



Fraunhofer

IAO

FRAUNHOFER INSTITUTE FOR INDUSTRIAL ENGINEERING IAO

SPECIALIST QUALIFICATION FOR GERMAN COMPANIES WITH LOCATIONS IN CHINA

AN INNOVATIVE BLEND OF QUALIFICATION OFFERS TO GAIN INDUSTRIE 4.0 KNOW-HOW



INWICA

Innovative technical skill trainings for workers in China
A culturally adapted learning approach

The situation as it stands

Training offshore workforces with varying cultural backgrounds poses a challenging task in times of advancing globalization, particularly for export-minded German businesses. This holds true around the world, but nowhere more than in China, a market that continues to grow. Many German enterprises have planted a local footprint with subsidiaries and sites of their own, some of which are closely allied with Chinese companies.

Non-academic specialists, especially in the technological field, are in short supply in China and elsewhere. Companies need new ways to further qualify their employees professionally and to meet the needs of the economy. The »INWICA« training program aims to take into account fundamental differences between different cultures and educational policy systems in China and in Germany when selecting learning content and learning technologies and designing the didactic aspects of learning transfer. Superior goal is to tailor the learning content to the qualification needs in companies.

Mission

The INWICA initiative has set out to develop a training program for German production companies with plants in China. The offer comprises flexibly bookable learning modules according to the need of companies, offering the opportunity to obtain advanced qualifications for the production workforce. It is to become an integral part of the training ecosystem in of the Shanghai regions's training ecosystem.

The INWICA learning contents refer to qualification portfolios, which were already certified by the German Chamber of Industry and Commerce. The topics are selected in such a way that they are to cover the given qualification need of enterprises with mechanisms in the region Shanghai. An important component is therefore the identification of the needs of the manufacturing industry. A further central question of the INWICA initiative is to explore options in which German Education Service Providers can make their offerings attractive and accessible to the Chinese market.

Training for manufacturing personnel tailored to business needs

An important part of career development programs is the preparation of learning content into learning modules in order to meet qualification requirements as flexibly as possible. In addition, teaching must be adapted to the culture of the country and the company, and a technical learning infrastructure must be adapted to the environment and the target group.

The INWICA consortium offers a range of services for the creation of such learning settings:

- Analyzes the market and training demands
- Audits the as-is status on location to determine qualification needs in the company
- Provides advice and guidance on selecting, adapting and delivering the right learning modules
- Conveys learning content mainly online by using a virtual classroom and social media channels
- Provides supplementary hands-on training and learning guidance on-site upon request

The INWICA training offering draws on the modular contents of the German »Industriemeister« qualification program and the Specialist 4.0 course certified in Germany by the Chamber of Commerce and Industry.

You are invited to review the topics presented in the following and select the modules you feel are most important to the training and qualification of your manufacturing personnel in China.

To this end, please take part in our quick survey at:

<https://s.fhg.de/INWICA-survey-en>

The INWICA consortium will be happy to tailor a qualification program to your company's needs.

We would be pleased to hear from you if you care to learn more. Simply send us an email at:

contact@inwica.com

INWICA qualification modules and learning technologies

Theory and practice in three qualification modules

Qualification module 1 is an introduction to the challenges of middle management. Module 2 focuses on Industrie 4.0. Both modules are largely digital courses held in the vitero virtual classroom. Qualification module 3 comprises hands-on training in workshops conducted on-site. These modules convey application-oriented skills, for example, how to operate machines.

Workshops

Workshops serve to determine the given qualification needs and to coordinate methods of embedding and evaluating new learning programs in the company's personnel and organizational development efforts.

These qualification modules' learning content and teaching methods are being adapted to the local culture for use in Chinese companies. All modules can be accessed individually or combined. The medium-term goal is for the INWICA qualification program to be certified by the German Chamber of Commerce and Industry.

Making the most of the latest learning technologies

Innovative learning technologies will be adapted to convey content to best suit your company's learning culture and infrastructure. These courses combine various learning technologies as needed. The focus is on using virtual classrooms.

Some of the teaching is done the conventional way with an instructor presenting theory, but the INWICA modules place greater emphasis on interactive peer-group learning as well as on self-driven learning. Around 80 percent of the e-learning is to take place online and live in a virtual classroom.

INWICA courses feature the following learning technologies:

- Virtual classroom / synchronous live e-learning using vitero
- Workshops held on-site at the company (specific application knowledge, qualification analyses, measures to embed learning content and methods in personnel and organizational development initiatives)
- LMS/ asynchronous e-learning using both, Chinese and German Software

