



## 4. Japan Wirtschaftstag in Rosenheim 11th May 2017

### Sheet Metal Rollforming for Japan

Field Report from a  
small company  
Albert Sedlmaier

# „Japan ist ein einzigartiger, strategisch wertvoller Standort“

Die aktuelle Geschäftsklima-Umfrage 2016 der Deutschen Industrie- und Handelskammer in Japan (AHK Japan)  
„German Business in Japan“ Quelle: Einladung zu dieser Veranstaltung

## Building international Partnerships (for a small company)

### Agenda

- **Introduction of data M Sheet Metal Solutions**
- Product Portfolio and Strategy  
Basic Software vs. „specialized Software“
- Occupying a high level Market Niche
- Become Technical Leader (even being small) by expanding product portfolio (research and development and international partnering)



Rollforming the Future®



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Monday, May 08, 2017

### Products & Solutions

#### +++DIVISION SOFTWARE:

- Roll Forming
- Simulation with FEA
- Metal Bending

#### +++DIVISION AUTOMATION:

- Roll Scanning
- Flexible Rollforming
- Material Testing
- Profile Cross Section Scanning

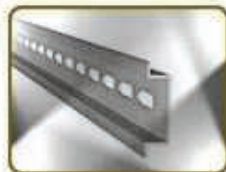
### Research Projects



data M Sheet Metal Solutions GmbH is a company specialised in the field of sheet metal processing. We have been developing and distributing the worlds-leading software solutions for rollforming COPRA® RF and metal bending COPRA® MetalBender.

In addition to software solutions we offer in particular wide-ranging [consulting and engineering services](#). These include design activities, analysis of reforming processes, or custom research and development in the field of roll forming.

#### +++DIVISION SOFTWARE:



#### COPRA® RF

The software COPRA® RF allows the designer to design simple as well as highly complex open or closed profiles, tubes, trapezoidal sections or drawing rings in a professional way.



#### COPRA® FEA RF

COPRA® FEA RF is used to simulate the roll forming operation by non-linear elastoplastic calculation.

