



International Electronics Manufacturing Initiative

# Availability of SnPb Compatible BGAs



*Critical Need for OEMs taking the Pb Exemption  
or OEMs that are out of scope of RoHS*

- 8:00 – 8:10**      **Review Agenda, Introductions**
- 8:10 – 8:30**      **Background – Jim McElroy, iNEMI**  
**iNEMI**  
**High Rel Task Force**
- 8:30 – 9:30**      **BGA Availability for High Rel Applications**  
**OEM Perspective – Ken Stuchlik, Lucent Technologies**  
**EMS Perspective – Thilo Sack, Celestica**  
**Supplier Perspective – Edgar Zuniga, Texas Instruments**
- 9:30 – 10:00**    **Break/Networking**
- 10:00 – 11:30**   **Proposals to Address**  
**Group discussion**  
**Prioritize ideas**  
**Plan for near term efforts**
- 11:30 – 12:00**   **Wrap-up**  
**Action items**  
**Next steps**



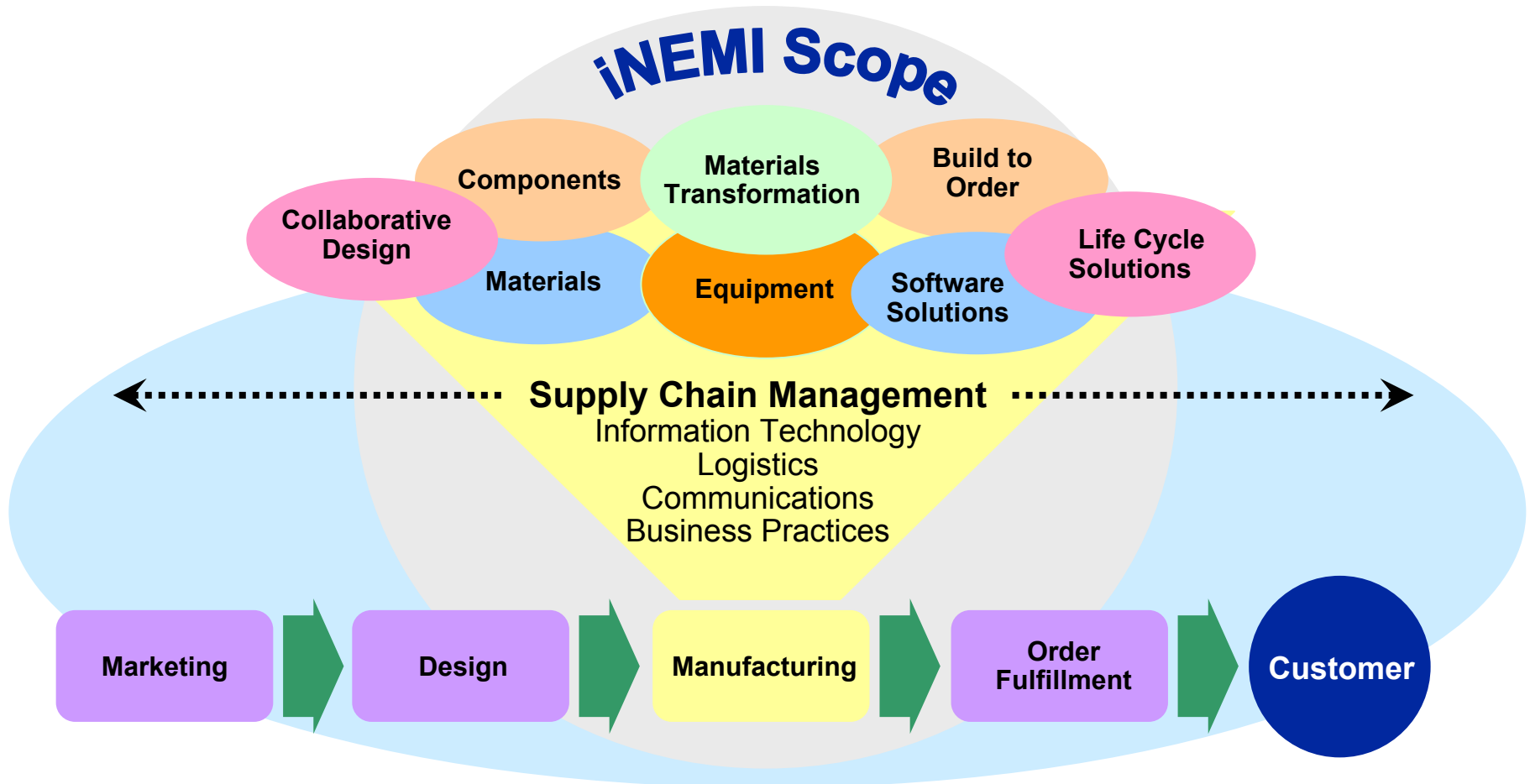
International Electronics Manufacturing Initiative

