

The PropelA Story

Turning Learnings into Impact



1. What is PropelA?

The project ***building skills for young plumbers and electricians through dual apprenticeship training*** (PropelA) is a private sector–driven dual vocational education and training (VET) programme in Kenya, created to address the country’s shortage of skilled plumbers and electricians by combining structured on-the-job training with classroom learning. Developed in 2021 and implemented through its first phase from 2022–2025, the model is co-created with Kenyan companies, training institutes, and the National Industrial Training Authority (NITA), ensuring that apprentices gain practical skills and gainful employment while companies build a reliable talent pipeline.

PropelA is implemented by Swisscontact in partnership with the Hilti Foundation, Geberit AG, National Industrial Training Authority (NITA) and Don Bosco Technical Institute making it Kenya’s flagship example of an industry-led, government-accredited skills development initiative. The programme’s purpose is both economic and social – to reduce unemployment and transform how the construction sector recruits and trains its workforce through a scalable dual VET system.

About Swisscontact

Swisscontact, originally founded in 1959, emerged from a growing recognition that the Swiss private sector could play a constructive role in the economic development of low and middle income countries. Established by leading figures from Swiss business, academia, and politics, the organisation worked to reduce poverty through private sector driven development.

Throughout the 1960s and 1970s, Swisscontact became deeply rooted in vocational education and training through the establishment of vocational schools across Asia, Africa, and Latin America. These included engineering workshops, agricultural training centres, and multiple technical training institutions that followed the Swiss dual training. The organisation not only built schools but also invested heavily in training instructors, ensuring that knowledge could be cascaded sustainably to new generations of learners.

Over the decades, Swisscontact has evolved into a global leader in skills development and labour market integration. Its support to systemic change through vocational education continues to draw from the Swiss dual VET model combining practical workplace learning with school based instruction, while adapting programmes to local economic contexts.

In Kenya, Swisscontact has been active since 1997, operating from its Nairobi offices where it implements market oriented development projects focused on skills development, employment, entrepreneurship, and climate resilient livelihoods. Over nearly three decades, Swisscontact has become a key development partner in Kenya.

Globally, Swisscontact implements 51 projects, strengthening vocational systems and collaborating closely with industry, governments, and education institutions. Its approach promotes demand driven training, private sector engagement, and systemic reform, positioning TVET as a pathway to youth employment and inclusive economic growth.



This document provides key insights and lessons learned from the Swiss–Kenyan collaboration on dual VET development. It shares the experience of adapting the Swiss dual training model to Kenya’s labour market context. The learnings should inform policymakers, training providers, industry partners, development stakeholders, and those interested in joining efforts to scale and strengthen the model to expand skills development and youth employment opportunities in Kenya.

1.1. How it Started

In the inception phase of PropelA from July 2021 to March 2022, a dual VET model tailored to Kenya's labour market needs was developed. The aim was to address youth unemployment and help employers access skilled talent. To achieve this, the project first identified and assessed companies, training institutes, and other stakeholders to ensure they had both the willingness and capacity to participate. Only after this analysis were partners onboarded which was a crucial step to ensure the dual VET model could be implemented effectively.

In this first phase, PropelA collaborated with nine leading electrical and plumbing companies in the construction sector and two training schools, collectively referred to as the "core group", to co-create a Kenyan version of the Swiss dual VET model. The process was intentionally bottom-up, guided by employer feedback and the practical realities of school-company co-delivery. The model was shaped through extensive consultations, workshops, and an exposure visit to Switzerland.

Key features of dual VET model:

- Entry based on clear entry criteria (typically KCSE graduates aged 18+, with the possibility of admitting 16-year-olds under specific conditions),
- A two- year programme where apprentices are employed by companies, and
- Accreditation by NITA at Level 5 (Master Craft Person III) upon completion.

Apprentices spend three weeks per month training in companies under mentor supervision and one week in a vocational school. The pilot focused on two construction trades, electrician and plumber, using high quality curricula inspired by the Swiss system but adapted to Kenyan employer requirements.



Did you Know?

