



**2020年中德工业 4.0 技术展示创新  
公开课目录  
Training Course 2020  
at Industry 4.0 Demonstration and  
Innovation Center**

上海遵成教育科技有限公司 ( [Seer Doer -Shanghai](#) )



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## Overview of Open Training Courses 2020

### 2020公开培训课程概览

Round No. (轮数)	No. (序号)	Training Topics (培训课程名)	Duration [days] (培训时间)	Time Schedule (培训日期)
Round 1 (第一轮)	1	Design your production line lean & intelligent (让您的生产线精益化和智能化)	1	2020.02.21
	2	Implementation of Lean Production (企业如何导入精益生产)	1	2020.02.28
	3	Digital Quality Management (企业数字化质量管理)	1	2020.03.06
	4	Intelligent Production Planning & Control (智能化生产计划和生产控制)	1	2020.03.13
	5	Industry 4.0: From Roadmap to Realization (企业工业 4.0: 从实施蓝图到全面实施)	1	2020.03.20
	6	Improve maturity of your manufacturing process to 6 Sigma (提升企业制造流程能力达到六西格玛水平)	3	2020.03.25-27
	7	Lean & smart internal logistics management (精益化和智能化内部物流管理)	1	2020.04.17
	8	Scalable Automation by Human-Robot Collaboration (人机互动实现可变速自动化)	1	2020.04.24
	9	Digital Shopfloor Management (数字化车间管理)	1	2020.05.15
	10	Business models in the era of intelligent manufacturing (智能制造时代的商业模式)	1	2020.05.22
Round 2 (第二轮)	1	Design your production line lean & intelligent (让您的生产线精益化和智能化)	1	2020.06.12
	2	Implementation of Lean Production (企业如何导入精益生产)	1	2020.06.19
	3	Digital Quality Management (企业数字化质量管理)	1	2020.07.10
	4	Intelligent Production Planning & Control (智能化生产计划和生产控制)	1	2020.07.17
	5	Industry 4.0: From Roadmap to Realization (企业工业 4.0: 从实施蓝图到全面实施)	1	2020.07.24
	6	Improve maturity of your manufacturing process to 6 Sigma (提升企业制造流程能力达到六西格玛水平)	3	2020.07.29-31
	7	Lean & smart internal logistics management (精益化和智能化内部物流管理)	1	2020.08.07
	8	Scalable Automation by Human-Robot Collaboration (人机互动实现可变速自动化)	1	2020.08.14
	9	Digital Shopfloor Management (数字化车间管理)	1	2020.08.21
	10	Business models in the era of intelligent manufacturing (智能制造时代的商业模式)	1	2020.08.28
Round 3 (第三轮)	1	Design your production line lean & intelligent (让您的生产线精益化和智能化)	1	2020.09.04
	2	Implementation of Lean Production (企业如何导入精益生产)	1	2020.09.11
	3	Digital Quality Management (企业数字化质量管理)	1	2020.09.18
	4	Intelligent Production Planning & Control (智能化生产计划和生产控制)	1	2020.10.16
	5	Industry 4.0: From Roadmap to Realization (企业工业 4.0: 从实施蓝图到全面实施)	1	2020.10.23
	6	Improve maturity of your manufacturing process to 6 Sigma (提升企业制造流程能力达到六西格玛水平)	3	2020.10.28-30
	7	Lean & smart internal logistics management (精益化和智能化内部物流管理)	1	2020.11.13
	8	Scalable Automation by Human-Robot Collaboration (人机互动实现可变速自动化)	1	2020.11.20
	9	Digital Shopfloor Management (数字化车间管理)	1	2020.12.04
	10	Business models in the era of intelligent manufacturing (智能制造时代的商业模式)	1	2020.12.11

## Design your production line lean and intelligent 让您的生产线精益化和智能化

### 目标与内容 Objectives and Content

A Lean Line Design is one of the best systematical ways to streamline a process in order to remove waste. The aim is to redesign production and logistics so as to increase productivity and flexibility, as well as lowering the investment ratio, space requirements and throughput time. In this training, ultimate workstation design tools and visual factory tools for line design as well as optimized material delivery are key contents. Intelligent tools will be introduced, which can automatically gather data and allow for further analysis as well as actions.

