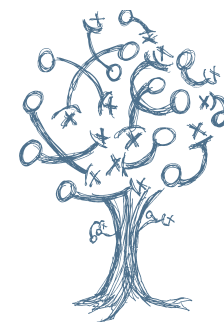


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# Sustainable Chemicals Management: Tools and Trends

November 18, 2015



# Today's topics and speakers

## Sustainable Chemicals Management Overview



Cheryl Baldwin  
VP of Consulting  
Pure Strategies

## Better Ingredients Case Study



Jennifer Duran  
Global Head of Sustainable  
Innovation  
RB

## Chemicals Management Software Review



Bob Kerr  
Co-Founder & Principal  
Pure Strategies

## The Chemical Footprint Project & Market Trends



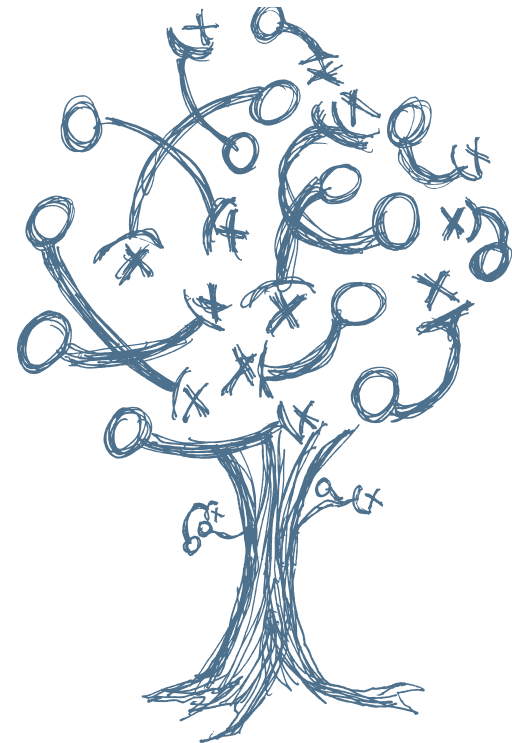
Tim Greiner  
Co-Founder & Managing Director  
Pure Strategies

# Key session logistics

- All attendees in listen-only mode
- Use chat window for questions – during and after presentations
- Some attendee-response questions – respond in chat window
- Webinar is being recorded
  - Recorded webinar and slides-only version at [www.purestrategies.com](http://www.purestrategies.com) shortly after webinar

# Pure Strategies overview

- Founded 1998 – 17 years providing sustainability expertise to leading companies.
- Deep experience working with:
  - Sustainability leaders and those at earlier stages of sustainability pathway
  - Iconic brands and less widely known companies
  - Mix of B2C and B2B companies
    - Food & beverage
    - Consumer products
    - Retail
    - Life sciences



[www.purestrategies.com](http://www.purestrategies.com)

# Pure Strategies areas of expertise



## pure ENTERPRISE

ACHIEVE DESIRED  
SUSTAINABILITY  
POSITIONING

- Alignment & Business Case
- Strategy & Integration
- Sustainable Chemicals
- CSR Communication



## pure PRODUCT

EVALUATE PRODUCT  
IMPACTS AND  
OPPORTUNITIES

- Life Cycle Assessment
- Product Strategy
- Safer Design
- Development Process



## pure SUPPLY

IDENTIFY RISKS,  
ENGAGE SUPPLIERS,  
AND DRIVE CHANGE

- Risk Management
- Supply Chain Strategy
- Supplier Scorecards
- Safer Supply Chain

# Partial client list



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# Sustainable Chemicals Management

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- Addressing chemicals of concern
- Improving health and environmental profile



- Evaluating and verifying composition
- Enhancing transparency and collaboration



# Sustainable Chemicals Management

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*Why are companies enhancing the safety and transparency of chemicals and materials in their products and supply chains?*

- A. Meet regulatory requirements
- B. Address customer demands
- C. Reduce costs
- D. Grow and innovate
- E. All of the above

# Sustainable Chemicals Management



## Growth Rates of Safer Chemistry vs Conventional Market

Sector	Safer Chemistry Market	Conventional Market	Time Period
Building Materials	+2000% <sup>1</sup>	+176% <sup>2</sup>	2009-2030
Chemistry	+3200% <sup>3</sup>	+133% <sup>3</sup>	2011-2020
Personal Care	+10.12% CAGR (US) <sup>4</sup>	+4.43% CAGR (global) <sup>5</sup>	2012-2016
Cleaning Products	+20% CAGR <sup>6</sup>	+1.5% CAGR <sup>7</sup>	2007-2011

