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中瑞职业教育白皮书

China-Switzerland White Paper on
Vocational Education

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2022



亲爱的读者

请让我从两个事实开始说起：

- 十多年来，瑞士一直被评为“全球最具创新力和竞争力的经济体”；
- 瑞士是欧洲青年失业率最低的国家之一。即使是在疫情期间，瑞士的失业率也始终处于低位。

在我看来，除了优秀的企业、一流的基础设施、高效的政府机构以外，教育体系是造就瑞士繁荣又有韧性的经济的第四大关键因素。出类拔萃的公立学校、富有成效的职业教育体系（VPET）和世界一流的大学院校共同组成了瑞士教育体系。

由中国瑞士商会发起的《中瑞职业教育白皮书》旨在详细描绘瑞士的职业教育体系。职业教育体系在瑞士国内备受推崇。三分之二的瑞士年轻人在完成义务教育后都选择了学徒制。在瑞士，技能的价值深入人心，高技能专业人才在就业市场备受追捧。我自己的四个孩子都参加了学徒课程，有几个后来选择了继续深造。

互融互通是瑞士职业教育体系大获成功的关键。学徒文凭不是终点，而是个人成长和职业发展的起点。瑞士的教育体系在职业学校和普通高校之间也设置了许多持续进步、相互流动的通道。

瑞士职业教育体系的成功也源于企业的带头驱动。瑞士企业在认识到参与职业教育体系的意义后，主动当起了领军者。在中国的瑞士企业更是承担着将瑞士特色职业教育体系引入中国市场的重要使命。这份白皮书便是在这个目标下应运而生。

自从我担任瑞士驻华大使以来，中国一直在为推进劳动力培训和技能提升而大力建设职业教育体系，这令我倍感振奋。我相信中瑞在职业教育领域的合作将取得累累硕果，惠及两国人民。让我们以本白皮书为契机，携手培育更多中瑞英才！

祝您在阅读本书的过程中，尽情享受思想碰撞的火花。

白瑞谊
瑞士驻华大使

Dear readers

Let me start with two facts:

- For more than a decade, Switzerland has been ranked as the world’s most innovative and competitive economy.
- Switzerland has one of the lowest youth unemployment rates in Europe, even during the pandemic-hit years.

My claim is: One of the reasons for our strong and resilient economy is – next to performing companies, excellent infrastructures or efficient state organization - our education system. It consists of good public schools, successful vocational and professional education system (VPET) and excellent universities.

This White Book – established by Swiss Chamber China – is dedicated to the Swiss VPET system. This system enjoys high recognition in our society. Two thirds of young people in Switzerland choose to start an apprenticeship after their compulsory education. The value of skills is well recognized, as skilled professionals are highly sought after by the labour market. Take myself as an example, all of my 4 children did an apprenticeship – and partly studied later.

The success of our VPET system is powered by its permeability. An apprenticeship diploma is not the end, but only the beginning of one’ s personal and career development. The Swiss education system offers abundant opportunities to progress and to transit between the academic and the vocational track.

The success of our VPET system is rooted in the leading role of the companies. They are motivated to take the lead because they see the value in their engagement. For Swiss companies in China, it is important that they bring the VPET aspect of Switzerland to the Chinese market as well. This White Paper serves exactly this purpose.

Since my appointment as Swiss Ambassador to China, I am glad to see that China is taking efforts with VPET in order to train and upskill the work force. I believe that there is a lot to benefit between our two countries. Let’s invest into young people! Let’s take this White Paper as a good start!

I wish you an interesting reading and a lot of inspiring exchanges.

Jürg Burri
Ambassador of Switzerland to China





瑞士职业教育体系概述

Overview of the Swiss
Vocational Education
System



瑞士是现今世界上最富有的发达国家之一，在世界经济论坛公布的全球竞争力报告以及世界知识产权组织公布的全球创新指数中，多年来瑞士均位居榜首。瑞士政府一直将教育与科技发展作为首要战略目标，而在其教育体系中，职业教育发挥着举足轻重的作用，该教育体系为企业输送了大量匹配市场需求的人才。根据 2021 年教育科研与创新国务秘书处 (SERI) 数据显示，瑞士全国共颁发 30000 个高等职业教育证书，提供了 87786 个学徒岗位，共有 240 个基础职业培训机构，年轻人失业率仅为 3.2%。

瑞士职业教育体系全称为 Vocational and Professional Education and Training (VPET)。VPET 体系与就业市场高度关联，为瑞士企业每年持续稳定的输送各层次人才。VPET 体系分为两个部分：高中职业教育与培训 (VET) 和高等专业教育。

As one of the richest developed countries in the world, Switzerland has held on to the No.1 position in the Global Competitiveness Report published by the World Economic Forum (WEF) and the Global Innovation Index (GII) released by the World Intellectual Property Organization (WIPO) for many years. A major contributor to such achievements is the Swiss education system which has long been listed, together with technological progress, as the most important strategic objectives by the Swiss government, and in the Swiss education system, vocational education plays a pivotal role. The resulting highly educated professionals form an excellent pool for companies based in Switzerland. According to statistics published by the State Secretariat for Education, Research and Innovation (SERI), 30,000 tertiary-level professional education qualifications have been granted in 2021. Across the country, 87,786 apprenticeships were available and there were 240 training institutions offering vocational education programs, resulting a very low youth unemployment rate—only 3.2%.

The Swiss vocational education system, known as Vocational and Professional Education and Training (VPET), is highly responsive to labor market and provides a steady supply of talents for Swiss companies every year. It is divided into two sectors: upper-secondary level vocational education and training (VET) and tertiary-level professional education.



“双轨制”：学习与培训并行

在瑞士，大约三分之二的年轻人在完成义务教育后会进修为期两年(获得联邦 VET 证书)或三到四年(获得联邦 VET 文凭)的高级 VET 课程，多年来这一比例较为稳定。双轨 VET 项目则是迄今为止最普遍的职业教育和培训形式。

“双轨制”指的是学校学习和企业培训两相结合，进入该 VET 体系的学生通常每周有一到两天时间在学校学习理论知识，其余三到四天时间则在企业或第三方培训机构中跟随导师学习实用技能。这种“双轨制”的人才培养方式是瑞士职业教育的一大特色，真正实现了校企双轨、产教融合的理念，在能让学生提前融入自己感兴趣的工作的同时，也并未过分限制学生的职业选择。“双轨制”模式并非是形式上的“实习”，而是真正将学生作为企业员工，在公司导师的指导下参与企业日常生产经营，让学生直观地接触实际工作生产，了解行业最前沿的技术，并锻炼思考与应对能力。

“学徒身份”：紧贴劳动力市场

VET 体系最大的特点是其与劳动市场的紧密联系。学生并非是以实习生而是以学徒身份进入企业，因此企业会正常发放薪水。例如钟表技术的学徒可以在职业教育培训中心实践；财政金融专业的学生则可在银行内出任柜员，真正面对并处理日常工作中的问题。此模式让瑞士在人力资源极其有限的情况下，不仅维持了国民生产生活的稳定运营，也使其各产业得到了高速的发展。

瑞士极具特色的“学徒制”立足企业的需求，将企业与学校深度绑定，共同分担人才培养成本。另外，瑞士政府专门建立了全国范围的“学徒市场”，学生可以在网上提交申请书并通过企业的职业面试以获得岗位。“学徒市场”主要有两个方面：供给方（提供学徒职位的主办公司）和需求方（寻找学徒职位的年轻人）。**国家在其中发挥着调解作用：确保参与学徒培养的公司获得并提供更好的条件，鼓励其开放学徒职位，并帮助年轻人选择职业。**

“学徒制”在瑞士就业市场中具有举足轻重的作用，银行业、精密仪器制造业、制药业、手表行业等都有学徒的身影。大部分瑞士企业都会为学生提供学徒职位，通常企业会为学生提供 1 年左右的工作机会，由经验丰富的资深员工对学徒进行工作指导，并在其工作期间正常发放薪水。

Dual-track Model: Learning and Training Go Hand in Hand

Upon completing compulsory education, about two-thirds of young people in Switzerland opt to undertake an upper-level VET program lasting two years (with a Federal VET Certificate) or three to four years (with a Federal VET Diploma). This proportion has remained steady for many years. Dual-track VET programs are by far the most prevalent form of vocational education and training.

The dual-track model is a combination of academic education and in-company training. Students studying a VET program typically spend one or two days on academic learning and three to four days in the host company or a third-party training institution, where he/she learns practical skills under a mentor. This dual-track approach to talent development is one of the distinctive characteristics of the Swiss vocational education. By integrating academic education and in-company work experience a dual-track program exposes students to potential career paths that they are interested in by offering a broad selection of apprenticeships. Moreover, on an apprenticeship in the dual-track model, students will be hired as paid employees instead of being treated as expendable interns. They will get involved in the company’s daily operation under the guidance of mentors, gain real work experience, catch up with latest technologies, and hone problem-solving skills.

Apprenticeship: Highly Responsive to the Labor Market Needs

The most distinctive characteristic of the Swiss VET system is its close connection with the labor market. Students are employed as apprentices rather than interns and they are entitled to pay. For example, a student trained as a watchmaker can practice at a vocational education training center, and a finance student can apply for a bank teller apprenticeship, where he/she will encounter and solve problems in the real work context. This model has enabled Switzerland to maintain socioeconomic stability and high economic growth, despite its very limited human resources.

Switzerland's unique apprenticeship model is deeply rooted in the needs of the labor market, The close connection between companies and schools also enables them to share the cost of talent development. In addition, the Swiss government has set up a nationwide apprenticeship market, allowing students to submit applications online and enroll in an apprenticeship program after passing interviews. There are two sides to the apprenticeship market: supply side (host companies that offer apprenticeship positions) and demand side (young people looking for apprenticeship positions). The government acts as an intermediary: it ensures the best possible apprenticeship conditions for host companies, encourages the provision of apprenticeship positions and good work environment, helps young people to choose an occupation.

In Switzerland, apprenticeships play a pivotal role in the job market, which can be found in a wide range of sectors, such as banking, precision instruments manufacturing, pharmaceuticals, watchmaking, etc. Many Swiss companies have established apprenticeship programs, which typically last for one year. Apprentices will learn under experienced mentors and get paid during the term of the apprenticeship contract.

“一个使命——三个伙伴”

瑞士职业教育体制可概括为“一个使命、三个伙伴”。为实现高质量的职业教育这一使命，**联邦、各州政府和协会（专业组织）三方共同致力于将瑞士 VPET 体系推向更高标准。**“三个伙伴”各司其职，在政策研究、法律制定、资金供给等多方面合力支持该体系的建设。

联邦、各州政府和专业组织均出资支持 VPET 体系，其教育支出由三方共同承担。

联邦层面负责职业教育的机构是教育科研与创新国务秘书处（SERI）和瑞士联邦职业教育学院（SFIVET），其主要职责是保证职业教育的质量、制定发展战略、专业人员与考官培训、职业教育的科研与调查等，并承担职业学校公共开支的四分之一。

SERI 2019 年统计数据显示，瑞士 VPET 系统的公共支出约为 36 亿瑞士法郎。这些资金的绝大部分是由各州作为执行伙伴提供的，其中 72% 的开销用于职业学校，12% 的开销用于专业教育机构，7% 的开销用于 VET 的预备课程。2019 年，联邦拨款 9.29 亿瑞士法郎用于支付 VPET 系统的总成本，高达 10% 的联邦资金更是被指定用于促进 VPET 开发项目和服务于公众利益的特定活动。

州政府层面负责职业教育的机构是州立职业教育培训办公室和职业学校（或专业学院）。其中州立职业教育培训办公室负责职业教育行动（VPETA）的实施，监督学徒培训情况和职业学校运行情况、为企业开具学徒培训许可、统筹学徒培训市场等，并承担职业学校公共开支的四分之三。职业学校则负责为学徒提供中高职理论教育与相关服务。

协会及专业组织一方面负责召集能够实行学徒培养的企业，另一方面负责界定培训内容、确立全国考核程序、组织行业课程与资深专家授课，同时负责管理中高职教育培训资金。企业则需要提供学徒实习机会，传授专业技能。

瑞士通过完善的职业教育法律法规体系，明确了联邦、州、行业和企业职业教育体系中的职责权利，为职业教育营造了良好的发展环境，吸引利益相关方自愿参与到职教决策过程中来，实现了原本由政府和学校为主的管理模式向职业教育利益相关方共同参与式治理模式的转换。长久以来，职业教育体系持续关注并致力于迎合劳动市场的需求，为学徒设立有效的职教计划，这使得他们在学徒期间的产出往往就会超过培训成本。

“One Mission, Three Partners”

The Swiss vocational education system is also characterized by its “one mission, three partners”. The provision of high-quality VPET is a mission collectively shouldered by the Confederation, the cantons, and associations (professional organizations), who are jointly committed to the highest possible quality standard of the Swiss VPET system. Each of the three partners has its own role to play and cooperates in areas such as policy research, law-making and funding to support the system.

The VPET system is funded by the Confederation, the cantons and professional organizations, and the costs of VPET programs are borne by the three parties.

The Confederation is represented by SERI and the Swiss Federal Institute for Vocational Education and Training (SFIVET). Their responsibilities include, among others, quality assurance, development strategies, trainings of professionals and examiners, scientific research and investigation of VPET, and contributing funding to cover 1/4 of the public spending on the VPET system.

According to the statistics published by SERI, public expenditure on the Swiss VPET system stood around CHF 3.6 billion in 2019. The vast majority of this funding was provided by the cantons as implementing partners: 72% of the expenditure was spent on vocational schools, 12% on professional education institutions, and 7% on preparatory courses for entry to VET. In 2019, the Confederation contributed CHF 929 million to cover the total costs of the VPET system. Up to 10% of the federal funding was earmarked to promote VPET development projects and specific activities that serve the public interest.

On the canton level, VPET tasks are performed by cantonal VET offices and VET schools (or professional education institutions). The cantonal VET offices are responsible for the implementation of the Vocational and Professional Education and Training Action (VPETA), supervising apprenticeships and the operation of vocational schools and professional education institutions. They are also in charge of issuing permits authorizing host companies to take on apprentices, coordinating the apprenticeship market, and covering 3/4 of the public expenditure spent on vocational schools. Vocational schools are responsible for providing apprentices with upper-secondary or tertiary academic education and other services.

The professional organizations (including trade associations) organize host companies, define the content of VPET programs, establish the national qualification procedures, develop training course, hire experts as teachers and manage VPET funds. Businesses provide apprenticeships and impart professional competences.

The respective areas of responsibility and rights of the Confederation, cantons, professional organizations and companies are set forth in the well-established VPET laws and regulations. This enabling environment has also motivated stakeholders to participate in decision-making in the VPET field, thus facilitating the transformation from a government- and school-based management model to a stakeholder governance model. Moreover, with consistent orientation towards the needs of the labor market, effective programs are efficiently delivered to apprentices, whose productive output has already exceeded the training costs. Another piece of good news for VPET!

教育的流通性

瑞士的职业教育和普通教育既有各自完整的体系，又互联互通。

义务教育结束后，约三分之二的学生选择职业教育与培训，近三分之一的学生选择进入普通高中就读，少数学生则会在做出选择前过渡性地体验不同的学习生活。

高等教育阶段大致分为高等职业学校、应用科学大学(UAS)和普通高校三类。应用科学大学是兼具综合性大学和高等职业院校两类特点的“混合型大学”。普通高校包括各州立大学以及两所联邦理工学院等综合性大学。

完成高中阶段 VET 课程并获得职业资格后，部分学生会选择**直接就业**，其余学生可以选择**进入高等职业学校学习**，还可以参加联邦职业高中会考后**进入应用科学大学和普通高校学习**。普通高中毕业生也可以在完成一段时间实习以后，进入应用科学大学或高等职业学校学习。

Permeability

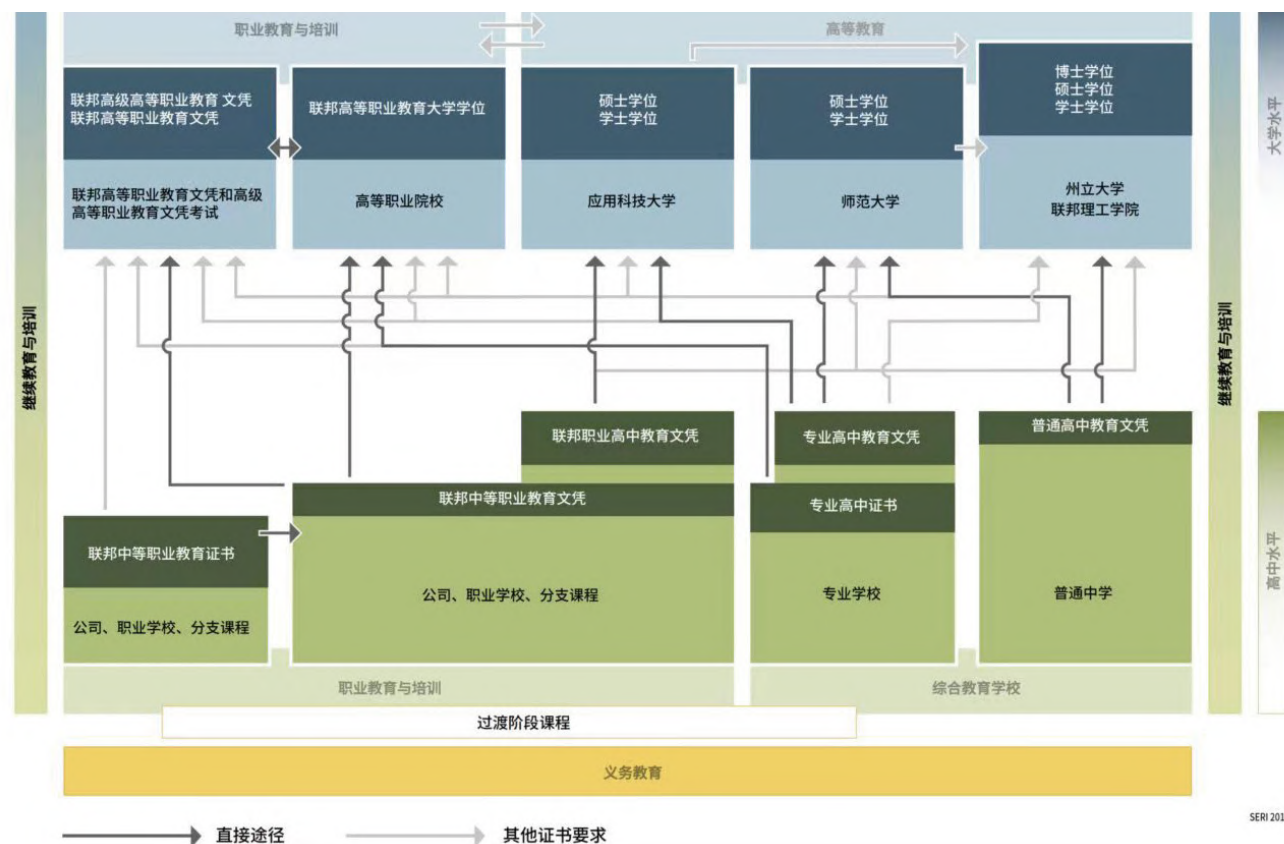
In Switzerland, the VPET and general education system are characterized by their own clearly defined pathways and a high degree of permeability.