精益生产线设计是最好的系统化方法之一，用以简化流程，消除浪费。的目的是通过重新设计生产和物流，以提高整体效率和灵活性，降低投资的比例，所需空间和缩短产出时间。在精益生产线设计中，工位设计工具和可视化工厂的的工具以及优化的物料配送是关键内容。同时，智能工具将被引入，可以自动地收集数据，并进行进一步的分析以及提供对策。

### 参加对象 Target Group

This seminar is not only designed for industrial engineers, production planning engineers and managers, but also for everyone who is interested in working in and further developing the fields of production, process or supplier improvement.

本次研讨会不仅适用于工业工程师，生产计划工程师和管理人员，同时也为有兴趣从事和进一步发展生产，加工或供应商改进等领域的人员。

### 大纲 Outline

#### 日期 Schedule

2020.02.21/  
2020.06.12/  
2020.09.04

#### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

#### 语言 Language

Chinese

- Business cases of Lean Line Design
- Assess current condition
  - a) Current layout
  - b) Process flow
  - c) Work distribution Diagram
- Developing operational flow version
- Line design
  - a) Rough line concept
  - b) Detailing and finalizing the layout
  - c) Developing work distribution
- Pilot implementation at demonstration line.
- Standardized Work and CIP
- Summary of results
- Discussion & next step in own factory environment
- 精益生产线设计的案例
- 评估当前的状况
  - a) 当前布局
  - b) 工艺流程
  - c) 工作分布图
- 制定完整的操作流程
- 线体设计
  - a) 生产线粗设计
  - b) 详细设计和确定布局
  - c) 制定工作分配
- 在示范线进行试点实施
- 标准化工作和持续改善
- 成果总结
- 沟通交流在自己工厂的未来实施

#### 地点 Venue:

Seer Doer Partner: Industry 4.0 Demonstration and Innovation Center, Suzhou  
遵成合作伙伴: 苏州中德工业 4.0 技术展示创新中心

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## Implementation of Lean production

### 企业如何导入精益生产

#### 目标与内容 Objectives and Content

Lean Production is embedded in corporate fundamental principles. It is a systematical operational solution emerged from continuously refined and developed production laws. It will maintain vitality and competitiveness for the company, thus help to realize sustainable business. In the practice of Lean Production, one-sided or incorrect understanding will often lead to bad execution or low performance, even it could damage the fundamental of the company. In this course, participants will be inspired above scientific Lean Production theory by the right mind setting and practice orientation, to really achieve corporate lean transformation as well as self-development and breakthrough. Some practical applications of Lean Production will be shown in the automated assembly line enabled by Industry 4.0.

精益生产是植根于企业生产规律，是对生产规律不断总结和发展的基础上，形成的企业运营系统解决方案，能让企业不断的保持活力和竞争力，实现永续经营。在精益生产的实践中，因为对其错误或者片面的理解，导致执行不到位，没有产生其应有的价值，甚至伤害到企业的根本。本培训在对精益生产科学认知的基础上，在思维模式和实践方式上启发学员，让其正确的认识精益，并且掌握实践精益的模式，实现企业的精益转换和个人的自我提升和突破。本培训还将展示精益生产在工业 4.0 自动化装配线上的一些实际应用案例。

#### 参加对象 Target Group

This training was developed for wide-range manager and engineer in different field of production management, especially for senior of high-level management board member. 本次培训面向生产管理领域的各个层次的管理者和工程师,尤其是公司的高级别管理人员。

#### 大纲 Outline

##### 日期 Schedule

2020.02.28/  
2020.06.19/  
2020.09.11

##### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

##### 语言 Language

Chinese

- History of Lean Production
  - Toyota Lean House
- Lean Production Mind-setting
  - Change Management
  - Identify Waste
  - 5 Lean principles
- Lean Tools
  - Top Management decision tool
  - Quality tool
  - Efficiency improvement tool
  - Lead time improvement tool
- Lean Practice
  - Kaizen Event
  - SGA group
- Learning by doing: case studies
  - Lean assembly line visiting and production simulation
- 精益生产起源与发展
  - 丰田精益屋
- 精益生产意识篇
  - 变革管理
  - 浪费
  - 精益 5 大原则
- 精益工具篇
  - 高级管理决策工具
  - 质量改善工具
  - 效率提高工具
  - 交期改善工具
- 精益实践篇
  - Kaizen 活动的推动
  - SGA 小组的推动
- 实践应用：案例分析
  - 精益装配线现场参观与生产模拟

地点 Venue: **Seer Doer Partner: Industry 4.0 Demonstration and Innovation Center, Suzhou**  
遵成合作伙伴：苏州中德工业 4.0 技术展示创新中心

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## Digital Quality Management 企业数字化质量管理

### 目标与内容 Objectives and Content

Quality management is a basic process which gives you a competitive edge. A digital quality management system assures the quality of products and services within a company or a production network in combination of Smart Manufacturing. You will be introduced to digital quality tools that will assist you in the management of both in-house and supplier quality issues. Numerous examples and case studies will help you to turn the theory of quality management into company practice by using digital tools.