# What is Roll Forming?



About 40%  
of steel sheet is being  
roll formed in Europe  
and Japan





# Application of Roll Forming

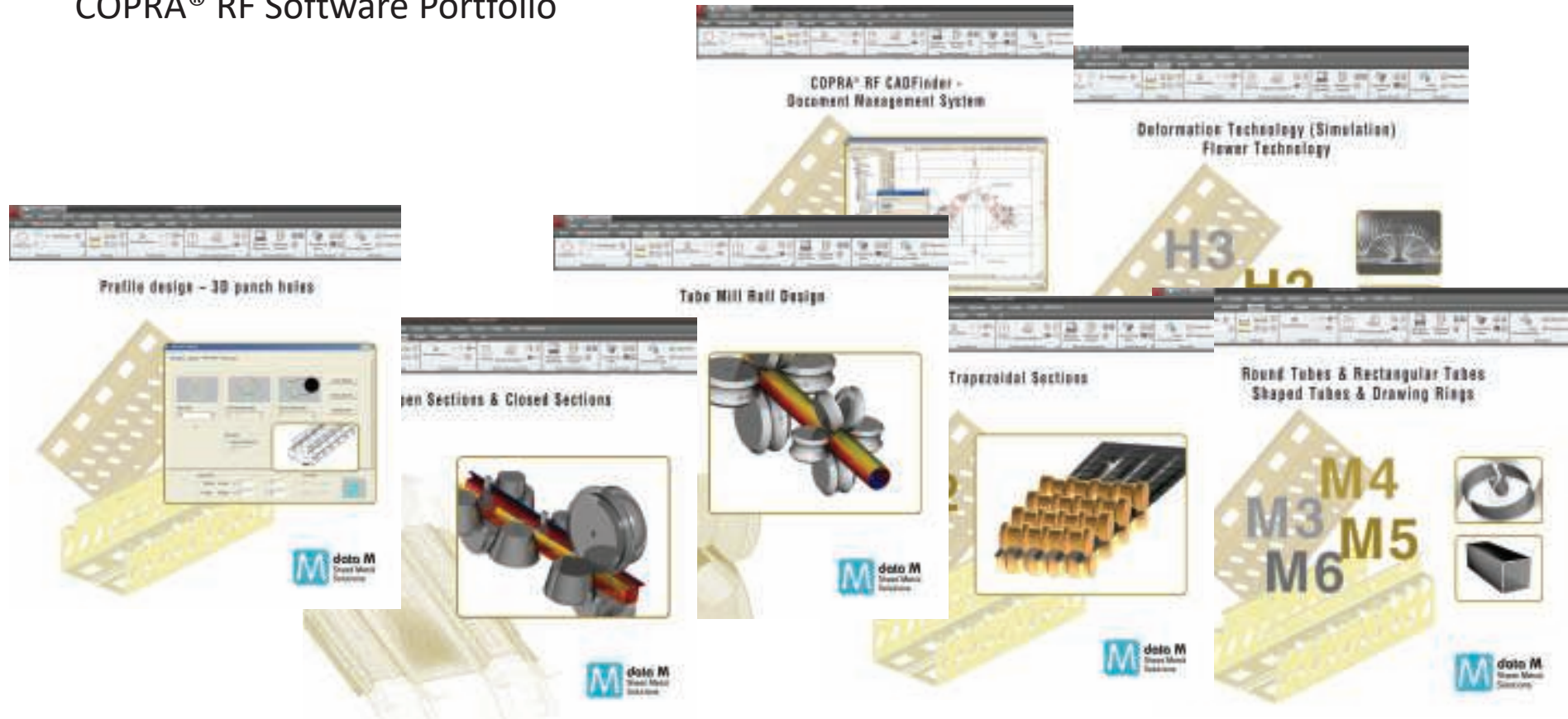


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**Basic Software vs. „specialized Software“**
- Occupying a high level Market Niche and...
- become Technical Leader (even being small) by expanding product portfolio (research and development and international partnering)

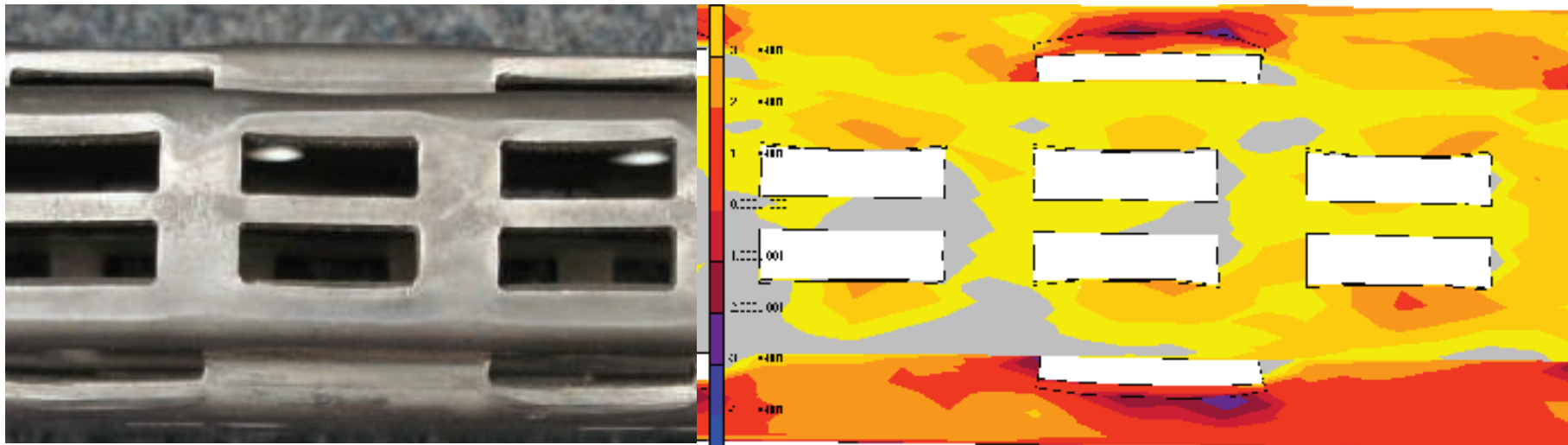
# Specialized Software vs. Basic Software...

COPRA® RF Software Portfolio



# Specialized Software vs. Basic Software....

Practical Example:  
Simulation and Validation of Pre-Punched Material....

