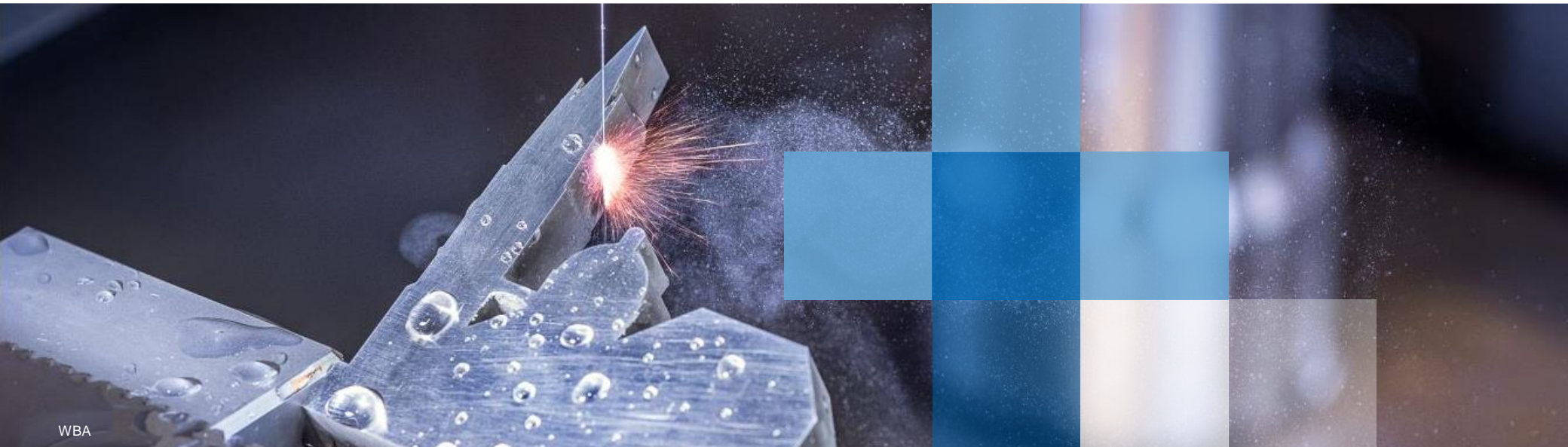




**WBA
WERKZEUGBAU
AKADEMIE**



WBA

Advanced tool and die making – Future strategies and solutions

Three day international seminar

Aachen, 21st to 23rd of October 2019

Powered by:



Trends and challenges in tool and die making: The existing global trends lead to four main challenges



46%

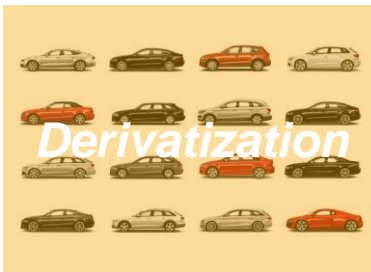
of the manufacturing companies are expanding internationally