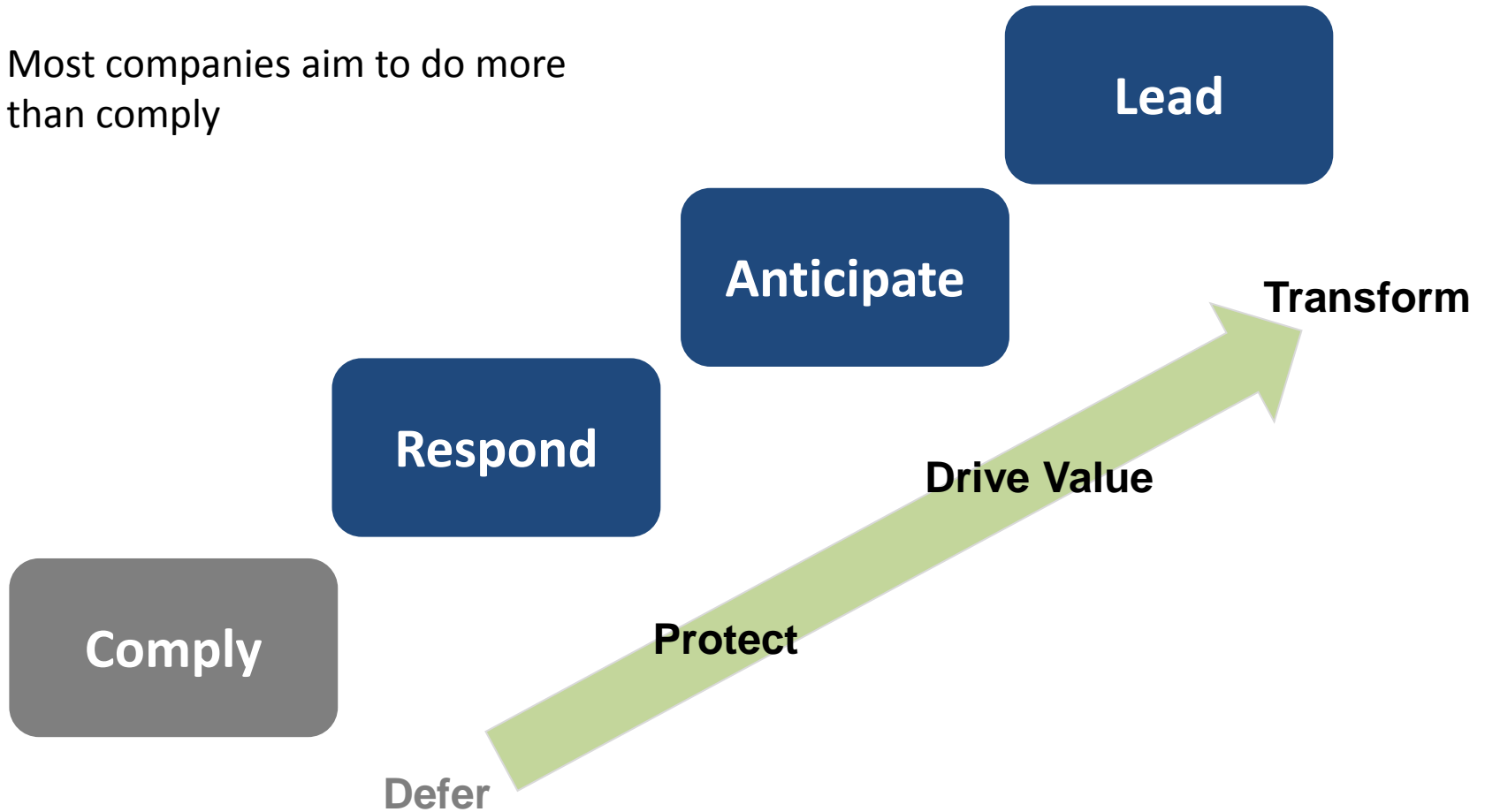
# Sustainable Chemicals Management

*Where does your company want to be?*



# Sustainable Chemicals Management

Most companies aim to do more than comply



# Sustainable Chemicals Management

## Strategy & Alignment

**Goals:** RSL,  
Profile,  
Accountability

**Capacity:** Data,  
Development  
(AA), Suppliers

## Measurement & Tracking

**Evaluation:**  
Footprint,  
Scoring

**Verification:**  
Testing

## External Engagement

**Transparency:**  
Disclosure,  
Reporting

**Collaboration:**  
Policy, Industry

# Sustainable Chemicals Management

---

## Strategy & Alignment

**Goals:** RSL,  
Profile,  
Accountability

**Capacity:** Data,  
Development  
(AA), Suppliers



# Sustainable Chemicals Management

---



## Measurement & Tracking

**Evaluation:**  
Footprint,  
Scoring

**Verification:**  
Testing

# Sustainable Chemicals Management

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**Ø ZDHC**  
Zero Discharge of  
Hazardous Chemicals

## External Engagement

**Transparency:**  
Disclosure,  
Reporting

**Collaboration:**  
Policy, Industry



# Sustainable Chemicals Management

## Strategy & Alignment

**Goals:** RSL,  
Profile,  
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**Capacity:** Data,  
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## Measurement & Tracking

**Evaluation:**  
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**Transparency:**  
Disclosure,  
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Policy, Industry

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Pure Strategies



HEALTH • HYGIENE • HOME

# Better Ingredients

RB's approach

Jennifer Duran

Global Head of Product Sustainability

November 2015

# Our vision and purpose



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Our **vision** is a world where people are healthier and live better

Our **purpose** is to make a difference by giving people innovative solutions for healthier lives and happier homes



**HEALTH**

**Good health is the key to happiness**



**HYGIENE**

**Hygiene is the foundation of healthy living**



**HOME**

**Home is the centre of family life**

# Our Powerbrands are leaders in growth categories



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**HEALTH**

- Mucinex** global #1 cough relief
- Nurofen** leading analgesic brand in Europe and Australia
- Durex** global # 1 condoms
- Gaviscon** leading gastro-intestinal in Europe and Aus
- Strepsils** global #1 medicated sore throat
- Scholl** world leading in foot care



**HYGIENE**

- Veet** global #1 depilatory
- Dettol & Lysol** global #1 germ kill
- Mortein** global #2 pest control
- Finish** global #1 automatic dishwashing
- Harpic with Lysol** global #2 toilet care
- Cillit Bang with Lysol & Dettol** global #1 in surface care
- Clearasil** global #3 in acne treatment



**HOME**

- Vanish** world leading fabric treatment
- Calgon** global #1 water softener
- Air Wick** global #2 air care
- Woolite** global #2 garment care

