

# ROI INDUSTRY 4.0 AWARDS 2018



APPLICATION FORM 2018, CHINA ROUND

POWERED BY



## Who can apply?

The target group for *THE AWARDS* are producing companies who have upgraded their business with industry 4.0-like **capabilities**, either as a whole or within a defined pilot section. For example, such **capability upgrades** could be in the area of human-machine interaction (e.g. augmented reality), robotics & automation, apps & assistance systems, data analytics (e.g. preventive maintenance), real-time data (e.g. condition monitoring), smart tools, material tracking & tracing, simulations, machine learning/AI, or 3D printing. If your team has done a great job which deserves praise and recognition, then apply. Technology providers are not eligible for participation, yet they can partner with one of their users and have them apply on their behalf.

To identify how the new capability has improved performance, %-like statements are required, e.g. before-after productivity +30%. It is not necessary to state specific process parameters and/or the absolute value of cost savings.

## The competition

### 1. Application documents

The application form must be completed where applicable. It is not mandatory, but very welcome, to add a presentation/outline of the capability upgrade in context in a separate file.

### 2. Criteria

The evaluation criteria are **level of innovation, economic efficiency, benefits for customers, employees and company, and evident practicality**. The finalists are chosen based on the information provided within the application.

### 3. Site visits

The finalists are visited to evaluate the solutions both from a qualitative and a quantitative point of view.

### 4. Winner appraisal

The jury of *THE AWARDS* rates each applicant based on and with reference to the *ROI INDUSTRY 4.0 UPGRADING FRAMEWORK*. To underline exclusivity, the number of Awards per year is limited to 5.

### 5. AWARDS ceremony

Winners become eligible to present themselves at the Global Smart Factory Summit on **16-November-2018** in Shanghai for no additional fee.

## Participation

Participation is possible for companies operating in China regardless of location, ownership, or size. In case of winning an award, the participant is obliged not to publish press releases, interviews or PR activities before the results are officially announced by ROI and Ringier. In general, participation in the competition is free of charge. Winners become eligible to use the *AWARDS LOGO* and make press releases/marketing and/or promotions which refer to winning at *THE AWARDS* without a license fee required. Winners are eligible to book a post-event promotion package from Ringier to build brand reputation with reference to *THE AWARDS*.

### CONFIDENTIALITY AGREEMENT

All information given in the application form is kept strictly confidential. Disclosures are made anonymous only. Participants are named only in case of an award.

## Contact person

Each participating company has to announce a contact person who is available for questions during the application period.

## Information

Name of company

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Selected factory / section

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Address

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Web

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Name of contact person

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Role

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Phone & e-mail

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## Return date and address

Please return the completed application form until

**27-07-2018**

## Helpdesk

You can reach us by e-mail during the application period and we get back to you as soon as possible. Please leave your phone in the inquiry so we can call you back.

**eMail: [i40awardchina@roi.de](mailto:i40awardchina@roi.de)**

## Notice

In case you are planning to participate please send us an e-mail in advance. It helps us a lot to do the advance planning for the evaluation visits. Thank you.

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## 1 General information

### 1.1 Short description of the participating company

Branch

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Customer target group

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Sales (year)

Employees (year)

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### 1.2 Short description of the participating factory or section/department

Please provide information about

	Factory in total	If any: participating section 1	If any: participating section 2
Production volume [in Mio. €]			
Number of employees (direct/indirect)			

Description of product groups of chosen section(s)

Product group	Share of overall production volume (€) of the factory [in %]	Production type (contract manufacture, job production, small / large scale production, process manufacture)	Major production technologies / methods

Please describe shortly the process chain from goods receipt to goods issue (customer inter-face, product configuration, industrial engineering, production, logistics, ...)

*Please include a value stream map of the selected section as an attachment.*

## 2 Industry 4.0-strategy and activities

### 2.1 Industry 4.0-strategy

Does your company have an overall strategy & roadmap for an intelligent and networked factory or supply chain?