Upon completing compulsory education, around two thirds of young people in Switzerland opt to undertake VET, while nearly one-third enroll in a general high school. A small number of students will choose transitional options to gain different learning and life experience.

On tertiary level, there are mainly three options: professional education institutions, Swiss Universities of Applied Sciences (UAS), and general universities. UAS is a hybrid of general universities and professional education institutions. General universities encompass cantonal universities and two Swiss Federal Institutes of Technology.

After completing a VET program and obtaining vocational qualifications, some students may choose to enter the job market, while others may apply for professional education institutions or take the Federal Vocational Baccalaureate Examination (FVB) and enter a UAS or a general university. Graduates of general high schools can also apply for a UAS or professional education institution after a period of internship.



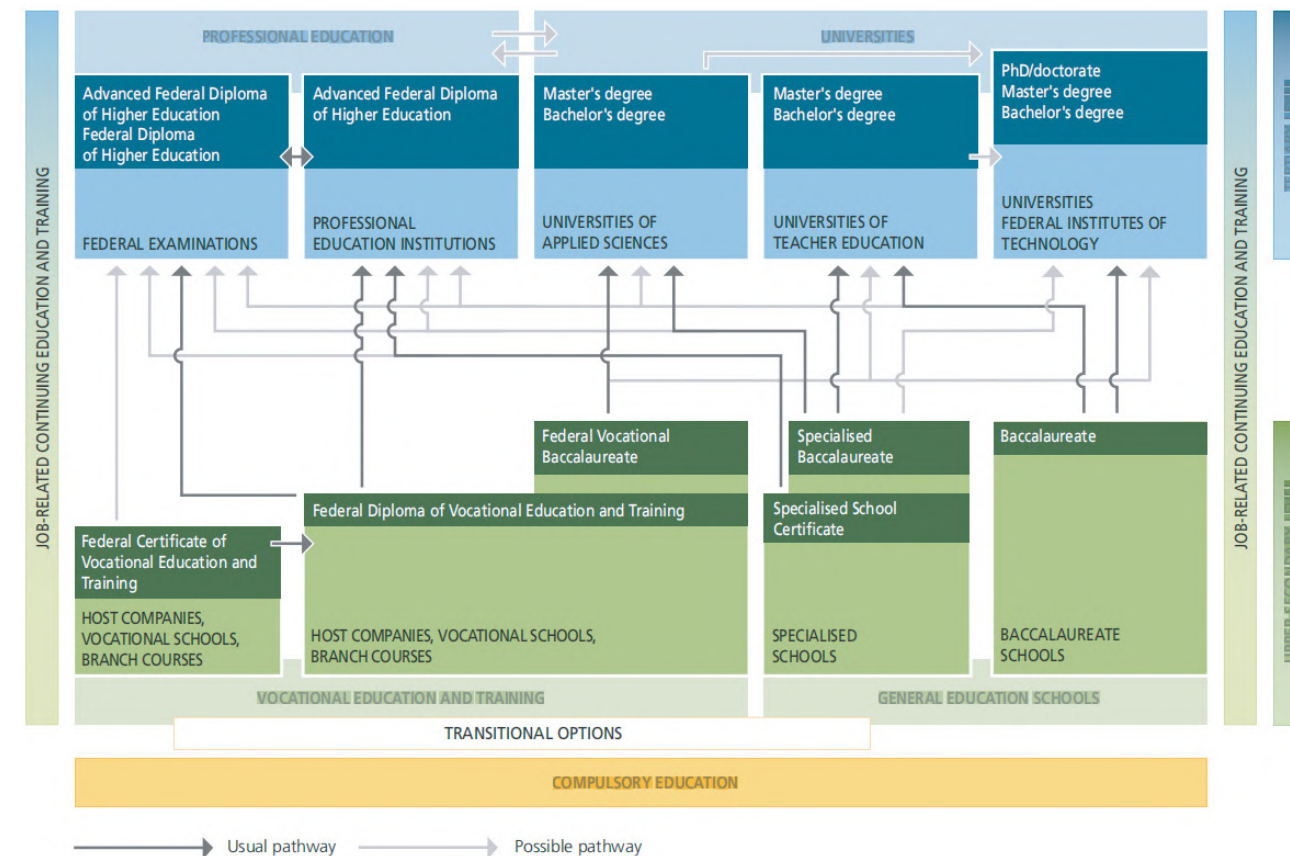


图片来源: Vocational and Professional Education and Training in Switzerland Facts and Figures 2021

高等职业学校、应用科学大学和普通高校之间也有一定通道实现相互流动。在教学内容的设置上，两种教学模式之间相互借鉴、互融互通，为学生在后续方向的选择上提供了极大的便利性。在瑞士，有大约 220 种不同职业的一级联邦专业考试，以及大约 170 种不同职业的二级联邦专业考试，通过考试后会为考生颁发相对应的资格认定证书。通常，VET 和专业教育非常灵活：学生可以追求更高级的教育和培训机会，从职业教育与培训转向通识教育或大学教育。联邦

职业考试 (FVB) 为持有联邦 VET 文凭的人提供更多的通识教育，并允许他们进入瑞士应用科学大学 (UAS)。如果 FVB 持有者也参加了大学能力测试 (UAT)，那么也可以进入州立大学或瑞士两所联邦理工学院之一。近年来，VET 毕业生获得 FVB 的比例一直在稳步上升。

同时综合性大学的学生也可以转向接受职业教育。继续教育和培训 (CET) 也在部分学生的考虑范围内。



Source: Vocational and Professional Education and Training in Switzerland Facts and Figures 2021

Mixed education pathways are also available thanks to the high permeability among professional education institutions, UASs and general universities. General education and vocational education draw on each other's strengths and form complementary curriculum, which has greatly facilitated pathway transfer. In Switzerland, there are federal professional examinations at level 1 for around 220 different professions and at level 2 for around 170 different professions. Successful candidates are granted a qualification certificate. VET and professional education are very flexible: students can pursue more advanced education and training opportunities and move from VET to general/university education. The Federal Vocational Examination (FVB) provides more general education for holders of the federal VET diploma and allows them to enter the Swiss University of Applied Sciences (UAS). FVB holders who go on to pass the Universi-

ty Aptitude Test (UAT) have the option of enrolling in a cantonal university or one of the two federal institutes of technology. The percentage of VET graduates with a FVB has been on a steady rise in recent years.

Meanwhile, students from general universities can transfer to professional education institutions. Continuing education and training (CET) options are also available.

职业教育热门专业

瑞士以金融、制造、医药三大行业闻名于世，这一点在职业教育中也得到了充分的体现。根据 Switzerland Global Enterprise 调查显示，2019 年度义务教育毕业生选择职业教育培训最多的专业是工商管理专业，共有 12814 人参加，其次是健康专业，共有 4920 人。

在高等教育阶段，瑞士目前拥有 8 所公立以及 1 所私立应用科学大学，每年向社会输送一万多名毕业生。其中，瑞士的三大支柱产业包揽前三名，占总毕业生数量的 61%。

按专业领域和毕业层级分列的应用科学大学毕业生人数		
专业	本科毕业生	硕士毕业生
建筑规划与施工	855	175
工程与信息技术	2647	329
化学与生命科学	428	158
农林业	90	0
商业管理和服务	4526	974
设计	665	243
体育	36	23
音乐、戏剧和其他艺术	885	1191
应用语言学	105	38
社会福利工作	1527	86
应用心理学	200	105
健康	2018	149
总计	13982	3471

来源：Vocational Training in Switzerland

Most Sought-after Professions in Vocational Education

Switzerland is renowned worldwide for its finance, manufacturing and pharmaceutical industries. This is also well represented in vocational education. According to the Switzerland Global Enterprise survey, in 2019, the most sought-after upper-secondary VET program was business management, with 12,814 students. The second most popular profession was health, with 4,920 students.

On the tertiary level, there are eight public and one private UASs in Switzerland. More than 10,000 students graduate from these universities each year, 61% of whom study programs related to the three most renowned industries.

Graduates of universities of applied sciences by field of study and level of graduation		
Field of study	Bachelor	Master
Architecture, Construction and Planning	855	175
Engineering and IT	2,647	329
Chemistry and Life Sciences	428	158
Agriculture and Forestry	90	0
Business, Management and Services	4,526	974
Design	665	243
Sports	36	23
Music, Theater and other Arts	885	1,191
Applied Linguistics	105	38
Social Work	1,527	86
Applied Psychology	200	105
Health	2,018	149
Total	13,982	3,471

Source : Vocational Training in Switzerland

十大初始专业培训项目

职业	人数
工商管理	12814
健康专员	4920
零售专员	4339
护工	3794
信息技术工程师	2194
电工	1891
快递员	1778
零售助理	1556
厨师	1540
插画师	1536

来源: Vocational Training in Switzerland

继续教育与终身学习

瑞士拥有一套完备的职业考试和资格认证制度，中等、高等、继续教育以及劳动力市场之间以各种资格证书和学历文凭为纽带相互连结，为学生提供极为有利的背书。

瑞士的教育体系为人们提供了终身学习的条件。VET 体系构成了终身学习的基础，并开辟了广泛的就业前景。职业继续教育则给成人提供各类职业教育培训的机会，如进修培训、转业培训等。

对于成年人来说，主要有四种不同的途径可以获得联邦 VET 证书或联邦 VET 文凭：第一个途径是参加常规的双轨 VET 项目；第二个途径是在常规的双轨 VET 项目中获得高级职位；第三个途径是可以在不完成培训的情况下获准进入资格程序；第四个途径是通过非正式学习(VNIL)的验证。

The Ten Most Frequently Chosen Initial Professional Training Programs

Profession	Total
Business administration	12,814
Health specialist	4,920
Retail specialist	4,339
Care specialist	3,794
IT technician	2,194
Electrician	1,891
Logistician	1,778
Retail assistant	1,556
Chef	1,540
Illustrator	1,536

Source: Vocational Training in Switzerland

Continuing Education and Training (CET) & Lifelong Learning

With clearly defined examinations and qualification procedures, the Swiss upper-secondary education, tertiary-level education, CET and the labor market are closely connected by qualification certificates and academic diplomas, which are solid evidence of students' expertise and skills. The Swiss VET programs pave the way for lifelong learning and opens a wide range of career prospects, while CET offers adults access to a variety of vocational education and training courses, such as further training and career switch training.

For adults, there are several ways to obtain a Federal VET Certificate or a Federal VET Diploma. The first pathway to vocational qualifications consists of enrolment in a regular dual-track VET program. The second pathway is to obtain advanced placement in a regular dual-track VET program. The third pathway is to obtain direct admission to the qualification procedure without having to complete training. The fourth pathway is to obtain validation of non-formal and informal learning (VNIL).

Vocational education should be an ongoing process over the lifespan because the need of a career switch or further education is very likely to arise in one's professional life. The Confederation, after scientific evaluation and rigorous argumentation in the past few years, has concluded that the main strategies and positioning of the current VPET system are correct and effective. It is also proposed that the strategies should focus on promoting lifelong education by leveraging the synergy of the existing legal framework to better align talent development with the requirements of tomorrow.

职业教育师资队伍建设

瑞士的师资建设有着严格的准入制度。根据定位大体上将教师分为 3 类：

定位	教育内容	任教资格
通识教育	注重学生文化素质培养	大学毕业
专业教育	专业理论知识培养	高职或大学毕业
实践教育	企业实践培养，即“师傅”	SFIVET 培训，并有至少 2 年从业经验

不断创新的职业教育体系

为进一步完善职业教育体系以起到全球领先的行业引导作用，瑞士联邦政府通过不断调整 VEPT 系统的战略部署并吸收新元素，使得该系统时刻保持活力，并在 2018 年提出了“VPET2030 计划”：

“响应经济市场宏观和微观层面上的变化。为进一步巩固瑞士职教系统的全球领先地位，2018 年联邦政府提出了一个面向瑞士职业教育未来发展的战略——‘VPET2030 计划’。在 2018 年 11 月的会议上，‘VPET2030 计划’指导委员会批准通过了第一批具体措施，以进一步鼓励职教系统内多元参与主体积极规划未来发展项目。该计划还提出要确保职教系统保持高效结构，多关注那些因为失业而重返工作岗位的人、残疾人和外来移民，要在未来投入更加充足的资金。该计划的具体措施将包括：实施‘2030 通识教育’、加快职业教育和培

训方案的合作审查与修订、减少职教参与主体的官僚主义、优化治理和加强职教合作伙伴之间的关系、推动培训项目的数字化和智能化、鼓励企业提供更多‘学徒制’培训、基于个性化职业生涯发展提供咨询服务等”。

-- 中国教育报

不仅如此，瑞士联邦政府还构建了一个专门的网络平台，及时向社会公布该项目建设情况及项目信息。

Training of VPET Faculty

Switzerland has established a strict admission system for vocational school teachers and trainers, who can be divided into the following three categories:

Positioning	Teaching content	Qualification
Branch course instructors	Liberal arts education	University graduates
Vocational school teachers	Academic education	Professional education institution or university graduates
Workplace trainers	Trainers at host companies, a.k.a. mentors	Trained in SFIVET, with no less than 2 years of working experience

Continuous Innovation in the Vocational Education System

For the further development of vocational education to support the global leading industries, the Confederation strives to maintain the vitality of the VPET system through strategic adjustments and continuous innovation. In 2018, Switzerland rolled out the VPET 2030.

“in response to changes in the market both on a macro and micro level. To further consolidate the global leadership of the Swiss VPET system, the Confederation introduced a future-oriented strategy for the development of vocational education in Switzerland in 2018- VPET 2030. At its meeting in November 2018, the VPET2030 Steering Committee approved the first package of measures to encourage various stakeholders in the VPET system to formulate development projects. This strategy also proposes to maintain an efficient structure, pay more attention to the reemployment of displaced workers, people with disabilities and immigrants, and increase funding. Measures specified in the strategy include: implementing “General Education 2030” , accelerating the collaborative review and revision of VPET programs, reducing bureau-

cracy, optimizing governance and strengthening VPET partnerships, driving digitalization and technologies in training programs, and encouraging companies to provide more apprenticeship positions, and providing personalized career counselling services, etc.”

-China Education Daily

Moreover, the Confederation has built an online platform to keep the public updated on the progress and information of VPET 2030.



2

中国职业教育的 发展现状

The Status Quo of
Vocational Education
in China

中国学历制职业教育概述

学历制职业教育覆盖面宽广

学历制职业教育在专业设置上全面覆盖了国民经济的各行各业，兼顾传统产业与新兴产业共同发展。参考教育部《职业教育专业目录(2021年)》，职业教育在专业设置上充分地考虑到现代化产业体系的发展升级并进行衔接，一方面从战略角度出发，面向战略性新兴产业重点领域，另一方面关注国民生产生活，向专业化、高品质、多样化的方向延伸。另外，也在新职业场景、新职业岗位上进行了探索。

对接“十四五”规划与2035年远景目标的战略部署：

- 1.9大战略性新兴产业重点领域：集成电路技术、生物信息技术、新能源材料应用技术、智能光电制造技术等。
- 2.现代服务业重点领域：供应链运营、智能物流技术、婴幼儿托育服务与管理、智慧健康养老服务与管理、现代家政管理等。
- 3.产业链供应链现代化：航空复合材料成型与加工技术、航空发动机制造技术、工业产品质量检测技术、计量测试与应用技术等。
- 4.新型基础设施建设：第五代移动通信、工业互联网、智能交通技术、水利水电工程智能管理、智慧水利技术等。
- 5.数字化产业：大数据技术、云计算技术应用、信息安全技术应用、密码技术应用等。
- 6.乡村振兴：现代农业经济管理、农村新型经济组织管理、现代种业技术、粮食储

- 运与质量安全、绿色低碳技术、智能环保装备技术.....
- 7.国家治理：应急救援技术、安全智能监测技术、智能安防运营管理、数字安防技术、智慧社区管理、党务工作等。
- 8.新业态、新职业：旅行管理与服务、民宿经营与运营、装配式建筑构件智能制造技术、区块链技术应用、全媒体广告策划与营销、网络直播与营销等。

Overview of Academic Vocational Education in China

Broad Coverage of Academic Vocational Education

The coverage of academic vocational education in China is so broad that it is extended across all sectors of the economy, with a mix of programs catering to the demand of both traditional and emerging sectors, A review of the Catalogue of Vocational Education Programs (2021) of the Ministry of Education will show that the Chinese vocational education system is highly responsive to the development and upgrade of modern industries. A broad variety of programs have been developed to meet the needs of both emerging sectors of strategic importance and more established sectors that are closely linked to everyday life. Moreover, apart from providing professional skills for a wide range of existing job roles, China’s academic vocational education system is also striving to ensure its relevance to new occupational realities.

Sectors highlighted in the Fourteenth Five-Year Plan and Long-Range Objective Through the Year 2035

- 1. 9 key emerging sectors of strategic importance: integrated circuit technology, bioinformatics, new energy materials, intelligent optoelectronic manufacturing...
- 2. Modern service: supply chain operation, intelligent logistics, infant and child care service and management, intelligent health and elderly service and management, modern household service...
- 3. Modernization of the industrial chain and supply chain: aerospace composite material molding and processing, aircraft engine manufacturing, industrial product quality inspection, metrology testing and application...

- 4. New infrastructure: 5G, industrial internet, intelligent transportation, intelligent management of water conservancy and hydropower projects, intelligent water conservancy...
- 5. Digitalization: big data, cloud computing, information security technology application, cryptography technology application...
- 6. Rural development: modern management of agricultural economy, management of new rural economic organizations, modern seed industry, grain storage, transportation and quality assurance, green and low-carbon technology, intelligent environmental protection equipment...
- 7. National governance: emergency rescue technology, security and intelligent surveillance, intelligent security operation and management, digital security, intelligent community management, Party affairs...
- 8. New sectors and new occupations: travel management and service, B2B business and operation, intelligent manufacturing of components of assembly buildings, block chain, omni-channel advertising planning and marketing, livestreaming and marketing...

