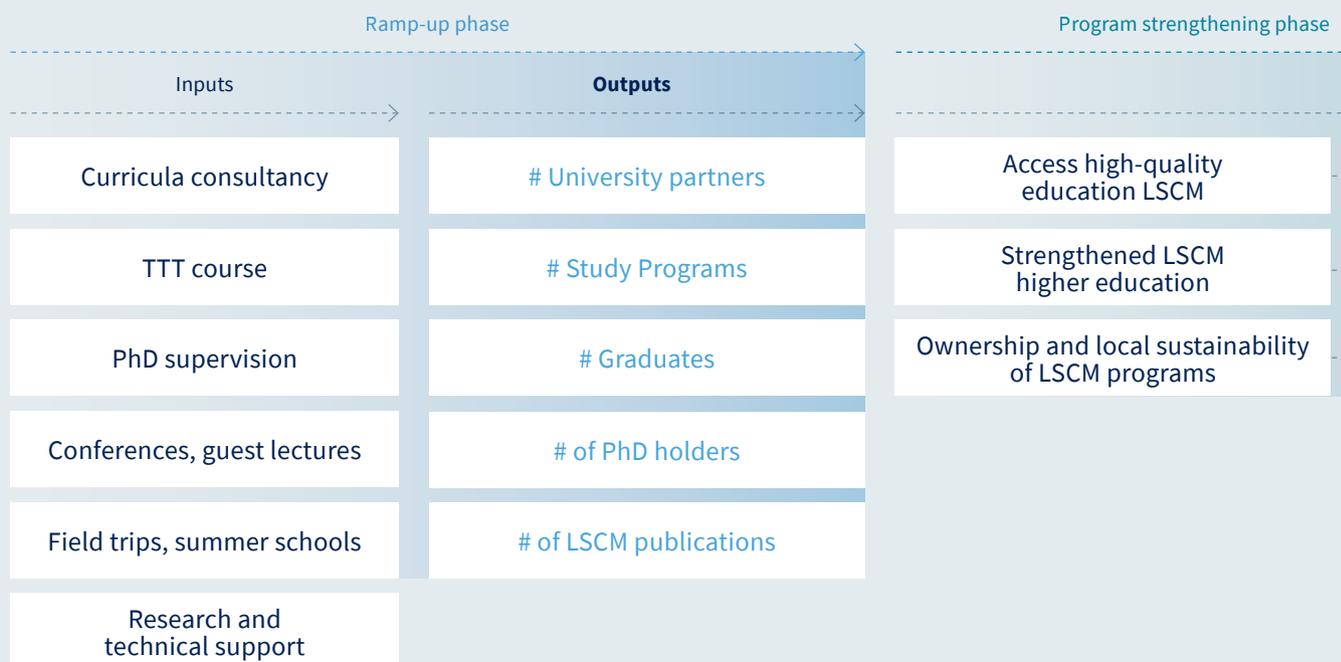


How does the program measure success?

The Education Program uses different performance indicators to measure its impact. Building upon our mission, we developed a framework to illustrate the program inputs, outputs, short-term and intermediate outcomes, and impact. We extract the key performance indicators (KPIs) attending to the framework and the overall program goals. In particular, we measure the following different areas with a number of various KPIs:

- Ramp-up phase: during this period, input and output factors are determined related to the demand for LSCM higher education and local need for LSCM talent
- Program strengthening phase: during this period, universities take over the full ownership of the implemented LSCM degree programs, and short-to medium-term outcomes relate to the quality of education/teaching and the offered LSCM programs in general.
- Integration phase: during this period, a stronger integration between the university programs and the professional LSCM community occurs. Medium outcome KPIs relate to graduates and their LSCM positions across various sectors, for example.
- Exit-phase: in the final program phase, the support activities diminish by the Kühne Foundation, and initial impacts on the logistics performance materialize in the form of changes in

Program Framework: inputs, outputs, short and midterm outcomes, and impact





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structures and processes across different sectors.

Concerning the long-term engagement with university partners and within countries, key outcome KPIs require a longitudinal measurement approach to provide sufficient significant levels for program-impact correlation measures. Generally, the Kühne Foundation will remain in good and close contacts with all stakeholders even beyond the ex-

it-phase of the Education Program, and will continue to integrate the developed programs into its global network of higher education partners.

The Kühne Foundation assures the minimum requirements for the implementation of the program and its continuity. This allows for commitment and a long-term focus, and ensures that the quality and integrity of the LEED program is maintained over the years.



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COUNTRIES (LEED)**

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