Swiss Dual VET Model

In Switzerland, apprenticeships are offered at the upper-secondary education level, following the completion of compulsory schooling. Most learners begin their apprenticeship at approximately 15 years of age and complete it between 18 and 19, depending on whether the programme lasts two, three, or four years. Most of the training takes place in a host company, where apprentices gain the practical knowledge, skills, and competencies required for their chosen occupation while actively participating in the company's production processes. Although school-based vocational training programmes also exist, they are relatively uncommon in Switzerland. The dual training model, combined with a stable economy that offers strong labour market absorption, is a major factor contributing to Switzerland's comparatively low youth unemployment rate of 8.8%, compared with 16.6% across the European Union (2021).



Success Factors of the Swiss VET System

The Swiss VET System is Characterized by a Unique Governance Structure.

While the national (federal) government is responsible for strategic management and covers parts of the overall costs, the training content and apprenticeships are completely in the hands of professional organizations. The cantons, as the third entity in the alliance, are responsible for the implementation and offer career guidance services. Professional organizations and industry associations play a central role in designing curricula, defining occupational standards, and organizing exams. They ensure training content matches labour market needs. At least every 5 years, they initiate the process of qualification update which is coordinated by the State Secretariat for Education, Research and Innovation (SERI). Companies are responsible for providing practical training as part of the dual system, employing apprentices and collaborating with vocational schools mainly responsible for delivering theoretical education complementing workplace training. Swiss dual model is special for having also a third learning place, the intercompany courses typically offered by professional organisations, trade associations, and sectoral bodies that represent specific industries or occupations. In these specialized training centers, apprentices from different companies come together to learn standardized practical skills that ensure consistency across the profession. This shared governance system ensures strong alignment between education and labour market needs, with decisions made collaboratively by state actors, employers, and social partners. This structure has proven successful over decades and is based on close cooperation and great trust among the partners involved.

The Swiss education system is highly permeable, offering multiple pathways and bridges that enable learners to move between academic and vocational routes, and to transition across different levels of education throughout their learning journey. Learners benefit from a high degree of flexibility in the design of their training career. For example, they can strive for a Federal Vocational Baccalaureate (FVB) diploma during or after their apprenticeship and thus be admitted to all Swiss universities of applied sciences and even to the regular universities. However, they can also aim for the tertiary level without such a diploma and either pursue a federal professional examination or join a college of higher education.

Young people are provided with early career information. To help young people take full advantage of the wide range of VET opportunities and make informed career choices based on their talents, interests, and labour market prospects, the cantons provide comprehensive advisory services free of charge. In addition, trial apprenticeships are commonly offered, allowing prospective apprentices to gain first-hand experience of a profession by spending about one week in a company.

At their host companies, learners are not merely observers; they quickly become involved in productive work processes. Consequently, employing apprentices often generates financial returns for companies within a relatively short period. Research on the Swiss dual VET system, widely regarded as a benchmark, shows that more than 60% of firms consider apprenticeships to be financially beneficial. The point at which training investments are recovered varies depending on the sector, as well as the duration and type of programme. In exchange, apprentices receive a salary starting from their first year, which typically increases with each year of training completed.

Company mentors are responsible for guiding the apprentice and supporting the development of technical competencies, soft skills, and a professional work ethic. Company mentors are required to hold a recognized qualification in the relevant occupation, have appropriate industry experience, and obtain formal certification as mentors. Apprenticeship mentoring is organized internally by host companies. In some cases, apprentices are paired with individual mentors, while larger companies hosting multiple apprentices may create dedicated units to coordinate recruitment and mentoring processes. Regardless of the structure, mentoring, supervision, and related administrative responsibilities are formally included in staff job descriptions and counted as part of their paid working hours.



1.2. Our Approach

The development of the PropelA project pilot followed a five-stage process in which each stage informed the next. This approach was particularly effective for the design and pilot phase and as a basis throughout the entire programme cycle.

