Dear partners and friends,

Over the next few years dealing with rapid changes regarding technological as well as organizational developments will be one of the biggest but at the same time most exciting challenges manufacturing companies have to manage. KIT-GAMI is strongly looking forward to be utilizing these changes for actively shaping the future of this industry in China and Germany. Combining our strengths in research and industry in the areas of Production Management, Quality and Supply Chain Management, KIT-GAMI is involving in various topics related to designing a smart but also sustainable manufacturing environment.

Therefore, we would to like to keep you informed about our current industry projects, training services as well as our events by our regular newsletter, which I hope you enjoy to read.

Sincerely,
Tobias Arndt

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**News**

**Mr. Tobias Arndt is newly appointed General Manager of KIT-GAMI**

Mr. Tobias Arndt is newly appointed General Manager of KIT-GAMI (Suzhou SILU Production Engineering Services Co., Ltd.) since April 2017.

He completed his industrial engineering studies at RWTH Aachen University (Germany) with a diploma in 2012. During that time, he also received his Master of Science at the Tsinghua University in Beijing. He has been working as research associate and project manager at Karlsruhe Institute of Technology (KIT) for more than four years. Mr. Arndt conducted several research and consulting projects with industry related to production, logistics, and supply chain optimization. In his PhD thesis, he focused on quality control strategies in global manufacturing networks. For the upcoming years, Mr. Arndt will continue on the established fruitful Sino-German collaborations between industry and research in the field of smart manufacturing together with the KIT-GAMI team and follow the joint mission:

"We are a trusted partner. We are passionate on building our clients’ capabilities and taking on issues that really matter to them." For more information related to our services or others inquiries, please contact Mr. Tobias Arndt directly (tobias.arndt@silu.asia) or visit our website www.silu.asia.
Conference: Internationalization and Innovation at KIT on March 8th 2017

In early March Professor Thomas Hirth, VP of KIT, along with a delegation traveled to China in order to exchange information with KIT’s strategic partners in the province of Jiangsu and Shanghai. A highlight of the travel was the conference “Internationalization and Innovation at KIT” organized by KIT-GAMI. Thomas Hirth explained to more than 80 participants of industry and science how KIT plans to combine and strengthen these activities in China. Gisela Lanza, Professor of KIT’s Institute of Production Science and China Commissioner of KIT adds: “Transfer of results from research to economic is an important factor to joint social, economic, and scientific challenges.” In her presentation on “Smart Manufacturing”, Lanza illustrated the potentials of smart production in connection with Industry 4.0. Jivka Ovtcharova, Professor and Head of KIT’s Institute for Information Management and Engineering, elaborated about virtual reality. “The high interest in the conference reflects KIT’s success in the areas of international affairs and innovation in China,” Hirth points out.

Speech and communication on site

Corporate Social Responsibility (CSR) and technical compliance with suppliers

This topic is gaining major importance for German companies within their global supply chains. Intrinsic and extrinsic factors motivate companies today to pay more attention to CSR & technical compliance factors. Despite the general acknowledgement and acceptance of the importance of these topics the practical implementation is low. These topics are relatively new for many companies. Thus at this instant there are no tool-sets, project approaches or theories mature enough available to develop supply chains according to CSR and technical compliance. Only companies that actively design compliant and sustainable business models and involve their suppliers have the potential of enabling the win-win situation for sustainable development.

KIT-GAMI, as a trustable partner in China, supports companies to build sustainable business models within the supply chain by taking CSR and valid technical standards into account. In our standardized approach, we firstly help our customers to identify the risks of their main suppliers regarding CSR and technical compliance. Afterwards, according to the results of a gap analysis we support them in terms of training, on-site improvement and methodologies (such as social compliance, 5S, traceability, problem solving techniques etc.) to implement the improvements smoothly. This way, a long-term business relationship between customer and their suppliers is enabled. From the supplier side, the working
Successful Lean Transformation in Customized Equipment Manufacturing