**Portfolio**

**French's** leading mustard brand in US

# Great progress for our sustainability agenda



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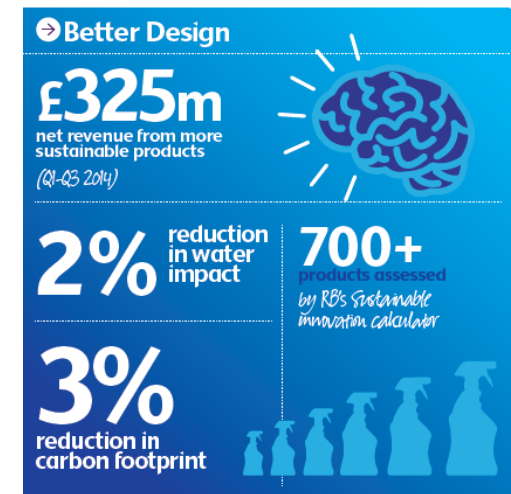
Reach over  
**200m**  
people to improve  
their health  
and hygiene



**1/3**  
net revenue from  
more sustainable  
products



**1/3**  
reduction in  
carbon footprint  
and water impact



...and RB was recognised by the CDP, DJSI and was ranked the 7<sup>th</sup> most sustainable corporation in the world

MEMBER OF  
**Dow Jones Sustainability Indices**  
In Collaboration with RobecoSAM

Most Sustainable Corporations in the World  
**GLOBAL100**

**CDP**  
CLIMATE DISCLOSURE LEADER 2014



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# Developing responsible products

# Better Ingredients



*RB will **advance global health and environmental protection** by continuously optimizing our products and will initiate activities focused on ingredient innovation & increased transparency*

Ingredient health and environmental profile





# Better Ingredients



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Protection

Transparency

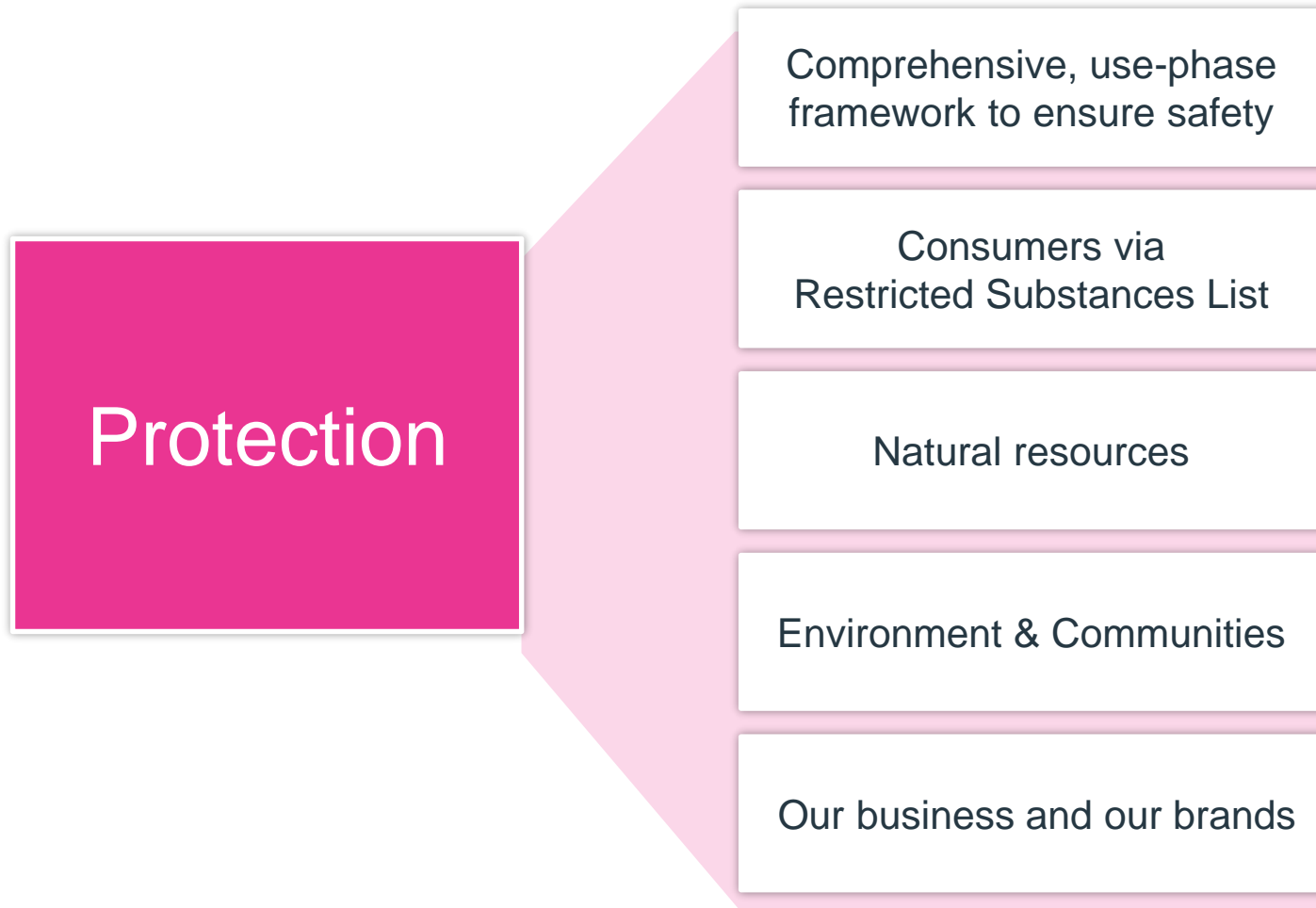
Innovation

Safety

# Better Ingredients



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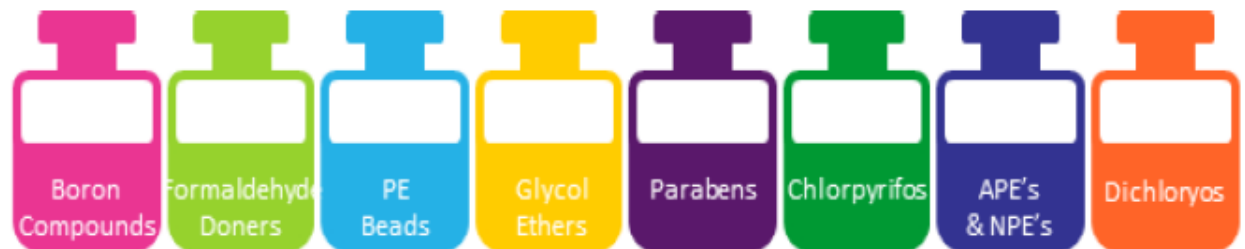


## Restricted Substances List (RSL)

Since 2001, RB has monitored and reviewed ingredients in our products, packaging and devices. As a result we have **voluntarily developed a RSL** and have implemented numerous activities designed to **minimize our products health & environmental impacts.**

We are **committed to continuous improvement** and annually review our RSL to account for new scientific evidence, upcoming regulations, possible risk as well as shifting public perception.

