

# **World Manufacturing Convention**





#### Shaping the future of manufacturing

Manufacturing is undergoing a fundamental revolution worldwide. The Internet of Things, Artificial Intelligence and advanced Robotics, big data and cloud computing are radically changing the conditions of industrial activity, creating a unique opportunity for new significant productivity gains and competitive advantages for first mover countries and companies. At the same time, major new developments in the global economy as well new issues and challenges on the international trade scene coupled with environmental pressures and the emergences of new risks are putting pressure on corporations to review the location of their activities and reshape and streamline their supply chains.

Industry 4.0 – the fourth industrial revolution – is there with tremendous implications in the economic, corporate, social and geopolitical domains. Whether it is Germany's "Industry 4.0" or China's "Made in China 2025", the US "Manufacturing revitalization", France's "Industry of the Future", Japan's "Society 5.0" or India's "Make in India" every major country in the world is today confronting the challenge of creating the conditions for the successful transformation and expansion of its industrial base as crucial asset for tomorrow's prosperity.

The Global Alliance of SMEs - GASME - is convening the World Manufacturing Convention to discuss the key elements of the manufacturing revolution underway and assess their impact, to explore the policies and initiatives that will allow countries and corporations to leverage the new immense opportunities created by this industrial revolution and to manage the challenges that it is creating.

The World Manufacturing Convention will also provide a privileged framework for promoting closer global cooperation, efficient exchanges of views and expertise. It will offer participants an opportunity for creating new business relationships and for matchmaking between Chinese and foreign manufacturers. More than 200 advanced foreign manufacturers will be invited for match making contacts with Chinese enterprises.

The Global Alliance of SMEs is co-hosting the World Manufacturing Convention with the Federation of German Industries (BDI), the United Nations Industrial Development Organization (UNIDO), the Anhui Provincial Government, China Council for the Promotion of International Trade, and the Chinese People's Association for Friendship with Foreign Countries.

Major business and industrial organizations are being invited as Partners for the World Manufacturing Convention and a full list of partner organizations will be permanently updated on the website of the WMC.

### Co-Chairmen:

Mr. Christian Wulff, Former President of the Federal Republic of Germany Mr. Jean-Pierre Raffarin, Former Prime Minister of the French Republic

#### Hosts

Anhui Provincial Government
Chinese People's Association for Friendship with Foreign Countries
China Council for the Promotion of International Trade
Global Alliance of SMEs
United Nations Industrial Development Organization
Federation of German Industries

### Supporting Organizations

Ministry of Industry and Information Technology of the People's Republic of China Development Research Center of the State Council

#### **Partners**

Federation of Mechanical Industries
American Chamber of Commerce in Shanghai
Confederation of British Industry

### Strategic Partner

Smadja & Smadja Strategic Advisory

### **Major Speakers**

Top government leaders from the People's Republic of China and from foreign countries

Leaders of Anhui Provincial Government

Top leaders of multinational corporations

Top leaders from major Chinese corporations

Senior personalities from international organizations

Heads of major business organizations

Thought leaders and experts from major Chinese and international think-tanks and academic centers of excellence

International personalities

### **Participants**

The Convention will bring together about 3000 participants. Among them:

Senior executives from international and Chinese manufacturing corporations from all key industrial and I.T sectors

Senior executives from financial institutions

Senior executives of corporations from the services sector

Editors from economic, business and industry publications



## Schedule

Day 1	
16:00 Onwards	Registration of participants
17:00 – 17:15	Coffee break
18:30 – 20:30	Official Welcome Banquet
Day 2	
09:00 - 10:30	Official opening ceremony
10:30 - 11:00	Coffee break
	Plenary session
11:00 – 12:30	How to create the best conditions for integrating the relevant technologies, such as additive manufacturing, robotics, artificial intelligence and advanced materials to forge a more efficient, leaner, manufacturing process and organization and generate business growth?
11.00 12.30	✓ What are the key requirements and conditions that corporations need to bring together to ensure the success of their shift to smart manufacturing or Industry 4.0?
	✓ What national policies are needed to smooth the way and accelerate the transition to Industry 4.0?
12:30 - 14:00	Plenary luncheon
	Plenary session  Addressing the challenge of sustainable industrialization
14:00 – 15:15	The depletion of many natural resources, damages to the environment, reactions from public opinions increasingly concerned about the quality of their environment are creating tremendous pressures on business and governments to radically review industrial activities and industrialization policies.  ✓ How business, governments and international organizations can complement their respective roles in ensuring sustainable indus-
	trialization?  ✓ What key developments could be leveraged for ensuring the sustainability of the industrialization process throughout the world, with respect to resources optimization and conservation, energy efficiency, environment protection?  ✓ What lessons can be learnt from past experiences?  ✓ Are there practices that can be replicated?