质量管理是一个让你的企业获得竞争优势的基本过程。在智能制造的生产模式大背景下，一个企业数字化质量管理体系能确保一个公司及整条生产链之中的产品和服务的质量。在本次培训中，数字化的质量管理工具将详细阐述介绍帮助你的企业提升内部和外部供应商质量问题，结合大量案例，帮助你的企业把质量管理理论运用到实际生产中去。

### 参加对象 Target Group

This training is developed for engineers and experienced employees in production management and quality control. The training is suitable for everyone aiming to work in and enhance the further development of quality management.

本次研讨会面向在生产管理和质量控制领域工作的工程师和有经验的员工。该研讨会对于每一位从事和加强质量管理进一步发展的人员都十分合适。

### 大纲 Outline

#### 日期 Schedule

2020.03.06/  
2020.07.10/  
2020.09.18

#### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

#### 语言 Language

Chinese

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>➤ Motivation for digital quality management</li> <li>➤ 7 tools of quality management               <ul style="list-style-type: none"> <li>▪ 7 tools review</li> <li>▪ 7 tools practice with Minitab software</li> </ul> </li> <li>➤ How Industry 4.0 effects quality management               <ul style="list-style-type: none"> <li>▪ Service-oriented Manufacturing</li> <li>▪ Roadmap for Service-oriented manufacturing</li> <li>▪ Case Sharing</li> </ul> </li> <li>➤ Data analysis in maintenance               <ul style="list-style-type: none"> <li>▪ Passive, preventive and predictive maintenance management</li> <li>▪ Case Sharing</li> </ul> </li> <li>➤ Computer vision in quality</li> <li>➤ Case Study</li> </ul> | <p>数字化质量管理的动机</p> <ul style="list-style-type: none"> <li>➤ 质量管理七大工具               <ul style="list-style-type: none"> <li>▪ 质量工具回顾</li> <li>▪ Minitab 软件实操</li> </ul> </li> <li>➤ 工业 4.0 对质量管理的影响               <ul style="list-style-type: none"> <li>▪ 服务型制造模式</li> <li>▪ 产品服务创新路径</li> <li>▪ 案例分享</li> </ul> </li> <li>➤ 数据分析在设备维护中的应用               <ul style="list-style-type: none"> <li>▪ 被动维护、主动维护和预测维护管理</li> <li>▪ 案例分享</li> </ul> </li> <li>➤ 图像识别</li> <li>➤ 案例分享</li> </ul> |
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#### 地点 Venue:

**Seer Doer Partner: Industry 4.0 Demonstration and Innovation Center, Suzhou**  
遵成合作伙伴: 苏州中德工业 4.0 技术展示创新中心

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## Intelligent Production Planning & Control

### 智能化生产计划和生产控制

#### 目标与内容 Objectives and Content

Production planning is the planning of production processes in a company. It utilizes the resource allocation of employees, materials and production capacity, in order to serve different customers. With higher and higher customer requirements in cost, quality and lead time while facing many variations in the production system, an intelligent production planning system is essential to help to achieve efficient production while keeping high service level. This training introduces you production planning approaches and methods in different manufacturing environments and the way to gain flexibility in cope with demand fluctuations and internal problems.

生产计划通过对员工、物料、产能等资源的合理分配，安排企业生产活动，以实现服务不同客户的目的。伴随着在成本、质量、交期等方面越来越高的客户需求，以及生产系统中本身存在的变异，我们需要一个智能化的生产计划系统来帮助我们实现更好的客户服务与更高的生产效率。本课程将向您介绍不同制造环境下的生产计划途径和方法，以及如何建立弹性以应对需求波动和生产中的变异。

#### 参加对象 Target Group

This training is developed for production management related engineers and experienced employees. The training is suitable for everyone aiming to work in the production management and continuous improvement topics.