Clear-structured layout, balanced assembly processes, daily shopfloor management, meeting with specific escalation processes are only part of the achievements of a successful lean transformation at a manufacturing site of a leading system provider in the automotive industry. After six months of close and intensive cooperation our partner and KIT-GAMI are both satisfied to witness that without any hardware investment the assembly line is running smoothly and productively as planned. During the first phase of this project lean mindset was achieved throughout the production department and other supporting functions by means of theoretical training and production simulation games. Following the factory planning processes defined in VDI 5200, a thorough current status analysis of the pilot assembly line was conducted. The method of value stream mapping was applied to investigate the information flow and manufacturing processes of the pilot product. To visualize the material flow a spaghetti diagram was used. In addition, detailed process mapping was carried out to identify non-value added activities during the entire manufacturing process. The status quo analysis then formed a solid foundation to plan the concept of the new line. For the new production line the ideal layout was selected based on an analysis of different layout scenarios. The work content of each work station was rearranged to balance the production. Based on the determined work content, the required manpower of each station can be fixed as well. This is extremely beneficial since a calculation of the exact manpower allows our partner to improve managing the subcontracting of operators. Besides the new design of the line, shop floor management was introduced to increase transparency of the production process and to facilitate the on-site problem solving culture. An information board was set up on 5 production lines to display production plan, production related KPIs, problem solving processes etc. Daily shopfloor meetings will now be held in front of the information board. The participants attending are mainly production, manufacturing and quality engineers. Solutions for production related problems can be developed during the shopfloor meetings within the team. In case the problem can’t be solved during the gathering, it will be escalated by means of action cards. By placing the cards on the plant management board, production managers can collect them and provide necessary support within 48 hours.

The conditions of employees are improved, the efficiency is increased and the quality level is enhanced. From the customer’s perspective, the quality of product is ensured and improved and the cost is reduced in long run. Therefore, a win-win situation between our customers and their suppliers is achieved.

For further questions regarding our project approach and success please contact Mr. Tobias Arndt (tobias.arndt@silu.asia) or visit our website www.silu.asia.

For further reading on current trends for the urge to include compliance and sustainability & technical compliance levels, see the table and diagram below.
**Sustainable Supply Development Project**

In global supply networks, it's no longer effective enough for companies to optimize their internal processes based on local interest. The importance to continuously improve the entire supply chain is gaining increasing awareness. Especially the local company of a supply chain should support the development of their suppliers in order to increase their own performance. To aid German companies to enhance their Chinese suppliers in these areas, the so-called SUSTAIN project has been launched. To give an example, a leading German company has selected one of its most important suppliers who will be developed within the project. The project scope was defined after thorough on-site observation and discussion. One aim of the project is to accelerate the internal material flow in a machining workshop. Following the process of Theory of Constraints (TOC), the inspection platform was identified as one of the bottlenecks in the machining workshop. Since all machined parts are currently taken to the inspection platform for a dimension check, the parts spend a lot of time waiting in the queue. To reduce waiting time a new quality control process was introduced. Dimensions that can be check by NC machine, do not have be inspected by the operators themselves.

The cleaning station of the supplier is another bottleneck, because high stock level and an unclear layout lead to an increase of waiting time and material handling time. In addition, most of the working space is occupied by stock, which means on the one hand low space utilization and on the other hand makes the cleaning process very inconvenient and inefficient.
Therefore, KIT-GAMI is now working on a new layout concept to optimize the cleaning area. To ensure health and safety of operators, labor safety was included in project scope as well. This supplier development project is ongoing and will last until October 2017. For further questions regarding our project approach and success please contact Mr. Zhang Renjie (zhang.renjie@silu.asia) or visit our website www.silu.asia.

**Training**

**2017 CRRC Talents Internationalization Executive Education Program**

CRRC (China Railway Rolling Stock Corporation) internally selected 108 young talents who joined 2017 CRRC Talents Internationalization Executive Education Program at XJTLU (Xi'an Jiao Tong-Liverpool University) in Suzhou. For this program, KIT-GAMI collaborated with XJTLU and took over the module “Setting up Global Networks and Supply Chains”. This training module included three topics regarding “Global Production Networks”, “Global Supply Chain Networks” and “Insight into Industry 4.0” which were conducted by KIT-GAMI experts. They provided advanced know-how to gifted participants.

For more information regarding the training program, feel free to contact Mr. Shen Chunfeng (shen.chunfeng@silu.asia) or visit our website at www.silu.asia.

**“Insight into Industry 4.0” customized workshop**

With the rise of the 4th industrial Revolution, both academic and industry are engaged in transformation and upgrading from traditional production to smart manufacturing. With KIT-GAMI’s academic strengths and years of consulting experience in the manufacturing field, KIT-GAMI provides one of industry’s leading trainings and workshops regarding Industry 4.0. The courses include content of Industry 4.0 conception and features, application approaches and use cases among others how Industry 4.0 effects enterprise business models. Through such trainings and workshops, participants will not only get theoretical knowledge of Industry 4.0, but also practical application methods. Additionally, the trainer will guide participants during discussions to re-consider their perception of manufacturing to encourage new business models and to enhance their competitive strength. During quarter 1, KIT-GAMI has conducted customized workshops for several customers based on their actual demands. For that the training contents were adjusted to guarantee a combination of theory with daily experience of customers within the workshop.
Open Course Training Program of 2017 2\textsuperscript{nd} Round