#### Meeting the success factors for technology transfer for SMEs

The technological enhancement of SMEs is recognized as a MUST success factor for implementing a shift towards Industry 4.0 at the national level. While efficient technology transfers are crucial to this enhancement process, they face however a number of difficulties and obstacles, whether it is confidentiality and Intellectual Property protection issues, insufficient technology capabilities, lack of financial or management resources on the recipient companies' side etc.

A technology transfer suitable for SMEs has also to be focused on the demands of that category of businesses.

- ✓ How should SMEs prepare themselves to be able to integrate and leverage technology transfers?
- ✓ What are the key success factors for technology transfers?
- ✓ How can SMEs best cooperate with academic R&D centers?
- ✓ What kind of PPPs would be most conducive for successful technology transfers?

### Intellectual Property strategies and priorities for smart manufacturing

Smart Manufacturing is based on IOT and automation data to transform how products are sourced, produced and put to market, combining the physical and digital ecosystems. The intellectual property and data that underpin these ecosystems are thus not only a crucial asset for companies engaged in smart manufacturing, they also determine in many ways their competitiveness and sustainability in a context of fierce global competition.

- ✓ How should corporations define their priorities with respect to Intellectual Property creation?
- ✓ How to address the increasing challenge of ensuring overall Intellectual Property protection against patent infringements and security cyber-attacks?
- ✓ What kind of intellectual property to share and what to develop?
- ✓ What ways to monetize the intellectual property created by shifting to smart manufacturing while not endangering any competitive edge?

## Making manufacturing a tool for urban development: The key role of SMEs

Fast urbanization is increasing the pressure for creating jobs that pay living wages and help reduce the gap in standards of living between the different segments of the population. This is where SMEs have a major role to play in contributing through their activities to the development of cities which can become centers of technological innovation, sustainable growth and social cohesion.

- What are the best practices in integrating SMEs in urban development strategies
- What can become a location of choice for high-tech SM-52

15:30 - 16:45

## Leveraging the power of big data for productivity and competitiveness

Leveraging Big Data - the ever increasing amount of structured and unstructured data generated through multiple sources and stored - is now a priority for businesses to increase their productivity and remain competitive. Companies are investing billions of dollars in Big Data initiatives to better understand their customers and detect early-on the new consuming patterns, to streamline supply chains and make production processes more efficient, to reduce cost and make better informed strategic decisions.

- √ How can Big Data be best used by businesses to make a difference performance-wise?
- ✓ What should a Big Data corporate strategy take into account and what are the measurements for success?

## How to create the greatest competitive advantage from Advanced Robotics and Artificial Intelligence?

Artificial Intelligence and robotics are revolutionizing the industrial landscape triggering and sustaining the shift towards Industry 4.0. Companies are today facing the challenge of ascertaining how best to use Artificial Intelligence capabilities and advanced robotics to achieve a competitive advantage in a context where technology is evolving very fast and highly skilled workers are in short supply everywhere. Automotive, retail, health care, food processing, transportation, are among the sectors where the spreading use of robotics is triggering radical changes What are the innovative ways to leverage technology to gain a sustainable edge over competitors?

- ✓ What kind of mix between the human worker and robotics will deliver the biggest productivity gains?
- ✓ In what ways are the leveraging of AI and robotics creating new business models?
- ✓ Are there Do's and Don'ts in integrating robotics into corporate strategies for reducing costs, improving performance, reducing risk, and mitigating skill shortages?

#### Digitization as the future of supply chains

Agile and digitized supply chains are proving to be the best response to a global economic context marked by fast and sometimes unpredictable shifts in supply and demand. Digitized supply chains, transforming the way goods move from production centers or warehouses to the consumers, are thus now a major factor in sustaining business growth and achieving a competitive advantage.

- √ How should companies approach the digitization of their supply chains as an enterprise-wide process of overhauling and transformation?
- What are the key factors for ensuring that the digitization of supply chains produce the expected benefits?

15:30 - 16:45

#### Plenary in parallel

#### Strategies for creating the talents and skills for Industry 4.0

Most countries and corporations moving towards Industry 4.0, have to address a number of challenges related to the availability of the skills and talents required by the radical transformation of manufacturing processes and of the way corporations look at manufacturing. The workforce of the near future will need to master skills in the domains of information technology, data analytics, Artificial Intelligence. As most tasks will differ in the future from what they are now, a great number of manufacturing jobs will require cognitive abilities – the ability to work with data - and system skills. Workers will have to share tasks with intelligent robots.

- $\checkmark$  What are the skills required from the works in Industry 4.0?
- ✓ How will education systems and corporations need to complement their role in creating the workforce for Industry 4.0 and ensuring employability in a fast changing technological context?
- ✓ What strategies for talent retention and development?
- ✓ How to prevent a digital divide between MNCs and SMEs and a widening gap between high-skilled and low-skilled workers?

#### Plenary in parallel

#### Investment priorities for smart manufacturing

In most cases, existing production facilities have to be upgraded to meet the requirements for smart manufacturing. Systems must be overhauled, new infrastructures must be set up, different automation systems must be made to connect and function together to create an architecture for data collection and management. All of this means new investments of various scale. Obviously, investments should focus on developing the technology platforms and the new operating models that will enable the smart manufacturing capabilities that will enhance productivity and customers' operations.