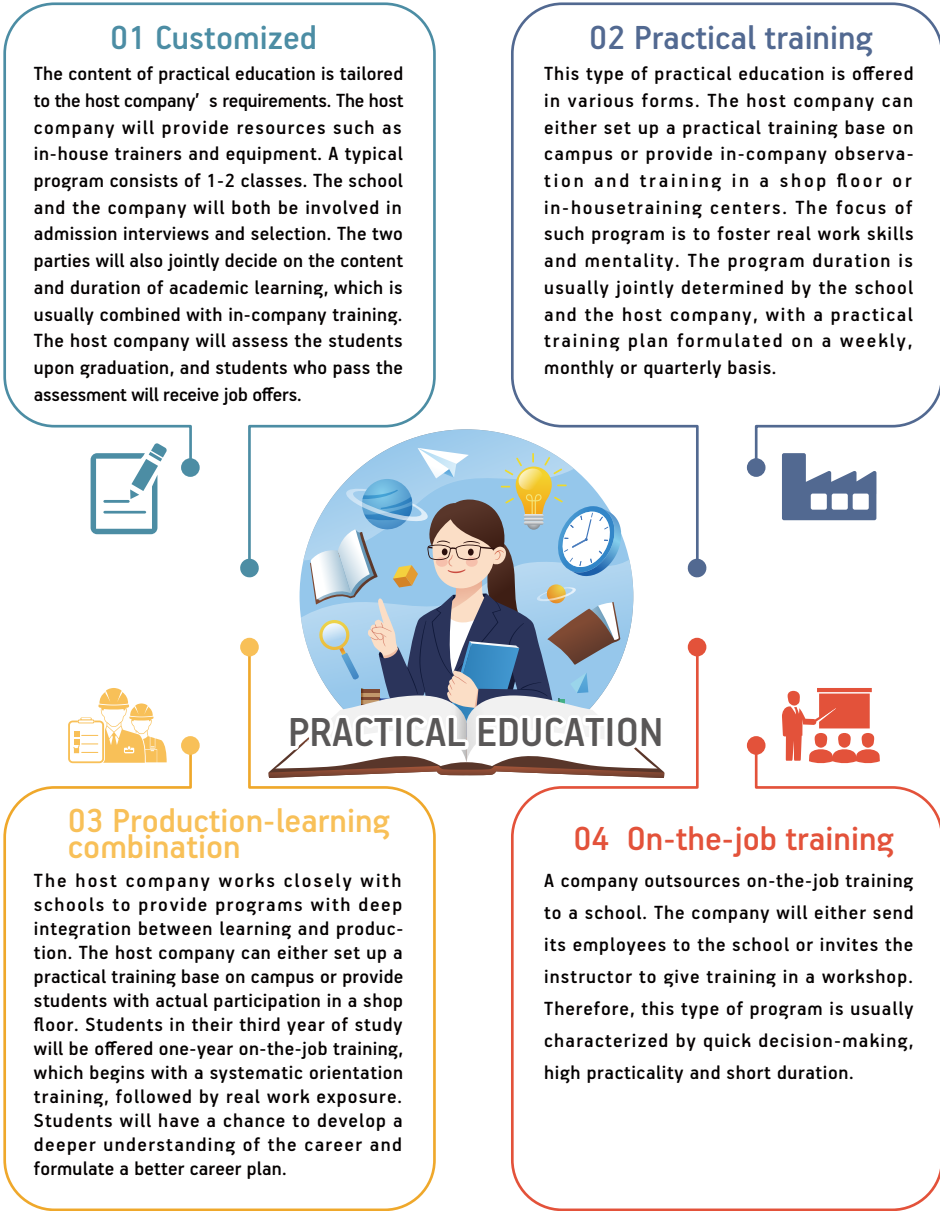
实践性教育

职业教育肩负着培养高素质劳动者和技术技能型人才的重要使命，因此现代职业教育必然以产学研融合为导向，将学习与生产挂钩，通过实践性教育培养学生实践经验与创新能力，真正做到学以致用，学用相长。而学校实践性教育往往通过与企业合作展开，我们经过调研和走访，整理出目前中国高等职业教育中比较常见的 4 类合作模式：



Practical Education

With the important mission of cultivating a well-educated and highly skilled workforce on its shoulder, it is imperative for a modern vocational education system to combine academic learning and hands-on work, allowing students to gain practical experience and innovation by applying what they learned and fostering synergy between learning and practice. Practical education depends on partnerships between schools and companies, which, as revealed by our investigations and field visits, has four main types in China:



中国非学历制职业教育概述

学历制职业教育在培养学生职业技能的同时也注重于学生文化水平的培养，毕业后可获得教育体系内相对应的文凭。非学历制职业教育则是以应用实践为导向，专注于职业技能的培养，受众群体不仅仅局限于在校学生，也涵盖了例如企业在职人员、待业人员、自由职业者等其他人群；其目的主要是为了个人通过自身职业技能的深度加强以获得社会的认可，通常以取得职业资格证书或岗位证书的形式表现。中国每年以获得相关资格证书为目的的结业生超过千万人次，其中多数以岗位培训为目的参加培训。以 2020 年为例，有 365.15 万人次完成职业资格证书培训，848.28 万人次完成岗位培训。相较于学历制职业教育，非学历制职业教育其教学内容、教学时间、教学地点、教学主体、教学形式、教学费用更加灵活多变。

01 教学内容:



相较于学历制教育在教学内容上的全面性，参与非学历制教育的人群往往是为了达到单一目的，例如职业技能提升、应试培训、培养兴趣爱好等；因此非学历制教育在内容上更具有针对性。

02 教学时间:



具有分散式、碎片化的特点，充分利用工作之余的时间进行学习，可以在工作日晚上、周末等业余时间。

03 教学地点:



地点灵活多样，可以是学校内租用教室，也可以是商场、写字楼，甚至采用线上授课模式在家中学习。

04 教学主体:



由教育部、其他部门、民办三类办学主体通过学校或者单独开设培训机构的形式组织开展相关职业培训课程，授课教师往往由已取得相关职业资格认证的教师或者从业者担任，教师可以是全职教授课程，也可以是兼职负责教学任务。

05 教学形式:



以往通常是以线下教学模式为主，而随着信息技术的发展和受近年来疫情影响，线上教育也逐渐走红，市场上出现了众多线上直播课程和视频录制课程等形式。

06 教学费用:



遵循市场化原则，根据不同教学主体、教学内容、教学形式，费用名目多、跨度大。

Overview of Non-academic Vocational Education in China

While academic vocational education holds academic learning in equal esteem to professional skills and offers students a diploma upon graduation, non-academic vocational education attaches more importance to the training and practice of job-specific skills, and its learners come from a broader range of backgrounds—students, company employees, people between jobs, freelancers, to name but a few. For most people who enroll in a non-academic vocational education program, their main goal is to strengthen job-specific skills and obtain professional certificates or job qualification certificates as proof of their competency. In China, more than 10 million learners graduate from such programs every year, the majority of which were on-the-job training. Take 2020 as an example, 3.6515 million people enrolled in training for professional certificates, and 8.4828 million participated in on-the-job training. Moreover, compared with academic vocational education, non-academic vocational education offers a higher degree of flexibility in training content, program schedule, location, school, teaching mode and fees.

01 Training content:



Compared With The Wide-ranging Curriculum Of Academic Vocational Education, The Offerings Of Non-academic Programs Are More Goal-oriented, Focusing On The Specific Need Of The Students—be It Skill Improvement, Passing Qualification Exams Or Just Looking For A Hobby.

02 Program schedule:



Looser And More Fragmented; Makes Full Use Of After-work Time, Such As Weekday Evenings And Weekends.

03 Location:



Flexible And Diverse; Can Be A Rented Classroom, A Meeting Room In A Shopping Mall Or Office Building. People Who Take Online Courses Can Study At Home.

04 School:



Vocational Education Institutions And Training Institutions Founded By The Ministry Of Education, Other Government Bodies Or Private Schools, With Either Full-time Or Part-time Faculty Consisting Of Teachers Or Experienced Practitioners Who Hold Relevant Vocational Qualifications.

05 Teaching mode:



Offline Teaching Used To Be The Dominant Teaching Mode, But With The Development Of Information Technology And The Impact Of The Pandemic, Recent Years Have Witnessed The Rising Popularity Of Online Education, Which Has Generated A Variety Of Livestream And Pre-recorded Courses.

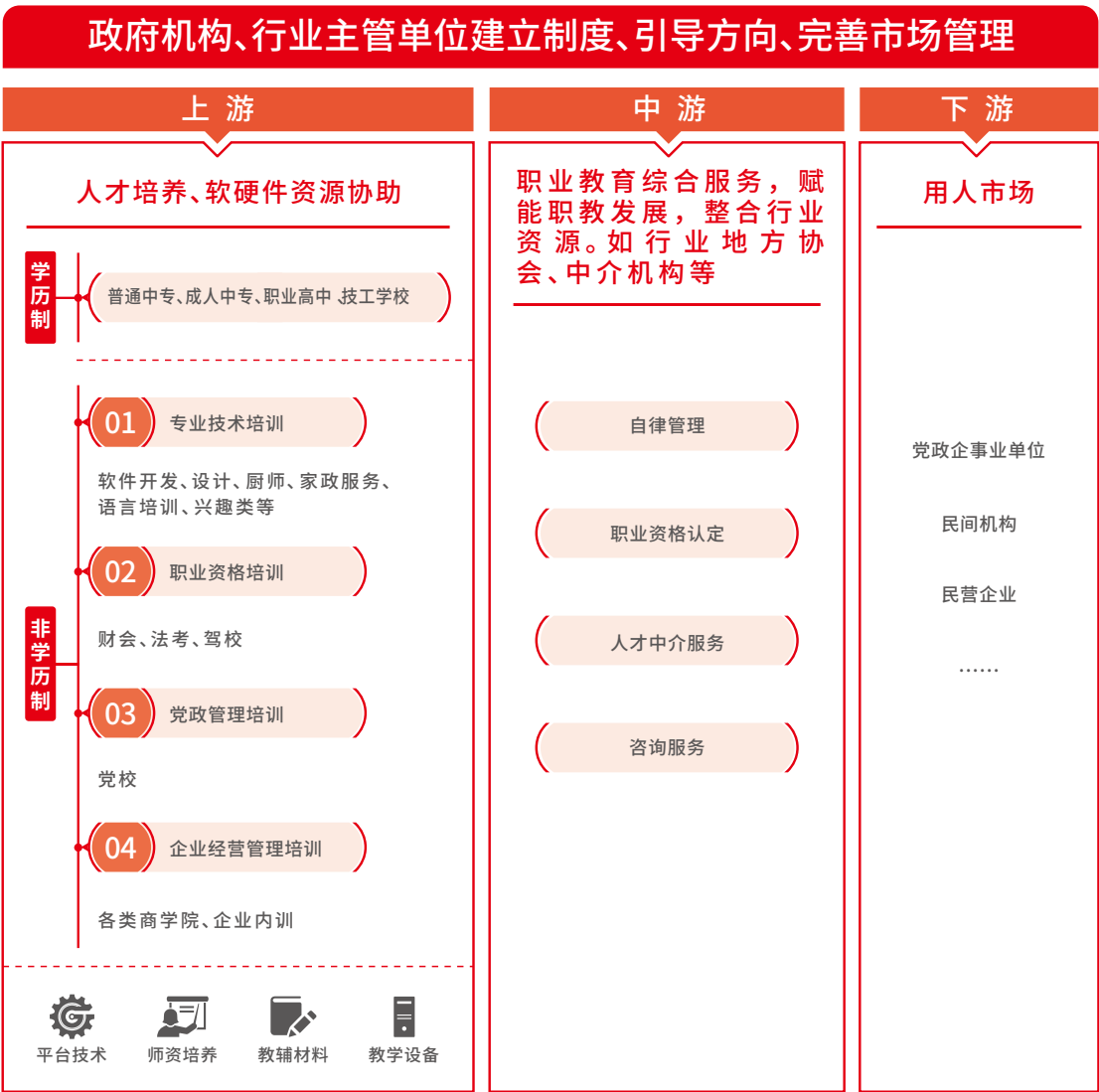
06 Fees:



Determined By The Market. Fees Vary Greatly With School, Training Content, Teaching Mode.

中国职业教育产业链完整，多方共同参与建设

职业教育产业的发展肩负着国家经济发展和全民技能提升的重任。如今职业教育上游产业发展涉及面广、集中度相对较低，形成了多元化、差异化的竞争格局。上游除了学历制教育外，大体上还可分为四个大类：专业技术培训、职业资格培训、党政管理培训和企业经营管理培训。而中游则是赋能职业教育发展、整合行业资源，起到产业链上下融通的关键作用。终端下游市场由社会各层次机构共同组成，发挥消化市场供给的作用。企业在其中既扮演着生产方的角色，也同时是行业的需求方，以人才为核心，输出内容给产业上游，并消化上游培养的人才资源的方式形成了较为完整的产业链发展模式。

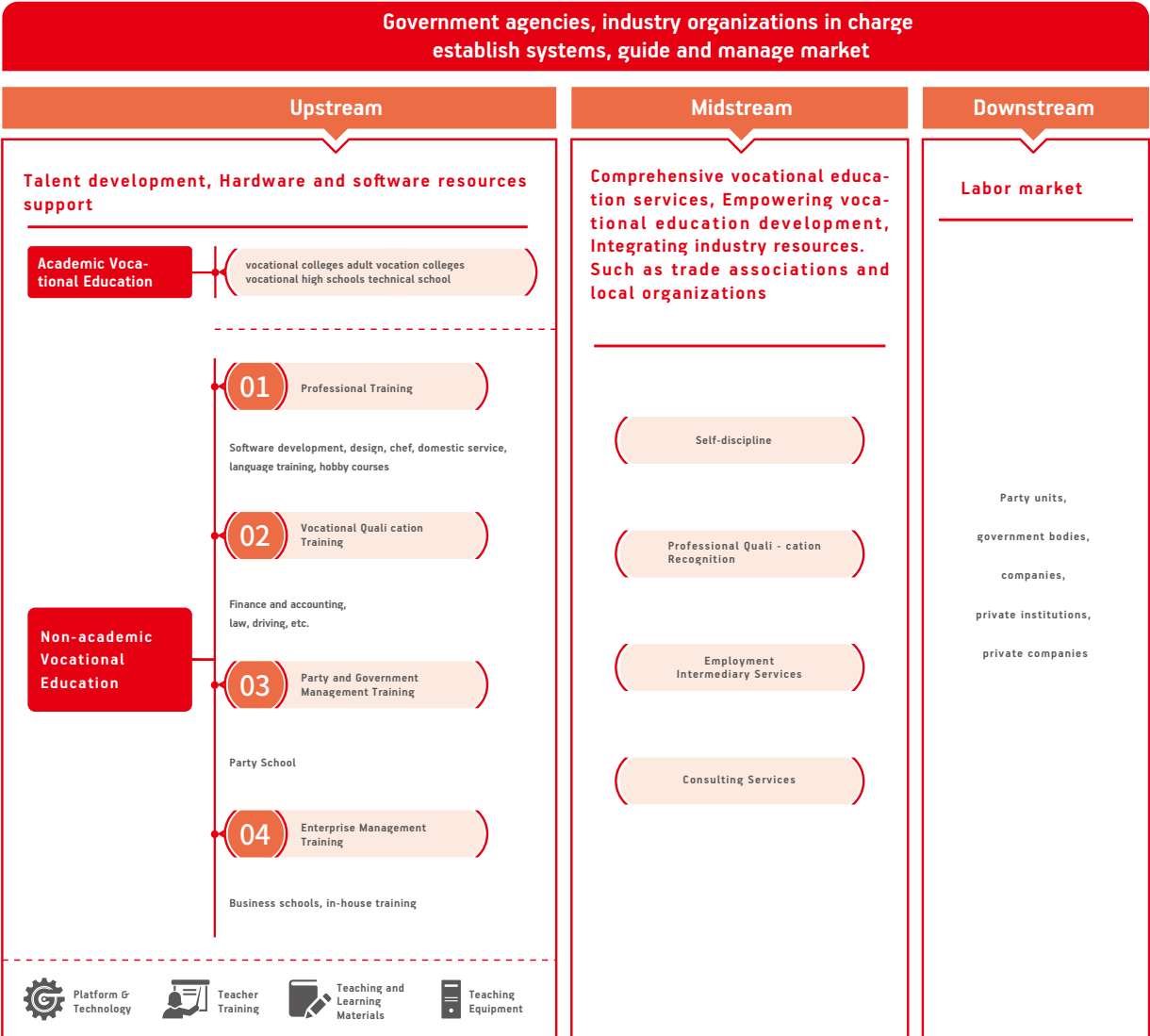


来源：公开资料收集整理制作

China's Vocational Education:
A Complete Industry Chain with Multiple Players

In China, the vocational education industry plays a critical role in driving economic growth and building a deeper pool of highly skilled workers. The upstream segment of the vocational education industry refers to a variety of vocational education providers, which can be categorized into five types: schools offering academic education and the other four types of non-academic institutions with different focus areas: skill training, vocational qualification training, the Communist Party of China (CPC) members training, or business management training. Their wide-ranging and differentiated offerings have helped shape a broad and decentralized market. The midstream segment, on the other hand, acts as a bridge connecting the upstream and downstream by fueling the development of vocational training and integrating resources. Finally, the downstream segment. It assumes the role of creating demands for qualified workers and involves a wide spectrum of actors. Company has a foot in both camps—on the supply side, it contributes resources to vocational education providers; on the demand side, it uses the human resources provided.

With such a diversity of players, China's vocational education industry has become a completely integrated system.



Source: information collected from publicly available sources

为实现职业教育更好更快速的发展，社会各机构需加强联系，紧密配合，共同推进真正学以致用、现代职业教育建设。在这其中，几方主体各司其职，各尽其责，我们认为只有政府、社会机构、企业、学校（培训机构）、学员之间相互协调配合，明确责任目标，才能引领行业走向更好、更快的发展道路。

政府：组织各级各部门、社会各界积极参与推进职业教育建设，扮演着管理者的职能，负责职业教育发展的统筹规划与顶层设计，并提供一定程度的财政支持。

社会机构：主要包括行业或地方协会、研究机构、企业小团体等各种形式的机构组织。主要职责是组织并管理社会上分散的企业单位，建立协调机制，解决各方分歧，作为企业间的协调人、发声并代表企业提出诉求与建议。

企业：作为创新载体，与学校紧密配合，将行业内最先进的软硬件资源带入职业教育之中，为学生创造优良的学习机会，提供必要的师资、实训场地、器械设备以及学生毕业前后的实习和就业机会。

学校(培训机构)：同样是创新的载体，保障学生权益，负责学生安全，为学生营造良好的学习生活环境，与企业配合共同对学生进行职业化教育的同时，引导学生自主创新意识与职业认同感的发展。

学生：既是作为学校学生接受教育，也担负着企业储备技术人才的责任，为经济社会长久发展提供保障。

To further stimulate the development of vocational education, it is imperative for all the above-mentioned actors to strengthen partnership and work closely together in building a modern vocational education system in order to apply the theoretical knowledge directly at the workplace. Each segment has its role to play. We believe that only through the collaboration among the government, professional organizations, enterprises, schools (including training institutions) and students, each player has its own clearly defined duties and goals, can we lead the industry to better and faster growth.

Government: organizes departments at all levels and all sectors of society to take an active part in the development of vocational education; acts as a manager; responsible for the coordinating resources, charting an overarching framework for vocational education development, and providing financial support.

Professional organizations: encompass a variety of organizations, such as trade associations and local organizations, research institutions, business groups. Their main responsibilities are to create bonds, facilitate collaboration, establish collaboration mechanisms, resolve disputes, act as a coordinator, express demands and suggestions on behalf of the companies.

Host companies: as a driving force of innovation, host companies work closely with schools and integrate the most cutting-edge hardware and software technologies into vocational education programs; create excellent learning opportunities for students; provide trainers, venues, facilities and equipment as well as internship and employment opportunities for students.