# Background Information

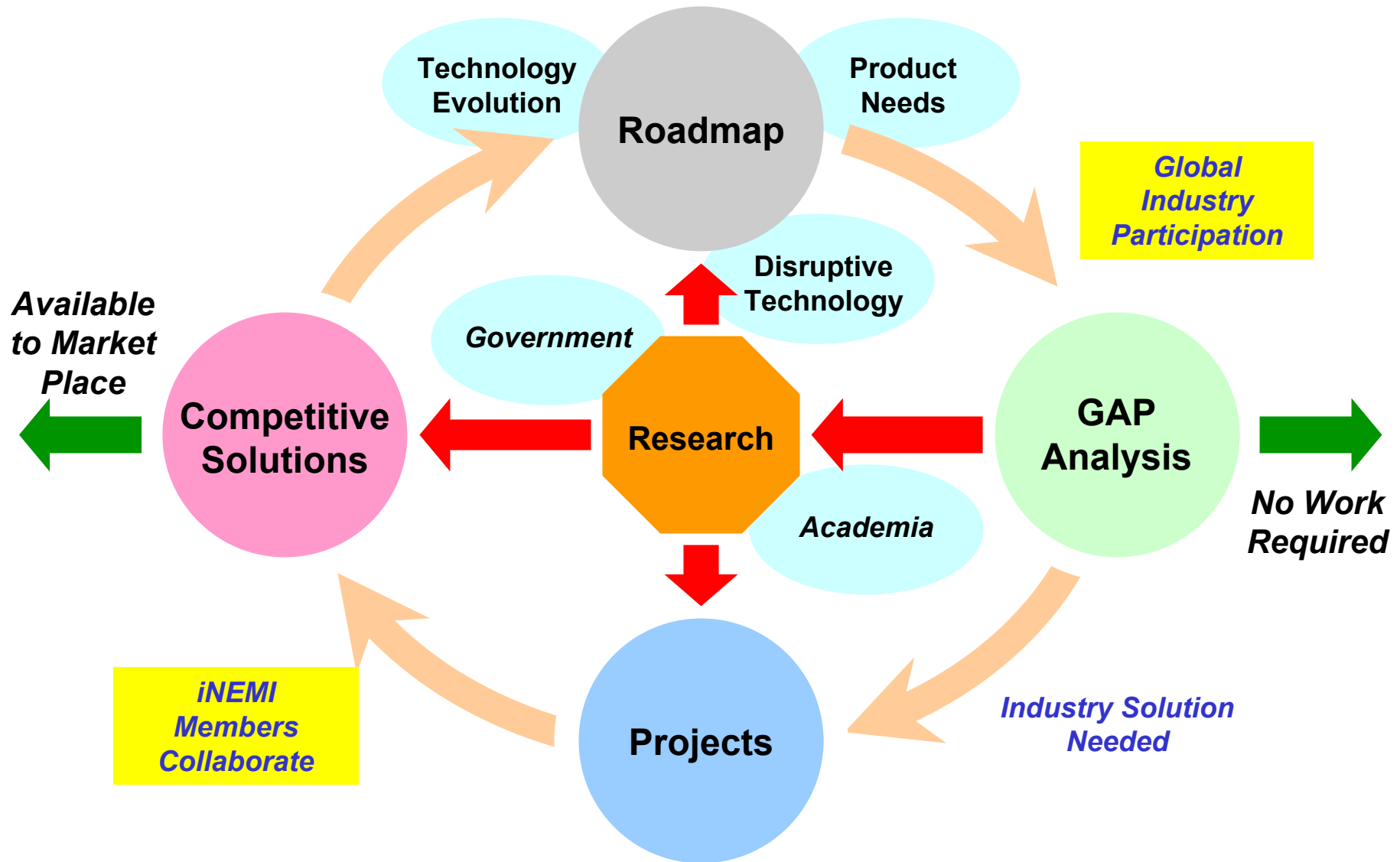


*iNEMI Consortia  
High Rel Task Force*

*Assure Leadership of the Global Electronics Manufacturing Supply Chain  
for the benefit of members and the industry*



