



Toy Industry Association, Inc.

**Toy Development Process,
Regulatory Scheme and New Initiatives**

Jim Walter

Chairman, TIA Safety Standards and Technical Committee

Washington State

Children's Safe Product Advisory Committee

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Discussion Topics

- **Overview of toy industry characteristics**
- **Vocabulary – construction and testing**
- **Toy development and production process**
 - **Concept of accessibility**
- **Global regulatory scheme**
 - **Testing methods and standards**
- **TIA's new Toy Safety Certification Program (TSCP)**

Toy Industry Overview

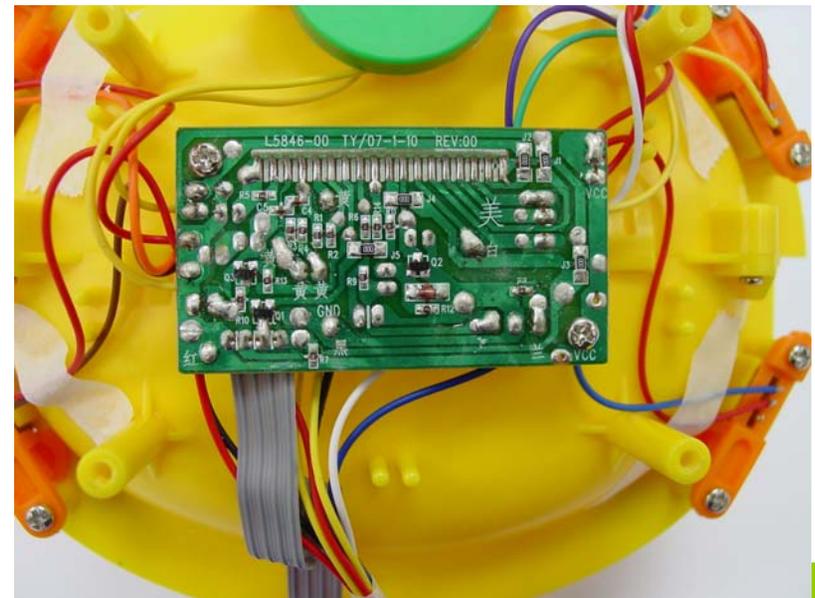
- **Diversity in toy manufacturing sector**
- **Designing for a global marketplace**
- **Approximately half the toys sold are new to market within past three years**
- **Highly seasonal nature to manufacturing and sales**
- **Approximately 40% of toys marketed today have some electrical and/or mechanical components to support learning and play value**



Toy 101 Vocabulary

General Product Components

- **Surface coatings – outer surface - potential child contact**
 - Decorations, labels, paints and other coating materials
- **Substrate – basic material of construction**
 - Plastic, vinyl, cloth, metal or combination
- **Mechanicals**
 - Screws, clips, springs, axels, gears, bushings
- **Electricals**
 - Jacks, plugs, connectors, circuit boards, coated wires, solder, capacitors, resistors, diodes



Key Safety Terms

- **ASTM F963 – 39 sections on “Safety Requirements”**
- **Small Part:**
 - Prevent choking hazards in toys appropriate for children < 36 months of age
- **Accessible Part of Component:**
 - Any area of toy that child can come in contact with
 - Defined by what can be touched by accessibility probe that simulates child’s abilities and dexterity
 - Inaccessible if passes probe test both before and after use and abuse testing
 - Hazard eliminated by preventing exposure
- **Use/Abuse Testing**
- **Flammability**
- **Heavy Elements**
- **Packaging**
- **Age Grading Guidelines**



Balancing Critical Interests in Toy Safety

- **Critical to use reliable design and materials to ensure small parts remain inaccessible**
 - During normal play
 - For small children even after abuse
 - Provide strong anchoring point for screws in plastic
- **Certain materials have been well tested over time and provide reliable safe play for a child**
 - PVC – durability, withstand UV exposure
 - Brass – soft property makes for reliable performance and secure screw inserts



- **“Lead-Free Brass”**
 - Misnomer – “ultra-low-lead brass, “enviro-brass”
 - Exceeds 90 ppm WA standard

What Makes a Learning Toy?

