

BizNGO

December 2, 2013

Agenda

Brief history of Sustainable Product

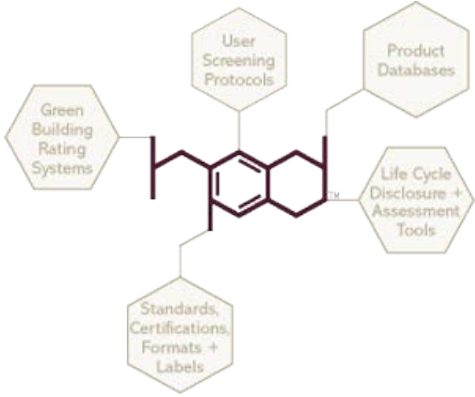
Buy-in from CEO

Current Work on Banned Materials

Case Study with Asahi Kasei

Labeling Game

HAWORTH



What it is

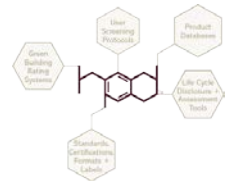


is to



AS

is to



Four Sustainability Categories



PRODUCT

- 100% Safe Materials
- 100% Sustainable Wood
- End of Life Management



ACCOUNTABILITY

- Reduction in Energy Use
- Zero Waste Initiatives
- LEED/Building Certifications
- Green Transportation



KNOWLEDGE

- CEUs/Knowledge Series
- Transparent Reporting
- Customer Performance
- Internal Education



PEOPLE

- Volunteer Hours
- Continuing Education
- Safety
- Health (IAQ)
- Supplier Code of Conduct

CEO Engagement

HAWORTH

Customer Research

Revised Goals:

100% Safe Materials globally (Long Term)
Banned list of 56 materials by 2018

Trends

100% Sustainable Wood Sources (globally)
FSC certification (AP&NA), PEFC for EU



Decision Matrix

End of Life responsibility
Goal in development

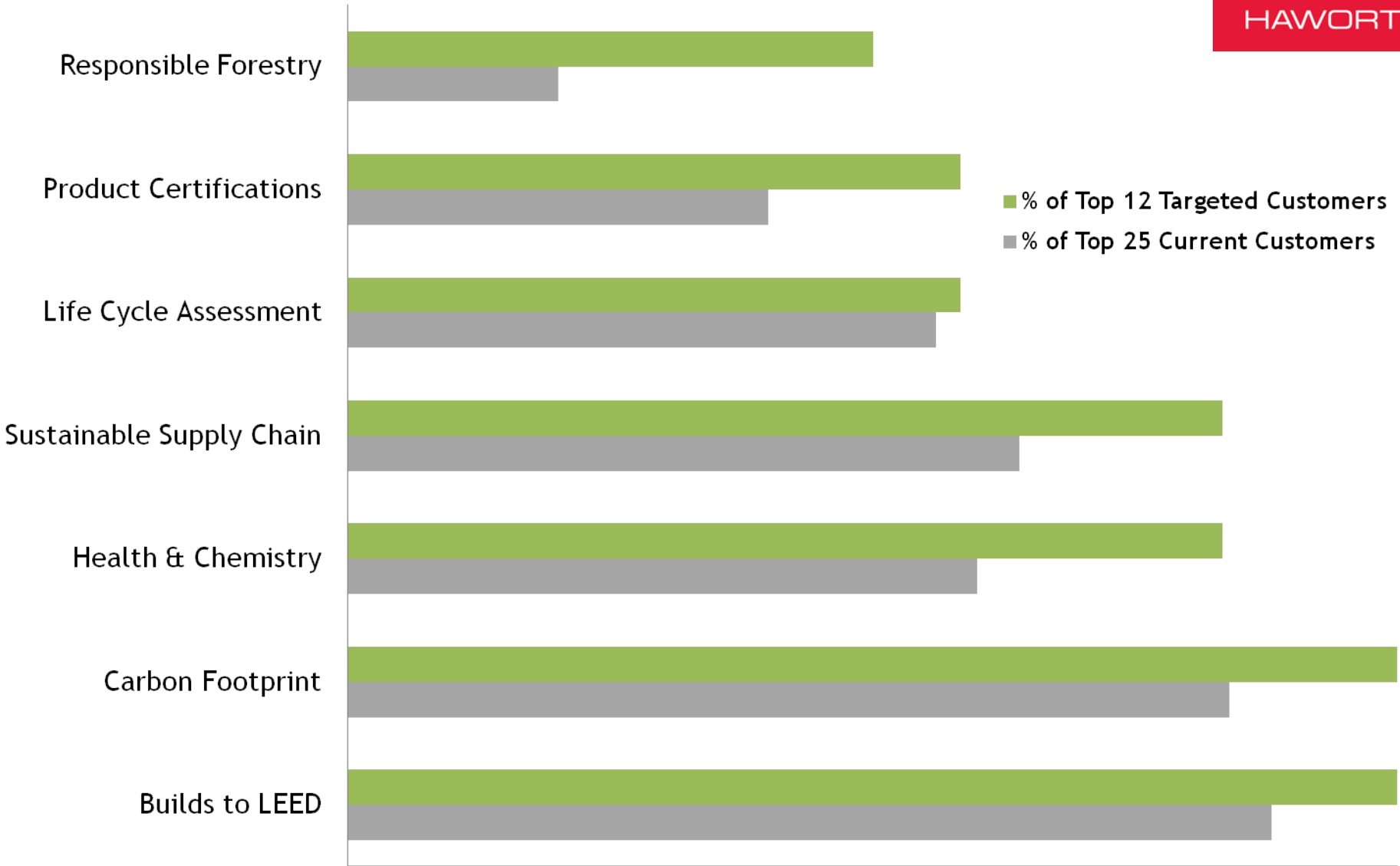
Specifications

Activities:

Chemical Disclosures
Product Certification



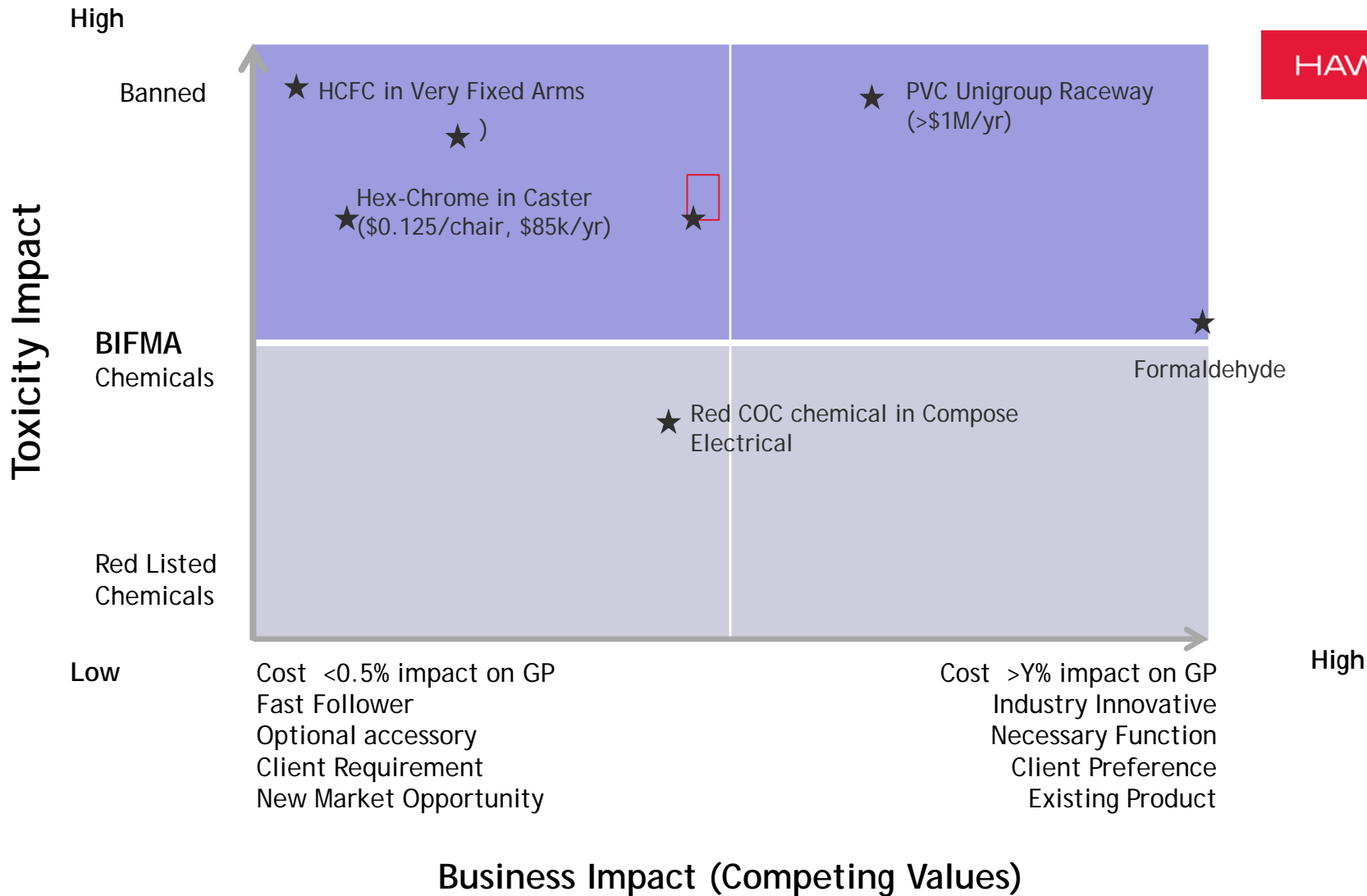
Customer Research



Chemistry Trends

Material/Use	Concern	Trend	Replacement
Brominated/Halogenated Flame Retardants	Persistent, Bioaccumulative, & Toxic throughout value stream including to Haworth members and our customers	TB133 (fire code) Increasing regulation, Negative public perception, customer banned	Phosphate based, non-halogenated
Hexavalent Chrome	Supply Chain toxin	Customer banned Heavy regulation	Tri-valent
Benzidene Dyes (Fabrics)	Supply Chain toxin	High regulation, customer banned	Eliminate. Dozens of readily available alternatives.
Material Enhancers (e.g. phthalates)	Value Chain Toxin (supply, mfg, use, and disposal)	Increasing regulation, customer banned	Eliminate.
PVC & chlorinated polymers (T-Mold, Raceway Covers, Adhesives)	Supply chain & recycling toxin	LEEDv4, ban in Germany, customer bans	ABS, PP, PE, Nylon, or other engineering solutions
Heavy Metals	Supply chain & recycling toxin	EU	eliminate

Materials of Concern Decision Matrix



HAWORTH

Safe Materials

Goal: 100 percent safe materials by 2020

- Identify 56 banned materials in product
- Develop clean material continuums

Banned Chemicals Identified

- Cal 133 Barrier Cloth
- PVC Raceway Covers
- PVC End Caps & Tapes
- PVC T-Mold
- PVC Modesty Panels
- Hex-Chrome in Casters
- HCFC in Very Arm Caps
- *and others...*



PRODUCT

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Safe Materials Activities

Process

- Identify harmful (emphasis on banned) materials
 - Internal review
 - Supplier disclosure (100 ppm)
- Review Supplier disclosure
- Find clean(er) alternatives
- Cost & Engineering analysis of alternatives
- Address tooling & supply chain criteria
- Implement