Stage 1 - Analysis

A thorough and holistic analysis is essential to understand the underlying causes and constraints of a system and to develop appropriate and effective training. The diagnostic and analytical work is most effective when conducted with strong participation from the project team that will later implement the project, ideally during an extended inception

phase. This allows the team to simultaneously build contextual understanding and establish relationships with potential partners, as both processes are closely interconnected. It is important to avoid overly predefining project parameters. Sectors, occupations, and locations should not be selected until a thorough and open-minded analysis has been completed.

In the case of PropelA, the process began with an initial feasibility study that included a sector assessment examining business structures within selected sectors, an analysis of skills gaps and workforce requirements, and a labour market assessment that highlighted a shortage of qualified workers in the construction sector. As part of this feasibility study, several champion companies were identified, specifically companies, or more precisely their CEOs, who were willing to actively contribute to shaping and guiding the project.

It soon became evident that these champion companies shared several characteristics. Many were medium-sized, well-established, Kenyan-owned businesses with a strong emphasis on quality delivery, where maintaining a skilled workforce is essential for preserving their market position. In collaboration with these companies, the selection of occupations was carried out, along with determining qualification levels and the duration of apprenticeships required to achieve the desired competency standards.

This was implemented through a structured process facilitated by the project team and conducted through a series of workshops. Ensuring the involvement of appropriate company representatives was crucial: strategic direction and vision-setting required the participation of CEOs and general managers, while practical implementation and legal considerations required the engagement of HR managers.



Stage 2 - Adaptation

An adaptation phase is necessary to tailor the training and business model, including the financing plan, budgets, and targets. It also aims to clarify the roles of all involved actors, identify the target groups, and ensure that the project team has the appropriate expertise to effectively support and guide the process.

In the case of PropelA, the goal was not to replicate the Swiss dual VET model exactly, but rather to adapt it by selecting its most relevant features and identifying the necessary conditions for successful implementation in the target context. The dual VET model was co-created mainly with the companies and consulted about with NITA and two vocational schools (Don Bosco for the plumbing, Eastlands College for electricity). While the Swiss dual VET model for the two occupations generally follows a day release approach (4 days in company, one day in school), this was found impractical for the context in Nairobi: due to the scattered locations of the apprentices' homes and the unavailability of a fast, reliable and affordable transport system, the companies jointly decided that it would be much better to follow a weekly release system. Out of four weeks a month, the apprentices spend three weeks in the company and one in school. They attend school in batches, which means not all of one company's apprentices may attend school at the same time. This ensures continuity for their employers and offers exposure to learn from and exchange with apprentices from the other countries.

In line with the Swiss dual VET model, the apprentices earn a salary in line with the government regulations (minimum salary for the first and second year of the apprenticeship) and apprentices are considered

employees of the companies they work in and are paid a salary equivalent to 50% of the legal minimum salary of a Government Grade Test (GTT) level 1 worker in the first year; in the second year they are paid 60% of the same. Further, companies provide allowances for transportation and safety gear. The apprentices' workdays consist of 8-8.5 hours, beginning at 7 or 7.30 a.m. and ending at 5 p.m. The apprentice may be mandated to come to work on Saturday mornings, depending on the employer, the workload, and the project. They are guided and supported by company mentors who are experienced senior members of staff. The companies also agreed to pay the school fees for each learner in full, which amounts to 4000 Kenyan Shillings per month (roughly 30 USD). Upon signing of the contract, which is mandatory for all apprentices, some companies invite parents. This can help create a mutual bond of accountability for all involved (companies, parents, and apprentices).

Another key component of the adaptation phase was curriculum development. A Swiss curriculum expert guided a team of Kenyan and Swiss subject matter experts through intensive workshops held in Kenya. The workshops aimed to condense the curriculum from four years to two years, substitute Switzerland-specific content with material relevant to the Kenyan context and align the curriculum as closely as possible with NITA standards. The result is a high-quality, industry-relevant, and up-to-date curriculum that is highly appreciated by both companies and trainers responsible for delivering school-based training.