- ✓ How to make the right investments choices on new IT, machinery and talent?
- ✓ Strategic alternatives for securing the capital needed to shift to smart manufacturing

18:30 - 20:30

Official Banquet

17:00 – 18:15

The "Made in China 2025" initiative launched by the government aims to take the Chinese industry up the value-added ladder, becoming innovation-driven, more efficient and integrated with the objective of raising domestic content of core components and materials in 10 priority sectors to 70% by 2025. These are: New advanced information technology; Automated machine tools & robotics; Aerospace and aeronautical equipment; Maritime equipment and high-tech shipping; Modern rail transport equipment; New-energy vehicles and equipment; Power equipment; Agricultural equipment; New materials; Biopharma and advanced medical products.   Assessing China's technology innovation capabilities in view of the objectives set for "Made in China 2025"  What will be the impact of "Made in China 2025" on the global industry and technology landscape as China moves ahead with its initiative?  How could the concerns expressed by some foreign business organizations about the way "Made in China 2025" will be implemented be addressed?  Coffee break  What new operating models for industrial manufacturers in a new global economic environment?  In a new global environment marked by increased volatility, new non-business risks, protectionist tendencies and fast technological change, manufacturing companies need to evolve towards new operating models building upon the potential of advanced manufacturing concepts. This involves creating new strategic partnerships while maintaining the strategic flexibility needed in an era where a partner might all of the sudden become a competitor; achieving greater efficiency in the mining of available data; pushing more forecfully towards sustainable manufacturing in terms of resources and energy use, etc.  What road map for moving towards the new operating models required by Industry 4.0?		Plenary session  « Made in China 2025»: A game changer for the global manufacturing landscape?
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Mind-sharing session

## What next steps for smart manufacturing in the automotive industry?

The automotive industry has been so far one of the top adapters of smart manufacturing increasingly becoming a digital business.

- ✓ Using smart manufacturing for customer-centric innovation.
- ✓ How will the shift to smart manufacturing create the flexibility and customizability in the production environment that the industry increasingly require?
- ✓ What does the optimization of the entire process chain involve?

Mind-sharing session

## What next steps for smart manufacturing in the consumer goods industry?

While Consumer-goods companies have been fast at leveraging digital innovation for marketing and sales activities, it is only more recently that they have begun to implement digital solution in their manufacturing processes, with the digitization of supply chain and operations.

10:30 - 11:45

- Which aspect of manufacturing would benefit most from implementing digital technologies?
- ✓ Using Big Data and Advanced Analytics to optimize the supply chain and create a lean operation
- ✓ What kind of organizational transformation to achieve the full benefit of shifting to smart manufacturing?

### What next steps for smart manufacturing in the machine tools industry

Shifting to smart manufacturing will get the machine tools industry closer to the zero defect objective. The ability to collect and leverage huge amounts of data about the production process for machinery could bring a new dimension to the concept of quality

- As the factory of the future will integrate all the aspects of manufacturing what will the new production lines look like?
- What will be needed to keep the machine tolls industry at the cutting edge of technology in the years ahead?

#### What next steps for smart manufacturing in the electronics industry?

What does Smart Manufacturing mean for the future of the electronics industry? The electronics sector has been using automation and data analysis to improve efficiency and reduce costs. However, the improvements in sophisticated data management tools, the new potentialities opened by Industry 4.0 are creating new opportunities for improving performance, and becoming even more consumer-centric, but also new challenges in putting all the parts together.

- What are the new opportunities for automation in electronics
  - ✓ Is the digital factory the next step for the electronics industry?
  - ✓ Creating partnerships with technology solutions providers and other organizations to get the needed technology capabilities outside of the company's core focus.

Closing plenary session

manufacturing?

#### The new global manufacturing map: A new world industrial order?

Off-shoring is dead. Long live next-shoring – returning production to home markets as companies streamline their supply chains to reduce geopolitical risks, costs and their environmental footprint. While manufacturing in China is moving from the coastal provinces to the central and Western parts of the countries, a lot of the Chinese production itself is shifting towards lower costs countries such as Vietnam Laos, Malaysia, Indonesia. Innovative technologies such as 3D printing is beginning to allow companies to replace traditional suppliers of parts by the use of in-house printers. China and India are becoming innovation powerhouses getting into domains of activities where until now the US, Europe and Japan had a monopoly.

11:30 - 12:30

10:30 - 11:45

- To what extent does the low cost factor still play a role in locating manufacturing activities?
- ✓ Is global manufacturing becoming more and more regional as a result of cost factors but also of the increase in intra-regional trade agreements?
- How is the promotion of a better business environment reducing barriers to business, developing infrastructure, fighting corruption etc. - becoming a major competitiveness factor within regions?