**50+ ingredients  
on our  
restricted  
substances list**



# What goes on the RSL?

We quarterly conduct a **four-pillar review** to infuse our internal knowledge with external expertise to ensure we are making ingredient decisions with the most current information available.



# RSL Highlights



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Ingredient	Completion date	Comments
Polyethylene (PE) beads	2018	Removal
Parabens (methyl, ethyl, butyl, propyl, isoparabens)	2013 (EU) 2015 (rest of the world)	Reduction program (excluding medically licensed products)
Chlorpyrifos	End 2009	
Boron compounds	End 2009	Removal / reduction to meet threshold levels established in the European Union
PVC packaging of household products	End 2009	Healthcare products are excluded from this target as no viable alternatives have yet been identified for healthcare applications
Fragrance raw materials: Non-GN Geranyl Nitrile (GN)	End 2009 End 2007	
Brominated flame retardants	End 2007	BFR with an adverse safety profile
Formaldehyde-donor preservatives Formaldehyde	End 2009 End 2006	
APEs/NPEs	End 2006	
Dichlorvos	End 2006	
Glycol Ethers (Monoethylene series)	End 2006	
Paradichlorobenzene (PDCB)	End 2006	

# Better Ingredients - Transparency



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## Transparency

100% compliance with RB's  
Restricted Substances List

100% transparency on  
ingredients

100% responsibly sourced  
natural raw materials

100% innovations assessed  
by our Sustainable Innovation  
Calculator

# Transparency



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RB is **committed to transparency** about **what is** – and **what is not** – in our products

Consumers are mindful about the products they bring into their homes and use around their families. Retailers care about the products that they sell. We care about the products our employees design and manufacture.

100% of our packaging lists RB contact details for further information is needed and where relevant we list ingredients directly on the packaging.

We provide outlets where consumers can assess ingredient information to empower them to make informed purchasing decisions and our brands are assessing how they take the next step.

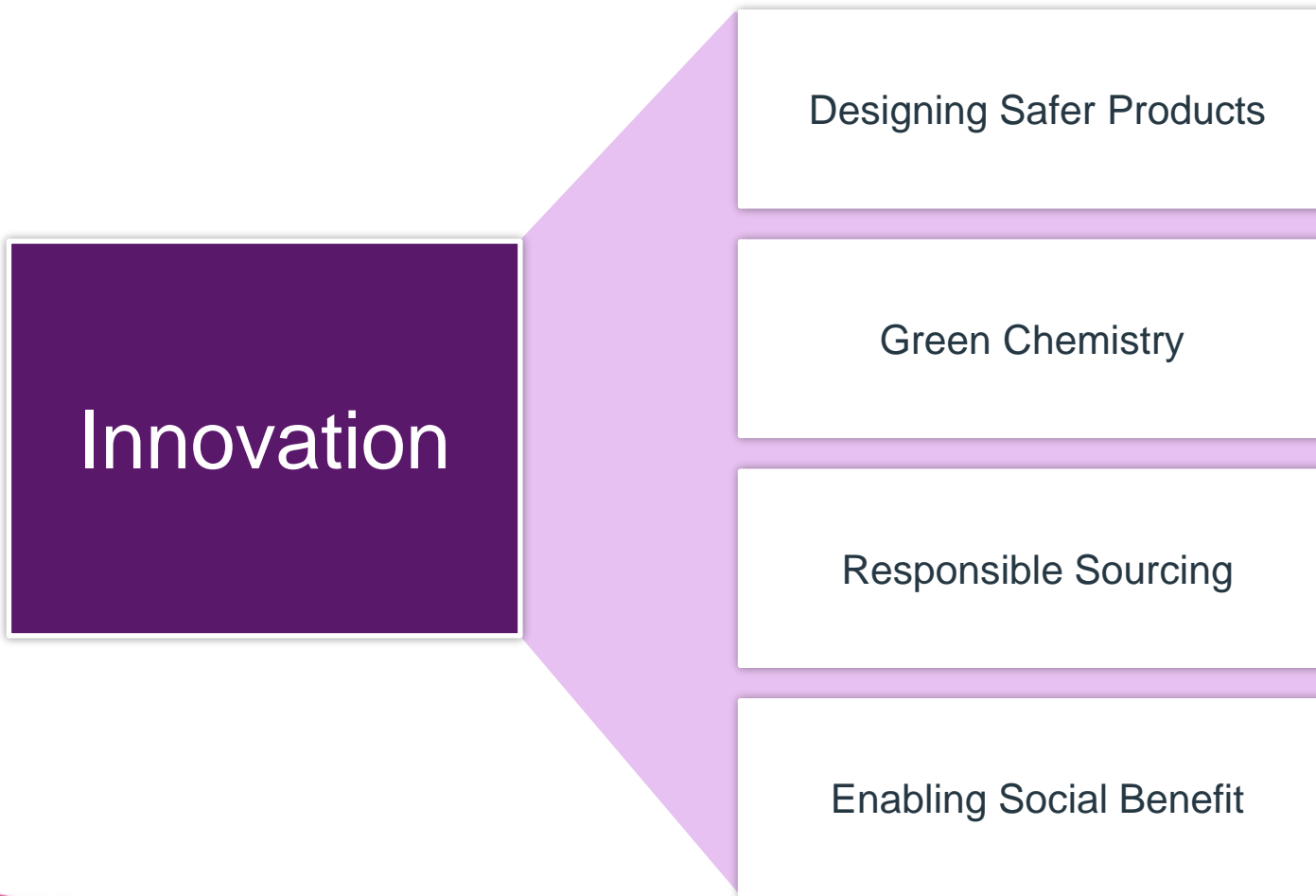
- **EU** [rbeuroinfo.com](http://rbeuroinfo.com)
- **North America and Canada** [rbnainfo.com](http://rbnainfo.com)
- **Australia** [rb-msds.com.au](http://rb-msds.com.au)