Yes	Partially	No
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*Please include a description of your industry 4.0 overall strategy & roadmap and your industry 4.0 project portfolio as an attachment.*

### 2.2 Focus of industry 4.0 activities

In which of the following areas is the main focus of your industry 4.0 activities?

Production (planning, manufacturing, assembly, production logistics)

SCM (planning, procurement, warehouse logistics, distribution)

Other (please describe):

### **2.3 Point of departure / challenges**

Where has your company been before starting the project?

### **2.4 Target**

Please draft the target of your project.

## **2.5 Methodical approach**

Please describe your approach on realizing / implementing the industry 4.0 solution / use case.

## **2.6 Description of industry 4.0 solution / use case**

Please describe your industry 4.0 solution in context, highlighting key elements (level of innovation, maturity level of the implemented industry 4.0 elements, and evident practicality).





## 2.7 Implemented industry 4.0 elements

Please mark the implementation status of each of the following Industry 4.0 elements in your solution with a cross. In addition, state in which section/department these elements are realized.

	Implementation level			Supporting areas Planning, production, assembly, quality, maintenance, intralogistics, storage, distribution logistics, others
	Pilot implemented	In rollout	Fully implemented	
Big data analytics <sup>1)</sup>				
Horizontal integration <sup>2)</sup>				
Vertical integration <sup>3)</sup>				
Digital assistance systems for the employee <sup>4)</sup>				
Digital consistency of the product development process <sup>5)</sup>				
Digital twin of production <sup>6)</sup>				
Other:				
Other:				

### Explanation of the elements:

- 1) Big Data: acquisition, analysis, evaluation und utilization of structured amounts of data to improve the value chain
- 2) Horizontal integration of information flows: supplier to production, production to customer.
- 3) Vertical integration of IT-systems on different hierarchical levels from ERP to actuator and sensor level.
- 4) Apps and assistance systems (for example AR glasses), physical human-machine-interface (for example collobrative robots)
- 5) Use of digital twin of the product and factory to integrate development, industrial engineering and production
- 6) Digital twin of the value stream or of the production processes

## 2.8 Maturity level of the industry 4.0 solution

Please explain your approach on the following topics related to your industry 4.0 strategy in general as well as related to the previously described use case:

	Classification along the industry 4.0 - pyramid				
	Connectivity <sup>1)</sup>	Information <sup>2)</sup>	Knowledge <sup>3)</sup>	Prediction <sup>4)</sup>	Autonomy <sup>5)</sup>
Planning					
Production					
Assembly					
Quality					
Maintenance					
Intralogistics					
Storage					
Distribution logistics					
Other:					
Other:					

### Explanation of the industry 4.0 - pyramid:

- 1) Collecting data by networking customers, products, machines, etc.
- 2) Generation of information based on the collected data, e.g. smart cockpits & KPIs, digital shopfloor management)
- 3) Build and share analyzed, contextualized knowledge, e.g. digital operator support
- 4) Prognosis based on predictive pattern recognition, e.g. predictive maintenance
- 5) Independent coordination of systems / autonomous system decisions

### 3 Achieved effects through the industry 4.0 solution

#### 3.1 Quantifiable effects

Please quantify the effects of your solution using the metrics below. What quantitative effects have you achieved compared to the initial state? Which target state do you want to achieve in the future?

Initial state in year		Current effect in %	Target effect in %
Sales & costs	Sales		
	Material costs		
	Energy costs		
	Personnel costs		
	Quality costs		
	Other:		
KPIs	OEE		
	Productivity		
	Quality/Scrap		
	Quality/Complaints		
	Lead time		
	Delivery reliability		
	Inventory range		
	Other:		

#### 3.2 Qualitative effects

Please describe the achieved positive and negative effects related to the initial state (e.g. re-garding customer value, customer satisfaction, flexibility or transparency).

#### **4 Lessons learned**

Please conclude your practical experiences implementing the industry 4.0 solution / use case.

We look forward to your participation in the ROI Industry 4.0 Awards China 2018.