Stage 3 - Pre-Training

In the pre-training stage, strong coordination between training institutions, companies, and partners is essential to establish quality dual VET programmes. Key considerations include recruiting qualified trainers and company mentors, developing clear training plans and

learning materials, ensuring effective communication between training venues, and providing necessary equipment. A structured recruitment strategy should also be implemented to attract and select suitable candidates while encouraging company ownership and active participation in the apprenticeship process.

In the case of PropelA, the vocational schools committed to recruiting and compensating two trainers each who possessed strong industry backgrounds as well as solid training experience. This step was essential to maintain the relevance and quality of school-based training. It was also important for partner companies to assess the trainers' competencies and skills in relation to their own requirements, thereby assuring them of the standard of training their apprentices would receive. For both occupations, Don Bosco successfully identified and recruited qualified trainers. These trainers were endorsed by the companies and brought with them extensive professional networks within their respective sectors. An Industry Liaison Officer, an existing position, was assigned with the role of establishing and maintaining relationships with companies; tasks which were supported by the project team.

At the same time, company mentors were identified and appointed. Firms selected senior personnel, primarily engineers, to fulfill this role. These mentors typically oversee entire construction sites and are responsible for assigning tasks and supervising workforce operations. In term of the curriculum, Swiss subject matter experts designed training plans for the first year based on the syllabus, specifying how learning content would be distributed between the two training venues. They also developed and shared lesson planning templates with the trainers. To support these preparations, the required equipment and materials for the first semester were delivered.

The project team also supported the creation a learner logbook to facilitate communication between TVET schools (trainers) and employers (company mentors). To strengthen mentor onboarding and maximize the apprentices' learning time in companies, the team supported the introduction of monthly mentor workshops known as "mentors' breakfasts." These sessions covered the dual training approach, clarified the mentor's role, and provided a platform for company feedback. Additionally, subject matter experts held breakout sessions with mentors to discuss occupation-specific curriculum content and determine which competencies should be developed in the workplace.

Once the prerequisites were established, the project team collaboratively designed the application process with their partners, allowing them to integrate apprentice recruitment into their current hiring processes. This initial step helped to form a sense of ownership. Companies with experienced and motivated HR personnel ran the recruitments autonomously while companies with lower capacity were supported by the project team to carry out the processes. The idea was to gradually transfer responsibility for recruitment and onboarding to the partnering companies. This phased approach ensured they received the appropriate level of support throughout the process and based on the level of the maturity of the company.

Subsequently, an apprenticeship recruitment strategy incorporating the lessons from the first and second recruitment was developed. The focus was on targeting apprentices with basic secondary education certification, as well as having an aptitude and interest to work hands-on in construction. Key actors like the government's placement agency, and the Kenya Universities and Colleges Central Placement Service

(KUCCPS) were involved to select apprentices who applied for the plumbing and electrical courses.

The project made significant strides in preparing for the recruitment, launching a comprehensive multi-channel communications campaign in collaboration with an HR firm, and a local youth organisation to generate interest. This initiative attracted 2,000 young individuals interested in plumbing and electrical trades, leading to a meticulous selection process in collaboration with the private sector. Ultimately, 113 apprentices were successfully placed in 25 companies. The recruitment strategy was refined based on lessons learned, emphasizing a more structured and competitive approach, which included stricter eligibility criteria, improved candidate ownership, and diverse outreach strategies.

The refined recruitment process involved conducting an aptitude test to identify high-potential candidates, where 600 out of 2,000 applicants were shortlisted for evaluation. Additionally, a workshop was organized to enhance candidates' interview readiness, featuring coaching sessions and mock interviews to help them prepare effectively. These initiatives aimed to boost candidates' skills and confidence while fostering collaboration with private sector partners, culminating in a stronger foundation for securing successful placements in the trades.

Stage 4 - Training

To ensure the quality of training, a training quality unit was established to support high standards of training across both learning locations. At the same time, a private sector engagement unit was created to manage relationships with participating construction companies and address related processes, complaints, and challenges. Separating these units

enabled more targeted support for stakeholders and clarified team responsibilities in managing these distinct relationships.