# Better Ingredients - Innovation



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# Ingredient Innovation – Green Chemistry mapped onto RB's portfolio

## 1. Prevention

It is better to prevent than to treat waste

## 2. Designing Safer Products

Products should be designed to effect their desired function while minimizing hazard, toxicity and potential for exposure

## 3. Design for Energy Efficiency

Energy requirements of products should be recognized for their environmental and economic impacts and should be minimized where possible

## 4. Catalysis

Catalytic chemistry is superior to stoichiometric

## 5. Design for Degradation

Products should be designed so they break down innocuously and do not persist in the environment

## 6. Real-time analysis

Develop tools to allow for real-time assessments and feedback during the product development process



# 1/3

net revenue from more sustainable products

What is a 'more sustainable innovation' and how do we measure this?



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RB's **Sustainable Innovation Calculator** guides the development of low-impact products. It is a streamlined Life Cycle Analysis (LCA) tool that **models product interactions from cradle to grave** across relevant environmental impact categories.

To qualify, a product must score at least **ONE GREEN**, without scoring any **REDS**.

	<b>Carbon</b> g CO <sub>2</sub> e / dose 	<b>Water</b> Effective water L / dose 	<b>Packaging</b> Effective packaging g / dose 	<b>Ingredients</b> Self declaration 
<b>Better</b> (More sustainable)	> 10% savings per dose	> 10% savings per dose	> 10% savings per dose	Complies with RSL + one new 'Preferred Sustainability Credential'
<b>Same</b> (No significant difference)	-1.5 – 10% savings	-1.5 – 10% savings	-1.5 – 10% savings	Complies with RSL
<b>Worse</b> (Less sustainable)	> 1.5% increase per dose	> 1.5% increase per dose	> 1.5% increase per dose	Does not comply with RSL (or variance)

Note: All product comparisons are done versus previous of category average.





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# Thank you!

- More information available:
  - On our website <http://www.rb.com/our-responsibility>
  - In our latest [Sustainability Report](#)

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# pure|STRATEGIES

**Sustainable Chemicals Management Software**  
A Pure Strategies review of tools for managing chemicals in products

# ***Sustainable Chemicals Management Software: set goals, understand requirements, and evaluate vendors***

## Sustainable Chemicals Management Software Selection Process



### **What are the business priorities?**

*Setting company sustainable chemicals management goals an essential 1<sup>st</sup> step*

### **What are the key features you should look for?**

*Focus on software features essential for meeting company goals*

### **What criteria matter to select software and services to meet meet your needs?**

*Assess quality of key software features, performance and extent of experience with companies with similar business needs*



# ***Business Priorities:***

***Increased efficiency, reduced costs, improved customer reputation & relationships, and reduced risk***

## **Increased efficiency/ reduced costs**

- Reduced time tracking chemical data, responding to changing regulations/requirements
- Better communication with suppliers about new/upcoming requirements
- More efficient coordination with product design teams on changing chemical requirements
- Greater assurance of chemical ingredient quality

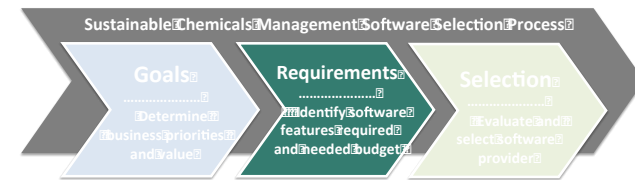
## **Reduced risks**

- Avoid regulatory fines/recalls due to chemical ingredient violations
- Avoid legal liability due to hazardous ingredients in products

## **Improved customer reputation & relationships**

- Assure customers meeting product chemical ingredient restrictions & rapid response to new requirements
- Provide more complete chemical information to customers
- Design safer products using improved chemical ingredient data





# 1. Inventory Chemical Data

*involves collecting detailed data on each chemical*

Inventory materials/chemical ingredients

- *Composition*
- *CAS#/EC#*
- *% Concentration*
- *Ingredient function or residuals and/contaminants*

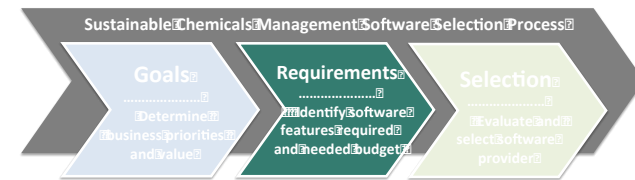
Identify articles & homogenous materials by

- *Weight*
- *Composition*

Generate data gap information

- *Ingredients/materials less than 100%*
- *Ingredients characterized only by % ranges*
- *CAS #s unknown/identified only by class/withheld for CBI*





# 2. RSL Inventories

## Are important but have limitations

### Scope of coverage of RSLs

- National regulations
- Regional/local regulations
- Industry sector - e.g., AAFA, BIFMA)
- Customized RSLs

### System for updating

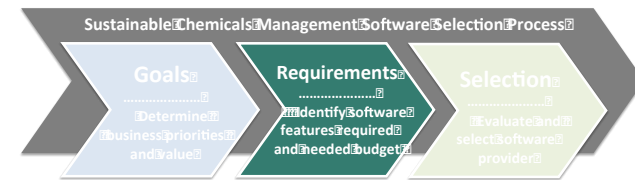
- System for routine updates
- Frequency of updates (daily, weekly, etc.)