PRODUCT

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Stakeholder Engagement

Supply Side

Tier 1-6

Chemical disclosures

Intellectual Property

Design Community

Certifications

Transparency

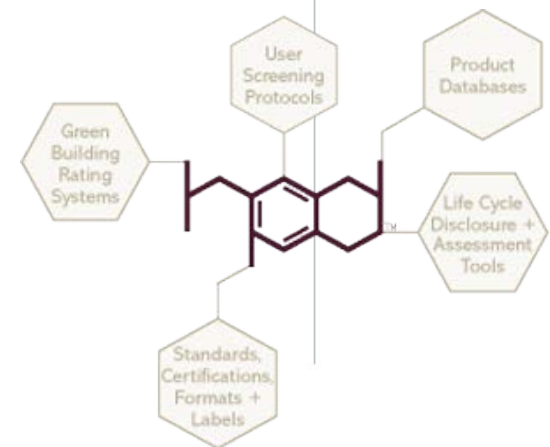
Client

Certifications (e.g. LEED)

Carbon Footprinting



KNOWLEDGE



What would help?

Centralized data base for raw material suppliers disclosures

Stringent rules/enforcement for developing countries

Convergence of certifications & validations

Clearing house of alternatives

Avoid the attempt to boil the ocean



KNOWLEDGE

- CEUs/Knowledge Series
- Transparent Reporting
- Customer Performance
- Internal Education

Asahi Kasei

Rebecca Cramer

Group Mission

We, the Asahi Kasei Group, contribute to life and living for people around the world.

This is the Asahi Kasei Group's unchanging reason for being.
What we never cease to strive for, though the needs of society change throughout the ages.
It is in our very nature, deriving from a sincere regard for the people of the world.

Group Vision

Providing new value to society by enabling “living in health and comfort” and “harmony with the natural environment.”

Group Values

Sincerity—Being sincere with everyone.

Challenge—Boldly taking challenges, continuously seeking change.

Creativity—Creating new value through unity and synergy.

Group Slogan

Creating for Tomorrow

The commitment of the Asahi Kasei Group:
To do all that we can in every era to help the people of the world make the most of life and attain fulfillment in living.
Since our founding, we have always been deeply committed to contributing to the development of society, boldly anticipating the emergence of new needs.
This is what we mean by “Creating for Tomorrow.”





AsahiKASEI

Core Operational Segments:

Chemicals

Homes

Health Care

Fibers

Electronics

Construction Materials

Services, Engineering & Others

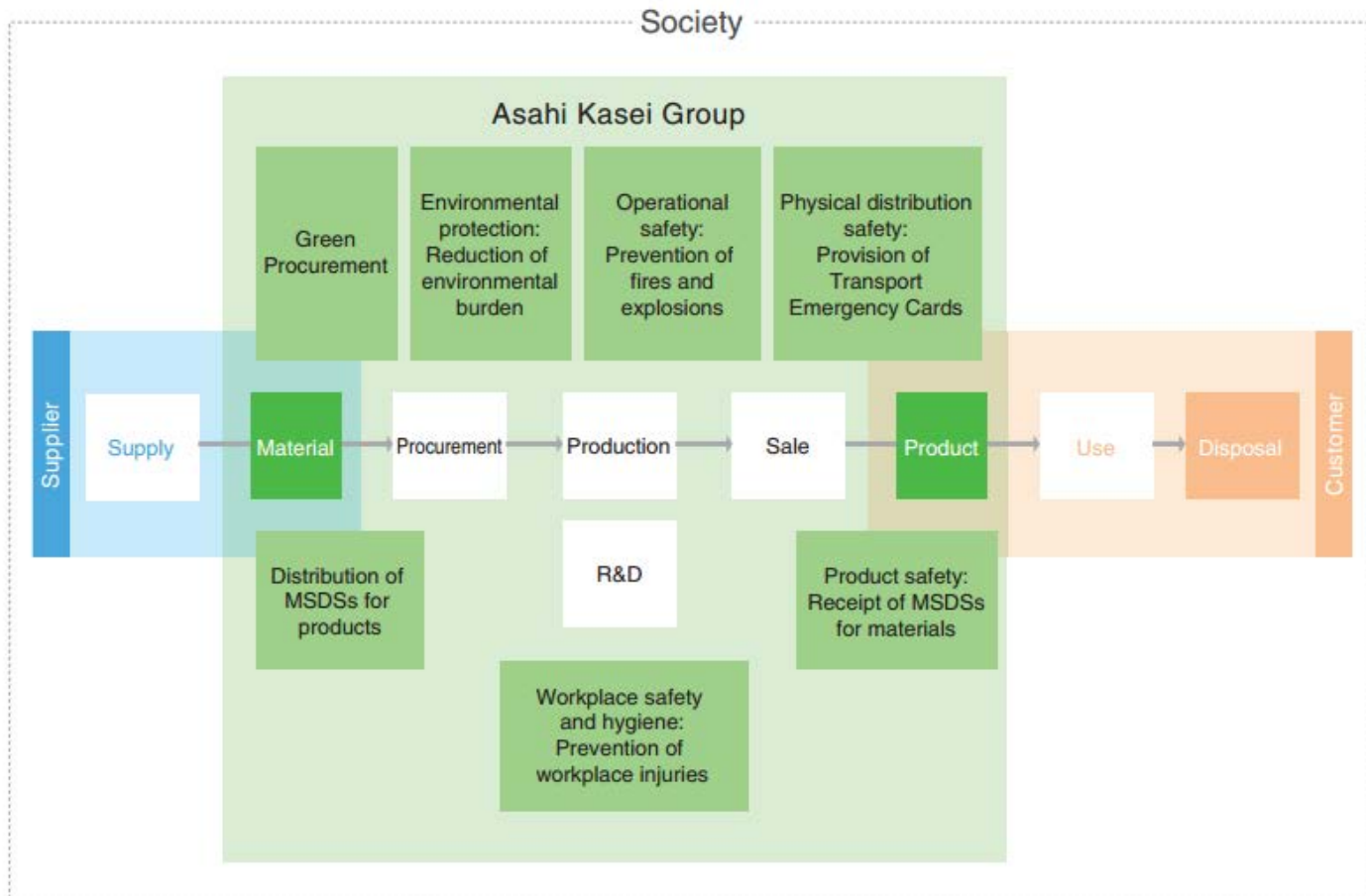
Pioneering Innovations Through Application Development

- Regional / Local Chemical Safety Laws
- Customer Protocols on Hazardous Chemicals
- Regulatory Protocols
- Country, Federal & State Laws
- EPA, DEQ, NAFTA, REACH, RoHS
- NSF, UL, KTW, WRAS, Etc.
- Industry Segment Protocols like BIFMA
- Employee Safety Initiatives

- Developing products with safe chemical footprint
Example: Polyamide → Polyolefin, PVC → PPE,
Halogen FR → Non-Halogen FR, Paint Elimination
- Recycled products (re-purposing)
- Development of Bio-Resin products for safe-use
Example: Plastics from castor-bean seeds (non- food grade)
- Bio-Fillers instead of inorganic raw materials
- Development of low VOC products
- Mono-material concept

Managing Chemical Substances

Chemical substance management flow



- Changing chemical lists
 - Safer → Non-Halogen FR → 3-4xs original cost
 - 2 years to develop → \$75K UL re-approvals
 - CA → just put on concern list ??? Frustrating
- Anti-scratch additives
 - Developed product for Auto Ind. → multiple supplier sources
 - On concerned list for Furniture → single supplier source → 3xs original cost

- Lack of unified chemical substance list
 - Different markets, segments and customers
- Hampers product development & production efficiency
- Additional cost in our supply chain
- Changing chemical lists add uncertainty
- Design complexity due to unavailability of safer / economical alternatives
- Intellectual property concerns of manufacturer
- Lack of awareness in downstream supply chain (chemical substances on different lists)