Schools (including training institutions): as another innovation driver, schools are responsible for protecting the rights and interests of students, ensuring their safety, creating a good learning and living environment, cooperating with host companies in imparting professional expertise, and helping students boost creativity and find a sense of fulfillment at work.

Students: recipients of vocational education; the future skilled workforce; and the foundation for long-term socioeconomic progress.



政府明确并进一步推动职业教育发展

时间	相关部门	文件	主要内容
2014.6	国务院	关于加快发展现代职业教育的决定	总体保持中等职业学校和普通高中招生规模大体相当，高等职业教育规模占高等教育的一半以上； 坚持学校教育和职业培训并举、全日制与非全日制并重； 鼓励行业和企业举办或参与举办职业院校。
2015.6	教育部	关于深入推进职业教育集团化办学的意见	鼓励多元主体组建职业教育集团，深化职业教育办学体制机制改革，推进现代职业教育体系建设。
2019.1	国务院	关于印发国家职业教育改革实施方案的通知	到 2022 年，职业院校教学条件基本达标，一大批普通本科高等学校向 应用型转变，建设 50 所高水平高等职业学校和 150 个骨干专业（群）； 推动建设 300 个具有辐射引领作用的高水平专业化产教融合实训基地； “双师型”教师占专业课教师总数超过一半； 从 2019 年开始，在职业院校、应用型本科高校启动“学历证书 + 若干职业技能等级证书”（1+X）制度试点工作。
2019.2	中共中央、国务院	中国教育现代化 2035	集中力量建成一批中国特色高水平职业院校和专业； 加强创新人才特别是拔尖创新人才的培养，加大应用型、复合型、技术技能型人才培养比重。
2019.5	国务院	职业技能提升行动方案（2019-2021 年）	2019 年至 2021 年，三年共开展各类补贴性职业技能培训 5000 万人次以上，其中 2019 年培训 1500 万人次以上； 到 2021 年底技能劳动者占就业人员总量的比例达到 25% 以上，高技能人才占技能劳动者的比例达到 30% 以上。
2019.10	教育部、民政部、商务部等 7 个部门	关于教育支持社会服务产业发展提高紧缺人才培养培训质量的意见	在中国特色高水平高职学校和专业建设计划等项目实施过程中，向家政、养老、育幼等相关领域专业倾斜。
2020.9	教育部、国家发展改革委、财政部等 9 个部门	职业教育提质培优行动计划（2020—2023 年）	职业教育与普通教育规模大体相当，职业学校办学定位清晰，专业设置和人才供给结构不断优化，每年向社会输送数以千万计的高质量技术技能人才。
2021.3		中华人民共和国国民经济和社会发展第十四个五年规划和 2035 年远景目标纲要	完善职业技术教育国家标准，推行“学历证书 + 职业技能等级证书”制度； 创新办学模式，深化产教融合、校企合作，鼓励企业举办高质量职业技术教育，探索中国特色学徒制。
2021.4		全国职业教育大会	习主席作出重要指示：职业教育前途广阔、大有可为，要优化职业教育类型定位，深化产教融合和校企合作，稳步发展职业本科教育。
2021.4		中华人民共和国民办教育促进法实施条例	支持和规范社会力量举办民办教育，保障民办学校依法办学、自主管理，鼓励、引导民办学校提高质量、办出特色，满足多样化教育需求。
2021.10	中共中央、国务院	关于推动现代职业教育高质量发展的意见	职业本科教育招生规模不低于高等职业教育招生规模的 10%；到 2035 年，职业教育整体水平进入世界前列，技能型社会基本建成。

来源：公开资料收集整理

Government Clarifies and Further Promotes Vocational Education Development

Time	Authority	Document	Main contents
2014.6	State Council	Decisions on Accelerating the Development of Modern Vocational Education	Maintains roughly equal enrollment in secondary vocational schools and general high schools; the share of vocational education should account for at least half at tertiary level. Stimulates the parallel development of academic education and vocational training, with equal emphasis on full-time and part-time programs. Encourages industries and companies to establish or get involved in vocational education institutions.
2015.6	Ministry of Education	Opinions on Further Promoting Vocational Education Institutions	Encourages different players to establish vocational education institutions; deepens the reform of the vocational education system and mechanism; builds up a modern vocational education system.
2019.1	State Council	Notice on the Issuance of the National Vocational Education Reform Action Plan	By 2022, vocational institutions will meet the basic teaching standards; Encourages general universities to switch their focus to being “application-oriented”; Establishes 50 high-quality tertiary-level vocational schools and 150 key programs (clusters); Promote the construction of 300 leading high-level vocational training bases which integrate academic education and hands-on practice; The number of dual-qualified teachers (teachers who possess both academic background and professional skills) will take up more than half of the faculty; Starting from 2019, the 1+X (one academic certificate + a number of vocational skills certificates) certificate mechanism pilot will be pushed forward in vocational institutions and universities of applied sciences;
2019.2	CPC Central Committee and State Council	China’ s Education Modernization 2035	Focuses on building a number of high-level vocational institutions and programs with Chinese characteristics; Strengthens the cultivation of creative talents, especially top-notch innovative talents, and increase the proportion of application-oriented, comprehensive and skill-focused training programs.
2019.5	State Council	Vocational Skills Upgrading Action Plan (2019-2021)	From 2019 to 2021, engages more than 50 million people in subsidized vocational training programs while the target for 2019 was 15 million. By the end of 2021, the proportion of skilled workers to the total number of employed workers will reach more than 25%, and highly skilled personnel will account for at least 30% in skilled workers.
2019.10	Ministry of Education, Ministry of Civil Affairs, Ministry of Commerce and 4 other government bodies	Opinions on Strengthening Education and Improving the Quality of Training of Most In-demand Skills to Support Social Progress and Economic Growth	Give priority to professions such as household service, elderly care and child-care in the development of high-quality vocational education institutions and programs with Chinese characteristics.



Time	Authority	Document	Main contents
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2020.9	Ministry of Education, National Development and Reform Commission, Ministry of Finance and 6 other government bodies	Vocational Education Quality Improvement Action Plan (2020-2023)	The scale of vocational education should be equivalent to that of general education; clarify the teaching objectives of vocational institutions, and train a large amount of highly skilled talents every year.
2021.3		Outline of the Fourteenth Five-Year Plan and Long-Range Objectives Through the Year 2035 for Socioeconomic Growth of the People's Republic of China	Improve national standards for vocational education and implement the certificate mechanism of one academic certificate plus a number of vocational certificates; Explore new teaching methods, deepen the integration of industry and education, strengthen school-company cooperation, encourage companies to offer high-quality vocational education, and establish an apprenticeship system with Chinese characteristics.
2021.4		National Vocational Education Conference	President Xi delivered an important speech and stated that vocational education would be very promising and hold great potential. He also said that it would be essential to clarify the types of vocational education, deepen the collaboration between industry and school, and put tertiary-level vocational education on a steady growth path.
2021.4		Regulations on the Enforcement of Private Education Promotion Law in the People's Republic of China	Support and regulate the private sector to develop private education to ensure compliance with laws. Give private schools more autonomy and motivate them to roll out high-quality programs with distinctive features that will meet diverse learning needs.
2021.10	CPC Central Committee and State Council	Guidelines on Promoting the High-Quality Development of Modern Vocational Education	The enrollment of undergraduate-level vocational programs should be no less than 10% of the total enrollment of tertiary-level vocational institutions. By 2035, China's vocational education will be among the top in the world, and a skill-based society will take shape.

The above information was collected from publicly available sources

近年来中国职业教育相关政策密集出台，在平衡职普比、鼓励推动应用化转型、提升高层次人才比例等方面做出了更全面的部署。可以看出中国对职业教育的重视程度有着显著的提升，政策也不断放宽，鼓励社会多方共同参与促进职业教育发展，并且强调了职业教育与普通教育拥有同等地位，但侧重有所不同，即“营造人人努力成才、人人皆可成才、人人尽展其才的良好环境”，为深化职业教育发展创造了有利条件。

In the past few years, the Chinese government has rolled out a number of policies related to vocational education and stepped-up efforts in balancing the ratio of vocational education to general education, encouraging universities to shift the focus to being application-oriented, and increasing the share of highly skilled talents. These endeavors show that the status of vocational education has improved considerably in China. To pave the way for a stronger vocational education industry, the government is relaxing regulations to motivate more players to get involved. The government has also stressed that vocational education and general education should develop on an equal footing but with different focus areas, so as to build an enabling environment where everyone will be a self-motivated learner and has a chance to shine.



传统产业人才紧缺问题尚存，
新兴产业发展进一步加大产业人才缺口

如今，中国正在产业向高质量发展的转型道路上前行。然而，人才短缺已成为了社会的普遍问题。就制造业而言，它们正面临着人才结构性过剩和短缺的双重问题：在先进制造业面临着高技能劳动力短缺时，传统制造业又面临着低技能劳动力结构性过剩的问题。随着资源限制的加剧和人口红利的逐渐下降，这些问题造成的影响会更加显著。根据教育部 2017 年的预测，在 2025 年，制造业十大重点领域的人才需求总量将达到 6191.7 万人，缺口将达到 2987.5 万人，缺口率达 48.25%。通过人力资源和社会保障部对市场缺工状况的持续统计，自 2019 年起，制造业是人才缺失最严重的行业之一，而且智能制造行业的人才缺失问题正在逐年突显。此前，人社部对 2021 年第四季度“最缺工”的 100 个职业进行了排名。该排行榜显示，在“最缺工”的 100 个职业中，其中 43 个岗位来自于“制造业”，这也使得该行业成为了人才缺失最严重的行业。

制造业十大重点领域人才需求预测
(单位：万人)

No.	十大重点领域	2015	2020		2025	
		人才总量	人才总量预测	人才缺口预测	人才总量预测	人才缺口预测
1	新一代信息技术产业	1050	1800	750	2000	950
2	高档数控机床和机器人	450	750	300	900	450
3	航空航天装备	49.1	68.9	19.8	96.6	47.5
4	海洋工程装备及高技术船舶	102.2	118.6	16.4	128.8	26.6
5	先进轨道交通装备	32.4	38.4	6	43	10.6
6	节能与新能源汽车	17	85	68	120	103
7	电力装备	822	1233	411	1731	909
8	农机装备	28.3	45.2	16.9	72.3	44
9	新材料	600	900	300	1000	400
10	生物医药及高性能医疗器械	55	80	25	100	45

来源：教育部《制造业人才发展规划指南》

Traditional Industries Face a Talent Shortage,
Intensified by the Rise of Emerging Industries

China is undergoing a transformation to high-quality growth. However, today, there is a prevalent shortage of skilled workers across many industries and some of them like the manufacturing industry are facing a two-fold challenge—the advanced manufacturing sector is confronted with a scarcity of highly skilled workers, while the traditional manufacturing sector has to deal with a structural surplus of low-skilled staff. Furthermore, the situation is very likely to deteriorate with growing resource constraints and the declining demographic dividend. In 2017, the Ministry of Education predicted that the ten key sectors of the manufacturing industry would need 61.917 million workers in 2025 and the shortage would reach 29.875 million, 48.25% of the total workforce in demand. The Ministry of Human Resources and Social Security (HRSS) has kept tracking the labor shortage and found out that since 2019, the manufacturing industry has been facing one of the worst shortages, and the situation in the smart manufacturing sector has even been deteriorating every year. A report released by HRSS ranked 100 most in-demand occupations in China’s labor market in the fourth quarter of 2021. Among the 100 occupations, 43 were manufacturing jobs, making the manufacturing industry the most talent-hungry.

Forecast of the Labor Demand in Ten Key Sectors of the Manufacturing Industry
(Unit: 10,000)

No.	Ten key sectors	2015	2020		2025	
		Total workforce	Projected workforce demand	Shortage	Projected workforce demand	Shortage
1	New generation information technology	1050	1800	750	2000	950
2	Advanced CNC machine tools and robots	450	750	300	900	450
3	Aerospace equipment	49.1	68.9	19.8	96.6	47.5
4	Marine engineering equipment and high-tech vessels	102.2	118.6	16.4	128.8	26.6
5	Advanced rail transportation equipment	32.4	38.4	6	43	10.6
6	Energy-saving and new energy vehicles	17	85	68	120	103
7	Electrical equipment	822	1233	411	1731	909
8	Agricultural Equipment	28.3	45.2	16.9	72.3	44
9	New materials	600	900	300	1000	400
10	Biomedical and high-performance medical devices	55	80	25	100	45

Source: Guideline for Manufacturing Talent Development Plan released by The Ministry of Education.



3

未来的中瑞职业教育 发展之路

Future Path for
Vocational Education
in China
and Switzerland



职业教育站在时代风口

在产业结构调整及人口红利消退的影响下，中国会更重视技术人才、创新人才与企业管理人才的培养。政府也将进一步强化宣传并加大投资力度，以加强人才培养建设，强化人才队伍建设和补齐人才结构短板。经过近年来对教育资源布局的调整，中高职院校办学水平皆有了明显的提升。随着民营企业的进一步介入，我们相信中国职业教育在度过短暂的阵痛期后，将会有全方位、井喷式的发展，行业的天花板也势必会迎来新的突破。

早在 2017 年，中瑞双方就已通过签署《中瑞职业教育与培训合作备忘录》，在职业教育的交流合作中迈出了重要的一步。签署该文件后，双方承诺将增强两国之间对教育、科研、创新的交流合作，并开展基于该备忘录内容的公开对话。

随着中国职业教育的兴起，中瑞职业教育的合作会具有更加突出的战略意义。

Vocational Education in Full Swing

With the undergoing structural transformation and declining demographic dividend, the cultivation of skilled workers, innovative talent and business management experts will be given more priority in China and the government will ramp up efforts in publicity and investment to strengthen talent development and fill the shortage of highly skilled workers. After years of optimizing the allocation of educational resources, both secondary and higher vocational institutions have made significant progress. With the deeper involvement of the private sector, we believe that the vocational education industry in China will ride out the short-term ups and downs, and enter a period of high growth and rapid development in the coming years. Future breakthroughs will usher in a new era of vocational education.

In 2017, China and Switzerland signed the Memorandum of Collaboration in Vocational Education and Training, marking a historic milestone in China-Switzerland collaboration in vocational education. The two sides pledged to strengthen the exchange and cooperation in education, scientific research and innovation, and engage in open dialogues based on the Memorandum.

With the rise of vocational education in China, China-Switzerland collaboration in this area will play a more strategically important role.



职业教育项目本土化

海外企业在华项目案例分析

乔治费歇尔 (GF)

公司简介

乔治费歇尔精密机床 (上海) 有限公司 (简称 GF 加工方案中国) 隶属于瑞士乔治费歇尔集团 (简称 GF 集团)。GF 集团创立于 1802 年, 总部位于瑞士夏弗豪森, 三大核心业务包括 GF 管路系统、GF 成型方案和 GF 加工方案。GF 加工方案作为全球领先的智能制造领域整体解决方案的供应商, 拥有多种加工技术包括电火花成型加工; 线切割加工; 高速、高性能和高效铣削加工; 激光纹理加工; 飞秒激光微细加工; 3D 金属增材加工; 零点夹具和自动化集成技术以及客户服务产品和数字化转型产品等。

GF 加工方案从 1993 年进入中国市场, 作为最早进入中国的瑞士精密加工制造企业, GF 加工方案始终本着 "扎根中国, 服务中国" 的企业理念, 以人才为驱动因素, 从根基上积极促进人才的可持续性发展, 如通过 GF 加工方案全国职业院校智能制造产教融合联盟, 加强校企合作。

产业生态联盟合作模式

GF 加工方案期冀将瑞士文化中追求创新、精益求精的工匠精神融入中国的职业教育, 为战略合作院校提供先进的制造技术、系统的师资培训、优秀的教学资源、引入瑞士的行业标准、国际交流合作等多种服务, 携手全国的职业院校培养更多新一代的技术技能型人才, 推动中国制造业的不断前行。

2016 年 GF 加工方案与天津轻工职业技术学院 (中国) 建立了战略合作伙伴关系, GF 加工方案提供了八台最先进的设备, 用于慢走丝线切割加工、铣削加工、激光纹理加工和自动化技术等教学工作, 并给予系统的

持续的培训支持。与 GF 加工方案所提供的机床设备紧密相关的实践课程诸如计算机数控 (CNC) 加工技术、模具设计与制造以及智能制造设备技术等科目, 满足了学院对教师培训、学习材料和学生用于实践培训的机器的迫切需要。

在过去的五年里, GF 加工方案与其他 11 家机构合作, 与天津轻工职业技术学院在模具制造领域开设精密模具产业学院。

GF 加工方案与天津轻工职业技术学院的合作是可持续教育的模板。该学院帮助毕业生在 GF 加工方案及其客户中找到工作, 他们可以将更多资源投入到培训中。

目前, GF 加工方案和中国教育部签署了战略合作协议, 计划在 5 年内, 和全国的 100 所院校开展合作, 共同培养国际化的智能制造领域的技术技能型人才。



Localization of Vocational Education Programs

Case Studies of Programs Initiated by Foreign Companies in China

GF

Company Profile

GF Machining Solutions (GF MS China) belongs to Georg Fischer Group (GF). GF was found in 1802, headquartered in Schaffhausen, with 3 core businesses: GF Piping Systems, GF Casting Solutions and GF Machining Solutions.

As the world's leading supplier of total solutions in the field of intelligent manufacturing, GF MS has a variety of machining technologies including EDM; wire cutting; high-speed, high-performance and efficient milling; laser texturing; femtosecond laser micromachining; 3D metal additive machining; zero-point fixture and automation integration technology and customer service products and digital transformation products.

GF Machining Solutions entered Chinese market in 1993. As one of the first Swiss precision manufacturing company in the Chinese market, GF Machining Solutions stick to the principle of "In China, For China", seeking to facilitate sustainable human resources development. Taking talents as the driving factor, actively promote the sustainable development of talents from the foundation. For example, through the GF MS, the National Vocational College Intelligent Manufacturing Industry-Education Integration Alliance will strengthen school-enterprise cooperation.

Industry Alliance Cooperation Mode

GF Machining Solutions hopes to strengthen industry-academia collaboration by integrating Swiss craftsmanship into Chinese vocational education, bringing advanced manufacturing techniques, systematic faculty training, outstanding teaching resources, Swiss industrial standards and international cooperation opportunities to strategic partners in China, empowering China's next generation skilled talents together with Chinese vocational schools and colleges and advancing Chinese manufacturing industry.