### RSL Limitations

- Regulatory lists often lag scientific knowledge of chemical hazards
- Sole reliance on regulatory RSLs may lead to regrettable substitutions



“Bisphenol-A free” products using equally hazardous BPS



# 3. Hazard Assessment

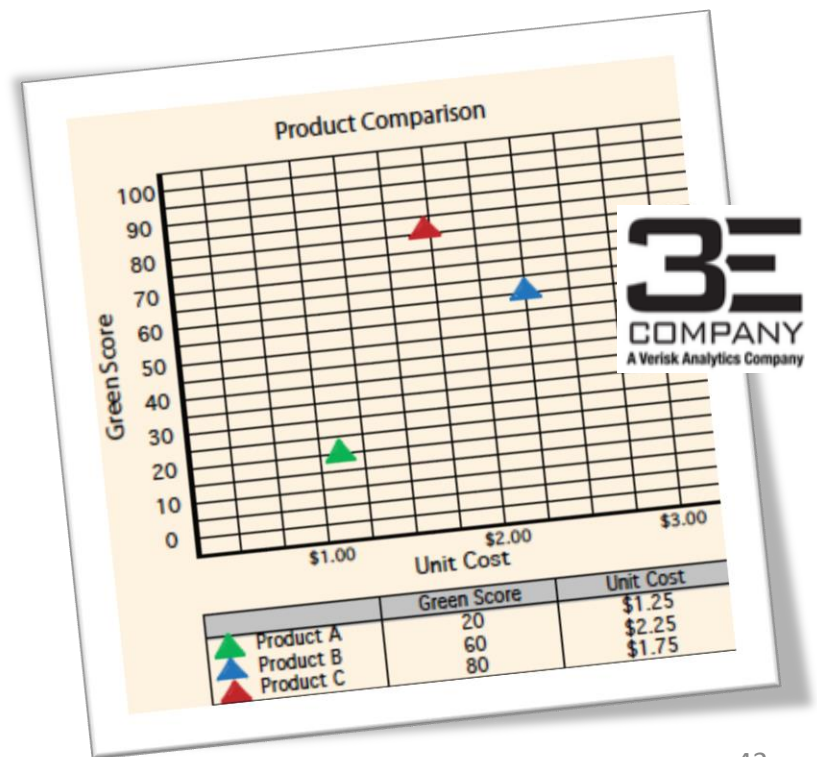
## Can be automated and individualized

- ### Endpoints commonly based
- Globally Harmonized System (GHS)
  - EPA Design for the Environment
    - Human health
    - Environment
    - Physical

- ### Weighing Hazards
- Value-based weighing of different hazards

- ### Automated Hazards
- E.g., CPA's GreenScreen List Translator automates search of >850 authoritative/screening lists.

- ### Vendor Assessments
- Based on scientific research/literature build into the software
  - Provide individualized hazard assessments for chemical ingredients





# 4. Exposure Assessment

## Comes from a variety of sources

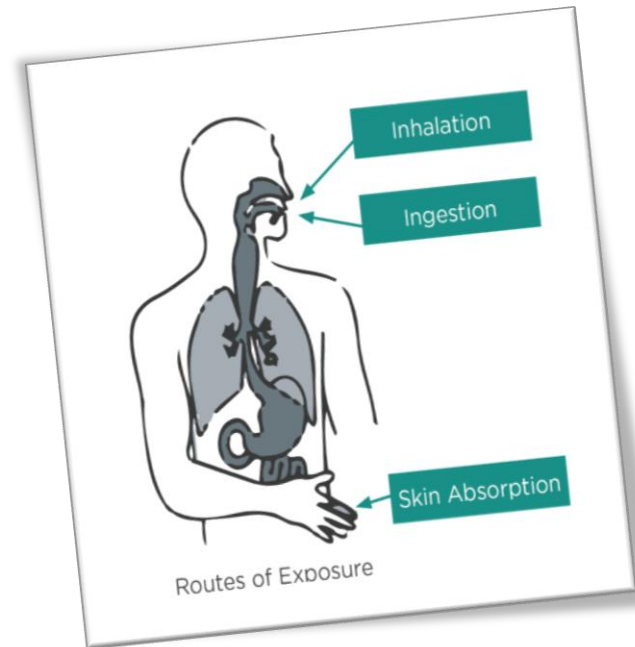
- Assessments evaluate
- Intrinsic physicochemical characteristics
- Life cycle & product factors
- Exposure scenarios derived from public or proprietary databases

### Regrettable Substitution

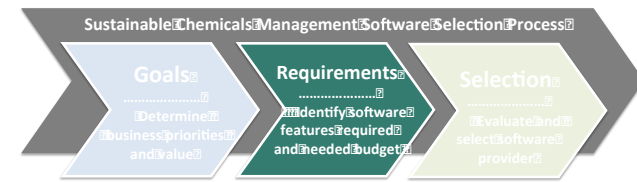
- Perchloroethylene replaced with n-propyl bromide

### Exposure Data

- Proprietary data from customers
- Data on consumer exposure to chemicals in consumer products being aggregated by the Dutch research agency, RIVM.



