

# Extended Reliability Assessment for Electronic Components

## Sustainable Electronics

### Motivation:

- Reduce resource impacts (raw material consumption, waste generation) and increase process efficiencies
- Extended reliability assessment can be used to select components to be refurbished, reused and/or re-assembled for longer use, beyond their initially assessed shelf life
- Lack of standard process to assess extended reliability of electronic components.

### Objective:

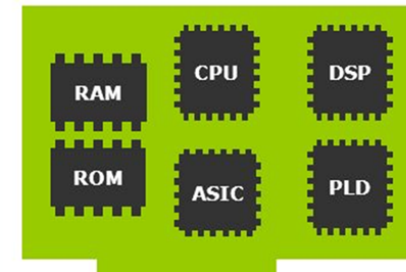
- From a proof-of-concept data collection plan, develop a standardized procedure for extended reliability assessment and component classification

### Strategy/Approach:

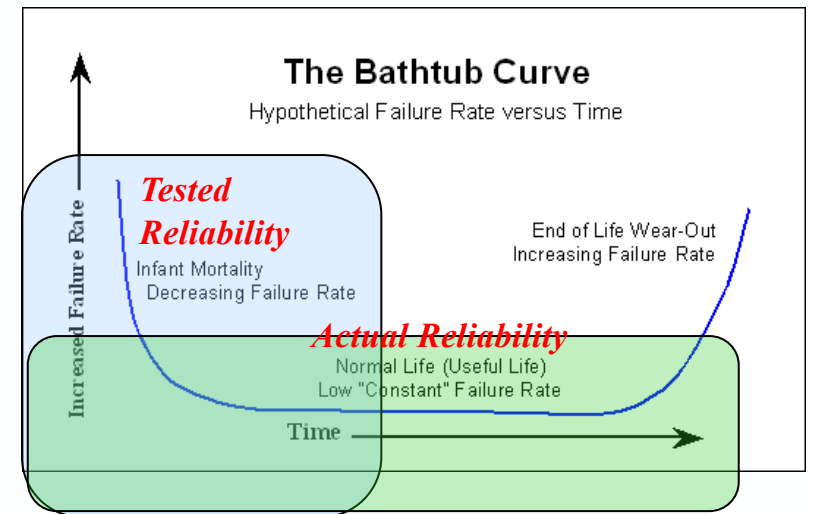
- Identify and classify components by type (application), re-workability and criticality on system.
- Select components (IC, passive or others) and subject to extended reliability. If possible, re-use reliability models to assess reliability extension.
- Select parts in use post 3+ years and subject to reliability testing to assess further fail rates.

### Longer Term:

- Have recurring meetings for thought leaders to share best practices and experiences
- Develop methodology for understanding or assessing component long term reliability.



System on Board



### Status:

- Presented at EGG 2020 for feedback
- Sustainable Electronics TIG will review in September
- Potential Q4 SOW work
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