Globalization

785%

increase in Audi model variations between 1994 and today



Derivatization

1,460%

increase in the worldwide number of electric cars between 2012 and 2017



New Technologies

50%

shorter model cycle time of the VW Golf between 1975 and today



Shortened Product Lifecycles

#15

iPhone model launches in the last 11 years



Volatility & Change Requests

Challenges for the tool and die industry



Cost pressure



Innovation pressure



Time pressure



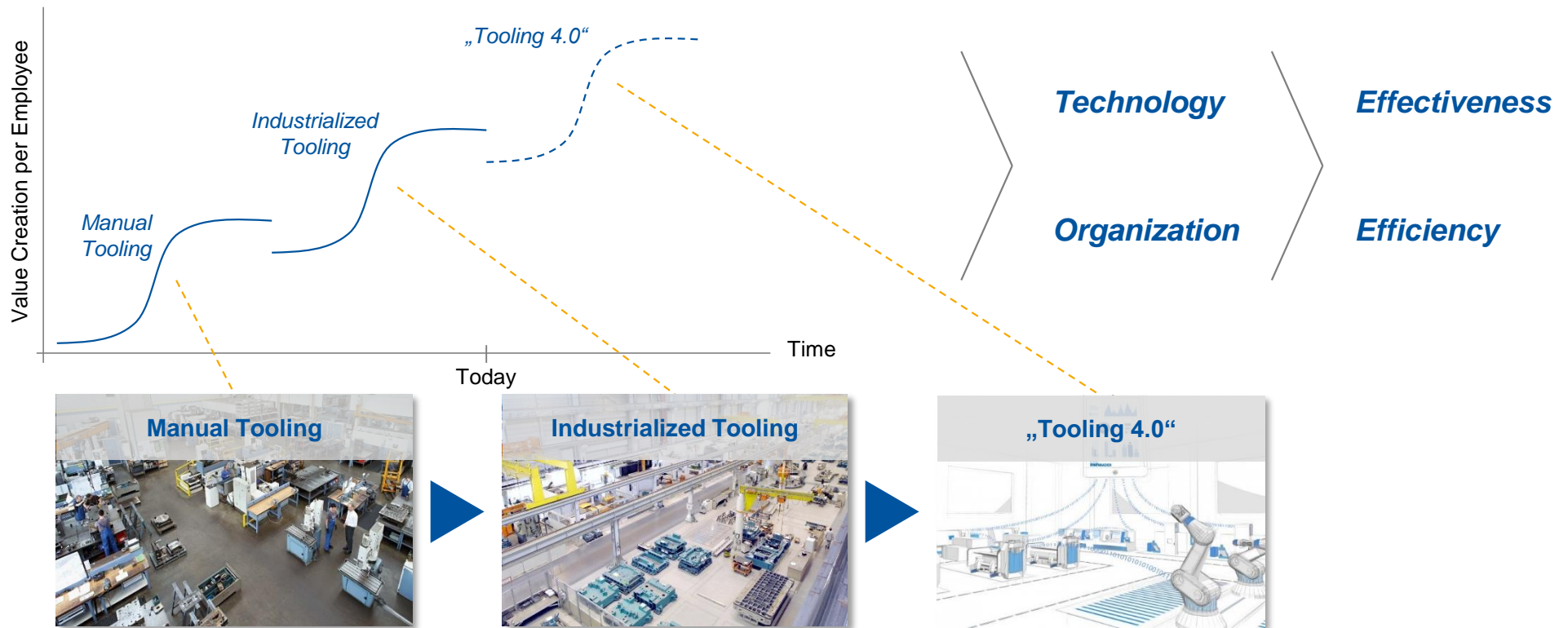
Flexibility pressure

Are you prepared for today's and future's challenges?



World class tool shops have successfully introduced new strategies in order to meet the current and future challenges

The evolution of tool manufacturing



The tool and die industry has to continuously adapt strategies, processes and technologies to ensure future competitiveness

The seminar *“Advanced tool and die making”* will facilitate relevant knowledge to improve operational excellence



Topics in focus

Digitalization & Industry 4.0



Outlook to the possibilities of Industry 4.0 for the tooling industry as well as best practice examples

Production planning and control



Efficient planning and scheduling to ensure delivery reliability and value creation speed

Process standardization & flow production



Process-oriented manufacturing and utilization of repetition effects for single batch manufacturing

Additive manufacturing



New opportunities by 3D printing technologies and connection into integrated process chains



Visit one of Germany's best tool shops and get in touch with local tooling experts



Visit the RWTH Aachen University innovation campus with the latest production technology



Learn from experienced lecturers and tooling experts and enjoy state-of-the-art training facilities



Experience real cases from the tooling industry for immediate application



Explore the city of Aachen with the historic city hall and the imperial cathedral

The seminar is structured into three days of presentations, case studies and insights into Best Practice examples



Structure of the seminar

	Sunday 20.10.	Monday 21.10.	Tuesday 22.10.	Wednesday 23.10.
09:00		Current trends and challenges in the tooling industry		Additive manufacturing and integrated process chains
10:00		Development of Industrialization in the tooling industry		
11:00		Tool standardization		Industry 4.0 in the tooling industry
12:00		Lunch	Company visit of German Best Practice tool shop	Lunch
13:00		WBA Demonstration Shopfloor tour		Fraunhofer IPT Shopfloor tour
14:00		Material flow and synchronization		
15:00	Individual arrival	Learning game Industrialization		Wrap up
16:00		Planning and scheduling		
17:30				Individual departure
18:30	Leisure time	Leisure time	Leisure time	
	Evening program		Evening program	
Open end				

Accompanying tooling activities

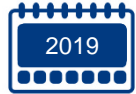
Get the most out of your days in Germany: Combine the seminar with a visit to the world's no. 1 trade fair for plastics and rubber "K 2019" in Düsseldorf



Key facts:

- Leading trade fair for plastics and rubber
- 3.293 exhibitors
- 232.053 visitors from 161 countries
- Raw materials, auxiliary materials, semi-finished products, technical parts and reinforced plastic products, machinery and equipment for the plastics and rubber industry, services, research, science

The seminar includes free local transfers and accommodation in a 4**** hotel in Germany



Dates

21. - 23.10.2018



Location

Aachen, Germany



Cost

2,500€

early booking

2,900€

regular booking

Group discount possible!