本课程面向与生产管理相关的工程师和有经验的员工。该课程对于每一位从事生产管理或改善的人员都十分合适。

#### 大纲 Outline

#### 日期 Schedule

2020.03.13/  
2020.07.17/  
2020.10.16

#### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

#### 语言 Language

Chinese

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|--|---|
| <ul style="list-style-type: none"> <li>➤ Background knowledge           <ul style="list-style-type: none"> <li>a) Manufacturing environments, processes and layouts</li> <li>b) Inventory management</li> </ul> </li> <li>➤ Master planning of resources           <ul style="list-style-type: none"> <li>a) Demand management</li> <li>b) Sales and Operations Planning, Resource Planning</li> </ul> </li> <li>c) Master scheduling and RCCP</li> <li>➤ Detailed scheduling and planning           <ul style="list-style-type: none"> <li>a) Material and capacity planning</li> </ul> </li> <li>➤ Execution and control of operations           <ul style="list-style-type: none"> <li>a) Scheduling and sequencing</li> <li>b) Production control</li> </ul> </li> <li>➤ Learning by doing: Case studies           <ul style="list-style-type: none"> <li>a) Application at advanced demonstration line</li> <li>b) Adaptive approach to your demand</li> <li>c) Lessons learned and experience summary</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>➤ 背景知识           <ul style="list-style-type: none"> <li>a) 制造环境、流程和布局</li> <li>b) 库存管理</li> </ul> </li> <li>➤ 大日程计划           <ul style="list-style-type: none"> <li>a) 需求管理</li> <li>b) 销售与运营计划，资源计划</li> <li>c) 主生产计划与RCCP</li> </ul> </li> <li>➤ 中日程计划           <ul style="list-style-type: none"> <li>a) 物料与产能计划</li> </ul> </li> <li>➤ 执行与控制           <ul style="list-style-type: none"> <li>a) 小日程排程</li> <li>b) 生产控制</li> </ul> </li> <li>➤ 从实践中学习：案例研究           <ul style="list-style-type: none"> <li>a) 在先进示范线的实际应用</li> <li>b) 基于需求的自适应方法</li> <li>c) 经验分享与总结</li> </ul> </li> </ul> |
|--|---|

报名码



#### 地点 Venue:

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## Industry 4.0: From Roadmap to Realization 企业工业 4.0 : 从实施蓝图到全面实施

### 目标与内容 Objectives and Content

Lean Production is a systematical approach that maintains competitiveness for the company, thus to realize sustainable business. The toolbox of Lean Production will be extended by technologies enabled by Industry 4.0 trends. In order to support companies during the conceptual design phase for cyber-physical production systems, this training aims to combine lean methodologies with digital solutions. In this course, participants will be inspired by state-of-the-art methodologies to manage their value stream aligned with latest software innovations.

精益生产是企业保持竞争力，从而实现可持续发展的系统化管理方法。在工业 4.0 新趋势下精益工具也得到了相应扩展。为了帮助企业完成对信息物理系统的构建，此培训将精益方法论与数字化解决方案有机结合，学员将在理论知识以学习最先进的车间软件解决方案如何实现对价值流的支持。

### 参加对象 Target Group

This training is developed for managers and engineers in different fields of production management, especially for middle and high-level management.

本次培训面向生产管理领域的各个层次的管理者和工程师，尤其是公司的高级别管理人员。

### 大纲 Outline

**日期 Schedule**  
2020.03.20/  
2020.07.24/  
2020.10.23

**价格 Price**  
RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

**语言 Language**  
Chinese

- Introduction of lean production
- Industry 4.0 demonstration
  - a) Application fields of Industry 4.0
  - b) Development of Industry 4.0
  - c) Industry 4.0 use cases
  - d) Technology scope
  - e) Production science and management
- Modern information flow management
- Lean production enabled by Industry 4.0
  - Digital Shopfloor Management
  - Smart material replenishment concept
  - Achieving 0-defect by advanced quality systems
  - Work organization development
  - Experience Industry 4.0 assemblyline
- Approach to realize Industry 4.0
  - Industry 4.0 company assessment
  - Roadmap to realize Industry 4.0
  - Cost-benefit analysis
- 精益生产介绍
- “工业 4.0”展示
  - a) 应用范畴
  - b) “工业 4.0”的发展
  - c) “工业 4.0”应用案例
  - d) 设备技术要求
  - e) 生产科学及管理模式
- 现代化信息流管理
- 工业 4.0 下的精益生产
  - 数字化车间管理
  - 智能物料配送方案
  - 0 缺陷质量管理体系
  - 工作组织发展
  - 体验工业 4.0 智能装配性
- 工业 4.0 实施方案
  - 工业 4.0 工厂评估
  - 实现工业 4.0 之路
  - 成本收益分析