- **Organization:**
  - 501 (c) (6) not-for-profit, R&D Consortia
  - Collaboration framed by organization by-laws, intellectual property policy, and project agreements.
- **Anti-trust Considerations:**
  - All members registered with Justice Dept. under National Cooperative Research and Production Act
  - Anti-trust guidelines used to bound collaboration between competing firms.
- **Capabilities/services:**
  - Support to help organize & manage projects
  - Teleconference & WebEx
  - Project specific Information (web/ftp sites)
  - Monthly Member Newsletter
  - Project meetings at appropriate industry venues
  - Project report publication
  - Relationships with other Organizations
    - Roadmapping
    - Standards
    - Joint projects







## Consultants, Government, Organizations & Universities



ASSOCIATION CONNECTING  
ELECTRONICS INDUSTRIES®



Développement  
économique  
et régional



- **Industry has used SnPb solder for over 50 years:**
  - Processes well characterized
  - Reliability understood
- **Elimination of Pb from solder has significant supply chain impact.**
- **Collaborative efforts through industry groups such as iNEMI are helping the industry to make the transition:**
  - Common understanding of issues
  - Common solutions
  - Leveraging the combined resources of many companies

**Objective:**

- **Work with components supply base to insure that High Rel product needs are met.**
- **These companies are taking advantage of Lead exemptions and therefore expect to continue to use SnPb assembly for some time.**

**Scope:**

- 1. Address availability of SnPb compatible BGA's for High Rel segment.**
- 2. Communicate clear requirements for Tin Whisker mitigation and testing practices.**
- 3. Communicate manufacturing issues for thermally complex assemblies.**
- 4. Communicate unique requirements for RoHS 5/RoHS 6 subassemblies.**

**Status:**

**Three position papers released.**

- **Recommendations to Electronics Industry Component Supply Base**
- **Pb-Free Manufacturing Requirements for High-Complexity, Thermally Challenging Electronic Assemblies**
- **RoHS5 & RoHS6 Subassembly Modules**



- **Based on feedback, firms are paying attention to these documents:**
  - **Among most popular downloads from iNEMI web site**
  - **Questions of clarification continue to be asked**
- **Supply base is addressing technical requirements (e.g. Tin Whisker mitigation).**
- **Availability of SnPb compatible BGA's remains a key concern.**

- **Consumer electronics is Driving the Component supply base.**
- **TAM for all High Reliability categories (Servers, Telecom, Military, etc.) is on the order of 5% of Revenue for Supply Base.**
- **Most suppliers prefer to have their entire product line converted to Pb-free.**
- **Maintaining a dual supply chain to satisfy the High Rel segments is costly and adds complexity.**
- **There is uncertainty on how long the Pb-free exemption will last.**
- **Today's alternatives are not very attractive**
  - **Risk of shipping product that will not meet reliability specifications, or**
  - **Supply risk of not being able to secure SnPb compatible BGAs**

- **Long term solution is to reduce reliability risk of Pb-free components**
  - The economic incentive is compelling
  - Would be well worth technology investment
  - Could take several years to complete
- **What can we do in the short to mid term to help encourage the availability of SnPb compatible BGAs?**

- **Form iNEMI BGA Supply Group made up of High Reliability OEMs and EMS providers.**
- **Focus on ways to encourage Suppliers to support SnPb compatible BGAs.**
- **Potential Efforts**
  - **Develop “A” list for critical component families**
  - **Estimate TAM for these High Rel components**
  - **Develop general business case for meeting needs**
  - **Organize workshop for BGA suppliers**

**Today!**

**SnPb-Compatible BGA Availability Workshop  
at SMTA International**

**Thursday, September 28, 2006**

**8:00 a.m.—noon, Room 53**

**Donald Stephens Convention Center  
Rosemont (Chicago), IL**

**Open to Industry.**



*Helping you connect with and strengthen your supply chain*

**[www.inemi.org](http://www.inemi.org)**

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