Group size

Max. 25



Language

English



Registration

- **Registration via email and payment of respective fees**
 - **Early booking** fees (2,500€) apply for reservations from now **until 15.08.2019!** To use the discount the **early booking price** has to be transferred until 15.08.2019 with confirmation of payment!
 - **Regular booking** fees (2,900€) apply after 15.08.2019 and have to be paid in full **until 30.09.2019** with confirmation of payment!
- **Free cancellation** and full refund **until 15.08.2019 for participant!**
- Please note that the **WBA reserves the right to cancel the event until 15.08.2019** in case of insufficient participation. Please **do not make any travel arrangements** prior that date!
- If you would like to **attend the seminar with your colleagues**, ask for a **group discount!**

Organization details and included services:

- Free transportation during the seminar program
- Accommodation in a 4**** Hotel from 20th of October 2019 until 23rd of October 2019
- Evening program including dinner on Sunday and Tuesday
- Free breakfast and lunch on the seminar days Monday, Tuesday and Wednesday
- Digital and printed documentation of the seminar documents
- Support of the participants through trained specialists prior to the seminar and during the event
- Access to state-of-the-art training facilities in the newly introduced cluster of production technology of RWTH Aachen University
- International flights and the arrival to Aachen are not included



During the seminar there will be an evening program, leisure time and a company visit of a German Best Practice tool shop



Sunday, October 20th: Brewery visit

- Subsequent dinner and **beer tasting**



Monday, October 21st: Individual leisure time

- Individual free time in Aachen that can be used for **shopping**, a visit of a **thermal bath** or anything you like



Tuesday, October 22nd: Company visit of German Best Practice tool shop

- Visit of a **world class** tool shop which focusses on **injection moulds**, **die casting tools** for aluminum and zinc as well as **stamping** and **bending tools**
- **Winner** of the award “**Tool-Maker of the Year 2018**” in the category internal tool maker with less than 50 employees



Tuesday, October 22nd: City tour and dinner together

- Guided tour through the city and the **old town of Aachen**
- Visit of Aachen's historical landmarks, e.g. the **imperial cathedral**
- **Dinner** together with all participants at a **traditional German restaurant**



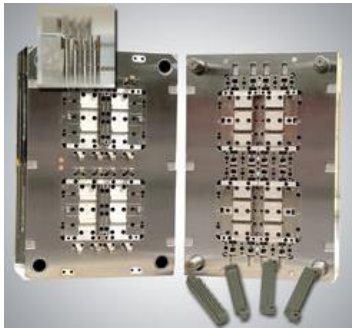
Tuesday, October 22nd: Company visit of German Best Practice tool shop



Company visit at Harting Applied Technologies



Harting electrical connector



Harting tool



Award ceremony "Tool-Maker of the Year 2018"



Outstanding features of Harting Applied Technologies

- Harting Applied Technologies is the **internal tool shop** of the internationally operating and family-owned Harting Technology Group, one of the **leading partners** and **drivers** of the fourth industrial revolution (**Industry 4.0**)
- The manufactured **injection moulds**, **die casting tools** as well as **stamping and bending tools** are used for the production of **industrial connection technology** such as electrical connectors, network components and solutions for e-mobility
- Harting Applied Technologies is the winner of the award "**Tool-Maker of the Year 2018**" in the category internal tool maker with less than 50 employees

Harting Technology Group

5,000 number of employees **762 m. €** turnover in 2018

13 production plants **3** tool shops

100% owned by the Harting family



Harting Applied Technologies is a world-class tool shop due to its high degree of innovation, automation and productivity

The three day international seminar has already taken place between 2016 and 2018 in an innovative and interactive environment



Innovative and interactive workshops



Collaboration between research and industry



First-hand experience in the use of new technologies



Continuous learning and networking across borders



The international seminar promotes global exchange in order to solve today's challenges in the tool and die industry

The “Tooling Theme Park” of the WBA presents new Industry 4.0 applications based on modern technology



Within this unique infrastructure, digital networking and the future of toolmaking can be experienced live via demonstrators

The WBA Tooling Academy Aachen offers the full range of tool making competence



Who we are

- **Central point of contact** for tool shops
- Close **collaborator with institutes** of the RWTH Aachen University and the Fraunhofer-Gesellschaft
- **25 employees** with organizational and technological focus on tool making
- Dedicated demonstration tool shop
- Execution of approx. **50 consulting projects** per year
- Initiator and leader of approx. **10 research projects per year** with partners from our network

Where we come from

**WBA
WERKZEUGBAU
AKADEMIE**

Powered by:

Who our partners are

Premium	Cooperation
Business 	
Basic 	

Our mission

- Establish **successful business strategies** and enhance **operational excellence** for our customers
- Share insights** on future business and market developments and latest technological enablers
- Connect our partners** for multi level cooperation
- Qualify personnel** for current and future challenges



Please get in contact with us for further details and discussions



WBA

Carmen Halm

Head of Further Education

WBA Tooling Academy Aachen
Campus-Boulevard 30
52074 Aachen, Germany



+49 241 990163 16



c.halm@werkzeugbau-akademie.de



WBA

WBA Tooling Academy Aachen GmbH

Campus-Boulevard 30
52074 Aachen
Germany

Phone +49 (0)241 99016302

Fax +49 (0)241 99016329

E-Mail: info@werkzeugbau-akademie.de

Jens Helbig

Consultant

WBA Tooling Academy Aachen
Campus-Boulevard 30
52074 Aachen, Germany



+49 241 990163 19



j.helbig@werkzeugbau-akademie.de



Maren Richter Photography

Managing Director:

Prof. Dr.-Ing. Wolfgang Boos, MBA

Local court Aachen HRB no. 16525

Tax number.: 201/5998/4552

VAT number: DE 275 054 031