- Features - lights, sounds, motion, vibration
- Stimulates visual, auditory, tactile, verbal senses, learn their actions cause responses and promote interaction with people



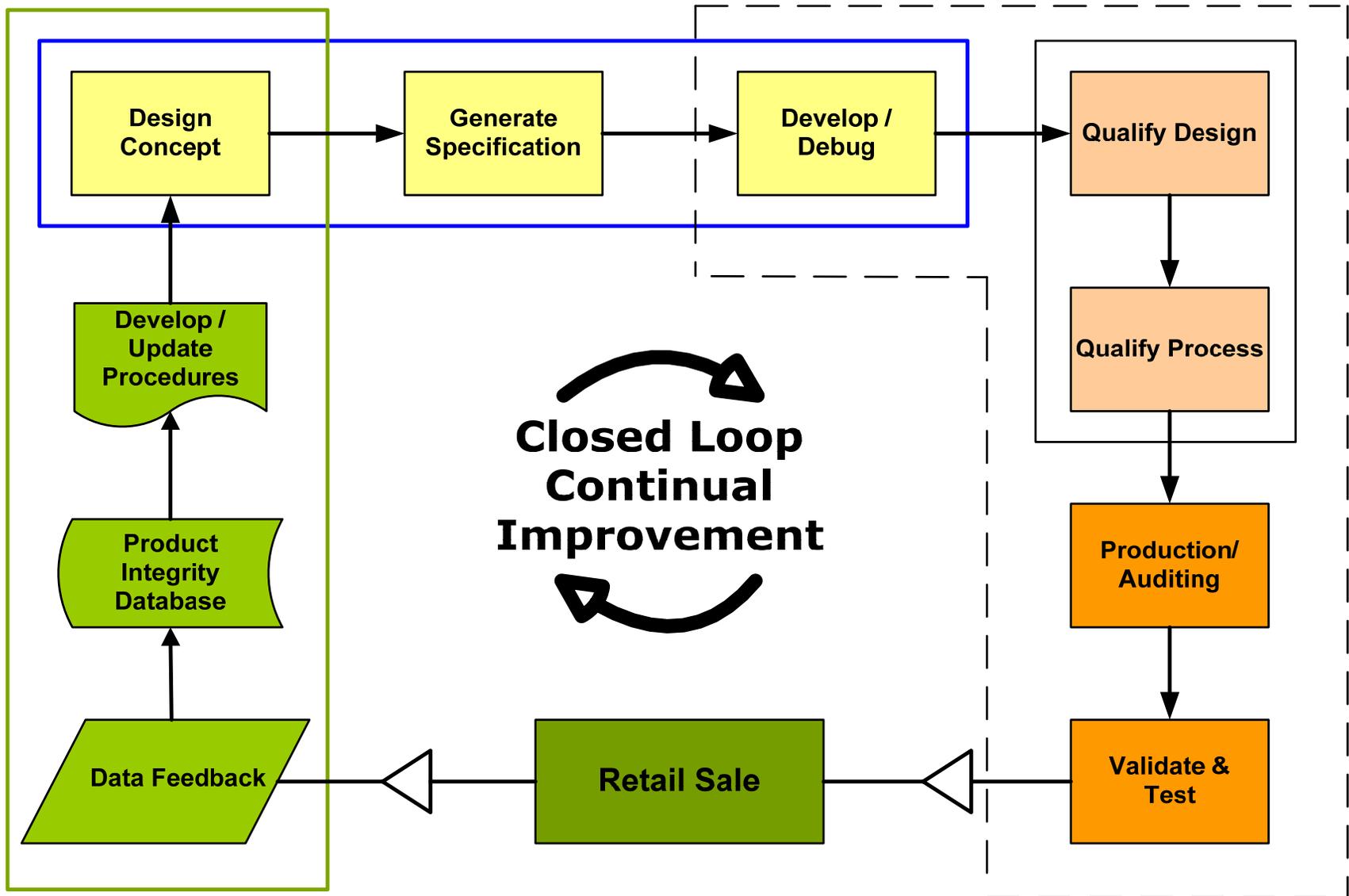
Interactive Toys and Learning

- **Promote development**
 - Cognitive – memory, language, reasoning
 - Physical – strength, motor control, coordination
- **Value recognized for all ages, settings and development levels**
 - Infants to adolescents
 - Stroller to classroom
 - Diversity of needs and skills levels, special needs
- **Research shows consumers are turning to electronic toys to enhance a child's interactive learning**
 - 75% of consumers who purchased an electronic toy in the past year said they did so for educational value
 - Three of the top five most purchased types of electronic toys were educational products."

Overview of Quality Producers & Production Practices

- **Quality is integrated throughout the toy development process**
 - Concept – Design
 - Development - Production Pilot
 - Production
 - Post Production
- **Closed loop system**

Relationship Between Quality and Toy Development



International Regulatory Scheme

- **United States (early 70's)**
 - Federal Toy Safety Standard, 16 CFR Part 1000-end
 - ASTM F-963-07: Standard Consumer Safety Specifications for Toy Safety
 - Physical/Mechanical
 - Flammability
 - Migration of Certain Elements
- **Europe (late 80's)**
 - Toy Safety Directive
 - EN-71 Toy Safety Standard
 - “CE” Mark
- **International (late 90's)**
 - ISO standard 8124

Issues Related to Standards and Methods for Measuring Lead

- **Safety considerations directly related to strength, integrity reliability of using alternative materials**
- **Consistent Testing Methodology Is Necessary to Ensure Accurate Universal Results**
 - Proposed Federal legislation requires methods be developed to ensure that testing is performed consistently across laboratories.
 - No standard methodology currently exists for determining the total lead in plastic, metal, and other substrate materials.