KIT-GAMI launched its latest Open Course Training Program for 2017. The training program consists of ten training sessions related to topics such as production management, quality management, lean logistics and Industry 4.0 application solutions. Please refer to the table below for details:

<table>
<thead>
<tr>
<th>Training Topics</th>
<th>Duration [days]</th>
<th>Time Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving maturity of your manufacturing process to 6 Sigma</td>
<td>5</td>
<td>2017.06.05-09</td>
</tr>
<tr>
<td>Preventive Quality Assurance - Design and Process FMEA</td>
<td>1</td>
<td>2017.06.16</td>
</tr>
<tr>
<td>Lean production enabled by Industry 4.0</td>
<td>2</td>
<td>2017.06.22/23</td>
</tr>
<tr>
<td>How to design your production line lean &amp; intelligent</td>
<td>1</td>
<td>2017.07.07</td>
</tr>
<tr>
<td>Flexible production planning: The key to competitive edge</td>
<td>1</td>
<td>2017.07.14</td>
</tr>
<tr>
<td>Application of 5S Principle and Visual Management into Demonstration Line of Industry 4.0</td>
<td>1</td>
<td>2017.07.21</td>
</tr>
<tr>
<td>Systematic Approach to Failure Prevention - Poka-Yoke</td>
<td>1</td>
<td>2017.07.28</td>
</tr>
<tr>
<td>How to upgrade your internal logistics to lean &amp; smart</td>
<td>2</td>
<td>2017.08.10/11</td>
</tr>
<tr>
<td>How to analyze your product cost structure systematically</td>
<td>1</td>
<td>2017.09.18</td>
</tr>
<tr>
<td>Optimization of value-streams by IT Shopfloor Solutions</td>
<td>2</td>
<td>2017.08.24/25</td>
</tr>
</tbody>
</table>

All training sessions will take place at KIT-GAMI’s Industry 4.0 Demonstration and Innovation Center. A unique learning environment by combining theory and practice as well as a platform to exchange knowledge and ideas with experts is offered. Moreover, our coaches’ know-how and their industry expertise ensure the most efficient knowledge transformation. For more information regarding the registration process, training outline or other issues, feel free to contact us by emailing training@silu.asia, calling Ms. Yin Yaxian under +86-(0)512-62967377 or visiting www.silu.asia.
Industry 4.0 Innovation Center OPEN DAY on Mar. 29th, 2017

Since the KIT-GAMI opened the doors of its Industry 4.0 Demonstration and Innovation Center in November 2015, it has hosted several rounds of IC Open Day Events. Each time, more than 30 companies with approximately 50 attendees applied to participate. Some companies even requested the event to be conducted exclusively for their own employees in the form of a workshop with the objective of improving their daily work performance. The staggering demand for visits and trainings has increased even more.

During the first IC Open Day event of the year on Mar. 29th, 2017, the knowledge of Industry 4.0 was passed on to the local Chinese customers who had high expectations of the event. A lively discussion was raised during the interaction and line experience session.

The Industry 4.0 Demonstration and Innovation Center serves as a platform for advanced training sessions for Sino-German enterprises in the field of production management, quality management and lean logistics enabled by Industry 4.0. Industry 4.0 solutions are part of our consulting services to upgrade your production system to a cyber-physical production with guaranteed tangible benefits. To become a partner or for more information, please do not hesitate to contact us.

We will continue the event in 2017. The next round will be organized in the end of May. If you are interested in participating, please send an email to info@silu.asia.

“Industry 4.0- from Smart Manufacturing to a creative Business Model” at SIP Expo

Both KIT and the BOSCH group are advocates and trailblazers in the field of Industry 4.0. With KIT-GAMI's advantage of top-level research and rich experience of the BOSCH group, we held this forum again during the 2017 Suzhou Industrial Fair this year. This time, KIT-GAMI and Bosch talked about different visions from different sides and generated fantastic ideas, which were shared among the nearly 150 participants. Ms. Guan Xiangzhen from KIT-GAMI, Mr. Cai Pei from Bosch and Mr. Cheng Zhiyou from Rexroth gave keynote speeches on Industry 4.0 concepts, case studies as well as methods of implementing Industry 4.0 in China.
KIT-GAMI is dedicated to support enterprises in their development by providing premium professional manufacturing skills as well as trainings and research. Currently, more and more organizations are paying stressed attention on Industry 4.0 knowledge to expand their comprehension and apply it into the processes of their own business. KIT-GAMI can support this process by a structured project approach to assess the current state and map out a future state of a company’s operations with regard to Industry 4.0.

To become a partner or for more information, please do not hesitate to contact Mr. Tobias Arndt (tobias.arndt@silu.asia).