

# NEXT STEP IN GLOBALISATION OUR M.A.I-PRODUCTION PLANT MEXICO

# Welcome!



#### We are specialists for innovative automation solutions.



## 7 locations worldwide



# Headquarter &Production Plants:

M.A.i GmbH & Co. KG Hummendorfer Straße 74 96317 Kronach, Bavaria / Germany

M.A.i - Automation Technology (Nanjing) Co. Ltd. No. 1888 Jiyin Road 21106 Nanjing / P.R. China

#### M.A.i Mexico

Carretera Estatal 100 km 3.6 Int 1 Parque Industrial Terrakia Nave 9 76295 Colón, Querétaro / Mexico

#### Service & Sales:

M.A.i – Automation Technology (Ningbo) Co. Ltd. Ningbo High Technology Zone 315040 Ningbo City / P.R. China M.A.i – Automation

Technology (Suzhou) Co. Ltd.

215000 Suzhou / P.R. China

# .....

M.A.i – innovative automation Servicecenter Hungary Ráday utca 12 2112 Veresegyház, Budapest / Hungary M.A.i – Automation SRB DOO Servicecenter Serbia Trg Topolivaca 4 34000 Kragujevac / Serbia

# M.A.i Germany



M.A.i GmbH & Co. KG Headquarter Hummendorfer Straße 74 96317 Kronach, Bavaria / Germany

#### Sales | Engineering | Production | Service





 $\rightarrow$  270 employees + 40 trainees

 $\rightarrow$  8.000 sqm production area & 2.500 sqm administration area

### M.A.i China

innovative automation

M.A.i – Automation Technology (Nanjing) Co. Ltd. No. 1888 Jiyin Road 21106 Nanjing / P.R. China

Sales | Engineering | Production | Service





 $\rightarrow$  120 employees

 $\rightarrow$  3.000 sqm production area & 1.000 sqm administration area

# Current sales





#### And now ... New destination since 2023



# MEXICO CALLING!

#### M.A.i Mexico



#### M.A.i Mexico

Carretera Estatal 100 km 3.6 Int 1 Parque Industrial Terrakia Nave 9 96295 Colón, Querétaro / Mexico

#### Sales | Engineering | Production | Service





 $\rightarrow$  40 employees in 2025

- → 100 employees in 2030 (strategic plan)
- $\rightarrow$  3.000 sqm production area & 800 sqm administration area