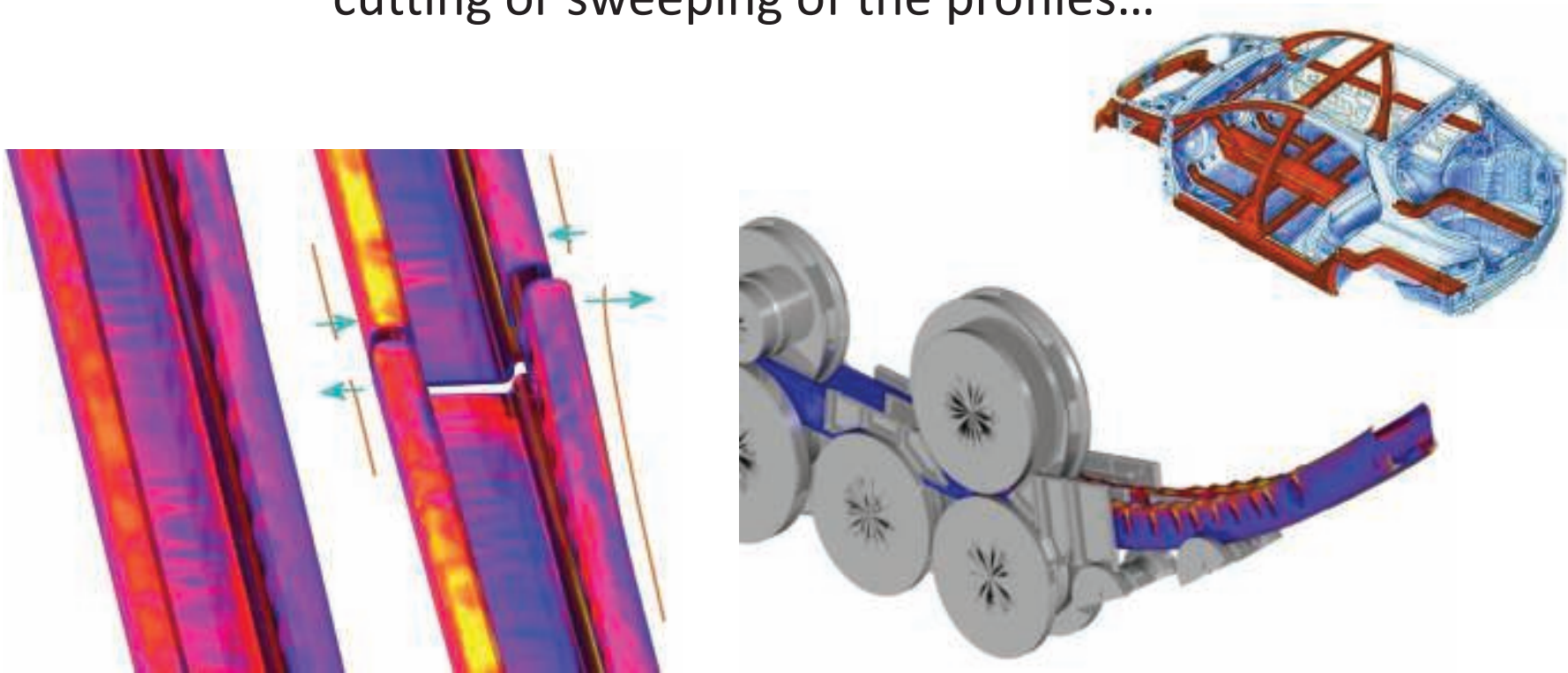






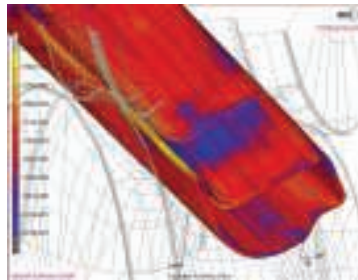
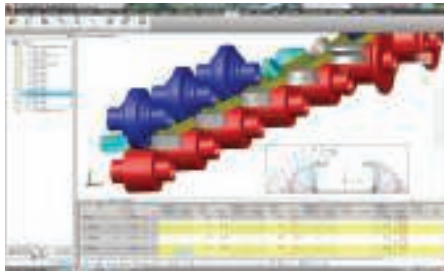
# Specialized Software vs. Basic Software...

The CAE tool COPRA<sup>®</sup> FEA RF is able to represent integrated operations in the simulation of the roll forming process like cutting or sweeping of the profiles...



