

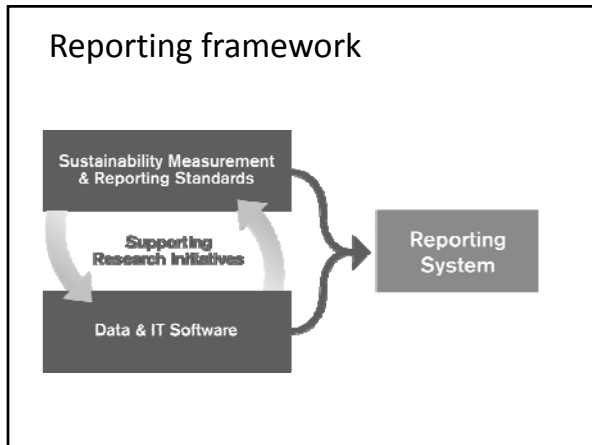
A PROPOSED APPROACH TO SUSTAINABILITY
MEASUREMENT AND REPORTING

1

Purpose

- Introduce concept of a Sustainability Measurement and Reporting Standard
- Show how Sector Working Groups will develop SMRS's
- Propose how SMRS's should be structured to enable rapid implementation

2



What is a SMRS?

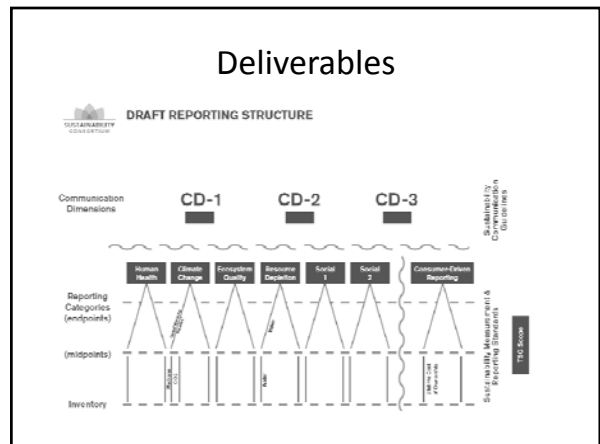
- SMRS = Sustainable Measurement and Reporting Standard
- Establishes a foundation that allows business to business, business to retail and business to consumer reporting.
- It addresses the questions:
 - What sustainability measures or attributes should be captured?
 - How should they be measured?
 - How should they be reported?
- Initially applied to product category or higher

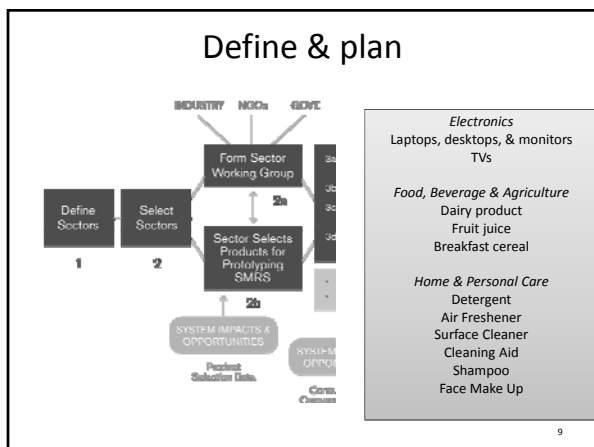
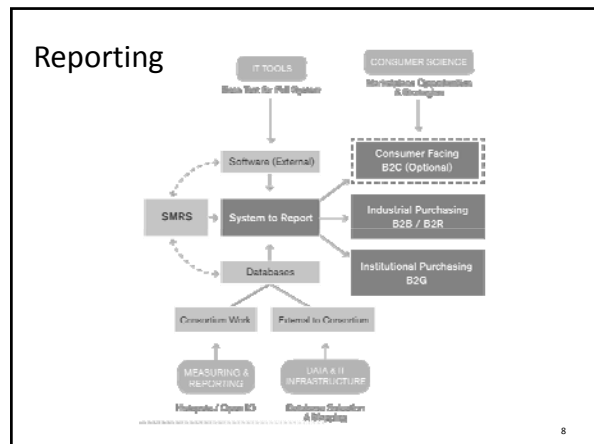
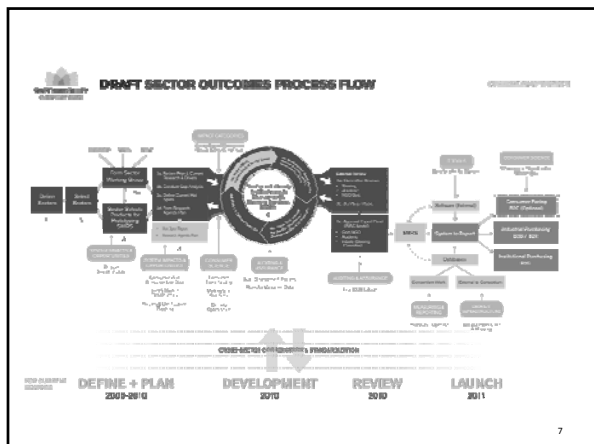
4