Terrakia Industrial Parque & M.A.i building

M.A.i building backside, inside production & administration area

# Your added value





# Significant investments all around the area

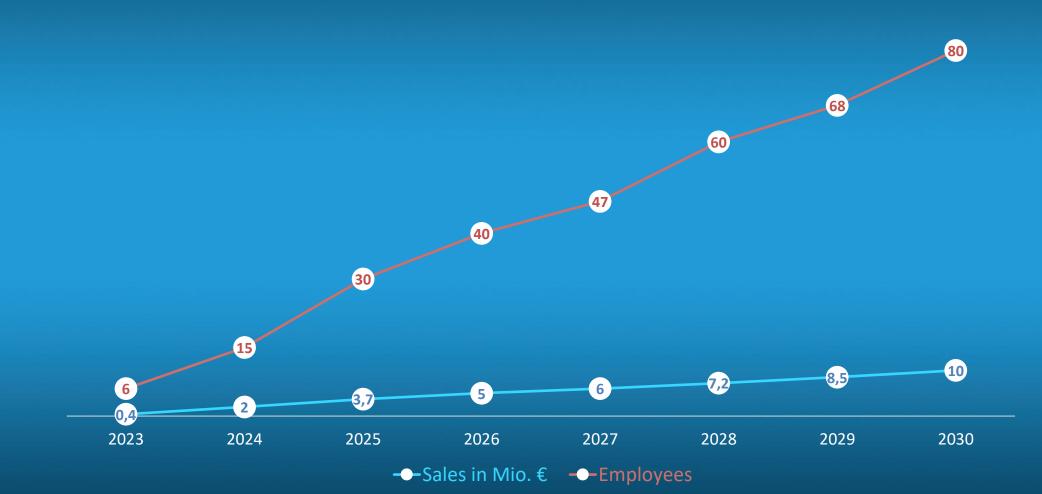




# Sales & Employees



#### **BUSINESS PLAN MAI MEXICO**

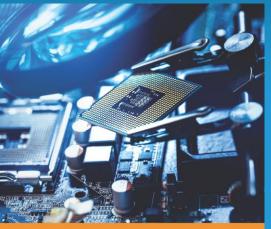


# Industry sectors





AUTOMOTIVE



# ELECTRONICS



MEDICAL



#### **NEW ENERGY**

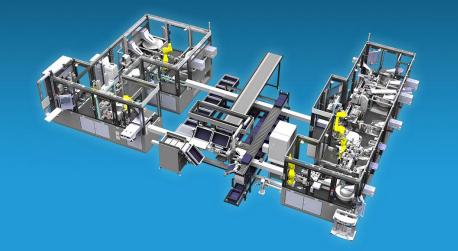
#### Customers







#### Automation solutions



handling- and robot automation systems around injection molding/press technology

robot handling systems for loading and unloading of manufacturing systems

systems for process data aquisition and traceability



special applicans





robot automation



injection molding automation



testing

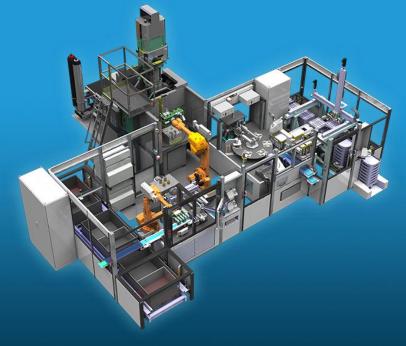
lines

assembly lines

semi- and fully automatic assembly and test lines

semi automated complex manual workstations

camera based, electrical and electronic testing techniques



# Automotive Example

Plastic Processing: Molding Automation of Interior lighting panel IML

#### **Process notes:**

#### Performance: 37 sec. / 4 parts

- ightarrow servo-motorized 3-axis gantry handling for KLT, lid and tray
- $\rightarrow$  6-axis robot with multi-gripper (3D contour gripper)
- $\rightarrow$  cleaning station with integrated suction and ionization
- $\rightarrow$  cleanroom compatible 6-axis robot at SGM
- $\rightarrow$  pneumatic transfer rotary module
- $\rightarrow$  6-axis robot for transferring injection molded parts
- $\rightarrow$  keyence laser system for sprue separation
- $\rightarrow$  inspection station complex camera inspection system Cognex
- → Clean room cabin as closed standardized M.A.i protective enclosure







# Automotive Example

Assembly Processing: Automation of battery voltage disconnector

#### **Process notes:**

#### Performance: 8 sec. / 1 part

- $\rightarrow$  product carrier circulation system with 22 part-specific 1-fold product carriers
- $\rightarrow$  Station 1: manual workstation preloading lower part
- $\rightarrow$  Station 2: feeding and assembly piston
- $\rightarrow$  Station 3: feeding and assembly of retainer + igniter by 4-fold rotary indexing table
- → Station 4: O-ring assembly station for igniter
- $\rightarrow$  Station 5: converting copper strip by 4-fold rotary indexing table
- $\rightarrow$  Station 6: provide filter per 2x Scara robot
- $\rightarrow$  Station 7: feeding and mounting damping element
- → Station 8: repositioning lower part with O-ring assembly
- → Station 9: test cell with screw system and component labeling with DMC code by laser unit
- → Station 10: HV test, resistance measurement, tumble circuit test pin position
- $\rightarrow$  Station 11: packing og the components in 2x tray variants







# Automotive Example



#### **Process notes:**

Performance: 32 sec. / 8 parts / 120 metal parts / 8 cavities

- $\rightarrow$  6-axis robot Stäubli TX 200 with insertion and removal combi-gripper
- → 3x Scara robot Stäubli TS 60 with removal combi-gripper
- $\rightarrow$  bowl feeder with seperating device
- $\rightarrow$  cooling line with 10 4-fold mounting plates for 40 finished parts
- $\rightarrow$  rotary table drive with 8 stations:
  - pin length check
  - wobble circle test
  - electrical function test (LV, HV)
  - part marking by means of centre punch
  - cleaning station
  - automatic packaging in trays or nok
- $\rightarrow$  automatic dummy test with max. 10 different customer test dummies