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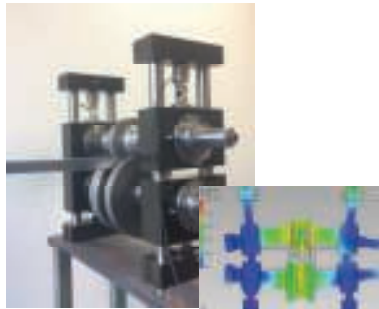
COPRA® - Tool Design and Simulation Software



Process development, R&D Services



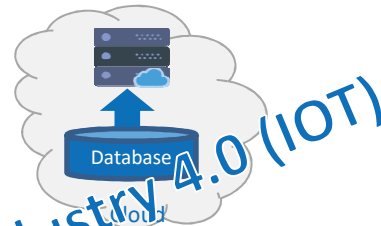
The COPRA® idea:  
an holistic approach to  
**Roll Forming**



COPRA® Smart Stands



Material Testing:  
COPRA® FEA Bendtester



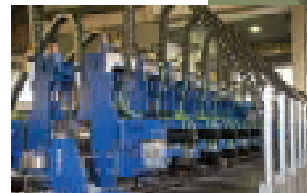
Industry 4.0 (IIOT)



Quality Control:  
COPRA® RollScanner



COPRA® Smart Factory



COPRA® Adaptive Motion Control

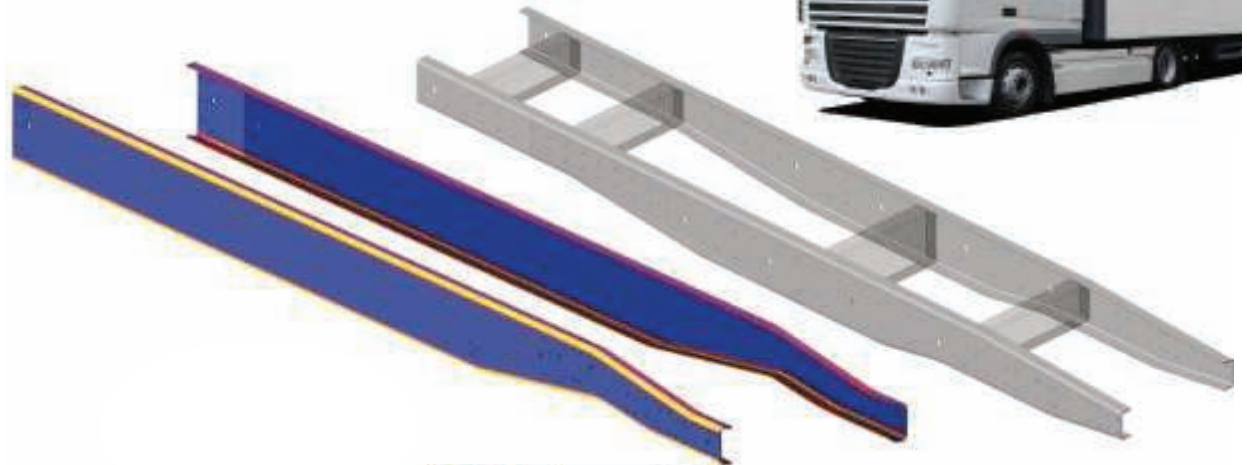


Sensors:  