报名码



**地点 Venue:**

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## Improving maturity of your manufacturing process to 6 Sigma 提升企业制造流程能力达到六西格玛水平

### 目标与内容 Objectives and Content

Six Sigma is defined as a method that provides tools to improve business process capabilities. In this training you can learn how to use Six-Sigma logic and tools to solve problems in a systematic way. By applying DMAIC cycle you can identify and remove the causes of defects and minimize variability in manufacturing and business processes. This results in improved quality and satisfied customers.

六西格玛是一种方法论，运用工具来改善业务流程能力。本次六西格玛绿带培训项目将使您能够理解六西格玛系统解决问题的逻辑以及熟悉并常用的六西格玛工具。您可以通过DMAIC识别和消除缺陷出现的根本原因，并尽量减少在生产和业务流程上的波动，从而提升产品质量并增强客户满意度。

### 参加对象 Target Group

This training was developed for management and technical staff groups in the company (Production, Quality, Engineering, Supervisor, Manager and technical staffs).

企业中高层管理及技术人员（生产、品质、工程部工程师、主管、经理及技术人员）

### 大纲 Outline

**日期 Schedule**  
2020.03.25-27/  
2020.07.29-31/  
2020.10.28-30

**价格 Price**  
RMB 5000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

**语言 Language**  
Chinese

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>➤ Define Phase             <ul style="list-style-type: none"> <li>a) Introduction of Six-Sigma</li> </ul> </li> <li>➤ Measure Phase             <ul style="list-style-type: none"> <li>a) Data and sampling</li> <li>b) MSA (Measurement System Analysis)</li> <li>c) Process capability analysis</li> </ul> </li> <li>➤ Analysis Phase             <ul style="list-style-type: none"> <li>a) Fishbone diagram</li> <li>b) FMEA</li> <li>c) Hypothesis test</li> </ul> </li> <li>➤ Improving Phase             <ul style="list-style-type: none"> <li>a) Correlation and Regression analysis</li> <li>b) DOE introduction</li> </ul> </li> <li>➤ Control Phase             <ul style="list-style-type: none"> <li>a) Error-proofing</li> <li>b) SPC control chart</li> <li>c) Control plan</li> <li>d) Experience sharing and summary</li> </ul> </li> <li>➤ The participants are invited to Industry 4.0 Demonstration and Innovation center for case studies</li> </ul> | <ul style="list-style-type: none"> <li>➤ 定义阶段             <ul style="list-style-type: none"> <li>a) 六西格玛概述</li> </ul> </li> <li>➤ 测量阶段             <ul style="list-style-type: none"> <li>a) 数据与抽样</li> <li>b) 测量系统分析</li> <li>c) 过程能力分析</li> </ul> </li> <li>➤ 分析阶段             <ul style="list-style-type: none"> <li>a) 鱼骨图</li> <li>b) 潜在失效模式及后果分析</li> <li>c) 假设检验</li> </ul> </li> <li>➤ 改善阶段             <ul style="list-style-type: none"> <li>a) 相关回归分析</li> <li>b) 试验设计概述</li> </ul> </li> <li>➤ 控制阶段             <ul style="list-style-type: none"> <li>a) 防错法</li> <li>b) SPC控制图</li> <li>c) 控制计划</li> <li>d) 经验分享与总结</li> </ul> </li> <li>➤ 学员将被邀请参观中德工业 4.0 技术展示创新中心并在现场进行案例分析分享</li> </ul> |
|--|---|

**地点 Venue:**

**Seer Doer Partner: Industry 4.0 Demonstration and Innovation Center, Suzhou**  
遵成合作伙伴：苏州中德工业 4.0 技术展示创新中心



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## Lean & smart internal logistics management 精益化和智能化内部物流管理

### 目标与内容 Objectives and Content

Lean material replenishment planning is the important base and premise of lean production. To support continuous production and reduce material stock level at the production area, different materials must have different replenishment strategies according to material properties. As efficient ways to optimize your internal logistics, Kanban system and internal milk-run will be introduced. Additionally, some application cases about smart internal logistics will be shown in the demonstration line enabled by Industry 4.0.