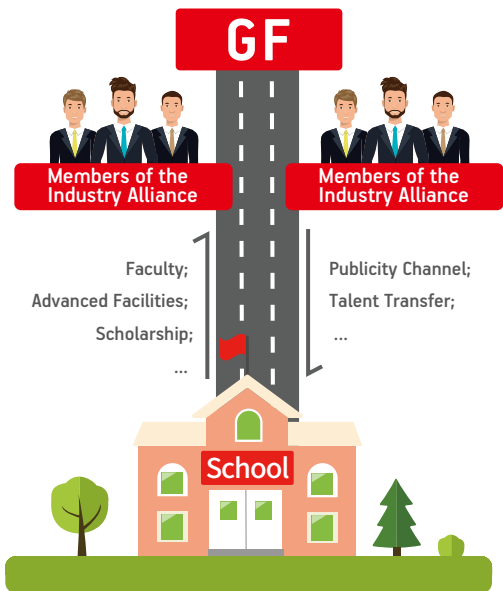
In 2016, GF Machining Solutions established a partnership with Tianjin Light Industry Vocational Technical College (TJLIVTC), where GF Machining Solutions provided eight state-of-the-art machines for tasks such as cutting, milling, laser machining and automation. It also offered support for continuous training. Hands-on courses are

closely related to the machines provided by GF Machining Solutions in subjects such as computer numerical control (CNC) machining technology, tool design and manufacturing, as well as smart manufacturing equipment, which have met the urgent need of the college for teacher training, learning materials, and machines for hands-on training.

In the last five years, GF Machining Solutions has partnered with 11 other institutions and set up another school in the field of tool and die making with TJLIVTC. The proximity of the campus to GF Machining Solutions' customers will facilitate job creation and long-term partnerships.

GF Machining Solutions' partnership with TJLIVTC has set an example for sustainable education. Graduates have the support from the college in finding jobs with GF Machining Solutions and its customers, which will, in return, provide the college more resources for training.

At present, GF and the Chinese Ministry of Education have signed a strategic cooperation agreement, and within 5 years, GF will cooperate with 100 colleges and universities across the country to jointly cultivate technical and skilled talents in the field of international intelligent manufacturing.



西卡 (SIKA)

公司简介

西卡是一家特殊化学品公司，在建筑和工业制造领域的用于粘接、密封、消声、加固和保护的系统和产品的研发和生产上拥有世界领先地位。西卡集团的子公司分布于全球 100 多个国家和地区，拥有 300 多家制造工厂，27,000 名员工。西卡在 2021 年实现了 92.52 亿瑞士法郎的年销售额。2019 年底西卡凭借创新的新型胶粘剂技术荣获瑞士科技创新奖。

西卡中国总部位于苏州，提供从屋面到地面的全套建筑解决方案，包括先进的聚羧酸盐混凝土外加剂，PVC 防水卷材系统，聚氨酯密封胶，各类工业地坪材料，灌浆材料，加固与修补材料等一系列化学建材产品。西卡的工业技术能使车辆的重量更轻，从而降低油耗，提高驾驶效率，并增强安全性和舒适性。西卡凭借其强大的技术支持，致力于为客户提供完整的解决方案。

现代学徒制

西卡拥有完整的人才发展体系，以培训生项目、内部讲师团项目为基础，通过领导力、销售能力以及技术开发能力三支柱，全方位多层次推进，在保障员工自身发展的同时为公司的飞速发展提供源源不断的专业人才。

为了满足西卡自身持续发展及产业链专业能力素质提升的需求，目前西卡已与中国五所大学建立了长期合作，并在 2022 年着手与部分学校携手开展在人才培养方面新的探索，建立现代学徒制实习班，致力于年轻一代人才的全面培养和储备。优秀的学员进入西卡实习班——在特定岗位由公司内部经验丰富的核心骨干作为师傅，担任工作技能指导责任；由 HR 统一负责职业素养和综合素质的提升，两相结合进行重点培养综合能力强、专业技术精的产业人才。



现代学徒制



SIKA

Company Profile

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and motor vehicle industry. Sika is represented in over 100 countries and regions with subsidiaries and more than 300 manufacturing plants.

Its more than 27,000 employees generated annual sales of CHF 9.252 billion in 2021. At the end of 2019, Sika won the Swiss Technology Award in the "Innovation Leaders" category for its new adhesive technology.

Sika China, headquartered in Suzhou, offers a full range of construction materials from roofing to flooring, including advanced concrete admixtures, roofing and waterproofing membranes, flooring materials, sealants, mortars and grouts. Sika's technologies enable the design of light-weight and fuel-efficient vehicles, increase driving efficiency and enhance safety and comfort. With a strong technical support, Sika is committed to offering complete solutions for customers.

Modern Apprenticeship

Sika strives to build a complete training system to underpin and maintain its talent pipeline. The training involves three main areas: leadership, sales ability and R&D ability. The training not only supports employee development, but also provides a robust talent pipeline that drives Sika's fast growth.

To sustain its growth and improve employees' professional competence of the industrial chain, Sika has established long-term cooperation with five Universities in China, and started new exploration in talent cultivation with some schools in 2022. A modern apprenticeship practice has been established with comprehensive training. Excellent students enter the internship class of Sika, and the experienced key members of the company provide guidance as the master in a designated position. HR is responsible for the promotion of working skills and comprehensive accomplishment, focusing on the cultivation of industrial talents with strong comprehensive ability and professional skills.



Modern Apprenticeship



迅达电梯 (Schindler)

公司简介

迅达集团于 1874 年成立于瑞士，是全球领先的电梯、自动扶梯、自动人行道及相关服务的供应商之一。迅达的服务涉及整个楼宇生命周期，从设计到安装、维修、保养及更新改造。迅达电梯在全球 100 多个国家和地区，拥有 1000 多个分支机构及 66000 多名员工，并在 9 个国家设有生产基地，研发中心遍布全球。

迅达于 1980 年进入中国，是中国第一家工业性合资企业，并于 2006 年完成独资化进程，目前为 100% 迅达集团控股。四十多年来，迅达中国以优质的产品和服务为中国的城市化发展，尤其是高层地标、商业地产、公共交通等建筑做出了贡献。

校企多层次合作模式

迅达完善的人才培养体系不仅帮助其在落地中国后实现飞跃式的发展，成为行业标杆，也为公司以及社会培养了一大批优秀的电梯专业技术人才。早在 2007 年迅达就已经开始在中国开展校企合作人才培养计划，通过与高校开展多层次合作，每年为迅达在中国的 40 多家分公司输送数百名技术人才。截至目前迅达已与中国数十所高校签约合作，其中 8 所高校更是达成了深度战略合作。合作院校与迅达共同搭建实操培训基地并配备驻点培训师，以满足日常教学和培训需求。深度合作的院校与迅达联合开设电梯专业，订立订单班，迅达提供师资培训、校企教材开发指导、人才培养方案优化，实习生岗前培训等。实现从学生到员工的校企对接培养模式。双方的深度合作为职业教育发展起到表率作用的同时，也为迅达发展所需的人才储备提供了强而有力的支撑。

Schindler

Company Profile

Founded in 1874 in Switzerland, Schindler is a world-leading provider of elevators, escalators, moving walks and other related services. Schindler works with its customers across the whole life cycle of an installation—from planning and installation to maintenance and modernization. Schindler is present in over 100 countries with over 66,000 employees, serves customers from more than 1,000 branch offices worldwide, and runs production sites in nine countries, with R&D facilities around the world.

Schindler's engagement in China goes back to 1980 when it became the first industrial joint venture. After Schindler was transformed into a sole proprietorship in 2006, it is now wholly owned by the Schindler Group. For more than 40 years, Schindler China has contributed to the development of Chinese cities with quality products and services, especially in high-rise, commercial and public transportation buildings.

School-business

Multi-level Cooperation Model

Behind Schindler's soaring growth in China is its well-designed talent training system, which has not only become an industry benchmark, but also provided a large number of excellent elevator experts for the company and society. Schindler's cooperation with Chinese education institutes dates back to 2007, and over the years, a multi-layer cooperation model has taken shape, which produces hundreds of skilled workers for Schindler's more than 40 branches in China every year. Up till today, Schindler has signed cooperation contracts with dozens of education institutions in China, eight of which are forged as deep strategic partnerships. Together, practice training centers have been built with Schindler dedicated professional trainers to fulfill the needs of education and training. Together with deep-strategic partners, an Elevator & Escalator program has been built and customized classes have been set up. Schindler provides support, such as training for teachers, direction for curriculum development, talent program optimization, and pre-employment training for apprentices. This model ensures a smooth transition for students to become company employees. These deep partnerships have not only inspired other vocational education programs, but also underpinned Schindler's talent pipeline.



订单式合作

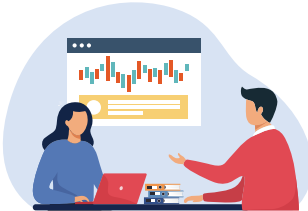
企业排除培训师依托企业在校建立的培训中心开展相关课程、针对公司需求的技能岗位开展特训，完全使用企业的技能培养模式开展技能训练。

迅达中国



深度合作

以企业培训中心模式搭建专业，提供校企合作教材开发指导，优化人才培养方案，提供师资培训及实习生岗前培训。



一般合作

提供师资培训、实习生岗前培训、人才招募



Customized Class

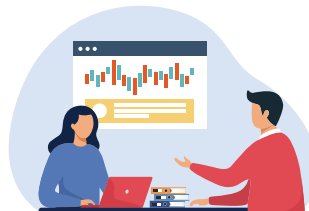
Schindler trainers works in training centers built together for elevator & escalator related training especially focus on Schindler products related skills. All trainings implemented according Schindler training program.

Schindler China



Deep-Strategic

Schindler provides direction of curriculum developing, talent program optimization; Trainings for teachers and apprentice before work, through together build training centers, Elevator & Escalator programs.



Cooperation

Schindler provides trainings for teachers and apprentice before work, offers apprentice position.

新创烹饪（CieCAS）

公司简介

专注于餐饮业的新创烹饪与前文的案例有所不同。前面提到的企业是为学校或培训机构之类的合作伙伴提供优质的瑞士职业教育资源，而新创烹饪则是一家专业的培训中心，为餐饮从业人员提供专业的培训以使其成为专业的厨房或餐厅管理者。新创烹饪由一位瑞士企业家于 2018 年创立，他秉承玉琢成器的理念，与中国最大的调味品公司之一欣和集团达成合作，凭借着欣和集团全力的资金支持，新创烹饪引进了一流的培训设施，采用瑞士培训标准，投身于中国餐饮管理培训行业。

作为上海长宁科技进修学院（CNST）的服务提供商，新创烹饪遵循奥地利联邦经济促进学院（WIFI）的欧洲餐饮课程，重点培训人们如何对厨房进行专业化管理，例如生产管理、设备管理、卫生管理、安全管理等，其培训重点与中国传统的烹饪学校形成了鲜明对比，后者更侧重于烹饪方法的教授。除了餐饮管理之外，新创烹饪也同样涉及餐饮服务领域，一般而言新创烹饪采用 5 天工作和 1 天培训的模式，通过两者结合的双轨制教育培养以顾客为中心的餐厅经理，培训的重点是将理论学习与工作接轨。

如前所述，这一模式在瑞士非常典型，但在中国尚未完全开展。目前新创烹饪在中国已经与凯悦酒店和铂瑞酒店达成合作，帮助其部分员工成为合格的运营经理。然而，新创烹饪面临着许多挑战，例如学员难以兼顾全职的工作和培训、餐饮业缺乏创业的吸引力、低收入人群的经济条件难以支撑如新创烹饪的优质教育。除此之外，新创烹饪所提出的教育理念在餐饮行业还处于起步阶段，市场认知度较低。因此，新创烹饪必须扩大其服务范围，为更多的餐饮公司和职业学校提供定制化专业课程。另外，新创烹饪还着手于为企业客户提供“趣味生活烹饪”团建活动，并组织面向大众的美食活动和烹饪课程。

学以致用用的双轨制教学

通过将学习与实际应用相结合，新创烹饪致力于为人们的职业发展提供更多机会。在瑞士餐饮专家的支持下，新创烹饪组建了一支具备餐饮双轨学徒制背景的师资队伍，并且具有丰富的教育和实践经验。参加新创烹饪项目的学员将受益于餐饮管理的系统化培训，让他们对餐饮管理有一个更全面的了解，并且所有教授的理论知识都会在他们的工作场所演示和实践。因此这些同时接受教育和实践的受训人员更有机会在完成培训之前就获得晋升。

Center of innovative & entrepreneurial Culinary Arts & Services (CieCAS)

Company Profile

On the opposite of the cases spectrum presented in this paper is CieCAS for the food and beverage industry. The companies mentioned before were looking for collaboration partners with schools or training institute to provide quality Swiss vocational education. CieCAS is set-up as a professional training center for food and beverage personnel to become professional system operators to manage kitchen or restaurants. CieCAS was founded in 2018 by a Swiss entrepreneur who believes that there are great career opportunities in the food and beverage industry for hardworking people if they get the right educational support.

CieCAS has a top notch training facility based on Swiss training standards. The financial support of CieCAS is provided by Shinho – one of the largest condiment companies in China with the vision of providing healthy food to the table of families in China. CieCAS is established as a service provider to Shanghai CNST Vocational Institute of Continuing Education and follows the European food and beverage curriculum of the Austrian WIFI International. Its main training focus is for people to learn how to operate kitchen professionally such as setting it-up correctly, manage resources, keeping it clean, and provide recipes and menus. This is quite in contrast to the local culinary schools in China which are more focused on cooking food. CieCAS does this also in the service area for people to become customer focused restaurant managers. It does this through dual education which means working while attending training at the same time. The normal ratio is 5 days of work and one day of training. The focus of the training is on the concept of learning and applying it directly in the workplace. This concept as mentioned previously is very typical in Switzerland, but not yet in place in China. CieCAS started its program by collaboration with Hyatt and Primus hotels in China to train some of their staff to become operational managers. However, CieCAS faces many challenges such as: the tough commitment to work full-time and get training at the same time, the lack of attraction of the food and beverage industry to start a career, and the funding of quality education to make it affordable for low income people.

On top of it, the concept CieCAS proposes is also new to the industry and lacks the Chinese government recognition. Therefore, CieCAS had to expand its service scope and also offers customized

programs for food and beverage companies and vocational schools on a professional side. It also started with lifestyle programs for companies to do fun team building through cooking or service challenges, and it offers food events and cooking classes for people.

Dual-track Model to Apply Learning in Practice

By connecting learning with real-world applications, CieCAS strives to provide people career growth opportunities. It has built a teaching force by the support of Swiss culinary and restaurant experts with a rich educational and practical experience as they all completed food & beverage dual track apprenticeship programs. Trainees enrolled in CieCAS’ s programs will benefit from a systematic training on the restaurant management system. Allowing them to gain a comprehensive understanding of management because everything taught in theory needs to be implemented and demonstrated in their workplace. Thus, these trainees receive work experience and education at the same time, and are more likely to get promoted before they even finish their training.

弗雷萨 (FRAISA)

公司简介

弗雷萨 (FRAISA) 是一家全球总部设在瑞士的家族企业, 生产金属加工行业最高性能的切削刀具, 并通过其 7 个子公司的子公司销往世界各地。公司重视持续的创新过程, 通过研究和开发保证面向未来的尖端技术。在瑞士, 弗雷萨举办了一个名为 "FRAISA ToolChampions" 的全国性综合金属加工行业竞赛, 已有 30 多年历史。每年都有超过 1000 名学徒工参加这一挑战。这个挑战是一个真实的、选拔性的测试, 即: 参赛学徒工在一套组织方给定图纸的基础上, 通过铣削、钻孔和螺纹切削的制造工艺最终加工出一个完美的工件。正是借此, 弗雷萨帮助瑞士寻找精密金属加工领域的最优秀的年轻学徒工。由于与 SWISSMECHANIC 在 SwissSkills (瑞士技能大赛) 的战略合作, 在 ToolChampions 竞赛 (传统组和数控组) 中获得最佳名次的学徒工将直接获得参加 SwissSkills (瑞士数控大赛) 的资格。

在瑞士之外, 弗雷萨在世界各地的子公司都在支持机加工 / 学徒工参加不同的比赛, 不仅帮助他们装备最高性能的瑞士精密刀具, 而且还帮助他们掌握最先进的加工知识和尖端技术。这包括 Euroskills (欧洲技能大赛) 和 ChinaSkills (中国技能大赛)。他们中的许多人将在世界技能大赛期间以 " 瑞士技术 " 参赛。在比赛的背后, 展示了弗雷萨的价值观和理念, 即长期和可持续发展, 以及其社会责任。

中国分公司的总部设在上海。在过去的几年中, 弗雷萨在中国支持了许多金属加工领域的职业学校。不仅在中国技能大赛和世界技能大赛中为他们提供相应的产品, 而且还通过培训在数控铣削领域提供了大量的专业知识。其中一个例子是广东机械技师学院, 他们已经连续 3 次在世界技能大赛中获得数控铣削类的金牌。弗雷萨中国作为其数控铣削刀具的主要供应商, 与学校团队紧密

合作, 开发特定需求的刀具、分享最先进的铣削技术、寻找完美的应用加工参数, 并提出最新的铣削加工策略。在短期内, 我们支持中国队参加世界技能大赛, 并获得好成绩。从长远来看, 弗雷萨中国的目标是通过他们在人才教育方面的努力, 为加强中国未来的机加工竞争力作出贡献。

FRAISA

Company Profile

FRAISA is a Swiss based family-owned company, who produce highest-performance tools in the metal working industry and distribute them to the world through its 7 subsidiaries. The company emphasis is placed upon a continual innovation process that guarantees future-oriented cutting-edge technology through research and development. In Switzerland, Fraisa hold a national industry competition for Polymechanics called "FRAISA ToolChampions" more than 30 years. Every year, over 1,000 apprentices have taken up this challenge. The challenge is a real, selective test: On the basis of a set drawings, a perfect workpiece must be manufactured by means of milling, drilling and thread cutting. Therefore, we are looking for the most talented young Swiss apprentices in high precision metal working. The Best placed Apprentices in the ToolChampions competition (conventional and CNC categories) are qualify directly to take part in SwissSkills, due to a strategic cooperation with SWISSMECHANIC on SwissSkills.

Out of Switzerland, Fraisa subsidiaries all over the world are supporting Polymechanics / apprentices with different competitions, helping them not only to equipped by highest performance Swiss precision tools, but also with state-of-art machining technology. This included euroskills and ChinaSkills. Many of them will compete by "Swiss technology" during WorldSkills. Behind the competition, it shows the value and philosophy of Fraisa, that in long term and sustainable development, as well its social responsibility.

The headquarter of Chinese subsidiary located in Shanghai. Over past years, FRAISA in China supported many vocational schools in the field of metal working. Not only provide them correspondent products in the competition as ChinaSkills and WorldSkills, but also a lot of know-how through training, workshop in the CNC Milling sector. One example would be Guangdong Machinery Technician College, who has continuously 3 times won gold medal at WorldSkills competition in category CNC Milling. FRAISA China as main supplier of their CNC mill-

ing tools, work closely with School team in developing tools in specific needs, sharing the state-of-art milling technology, finding perfect application data, and suggesting with up-to-date machining strategies. In short run, we support China team during WorldSkills competition. In the long run, FRAISA China target on contributing to strengthening China's future machining competitiveness through their efforts in talent education.