To strengthen mentors as key contributors to high-quality workplace training, several measures were introduced. Recognizing the importance of soft skills in career development, mentors, who often lacked pedagogical or andragogical training, received training in effective communication, teamwork, and problem-solving. This initiative led to 34 mentors receiving formal accreditation from Auslandshandelskammer (AHK) in May 2024.

Additionally, the project actively promoted a company culture that values mentorship as an essential contribution to both apprentices and the companies. The accreditation was intended to enhance recognition of mentors as in-company trainers and to formalize workplace training. Engagement sessions with CEOs and HR representatives of partner companies emphasized the mentors' importance and encouraged both monetary and non-monetary recognition of their contributions

Participating companies have made notable progress in improving apprentice welfare by formalizing apprentice contracts, ensuring payment of standard stipends, covering students school fees, supporting soft skills development, and working with partners to establish clear disciplinary procedures. Company HR departments have played a key role in monitoring apprentices' wellbeing and performance. Targeted HR training was conducted to strengthen staff understanding of apprentices' roles and responsibilities, as well as the company's role in apprentice selection, onboarding, management, and supervision.





An aerial view of the graduation grounds at Don Bosco Boys, with the cohort 1 graduates and their parents and guardians.

Stage 5 - Post-Training

Training began in November 2022 with the first cohort of 105 apprentices placed across 18 companies. Over two years, 76 successfully completed the programme and passed their final exams in October 2024. The second cohort commenced in November 2024 with 120 apprentices hosted by 34 companies and 71 sat their exams in October 2025.

After graduation, apprentices have obtained employment across different industries, largely due to the practical experience acquired during their training. The dual VET model provided extended exposure to practical work, allowing graduates to demonstrate both their technical competencies and soft skills. For many others, the apprenticeship was a bridge into self-employment with many graduates working as freelancers or establishing their own small businesses. Some of the freelancers and small business owners collaborate with their former host companies and mentors are the liaison persons.

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Voice from a Graduate:

“I always wanted to pursue a course in electronic engineering, but I could not afford to pay for my school fees. PropelA has helped me achieve my dreams and my company has given me an opportunity to work with key industry leaders in construction. To my CEO and my mentors, thank you for the hands-on training. I've learned so much, and this program has opened doors I didn't think were possible.” Aston Mwendwa

Voice from a Company:

“The apprentices have made meaningful contributions to our projects, demonstrating a remarkable level of commitment and enthusiasm. Their fresh perspectives and eagerness to learn have reinvigorated our team and reinforced the value of investing in emerging talent. This is who we are proud to offer some of these graduates full-time opportunities within our company. Their journey from apprentices to trusted team members exemplifies the impact of this program and validated the promise it holds for building a robust talent pipeline.” Amarjit Singh Panesar, Sawarn Singh & Sons Limited

In the follow up phase, PropelA strives to continue building the capacity of system actors to ensure sustainability. This means strengthening schools to run and replicate the dual model independently, partnering with business associations to support expansion and their members, and transferring expertise to NITA and other policy actors promoting dual VET.

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1.3. Our Learnings

PropelA was intentionally designed as a phased pilot, allowing the model to be tested, adapted, and strengthened before any ambition to scale. By starting with a small group of committed companies and partners, the initiative created space for learning, iteration, and evidence building, ensuring that the dual VET model responds to real labour market needs and institutional capacities. In this way, PropelA prioritises long term viability and systemic embedding over rapid roll out, recognising that durable skills systems require trust, learning, and adaptation. In the process of piloting the following lessons were learned:

Importance of a Clear Vision: A clear vision from the start is essential. Successful implementation of the dual VET model requires a thorough analysis of existing training programmes in the country. This helps identify gaps and challenges, clarify the roles of key stakeholders, and determine potential partners and their contributions to the system. This process should be led by the project team to strengthen clarity of purpose, enhance local ownership, and deepen understanding of the operating environment.

Equal Weight to all Partners: The dual VET model is built on two learning locations. In Kenya, securing company participation was essential and focus was given to engaging companies. However, working with vocational schools requires the same level of attention. A thorough due diligence and quality assessment, as well as a structured onboarding and relationship building process like that used with companies is essential to ensure full engagement from the schools and earlier clarification and alignment on their role.