精益物料配送是实现精益生产的重要基础和前提条件。为了支持持续生产和降低在生产区域的原材料库存水平，不同的物料根据物料属性应有不同的配送模式。作为一个行之有效的优化您的内部物流的方法，看板系统和内部循环配送模式将在本次培训中重点介绍。此外，本培训还将展示智能化内部物流在工业 4.0 示范线上的实际应用案例。

### 参加对象 Target Group

This training unit is not only designed for logistics planning engineers, production planning engineers, industrial engineers and managers, but also for everyone who is interested in working in and further developing the fields of logistics and production.

本次培训不仅适用于物流规划工程师、生产规划工程师、工业工程师和管理人员，同时也为有兴趣从事和进一步在物流和生产领域发展的人员量身定制。

### 大纲 Outline

#### 日期 Schedule

2020.04.17/  
2020.08.07/  
2020.11.13

#### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

#### 语言 Language

Chinese

- Introduction of lean internal logistics
- Smart material replenishment strategies
- Material ABC/XYZ-analysis
- Kanban system
  - Introduction of Kanban system
  - Calculation of number of Kanban cards
  - Implementation steps
- Internal milk-run system
  - Benefits of internal milk-run systems
  - Design of internal milk-runs (route/schedule)
  - Implementation steps
- Learning by doing: case studies
  - Application cases in the Industry 4.0 Demonstration and Innovation Center
  - Lessons learned and experiences summary
- 精益内部物流介绍
- 智能化物料配送策略
- 物料 ABC/XYZ 分析法
- 看板管理系统
  - 看板介绍
  - 看板卡数量计算
  - 实施步骤
- 内部循环供货系统
  - 内部循环供货优点
  - 内部循环供货设计（线路/时间）
  - 实施步骤
- 从实践中学习：案例分析
  - 在中德工业 4.0 技术展示创新中心的实际应用
  - 经验分享与总结

报名码



#### 地点 Venue:

Seer Doer Partner: Industry 4.0 Demonstration and Innovation Center, Suzhou  
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## Scalable Automation by Human-Robot Collaboration 人机互动实现可变速自动化

### 目标与内容 Objectives and Content

The increasing demand for customization, shortened product life-cycles and increasing labor cost are raising new challenges for production system. They are expected to adapt flexibly to frequent changes in products, components and tasks. However, current classical production systems are designed for a low-mix high-volume production. Therefore, the use and application of Collaborative Robots (Cobots) in production systems is constantly increasing. By proper tasks allocation with human operators, a high flexibility and quick adaptability of the processes can be ensured, maintaining a high degree of efficiency through the scalable automation.

与日俱增的个性化需求、越来越短的产品生命周期以及逐渐上涨的人力成本都对生产系统提出了新的挑战。我们希望生产系统能迅速适应多变的市场，但是目前传统的生产系统多数是针对大批量生产生产的。因此，人机协作机器人在生产系统中得到越来越多的应用。通过适当的任务分配，我们可以通过可变速自动化实现过程的高度柔性化，同时保证系统有高效的产出。

### 参加对象 Target Group

This training is not only designed for industrial engineers, production planning engineers and managers, but also for everyone who is interested in working in and further developing the fields of production, process or supplier improvement.

本次研讨会不仅适用于工业工程师，生产规划工程师和管理人员，同时也为有兴趣从事和进一步发展生产，加工或供应商改进等领域的人员。

### 大纲 Outline

#### 日期 Schedule

2020.04.24/  
2020.08.14/  
2020.11.20

#### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

#### 语言 Language

Chinese

- Motivation for scalable automation
- Change enablers and features of changeable drivers
  - Compatibility
  - Universality
  - Modularity
  - Scalability
  - Mobility
- Introduction of Cobot
- Interaction ways with Cobot
  - Use Augment Reality/Virtual Reality for human assistant
  - Multi-modal interaction
- Task allocation for scalable automation
- Case Study: Human Robot Collaboration for assembly line
- Cost analysis for scalable automation
- 可变速制造的动机
- 变化的主驱动力及可变速性的特征
  - 兼容性
  - 普遍性
  - 模块化
  - 可扩展性
  - 移动性
- 人机协作机器人介绍
- 人机交互
  - 利用增强现实、虚拟现实辅助员工
  - 多模态交互
- 可变制造中的任务分配
- 案例研究：装配线的人机协作
- 可变制造的成本分析