SciVera and Chemical Compliance Systems (CCS)



# 5. Identify Alternatives

## Tools use different schemes

### Comparative scoring

- Value based scoring of the relative hazard endpoint scores

### Toolboxes of alternatives

- Vendor proprietary
- Sector specific – e.g., Safer Choice/DfE

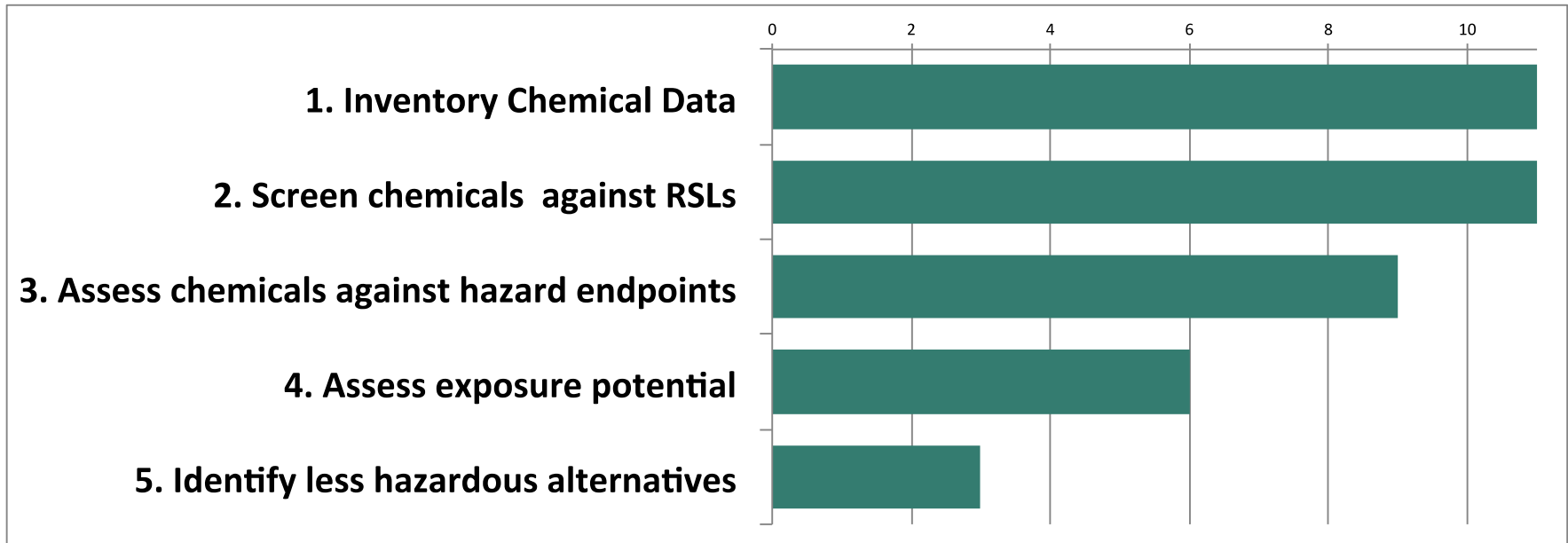
Chemical Compliance Systems (CCS) has list of “potentially greener chemicals” organized by ~ 65 categories

### DfE’s Safer Chemical Ingredients List: Functional Categories

- Antimicrobial actives
- Chelating actives
- Colorants
- Defoamers
- Enzymes & enzyme stabilizers
- Fragrances
- Oxidants & oxidant stabilizers
- Polymers
- Preservatives & anti-oxidants
- Processing aids & additives
- Solvents
- Specialized industrial chemicals
- Surfactants
- Uncategorized



# Five Software Capabilities are key to sustainable chemicals management software



- Not all software tools include all capabilities
- Inventory & some RSL screens essential
- Assess features against chemical management goals

# **Software Selection:** *influence your selection*

*Your goals, budget, and sector will*

## Sustainable Chemicals Management Software Selection Process

### Goals

.....  
Determine  
business priorities  
and value

### Requirements

.....  
Identify  
software features  
required  
and needed budget

### Selection

.....  
Evaluate and  
select software  
provider

**What criteria matter to select software and services to meet meet your needs?**

*Assess quality of key software features, performance and extent of experience with companies with similar business needs*



# Software Selection:

*Your goals, budget, and sector will influence your selection*

## Steps to assess & select vendors

1. Review vendors to identify which align best with your priorities/requirements
  - Use vendor summaries in report appendix for preliminary assessment
  - Use report checklist to clarify how vendor capabilities match your needs
2. Evaluate vendor demos, details of what they offer, costs
3. Negotiate!

Report available at:

<http://www.purestrategies.com/downloads/sustainable-chemicals-management-software>



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Market Trends**



**Tim Greiner**  
**Co-Founder & Managing Director**  
**Pure Strategies**

# Chemical Footprint Project

## Founders:

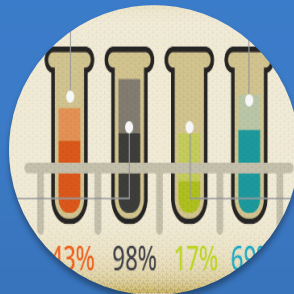
- Clean Production Action
- Pure Strategies
- Lowell Center for Sustainable Production

# Chemical Footprint Project



## Mission

- Transform global chemical use by measuring and disclosing data on business progress to safer chemicals.



## Assessment Tool

- A metric for benchmarking companies as they select safer alternatives and reduce their use of chemicals of high concern.



## Race to the Top

- Recognize top tier performers reducing their chemical footprint



# Steering Committee



KAISER PERMANENTE®



Dignity Health™



Investor Environmental Health Network  
HEALTHY PEOPLE...HEALTHY BUSINESS

EDF ENVIRONMENTAL DEFENSE FUND  
Finding the ways that work





## CFP Assessment Tool



Assessment Tool:  
20 Questions - 100 pts



**Chemical Footprint: *the total mass of chemicals of high concern (CoHCs) in products sold by a company, used in its manufacturing operations and by its suppliers, and contained in packaging.***



**F1. Has your company set goals for reducing CoHCs in the products you sell and measured progress against these goals? (6 points)**

**Response Options**

Check all that apply in “a-d” or answer only “e.” Our company:

- a. has set goal(s) for reducing CoHCs by count or mass
- b. publicly discloses the goal(s) (at minimum includes percentage reduction and time period)
- c. publicly discloses specific CoHC(s) included in the goal(s)
- d. publicly reports annually on progress towards meeting goals
- e. has no CoHCs in our products and publicly discloses this information