公司简介

EHL 集团是全球酒店及泛服务业在教育、创新与咨询领域的标杆与范例。自 1893 年起, EHL 集团就一直致力于提供世界领先的酒店及泛服务业终身学习体验, 在瑞士和新加坡的三个校区提供职业教育学徒制认证、本科、硕士到高管进修等广泛的学习选择。同时 EHL 集团还为全球各地的合作伙伴在咨询顾问、教育培训和学术认证等领域提供可落地的解决方案。秉承以可持续发展理念为核心的价值观和社会承诺, EHL 集团将践行历史使命, 携手全球酒店及泛服务业伙伴, 共同打造以人为本、开放共赢的美好教育、工作和生活体验。

VET by EHL 职业教育与技能实训

VET by EHL 旨在培训具备服务意识的、高效的酒店业专业人士和年轻的毕业生, 旨在帮助私人 and 机构投资者发展酒店业所需的职业能力和知识。应用混合学习 (实践和学术) 的方法, 以实践学习为重点, 其特点在于:

- 持续 18 个月的服务、烹饪、酒店模块化文凭
- 由独立的 6 个月证书模块组成
- 以应用为导向的课程
- 在学习管理系统上提供完整的内容

两种培训模式以满足学员需求:

- 「学徒制 2.0 模式」
- 在酒店 / 餐厅运营中实施
 - 由酒店培训经理 / 主管提供理论和实践课程
 - 80% 工作, 20% 培训
 - “边学边赚”的理念

- 「培训中心模式」
- 需要标准化的培训中心基础设施和运营网点
 - 充分利用行业实习机会
 - 每个 6 个月的证书由 3 个月的培训中心和 3 个月的实习分享组成
 - 由行业专家提供服务



Company Profile

EHL Group is the global reference in education, innovation and consulting for the hospitality and service sector. With expertise dating back to 1893, EHL Group now offers a wide range of leading educational programs from apprenticeships to master's degrees, as well as professional and executive education, on three campuses in Switzerland and Singapore. EHL Group also offers consulting and certification services to companies and learning centers around the world.

True to its values and committed to building a sustainable world, EHL Group's purpose is to provide education, services and working environments that are people-centered and open to the world.

VET by EHL

Designed to train service-minded, effective hospitality professionals and young graduates, VET by EHL aims to help private and institutional investors to develop the vocational competencies and knowledge required in the hospitality industry. Applying a hybrid learning (hand-on and academic) approach with a focus on practical learning, the characteristics of VET by EHL lie in...

- Modular 18 months Diploma in Service, Culinary, Hotel
- Consisting of Independent 6-month certificate building blocks
- Application Driven curriculum
- Complete Content provided on Learning Management System

Two models to suit your needs:

- 「Apprenticeship model」
- Implemented within Hotel/Restaurant operations
 - Theoretical & practical curriculum delivered by Hotels Training Managers/Supervisors
 - 80% on the job, 20% in training
 - “Earn as you learn” philosophy

- 「Training Center model」
- Requires standardized Training Center infrastructure with operating outlets
 - Leverages Industry Internships
 - Each 6-month certificate shared between 3 months in the training center and 3 months in internship
 - Delivered by industry professionals



应用案例

江苏旅游职业学院--瑞士职业教育混合式学习方法在中国高校的最佳应用

江苏旅游职业学院是一所全日制公立学院，凭借其 63 年来积累的烹饪专业经验，其烹饪科技学院仍然是江苏旅游职业学院最大的专业，占据学生总数的 32.9%。在旅游管理学院下，旅游管理专业和酒店管理专业即将通过 VET by EHL 所提供的职业教育与技能实训来提升其现有的实用艺术水平。

EHL 为江苏旅游职业学院提供的授权模式包括标准操作程序、品牌营销、师资培训、教学大纲、学习材料和证书。综合课程计划将被分为西餐烹饪、餐饮服务、房屋运营和综合运营 4 个模块，分别从基础水平到中级和高级水平。成功通过 3 个级别后，学生将被授予由 EHL 认证的职业教育与技能实训毕业证书。

从 2023 年 3 月即将招收的第一批学生开始，VET by EHL 职业教育与技能实训将传递和发展旅游管理和烹饪科学学院的技能、知识和诀窍，从而使毕业生能够有把握和能力地开展专业活动。

Villars Palace Academy, 酒店运营管理与职业教育学徒制的融合典范

作为专精于瑞士酒店管理和领导力的学校，Villars Palace Academy 在 1991 年承袭了博索雷学院的传统，提供广泛的职业教育与技能实训（VET）课程，并获得 EHL 特许认证。Villars Palace Academy 致力于为学生提供独特的机会，通过现实生活中的工作经验来实践应用理论课知识。

在其最先进的教育度假地中学习，学生可以通过对酒店管理知识和国际化实践经验的了解与学习，更迅速有效地实现他们的职业梦想。除此，他们也可以与各部门的专家一起培训，从前厅部和房务部到客房部和餐饮部，不一而足。

- **增强学生的学习体验**——为了给新生代提供宝贵的机会，让他们成为有能力的、公平的领导者，Villars Palace Academy 开发了一种独特的教育体验，让学生成为自己的混合学习路径设计师。
- **提高学生的软技能**——Villars Palace Academy 希望通过多种活动培养学生的成长心态，发展未来领导人成功所需的人际交往能力和精神面貌——创造力、团队精神、抗压能力、科技掌握力和文化智力，以及对全球道德和可持续发展的强烈意识。

Cases

Jiangsu College of Tourism, a promising example of Swiss blended-learning methodology in China

Jiangsu College of Tourism (JCT) is a full-time public vocational school. The College has over 11,961 students on campus with 7 secondary departments operating. Recognized for its culinary expertise accumulated over 63 years, the School of Culinary & Science is the largest department in JCT occupying 32.9% of total students. The school also offers Hotel Management, Tourism Management, International Management, Information Engineering, Economics and etc. To enhance the practical art facilitation skills and its student learning experience, Jiangsu College of Tourism is in partnership with VET by EHL since year 2021. The first batch of VET by EHL students on Jiangsu College of Tourism will be in March 2023.

Licensing Model provided by EHL contains SOPs, branding, faculty training, syllabus, learning material & certificates for JCT. The comprehensive course program will be categorized into 4 modules from Foundation level to Intermediate and Advanced level. When students successfully pass 3 levels, they will be granted VET Diploma published by EHL.

Villars Palace Academy, a model of integration of VET within a hospitality development.

Developing on the heritage of the Collège Alpin Beau Soleil from 1991, Villars Palace Academy, as a Swiss hospitality and leadership school, delivers a broad Vocational Education and Training (VET) programme, licensed by EHL, offers students the unique opportunity to apply what they learn in theory classes through real-life working experiences.

Skilling up within its state-of-the-art Edu-resort, students could effectively reach their professional dreams by learning about Hotel Administration and gaining a hands-on, global experience, while training with experts in various departments, from front office and rooms division to housekeeping and food & beverage, to name but a few.

- **Enhance Students' Learning Experiences** - To give new generations a valuable opportunity to become competent and fair leaders, Villars Palace Academy had developed a unique educational experience, where students are the architects of their own blended learning pathway.
- **Enhance Students' Soft Skills** - Villars Palace Academy hopes to cultivate students to have a growth mindset through multiple activities and develop the interpersonal skills and ethos future leaders will need to succeed - Creativity, team-work, resilience, tech-savviness, and cultural intelligence, together with a strong awareness of global ethics and sustainable development.

瑞士贵族艺术学院 (SNAA)

公司简介

瑞士贵族艺术学院位于瑞士苏黎世，致力于艺术教育理论和实践的研究，以提高视觉表演艺术的专业和教学技能。

除此之外，SNAA 还包括一项全面的中国战略，由华高国际执行董事曹女士于 2011 年与瑞士艺术材料制造商 Caran D'ache 合作推出。中国 SNAA 包括 CHOO NOBLE Beauty Creation 和 CHOO NOBLE Art 互动咖啡馆，这两个项目的目标是为中国带来高品质的艺术和瑞士生活方式，并提供三维艺术学习体验。

视觉艺术教学计划

瑞士贵族艺术学院以瑞士领先的艺术专业技能培训和来自其他欧洲国家和地区的优秀艺术教育资源为基础，与全球合作伙伴合作，开发了一套完整的视觉艺术和表演艺术教学系统。它包括艺术教育从业者持续专业发展项目 (CPDA)、视觉艺术教学计划 (VATP) 和表演艺术教学计划。这些课程基于终身学习的原则，特别适合中国视觉艺术学习与创业相结合的人才市场的需求。

在中国，VATP 视觉艺术教育课程体系于 2020 年正式启动。有了这个证书，艺术家可以将艺术与创业结合起来，提高他们的职业前景。通过在 VATP 课程中获得的知识，学生可以成为认证的艺术教师，并可以通过开办自己的艺术学校或 Choo Noble art 互动咖啡馆，在 Choo Noble 项目中快速走上创业之路。简言之，SNAA 为艺术从业者提供了广泛的机会，并在塑造未来的过程中支持他们的学生。

DCIA-PIA	G1-G3	G4-G6	G7-G8	IF-INTRM	AF-AD	SOLO
在不同领域寻找兴趣进行基础创作和学习	多领域进行挖掘式的主题借鉴融合不同的绘画风格创作个人风格作品			拥有独特的个人见解能够随心所欲的自我展现并且获得一定的社会认可		
启蒙级别	专业级别			艺术家级别		

该认证基于 40 小时的在线课程。毕业后，毕业生将获得 VATP 视觉艺术教师资格证书，其中包括瑞士 Sicpa 集团的数字安全管理系统 (Certus) 和区块链技术 (Sicpa)。这种认证被艺术学校广泛推广。



Swiss Nobleness Art Academy

Company Profile

Swiss Nobleness Art Academy (SNAA), based in Zurich, Switzerland, is dedicated to the study of art education theory and practice to improve professional and teaching skills in the visual and performing arts.

Amongst others, SNAA includes also a comprehensive China strategy, launched by Ms Amy Cao, Executive Director of Huagao International in 2011 in cooperation with the Swiss art material manufacturer Caran D'ache. China SNAA includes CHOO NOBLE Beauty Creation and Choo Noble Art interactive café, both projects have the goal of bringing high-quality art and Swiss lifestyle to China as well as providing a three-dimensional art learning experience.

Visual Arts Teaching Program

Based on Swiss leading art professional skills training and the integration of excellent art education resources from other European countries and regions, the Swiss Nobleness Art Academy, in collaboration with its global partners, has developed a complete systematic teaching system for visual arts and performing arts. It includes the Project for Continuing Professional Development for Art Education Practitioners (CPDA), the Visual Arts Teaching Program (VATP), and the Performing Arts Teaching Program (PATP). These programs are based on the principle of life-long learning and are particularly responsive to the needs of the China talents market merging visual art learning and entrepreneurship.

In China, the VATP visual arts education curriculum system was officially launched in 2020. With this certificate, artists can combine art and entrepreneurship to improve their career prospects. With the knowledge gained during the VATP courses, students become certified art teachers and can quickly embark on the entrepreneurial path at one of the Choo Noble projects by running their own art school or Choo Noble Art interactive café. In short, SNAA provides art practitioners with a wide range of opportunities and supports their students all along the way to shaping their future.

DCIA-PIA	G1-G3	G4-G6	G7-G8	IF-INTRM	AF-AD	SOLO
Seeking interests in different fields for basic creation and learning	Attempting exploration theme in multiple fields, learning and integrating different painting styles to create personal style works			Having unique personal opinions, be able to express themselves and gain certain social recognition		
Enlightenment level	Professional level			Artist level		

The certification is based on a 40 hours online course. After finishing, graduates get a VATP visual arts teacher qualification certificate that includes the Swiss Sicpa Group's digital security management system (Certus) and blockchain technology (SICPA). This certification is widely promoted by art schools.



艺术教育从业者持续专业发展 (CPDA)

与 VATP 类似，艺术教育从业者持续专业发展 (CPDA) 基于终身学习原则。这是瑞士贵族艺术学院为瑞士、中国和世界各地的年轻艺术教育工作者发起的一项倡议。

通过这一额外认证，瑞士贵族艺术学院利用世界上最好的艺术教育资源，在艺术教育专业技能、商业管理和国际交流三个实际应用领域为年轻的艺术教育工作者提供可持续的再培训计划。

Continue Professional Development for Art Education Practitioners (CPDA)

Similarly, to the VATP the Continue Professional Development for Art Education Practitioners (CPDA) is based on the life-long learning principle. It is a Swiss Nobleness Art Academy (SNAA) initiative for young art educators in Switzerland, China, and around the world.

With this additional certification, the Swiss Nobleness Art Academy (SNAA) offers young art educators a sustainable reskilling program in three practical application fields of art education, such as professional skills, business management, and international exchange, using the best art education resources in the world.

Generis

公司简介

Generis 是一家致力于为公共和私营客户寻找创新解决方案的服务提供商。其客户可以接触到瑞士和中国的 40 多名高素质经济学家、工程师、政治学家、通信专家和中国文化专家，以及一个庞大的专业服务合作伙伴网络。Generis 不仅为高技能专业人士提供机会，而且长期以来为应届大学毕业生提供优秀的职业机会。

Generis 是一家高质量的服务提供商，对看似不可能的事情着迷。Generis 正专注于从零开始培养人才，以满足其全球客户的挑战性需求。项目始于将没有经验的应届毕业生转变为优秀人才。每位新员工将由一至三名经验丰富的员工指导。第一位导师将专注于专业知识，包括如何提高绩效、专业技能和方法。第二位导师将专注于人才的心理健康，同时与学员保持密切联系。第三位导师将专注于一切与人力资源相关的组织。这一导师战略促进了员工之间的内部沟通，使他们能够交流问题并找到解决困难任务的方法，在中国的员工有专门的瑞士导师，反之亦然。为了进一步加强内部合作和沟通，Generis 每年举办一次聚会，导师和学员可以在聚会上与同事会面并建立牢固的联系。为了进一步帮助专业员工和应届毕业生开发并提供出色的解决方案来应对极其困难的挑战，Generis 中国为在公司工作三年以上的员工提供了来自各种第三方培训提供方的独家强化培训。培训计划是根据公司和员工的需要量身定制的。培训结束后，受训者将获得第三方颁发的证书，该证书将对公司发展和未来职业发展有帮助。

Generis

Company Profile

Generis is a service provider dedicated to finding innovative solutions for its public and private sector clients. Its clients have access to over 40 highly qualified economists, engineers, political scientists, communication experts, and sinologists in Switzerland and China, as well as a large network of specialized service partners. Generis not only provides opportunities to highly skilled professionals, but also has a long history of providing excellent career opportunities to fresh university graduates.

Generis is a high-quality service provider who is fascinated by the seemingly impossible. Generis is focusing on developing talent from the ground up in order to meet the challenging demands of its global clientele. The journey begins with transforming fresh graduates with no experience into exceptional talent. Each new employee will be mentored by one to three experienced employees. The first mentor will concentrate on expertise, which will include how to improve performance, professional skills, and methodology. The second mentor will concentrate on the talent's emotions while keeping in close contact with his mentee. The third mentor will concentrate on the organization, including everything HR-related. This mentor strategy fosters internal communication among employees, allowing them to exchange problems and find solutions to difficult tasks. An employee in China can have a mentor in Switzerland and vice versa. To further bolster internal cooperation and communication, Generis hosts an annual gathering where mentor and mentee can meet and form strong bonds with the coworkers. To further help professional staff and fresh graduates to develop and provide outstanding solutions to extremely difficult challenges, Generis China offers employees who have been with the company for more than three years an exclusive intensive training from a variety of third-party training providers. The training program is tailored to the needs of the company and the needs of the employees. At the end of the training, the trainee will receive a certificate from a third party that will be useful for company development and his future career development.

ABB集团

公司简介

ABB 是数字技术的行业领导者，为电气、运动控制和工业自动化领域提供产品、系统、行业解决方案和服务。其产品最大限度地提高了能源效率、工业生产率以及安全可靠。

通过培训计划和评估，ABB 的员工能够根据个人兴趣规划自己的职业生涯。ABB 以低于 10% 的人才外流率为荣，因为这是员工战略成功实施的证据和结果。

在寻找具备所需技能的毕业生方面，ABB 面临着与制造业其他公司相同的困难。事实上，在公司内部指导新员工的同事缺乏必要的教学材料和工程经验的情况也时常发生。为应对这样的情况，ABB 积极与大学和职业院校合作，提供一整套教师培训、教材、教具和学生发展平台。通过与职业学院的合作，ABB 每年都在为人工智能、汽车、电子和建筑等行业培养人才。随着行业面临技术工人短缺的问题，ABB 正在注入新的血液，并寻找利用自动化技术协助工人工作的方法。

在 ABB，新招募的毕业生和经验丰富的老员工在整个职业生涯中都会接受多次技能提升和技能再培训课程，从而帮助他们在公司内晋升或集团内部转岗。这就是 ABB 搭建稳定的人才库的方法，并为中国社会和瑞士商业界做出积极贡献。

人才与其部门经理之间的透明沟通是 ABB 员工战略的另一个基本要素。除了集团对内部转岗持开放态度外，各个部门经理还需要定期接受评估，以确保每个员工都能在其最适合的岗位。

ABB Group

Company Profile

ABB, the industry leader in digital technologies, provides products, systems, solutions, and services for electrification, motion, and industrial automation. Its offerings maximize energy efficiency, increase industrial productivity, and improve power reliability.

Through training programs and assessments, employees at ABB are able to shape their careers in accordance with their individual interests. ABB also takes pride in having a talent outflow turnover rate below 10%, which is evidence and the result of successfully implemented employee strategies.

ABB faces the same difficulty as other companies in the manufacturing industry when it comes to finding graduates with the required skills. In actuality, it is frequently the case that the same vocational colleagues who have been instructing students lack the necessary teaching materials and engineering experience. ABB actively collaborates with universities and vocational schools by providing a complete set of teacher training, teaching materials, teaching aids, and a student development platform. Through its cooperation with vocational colleges, ABB is nurturing talents for industries such as artificial intelligence, automobiles, electronics, and construction every year. With industry facing a shortage of skilled workers, they are injecting new blood and helping to find ways to use automation technology to assist people in carrying out tasks.

At ABB, both newly hired graduates and seasoned employees receive multiple up skilling and re-skilling courses throughout their careers to help them advance within the company, climb the career ladder, or change careers entirely from within the organization. This is how ABB creates a stable talent pool and positively contributes to Chinese society and the Swiss business community.

Transparent communication between talent and their line managers is another essential element of the ABB employee strategy. In addition to being open to career changes, line managers at ABB are regularly evaluated to make sure that everyone has a good place to work.