Reporting categories

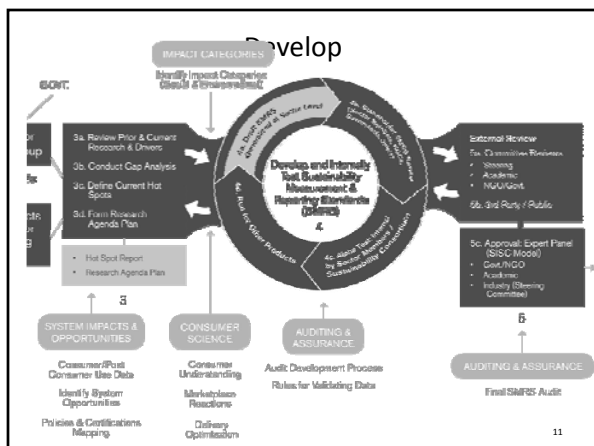
- A SMRS defines measurement and reporting standards for each specified Reporting Category
- A Reporting Category is defined as set of an area of impact or concern where measures can be aggregated in common units
 - For example, "Climate Change" aggregates numerous impacts by Greenhouse Gas (GHG) and Global Warming Potential (GWP)
 - "Energy" aggregates by kWh
 - "Human toxicity" aggregates to Disability Adjusted Life Year (DALY)
 - Could be unit-less in the case of attributes
- Reporting Category may additionally include other information that cannot be quantified in any manner
- Reporting Categories Workshop
 - Multi-day workshop of experts
 - Date: TBD (anticipated for June-July 2010)

5





- ### Sector Working Groups
- Comprised of TSC Sector Coordinator and stakeholders including industry members, academics, NGOs and Government agencies.
 - ISO 14020 (Environmental labels and declarations — General principles)
 - Valid, verified, scientifically-based, transparent, life-cycle based, innovation focused, multi-stakeholder developed, accessible
 - Federated approach



HOW SHOULD SMRS BE DEVELOPED?

SMRS requirements

- Promotes innovation
- Scientifically valid
- Is performance based
- Accounts for impacts across life cycle
- Incorporates existing standards
- Incorporates attributes and LCAs
- Supports distributed reporting
- Allows a range of reporting options
- Deals with complexity
- Can be developed in a timely manner

13

LCA or best practices?

Given that sustainability information needs to be reported, in what form should it be reported?

Quantitative (numerical) approaches such as LCA have higher information content but are more costly.

Attribute approaches such as a check-list of best practices have lower information content and may not be performance driven, but are generally less costly. Attributes can include NGO & government labels and certifications.

14

A hybrid approach

A pure LCA approach is not economically scalable across all consumer products

A pure "best practices" approach lacks precision and tends to weigh each best practice equally, regardless of impact

SWG needs to address how Baseline model and drivers get updated

15

Three step reporting

16

A US Tax Code analogy

17

HOW WILL SUSTAINABILITY PERFORMANCE DRIVERS WORK IN A SMRS?

