RENA Technologies GmbH
Company Presentation
Bernard Winker
Confidential
RENA at a glance

Headquarters
Gütenbach
In Germany’s Black Forest
Founded 1993

~ 1000 Employees

3000 + tools installed worldwide

#1 Global Technology Leader in Wet Chemical Process Equipment
Customized products and solutions
Foundation as wet chemical equipment player for Semiconductor applications

Diversification into attractive end-markets
Diversification strategy into Semiconductor, MedTech and new application fields

1993
Foundation of RENA GmbH

1994
Fully automatic semiconductor equipment

2002
First Inline texturing tool worldwide

2007
Expansion of production facilities in Germany and Poland

2008
Start of RENA Technology Center (R&D), Freiburg

2011
Launch NIAK platform for wet chemical solar processes

2015
Foundation of RENA Technologies GmbH; Acquisition by Capvis

2016
70% market share for PERC technology; RENA monoTEX® additive

2018
Successful diversification: Semiconductor, MedTech and Green Energy

2019
Acquisition by Equistone

1993 - 2015
Shift from product focus to platform technology

Established proof of world-leading platform
Know-how transfer into emerging Green Energy market and establishment as technology leader

2015 - 2016
Milestones/RENA History

2018 - 2019
New Panel plating process for highly accurate deposition
What our products do

Machine + Chemistry = Surface Treatment

Additives

Cleaning
Plating
Etching
Texturing
Porosification

Example
Textured wafer surface for high efficiency solar cells
Our Expertise – Your Solution

- Technology Assessment
- Process development & optimization

- Standardized design
- Customized engineering
- Platform optimization (TCO, uptime, throughput)
- Construction of machine

- Manufacturing & Assembly
- Shipment
- Move-in
- Commissioning and process start up
- Qualification and validation

- Maintenance
- Spare part supply
- Optimization and upgrades
- Onsite service
- Retrofits
- Process support

Applied Research
Design & Engineering
Production, Delivery and Start up
After Sales

Sectors:
- Semiconductor
- MedTech
- Green Energy
- Glass
- Customized
More than 300 international customers worldwide work everyday with RENA tools.
Our global footprint

- **Manufacturing, engineering and R&D**
  - Gütenbach, Germany
    - Headquarters
    - Manufacturing and engineering
  - Berg, Germany
    - Manufacturing, engineering and R&D
  - Freiburg, Germany
    - R&D
  - China
    - Sales, Service and R&D
  - Wykroty, Poland
    - Pre-assembly of machine modules and third-party industrial manufacturing services (AIS)

- **Sales & service centers**
  - Germany
  - China
  - Philippines
  - Singapore
  - USA

- **Representative offices**
  - India
  - Japan
  - Israel
  - Netherlands
Semiconductor Solutions

Final product

Applications
- Prime Wafers
- Discrete, IC
- LED, Photonics
- MEMS, Sensors
- Memory
- Power Devices

RENA solution

Manual and automatic tools for various wet processing steps e.g. cleaning, plating, polishing, stripping and drying up to 300mm

Challenges

- Complex manufacturing process and integration
- Highest requirements on surface condition
- Highly reproducible surface quality output
- High uptime for maximum throughput

25 years of experience as Semiconductor equipment manufacturer with focus on customized solutions
Automatic wet bench for semiconductor production

- Advanced process sequence and throughput simulation
- Process monitoring and analysis with independently configurable software
- Up to cleanroom class ISO 2
- Substrates up to 300 mm
- Standard, low-mass and carrierless processing
- High process flexibility
- Modular design
- Customized input and output
Supply cabinet to provide chemicals or to collect effluent

- Modular design
- Minimized footprint and quick start up
- High flexibility
- Easy maintenance integral part design
- Full compliance to SEMI standards
- Housing made of PP white or Stainless Steel
Electroplating equipment for MEMS, LED & wafer packaging

Flexible performance
- Manual equipment
- Plating of Ni, Au, Sn, Ag
- High flexibility
- Wide layer thickness range
- Various substrates
- Excellent uniformity
- For R&D environments and small production lines
Service Solutions

Customer focus

Running Production Line, Short downtimes
Cost efficient and reliable production tools on highest availability level
Short lead time for spares
Upgrade and modernization service
Upgrade and modernization service

Challenges

- High Uptimes,
- Constantly high Yield
- Fast response times
- Machine and Process Know

RENA promise

Consulting, Field Service & Support, Parts and Retrofits, Predictive maintenance
With our RENA service experts we tailor customer demands the service level that fits for you
100 service colleagues are ready to answer your calls
RENA sets market trends & innovations

Technology Center Freiburg

- 35 technologists in Germany and China
- Cooperating with 100 design and software engineers
- 150 patents granted and pending
- In-house process development and demonstration
- Collective development with our customers

- World wide onsite support for startup and process
- Installed machines for test purposes in the fields of solar, semiconductor, battery, medical
- Cleanroom conditions available
- Demo possibilities

Numerous renowned partners in R & D worldwide
Qualified professionals for hi-tech products

- Our experienced staff has the know-how for first class equipment
- We are proud to develop our future staff by ourselves to meet the specific skills required for building our machines
- Longstanding relationships with our employees characterize our company and represent reliability, quality and a healthy working atmosphere
- Our staff puts heart and soul into our products to deliver cutting edge solutions to our customers

RENA represents dedication, commitment and loyalty
Thank you for your attention.

View RENA Headquarters - 1000 m