



INEMI[®]

International Electronics Manufacturing Initiative

Sustainability Summit: Break Out Group's Summary Reports

Advancing manufacturing technology

Sustainability Summit Summary Reports

- **Established Two break-out groups to brainstorm options and priorities**
 - **Reuse, Recycling Group: Alan Rae, NanoDynamics**
 - **Sustainability Group: Marc Benowitz, Alcatel Lucent**



INEMI
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Reuse, Recycling, Group Review

Alan Rae

Advancing manufacturing technology

Reuse & Recycling (R&R) Headliners

- **Design for R&R**
- **Collection and Logistics**
- **Reuse**
- **Recycle Components**
- **Mining Materials**

Recycle Components

- **Not going into mainline products...intentionally! Going into repair and export (in US)**
 - Quality
 - Supply continuity
- **Needs**
 - Ease of disassembly
 - Identification
 - Cross-compatibility
 - Lifetime indicator

Mining Materials

- **Needs**
 - **Cross-industry collaboration**
 - **Self-regulate on a common group of plastics**
 - **Only a few are dominant – ABS, PC, epoxy**

Reuse

- **Need**
 - **Business leasing models**
 - **Data cleaning**
 - **Learn from other industry models e.g. Interface carpets**
 - **Easy disassembly of casings**
- **Recommendation**
 - **Sponsor a cross-industry focused workshop for the niche polymer supply chain (similar to “simply sustained” PE workshop)**

Collection logistics

- **Need**

- to tag – RFID?
- Make it easy for consumers, municipalities, commercial collection, recyclers, community
- Change the value proposition – vouchers, mailers etc.
- Design product for multiple users
- Leasing model – “adopt a phone”

- **Recommendation**

- White paper recommendations on the preferred model for different product segments (Cell Phones, Lap Tops, TVs, ITC, etc)

Sustainability Group Review

Marc Benowitz

Best Practices for OEM Sustainability Plans/Actions

- Based on similarities in plans for
 - Alcatel-Lucent
 - Cisco
 - Intel
 - Motorola
 - Huawei

 - We need to speak the same language

So we can speak the same language – based on best LCA practice

Area of common concern

- – **LCAs – non-competitive**
 - Methods, data, redundant work for common classes of products
 - 90% of parts the same for a specific application/class; we know what is in each others products, we have the same suppliers
 - **OPPORTUNITY:** building block based product or assembly emulators/evaluators for weight and class, # of devices by class; agreed upon by industry
 - Want to have Ericsson, Nokia, and Siemens at the table
 - System agnostic, updateable data bases with – avoid having to find new data or update, one company at a time
 - Product and company specific: get credit for post consumer content, energy use: depends on idle mode, stand by,... - may agree on how to do the calculation but product specific

LCA Building Blocks for Product Classes

- Can result in EcoDeclaration for product family
 - EPEAT
- End result – spinout of “LCA for Dummies” common product classes with most products in a class being the same, clear articulation of what is included, minor adjustments for differences
- Help supplier base to succeed:
 - Don’t drive them crazy
 - We will use the common commodity product LCA to establish baseline
 - Help them distinguish differences; trust but verify; KGS, KGP
 - We all buy from the same sources!
- In cascading down to suppliers, we may have best practices in manufacturing operations being introduced into the supply chain through the OEMs, n-tier suppliers,...

LCA Building Blocks for Product Classes

- From that common basis we can look at transport tradeoffs – where do parts come from?
 - We outsource logistics: DHL, UPS, FedEx should give us data based on region to region transport.
- In cascading down to suppliers, we may have best practices in manufacturing operations being introduced into the supply chain through the OEMs, n-tier suppliers,...

End of Life

- Ask recyclers for data based on product family/class/emulator
 - Same as we are doing for logistics
 - In many cases, data from them should be more accurate than assumed - reflect what is done, not what we wish was true

End of Life

- Redefine what the end game should be –
- Refurbish, reincarnate – innovative strategies for return while there is still value after refurbishing –
 - No more “purchase to basement/drawer fill” while there is still value to someone
 - At real product EOL – innovative ways to encourage component mining

Carbon Footprint

- Plenty of players in the game – Carbon Disclosure Project
 - No need for iNEMI
 - Ditto for other items – water use,...

So we can speak the same language – based on best LCA practice

Area of common concern

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 - **OPPORTUNITY:** building block based product or assembly emulators/evaluators for weight and class, # of devices by class; agreed upon by industry
 - Want to have Ericsson, Nokia, and Siemens at the table
 - Modify as products change, new materials; if different from that then justify