COPRA® ProfileScan

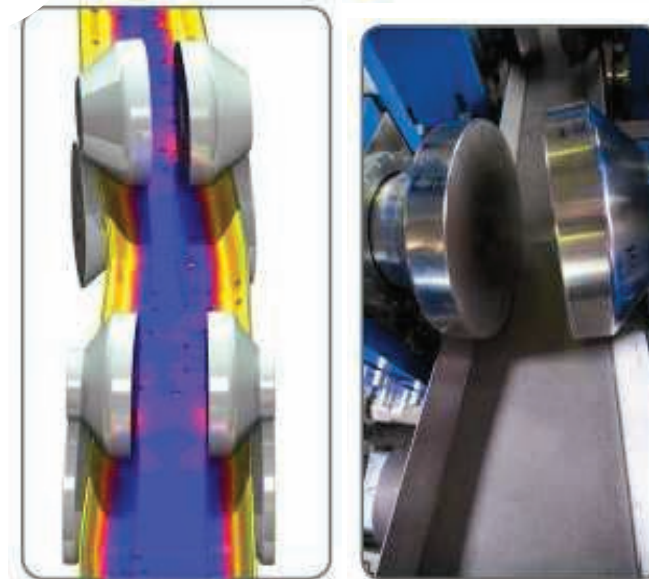


# Leadership in (high level) Market Niche: New Technology for making Truck Beams

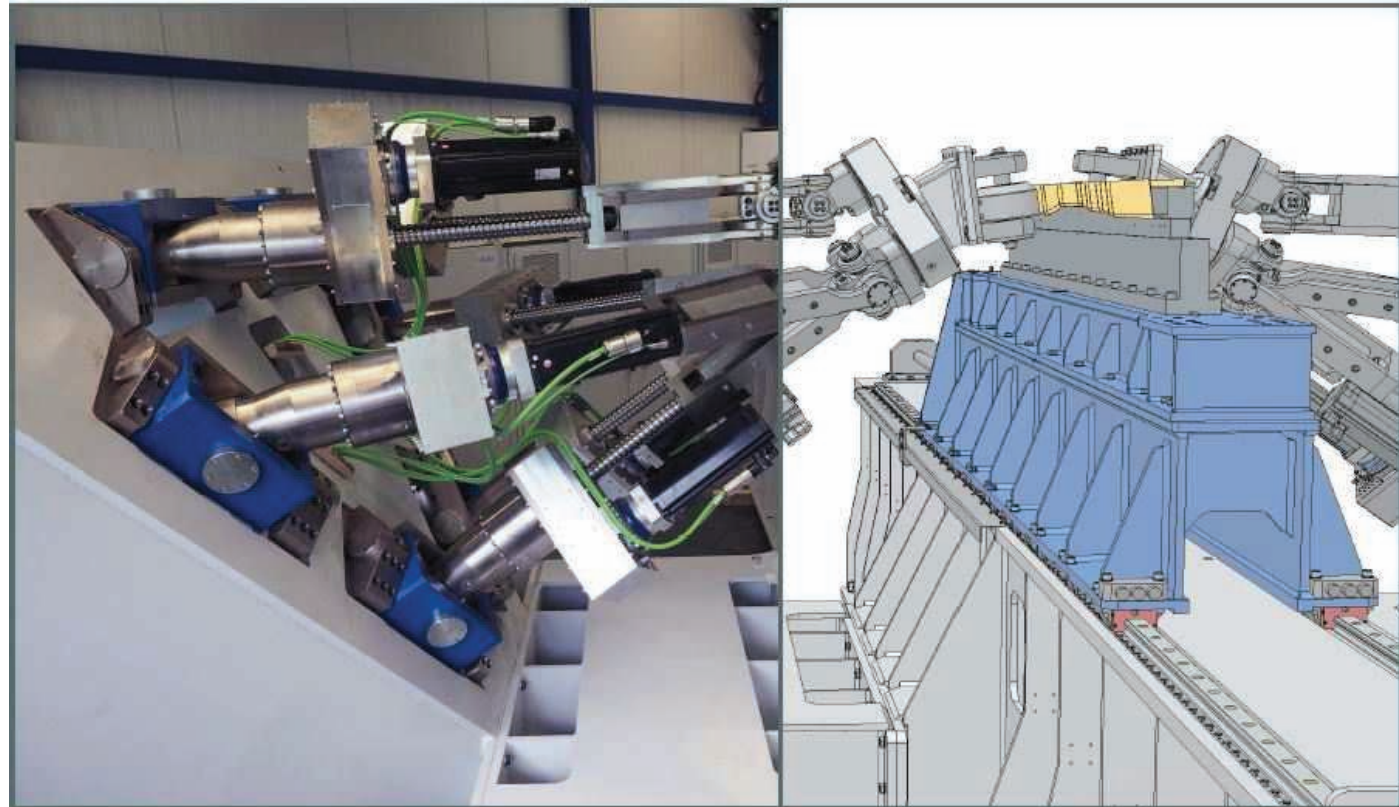
Target: Industrial Realisation  
of a NEW 3D Roll Form  
System to produce  
Truck Beams



- Length: 9-15 m
  - Material thickness: 5-8 mm
  - Material Properties: to 900 MPa
  - Est. 100 holes per meter
  - Double sided asymmetric 3D forming
  - Close tolerances for later assembly
  - 8 geometries
  - Output: 100 tons per day (300 days/year)
- development of concept and machine**