报名码



#### 地点 Venue:

Seer Doer Partner: Industry 4.0 Demonstration and Innovation Center, Suzhou

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## Digital Shopfloor Management 数字化车间管理

### 目标与内容 Objectives and Content

The shopfloor is where value-added activity happens. It also directly represents how well a manufacturing plant is managed. By deploying excellent shopfloor management processes, the information transparency will be increased and problems which occur in production will be solved more efficiently. In this course, participants will be inspired by latest digital applications and their advantages in shopfloor management compared to traditional management tools.

车间是企业进行增值活动的场地，更是企业管理水准的直接体现。通过持续优化车间管理流程，可以提升企业内部的信息透明度，加快问题解决的速度。在本课程中学员将体验最先的数字化车间管理应用，了解其相对于传统车间管理工具的优势。

### 参加对象 Target Group

This training is developed for managers and engineers in different fields of production management, especially for middle and high-level management. Case studies and examples are especially designed for the needs of persons who are in charge for production management.

本次培训面向生产管理领域的各个层次的管理者和工程师，尤其是公司的高级别管理人员。案例分析和实例专为从事生产管理的工作人员量身定制。

### 大纲 Outline

#### 日期 Schedule

2020.05.15/  
2020.08.21/  
2020.12.04

#### 价格 Price

RMB 2000

Fee includes lectures, course materials and lunch.

包括会务，资料费，午餐费。

#### 语言 Language

Chinese

- Introduction of shopfloor management
- Excellent shopfloor management
- Process of shopfloor management
- Traditional shopfloor management and their challenges
- Shopfloor management in time of Industry 4.0
  - Digital shopfloor management
  - Experience digital applications in shopfloor management
  - How to realize digitalization on the shopfloor
- 车间管理介绍
- 卓越车间管理
- 车间管理流程
- 传统车间管理及其遇到的挑战
- 工业4.0下的车间管理
  - 数字化车间管理
  - 体验数字化车间管理应用
  - 如何实现数字化改造

#### 地点 Venue:

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## Business models in the era of intelligent manufacturing 智能制造时代的商业模式

### 目标与内容 Objectives and Content

Under the wave of global intelligent manufacturing transformation, today's enterprises do not only need product innovation and service platform innovation, but also need to be driven by innovative and competitive business models. The traditional business model has been difficult to adapt to the innovative needs in the digital age, the digital transformation of enterprises must also be accompanied by breakthroughs in business models. How to design a business model? How to digitize business models? These problems have become a common problem for enterprises. As a senior technical service company in the global intelligent manufacturing field, GAMI will bring you the answer to the design of your business model!

在全球智能制造转型的浪潮下,当今企业不仅需要产品的创新和服务平台的创新,更需要富有创新性和竞争力的商业模式。传统的商业模式已很难适应数字化时代的创新性需求,企业数字化转型的同时也必须伴随着商业模式的突破更新。如何设计商业模式?如何进行商业模式数字化转型?已经成为了企业共同的难题。GAMI 作为全球智能制造领域资深的技术服务公司,将为企业商业模式的设计升级带来答案!

### 参加对象 Target Group

This training course is aimed at high-level managers in the manufacturing industry. 本次培训课程主要面向制造业领域的企业高级别管理人员。

### 大纲 Outline

**日期 Schedule**  
2020.05.22/  
2020.08.28/  
2020.12.11

**价格 Price**  
RMB 2000

Fee includes lectures, course materials and lunch.

包括会务, 资料费, 午餐费。

**语言 Language**  
Chinese

- What is a business model?
  - Definition of business model
  - Digital business model
- Development history of business model
- Business model components
- How to design (digital) business models?
  - Introduction of design approach
  - Design roadmap
  - Business model evaluation
  - Case studies
- Case study workshop
  - Design your business model
  - Business model evaluation
- Summary and conclusion
- 什么是商业模式?
  - 商业模式的定义
  - 数字化商业模式
- 商业模式的发展历史
- 商业模式的组成
- 如何设计(数字化)商业模式?
  - 设计方法简介
  - 设计步骤
  - 商业模式评估
  - 现有案例分析
- 案例研究
  - 设计自己的商业模式
  - 商业模式评估
- 分享和总结

**地点 Venue:**

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