瑞士企业在中现状

近些年来用工缺口扩大、人才流失等问题让企业深刻地意识到了人才储备与员工忠诚度的重要性。中国许多大型企业陆陆续续与中高等院校通过校企合作的模式开展合作，通过入驻学校，在人才招聘上抢占先机，每年吸引了大量优秀毕业生留任企业。

我们通过视频与书面调查的方式采访了十余家大型的瑞士企业驻中国公司负责人，就职业教育校企合作模式进行了交流，负责人们也对于企业在中国的发展、人才培养的心得上表达了自己的见解：

高素质人才稀缺，重视人才储备

现如今企业不得不面对人才稀缺、内生扩张、员工老龄化等问题，持续造血能力决定了其生存的关键。在社会招聘难以满足企业对高素质人才需求的局面下，人才的储备成为了企业关注的重点。近年来年轻人进厂工作的意愿逐年递减，而且很多新员工因为认为收入有限，能力得不到锻炼，所以会在职业的价值感和获得感上有所缺失，从而选择在入厂两年内离职。为了自身发展的需求，也为了帮助员工度过成长的阵痛期，企业决定在积极改善客观问题的基础上，开始落实各自的人才储备战略。通过多元化的合作和内部人才培养体系的搭建，加强员工对企业认同感和归属感。

重能力，轻学历

现阶段在企业内部以学历决定毕业生入企时的薪资待遇是无可厚非的事情。然而个人在企业的发展却并非单纯唯学历论，成长路线和个人能力才是决定个人发展的核心要素。从企业角度来说，特别是对于外企，在欧美国家蓝领工人的薪资水平往往要高于普通白领，各行业对于经验丰富的技术人才更加视若珍宝。而在中国，企业对于这一点也在积极朝向欧美国家靠拢。企业愿意为员工提供一个长期发展的平台，也相信通过在企业内的成长，员工可以实现自我价值的提升。

The Status Quo of Swiss Companies in China

Facing issues like a growing labor shortage and human capital flight, more and more companies have come to realize how important a talent pipeline and employee loyalty are. Many large companies in China have forged partnerships with universities and colleges through cooperative programs. Their presence in school also gives them a head start in scouting high potential employees and a considerable number of graduates of these programs have joined the host companies. We surveyed more than ten large Swiss companies in China via interviews and questionnaires, and exchanged views on the model of school-company cooperation in vocational education, as well as on the development of foreign companies in China and their insights on talent training.

High-quality Talent is Scarce, A Talent Pipeline is Essential

Talent scarcity, expansion problems, aging workforce—there is no shortage of challenges facing companies today. And when traditional recruitment methods can no longer meet their demand for high-quality talent, building a robust talent pipeline is put high on the agenda because it has become a key determinant for business survival. However, in the past few years, the manufacturing industry has witnessed a decline in youth labor force because young people feel that a manufacturing job is low-paid and cannot give them a sense of growth and achievement. The highest HR turnover rate is found among staff within the first two years of employment.

In response, many manufacturing companies are actively solving problems to help new hires settle into jobs, which apparently also serves the interests of the company. And to create a stronger sense of belonging in the workplace, companies have also introduced talent pipeline strategies and started to develop a diversified training system.

Skills Matter More Than Educational Qualifications

While it is natural that the starting salary of graduates usually depends on their level of education, education is not the only determinant of career growth—not even a key one. It is the choice of career paths and job competencies that make or break a career. In Western countries, blue-collar jobs tend to pay better than white-collar jobs because experienced skilled workers are considered as an invaluable asset. Companies in China are also joining the bandwagon. More and more companies have set up a long-term platform where employees can grow and increase their value. Companies are offering a platform for long-term employee development because they believe that this will improve employee value.

中进外退

在外国企业初入中国时，免不了从总部调派许多本国人来中国，而随着近几年企业在中国的发展步伐加快，企业内部外国人的平均比例呈现了明显的下降趋势，从原本的10% 降到了 1%，一些外企甚至只有几名本国人来华交流轮岗。大部分外企的内部领导层和其他重要岗位基本实现了本土化替代。促成这一局面的主要原因是因为外企想要在中国长期发展便离不开本土化策略。中国开放的竞争市场给各方面人才提供了大量的实践机会。通过理论与实战的结合，中国本土的管理团队不管从能力水平还是经验阅历都不逊色于任何人，而且本土化的管理也为外国人提供了一个应用实践的机会和平台。

校企缺少深度合作，行业需要有效整合

尽管大企业在社会资源上有着相对的优势，且与院校和劳务中介的合作解决了部分用工问题，但是在如何留住人才以及应对人才流失的问题上依然不知所措，特别是在行业竞争激烈、人才流失率大的沿海地区。企业在识人、育人、留人上难以做到兼而有序。而在校企合作模式中，中小企业往往由受限自身规模与成本，难以与院校形成长期稳定的合作。因此企业期待在人才培养上能诞生一个可以真正帮助企业解决问题的平台，通过提升社会认知度、调度社会和人力资源、构建行业乃至跨行业职业资格互认体系，对职业教育行业进行有效整合，助力企业培养人才、留住人才，从而对解决各地区人口就业和为企业提供机会反哺社会起到积极作用。

More Locals, Less Expats

It is a common practice for a foreign company to send an army of expats when it is making its first move to the Chinese market, but as the company starts to grow in China, the proportion of Chinese employees in foreign companies will rise. In fact, we can see that the average proportion of expats in foreign companies has dropped dramatically from 10% to 1%. Only a few expats were sent for job rotation. Most of the senior management positions and key roles are filled by local staff. There are two main reasons behind this shift: 1) a localization strategy is indispensable for the long-term growth of foreign companies; 2) local management teams are as good as, if not better than, their foreign counterparts in terms of skills or experience, thanks to the abundant opportunities provided by the open Chinese market, allowing them to combine theory and practice. In fact, a lot of foreign expats have been sent to China to learn from local professionals.

Lack of Deep School-business Partnerships, the Industry Needs Effective Integration

For large enterprises, although they have more access to social resources and the cooperation with schools and employment agencies has solved some employment problems, they are still racking their brains trying to improve rendition and reduce turnover rate. It is particularly hard for companies based on the coastal areas to strike a balance among the identification, development and retention of talented employees because of a high turnover rate driven up by intense competition.

For small-and-medium enterprises (SMEs), it is difficult for them to forge long-term and stable partnerships with vocational schools because of the scale often limited by their own scale and costs constraints. What these SMEs need is a platform that can help them solve real problems. Such platform will raise the social status of vocational education, allocate social and human resources, and establish an inter-industry or even cross-industry qualifications recognition system. In doing so, a highly integrated vocational education industry will emerge. This industry will play a crucial role in helping companies with employee development and retention, giving them opportunities to contribute to social progress and solve unemployment problems.

中瑞合作助力中国职业教育发展



提升职业教育社会认可度

不得不说，社会认同度低极大地限制了职业教育的发展。目前普遍的社会认知仍是以高学历为主流的精英思想，对职业教育的刻板印象停留在是作为无法正常接受普通教育的第二选择。特别是中等教育阶段，由于教育资源相对匮乏，管理散乱，很长一段时间里职业教育的教学成果无法达到预期，造成了学生毕业率始终落后于普通高中，毕业后继续接受高职教育比例不高。多数高等职业教育生源来自普通高中，致使中等职业教育与高等职业教育无法有效衔接。只有打破偏见，让社会深刻意识到职业教育与普通教育在社会层次上并无差别，重新树立社会认同感才是让职业教育顺利发展的关键。

教育部门可以在引入瑞士教学体系的同时探索职业资格互认体系的搭建，并逐步向社会扩散其影响力，通过自上而下的方式强化职业教育权威性，从而最终实现职业教育整体社会认同感的提升。

China-Switzerland Collaboration Supports the Development of Vocational Education in China



Improve the Social Status of Vocational Education

Let's address the elephant in the room—the low social status has been a massive hindrance to the development of vocational education. In a society where a meritocratic educational system still dominates, the stereotype of vocational education being second choice to general education still exists. The view of vocational education being inferior is even more prevalent at secondary level education. The graduation rate of vocational secondary school has been disappointingly lower than that of general secondary schools for years. Only a few graduates will advance into the next level, making higher vocational institutions dominated by their counterparts from general secondary schools. This has also been breaking the ties between secondary-level and higher-level vocational education. There are many reasons for this problem, such as inadequate educational resources and chaotic management. Only by shattering the prejudices and changing perceptions to give equal status to vocational education, can we have stronger vocational education.

Apart from introducing the Swiss system, we also suggest the education authority to establish a system of mutual recognition of professional qualifications as an official endorsement, and strengthen its influence to raise the status of vocational education in a top-down manner.

产学融合

职业教育发展的落后一方面来自于师资。教师由于常年在学校授课，缺少时间和机会与外界深度交流去了解产业发展和市场需求，久而久之传授的只能是书本上的知识和自己过时的经验，而能够教授更全面知识和经验的“双师型”教师的数量更是远远无法满足市场需要。

另一方面则是教学内容与设备。由于大部分职业院校的办学经费来自于政府财政拨款，教学课程与内容的设置上无法做到完全自主化，设备更新迭代的速度也难以跟上企业发展。

这两方面的欠缺导致目前存在职业院校与产业脱节的现象。尽管有少部分院校能够与企业开展深度合作，由企业提供师资和设备，但在实际操作中由于企业定制化需求强，同时也受限于企业自身规模和所投入的精力，无法将模式大面积复制和推广。而且长期的产学脱节限制了毕业生的自身发展，得不到企业认可，进一步加剧了两者的矛盾。

中瑞校企合作将成为解决问题的关键。在合作项目的基础上，吸引更多的瑞士企业或采用瑞士模式的培训院校参与到中国职业教育的建设之中，集中企业与学校资源，形成集群效应，从而解决企业专业性人才需求并共摊人才培养成本；而院校则能获得更多先进的教学设备、专业的技术指导以及企业资金支持，深化产学融合发展。

多方协同配合

受地理、人文、产业环境等客观因素影响，尽管目前社会正在努力推动职业教育发展，但具体落实到各地后执行效果不一，差异性大。不管是地方政府、职业教育还是地方产业都具有很强的区域性，因此合作方向上的错位导致政府难以对产业链上下游资源统筹规划，发挥市场引导作用。

校企合作时，企业考虑到合作模式、成本、知识产权、企业间排他性等一系列问题，合作上流于表面，难以保持深度配合。反之，几方主体都无法对培养出的学生形成强约束力，人才轻易的流失导致企业利益在目前的职教合作中无法得到充分体现，降低了企业积极性。

因此，教育部门应借助中瑞合作发挥规模优势，打造中瑞职业教育闭环网络，在网络内统筹各方资源与需求，配合地方政府发挥引导作用，为目前人才区域错配、周期错配提供有效的解决方案。

Industry-education Integration

One key problem facing the vocational education industry is the education-employment mismatch. There are two main reasons for this:

- 1) Teachers are busy with teaching and have little time to spare for communicating with practitioners to catch up with industrial trends and market demand. At the end, teachers only have textbooks and outdated experience at their disposal. The number of double-qualified teachers who can impart both theoretical knowledge and practical skills still misses the target by a wide margin.
- 2) Outdated curriculum and equipment. As most vocational education institutions are funded by government, they do not have much autonomy over curriculum decision-making and it is difficult for them to keep up with the latest updates for the equipment.

Only a few vocational education institutions have established deep partnerships with companies, but they are not out of the woods either. Although a company will provide teachers and equipment, the curriculum has to be tailored to the company’s specific requirements. It is also limited by the scale and commitment of the company, thus making it hard to reuse or promote the curriculum.

This persistent education-employment mismatch is detrimental to graduates’ growth in companies and drive schools and companies further apart.

A deeper China-Switzerland school-business partnership will be a key solution to this problem. With the involvement of more Swiss companies and training institutions based on the Swiss model, we can better unleash the synergy between schools and businesses to meet the demand for professionals and share the costs of talent development. Schools will be provided with more advanced equipment, technical guidance and funds from companies, and the school-business partnership will be further strengthened.

Multi-party Synergy

In China, even though there is a nationwide effort to promote vocational education, the practice still varies widely across different regions due to local factors such as geography, culture and industry. Whether it is local government, vocational education programs or companies, they are all marked by distinctive regional characteristics. Hence, it is very challenging for the government to coordinate resources across the industry, and guide the market.

Furthermore, it is hard to forge a deep school-business partnership because companies tend to be held back by issues like cooperation mode, costs, intellectual property rights, and exclusivity. As a result, graduates of these cooperative programs are unlikely to feel connected with the companies, and a high employee turnover rate, which is detrimental to the interests of the companies, will make them feel disheartened.

Thus, it is imperative for the education authority to create a China-Switzerland closed-loop vocational education network by leveraging economies of scale. This network will be an efficient solution to the regional and cyclical misalignment by effectively coordinating resources and demand, and helping local government to guide the market.

培养毕业生企业归属感

在目前社会环境下,员工与企业往往很难建立深层的联系,尽管员工在学生时期就受到企业的培养,但双方的关系依旧很难维持。员工对于企业的选择会从薪资待遇、发展前景、工作环境、人际关系等多角度综合考虑,其中任何一点都会对企业造成人才流失。

以制造业为例,制造业是职业教育重要的下游产业之一。然而,企业新员工的普遍薪资待遇不高,但是工作强度高,环境差,枯燥乏味,久而久之员工就会出现离职的想法,造成企业难以留住人才。因此,除了改善客观环境外,对于员工心理建设工作也需要进一步加强,培养员工集体荣誉感和归属感。

得益于瑞士“学徒制”的影响,瑞士企业在员工归属感的培养上有深刻的心得体会。将“学徒制”作为校企合作的延伸,1对1的师徒制不仅能让学徒的技能得到提升,同时导师也能为学徒提供咨询与发展规划,对学徒深层次的职业意识与企业归属感上有潜移默化的影响。以“导师”作为媒介,学徒在企业可以感受到归属感、责任感,建立更加紧密的联系。

Help Graduates Feel Connected to the Companies

Given the circumstances, it is not easy for employees to feel connected to their company. Even though the company started to train them when they were still students, it is still difficult to build a strong employer/employee relationship. There are many factors which will impact a stay/leave decision: wages and benefits, career prospect, work environment, interpersonal relationships, to name but a few. And any one of them can trigger employees to quit.

Take the manufacturing industry as an example, one of the important downstream industries of vocational education. New hires tend to face a number of challenges: a low starting salary, a heavy workload, a bad work environment, repetitive work and boredom. Day in day out, the idea of quitting begins to creep into mind and it will be difficult for companies to change their decision. To improve employee retention, it is important for companies to enhance work environment and foster a strong sense of honor and belonging among employees.

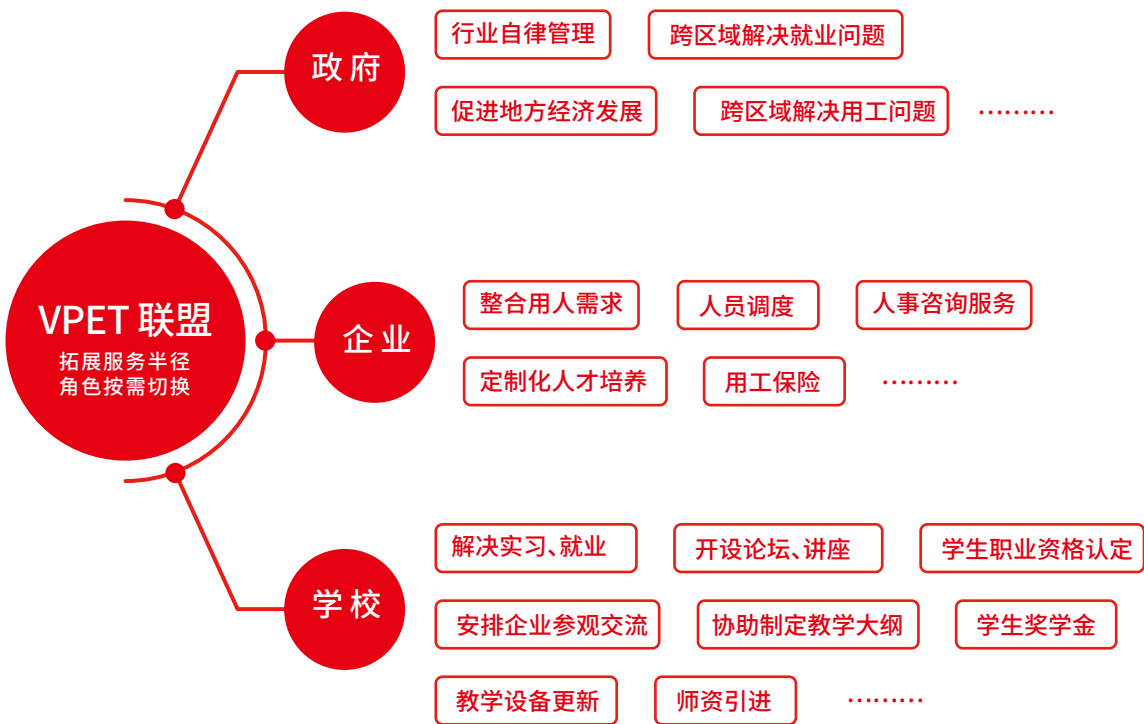
Swiss companies have a proven track record in a strong sense of belonging among employees thanks to apprenticeships. The Swiss apprenticeship programs, as a part of the school-business partnerships, adopts one-on-one mentoring model. Mentors will not only help apprentices improve their skills, but also provide counselling and give advice on career path. Their professionalism and sense of belonging will also rub off on the mentees, instilling a stronger sense of duty and connection.