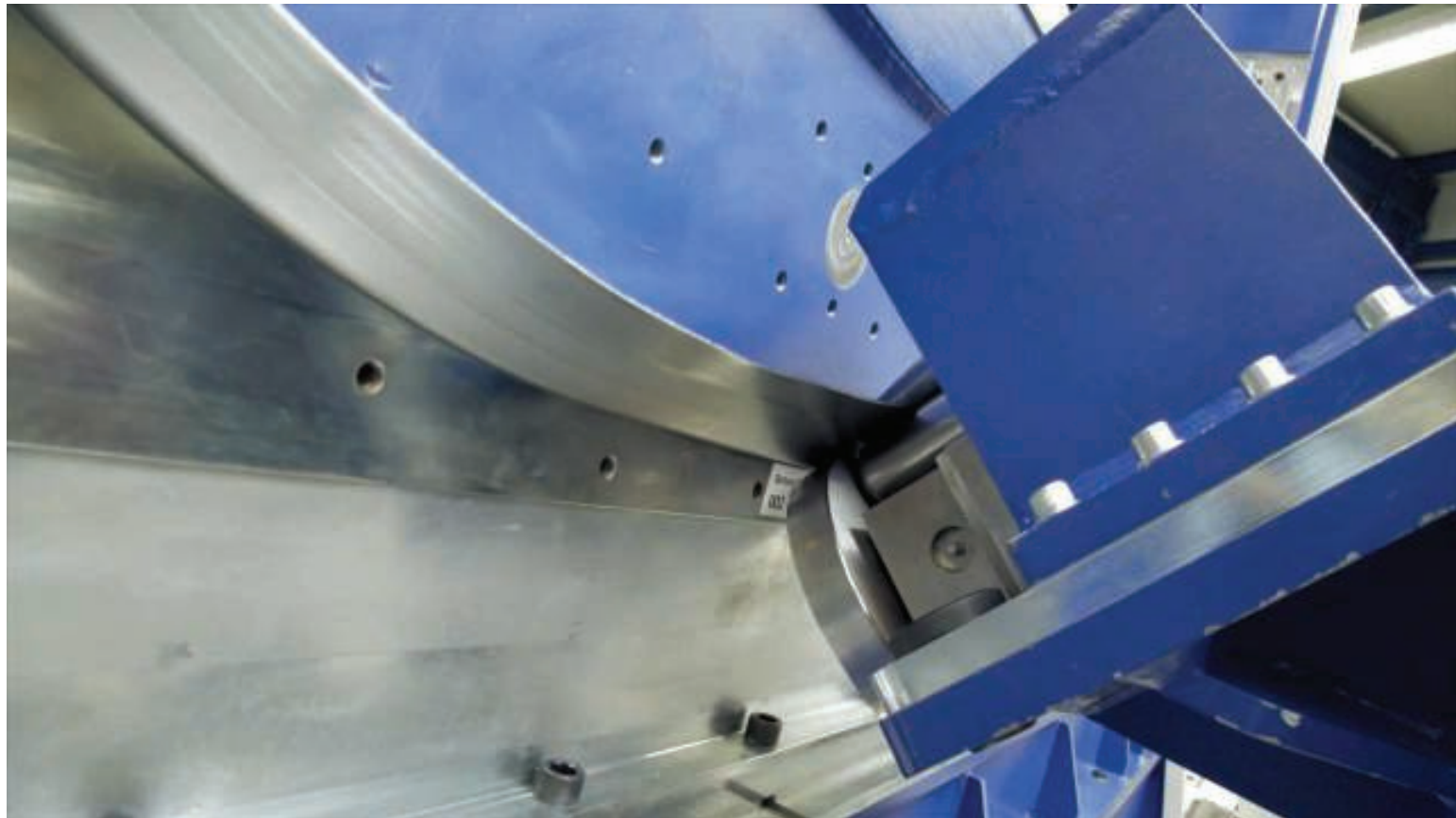


# Leadership in (high level) Market Niche: New Prototyping\* Machine for 3D automotive roll formed components



\*Machine for making (roll formed) prototype parts

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\*Machine for making (roll formed) prototype parts

# Building long term partnership with Customers in Japan

In many ways similar culture and thinking (long term planning, trust, high technical level, highest educated and motivated people, great respect....)

„Japan ist ein einzigartiger, strategisch wertvoller Standort“ ...



ありがとうございました

Many thanks for your attention!



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