 - Different testing methodologies yield very different results
- **Standardized methods for extractable lead do exist for these substrates and are detailed in the European standard EN71-3 and ISO 8124-3**
 - Established methodology provides a strong basis for measuring WA standard of “90 ppm by weight”

Toy Safety Certification Program

- **Importing companies and domestic manufacturers are responsible for meeting three basic requirements:**
 1. Hazard and risk assessment for toy product design
 2. Factory process control audits
 3. Production sample testing to validate that the factory is producing toys that meet U.S. safety standards
- **These three elements will be verified or audited by accredited certification bodies**
- **Upon successful completion of applicable requirements (certification), the product or packaging may bear a toy safety mark**

PROCESS FOR COMPANIES SEEKING TSCPSM CERTIFICATION

AS OF JULY 2, 2008



Toy Industry Association, Inc.

Toy Safety Certification ProgramSM

STEP 1.

SUBMIT APPLICATION

Apply for certification of toy(s) via TSCP database.

Upload file(s).

Designate certification body.

STEP 2:

ATTEST TO DESIGN ANALYSIS

Attest that a design hazard assessment was completed for each toy.

CONFIRM FACTORY AUDIT

Identify producing factory.

If factory has not previously been audited or assigned a preliminary rating, it will be prompted to do so.

IDENTIFY TESTING LAB

Lab to test to TSCP requirements and upload results on to TSCP database.

If testing was previously completed, the report number will be provided at the time of application.

STEP 3:

CERTIFICATION

Certification Body alerted that the required pieces of information gathered in Steps 1 and 2 are now available to assess toy.

Certification Body certifies toy or goes back to applicant with any needed additional information or steps.

TSCP website indicates when toy is certified.



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www.toyassociation.org

Questions?