Contents of INWICA qualification modules

Culturally adapted for business locations in China

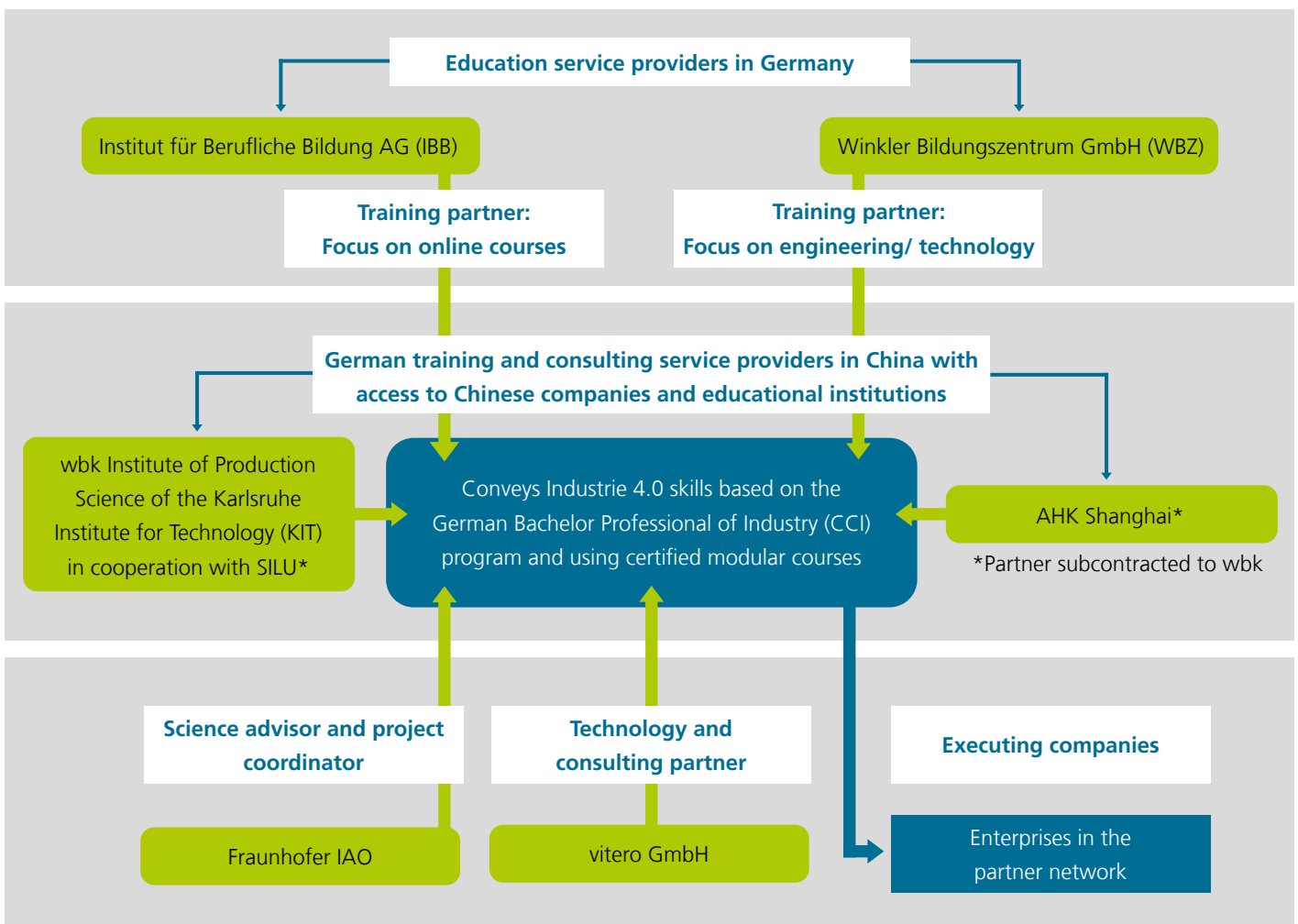
		Qualification module 1	Qualification module 2	Qualification module 3
• INWICA qualification offerings		Interdisciplinary Basic Qualification Course on basis of the German »Industriemeister«	Industrie 4.0 Specialist	Additional practical skills
	Objectives	Fundamental knowledge Middle management tasks	Specialization Identifying and tapping Industrie 4.0 potential	Application Specific tasks in the company
	Contents	<ul style="list-style-type: none"> Legal affairs/ compliance practices Business administration practices Information sharing, communication and planning methods Collaboration within the company Science and engineering fundamentals 	<ul style="list-style-type: none"> Basics of Industrie 4.0 Connected business models in manufacturing & logistics Technologies to implement I. 4.0 cyber-physical systems Work & organizational design in the age of digital transformation 	Machine knowledge, programming skills, data analysis, methods to analyze qualification requirements, etc.
	Scope	Course hours IHK curriculum: 400	Course hours CCI curriculum 100	On-site requirements analysis: one-day workshop
	Duration	9 to 15 months	2 to 3 months	Courses on-site or online: 1-x days as required
	Learning method	Hybrid learning system focused on a virtual classroom	Hybrid learning system focused on a virtual classroom	External academy workshop or on site at the plant

Fig. INWICA qualification modules

Consortium members

- Fraunhofer Institute for Industrial Engineering IAO
- wbk Institute of Production Science of the Karlsruhe Institute for Technology (KIT)
- vitero GmbH
- Institut für Berufliche Bildung AG (IBB)

Structure and partners collaborating in the joint INWICA project





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