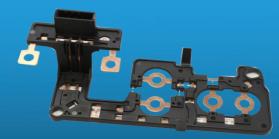
# **Electronics Example**

Power Management: Assembly & testing line for E-Mobility – HV Contact bridge

#### **Process notes:**

#### Performance: 40 sec. / 4 parts

- → process content: robot assembly line, 3 robots, EOLT
- $\rightarrow$  DMC-marking and reading station
- $\rightarrow$  press assembly bushes/screws with force-displacement monitoring
- $\rightarrow$  camera inspection unit for holes
- $\rightarrow$  EOL: M-slot test and high-voltage test
- $\rightarrow$  pin-position measuring station







# Medical Example

#### Clean Room Technology: Production cell for medical blood test stripes

#### **Process notes:**

#### Performance: 12 sec. / 16 parts

- $\rightarrow$  clean room production class 7
- $\rightarrow$  M.A.i-highspeed linear axis with 16-fold pneumatic suction gripper
- $\rightarrow$  camera inspection unit with 4 cameras for check part geometry
- → fast linear transfer system
- $\rightarrow$  2 tampon printing machines with camera monitoring
- $\rightarrow$  2 cameras for tampon-print check
- $\rightarrow$  full automatic packaging line







# Medical Example

Clean Room Technology: Assembly and testing cell for medical containers

#### **Process notes:**

#### Performance: 7 sec. / 1 part

- $\rightarrow$  clean room production class 6
- $\rightarrow$  wall thickness measurement
- → vacuum leak test
- $\rightarrow$  color test
- $\rightarrow$  mounting plug incl. ionization
- $\rightarrow$  welding CO-EX foil by thermal contact welding
- $\rightarrow$  leakage test after welding



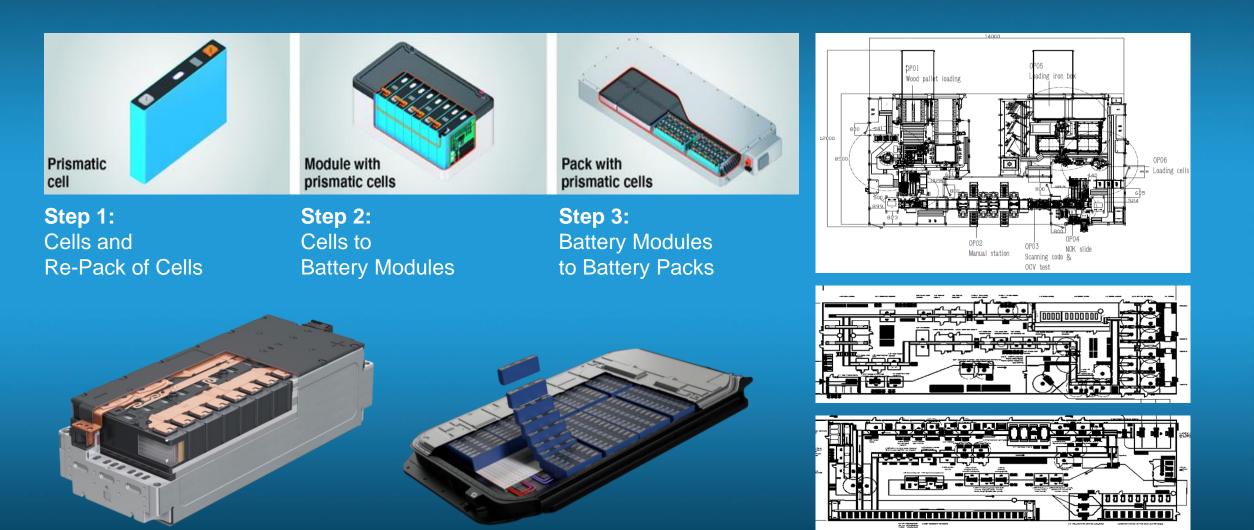






# New Energy Example

Power Management: Automation for car batteries (cells, modules & packs)



# GREAT IDEAS NEED GREAT SOLUTIONS

Please contact us for more informations about M.A.i Mexico!