Financing and Sustainable Business Models: Evidence from PropelA shows that a positive return on investment is attainable when apprentices receive substantial workplace exposure, benefit from high-quality training, are well-matched to roles, and levy reimbursements are effectively managed. For TVET schools, dual VET introduces additional responsibilities but also opens opportunities to diversify revenue streams, such as through mentor training or specialized services. For learners, stipends enhance accessibility, and higher post-training earnings provide strong incentives for upskilling and career advancement. Making an evidence-based argument based on these aspects early on is important to ensure buy-in from stakeholders.

Practical Exposure: The exposure trip to Switzerland was pivotal for securing company buy in. By engaging directly with Swiss firms, apprentices, vocational schools, and other stakeholders, participating companies were able to see the dual VET model in practice and shape their own vision for implementation. As one CEO noted: “The trip to Switzerland was an eye opener... After that, I bought the project.” The visit also created a strong sense of cohesion among the firms, leading two of them to join the project steering committee. These companies now hold significant ownership of the initiative and remain actively engaged.

End-User Involvement: Involving the ultimate end users of revised curricula early on strengthens ownership, improves understanding, and supports successful implementation. Clearly identifying the target audience for the documents being developed and tailoring these materials accordingly can help in the curriculum development process. Simpler and practical guidance is often more effective than complex, academic documents. In addition, working with companies to increase their understanding on their role in the dual VET model can further increase industry ownership.

Swiss Expertise: Engaging Swiss experts was valuable during curriculum development, as they provided high-quality input and supported the transfer of knowledge from Switzerland to Kenya. However, when working with external knowledge providers, it is essential to ensure they fully understand the local context. Any knowledge transfer process should include a capacity-building component, recognising that both sides benefit from the exchange.

1.4. Results and Impact

High Employment Rates

Tracer study (2025) results show 79% of graduates were employed, nearly 70% of them stayed with the same company and role where they trained. They also report more positive life changes, especially being able to take out insurance and paying for better childcare.

Higher Earnings Compared To Peers from other Training Programmes

Those retained by their training company earn slightly above entry-level rates and well above minimum wage. Additionally, 14.5% are self-employed and report higher earnings, a key factor in choosing independence.

More Self-Employment Opportunities

For many graduates, the apprenticeship served as a springboard into diverse career paths rather than the end of their training journey. Several have moved into self-employment, either as freelancers or by starting small enterprises. This trend is especially strong in plumbing and electrical trades, where opportunities for independent work are common and where informal networks continue to link graduates with mentors and companies offering job-on-demand opportunities.

Business Viability

Employers who participated in PropelA were able to recover their investment within two to three years, depending on company size and sector according to evidence from a return-on-investment study (2026). The strongest returns were reported in the electrical sector, where productivity gains and the value of certified technicians are especially pronounced. Small and medium-sized enterprises achieved slightly higher long-term gains than larger firms, although the latter tended to break even more quickly. In all cases, apprentices proved to be a more valuable investment than unskilled recruits, as they began contributing positively to company performance as early as their first year of employment.

Positive Social Impact

The social return on investment (2026) analysis shows exceptionally high societal benefits. The plumbing apprenticeship alone generated an estimated \$146 in social value for every dollar invested, driven largely by improved water hygiene and reduced waterborne diseases. These findings highlight the programme's broader systemic impact, extending well beyond individual graduates and companies to contribute meaningfully to public health, energy sustainability, and the wider economy.



1.5. Join us!

Youth unemployment in Kenya remains a critical challenge, with thousands of young people entering the job market each year without the skills demanded by employers. PropelA offers a proven solution: a Swiss-inspired dual VET model that combines high-quality school-based learning with hands-on company training. PropelA has already demonstrated remarkable results: 79% of graduates are employed, many earning above minimum wage, with apprentices generating measurable returns for participating companies within just 2–3 years.

Join us in scaling this model to more sectors, companies, and communities, turning youth unemployment into opportunity and building a skilled workforce that drives Kenya's economic growth.

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PROPELA

A boost to a brighter future

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