# Timeline

Jun 2015: online Assessment Tool launched

Nov 30, 2015: online Assessment Tool closed

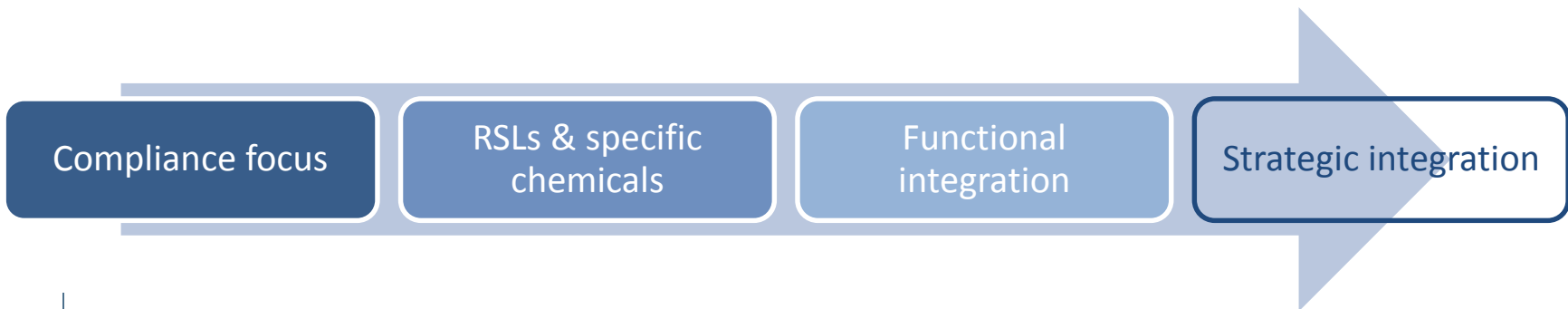
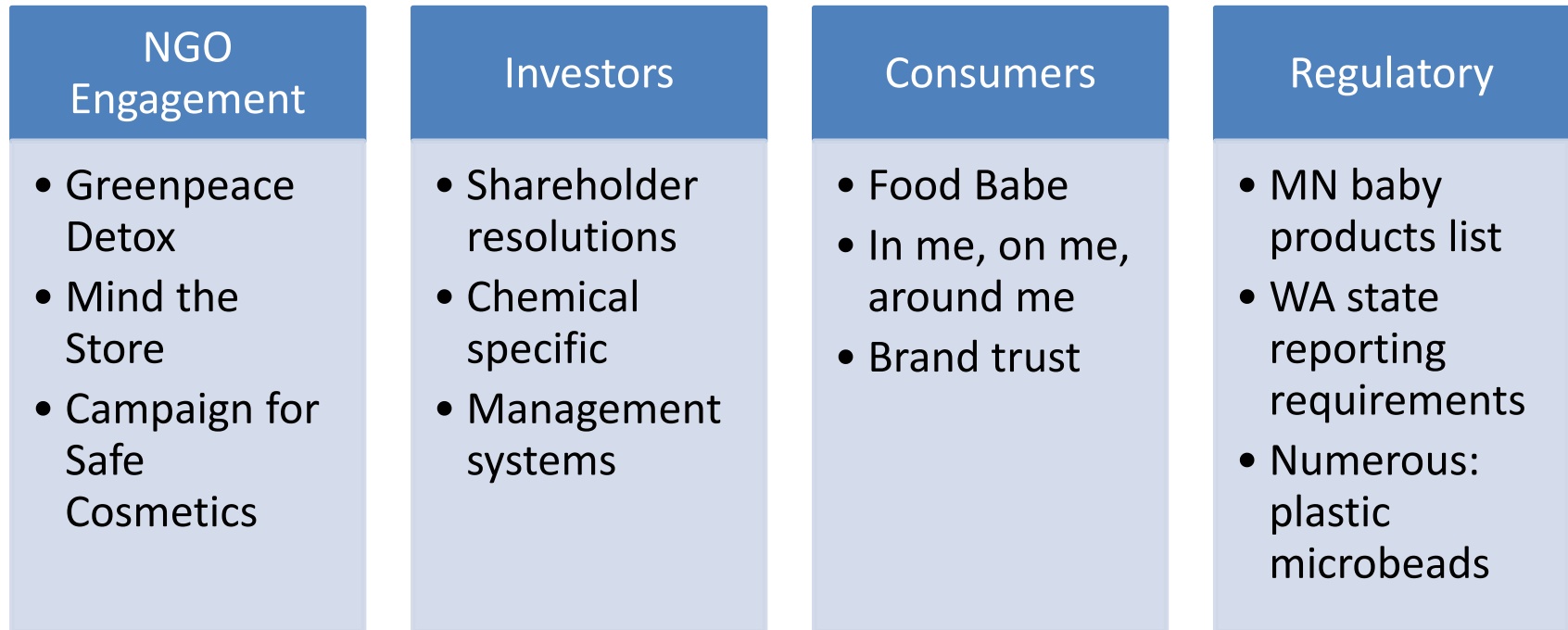
Feb 2016: release CFP Annual Report

go to [chemicalfootprint.org](http://chemicalfootprint.org) to register for news,  
to download Guidance





# Trends in Sustainable Chemistry



# Thank you very much!

---

## Questions & Discussion

For more information

Chemicals Management Software Report:

<http://www.purestrategies.com/downloads/sustainable-chemicals-management-software>

Chemical Footprint Project:

[chemicalfootprint.org](http://chemicalfootprint.org)

Webinar recording:

Emailed soon to all attendees & registrants

Pure Strategies information & other resources: [www.purestrategies.com](http://www.purestrategies.com)

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[jennifer.duran@rb.com](mailto:jennifer.duran@rb.com)

Cheryl Baldwin

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