中瑞合作下职业教育发展方向

中瑞合作催生新业态, 行业运营商机位转变

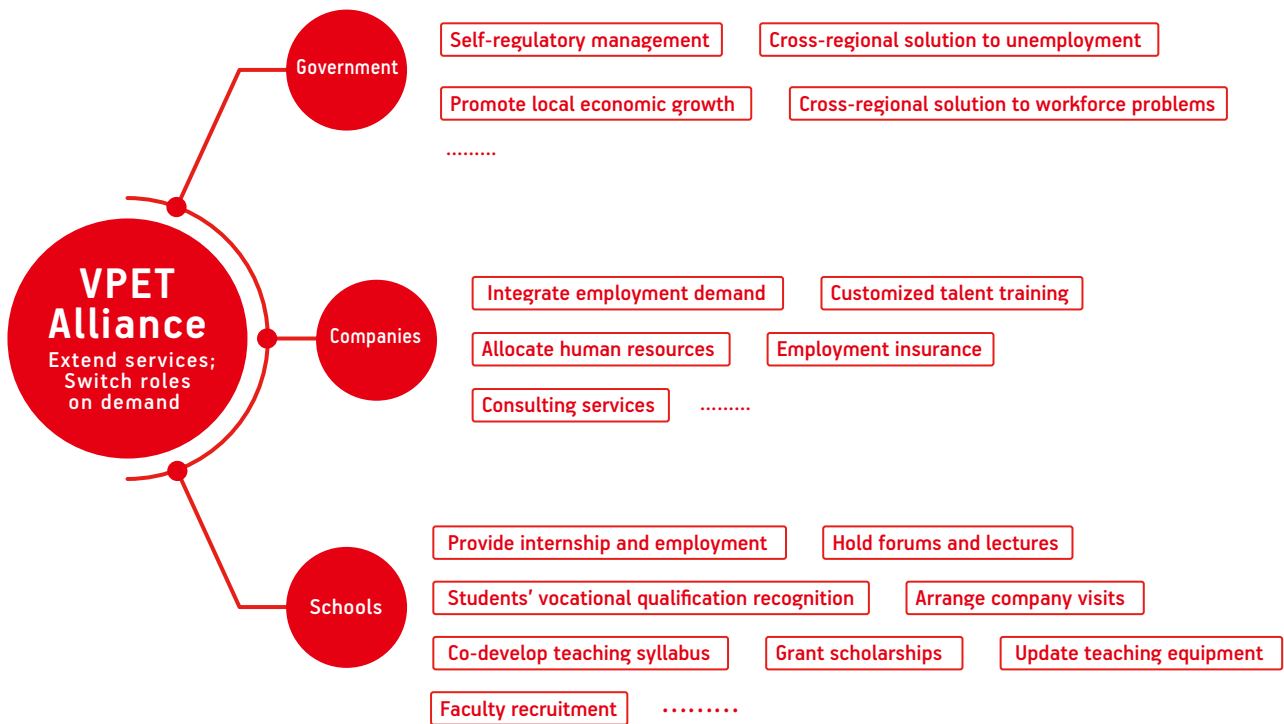
在中瑞双方的紧密合作下, 推动职业教育规模化、多样化发展, 催生出新的业态。未来通过成立 VPET 联盟赋能行业整体发展, 联盟将具备极强的社会资源整合能力, 大幅提升行业门槛, 帮助政府降低管理成本。联盟定位是行业运营服务商以及多方的桥梁, 服务内容与劳务中介一刀切的服务不同, 将在调节行业供需平衡的同时, 为两端做出更精细化的管理服务, 引入金融、医疗等社会多层次多领域参与共同赋能行业整体发展, 形成自身独有的竞争壁垒, 为行业发展起到放大作用。



The Future of Vocational Education under China-Switzerland Collaboration

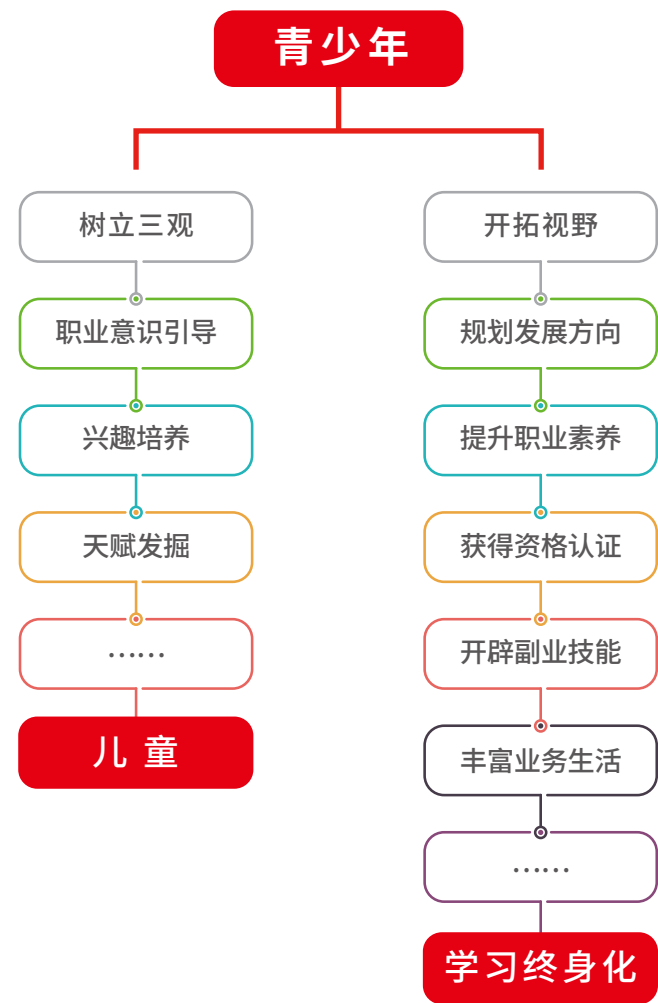
China-Switzerland Collaboration Ushers in a New Era, the Rise of Operation Service Provider

Under the close cooperation between China and Switzerland, the vocational education industry will enter a new era of fast and diversified growth. In the future, a China-Switzerland VPET Alliance will be established to empower the vocational education industry by efficiently coordinating social resources, setting higher thresholds, and helping government to reduce management costs. This alliance will act as an operation service provider and a bridge. Unlike employment agencies which provide recruitment services in a one-size-fits-all approach, this alliance focuses on balancing supply and demand, and offering more customized management services for players on both sides. Furthermore, this alliance is committed to unleashing multiparty synergy by engaging a wide range of industries such as finance and medicine to foster unique competitiveness and push forward the development of the vocational education industry.



受众人群两端延伸

从职业教育的广度来说，现阶段学龄青少年还是中国职业教育最大的受众群体，其次为初入社会的 20-30 岁左右的人群，而面向更早期或者后期年龄段的市场仍有巨大的潜力有待发掘。借鉴瑞士终身学习发展战略，未来中国职业教育会向两端同步拓展，以学龄青少年为核心，朝着职业教育终身化的方向发展。职业教育除了服务于职场，还有更广泛的用途。根据不同年龄层次的特点与诉求，延展出具有针对性的教学内容，能够让职业教育更具有现实意义。

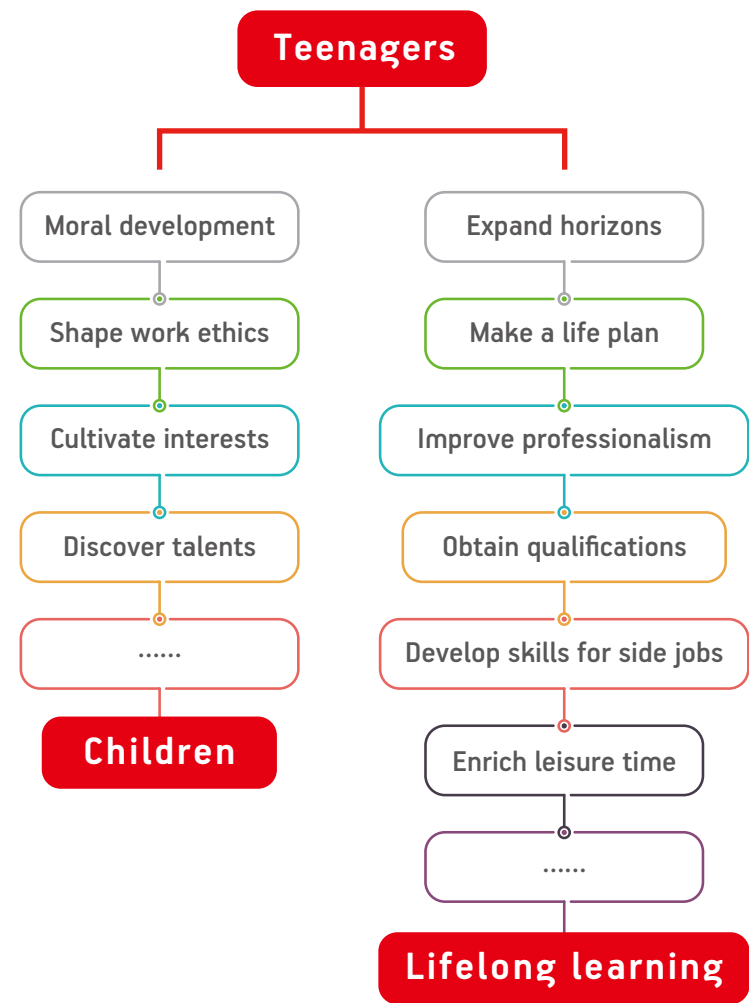


职业教育层次提升

对职业教育的深度而言，市场需求的不断增加以及中国制造业蓬勃的发展对现有的企业是一个巨大的挑战。考虑到生产制造和人员管理的复杂度都会有所提升，其精密化程度的提高都对员工的专业水平有了更高要求，进一步突显人才短缺的问题。产业升级带来的技术革新将会促使企业提升员工的技术水平和职业素养，市场必定会出现进一步对于高层次专业化技术人才的需求。中国目前职业本科教育尚且处于起步阶段，借助中瑞职业教育合作，填补中国高层次职业教育的空白，能够有效促进中国职业教育迈向更深层次和更高水平的发展。

Extend Towards Both Ends of the Age Spectrum

When it comes to the breadth of vocational education, school-age teenagers are the largest group of learners in China, followed by people aged 20-30 who have just entered the workforce. In contrast, the involvement of younger or older age groups is still low. With this enormous market potential, it is advisable for the Chinese vocational education industry to extend further towards both ends of the age spectrum and encourage lifelong vocational education by drawing on the experience of the Swiss lifelong education strategy. Vocational education has a bigger role to play in people's life apart from preparing them for work. We should develop targeted curriculum based on the age-specific characteristics and requirements to make vocational education more relevant.

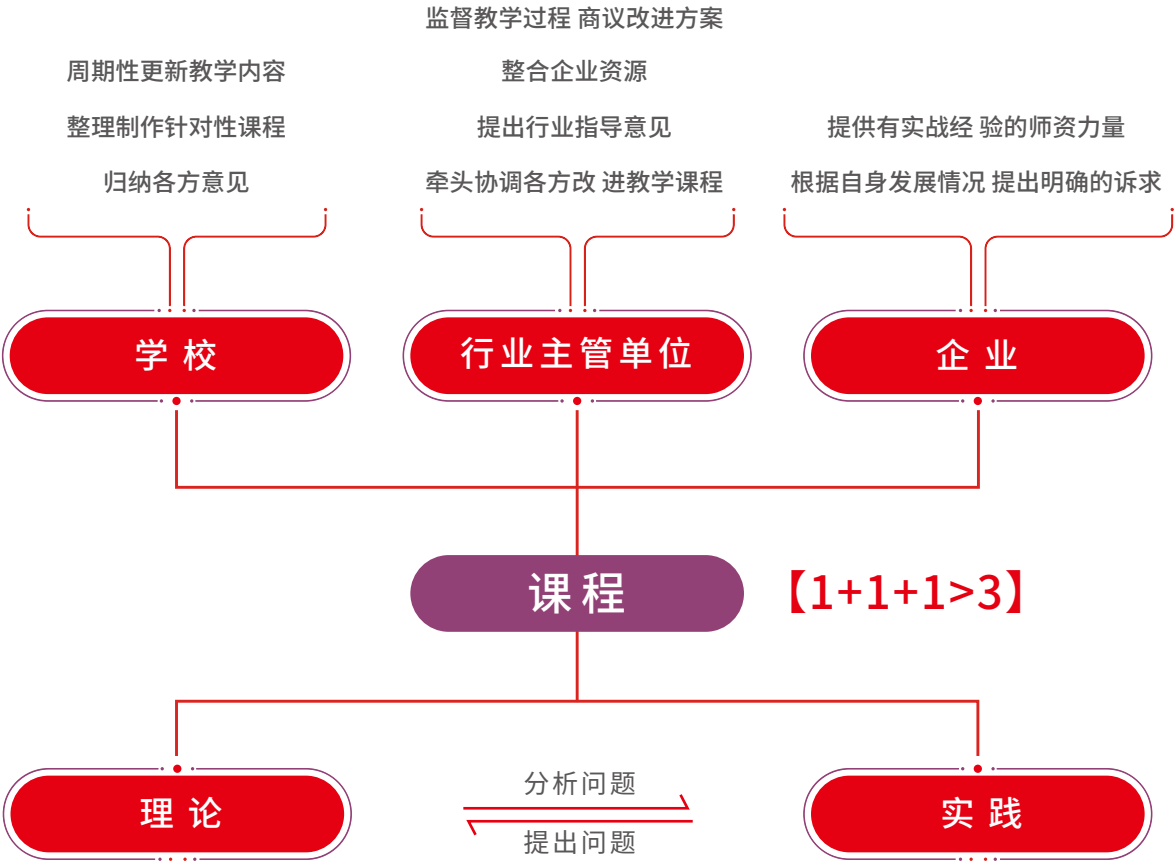


Vocational Education Level Up

As for the depth of vocational education, with the increasing market demand and the fast growth of China's manufacturing industry, companies will face even more challenges. More and more sophisticated manufacturing technologies and products will pose higher requirements on the skills of workers, which will exacerbate the existing talent shortage. The technological innovation brought by upgrades and transformation will force companies to improve the skills and professionalism of their employees, inevitably causing a surge in demand for highly skilled employees. China's undergraduate-level vocational education is still at an early stage, and the China-Switzerland cooperation will fill the gap of high-level vocational education in China and take it to the next new level.

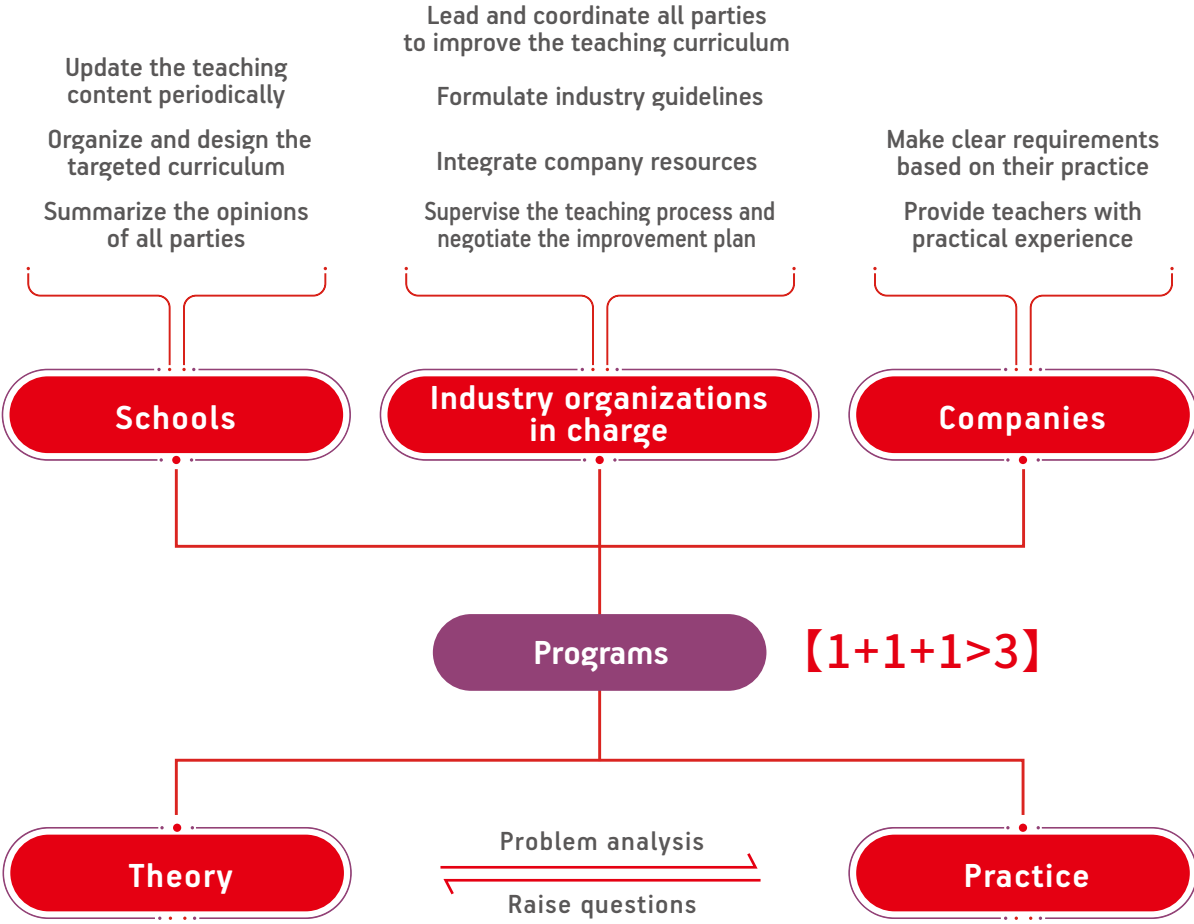
内容重塑，产学深度融合

在政府的统筹规划与校企深度合作之下，未来职业教育课程设置依然会坚持理论教学与实践教学的并重，注重理论与实践的交叉性，让学生在实践发现问题，在理论中寻找答案。在方向上，既涉及现阶段重点制造产业，也有新兴科技行业、互联网、生活服务等内容，更贴合于社会及企业发展所面临的需求和问题。通过中瑞合作整合在华瑞士企业资源，职业教育不会仅为个别企业提供定制服务，而是会面向所有的在校学生，由学校、行业主管部门、企业群三方共同制定人才培养方案。并且根据发展的需要节奏地调整教学内容，有效的落实“1+X”策略，增强教学内容的时效性和针对性。



Content Reshaping, Deep School-business Partnerships

Looking into the future, with the government's coordination and deep school-business partnerships, the curriculum of vocational education will continue to focus on strengthening the ties between academic education and hands-on practice, allowing students to spot issues in practice and seeking answers in classroom. Moreover, it will cover a broad variety of industries, including the manufacturing industry which is a pillar for the economy and emerging industries such as new technologies, internet, life services, etc., to keep pace with the socioeconomic requirements and problem. Under the China-Switzerland cooperation, resources of Swiss companies in China will be more efficiently integrated. Instead of being confined to a customized curriculum, more comprehensive training programs will be co-developed by schools, the government bodies and companies, and developed to all eligible students. The curriculum will be adjusted at a reasonable pace to improve its relevance and effectiveness. The “1+X” certificate mechanism will also be rigorously implemented.



本土化创新，全方位赋能中国职业教育发展

由瑞士商会牵头、协调中瑞政府、院校、企业共同助力中国职业教育体系建设，以引入并打通国际化职业资格认定体系，开展国际级专业技能大赛等形式提升社会认可度；运用“双轨制”成功经验培养高素质高水平的员工，提升主观能动性，通过跨领域、跨部门、跨业务协调配合，形成以人为本的企业核心竞争力；结合中国职业教育发展方针，形成具有中国特色系统性、规模化的职教体系，向更深、更广的方向探索，一同推动中国职业教育高质量发展迈向新一层台阶。

Localization & Innovation, Full Support for the Development of Vocational Education in China

Initiated by Swisscham China, Swiss and Chinese governments, educational institutions and companies are making a concerted effort to push forward China's vocational education industry. For example, we strive to improve the social status of vocational education by introducing a system of mutual recognition of professional qualifications and hosting international skill contests. The successful story of the Swiss dual-track model has inspired Chinese companies to break silos and boost cross-functional cooperation in fostering highly skilled and self-motivated employees, which will help companies to form key competitiveness. Under the government's guidance, a strong vocational education industry with Chinese characteristic is taking shape. Looking ahead, China will work closely with Switzerland to push the frontiers of China's vocational education and take it to the next level.



附录：中瑞 VPET 企业名录

企业名称	所属行业
乔治费歇尔 GF	机械设备
西卡中国 SIKA	建材物料
迅达中国 Schindler	机械设备
新创烹饪 CieCAS	职业培训
弗雷萨 FRAISA	精密机械
EHL 集团	职业培训
瑞士贵族艺术学院 SNAA	职业培训
Generis	职业培训
ABB 集团	机械设备

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Appendix: List of Companies Involved in VPET in China and Switzerland

Company Name	Industry
GF	Machinery and equipment
SIKA China	Construction materials
Schindler China	Machinery and equipment
CieCAS	Vocational training
FRAISA	Precision machinery
EHL Group	Vocational training
Swiss Nobleness Art Academy	Vocational training
Generis	Vocational training
ABB Group	Machinery and equipment

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