



World-Wide Value Offerings

**Component Solutions**

- Turnkey chip design
- Turnkey package design

**Business Solutions**

- Manufacturing services
- Technology consulting
- IP management consulting
- Verification and e-design

**System Solutions**

- System architecture and design services
- High performance packaging services
- Power and mechanical design services
- Industrial solutions

**Mission Transfer Services**

- Fab management outsourcing
- Technology outsourcing

Translating  
Technology  
into  
Business  
Value

Business Solutions/Manufacturing Services  
EMEA (Europe, Middle East and Africa)

**End to End Manufacturing Consulting**

- Technology procurement
- Manufacturing process optimization
- Manufacturing yield and quality enhancement
- Customer relations

**Technology Implementation**

- Technology transfer
- Process customization
- Process/product qualification

**Facilities Infrastructure**

- Project management
- Environmental control systems

**Manufacturing Systems & Operations**

- Automation and IT solutions
- Manufacturing data systems
- Equipment engineering

Translating  
Technology  
into  
Business  
Value

Technology  
Implementation Services

**IBM E&TS** is a new division of IBM within the IBM Technology Group. Specializing in applied technology services, IBM E&TS collaborates with businesses whose success depends on the integration of complex technology.

**IBM E&TS** enables customers to translate technology into business value, to meet today's challenges such as new technology integration, financial and time to market pressures.

**IBM E&TS** is your portal to the deep technological expertise and engineering capabilities of IBM.

The **IBM E&TS EMEA** organization is an integral part of the world wide IBM Engineering & Technology Services.

**IBM E&TS** offers a comprehensive set of technology business solutions. Engagement can occur at any step according to your requirements.

By involving **IBM E&TS EMEA** in your business solutions, you gain access to our world-wide value offerings with a local presence in Europe.



**IBM E&TS** is your key to success.



*From Ingenuity to Impact.*

@business on demand

**Areas of Technology**

- *Sensor system design*
- *Design services for sensor network components*
- *Micro electro mechanical systems (MEMS)*
- *Optical systems*
  - *Organic light emitting devices*
  - *Waveguides*
- *Integration of technology components*
- *Nano technology*
- *Functional coatings*

**Thinfilm Technology Processes**

- *Deposition techniques*
  - *Vacuum & electrochemical*
- *Photolithography*
- *Dry & wet etching*
- *Planarization*
- *Advanced cleaning processes*

**Tool & Tester Design**

- *Electronic circuit design*
- *Mechanical design*
- *Measurement & automation software*
- *System design & build*



**Process Customization**

- *Efficient & high value process definition*
- *Best of breed tooling, process & process flow selection*
- *Materials & consumables selection and optimization*
- *Total process & product control concepts*
- *Product reliability*

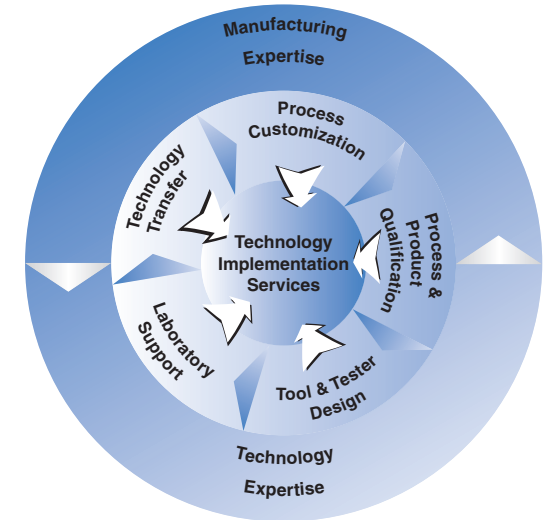
**Process & Product Qualification**

- *Process characterization*
- *Process sensitivity studies*
- *Process window definition*
- *Design of experiments (DOE)*
- *Measurement & monitoring concepts*
- *Product reliability*

**Laboratory Support**

- *Physical & chemical analysis of surfaces, thin films, interfaces, materials*
- *Organic & inorganic trace analysis*
- *Clean room & contamination control*
- *Electrical & magnetic testing*
- *Electromagnetic compatibility (EMC)*
- *Environmental testing & monitoring*
- *Root cause analysis & solution development*

**We offer Process & Technology Consulting Services!**



**Further Information:**

IBM Technology Group  
 IBM E&TS EMEA  
 Postfach 2540  
 55015 Mainz/Germany  
 E-mail: [ets\\_emea@de.ibm.com](mailto:ets_emea@de.ibm.com)  
 Web: [ibm.com/technology/](http://ibm.com/technology/)



The IBM homepage can be found at: [ibm.com](http://ibm.com) • IBM, the IBM logo, the e logo and e-business on demand are trademarks of IBM Corporation in the United States, other countries, or both. • IBM's obligations with respect to its products and services are governed solely by the written agreements under which they are provided by the relevant IBM contracting entity. • © Copyright IBM Corporation 2003 • All rights reserved.