18

Drivers are key to simplicity

Dilemma:

- The key to timely and cost effective reporting is to modify baseline scores using attributes that act as sustainability performance drivers.
- But we still need to maintain the quantitative backbone for optional, more detailed reporting

Solution:

- SWG will create a list of common sustainability performance drivers that can be reported to
- Drivers may reflect positive or negative impacts on one or more Reporting Categories
- Key is to determine how much each sustainability performance drivers is “worth” for a given Reporting Category

19

Example: Electronics

<p><i>Baseline model-Laptop</i></p> <ul style="list-style-type: none"> NO ENERGY STAR ROHS COMPLIANT NOT EPEAT CERTIFIED < 30% RECYCLED MATERIAL HARD DRIVE TECHNOLOGY-A 	<p><i>Sustainability performance drivers</i></p> <ul style="list-style-type: none"> ENERGY STAR ROHS NON-COMPLIANT EPEAT SILVER CERTIFIED > 30 % RECYCLED MATERIAL HARD DRIVE TECHNOLOGY-B
--	--

20

Example: FBA

<p><i>Baseline model-Beverage</i></p> <ul style="list-style-type: none"> NO SUSTAINABLE SUGAR FARMING SECONDARY DATA FOR WATER USAGE PACKAGE < 10% RECYCLED MATERIAL PET CONTAINER 	<p><i>Sustainability performance drivers</i></p> <ul style="list-style-type: none"> CERTIFIED SUSTAINABLE SUGAR FARMING PRIMARY DATA FOR WATER USAGE PACKAGE > 10 % RECYCLED MATERIAL BIO-BASED CONTAINER
---	--



21

Example: HPC

<p><i>Baseline model-Detergent</i></p> <ul style="list-style-type: none"> NOT CONCENTRATED REQUIRES HOT WATER NOT DFE CERTIFIED SURFACTANT-A 	<p><i>Sustainability performance drivers</i></p> <ul style="list-style-type: none"> CONCENTRATION LEVEL COLD WATER CAPABLE DFE CERTIFIED SURFACTANT-B
--	---

22

Drivers that matter

 <p>Not Energy Star Energy Star</p> <p><i>WISH TO INCENTIVIZE THESE DIFFERENCES</i></p> <div style="border: 1px solid black; background-color: #ccc; padding: 5px; width: fit-content; margin: 0 auto;"> PRIMARY FOCUS—USE THESE DRIVERS FOR CATEGORY </div>	 <p>10" screen 13" screen</p> <p><i>FUNCTIONAL CONSIDERATIONS—NEEDED FOR ACCURATE TOTAL FOOTPRINTS</i></p> <div style="border: 1px solid black; background-color: #ccc; padding: 5px; width: fit-content; margin: 0 auto;"> SECONDARY FOCUS—DEVELOP THESE DRIVERS FOR MORE ACCURACY </div>
--	--

23

Drivers that scale

Sustainability Performance Drivers

MULTIPLE SECTORS

SECTOR

MULTIPLE PRODUCT CATEGORIES

PRODUCT CATEGORY

PRODUCT

}

Initial focus of SMRS

Enables quick scaling

24

Mapping drivers

Possible approaches to determine impact of driver

One driver at a time:

- Estimate change in inventories from driver and use LCIA to determine impacts, or
- Estimate percent change in baseline impacts using previous research.

Multiple drivers at a time

- Estimate percent change in baseline impacts using previous research and allocate to drivers based on expert opinion, or
- Use unit-less measure for Reporting Category (e.g. fraction of supply chain that is certified)

25

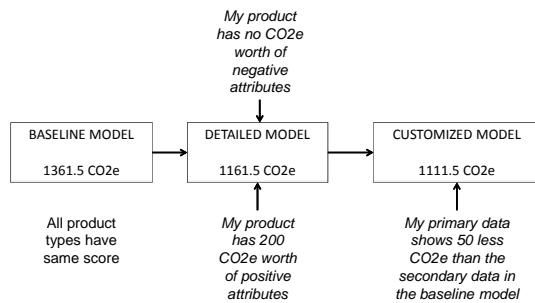
Customization (optional)

Reporting companies may customize their report in two ways:

- Substitute primary data for secondary data in the baseline model
 - Example: Our primary data for baking shows 265 kg CO₂e instead of 300, representing a change of -35
- Customize the baseline LCA model according to (proprietary) processes or materials
 - Example: An LCA model of our waste management processes show 110 CO₂e instead of 125 as estimated by the Baseline Model and the “100% recyclable packaging” attribute, representing a change of -15
- Any custom changes to the data or model must be transparent, adherent to SRMS guidelines and able to be audited by third party

26

Distinguishing similar product types



27

Summary

- Proposed approach enables rapid implementation and bootstrapping from existing standards and initiatives
- Maintains ability for more quantitative modeling of life cycle
- Creation of sustainability performance drivers enables simple reporting and is key to scaling across product categories

28